

Diary Number: _____

Inspector Name: _____

TRACS Number: _____

Date: _____

Division VIII: Roadside Development
Title: Pump House Electrical Equipment

Pump Station Name
Route
Station
Offset
Sheet Number
Reference Number

Attribute Numbers	Compliance	Narratives	References
0.		All stakeholders have participated in the pre-activity meeting (can be combined with other pre-activity).	Recommended
1.		Approved work in confined spaces complies with OSHA & the contractor's approved SAFETY PLAN.	Standard Specifications 107.08
2.		Equipment is installed in a neat and workmanlike manner with ample space allowed for removal, repair or changes to equipment.	Special Provisions
3.		Electrical equipment is firmly secured to the surface on which it is mounted and installed true and level in accordance with the manufacturer's recommendations.	Special Provisions
4.		Motors and electrical equipment are grounded in conformance with the National Electrical Code (NEC) and welded with exothermic welding technique or by use of an approved ground clamp.	National Electrical Code
5.		Nameplates are on all items of electrical equipment and appurtenances and are made of laminated composition material conforming to the specified requirements.	Special Provisions
6.		Properly sealed explosion-proof conduit seals and fittings for Class I, Division I, and Group D hazardous areas are installed in explosion-proof equipment.	National Electrical Code

7.		The wet well is a Class I, Division I, Group D hazardous area and installed in conformance with NEC Article 500.	National Electrical Code Article 500
8.		Rigid metal conduits are heavy-wall, hot-dipped galvanized steel conforming to the American National Standard Institute (ANSI).	American National Standard Institute C80.1
9.		PVC conduit is Schedule 40 conforming to (NEMA) Standard TC2.	National Electrical Manufacturers Association
10.		Metal conduit fittings and covers are hot-dipped galvanized with gaskets in conformance with NEMA and ANSI C80.4.	National Electrical Manufacturers Association Publish FB-1
11.		Rigid metal conduit expansion joint fittings are of standard manufactured products designed to prevent damage to cable and equipped with an approved means of providing electrical continuity of the conduit run.	Special Provisions
12.		All conduits, boxes, fittings and accessories are installed in conformance with the specified requirements.	National Electrical Code
13.		Conduits in explosion-proof areas are installed in conformance with NEC, Class I, Division I, Group D.	
14.		Junction, outlet, device terminal, pull box and covers are made of cast steel and are hot-dipped galvanized conforming to Underwriters Laboratories (UL) 514.	Special Provisions
15.		Conductors are annealed copper wire in conformance with the Insulated Cable Engineers Association (ICEA) Standards and the NEC.	Insulated Cable Engineers Association
16.		Markers for cabling are B-292 vinyl as manufactured by Brady, Seaton or equal.	Special Provisions
17.		Volt power cables are single conductor, suitable for 600 volt service and consisting of copper conductor 900C with heat and moisture resistant insulation Type THWN/THHN, and Number 4 and larger is XHHW.	Special Provisions
18.		Conductors are Class B stranded, for sizes Number 6 and smaller THWN/THHN, and for Number 4 and larger XHHW.	Special Provisions
19.		Control cables are single or multi-conductor 600 volt service consisting of Class B or C stranded with insulation the same as for 600 volt power cable.	Special Provisions
20.		Individual conductors of the multi-conductor cable are color coded and have a minimum wire size of Number 14 AWG.	Special Provisions
21.		Lighting wire is single-conductor, 600 volt with insulation the same as for the 600 volt power cable and no smaller than Number 10 AWG.	Special Provisions
22.		Fixture wire is Number 14 AWG with Class B stranding and conforming to ANSI-CI and NEC requirements.	American National Standard Institute
23.		Instrumentation and signal cables for carrying digital, analog, or d-c pulsed signals are of stranded tinned copper, 105-C APVC insulated for 600 volt service with overall shielding and PVC jacket.	Special Provisions
24.		Conductors are a minimum of 16 AWG, Class C stranded, color coded and numbered as required.	Special Provisions

25.		Receptacles are corrosion resistant, duplex type, 3-wire grounding, rated 20 A., 125V AC or DC manufactured by Hubbell, Leviton or equal.	Special Provisions
26.		Receptacle on cord is a single outlet type with 3 wire grounding rated for 20A at 120V AC, is wound on a wall mounted reel assembly and labeled for use in Class I Div. locations, manufactured by Appleton Electric Company or equal.	Special Provisions
27.		Switches used for the control of fixtures are corrosion resistant toggle type, specification grade, AC only, and rated 20A, 120-277V AC.	Special Provisions
28.		Switches are single pole and 3-way, manufactured by Hubbell, Leviton or equal.	Special Provisions
29.		Panel boards are dead-front safety type, conforming to NEMA and NEC Article 384 and UL 67.	Special Provisions
30.		Circuit breakers are NEMA AB1, molded-case, bolt-on, quick-make/quick-break type with a mechanically trip-free switching mechanism and a thermal trip.	Special Provisions
31.		The door has concealed hinges, trim clamps, a combination catch and a flat-key lock with two keys.	Special Provisions
32.		Ground conductors are bare, soft drawn, Class B stranded copper cables, cable-to-cable and cable-to-ground rod connections welded by thermo weld process or equal.	Special Provisions
33.		The grounding system is in conformance with the NEC specified requirements.	National Electrical Code
34.		Driven ground rods are 5/8 inch in diameter and 10 feet or more in length.	Special Provisions
35.		Ensure that automatic transfer switch is operable.	
36.		Explosion proof lights with heavy duty guards in wet well.	
37.		Check blowers and fans are; Ensure proper operation and rotation, Check timers on exhaust fans and switches for proper operation.	
38.		Check operation of odor control system including controls and grid condition.	
39.		Check the pump alternate- lead/lag on both bubbler and float systems.	
40.		Ensure that all equipment is connected to grounding system	
41.		Conduct 24 hour run test on backup generators to ensure proper operation	
42.		Quantlist Minimum Frequency is being followed, one per pump house.	Construction Bulletin 07-01