



PUMP STATION INSPECTION CHECKLIST

SITE

- Inspect asphalt, check slope for proper drainage, puddles
- Inspect grounds
- Inspect fencing and gate. Insure correct operation of gate (Full swing)
- Inspect for correct material (Vinyl coated black or brown) Posts and fabric
- Insure that all debris has been removed from site
- Insure that all required signage has been installed (Station I.D. sign)

WETWELL

- Inspect interior coating (cracks, blisters, loose material, exposed concrete, etc)
See Pierce County Standard Specifications 5.8.3.6
- Inspect exterior coating (Coal Tar Epoxy)
- Inspect concrete penetrations (discharge piping, conduits, etc)
- Insure that all penetrations are cored and link-sealed then finished with epoxy grout
- Check proper operation of aluminum hatch and placement per standard design
- Check and verify opening of hatch to accommodate pump extraction
- Verify all required signage has been provided (Confined Space Entry – permit required, OSHA, etc)
- Verify operating range of (Bubbler and/or floats) as per design
- Inspect alignment of discharge piping
- Insure that stainless bolts are utilized in ductile piping
- Inspect paint used on piping (Series 66 and top coat of 73)
- Insure that FCA is installed at 90 degree elbow on discharge piping in wet well
- Inspect alignment of poly ladder rungs
- Ladder placement, Ladder mast bracket, Grating
- Inspect grating platform and supports (stainless and Fiberglass grating) w/SS fasteners

PUMPS

- Pull each pump and reset, check for ease of removal and proper sealing at disconnect flange and alignment of rails
- Inspect for any damage to paint on pump
- Inspect cord and cord placement

VALVE VAULT

- Check coating for any cracks, blisters, etc
See Pierce County Standard Specifications 5.8.3.6
- Inspect paint on all mechanical piping (cracks, blisters, loose paint)
Color Code & DFT Mils 4.2214926 mils
- Inspect alignment of discharge piping
- Verify pressure gauges are in place and the correct type
- Check and verify opening of hatch
- Verify all required signage has been installed (Confined Space Entry–permit required)
- Inspect and insure that drain line is at grade to wetwell from valve vault

PIPING

- Insure alignment of discharge piping between wetwell and valve vault

ELECTRICAL

- Verify that seal offs are sealed with CHICO.
- Verify that pump motor leads are a continuous run from pump to control panel.
- Verify the usage of stainless steel strain reliefs on all pump and float cords
- Verify that bubbler line is sealed off in conduit
- Verify seal offs are located in vault. All conduit penetrations to be grouted.
- Verify that there has been a signed approved electrical inspection report from Tacoma Power or Washington State Labor and Industries.
- Insure that ground rods are accessible and have risers installed as per spec for access.

CONTROL PANEL

- Insure that wiring schematic is in door pocket
- Insure that Control side of panel is oriented to face the wetwell
- Verify UL labeling
- Inspect enclosure for chipped paint or other damage
- Utilize Mil thickness gauge to verify proper DFT of paint. (4.45602 mil) 360 square feet/gallon–TNEMEC Series 66 and 73. See section 17.2.2.1.3
- Verify signed off electrical inspection report from governing electrical inspector
- Verify all pilot lights are operational
- Verify all wires are labeled
- Verify all placards are in place
- Verify all wiring debris has been removed from enclosure
- General inspection of field wiring
- Conduct operation test of controls

- Pump manufacturer to supply additional Motor Nameplates (Crew to place on interior door)
- Specialty products mounted and placed in interior or control panel. See section 17.6
- Panel Manufacturer to conduct O&M training

TELEMETRY SYSTEM

- Visually verify all components have been provided and pre-wired (radio, antenna, all associated wiring, alarm set points, etc)
- Pierce County Instrumentation Specialist to program/setup system for communications to Chambers Creek Wastewater Treatment Plant base station and aim antenna if needed
- Check communication link to Chambers Creek Wastewater Treatment Plant base station (Data fails)
- Inspection of field wiring
- Insure that standard mast and antenna are supplied–Standard anchoring method

OPERATIONS TEST–PUMP SYSTEM

- Insure contractor and contractor's representatives are present during start up. Electrician, Control Panel builder, mechanical, pump manufacturer's representative, Generator representative optional
- Verify pump rotation–reverse leads as required
- Throttle valves while filling FM, if applicable
- Draw down test. Calculate actual GPM and compare to design specifications. Check both pumps
- Add water to system and/or simulate flow and confirm operation of liquid level control system
- Inspect sealing flange of pump for proper seal (No leaks)
- Pull pumps and extract from wetwell. Insure clearances are maintained and pumps travel smoothly on rail system. Check pump cords–avoid obstructions
- Test high water and low water alarms
- Note any unusual noises/vibration

OPERATIONS TEST–GENERATOR

- Verify Diesel tank is fully fueled after factory representative has performed load run.
- Run generator in Manual mode. Check hertz, voltage, etc. Verify operation of load bank
- Verify certified affidavit from Generator Manufacturer/Representative of startup and load testing
- Receipt of Manufacturers warranty–2 year
- Test auto–shut down on overspeed circuit
- Test to see if genset meets Decibel requirements of spec

- Simulate power failure (Disconnect main breaker). Verify automatic start of genset
- Verify automatic transfer of power to emergency source. Check for proper time delay between sequences
- Let run for 10 minutes
- Restore Utility power source. Verify automatic retransfer, cool down cycle time, and shut down
- Test load bank for proper operation
- Insure that separate circuits are provided for battery charger and block heater
- Test block heater and battery charger for proper operation

OPERATIONS & MAINTENANCE MANUALS

- Receipt of Operation and Maintenance Manuals
- Check for detailed equipment literature
 - Fairbanks Morse Submersible pump – O and M
 - Dezurik Plug Valves
 - Mueller Swing Check Valves
 - Gauges
 - Ball Valves
 - Superior Custom Controls – Control Panel
 - Russelectric Transfer Switch
 - Nordic/Furnas Softstart
 - Thomas air compressor
 - Wiring Schematic
 - Specification Sheet
 - Outline drawing
 - Operators Manual
 - Parts Catalog
 - Installation Manual
 - Engine Operation and Maintenance Manual
 - Engine Parts catalog
 - Certified Test Record
 - Approved Construction Drawings
 - Plan, Profiles, and Details
 - Approved Gravity (Pump station tributary)

SPECIALTIES – SECTION 17.6

- Insure that all specialties are provided (See North Surprise Spec. Section 17.6)
- Correct placement of signage including station ID sign