

Innovative Delivery of Large Scale (30 MGD) Drinking Water PFAS Regulatory Compliance



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Agenda

- Project Background
- Collaborative Delivery Model
- Owner Role in Pre-procurement
- Elements of the D-B RFP Process
- Design Workshop Approach
- Design Scope Adjustments
- Construction and Startup Observations
- Current Project Status
- Questions



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Veolia approach to PFAS

Finding a Unique Integrated Offer

End-to-end Solutions to Sustaining Healthy Communities and Industries

Analysis & Tracking
Study

- ✓ > Partnering with labs
- > R&D

Controlling &
Engineering

- ✓ > Separation
- > Capture

Operation

- ✓ > Optimization
- > Performance

Waste Treatment

- ✓ > Disposal

Laboratories - Water Operations



Water Operations & Technologies

Membranes



Activated Carbon



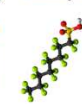
Exchanging Ions Resins



Alternatives Technologies (incl. combinations)



R&D on Alternatives Technologies



Hazardous Waste Treatment

High temperature incineration
Physico-Chemical Treatment,
Stabilization & Landfilling,
Soil remediation + Secondary



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Stanton WTP PFAS Compliance Overview

- 30 mgd surface water treatment
- Accelerated project to meet Delaware reg
- Federal announcement superseded DE
- 2019 upgrade included PFAS provisions
- Tight site, environmental constraints
- Extensive permitting requirements
- Veolia decided to move forward with a design-build approach



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Elements of Design-Build RFP Process

- Provided performance requirements
- Prescribed vessel vendor and quantity
- Specified building type
- Established boundaries (physical/scope)
- Proposal contents and pricing form



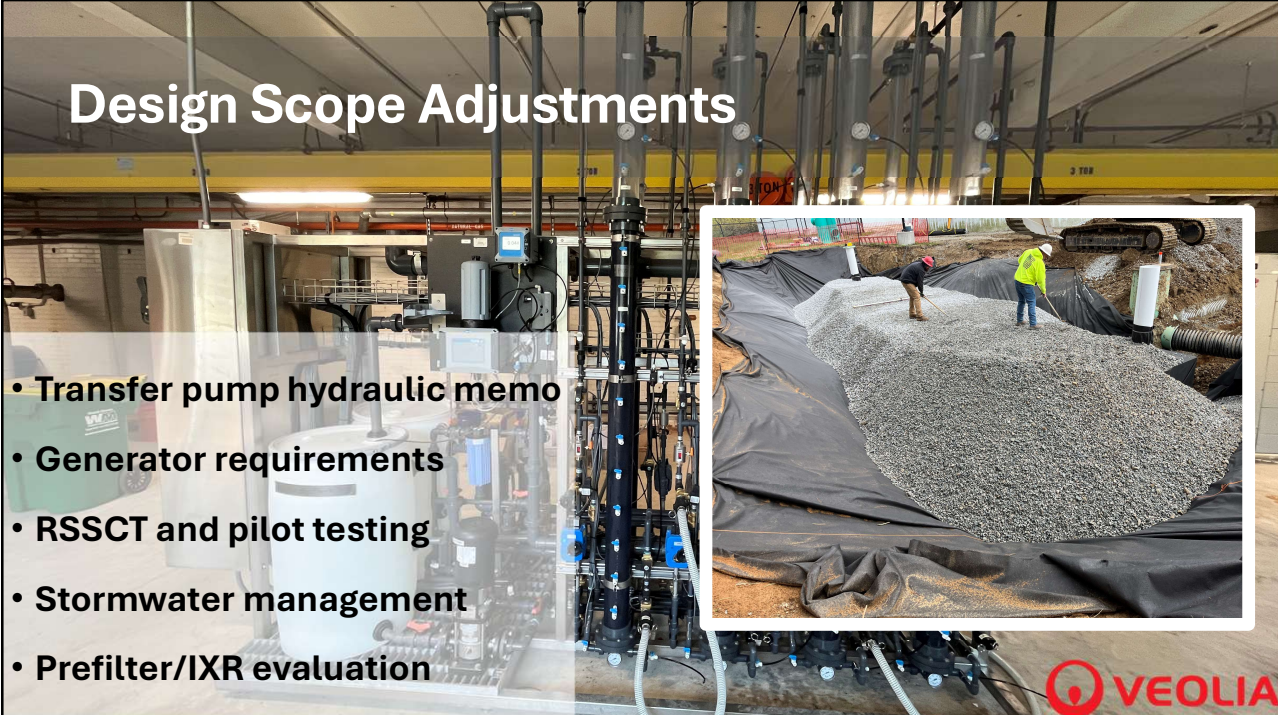
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Design Workshop Approach



- Emails don't design facilities...
- 13 "official workshops" over an 11-month design phase
- Specific topic with specific outcomes
- Detailed agenda with guiding presentation
- Empowered attendees
- Ownership of outcomes
- Additional startup workshops

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Design Scope Adjustments



- Transfer pump hydraulic memo
- Generator requirements
- RSSCT and pilot testing
- Stormwater management
- Prefilter/IXR evaluation

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Construction and Startup Observations



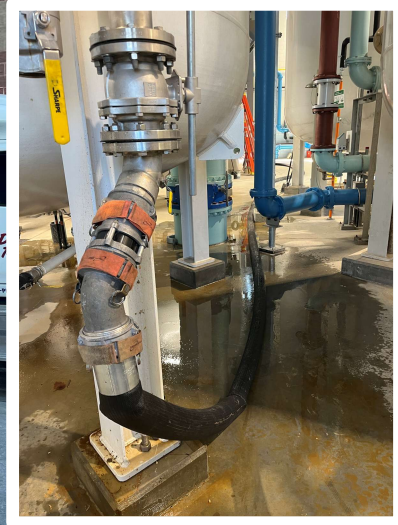
- Operational interruptions and tie-ins
 - Piping
 - Chemical switchover
 - Road closures
- Vessel assembly and punch list
- Pipe pressure testing
- Pressure balancing of skids




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Project Status

- Flow through building on 2/24
- First vessel in service 3/11
- Additional transfer pump started up 5/8
- Last vessel scheduled to be filled 5/16



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Questions?

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