



Contractor Understanding; for GWS Wave Treatment Systems

A complete review of installation and startup requirements may be found in the applicable IOM.

Electrician requirements		Acknowledged:	X
A.	Pre-Installation component inspection and operations check prior to mechanical installation (See IOM)		
B.	WAVE & Auto-blowdown: Dedicated power supply (not interlocked with equipment operation)		
C.	No conduit penetrations to NEMA panels (void warranty)		
D.	WAVE is hard wired or power supply is not a GFIC.		

Mechanical requirements			
A.	See the IOM for WAVE gasket, torque tightening, clearance, insulation, and other requirements.		
B.	Delay system fill and coordinate with GWS Certified Service Provider (see Startup requirements below).		

Controls requirements			
A.	Reviewed Electrician requirements		
B.	The WAVE Signal Cable cannot be shortened or lengthened (verify ordered/ shipped Cable meets field req.)		
C.	Low-voltage for InstAlert complete: Blowdown controller, Wave panel		
D.	Blowdown valve wired		

Startup requirements			
CAUTION, AVOID WARRANTY LOSS: Never startup system without complete installation of the WAVE, Automatic Blowdown Equipment, InstAlert, and Filtration Systems (if applicable).			
A.	Addition of Water for Hydrostatic Testing (Red-Water Avoidance).	Plan in place:	N/A:
	Some makeup water types will cause a rapid oxidation of iron pipe. It is the responsibility of the Contractor to delay filling the system; periodically circulate; or add corrosion inhibitors to avoid flash-corrosion and "red-water". Coordinate preventative actions with the Griswold designated Certified Service Provider to avoid an unsightly situation and a subsequent cleanup.		
B.	Initial Flush and Chemical Cleaning.	Plan in place:	N/A:
	All systems should be flushed with clean water to remove sediment and debris. A chemical cleaning of the <u>entire system</u> will be required to further remove sediment, oxides, and oils. When a written procedure is not included in the project specification, the Griswold Certified Service Provider will supply a procedure.		
C.	Full Startup and System Load. Plan in place:	Plan in place:	N/A:
	It is important to establish a system load immediately following the Chemical Cleaning to enable the Wave corrosion inhibition and biological control mechanisms. If a load is not available, the filling and system cleaning should be delayed – Or, a temporary chemical based treatment program must be employed.		
D.	Galvanized Metal Conditioning/ Passivation Plan.	Plan in place:	N/A:
	All galvanized cooling tower sumps, hot decks, and submersed components are susceptible to a "white rust" condition. A Galvanized Metal Conditioning/ Passivation Plan must be pre-arranged with the Certified Service Provider prior to adding any water to the system. Failure to establish a Conditioning Plan can cause irreversible damage and/ or result in an expensive remediation.		
E.	Low-Load Operation.	Plan in place:	N/A:
	At no time should equipment be allowed to remain idle without flow for longer than three-days. Circulate WAVE treated system water into all standby chillers and heat exchangers at least one-hour per day or at least three-hours every three days.		

Contractor Acknowledgement of Conformance: I understand pre-installation, installation, and startup requirements.			
Firm		Name	
Signature		Date	
Return Form To: GWS Project Service Manager, Mike Jakubowski, mike@griswoldwatersystems.com , 386.663.3384			

MAKING WATER WORK

2801 Barranca Parkway
Irvine, CA 92606 | 386.663.3370 | info@griswoldwatersystems.com

GriswoldWaterSystems.com

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