Region 9 Enforcement Division
75 Hawthorne Street
San Francisco, CA 94105

Inspection Date(s):	January 30, 2024		
Time:	**Entry:** 1:20pm	**Exit:** 2:45 pm	
Media:	Water		
Regulatory Program(s)	Clean Water Act Pretreatment		
Facility or Site Name:	Desotec US LLC		
Facility/Site Physical Location:	2523 Mutahar St Parker AZ 85344		
Mailing address:	2523 Mutahar St Parker AZ 85344		
Facility/Site Contact:	Russell Smith	**Title**: Plant Manager	
	Phone: (724) 761-6998	**Email**: Russell.Smith@desotec.com	
Receiving POTW Name: **Address:**	Colorado River Sewage System Joint Venture 12501 Agency Rd., Parker, AZ 85344		
NPDES # :	AZ0021415		
Categorical Part/Subpart:	Centralized Waste Treatment		
NAICS:	562211		
SIC:	4953		

Facility/Site Personnel Participating in Inspection:

Name	Affiliation	Title	Email
Margaret Jeferson	Desotec	Product Management	Margaret.Jefferson@desotec.com
Jarrod Caswell	Desotec	Production Supervisor and Backup Emergency Coordinator	Jarrod.Caswell@desotec.com

EPA Inspector(s):

Adam Howell	US EPA	Inspector	Howell.Adam@epa.gov
Laila Hayani	US EPA	Inspector	Hayani.Laila@epa.gov

POTW / Federal/State/Tribal/ Representatives:

Ashley Longanecker	CRSSJV	Operations Manager	crssjvopsmgr@gmail.com

Report Author:	Laila Hayani	415-972-3475
	LAILA HAYANI Digitally signed by LAILA HAYANI Date: 2024.03.26 11:51:44 -07'00'	**Date:** 3/26/2024
Manager:	Elizabeth Aubuchon	415-972-3327
	ELIZABETH AUBUCHON Digitally signed by ELIZABETH AUBUCHON Date: 2024.03.26 15:41:06 -07'00'	**Date:**

SECTION I – INTRODUCTION

I.1 Purpose of the Inspection

The purpose of the inspection was to ensure compliance with pretreatment standards and applicable Federal regulations covering the discharge of wastewaters into publicly owned treatment works. The inspection consisted of a review of the process areas, chemical storage areas, and the wastewater treatment system.

SECTION II – FACILITY / SITE DESCRIPTION

II.1 Facility Description

Desotec US LLC (Desotec) operates a carbon regeneration facility on the Colorado River Indian Tribes (CRIT) reservation. This Desotec facility was formerly operated as Evoqua Water Technologies until Evoqua's carbon reactivation and slurry services was bought by the European company Desotec. The facility sends its wastewater to the publicly owned treatment works (POTW), Colorado River Sewage System Joint Venture (CRSSJV). It has a pretreatment permit with CRSSJV, and the plant manager sends wastewater pretreatment data to both CRSSJV and the CRIT on a monthly basis.

Desotec accepts spent carbon from across the country and reactivates it for commercial reuse. The facility accepts both hazardous and non-hazardous spent carbon, with a split of about one-third and two-thirds respectively. Suppliers of spent carbon must provide an analytical profile before it is considered for acceptance into the facility. The profiles are good for two years.

II.2 Wastewater Sources

Spent carbon is mixed from different sources. Water is added and the slurry is stored in tanks. The slurry is transferred to a furnace with 0% excess oxygen to ensure that the carbon doesn't burn. The slurry is subjected to progressively higher temperatures as it travels down through the furnace's four zones. The heat drives organic compounds and moisture out of the carbon, reactivating it. Hot gasses and vapor are treated before being release via an emissions stack. Part of the gas treatment system is a wet scrubber, which generates wastewater with a high concentration of organic compounds. This is the primary source of wastewater from the facility.

Other sources of wastewater can include wastewater from the cooling tower and cooling screw, rainwater falling within containment areas, and facility wash-down water. Floor drains throughout the facility also collect wastewater for pretreatment.

The facility previously used a boiler but has eliminated it from their system, so they no longer have boiler feed blowdown wastewater. The facility is also covered under a Multi-Sector General Permit (MSGP) for stormwater.

II.3 Wastewater Treatment

Wastewater is first sent to a first stage reaction tank for pH adjustment using NaOH. It is then sent to a reaction chamber followed by a flocculation mixing chamber where flocculants are added to separate out metals. Next, wastewater is sent to the clarifier, where solids settle to the bottom of the tank. Clean water goes to the clearwell chamber, followed by the filtration chamber before being tested and sent to CRSSJV.

Solid waste from the clarifier is pumped out to sludge chambers and sent to a sludge thickener tank. Thickened sludge is brought to the filter press to turn it into a filter cake, which is picked up by Clean Harbors for incineration off-site.

II.4 Compliance History

The plant manager stated that they have not violated their effluent limits since he began in 2021. In the event of an exceedance, he would immediately notify the CRSSJV team.

SECTION III – OBSERVATIONS

1. The operator noted that they observe higher TDS levels in the summertime due to increased cooling needs for the cooling tower.
2. The outside walls of the sludge chamber showed precipitate buildup, primarily around the piping system that is seen in Photos 3 and 4.

SECTION IV – AREAS OF CONCERN

The presentation of areas of concern does not constitute a formal compliance determination or violation.

1. The 55-gallon tanks of metal ion precipitants and coagulants had their labels facing inward towards each other, making them difficult to read.
2. It is unclear what the sludge chamber piping system carries and what the precipitate is on the outside of this piping system. Please provide a response as to the purpose of this piping system and a description of the precipitate.

SECTION V – DOCUMENTS REQUESTED/REVIEWED DURING INSPECTION

The EPA inspectors reviewed Desotec's monitoring and reporting records, which are filed electronically.

APPENDICES

Appendix 1 – Inspection checklist
Appendix 2 – Photograph Log

Appendix 1- INSPECTION CHECKLIST

I. GENERAL

Facility Type	☒ Categorical IU ☐ Significant IU ☐ Zero Discharge ☐ Unpermitted ☐ Other_____
Inspection Type	☒ Pretreatment Compliance Inspection (non-sampling) ☐ Pretreatment Compliance Inspection (Sampling)

Weather

☒ Dry ☐ Rain

☒ Clear ☐ Recent Rains

☐ Overcast ☐ _____

Was facility notified in advance?	Yes ☒ No ☐
Presented credentials?	Yes ☒ No ☐
Notes:	

II. RECORDS AND REPORTS REVIEW

RECORDS	Available onsite?			
	Yes	No	N/A	Not Inspected
Control Mechanism or Permit	☐	☐	☐	☒
Monitoring and reporting records for past 3 years	☒	☐	☐	☐
Maintenance records	☐	☐	☐	☒
Operational records/ log books	☐	☐	☐	☒
Spill prevention control and countermeasure (SPCC) plan	☐	☐	☐	☒
Slug Control Plan	☐	☐	☐	☒
Have any Spills or Slug Loadings occurred?	☐	☒	☐	☐
Was notification provided to POTW?	☐	☐	☒	☐
Are records available?	☐	☐	☒	☐
	☐	☐	☐	☐
Notes:				

REPORTS	Completed in time frame and frequency as required by permit?			
	Yes	No	N/A	Not Inspected
Has IU submitted Semi-annual reports to Control Authority?	☒	☐	☐	☐
Other:	☐	☐	☐	☐
Other:	☐	☐	☐	☐
Notes: *The plant manager stated that he submits monthly reports to CRSSJV.*				

III. SELF MONITORING PROGRAM

SAMPLING RECORDS	Yes	No	N/A	Not Inspected
Are monitoring reports submitted in timeframe and frequency required by permit?	☒	☐	☐	☐
Sampling Records have: Dates, times, location, & name of individual performing sampling:	☒	☐	☐	☐
Lab Reports have: Analytical methods, results, dates and time of analyses:	☒	☐	☐	☐
Are samples collected and preserved using methods approved in 40 CFR Part 136?	☒	☐	☐	☒
Detection limits are reported for "less than" results:	☐	☒	☐	☐
Does discharger monitor effluent more frequently than required by Permit?	☐	☐	☐	☒
If Yes, is all data collected reported?	☐	☐	☐	☒
Notes: *The results for all metals in the report submitted on June 12, 2023 are "ND". The MDL column is blank for each metal that has "ND" as a result.*				

SAMPLE MONITORING	Yes	No	N/A	Not Inspected
Are sample locations and methods representative of Effluent?	☒	☐	☐	☐
What Flow Measurement Device is utilized?				
☐ Flume ☐ Weir ☒ Meter: Type: Rosemount magnetic flow meter ☐ Calculation ☐ Other_____				
Device appears to be functioning properly without obstructions:	☒	☐	☐	☐
Is flow meter calibration available onsite?	☒	☐	☐	☐
Date of last calibration	10/20/2023			
Calibration performed by	Robert Sobrito			
Notes:				

ANALYTICAL MONITORING	Yes	No	N/A	Not Inspected
Does discharger perform on-site analysis for compliance monitoring?	☐	☒	☐	☐
List parameters analyzed on-site:				
Are records of equipment calibration available?	☐	☐	☒	☐
Is the on-site laboratory certified?	☐	☐	☒	☐
Certification Number				
Expiration Date				

COMPLIANCE MONITORING RATING CODE	Satisfactory	Marginal	Unsatisfactory	Not Rated
	☐	☐	☐	☒

Notes:

IV. SITE REVIEW OPERATIONS AND MAINTENANCE

General	Yes	No	N/A	Not Inspected
Does the facility appear to have potential for slug discharges (e.g. raw materials / chemicals without secondary containment)?	☐	☒	☐	☐
Is there evidence of/possibility for discharge other than at outfalls as described in the permit?	☐	☒	☐	☐
Is the facility as described in the permit/fact sheet for the following?				
Processes	☐	☐	☐	☒
Treatment Units	☐	☐	☐	☒
Flow and/or Production Rates	☐	☐	☐	☒
Outfalls & Monitoring Locations	☒	☐	☐	☐
Have there been significant changes in operation since last inspection or permit reissuance?	☒	☐	☐	☐
Plant schematic is up to date	☐	☐	☐	☒

Notes: *The plant manager stated that they no longer use a boiler, so there is no boiler feed wastewater. Additionally, the facility was previously owned by Evoqua and is now owned by Desotec.*

Treatment Units & Supporting Equipment	Yes	No	N/A	Not Inspected
Hydraulic and loadings rates appear consistent with the permit and plant design	☒	☐	☐	☐
Tanks, floats, pipes, valves, etc. appear in good working condition	☒	☐	☐	☐
Equipment appears adequately maintained and functioning correctly	☒	☐	☐	☐
There is no visible evidence of hydraulic short-circuiting	☒	☐	☐	☐
Process controls appear adequate	☒	☐	☐	☐
No safety concerns observed that may interfere with operation, maintenance, monitoring	☒	☐	☐	☐
Notes:				

Operation & Maintenance	Yes	No	N/A	Not Inspected
O &M Manuals are organized and maintained for use:	☐	☐	☐	☒
The maintenance activities, spare parts on-hand, and equipment available appear adequate to ensure continuous operation of treatment system:	☐	☐	☐	☒
Is a maintenance management program in place?	☐	☐	☐	☒
Number of open work orders:				
Oldest date of open work order:				
Notes:				

Stormwater	Yes	No	N/A	Not Inspected
Does facility have exposure and potential to discharge Stormwater?	☒	☐	☐	☐
Is discharger subject to Multi Sector General Permit (MSGP)?	☒	☐	☐	☐
If Yes→ Filed Notice of Intent?	☒	☐	☐	☐
If Yes → Stormwater Pollution Prevention Plan (SWPPP) available	☐	☐	☐	☒
Is there evidence of unauthorized (non-stormwater) discharges?	☐	☒	☐	☐
Are there signs of spills to soil, groundwater, or surface water?	☐	☒	☐	☐
Is adequate equipment available for spill cleanup and containment?	☐	☐	☐	☒

Are the following areas observed to be free of materials to prevent stormwater pollution?	Yes	No	N/A	Not Inspected
Storage areas	☒	☐	☐	☐
Fueling areas	☐	☐	☐	☒
Maintenance areas	☐	☐	☐	☒
Loading and unloading areas	☒	☐	☐	☐

Waste disposal areas	☐	☐	☐	☒
Chemicals are stored in secondary containment:	☒	☐	☐	☐
Notes:				

V. FINAL EFFLUENT

EFFLUENT APPEARANCE	Yes	No	N/A	Not Inspected
Clear	☐	☐	☐	☒
Colorless	☐	☐	☐	☒
Free of oil sheen	☐	☐	☐	☒
Free of floatables	☐	☐	☐	☒
Free of objectionable odor	☐	☐	☐	☒
Notes:				

VI. SINGLE EVENT VIOLATIONS

Were any Single Event Violations (SEV) Observed?	☐ Yes ☒ No
If Yes Describe SEV:	SEV CODE

Appendix 2 – Photograph Log

The photographs were taken during the inspection by Laila Hayani using an Olympus Tough TG-5 digital camera. Original copies of the photos are maintained by EPA Region 9.

Photo 1: First stage reaction tank for pH adjustment (right of photo) and reaction chamber (left of photo)

Photo 2: Reaction Chamber and Flocculation Mixing Chamber

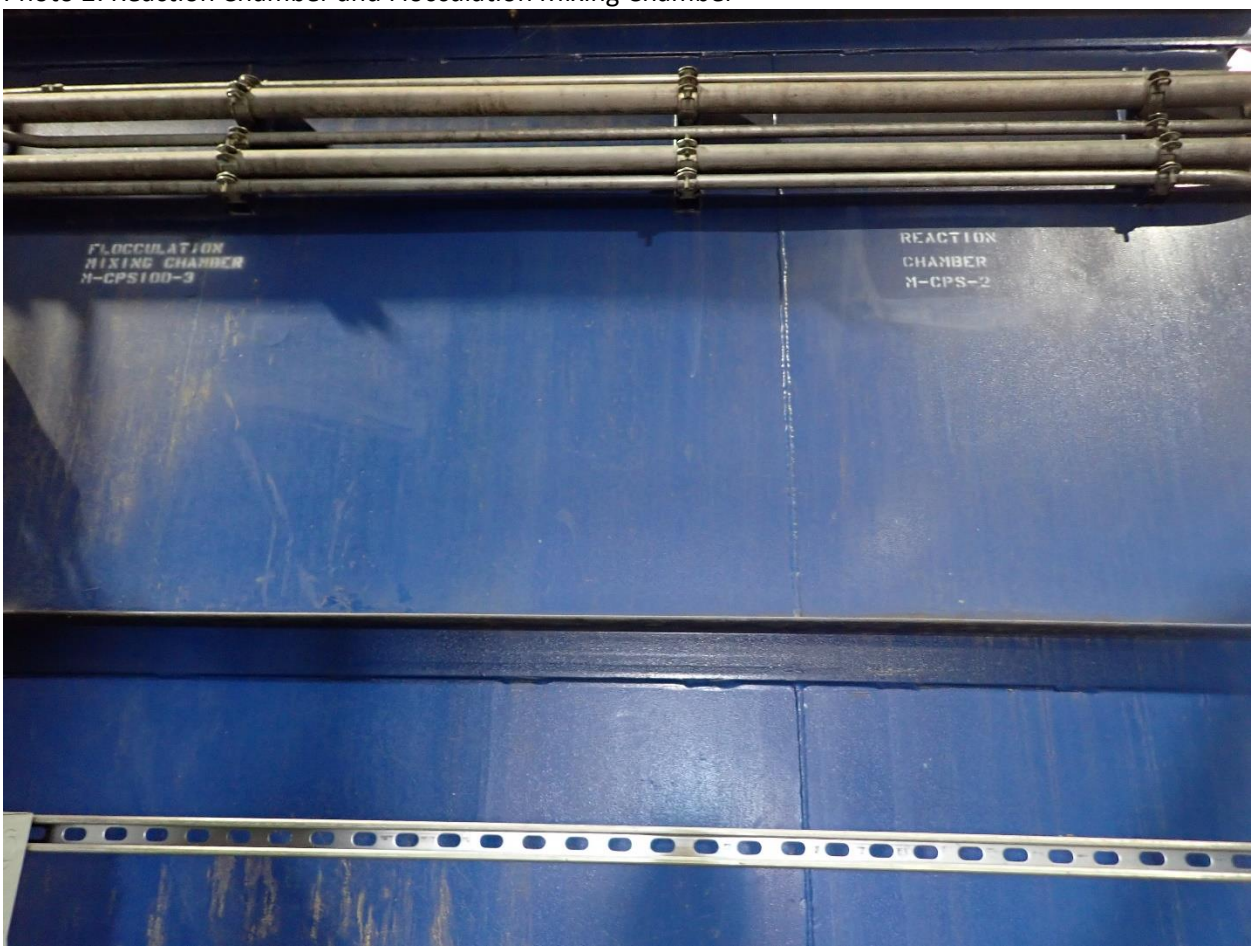

Photo 3: Clarifier chamber and sludge chamber

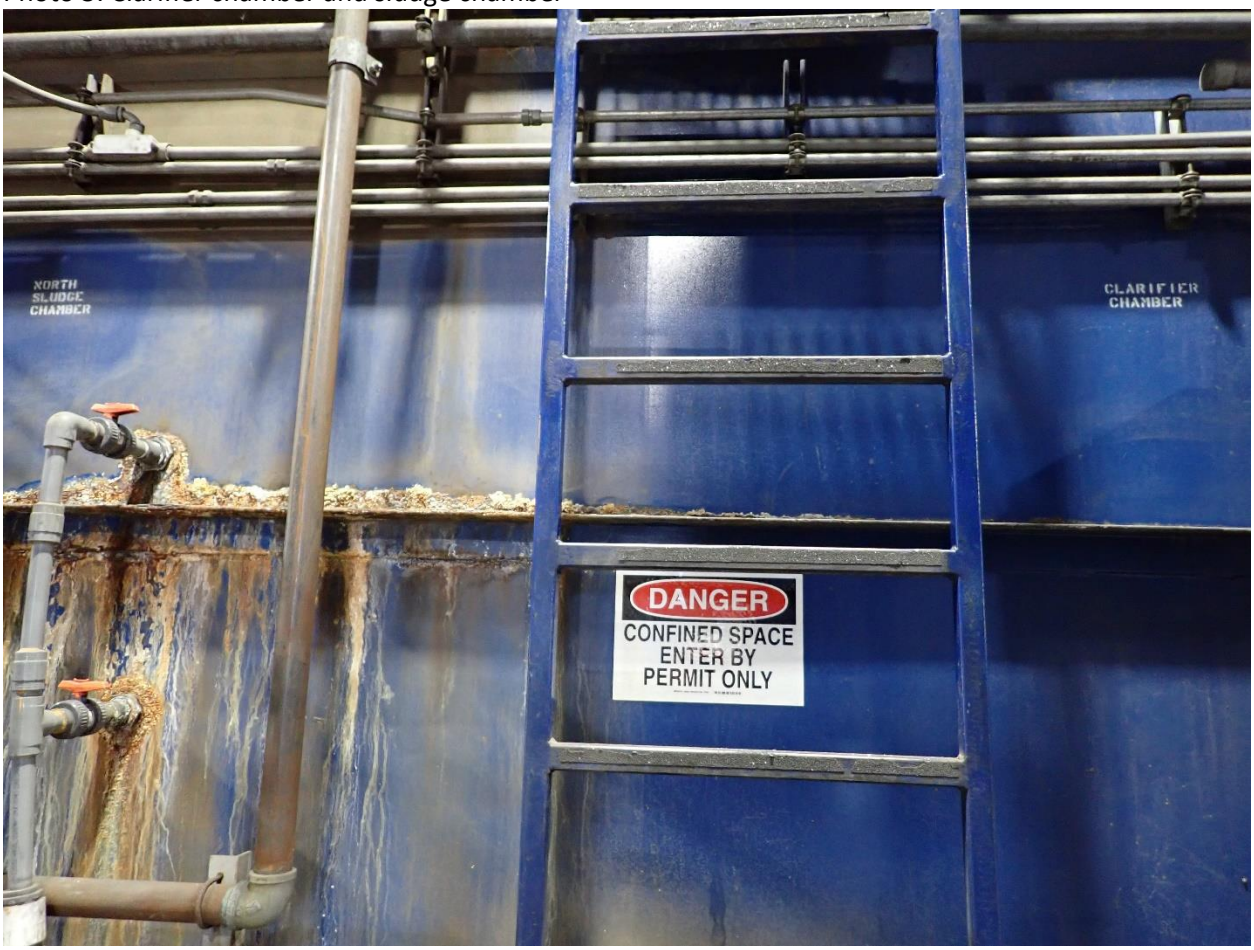

Photo 4: Clearwell chamber. Floor drains lead to the wastewater treatment system.

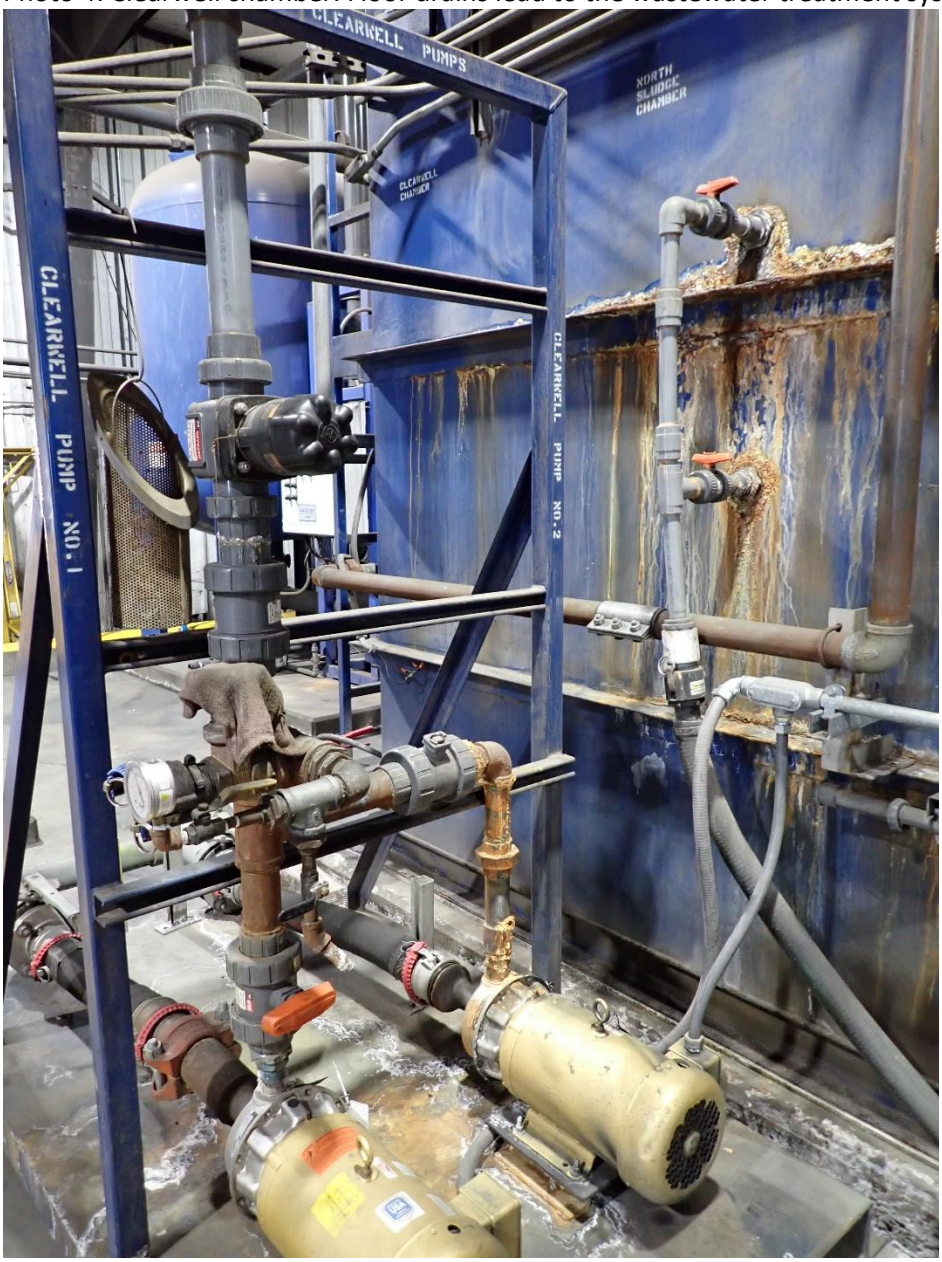

Photo 5: Filtration chamber

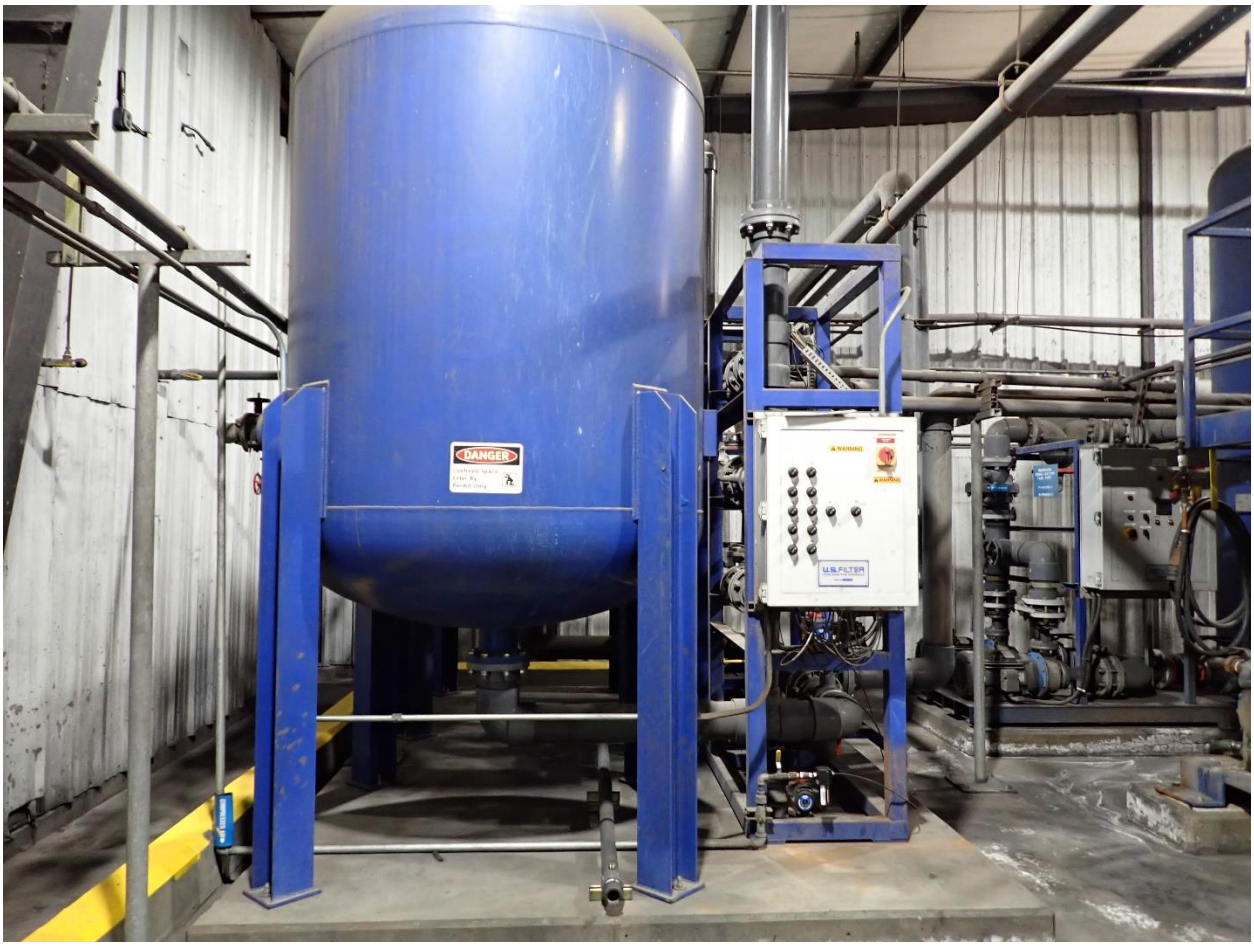

Photo 6: Sludge thickener chamber

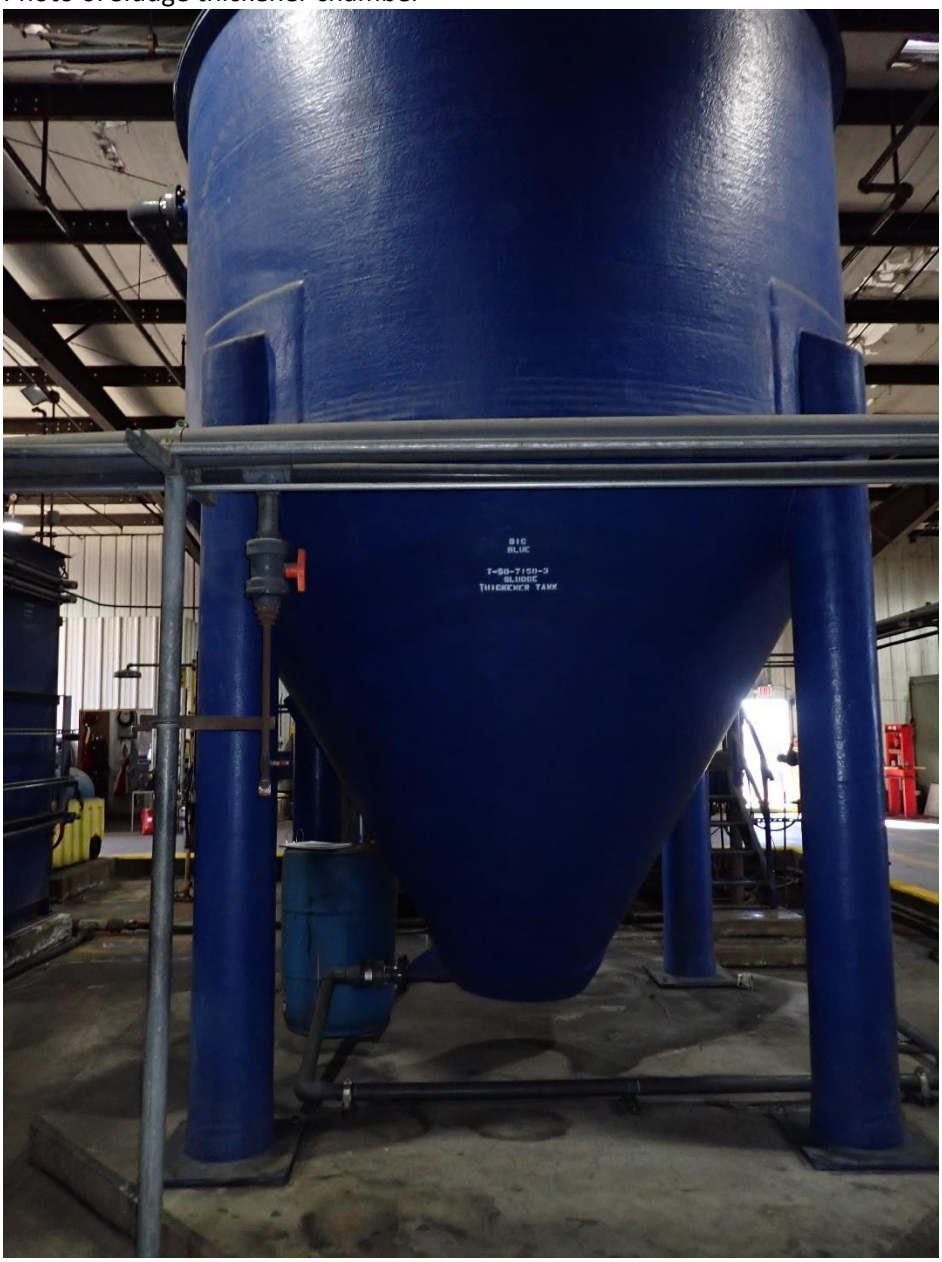

Photo 7: Sludge press condenses sludge into filter cakes, which are sent off-site for disposal.

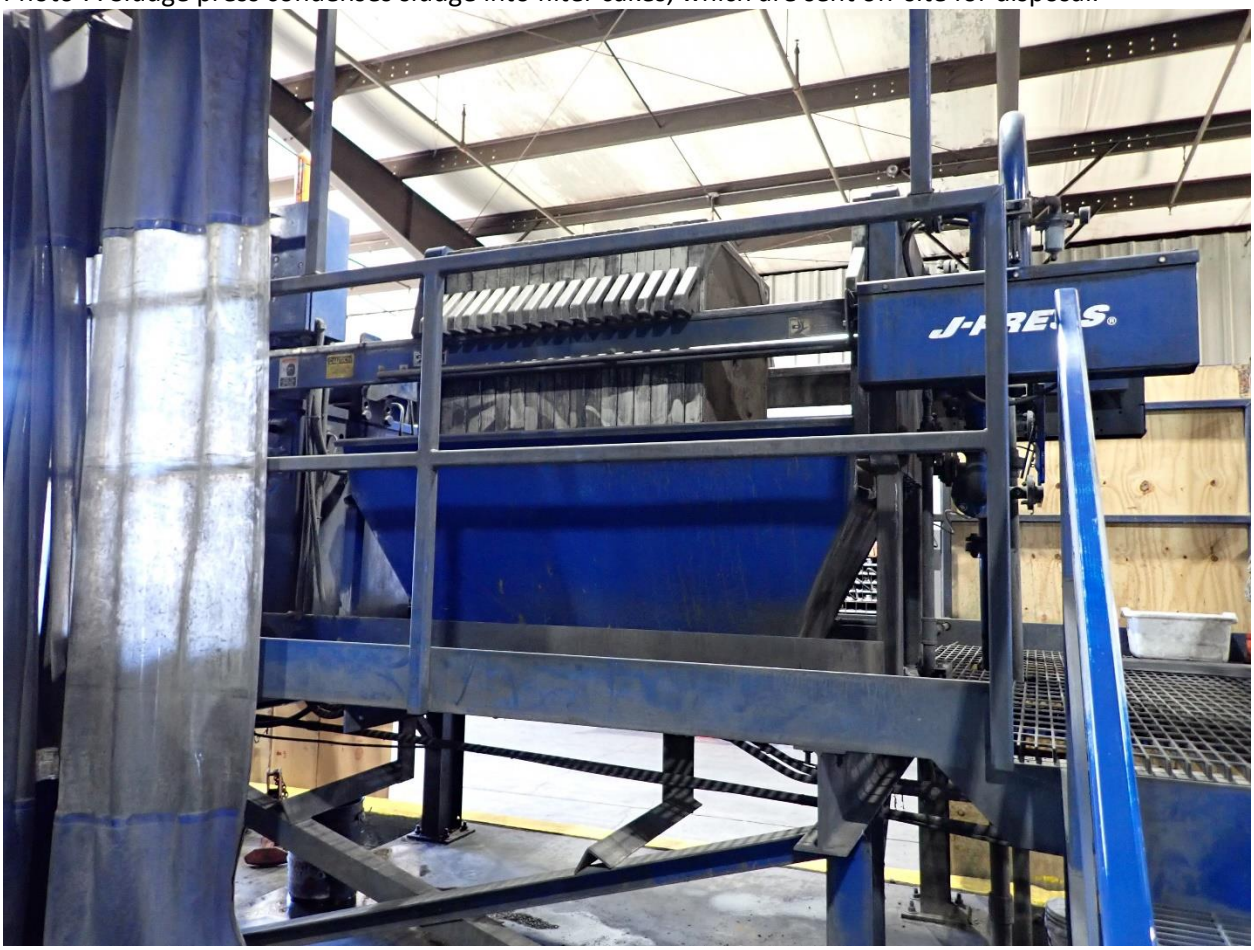

Photo 8: Sampling point for pH and TDS

Photo 9: Flow meter