Operating Plan for Delegation of Tasks and Activities

Meadow Mountain Water Supply Co - PSWID - 0207504

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Task or activity description	Authorized position(s)	Operational limits and response
Entry Point Chlorine Residual Readings	Trained Staff	If the chlorine residual measured is below 1.2 mg/L or above 2.0 mg/L, immediately notify the certified operator in responsible charge.Chlorine residuals are to be taken every day at the Entry Point Tap located on the distribution pipe before the highline pumps. Let the sample tap run for 10 seconds prior to collecting sample (follow chlorine test kit owners manual, and training (training includes demo and practice samples with ORC)). Record value in daily log.
Entry Point pH Readings	Trained Staff	If the entry point pH measured is below 7.0 mg/L or above 7.6 mg/L (target is 7.3), immediately notify the certified operator in responsible charge. pH to be taken every day at the Entry Point Tap located on the distribution pipe before the highline pumps. Let the sample tap run for 10 seconds prior to collecting sample (follow pH kit owners manual, and training (training includes demo and practice samples with ORC)). Record value in daily log.
Chlorine Pump Adjustments	Trained Staff	If the chlorine residual is trending low or high, (Entry Point residual goal is 1.3 mg/L with an acceptable range of 1.2 to 1.5 mg/L) adjustments can be made to the chlorine pump. Adjustments to feed should be made in small steps checking effect on final chlorine residual as the adjustments are made. Record changes made to the pump in the daily log.
Soda Ash Pump Adjustments	Trained Staff	If the entry point pH is trending low or high, (Entry Point pH goal is 7.3 mg/L with an acceptable range of 7.1 to 7.5 mg/L) adjustments can be made to the soda ash pump. Adjustments to feed should be made in very small steps checking effect on final water pH as the adjustments are made. Because MMWS alkalinity is low, small adjustments to soda ash can have a large effect on entry point pH. Feed rate adjustments should be in 2% increments (e.g. 40% to 42% pulse rate). Record changes made to the pump in the daily log.
Adding/Mixing Chlorine Solution	Trained Staff	Using 6% chlorine solution (PureBright), mix 6 gallons into 12" of final solution. When the chlorine solution drops below 12" from top of solution tank, chlorine solution should be mixed, stirred lightly with power mixer, and recorded in daily log sheet.
Adding/Mixing Soda Ash Solution	Trained Staff	Using dry soda ash powder, mix 6 lbs of soda ash into 12" of final solution. When the soda ash solution drops below 12" from top of solution tank, soda ash solution should be mixed. The solution should be continuously stirred with power mixer while soda ash powder is added until all soda ash is disolved. Recorded in daily log.

Membarne Integrety Test	Trained Staff	Membrane integrety test is to be conducted once per week on Tuesdays by the operator on duty for the day. A test on an individual ultrafilter unit can also be performed if an unusual TMP is noted during daily checks. Follow the SOP for Membrane integrity testing. Record test on daily log and in maintenance log.		
Ultra-Filter Clean in Place	Trained Staff	Ultra-filter clean in place (CIP) is conducted every third week on Tuesday by the operator on duty for the day. This may be done more frequently if rising TMP is noted (this will typically occur during spring run-off). Follow the SOP for filter clean in place. Record test on daily log and in maintenance log.		
Raw Water Line Inlet Backwash	Trained Staff	Intake galleries on Fox Creek and Willow creek occasionally clog with sediment. This typically occurs during spring runoff. Each plant inlet has a pressure gauge where the inlets enter the plant. < 20psi at one of the inlets when the plant is running is an indication that a backwash may be required. A drop in daily flow through one of the inlets is also an indication. Daily flow through each of the inlets should be calculated and compared during each daily check. A change in the balance of water coming from one source or the other could also be an indication that a backwash is required. Follow the SOP for intake operation and maintenance to backwash intake gallery. Record on daily log.		
Ultra-Filter Power Drain	Trained Staff	An Ultra-filter Power Drain is to be used when an unusually high filter TMP is noted as a first attempt to clear filtrate from a filter. Follow the SOP for Ultra-Filter Power Drain. Contact the ORC if a power drain does not correct the TMP issue.		
Distribution Flushing	Trained Staff	Notify homeowners before performing this proceedure to advise them not to use water during flushing operations. Flushing Hydrants are located at each of the system bleeders. Open one of the flushing hydrants at a time (slowly open), Record initial chlorine residual value, flush water for 5 to 10 min until the flush water is clear, check chlorine residual to ensure it is above 0.4 mg/L (if below a 0.3 mg/L or above 2.2 mg/L call ORC immediately) and record concentration. Slowly close the flushing hydrant. Record in maintenance log.		
Meter Replacement	Trained Staff	Will be conducted case by case situation. If a meter has been regisitering (reading) zero "0" for 3 consecutive months a meter replacement may be warranted. Staff will notify ORC prior to any construction (meter replacement) and will follow AWWA Standard C605-13 and manufacture installation guide. The "water district" is to notify the homeowner that a meter replacement will be taking place, while the trained staff or ORC will notify the homeowner that flushing should be done post meter replacement. Record repair in maintenance log.		

Sensaphone Alarm Response	Trained Staff	The water treatment plant has sensors to ensure that the plant is operating correctly and a sensaphone system that will call all of the trained operators if it senses a problem. The operator on daily duty should go to the plant to investigate and resolve all alarm calls. If the operator on duty is not available, another operator should respond. When an operator is responding to an alarm, they should acknowledge the alarm with the code "555". The alarm system will continue calling operators until the alarm is acknowledged. Notify the operator in charge of all alarms and resolutions. Record alarm and resolution in the maintenance log.		