

January 16, 2009

Mr. Rick Baer, Interim Utility Director Antrim Township 10655 Antrim Church Road Greencastle, Pennsylvania 17225

Re: Antrim Township Collection and Conveyance System Inspection Report 2008 Year

Equipment Condition and Maintenance

Brinjac No. 98011-R09

Dear Mr. Baer:

On January 12 and 13, 2009, Brinjac Engineering with Antrim Township plant operator Roger Nowell performed inspections of Antrim Township Municipal Authority's sanitary sewer pump stations. The general condition of the pump stations are in good working order. The pump station inspection schedule provides for sequential inspections twice per week. Pump station maintenance is performed when the need arises. Additional maintenance should be performed on particular discharge forcemains as cited below. The planned maintenance and repairs for 2009 should resolve any risks with back-up generators. The pump packing leakage evidenced at the older pump stations is not an unusual problem considering the age of the pumps. New packing is installed as part of the maintenance program which sustains the pumps in operational condition

Condition of Pump Stations

The following summaries are the inspection observations of the condition and working order of the Antrim Township Municipal Authority's pump stations.

Lift Station #1

Condition: Good. The lift station was built in 1977 and was upgraded in 2002. The two (2) Gorman-Rupp Super T-3 pumps are in good working order. The back-up power is a Wisconsin auto start engine. There is an emergency Omnisite call-out system.

Lift Station #2

Condition: Good. The lift station was upgraded in 2002. The two (2) Gorman-Rupp Super T-3 pumps are in good working order. The back-up power is a Wisconsin auto start engine. There is an emergency Omnisite call-out system. During rain storms runoff penetrates under the door of the building. Site drainage modifications should be made to control runoff.

Lift Station #3

Condition: Fair. The lift station was built in 1977. The two (2) Weil pumps are in good working order. The back-up power is an Onan generator. The back-up generator will be repaired in 2009. There is an emergency Omnisite call-out system. There is some corrosion of the exterior of the pumps volutes and housings. The surface rust of pumps and piping should be removed and repainted. The packing on the pumps leak, and is replaced as part of the maintenance schedule.

Lift Station #4

Lift station to be eliminated in 2009.

Lift Station #5

Condition: Good. The lift station was upgraded in 2003. The two (2) Gorman-Rupp Super T-6 pumps are in good working order. The back-up power is a Kohler generator. There is an emergency Omnisite call-out system.

Lift Station #6

Condition: Fair. The lift station was built in 1982. The two (2) Paco pumps are in good working order. The back-up power is a Kohler generator which will be replaced in 2009. There is an emergency Sensaphone call-out system. There is some corrosion of the exterior of the pumps volutes and housings. The surface rust of pumps and piping should be removed and repainted. The packing on the pumps leak, and is replaced as part of the maintenance schedule.

Lift Station #7

Condition: Fair. The lift station was built in 1982. The two (2) Paco pumps are in good working order. The back-up power is a Kohler generator which will be replaced in 2009. There is an emergency Sensaphone call-out system. There is some corrosion of the exterior of the pumps volutes and housings. The surface rust of pumps and piping should be removed and repainted. The packing on the pumps leak, and is replaced as part of the maintenance schedule.

Lift Station #8

Condition: Fair. The lift station was built in 1982. The two (2) Paco pumps are in good working order. The back-up power Kohler generator will be replaced in 2009. There is an emergency Sensaphone call-out system. There is some corrosion of the exterior of the pumps volutes and housings. The surface rust of pumps and piping should be removed and repainted. The packing on the pumps leak, and is replaced as part of the maintenance schedule. The forcemain was repaired in December of 2008.

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Lift Station #9

Condition: Fair. The lift station was built in 1982. The two (2) Paco pumps are in good working order. There is no back-up power a new generator will be installed in 2009. There is an emergency Sensaphone call-out system. There is some corrosion of the exterior of the pumps volutes and housings. The surface rust of pumps and piping should be removed and repainted. The packing on the pumps leak, and is replaced as part of the maintenance schedule. The pump controls will be moved from the dry well to the generator enclosure in 2009.

Lift Station #10

Condition: Good. The lift station was upgraded in 2005. The two (2) Gorman-Rupp Super T-4 pumps are in good working order. The back-up power is a Kohler generator. There is an emergency Omnisite call-out system.

Lift Station #11

Condition: Fair. The lift station was built in 1982. The two (2) Paco pumps are in good working order. A portable back-up power generator is used for this station. There is an emergency Omnisite call-out system. The dry well is currently being refurbished. The pump controls were moved to the generator enclosure in 2008.

Lift Station #12

Condition: Fair. The lift station was built in 1982. The two (2) Paco pumps are in good working order. The back-up power is a Kohler generator which will be replaced in 2009. There is an emergency Sensaphone call-out system. There is some corrosion of the exterior of the pumps volutes and housings. The surface rust of pumps and piping should be removed and repainted. The packing on the pumps leak, and is replaced as part of the maintenance schedule.

Lift Station #13

Condition: Fair. The lift station was built in 1982. The two (2) Paco pumps are in good working order. The back-up power is a Kohler generator which will be replaced in 2009. There is an emergency Sensaphone call-out system. There is some corrosion of the exterior of the pumps volutes and housings. The surface rust of pumps and piping should be removed and repainted. The packing on the pumps leak, and is replaced as part of the maintenance schedule.

Lift Station #14

Condition: Fair. The lift station was built in 1982. The two (2) Paco pumps are in good working order. The back-up power generator does not function, and is to be replaced in 2009. There is no emergency call-out system. There is some corrosion of the exterior of the pumps volutes and housings. The surface rust of pumps and piping should be removed and repainted. The packing on the pumps leak, and is replaced as part of the maintenance schedule.

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Lift Station #15

Condition: Fair. The lift station was built in 1982. The two (2) Hydromatic pumps are in good working order. The back-up power Kohler generator does not function, and is to be replaced in 2009. There is no emergency call-out system.

Lift Station #16

Condition: Fair. The lift station was built in 1982. The two (2) Peabody submersible pumps are in good working order. There is no back-up power. There is no emergency call-out system. There is an emergency alarm light.

Lift Station #17

Condition: Fair. The lift station was built in 2001. The two (2) Gorman-Rupp Super T-6 pumps are in good working order. The back-up power is a Wisconsin auto start engine. There is an emergency Omnisite call-out system. Exterior and interior cracking of the masonry block on the southwest corner of the building needs repaired. Influent from LS # 22, located nearly 3 miles north of LS # 17, generates hydrogen sulfide gas resulting in odors and corrosion of the LS #17 wet well. The ductile iron discharge pipe passing through the wet well needs to be cleaned, and recoated.

Lift Station #19

Condition: Good. The lift station was built in 2002. The two (2) Gorman-Rupp Super T-3 pumps are in good working order. The back-up power is a Wisconsin auto start engine. There is an emergency Omnisite call-out system.

Lift Station #20

Condition: Good. The lift station was built in 1993. The two (2) Barnes submersible pumps are in good working order. The back-up power is a Kohler generator. There is no emergency call-out system.

Lift Station #21

Condition: Good. The lift station was built in 1995. The two (2) Barnes submersible pumps are in good working order. The back-up power is a Kohler generator. There is no emergency call-out system. There is an emergency alarm light.

Lift Station #22

Condition: Good. The lift station was built in 2001. The two (2) Gorman-Rupp Super T-4 pumps are in good working order. The back-up power is a Wisconsin auto start engine. There is an emergency Omnisite call-out system. Addition of hydrogen sulfide control agents are added at this station during the summer season because the discharge at LS #17 produces odors and

corrosive hydrogen sulfide gas. It is recommended to add the hydrogen sulfide controls throughout the entire year to prohibit corrosion.

Lift Station #23

Condition: Good. The lift station was built in 2001. The two (2) Gorman-Rupp Super T-3 pumps are in good working order. The back-up power is a Wisconsin auto start engine. There is an emergency Omnisite call-out system. During rain storms runoff penetrates under the door of the building. Site drainage modifications should be made to control runoff.

Lift Station #24

Condition: Good. The lift station was built in 2002. The two (2) Gorman-Rupp Super T-3 pumps are in good working order. The back-up power is a Wisconsin auto start engine. There is an emergency Omnisite call-out system. Exterior and interior cracking of the masonry block on the northeast corner of the building needs repaired.

Lift Station #25

Condition: Good. The lift station was built in 2006. The two (2) Gorman-Rupp Super T-6 pumps are in good working order. The back-up power is a Nissan auto start engine. There is an emergency Omnisite call-out system.

In general, the pump stations are in fair to good condition which confirms the maintenance performance of the Township's operators. The condition of the pump stations are good considering the volume of maintenance demands on 24 pump stations.

Sewer System Monitoring, Maintenance, and Repairs

The Authority owns equipment necessary to maintain the sewerage system. In 1998 and 1999, Antrim Township completed an aggressive Infiltration/Inflow (I/I) program. As part of that program, all manholes within the system were inspected and a database was created. This database logged manhole numbering, location, flow paths, and condition. That database allowed a priority system to be developed for rehabilitation.

Additional work that is completed on a routine basis includes raising manhole frames, sealing, adjustment, and installation of watertight inserts. Ongoing monitoring, maintenance and the associated repairs are part of the regular operations at the Township. Copies of regular maintenance work performed on the sewer system are maintained at the plant.

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Condition of Sewer System

Antrim Township sewer system consists of approximately 80 miles of sanitary sewers, with most of the core system constructed between 1974 and 1979. The sewer system appears to be in good condition. Problems are scheduled for correction as they are identified.

The Township has a quarterly maintenance schedule for the sewer lines which entails the inspection of lines, and flushing or televising as needed. The Township maintains the collection and conveyance systems in good working order.

If you have any questions related to this information, please feel free to contact me at (717) 233-4502.

Sincerely,

Brinjac Engineering, Inc.

David A. Brinjac, P.E.

JF/DAB:sc

c: File