

PROJECT TRAINING AND SUPPORT



ANTHC DEHE (Tribal Utility Support)

- ▣ Project related training/
support
- ▣ Technical assistance to
communities
- ▣ Formal operator training
- ▣ Plan review
- ▣ Engineers
 - Three Each
- ▣ Operation Specialists
 - Three Each
- ▣ Technical Writer



Smooth Transition to Community Ownership

- ▣ Project plan for operator training
- ▣ Comprehensive operator training
- ▣ Community specific manuals and operation aids
- ▣ Coordination with State RMW Program
- ▣ Follow up training and support



Notice to Proceed

- ❑ Operator training needs and operator training plan
- ❑ Project/Superintendent training role
- ❑ Certification requirements
- ❑ Project budget



Operator Training

- ▣ On the job training
- ▣ Start-up/commission
- ▣ Transition period
- ▣ Performance period
- ▣ Manual and Operation Aid Focused
- ▣ RMW coordination



Operator Training

- ❑ Water treatment and water systems
- ❑ Wastewater collection and disposal systems
- ❑ Boilers and hydronic systems
- ❑ Heating Systems
- ❑ Regulations
- ❑ Electrical and controls
- ❑ Generators
- ❑ Community meetings



Operator Training

- Performance based training
- Community verification
- Trainer check



TRAINING PLAN: Transfer Pumps

Community: Saxman

Date: 6/4/09

Project #: _____

- Operator identifies critical tank elevations
- Operator describes transfer pump and pumps operation
- Operator identifies components and functions in transfer pump control panel.
- Operator identifies components in tank level control panel
- Operator demonstrates safe entry into control panel
- Operator demonstrates proper lock out safety procedures
- Operator demonstrates proper voltage checks in transfer pump control panel. QUALIFY WITH VOLTAGE FROM DRIVE
- Operator locates pump troubleshooting guide in pump O&M manual
- Operator demonstrates basic reset of control panel
- Operator demonstrates basic knowledge of pump drive and comfortable with scrolling through basic menu.
- _____ Operator successfully troubleshoots panel fault # 1 N/A
- _____ Operator successfully troubleshoots panel fault # 2 N/A
- Operator successfully troubleshoots drive fault # 1
- Operator successfully troubleshoots drive fault # 2

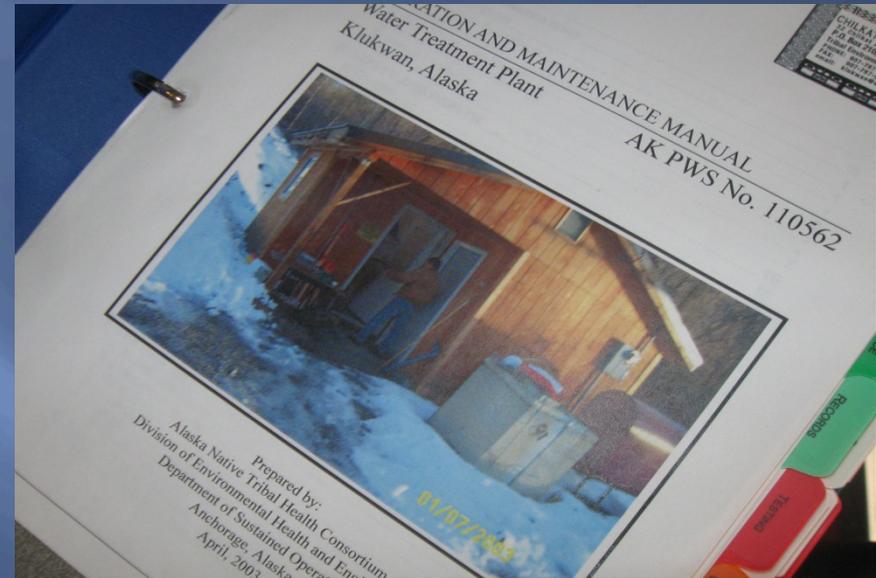
Operator: RICHARD SHIELDS

Date: 6/11/09

Trainer: COSTELLO
POE

Manuals/Operation Aids

- ❑ Manuals tailored to individual systems
- ❑ Daily, weekly, monthly and annual checklists.
- ❑ P.M. Plan
- ❑ Equipment literature



OUZINKIE WATER TREATMENT RECORD

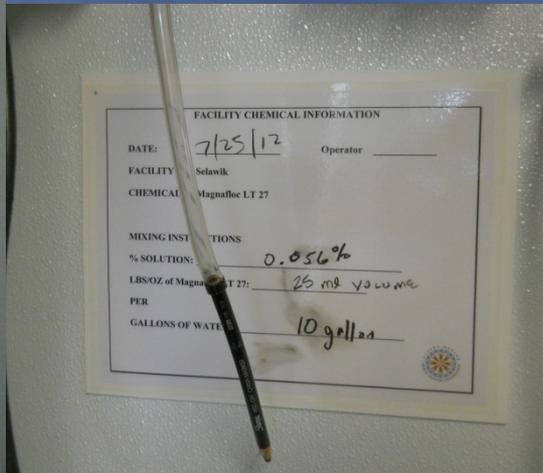
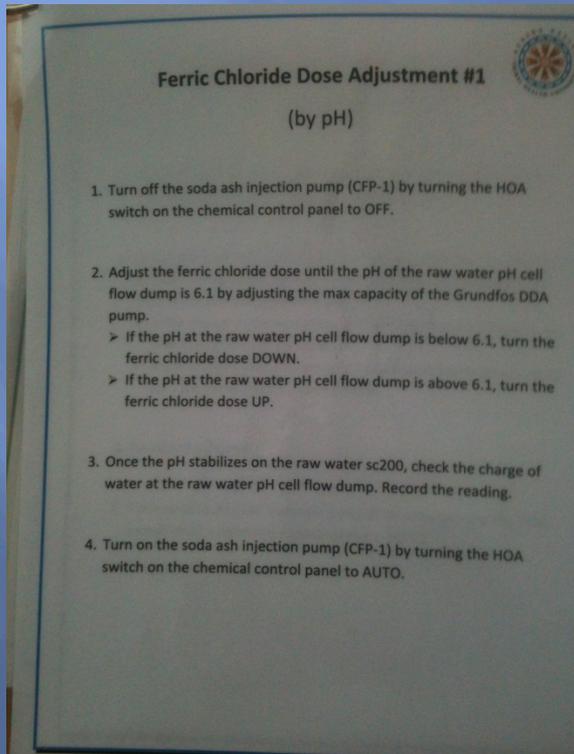
Raw Water	Raw Water	Filter Differential	Raw Water	Filtered Water	UV254		Ferric Chloride Addition		Process pH (Soda Ash)		Dist. gpd
					Raw	Treated	Feed	Control	Set	Actual	
Pressure	Flowrate	Pressure	MGD	MGD	UV	UV	Rate	ppt	Set	Actual	Raw
113.0	170"	0.663	0.031	0.04	0.022	0.04	5.75				
108.2	160"	0.73	0.031	0.03	0.020	0.01	5.35				
108.43	180"	0.678	0.031	0.02	0.020	0.02	6.35				
114.2	180"	0.65	0.031	0.03	0.020	0.025	5.85	11.0222	New Soda		
109.3	180"	0.683	0.031	0.03	0.022	0.03	5.85	7.14	11.0222		
102.3	142"	0.618	0.031	0.07	0.025	0.025	5.85				
105.0	177"	0.655	0.031	0.03	0.023	0.025	5.85				
105.8	160"	0.690	0.031	0.03	0.049	0.021	5.85	11.0222	New Ferric Chloride		
108.85	175"	0.671	0.032	0.02	0.022	0.021	5.82				
109.02	180"	0.517	0.021	0.11	0.017	0.025	5.82				
106.6	110"	0.519	0.021	0.13	0.019	0.02	5.85				
106.6	121"	0.502	0.022	0.10	0.021	0.01	5.85				
107.5	139"	0.50	0.022	0.12	0.022	0.025	5.85				
107.9	162"	0.46	0.022	0.07	0.026	0.025	5.85				
107.7	173"	0.44	0.022	0.06	0.019	0.025	5.85				

CHANGE FERRIC CHLORIDE DOSE



Manual/Operation Aids

- ❑ Wall charts
- ❑ Extensive labeling



Training Challenges



Operator Turnover

- ❑ Low pay and high expectations
- ❑ Talented move on to better paying jobs
- ❑ Retraining is required/Resources strained



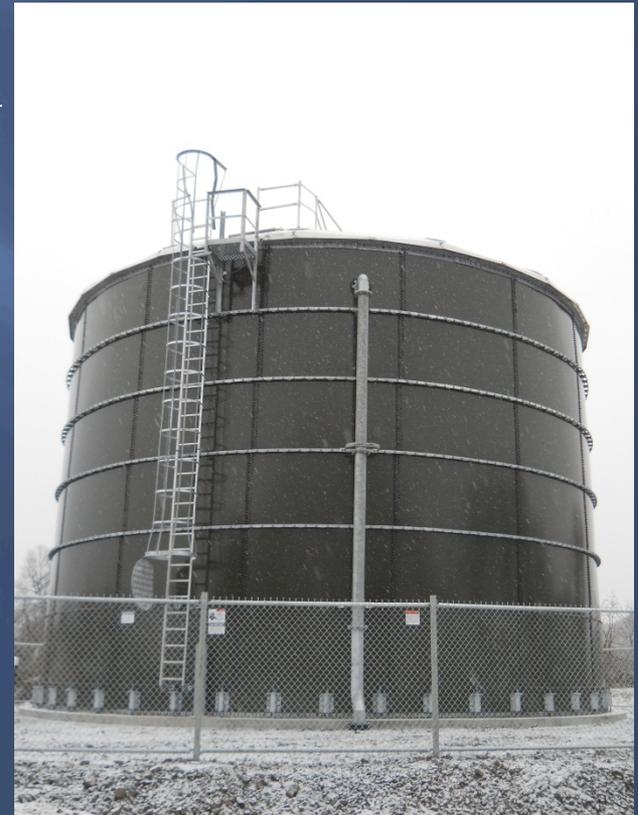
Increased Complexity

- ▣ Basic level of training
- ▣ Advanced water treatment
- ▣ Automation and controls
- ▣ Regulations



Refine Operation

- ▣ Improve basic operation past a basic level
- ▣ Operating temperatures
- ▣ Data and experience driven



Certification vs Operation ?

- ▣ ADEC Certifications
- ▣ Book Based knowledge vs ability to perform task.
- ▣ Test to measure outcome vs competence running system.

