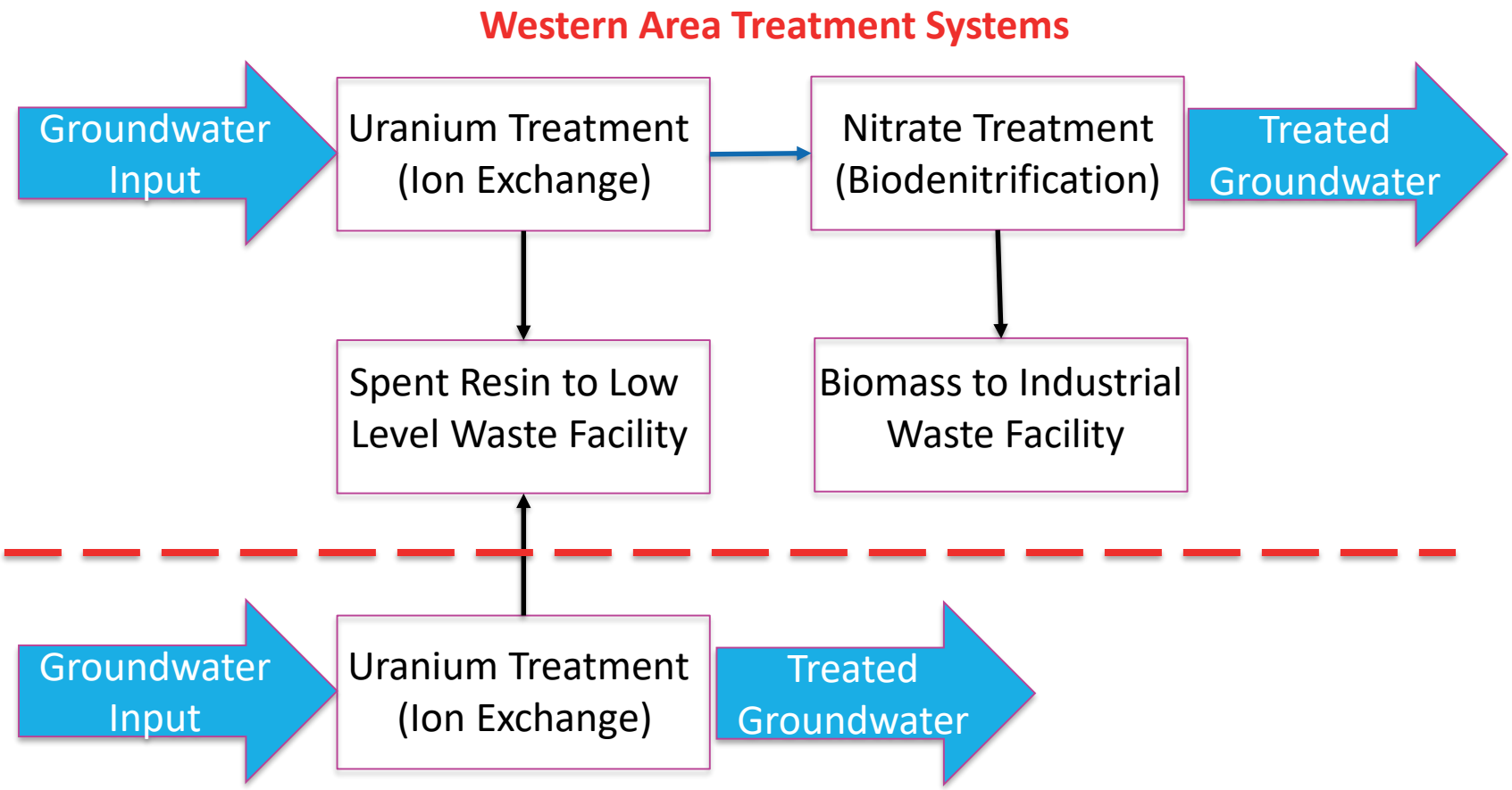
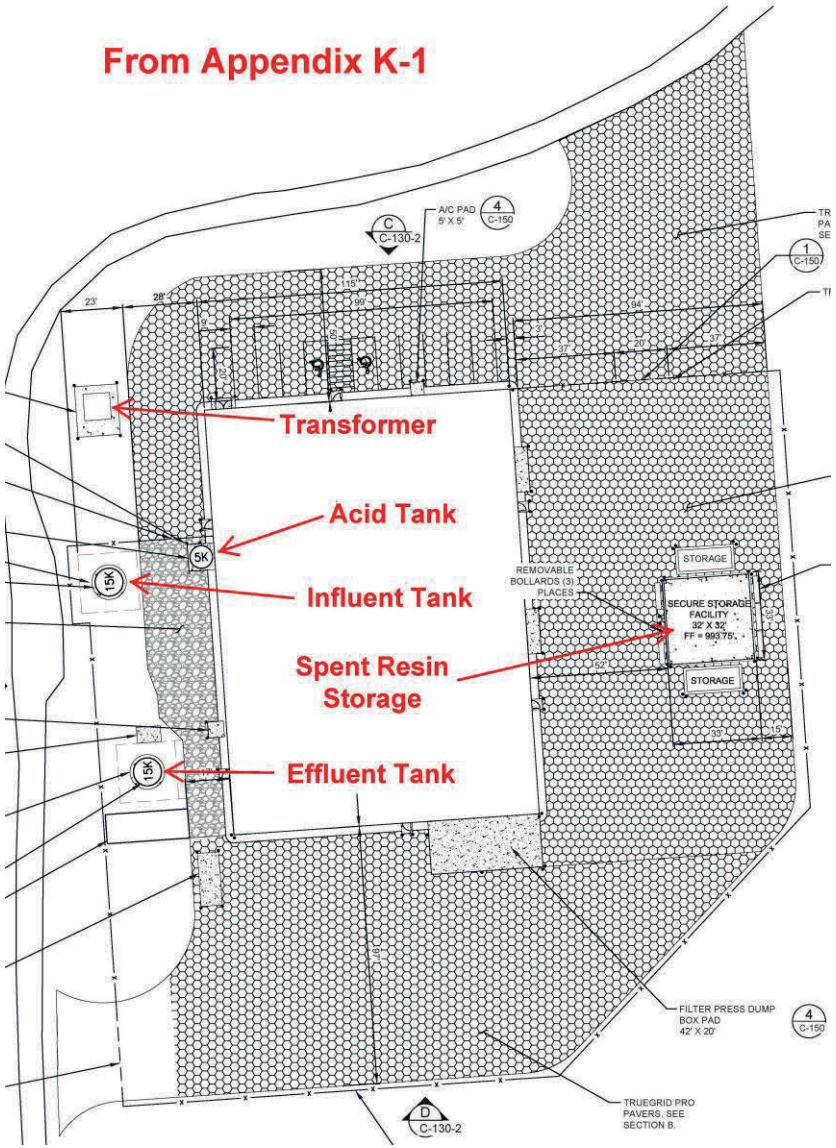
VNS Federal Services

Groundwater Treatment System

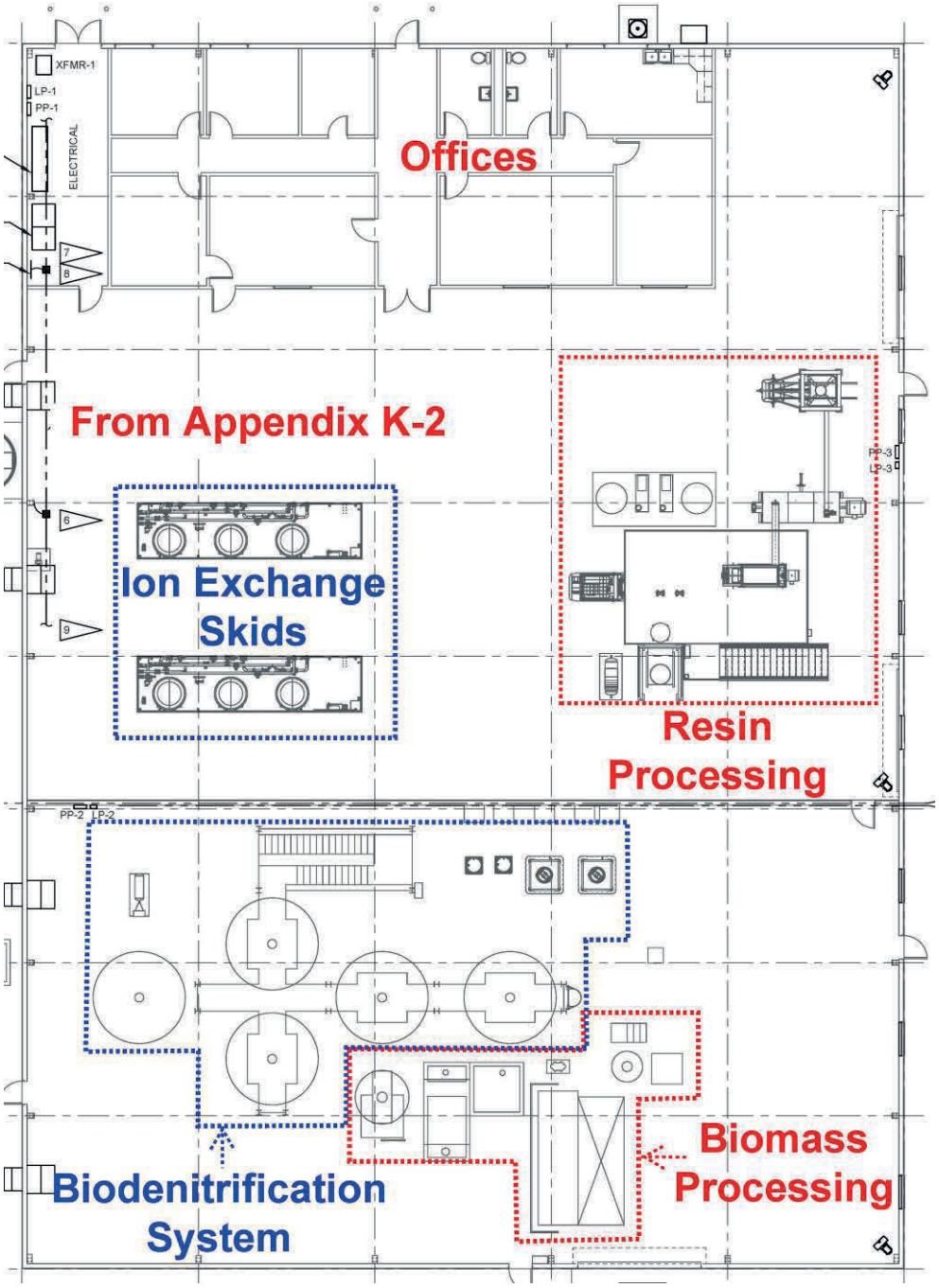
Treatment System Overview



Western Area Treatment Facility (WATF) Site

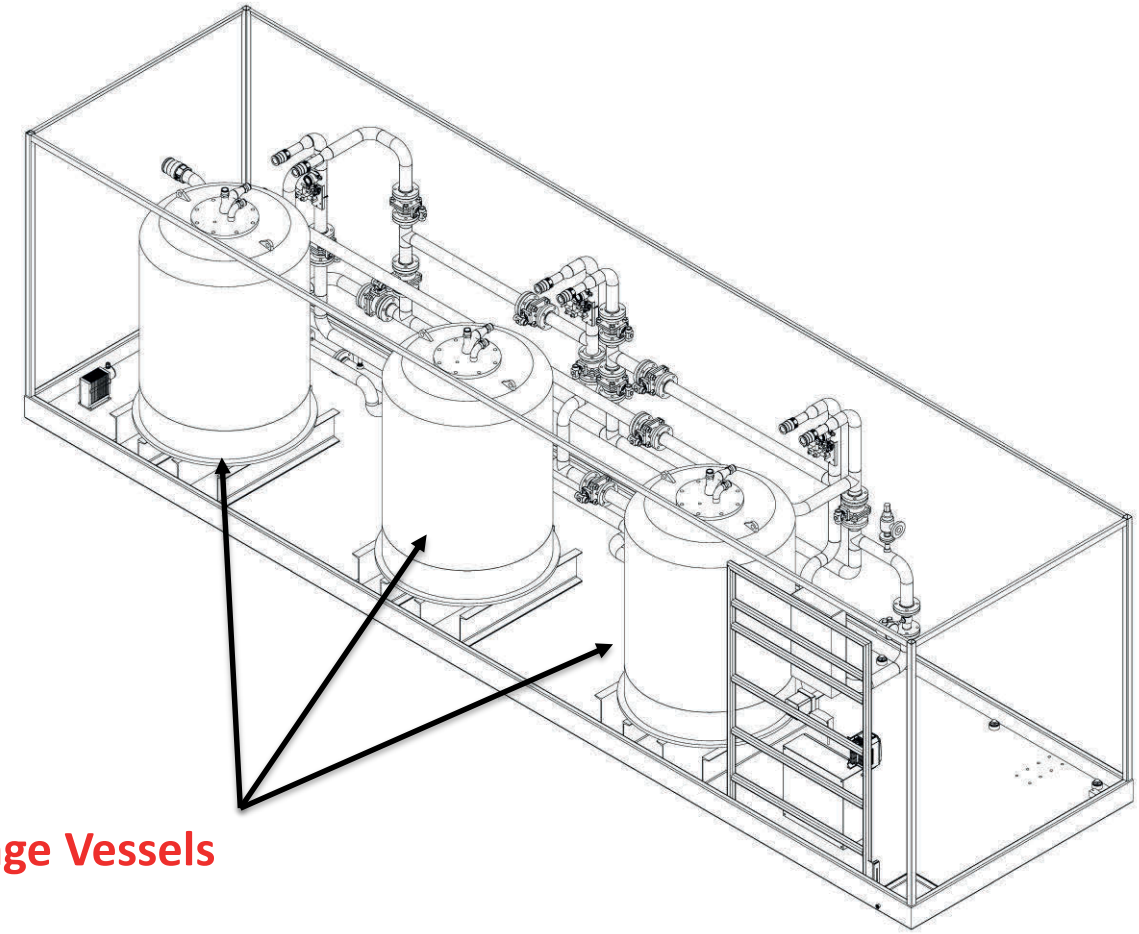


WATF Building Interior



Typical Ion Exchange Skid

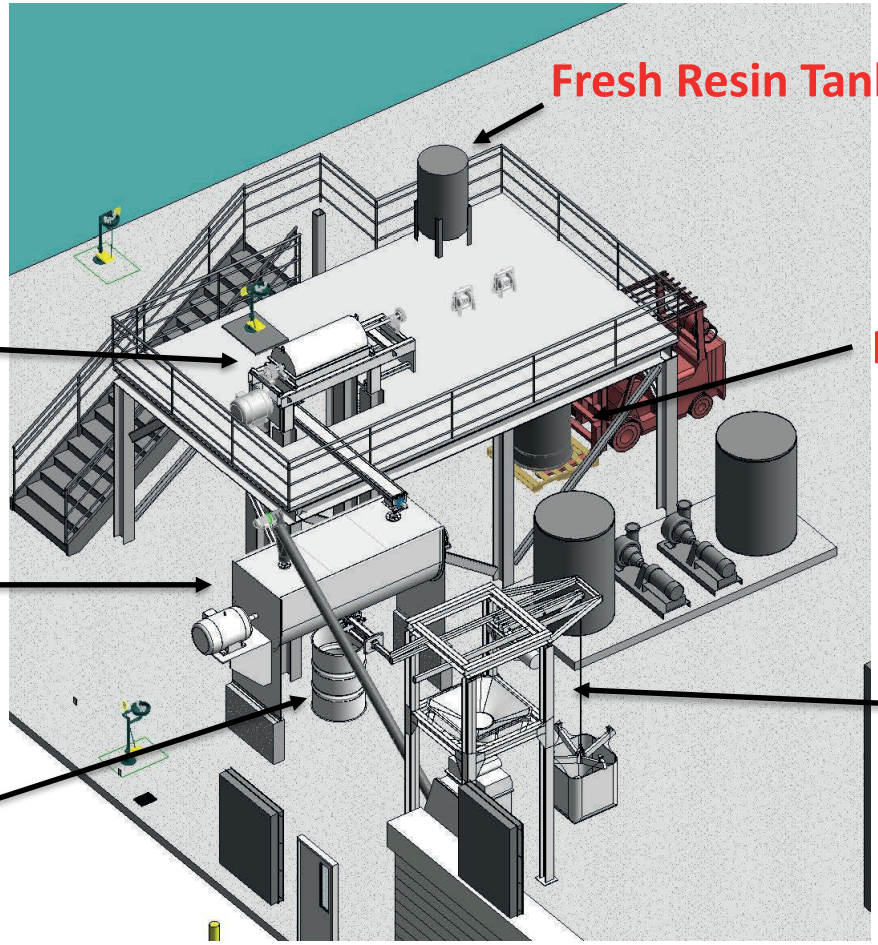
From Appendix K-3



Ion Exchange Vessels

Spent Resin Handling

Model Used for Appendix K-4

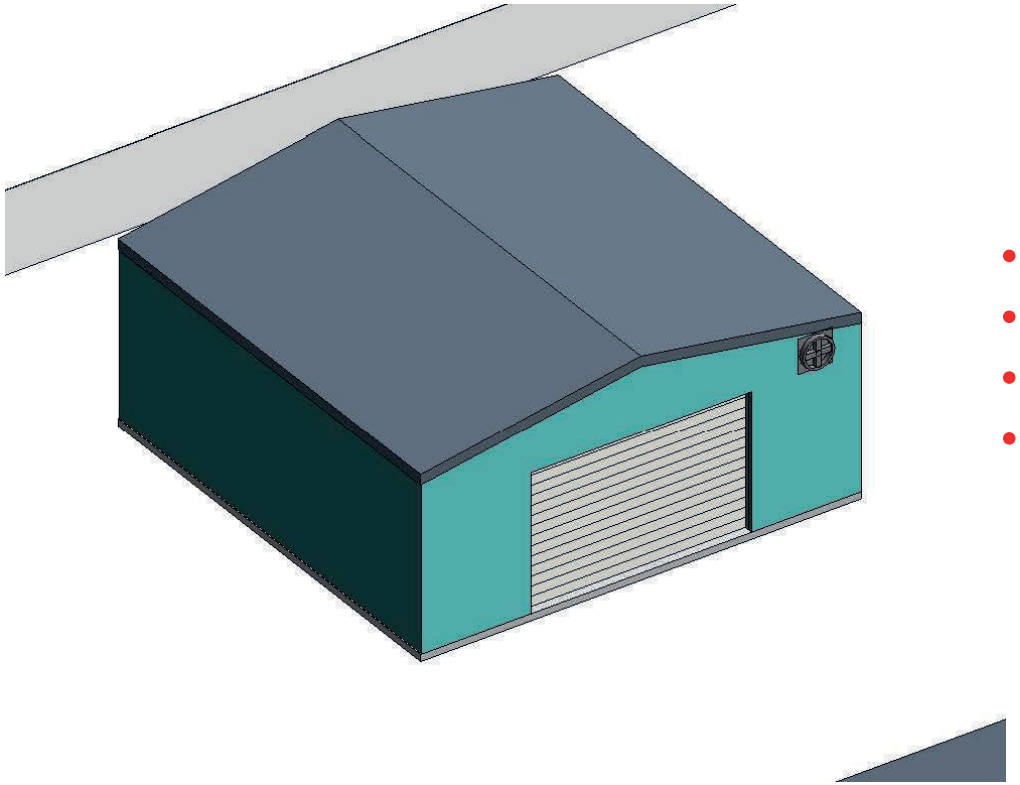


Ion Exchange System Monitoring and Control

Parameter	In-Line	Lab Analysis
Influent and Effluent Tank Level	X	
Influent pH	X	X
Post HCl Addition	X	X
Flowrate	X	
U-235/238 – Liquid		X
U-235/238 – Spent Resin		X

Secured Storage Facility

Model Used for Appendix K-6

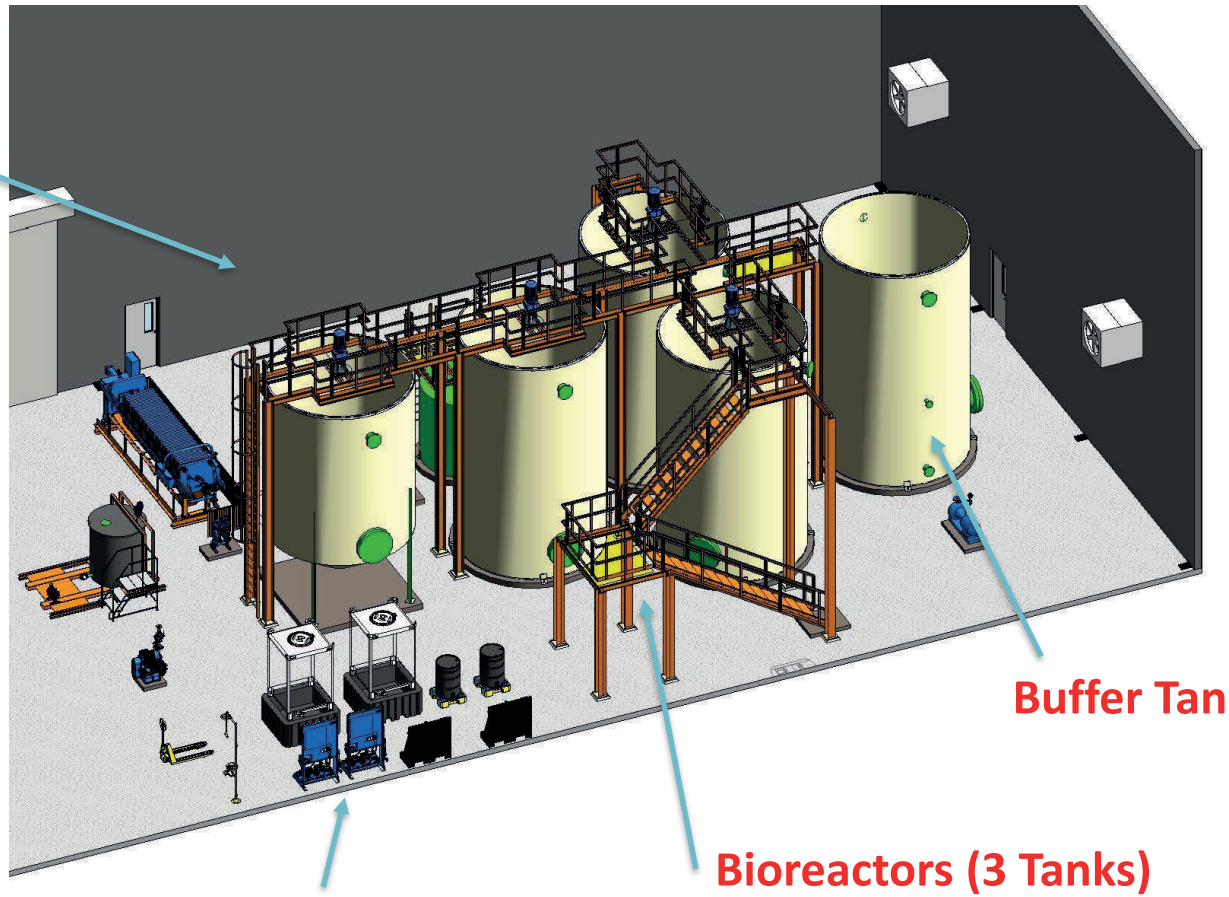


Building Features

- Metal Construction
- Single Access Door
- Removable Bollards at Door
- Other Bollards as Needed for Protection

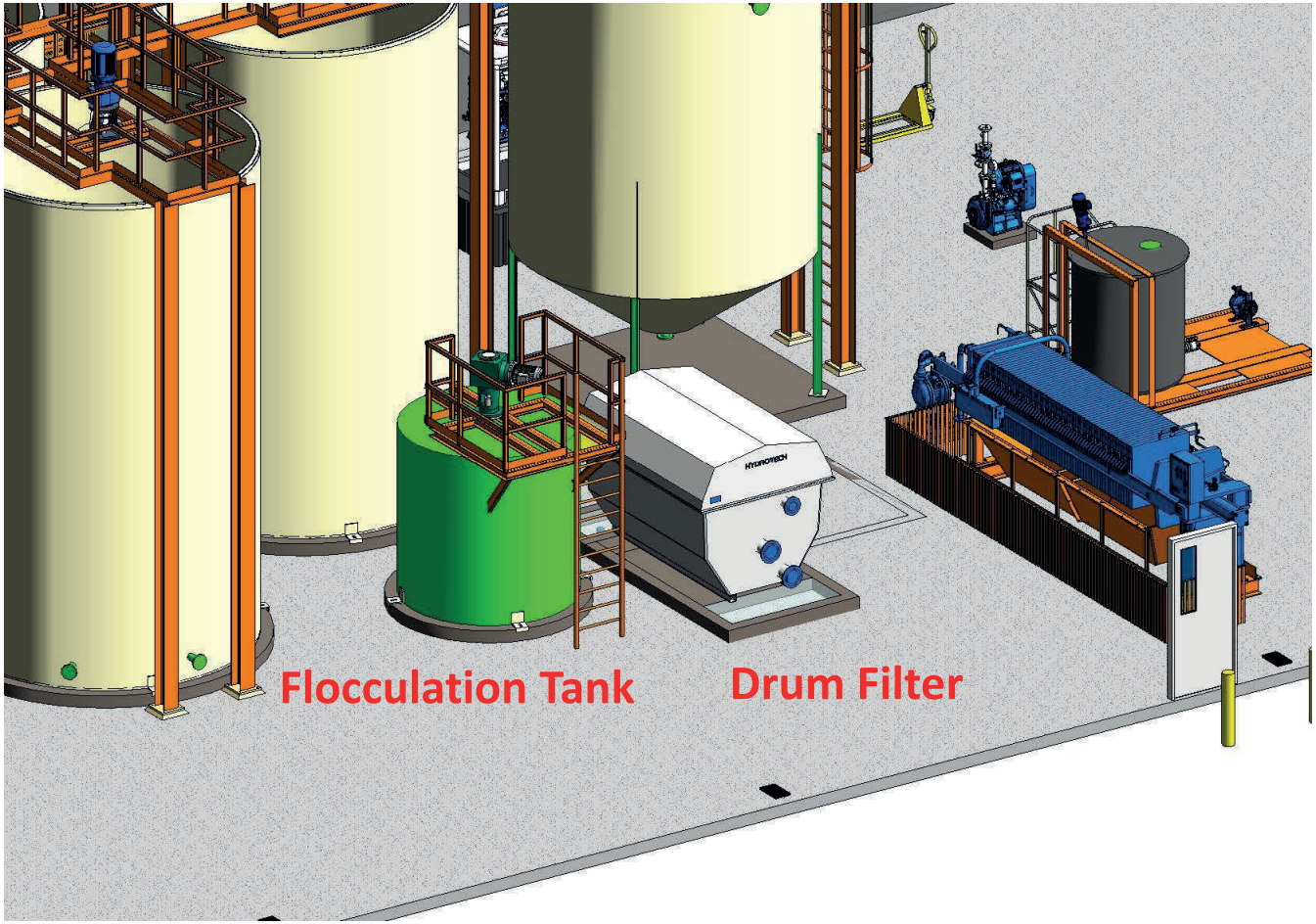
Biodenitrification System

Model Used for Appendix K-5



Biomass Removal and Handling System

Model Used for Appendix K-5

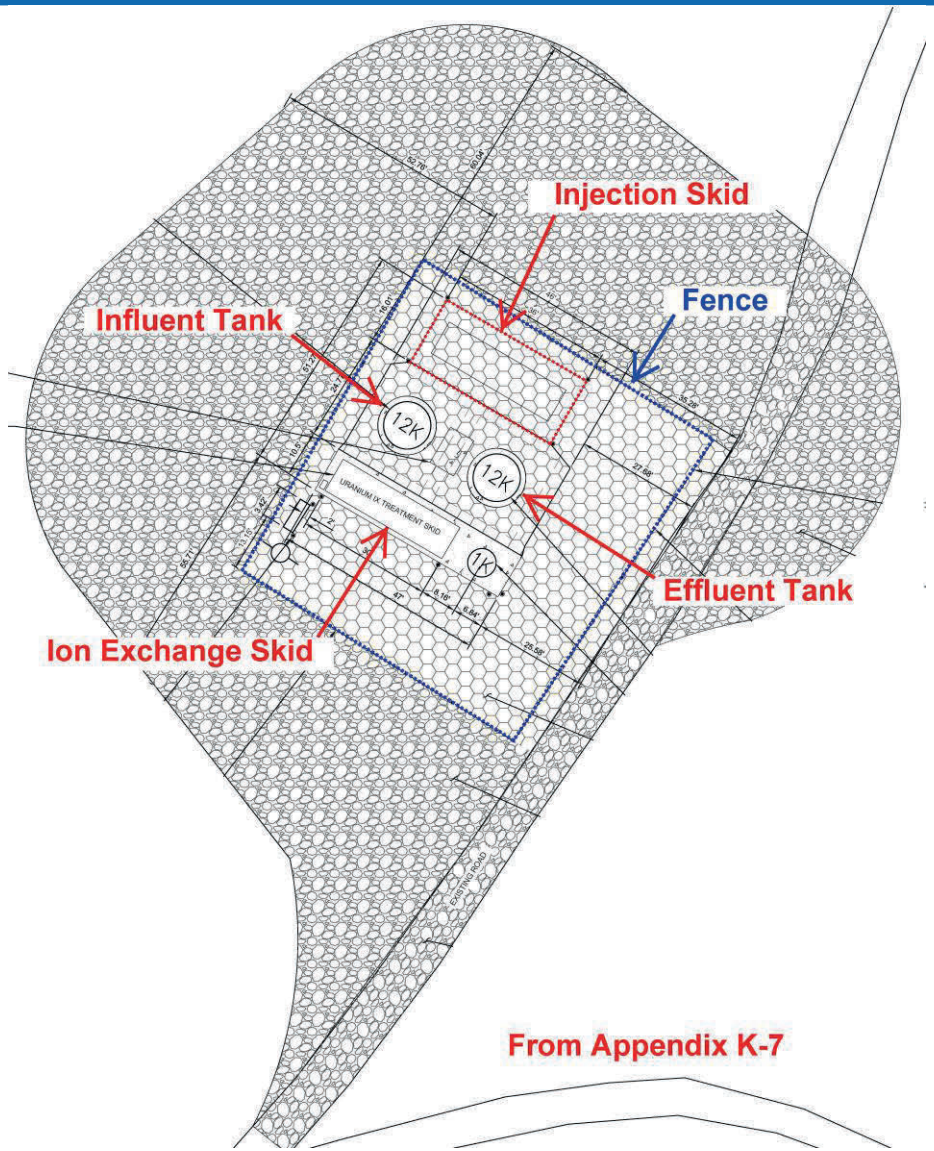


Filter Press

Biodenitrification System Monitoring and Control

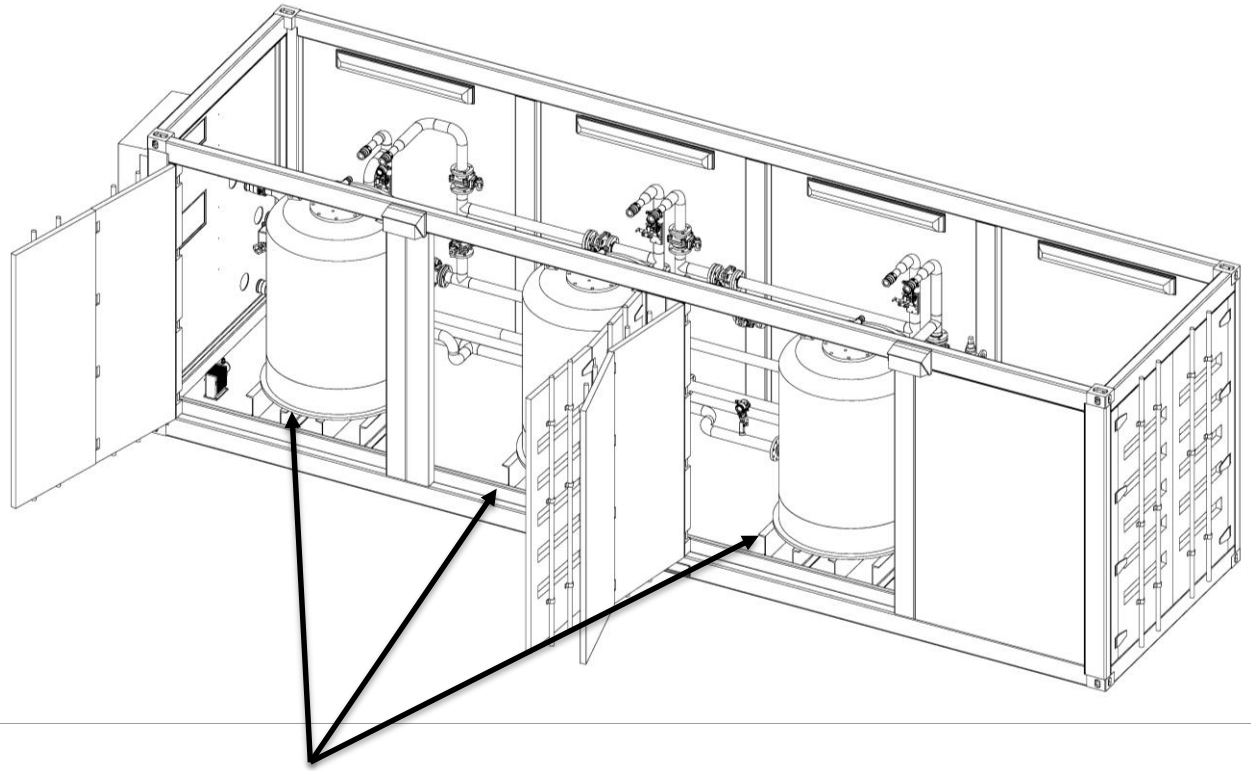
Parameter	In-Line	Lab Analysis
BufferTank Level	X	
Influent pH	X	X
Influent Nitrates	X	X
Flowrate	X	
Post Chemical Addition pH	X	X
Bioreactor Temperature	X	
Effluent Nitrate and Turbidity	X	X

Burial Area #1 Site



Enclosed Ion Exchange Skid

From Appendix K-7



Ion Exchange Vessels