

# ***HydroFLOW* reduces struvite scale accumulation in dewatering centrifuge effluent discharge**

*Updated on January 19, 2017*

**Customer:** Rockland County  
Sewer District #1, New York

**Problem:** Struvite scale clogging the effluent discharge system of the wastewater treatment plant's GEA Westfalia CA505 centrifuges.



# *HydroFLOW* reduces struvite scale accumulation in dewatering centrifuge effluent discharge

**Objective:** Multiply the time between cleaning by a factor of two; from approximately once every two weeks to once every four weeks.

**Duration:** From Nov. 3, 2016 to Jan.15, 2017 (72 days).



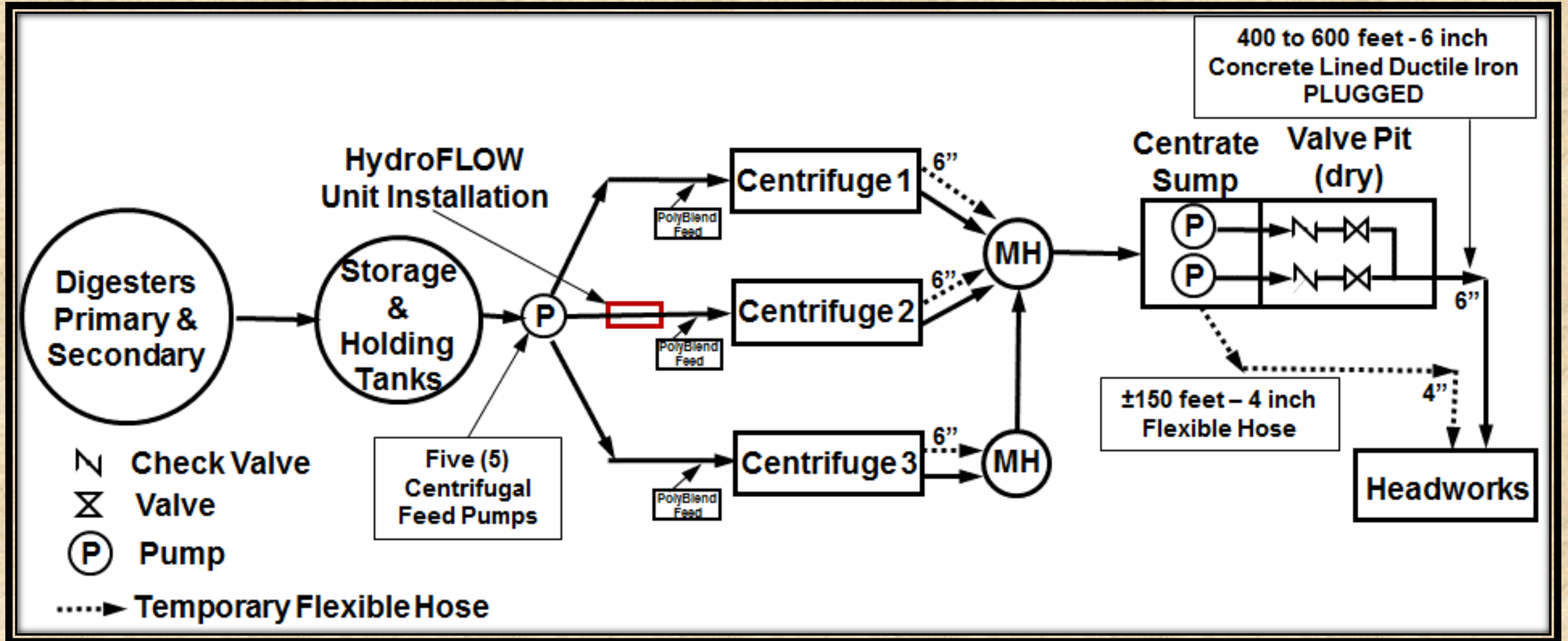


# Two weeks worth of scale accumulation in the centrifuge's effluent collection box and discharge pipe



Photographs taken by the plant's staff on August 24, 2016.

# System configuration



A *HydroFLOW* 160i demonstration unit was installed on the 6" influent sludge pipe feeding Centrifuge 2.



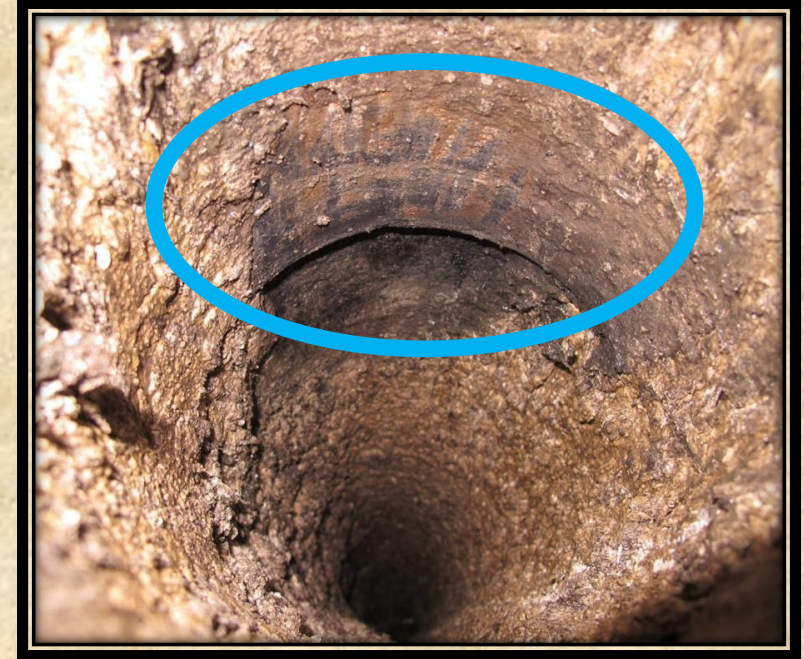
# Installation Day



A



B



C

- A. Demonstration unit was installed on the 6" sludge pipe feeding Centrifuge 2.
- B. Side wall of the effluent collection box with hard, thick scale accumulation.
- C. Effluent discharge pipe which receives flow from the effluent collection box.  
The section indicated was scraped clean for inspection purposes.



# Thirty Day Inspection



A



B

- A. Dramatic scale reduction in the effluent collection discharge box.
- B. Very little to no scale accumulation observed on the previously scraped inspection section after thirty days of operation since the *HydroFLOW* unit was installed. Existing scale seems to be softening.



# Seventy-Two Day Inspection



A



B

- A. Effluent collection box remained relatively clean with minimal scale deposits. Existing deposits softened and more easily removed.
- B. The clean inspection section remained free of scale. Existing scale is very soft, does not restrict effluent flow and can be readily removed.

# Conclusions

**The product evaluation demonstration has been judged a success by the Rockland County plant management, operations and maintenance staff. The process to purchase and install permanent units at the facility is currently underway.**

- The objective of extending the cleaning cycle from two to four weeks was met and greatly surpassed.
- There is little to no effluent flow restriction due to the reduced scale accumulation observed since installation of the *HydroFLOW* unit.
- The little scale that does accumulate, is relatively soft and is easily removed.
- Centrifuges 1 and 3 were also positively impacted.



**For additional information  
please contact:**



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