PROCESS DATASHEET				Sheet 1 of 1	
				SPEC	REV.
REV	BY	DATE	DESC.		RD
0	RD	01/03/15	ISSUED FOR PURCHASE	PROJ#	DATE
				13-1200	01/03/15
RDS DOC#		13-1200-00-PR29-095		REQ.	P.O.
CLIENT:		JUNIPER GTL		1	
LOCATION:		WESTLAKE, LA		BY CHK'D	APPR.
PROJECT:		JUNIPER GTL		DA/LG	BR

US-01-902-PK-0001

(900-PK-001)

COOLING WATER PACKAGE

Modifications to Datasheet

1. Process Data updated to reflect current Cooling Water Balance.

Attached Documents:

	Pages
1. Datasheet for 900-PK-001, Rev 1 - 1/27/14	3

Notes:

1. Cooling Water Towers to be placed on the same location and to have the same footprint than the existing 4-cell ones (B-9401W, B-9401E). Existing Foundations are also to be Reused.

COOLINGTOWER

							RDS DOC #:	13-1200-00-PR29-095
Client:		Rev	Desc	Date	By	App	Equip Tag(s):	(900-PK-001)
Location:	Westlake, LA	0	IFD	06/18/13	GF	LB		US-01-902-PK-0001
Project Name:	Juniper	1	for XTLH	01/27/14	SCJ	LB	Data Sheet #:	1010-SGCE-311-DAT-00061
Project No:							Qty Req:	1

					Rev
1	**GENERAL INFORMATION**				Rev
2	Manufacturer	* (Note 1)	Model Number	*	1
3	Type	*	Number of Cells	*	
4	Weight (Dry / Wet), lb	*	Material of Construction	*	
5	**** CASE 1 **** (NOTE 3)	**PROCESS INFORMATION**		**** CASE 1 ****	
6	Capacity, gpm	~~8500~~ ~~13256~~	Duty, btu/hr	~~146,300,000~~ ~~152,444,000~~	1
7	Wet Bulb, °F	81	Dry Bulb, °F	90	
8	Relative Humidity, %		Maximum Noise Level, dB		
9	Water Temperature In (Design), F	~~122~~ ~~111~~	Water Temperature Out (Design), F	88	1
10	Water Temperature In (Maximum), F		Water Temperature Out (Maximum), F		
11	Water Temperature In (Minimum), F		Water Temperature Out (Minimum), F		
12	Evaporation Loss, %	~~3.3%~~ (Note 2) 2.3%	Drift Loss, %	0.005 (note 2)	1
13	Fan Efficiency, %	*	Required Make-Up Water, GPM	~~386~~ ~~422~~	1
14	**** CASE 2 **** (NOTE 3)	**PROCESS INFORMATION**		**** CASE 2 ****	
15	Capacity, gpm	~~11510~~ ~~14323~~	Duty, btu/hr	~~146,300,000~~ ~~171,876,000~~	1
16	Wet Bulb, °F	~~81~~	Dry Bulb, °F	~~90~~	
17	Relative Humidity, %		Maximum Noise Level, dB		
18	Water Temperature In (Design), F	~~113~~ ~~112~~	Water Temperature Out (Design), F	88	1
19	Water Temperature In (Maximum), F		Water Temperature Out (Maximum), F		
20	Water Temperature In (Minimum), F		Water Temperature Out (Minimum), F		
21	Evaporation Loss, %	~~2.4%~~ (Note 2) 2.4%	Drift Loss, %	~~0.005% (Note 2)~~	1
22	Fan Efficiency, %	*	Required Make-Up Water, GPM	~~386~~ ~~476~~	1
23	**SITE DATA & ENVIRONMENTAL LOADS**				
24	**See General Equipment Requirements (Doc. No. XXXXXX)**				
25	**DIMENSIONS & HEIGHTS (by vendor)**				
26	Overall Dimensions (W x L x H), ft		Inside of Basin (W x L x D), ft		
27	Operating Level, ft		Air Inlet Height, ft		
28	Tower Height, ft		Fan Cylinder Height, ft		
29	Fan Deck Size (W x L)		Fan Deck Height, ft		
30	**CONSTRUCTION INFORMATION (by vendor)**				
31	Basin Material		Fan Deck Material		
32	Tower Fill Material		Mist Eliminator Material		
33	Fan Cylinder Material		Bolting / Connection Material		
34	Stairways, Y/N		Stairway Description		
35	Ladders, Y/N		Ladder Description		
36	Tower Fill Gauge/Thickness		Tower Fill Design		
37	Mist Eliminator Gauge/Thickness		Mist Eliminator Design		
38	Basin Heater, Y/N		Temperature Maintained w/ Heater, F		
39	Firewalls Between Cells, Y/N		Rating of Firewalls, min		
40	Watertight Partitions Between Cells, Y/N		Watertight Partition Material		
41	Access Doors, Y/N		Number of Access Doors		
42	Size of Access Doors		Location of Access Doors		
43	Flow Control Valves, Y/N		Number of Flow Control Valves		
44	Size of Flow Control Valves		Location of Flow Control Valves		
45	Vibration Monitor Y/N		Vibration Monitor Enclosure		
46	Performance Test, Y/N		Performance Test By		
47	Anchor Bolts By		Erection By		
48	Basin By		Basin Type		

COOLINGTOWER

		Rev	Desc	Date	By	App
Client:						
Location:	Westlake, LA	0	IFD	06/18/13	GF	LB
Project Name:	Juniper	1	for XTLH	01/27/14	SCJ	LB
Project No:						

RDS DOC #: 13-1200-00-PR29-095
Equip Tag(s): (900-PK-001)
US-01-902-PK-0001
Data Sheet #: 1010-SGCE-311-DAT-00061
Qty Req: 1

WATER DISTRIBUTION SYSTEM (by vendor)

Type		Spray Heads Per Cell	
Header Size		Nozzle Size	
Lateral Size		Required Minimum Inlet Pressure, psig	

FAN(S) (by Vendor)

Manufacturer		Model Number	
Type		Velocity Recover Fan Cylinder, Y/N	
Number of Fans		Fan Diameter, ft	
Fan Blade Material		Fan RPM	
Air Flow Per Fan, CFM		Blades Per Fan	
Blade Pitch		Tip Speed, fpm	

TRANSMISSION (by vendor)

Type		HP	
Gear Ratio		SF	
Number of Belts		Belt Size	
Shaft Diameter		Shaft Material	
Lubrication System			

MOTOR / DRIVE (by Vendor)

NOTES

1) Spaces marked with an asterisk (*) are to be provided by Vendor.

2) Basis for calculations. Vendor to confirm.

3) ~~Case 2 represents the maximum cooling tower water requirements expected if a steam turbine (with surface condenser) are installed for mechanical drive of the main syngas compressor.~~ Case 1 is ~~Normal~~ Design, ~~Case 2 is Design~~.

4) Refer to latest revision of the Basic Engineering Design Guidelines. Document (1015-JGTL-321-BED-00001-00) for additional information.

5) Hot water (cooling water return) pressure at ground level: 24 psig.

6) Vendor to guarantee performance as specified under Process Information section. Drift losses are also to be guaranteed.

7) Water distribution system shall be designed to permit flexible operation of the tower, And permit each cell to be taken out of service individually. Nozzle shall be self-draining, Non-Clogging type, Non-Ferrous Material. Maximum allowable nozzle Δ p is 10 psi.

COOLINGTOWER

		Rev	Desc	Date	By	App		
Client:							RDS DOC #:	13-1200-00-PR29-095
Location:	Westlake, LA	0	IFD	06/18/13	GF	LB	Equip Tag(s):	(900-PK-001)
Project Name:	Juniper	1	for XTLH	01/27/14	SCJ	LB		US-01-902-PK-0001
Project No:							Data Sheet #:	1010-SGCE-311-DAT-00061
							Qty Req:	1

SKETCH

THIS PAGE IS BLANK

Line

Rev