

GENERAL PROCESS EQUIPMENT AND PIPING NOTES (CONTINUED)

43 21 13 CENTRIFUGAL LIQUID PUMPS (CONTINUED)

H. TESTING

1. ALL FACTORY TESTING SHALL CONFORM TO THE MOST CURRENT EDITION OF THE HYDRAULIC INSTITUTE STANDARDS. ALL PUMP PERFORMANCE TESTING SHALL BE PERFORMED AT THE MANUFACTURER'S FACILITY. (SPECIFY IF THERE ARE ANY ADDITIONAL STANDARDS)
2. PERFORMANCE TESTING SHALL BE VIRTUALLY WITNESSED AND PERFORMED ON THE FULLY ASSEMBLED UNIT WITH A JOB MOTOR. THE TEST SHALL COVER SEVEN POINTS INCLUDING THE DESIGN POINT (HI 14.6). THE DESIGN POINT SHALL BE USED FOR ANY PERFORMANCE EVALUATION.
3. HYDROSTATIC TESTING SHALL BE NON-WITNESSED IN COMPLIANCE WITH HI14.6. HYDRO TESTING IS TO BE PERFORMED ON THE PRESSURE CONTAINING COMPONENTS. CERTIFIED TEST RESULTS SHALL BE PROVIDED FOR APPROVAL PURPOSES PRIOR TO SHIPMENT.
4. A STANDARD 10 BUSINESS DAYS' NOTICE SHALL BE GIVEN TO THE ENGINEER BEFORE STARTING ANY WITNESS TESTING. THE MANUFACTURER SHALL NOT BE RESPONSIBLE FOR EXPENSES INCLUDING, BUT NOT LIMITED TO TRAVEL, FOOD, AND LODGING TO OBSERVE ALL WITNESS TESTING.
5. A WRITTEN APPROVAL FOR ALL WITNESS TESTING IS REQUIRED PRIOR TO RELEASE FOR SHIPMENT. ALL NON-WITNESS TESTING SHALL REQUIRE WRITTEN PRIOR TO RELEASE FOR SHIPMENT.
6. FIELD/FUNCTIONAL TESTING WILL BE PERFORMED BY THE CONTRACTOR TO INSURE PROPER MECHANICAL OPERATION AT THE JOBSITE. ALL TESTING DATA TO BE USED FOR EVALUATION SHALL BE PERFORMED AT THE PUMP MANUFACTURER'S FACILITY.
7. MOTOR TESTS AND TEST REPORTS SHALL BE PROVIDED AS REQUIRED IN ACCORDANCE WITH THE MOTOR SPECIFICATION.

- I. SHIPPING: PUMPS THAT ARE LESS THAN 30 FEET IN LENGTH SHALL BE SHIPPED FULLY ASSEMBLED WITH THE DRIVER AND SHAFT SEAL UNMOUNTED. THE DISCHARGE FLANGE SHALL BE PROTECTED WITH A WOODEN FLANGE COVER.
- J. STORAGE, HANDLING, AND INSTALLATION: THE SKIDDED PUMP AND RELATED EQUIPMENT SHALL BE UNLOADED, STORED, AND INSTALLED IN AGREEMENT WITH THE MANUFACTURER'S OPERATION AND INSTALLATION MANUALS. IF STORAGE IS PLANNED TO BE LONGER THAN SIX MONTHS OR IN HARSH ENVIRONMENT, LONG TERM STORAGE PRACTICES SHOULD BE FOLLOWED PER THE MANUFACTURER'S OPERATION AND INSTALLATION MANUALS.
- K. START-UP FIELD SERVICES: THE PUMP MANUFACTURER SHALL INCLUDE TWO DAYS OF START-UP FIELD SERVICES WITH THE PROPOSAL FOR THE PURPOSE OF SUPERVISING THE START-UP AND INSTRUCTIONS OF PROPER MAINTENANCE AND OPERATIONS.

SERVICE PROVIDED BY FACTORY REPRESENTATIVE TIME ON SITE

INSPECT AND APPROVE INSTALLATION	1/2 DAY
SUPERVISE INITIAL ADJUSTMENT	1/2 DAY
SUPERVISE FIELD RUN TEST	1/2 DAY
INSTRUCT OWNER IN PROPER START-UP AND O&M	1/2 DAY
ADDITIONAL TIME ON SITE SHALL BE BILLED AT THE RATE DEEMED BY THE MANUFACTURER.	

DIVISION 46: WATER AND WASTEWATER EQUIPMENT

46 33 13 SODIUM HYPOCHLORITE GENERATING EQUIPMENT

A. GENERAL SCOPE

CONTRACTOR SHALL FURNISH AND INSTALL ON-SITE CHLORINATION SYSTEM AS SPECIFIED HEREIN. CHLORINATION SYSTEM SHALL CONSIST OF ON-SITE SODIUM HYPOCHLORITE GENERATION (OSG) SYSTEM EQUIPMENT AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN, INCLUDING ALL ACCESSORIES AND CONTROLS NECESSARY FOR A COMPLETE AND OPERABLE CHLORINATION SYSTEM.

A. GENERAL SCOPE OF WORK

WORK SPECIFIED SHALL INCLUDE MANUFACTURING, FURNISHING, INSTALLING, STARTUP, AND TESTING OF ALL EQUIPMENT NECESSARY TO PROVIDE A COMPLETE OSG SYSTEM SUITABLE FOR DISINFECTION OF MUNICIPAL WASTEWATER FOR REUSE. CONTRACTOR SHALL PROVIDE THE SERVICES OF A QUALIFIED MANUFACTURER'S REPRESENTATIVE TO INSTALL, INSPECT, STARTUP, CALIBRATE, AND PROVIDE EQUIPMENT AND OPERATOR TRAINING TO OWNER'S PERSONNEL. OSG SYSTEM EQUIPMENT FURNISHED AND INSTALLED FOR THIS PROJECT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS:

QTY	EQUIPMENT
1	DUPLEX WATER SOFTENER SYSTEM
1	CARTRIDGE FILTER SYSTEM
1	ON-DEMAND WATER HEATER
1	BRINE STORAGE TANK AND APPURTENANCES
2	BRINE BOOST PUMPS
1	BULK BAG HANDLING SYSTEM
1	GENERATOR CONTROLLER
2	SELF CLEANING SODIUM HYPOCHLORITE GENERATORS
2	SODIUM HYPOCHLORITE STORAGE TANKS AND APPURTENANCES
2	SODIUM HYPOCHLORITE DOSING PUMPS WITH SPEED CONTROL

B. GENERAL OPERATIONAL DESCRIPTION

THE OSG SYSTEM SHALL BE CAPABLE OF A CONTINUOUS PRODUCTION OF SODIUM HYPOCHLORITE FROM SALT, WATER AND ELECTRICITY. SUPPLY WATER SHALL PASS THROUGH THE WATER SOFTENER AND PROVIDE WATER FOR THE SALT SATURATOR AND MAKE-UP WATER FOR BRINE DILUTION. SATURATED BRINE SOLUTION WATER SHALL MIX WITH MAKE-UP WATER TO FORM A BRINE SOLUTION WHICH SHALL ENTER THE HYPOCHLORITE GENERATOR WHICH SHALL CONVERT THE BRINE SOLUTION TO A CONSISTENT SOLUTION (NOT LESS THAN 0.65%) OF SODIUM HYPOCHLORITE WITH THE ADDITION OF A DC CURRENT. SODIUM HYPOCHLORITE SOLUTION SHALL BE STORED IN THE STORAGE TANKS AS SHOWN ON THE DRAWINGS. DOSING PUMPS SHALL DRAW OFF THE STORAGE TANK AND INJECT SODIUM HYPOCHLORITE INTO THE DISCHARGE PIPING AT THE LOCATION SHOWN ON THE DRAWINGS.

C. APPROVED OSG SYSTEM MANUFACTURERS: PARKSON AND ENGINEER APPROVED EQUAL.

D. SUBMITTALS

THE CONTRACTOR SHALL PREPARE AND SUBMIT COMPLETE AND ORGANIZED SHOP DRAWINGS AS SPECIFIED HEREIN AND AS REQUIRED BY THE PROJECT PLANS AND SPECIFICATIONS AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

1. DETAILED SPECIFICATIONS, FABRICATION, ASSEMBLY, DIMENSIONS, MATERIALS OF CONSTRUCTION, PERFORMANCE CHARACTERISTICS, AND INSTALLATION INSTRUCTIONS FOR ALL EQUIPMENT PROVIDED.
2. OSG SYSTEM EQUIPMENT DRAWINGS, SPECIFICATIONS, WIRING DIAGRAMS, CONDUIT ROUTING PLANS, AND INSTALLATION INSTRUCTIONS.
3. EQUIPMENT SEISMIC DESIGN CALCULATIONS (INCLUDING EQUIPMENT ANCHORAGE) FOR THE WATER SOFTENERS, CHLORINE SOLUTION STORAGE TANKS, BRINE TANK, BULK BAG HANDLING SYSTEM, AND SODIUM HYPOCHLORITE GENERATORS.
4. OPERATION AND MAINTENANCE MANUALS FOR EACH ITEM OF EQUIPMENT SPECIFIED HEREIN.

F. PRODUCTS

1. GENERAL

ON-SITE SODIUM HYPOCHLORITE GENERATOR SYSTEM EQUIPMENT SHALL BE FURNISHED WITH ALL FEATURES AND ACCESSORIES NECESSARY TO PROVIDE SODIUM HYPOCHLORITE GENERATING, METERING, STORAGE, INJECTING, AND DOSING AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.

2. SODIUM HYPOCHLORITE GENERATORS

GENERATOR SHALL BE CAPABLE OF GENERATING AN EQUIVALENT OF 100 LBS. OF FREE AVAILABLE CHLORINE (FAC) PER DAY IN THE FORM OF SODIUM HYPOCHLORITE SOLUTION, AT NOT LESS THAN 0.65% CONCENTRATION. GENERATOR SHALL UTILIZE ONLY SOFTENED WATER, DC POWER, AND BRINE SOLUTION. GENERATOR SHALL CONSIST OF ALL METERING, PUMPING, CONTROLS, ACCESSORIES, AND APPURTENANCES TO AUTOMATICALLY DELIVER A CONSISTENT BRINE SOLUTION TO THE GENERATOR. THE GENERATOR SHALL BE SELF CLEANING AND SHALL UTILIZE A MODULAR ELECTROLYTIC CELL CONFIGURATION. THE GENERATOR SHALL START AND STOP BASED ON LEVEL IN THE SODIUM HYPOCHLORITE TANKS. GENERATOR SHALL BE SUITABLE FOR WALL MOUNTING AND SHALL NOT CONSUME MORE THAN THE FOLLOWING:

WATER:	22.0 GALLONS/POUND FAC
SALT:	3.0 POUNDS/POUND FAC
ELECTRICITY:	2.0 KW-HR/POUND FAC

GENERATOR SHALL BE FULLY CAPABLE OF AUTOMATIC CONTROL AND BE PROVIDED WITH AN OPERATOR INTERFACE. UNIT SHALL HAVE ETHERNET CONNECTIVITY TO THE FACILITY SCADA SYSTEM FOR SYSTEM STATUS AND ALARMS.

3. GENERATOR CONTROLLER

THE GENERATOR CONTROLLER SHALL BE FULLY CAPABLE OF AUTOMATIC CONTROL AND BE PROVIDED WITH AN OPERATOR INTERFACE. ALL CONTROLS SHALL BE HOUSED IN A MINIMUM NEMA 12 ENCLOSURE SUITABLE FOR WALL MOUNTING. CONTROL SHALL BE CAPABLE OF OPERATING ON 120/220 VOLTS SINGLE PHASE POWER. PANEL SHALL RECEIVE 4-20 MA SIGNALS FROM THE SODIUM HYPOCHLORITE STORAGE TANK LEVEL AND WILL START AND STOP THE GENERATORS BASED ON CHLORINE SOLUTION TANK LEVELS. THE CONTROLS SHALL PROVIDE THE FOLLOWING FUNCTIONS:

a. START/STOP OF THE CHLORINE GENERATION SYSTEM BASED ON LEVEL IN THE CHLORINE SOLUTION TANKS.

ALARMS WITH LCD DISPLAYED DESCRIPTIONS AND OUTPUT TO THE FACILITY SCADA SYSTEM:

- a. CHLORINE GENERATOR SYSTEM FAIL
- b. LOW CHLORINE STORAGE TANK LEVEL
- c. LEVEL CONTROL OF THE BRINE TANK.

3. SODIUM HYPOCHLORITE STORAGE TANKS
SODIUM HYPOCHLORITE STORAGE TANKS SHALL BE OF SINGLE WALL, VERTICAL STYLE, AND CONSTRUCTED OF HIGH DENSITY CROSS LINKED POLYETHYLENE CONSTRUCTION SUITABLE FOR STORAGE OF SODIUM HYPOCHLORITE. TANK SHALL HAVE A NOMINAL CAPACITY OF 2000 GALLONS, EQUIPPED WITH A 4" TOP MOUNTED FLANGED OUTLET WITH 4" VENT TO THE OUTSIDE OF THE BUILDING. 4" TOP MOUNTED FLANGED OUTLET WITH BLIND FLANGE FOR FUTURE FORCED VENTILATION FAN (LOCATED 180° FROM 4" VENT OUTLET). 2" FLANGED OUTLET FILL PIPE AT TOP OF TANK, 1" OUTLET AT BOTTOM OF TANK, 2" OUTLET AT BOTTOM OF TANK FOR LEVEL TRANSMITTER, AND ANY OTHER CONNECTION NECESSARY FOR A COMPLETE SYSTEM. TANK SHALL BE FURNISHED WITH CABLES FOR SEISMIC ANCHORAGE, COMPLETE WITH FLOOR ANCHOR SYSTEM.

4. BRINE TANK

THE BRINE TANK SHALL CONSIST OF A HEAVY-DUTY PLASTIC TANK (MINIMUM 500 GALLONS, MAXIMUM 60" TALL) WITH LID, SCREENED MANIFOLD 1/2" NPT WATER INLET WITH LEVEL CONTROL, 1" NPT OUTLET, OVERFLOW DRAIN, AND 1" DRAIN TANK.

5. BRINE BOOST PUMPS

BRINE BOOST PUMPS SHALL BE PROVIDED TO ALLOW A GREATER DISTANCE BETWEEN THE BRINE TANK AND THE GENERATOR UNITS. PUMP SHALL BE A MAGNETIC DRIVE, SEALLESS CENTRIFUGAL PUMP. WETTED PARTS SHALL BE NON-METALLIC AND COMPATIBLE WITH SATURATED BRINE. THE PUMP SHALL BE SUPPLIED WITH A BACKPRESSURE/BYPASS VALVE, CHECK VALVE, DISCHARGE PRESSURE GAUGE WITH GAUGE GUARD AND TWO TRUE UNION BALL VALVES. PUMP SHALL BE MODEL BC-3CP-MD AS MANUFACTURED BY MARCH PUMP OR ENGINEER APPROVED EQUAL.

6. CARTRIDGE FILTER SYSTEM

CARTRIDGE FILTER SYSTEM SHALL BE A DUPLEX 2.5" x 10" HEAVY-DUTY COMMERCIAL FILTER SYSTEM. FILTER CARTRIDGE TYPE AND SPECIFICATION SHALL BE OSG SYSTEM PROVIDER.

7. WATER SOFTENERS

WATER SOFTENER SHALL BE AN ION EXCHANGE SYSTEM, PROVIDED TO REMOVE CALCIUM, MAGNESIUM, IRON, AND MANGANESE TO ACCEPTABLE LEVELS FOR THE SOFTENED WATER TO BE USED IN THE SYSTEM. WATER SOFTENER SHALL BE OF THE ALTERNATING TWIN TANK DESIGN CAPABLE OF OPERATING ONE VESSEL IN SERVICE WHILE THE OTHER IS REGENERATING.

8. WATER HEATER

A WATER HEATER SHALL BE PROVIDED TO ENSURE WATER TEMPERATURE ENTERING THE GENERATORS IS SUFFICIENT TO ALLOW FOR EFFICIENT OPERATION. WATER HEATER SHALL BE A TANKLESS ELECTRIC WATER HEATER

RATED AT 14 KW. WATER HEATER SHALL BE MODEL TX014-2R AS MANUFACTURED BY HUBBELL OR ENGINEER APPROVED EQUAL.

9. SODIUM HYPOCHLORITE DOSING PUMPS

THE CHEMICAL METERING PUMPS SHALL BE POSITIVE DISPLACEMENT, PROGRESSIVE CAVITY OR EXTERNAL GEAR STYLE. THE PUMP SHALL SELF-PRIME WITH 10 FEET OF WATER SUCTION LIFT. THE MOTOR SHALL BE NOT GREATER THAN 1.0 HP, 208 VOLT, 3 PHASE, INVERTER-DUTY RATED, TEFC. THE PUMP(S) SHALL BE CAPABLE OF OPERATING AGAINST THE MAXIMUM PRESSURE OF 150 PSI. ONCE PRIMED, THE METERING PUMP(S) SHALL OPERATE WITH A MINIMUM OF 10 FOOT OF WATER SUCTION LIFT. WETTED PUMP MATERIALS SHALL BE PVDF AND/OR TEFLO. METERING PUMP(S) AND APPURTENANCES SHALL BE FURNISHED BY A SINGLE SUPPLIER TO ASSURE UNIFORMITY, COMPATIBILITY AND SYSTEM RESPONSIBILITY. PUMPS SHALL BE SKID MOUNTED WITH APPROPRIATE ISOLATION, CHECK, BACK PRESSURE, AND RELIEF VALVES, CALIBRATION COLUMN, PULSATION DAMPENERS, AND VARIABLE SPEED DRIVES. CHEMICAL METERING PUMPS AND BE SUITABLE FOR THE FOLLOWING:
MAXIMUM DISCHARGE PRESSURE = 150 PSI
LIQUID PUMPED = 0.5 TO 1 PERCENT SODIUM HYPOCHLORITE
PH = 8 - 9
SPECIFIC GRAVITY = 1 TO 1.3
TEMPERATURE RANGE = 40 TO 100 DEGREES F
QUANTITY = TWO, ONE DUTY AND ONE STANDBY
FLOW RATE = 140 GALLONS PER HOUR, MAXIMUM OUTPUT

10. BULK BAG HANDLING SYSTEM

A BULK BAG HANDLING SYSTEM SHALL BE PROVIDED FOR THE HANDLING AND EMPTYING OF BULK BAGS OF SALT AND SUBSEQUENT TRANSFER TO THE BRINE TANK. SYSTEM CAPACITY SHALL BE CAPABLE OF HANDLING TWO TON BULK BAGS. SYSTEM SHALL CONSIST OF THREE MAJOR COMPONENTS: LOWER FRAME, UPPER FRAME, AND CONVEYOR. THE LOWER FRAME SHALL BE ANCHORED TO THE FRAME AND PROVIDE THE STRUCTURAL SUPPORT FOR THE REMAINDER OF THE SYSTEM. THE LOWER FRAME SHALL PROVIDE THE NECESSARY COMPONENTS TO RECEIVE THE SALT FROM A BULK BAG IN THE UPPER FRAME AND TRANSFER IT TO THE CONVEYOR, VIA AN IRIS VALVE, WHILE CONTAINING THE SALT DUST. THE LOWER FRAME SHALL BE OF POWDER COATED CARBON STEEL. THE UPPER FRAME SHALL BE MOVABLE BY A FORKTRUCK FROM EITHER TOP OR BOTTOM, AND SHALL SUPPORT THE BULK BAG VIA THE LOOPS ON THE BAG FROM THE TOP OF THE FRAME WHILE BEING POSITIONED ON THE LOWER FRAME. THE UPPER FRAME SHALL BE OF POWDER COATED CARBON STEEL CONSTRUCTION.

THE CONVEYOR SHALL TRANSFER THE SALT FROM THE RECEIVING HOPPER OF LOWER FRAME TO THE BRINE TANK. THE CONVEYOR SHALL BE A STRAIGHT SHAFT STAINLESS STEEL SCREW CONVEYOR. CONVEYOR BEARINGS SHALL BE ADEQUATELY ISOLATED AND SEALED TO PREVENT INTRUSION OF SALT IN TO THE BEARINGS OR LEAKAGE OF LUBRICANT INTO THE SALT. CONVEYOR MOTOR SHALL BE TEFC, SEVERE-DUTY RATED.

11. APPURTENANCES

CONTRACTOR SHALL FURNISH APPURTENANCES AS SPECIFIED HEREIN OR SHOWN ON THE DRAWINGS, TO PROVIDE A COMPLETE AND OPERABLE SYSTEM. WHERE MATERIALS OF CONSTRUCTION ARE NOT SPECIFIED, THE MANUFACTURER SHALL FURNISH MATERIALS COMPATIBLE WITH THE INTENDED SERVICE CONDITION AND SHALL SUBMIT SUPPORTING DATA AS REQUIRED. EACH VFD SHALL BE PROVIDED WITH CONTROL TO RECEIVE A 4-20 MA SIGNAL TO VARY OUTPUT FOR VARIABLE SPEED CONTROL OF THE ATTACHED EQUIPMENT.

G. GENERAL EXECUTION

THE ON-SITE SODIUM HYPOCHLORITE GENERATOR SYSTEM EQUIPMENT SHALL BE INSTALLED AND TESTED AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN:

1. THE CONTRACTOR SHALL ARRANGE TO HAVE THE MANUFACTURER/ SUPPLIER OF THE EQUIPMENT SPECIFIED IN THIS SECTION FURNISH THE SERVICES OF COMPETENT FACTORY-TRAINED PERSONNEL TO PROVIDE THE INSTALLATION AND START UP OF ALL EQUIPMENT. ALLOWANCE FOR THIS SERVICE SHALL BE INCLUDED BY THE MANUFACTURER IN THE PRICE OF HIS EQUIPMENT. INSTALLATION AND ERECTION OF ALL ASSEMBLIES AND COMPONENTS SHALL BE IN ACCORDANCE WITH THE DETAILS INDICATED ON THE DRAWINGS, APPROVED SHOP DRAWINGS, AND THE PRINTED INSTRUCTION OF THE MANUFACTURER.
2. AFTER INSTALLATION, THE SYSTEMS SHALL BE PUT THROUGH ALL OPERATIONS IN THE PRESENCE OF THE OWNER. VISUAL INSPECTION WILL BE MADE FOR PROPER INSTALLATION, OPERATION, ALIGNMENT, AND LUBRICATION. MANUFACTURER SHALL PROVIDE A CERTIFICATE STATING INSTALLATION IS SATISFACTORY.
3. CRITICAL SPARE PARTS SHALL BE INCLUDED AS A PART OF THE SYSTEM INSTALLATION AND DELIVERED TO THE OWNER AS A PORTION OF SUBSTANTIAL COMPLETION.

H. INSTRUCTION

AFTER THE EQUIPMENT HAS BEEN INSTALLED, TESTED, AND ADJUSTED, AND PLACED IN SATISFACTORY OPERATING CONDITION, THE EQUIPMENT MANUFACTURER SHALL PROVIDE CLASSROOM INSTRUCTION TO OWNER'S OPERATING PERSONNEL IN THE USE AND MAINTENANCE OF THE EQUIPMENT. CONTRACTOR SHALL GIVE THE OWNER FORMAL WRITTEN NOTICE OF THE PROPOSED INSTRUCTION PERIOD AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF THE INSTRUCTION PERIOD. SCHEDULED TRAINING SHALL BE AT A TIME MUTUALLY ACCEPTABLE TO THE OWNER AND THE MANUFACTURER. DURING THIS INSTRUCTION PERIOD, THE MANUFACTURER SHALL ANSWER ANY QUESTIONS FROM THE OPERATING PERSONNEL. THE MINIMUM INSTRUCTION PERIOD SHALL BE AS LONG AS NECESSARY TO ADDRESS DETAILS OF OPERATION, ROUTINE MAINTENANCE, REPAIR, AND SPECIAL EQUIPMENT FEATURES AND OPERATIONS AND MAINTENANCE QUESTIONS.

I. WARRANTY

THE MANUFACTURER SHALL WARRANT THEIR PUMPS TO BE FREE OF DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR AFTER THE PRODUCT IS PUT INTO OPERATION OR NOT LESS THAN EIGHTEEN MONTHS FROM THE DELIVERY DATE, WHICHEVER OCCURS FIRST.

46 41 17 INLINE STATIC MIXERS

- A. STATIC MIXER SHALL BE WESTFALL'S MODEL 2800 OR ENGINEER APPROVED EQUAL.
- B. MATERIALS: CPVC BODY W/ VITON GASKETS.
- C. STATIC MIXER SHALL BE WAFER STYLE, HAVE A 0.8 BETA RATIO AND TWO (2) 1/2" CHEMICAL INJECTION INLETS.



CITY OF WICHITA, KANSAS
RE-USE WATER PUMP STATION
TO SERVE SPIRIT AEROSYSTEMS

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EQUIPMENT AND PIPING NOTES (CONT.)

PROJECT NO.	468-85112	
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SCALE	AS NOTED	
DESIGNED	DRAWN	CHECKED
ALF	ALF	KTS
NO.	REVISION	DATE
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