







EPCC Contractor :  Project No. : 1208	HENGAM FERTILIZER PROJECT		Owner : 	MC : 
	ALARM AND SET POINT LIST FOR UREA SYNTHESIS UNIT			
	Doc. No. : 1208-11-PR-LST-052	Rev. : 02		




COVER SHEET OF
ALARM AND SET POINT LIST
 FOR
UREA SYNTHESIS UNIT

TOTAL PAGES : 16

DE	EXT	AFC	A			
Eng. Phase	Purpose Of Distribution (POD)	Purpose Of Issue (POI)	Owner's Action			
02	12.08.2023	APPROVED FOR CONSTRUCTION	M.Fakhraei	A.Azma	A.Azma	M.R.Saremi
01	03.12.2018	ISSUED FOR ENGINEERING	M.Yazdanpanahi	A.Azma	A.Azma	M.R.Saremi
00	04.07.2018	ISSUED FOR ENGINEERING	M.Yazdanpanahi	A.Azma	A.Azma	M.R.Saremi
Rev.	Date	Description	Prepared by	Checked by	Approved by	Project

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
	11-AAH-1003	11-AT-1003	075	MC TO 11-E-102B	HIGH	μs/cm	27	
	11-AAHH-1003	11-AT-1003	075	MC TO 11-E-102B	HIGH HIGH	μs/cm	58	
	11-AAH-1004	11-AT-1004	073	LC FROM 11-V-110	HIGH	μs/cm	27	
	11-AAHH-1004	11-AT-1004	073	LC FROM 11-V-110	HIGH HIGH	μs/cm	58	
	11-AAH-1005A	11-AT-1005A	055	MLS FROM 11-E-105A	HIGH	μs/cm	27	
	11-AAHH-1005A	11-AT-1005A	055	MLS FROM 11-E-105A	HIGH HIGH	μs/cm	58	
	11-AAH-1005B	11-AT-1005B	055	LS FROM 11-E-105B	HIGH	μs/cm	27	
	11-AAHH-1005B	11-AT-1005B	055	LS FROM 11-E-105B	HIGH HIGH	μs/cm	58	
	11-AAH-1006	11-AT-1006	071	PROCESS CONDENSATE TO B.L	HIGH	μs/cm	41	
	11-AAHH-1006	11-AT-1006	071	PROCESS CONDENSATE TO B.L	HIGH HIGH	μs/cm	58	
02	11-AAH-1103	11-AT-1103	060	INERT GAS FROM 11-T-103	HIGH	(1)	(1)	1) If actual point on the explosivity graphic is inside the triangle alarm will be initiated(refer to DCS control narrative."ZA-E-06077" page 24 point 13)
02	11-AAH-1104	11-AT-1104	011	2nd STAGE 11-C-101 DISCHARGE	HIGH	Mol%	0.22	
	11-AAH-1105	11-AT-1105	011	2nd STAGE 11-C-101 DISCHARGE	HIGH	Mol%	0.8	

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	11-FAL-1003	11-FIC-1003	051	11-P-101 A/B DISCHARGE	LOW	m3/hr	100	
02	11-FAH-1003	11-FIC-1003	051	11-P-101 A/B DISCHARGE	HIGH	m3/hr	260	
	11-FAL-1004A	11-FIC-1004A	051	11-P-101 A SUCTION	LOW	m3/hr	100	
	11-FAL-1004B	11-FIC-1004B	051	11-P-101 B SUCTION	LOW	m3/hr	100	
02	11-FAL-1005A	11-FIC-1005 A	052	11-P-102A SUCTION	LOW	m3/hr	50	
02	11-FAL-1005B	11-FIC-1005 B	052	11-P-102B SUCTION	LOW	m3/hr	50	
	11-FAL-1010	11-FIC-1010	058	NH3 REFLUX TO 11-T-101	LOW	m3/hr	7	
	11-FAL-1012	11-FIC-1012	060	11-T-103 HW COLD CONDENSATE INLET	LOW	m3/hr	0.20	
02	11-FAL-1023	11-FI-1023	065	LS STEAM TO E-114	LOW	kg/hr	14,000	
02	11-FAL-1030	11-FI-1030	071	CONDENSATE TO E-116	LOW	m3/hr	30	
	11-FAL-1035	11-FI-1035	061	MLS STEAM TO 11-E-103	LOW	kg/hr	7,000	
02	11-FAL-1041	11-FI-1041	055	CARBAMATE SOLUTION TO E-105A	LOW	m3/hr	48	
02	11-FAL-10201	11-FI-10201	054	PASSIVATION AIR FROM 11-C-102A/B	LOW	Nm3/hr	48	
	11-FAL-1210	11-FI-1210	078	DEMINEALIZED CLOSED WATER TO 11-E-106	LOW	m3/hr	800	
02	11-FAH-1811	11-FI-1811	052	FLUSHING COND. TO 11-P-102A/B SEAL FLUSHING CONSOLE	HIGH	m3/hr	1.8	
02	11-FAH-1114	11-FI-1114	068	UREA SOL. RECYCLE FROM GRANULATION	HIGH	m3/hr	21	
02	11-FAL-1021	11-FI-1021	073	STEAM CONDENSATE TO B.L.	LOW	m3/hr	24	
02	11-FAH-1127	11-FI-1127	073	DEMI. WATER FROM B.L.	HIGH	m3/hr	30.3	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
02	11-LAL-1009A	11-LI-1009A	075	11-V-109 STRIPPER STEAM CONDENSATE SEPARATOR	LOW	mm	750	
02	11-LAH-1009A	11-LI-1009A	075	11-V-109 STRIPPER STEAM CONDENSATE SEPARATOR	HIGH	mm	1750	
02	11-LAL-1009B	11-LI-1009B	075	11-V-109 STRIPPER STEAM CONDENSATE SEPARATOR	LOW	mm	750	
02	11-LAH-1009B	11-LI-1009B	075	11-V-109 STRIPPER STEAM CONDENSATE SEPARATOR	HIGH	mm	1750	
02	11-LALL-1010	11-LSL-1010	075	11-V-109 STRIPPER STEAM CONDENSATE SEPARATOR	LOW LOW	mm	700	
	11-LAL-1011	11-LIC-1011	054	11-E-101 UREA STRIPPER BOTTOM	LOW	%	20	
02	11-LAH-1011	11-LIC-1011	054	11-E-101 UREA STRIPPER BOTTOM	HIGH	%	70	
	11-LAH-1012	11-LI-1012	056	11-V-101 CARBAMATE SEPARATOR	HIGH	mm	1750	
02	11-LAL-1013A	11-LI-1013A	055	11-E-105A 1st CARBAMATE CONDENSER	LOW	mm	1940	
02	11-LAH-1013A	11-LI-1013A	055	11-E-105A 1st CARBAMATE CONDENSER	HIGH	mm	2140	
02	11-LAL-1013B	11-LI-1013B	055	11-E-105A 1st CARBAMATE CONDENSER	LOW	mm	1940	
02	11-LAH-1013B	11-LI-1013B	055	11-E-105A 1st CARBAMATE CONDENSER	HIGH	mm	2140	
	11-LAL-1014	11-LIC-1014	057	11-L-102 M.P. DECOMPOSER HOLDER	LOW	mm	100	
	11-LAH-1014	11-LIC-1014	057	11-L-102 M.P. DECOMPOSER HOLDER	HIGH	mm	850	
	11-LAL-1015	11-LIC-1015	058	11-T-101 M.P. ABSORBER	LOW	mm	1300	
	11-LAH-1015	11-LIC-1015	058	11-T-101 M.P. ABSORBER	HIGH	mm	5600	
	11-LAL-1016A	11-LI-1016A	059	11-V-105 AMMONIA RECEIVER	LOW	mm	790	
	11-LAH-1016A	11-LI-1016A	059	11-V-105 AMMONIA RECEIVER	HIGH	mm	2760	
	11-LAL-1016B	11-LI-1016B	059	11-V-105 AMMONIA RECEIVER	LOW	mm	790	
	11-LAH-1016B	11-LI-1016B	059	11-V-105 AMMONIA RECEIVER	HIGH	mm	2760	
	11-LAL-1017	11-LIC-1017	060	11-T-103 M.P. INERTS WASH. TOWER	LOW	mm	550	
	11-LAH-1017	11-LIC-1017	060	11-T-103 M.P. INERTS WASH. TOWER	HIGH	mm	1350	
	11-LAL-1018	11-LIC-1018	057	11-V-123 M.P. E-102A STEAM COND SEPARATOR	LOW	mm	200	
	11-LAH-1018	11-LIC-1018	057	11-V-123 M.P. E-102A STEAM COND SEPARATOR	HIGH	mm	1180	
	11-LAL-1019	11-LIC-1019	061	11-V-124 E-103 STEAM COND SEPARATOR	LOW	mm	200	
	11-LAH-1019	11-LIC-1019	061	11-V-124 E-103 STEAM COND SEPARATOR	HIGH	mm	810	
	11-LALL-1021	11-LT-1021	064	11-L-104 VACUUM PRECONCENTRATOR HOLDER	LOW LOW	mm	100	

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	11-LAL-1021	11-LT-1021	064	11-L-104 VACUUM PRECONCENTRATOR HOLDER	LOW	mm	200	
	11-LAH-1021	11-LT-1021	064	11-L-104 VACUUM PRECONCENTRATOR HOLDER	HIGH	mm	1300	
	11-LAL-1022	11-LIC-1022	061	11-L-103 L.P. DECOMPOSER HOLDER	LOW	mm	100	
	11-LAH-1022	11-LIC-1022	061	11-L-103 L.P. DECOMPOSER HOLDER	HIGH	mm	800	
	11-LAL-1023	11-LIC-1023	064	11-L-104 VACUUM PRECONCENTRATOR HOLDER	LOW	mm	200	
	11-LAH-1023	11-LIC-1023	064	11-L-104 VACUUM PRECONCENTRATOR HOLDER	HIGH	mm	1300	
	11-LAL-1024	11-LI-1024	063	11-V-106 CARBONATE SOLUTION ACCUMULATOR	LOW	mm	1020	
02	11-LAH-1024	11-LI-1024	063	11-V-106 CARBONATE SOLUTION ACCUMULATOR	HIGH	mm	4080	
	11-LAL-1025	11-LIC-1025	065	11-L-114 VACUUM SEPARATOR HOLDER	LOW	mm	200	
02	11-LAH-1025	11-LIC-1025	065	11-L-114 VACUUM SEPARATOR HOLDER	HIGH	mm	1300	
	11-LAL-1026B	11-LT-1026B	067	11-TK-102 PROCESS CONDENSATE TANK	LOW	mm	670	
	11-LALL-1026B	11-LT-1026B	067	11-TK-102 PROCESS CONDENSATE TANK	LOW LOW	mm	350	
02	11-LAH-1026B	11-LT-1026B	067	11-TK-102 PROCESS CONDENSATE TANK	HIGH	mm	6000	
	11-LAL-1026A	11-LI-1026A	067	11-TK-102 PROCESS CONDENSATE TANK	LOW	mm	670	
	11-LAH-1026A	11-LI-1026A	067	11-TK-102 PROCESS CONDENSATE TANK	HIGH	mm	6000	
	11-LAL-1027A	11-LT-1027A	068	11-TK-101 UREA SOLUTION TANK	LOW	mm	700	
	11-LALL-1027A	11-LT-1027A	068	11-TK-101 UREA SOLUTION TANK	LOW LOW	mm	350	
	11-LAH-1027A	11-LT-1027A	068	11-TK-101 UREA SOLUTION TANK	HIGH	mm	6300	
	11-LAL-1027B	11-LI-1027B	068	11-TK-101 UREA SOLUTION TANK	LOW	mm	700	
	11-LAH-1027B	11-LI-1027B	068	11-TK-101 UREA SOLUTION TANK	HIGH	mm	6300	
02	11-LAH-1029	11-LT-1029	069	11-T-102 DISTILLER TOWER CHYMNEY TRAY	HIGH	mm	1600	
02	11-LAL-1029	11-LT-1029	069	11-T-102 DISTILLER TOWER CHYMNEY TRAY	LOW	mm	500	
02	11-LALL-1029	11-LT-1029	069	11-T-102 DISTILLER TOWER CHYMNEY TRAY	LOW LOW	mm	250	
	11-LAL-1030	11-LIC-1030	069	11-T-102 DISTILLER TOWER BOTTOM	LOW	mm	600	
	11-LAH-1030	11-LIC-1030	069	11-T-102 DISTILLER TOWER BOTTOM	HIGH	mm	1400	
	11-LAL-1031	11-LIC-1031	069	11-T-102 DISTILLER TOWER CHYMNEY TRAY	LOW	mm	500	
	11-LAH-1031	11-LIC-1031	069	11-T-102 DISTILLER TOWER CHYMNEY TRAY	HIGH	mm	1600	

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	11-LAL-1032	11-LIC-1032	070	11-R-102 UREA HYDROLYZER	LOW	mm	800	
	11-LAH-1032	11-LIC-1032	070	11-R-102 UREA HYDROLYZER	HIGH	mm	2400	
	11-LAL-1033	11-LI-1033	072	11-TK-104 CARBONATE CLOSE DRAIN TANK	LOW	mm	500	
	11-LAH-1033	11-LI-1033	072	11-TK-104 CARBONATE CLOSE DRAIN TANK	HIGH	mm	1500	
	11-LAL-1034	11-LT-1034	072	11-TK-104 CARBONATE CLOSE DRAIN TANK	LOW	mm	500	
	11-LALL-1034	11-LT-1034	072	11-TK-104 CARBONATE CLOSE DRAIN TANK	LOW LOW	mm	300	
02	11-LAHH-1034	11-LT-1034	072	11-TK-104 CARBONATE CLOSE DRAIN TANK	HIGH HIGH	mm	1600	
	11-LAL-1035	11-LIC-1035	073	11-V-110 STEAM CONDENSATE ACCUMULATOR	LOW	mm	670	
	11-LAH-1035	11-LIC-1035	073	11-V-110 STEAM CONDENSATE ACCUMULATOR	HIGH	mm	2760	
	11-LAL-1042	11-LI-1042	079	11-V-111 BLOW DOWN SEPARATOR (SEAL PIPE)	LOW	%	20	
	11-LAH-1043	11-LT-1043	069	11-T-102 DISTILLATION TOWER BOTTOM	HIGH	mm	1400	
	11-LAL-1043	11-LT-1043	069	11-T-102 DISTILLATION TOWER BOTTOM	LOW	mm	600	
	11-LALL-1043	11-LT-1043	069	11-T-102 DISTILLATION TOWER BOTTOM	LOWLOW	mm	200	
	11-LAH-1051	11-LT-1051	073	11-V-110 STEAM CONDENSATE ACCUMULATOR	HIGH	mm	2760	
	11-LAL-1051	11-LT-1051	073	11-V-110 STEAM CONDENSATE ACCUMULATOR	LOW	mm	670	
	11-LALL-1051	11-LT-1051	073	11-V-110 STEAM CONDENSATE ACCUMULATOR	LOW LOW	mm	610	
02	11-LAL-1111	11-LIC-1111	065	11-V-125 E-114 STEAM COND. SEPARATOR	LOW	mm	200	
02	11-LAH-1111	11-LIC-1111	065	11-V-125 E-114 STEAM COND. SEPARATOR	HIGH	mm	1140	
	11-LAH-1112	11-LT-1112	065	11-L-114 VACUUM SEPARATOR HOLDER	HIGH	mm	1300	
	11-LAL-1112	11-LT-1112	065	11-L-114 VACUUM SEPARATOR HOLDER	LOW	mm	200	
	11-LALL-1112	11-LT-1112	065	11-L-114 VACUUM SEPARATOR HOLDER	LOW LOW	mm	100	
02	11-LAL-1113A	11-LI-1113A	055	11-E-105B 2nd CARBAMATE CONDENSER	LOW	mm	1220	
02	11-LAH-1113A	11-LI-1113A	055	11-E-105B 2nd CARBAMATE CONDENSER	HIGH	mm	1420	
02	11-LAL-1113B	11-LI-1113B	055	11-E-105B 2nd CARBAMATE CONDENSER	LOW	mm	1220	
02	11-LAH-1113B	11-LI-1113B	055	11-E-105B 2nd CARBAMATE CONDENSER	HIGH	mm	1420	
	11-LDAH-1113	11-LDI-1113	055	11-E-105B 2nd CARBAMATE CONDENSER	HIGH	mm	5%	
	11-LAL-1115	11-LT-1115	059	11-V-105 AMMONIA RECEIVER	LOW	mm	790	

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	11-LAH-1115	11-LT-1115	059	11-V-105 AMMONIA RECEIVER	HIGH	mm	2760	
	11-LALL-1115	11-LT-1115	059	11-V-105 AMMONIA RECEIVER	LOW LOW	mm	590	
	11-LAL-1116	11-LT-1116	060	11-T-103 M.P. INERTS WASHING TOWER	LOW	mm	550	
	11-LALL-1116	11-LT-1116	060	11-T-103 M.P. INERTS WASHING TOWER	LOW LOW	mm	250	
	11-LAL-1125A	11-LI-1125A	077	11-TK-125 OFF SPEC PROCESS RECOVERY TANK	LOW	mm	350	
	11-LAH-1125A	11-LI-1125A	077	11-TK-125 OFF SPEC PROCESS RECOVERY TANK	HIGH	mm	6300	
	11-LAL-1125B	11-LT-1125B	077	11-TK-125 OFF SPEC PROCESS RECOVERY TANK	LOW	mm	350	
	11-LALL-1125B	11-LT-1125B	077	11-TK-125 OFF SPEC PROCESS RECOVERY TANK	LOW LOW	mm	250	
	11-LAH-1128	11-LI-1128	68	11-TK-106 OVERFLOW	HIGH	%	90	
02	11-LAL-1128	11-LI-1128	68	11-TK-106 OVERFLOW	LOW	%	10	
02	11-LAL-1129	11-LT-1129	063	11-V-106 CARBAMATE SOLUTION ACCUMULATOR	LOW	mm	1020	
02	11-LALL-1129	11-LT-1129	063	11-V-106 CARBAMATE SOLUTION ACCUMULATOR	LOW LOW	mm	600	
	11-LAL-1210B	11-LT-1210B	078	11-V-170 DW EXPANSION DRUM	LOW	mm	300	
	11-LALL-1210B	11-LT-1210B	078	11-V-170 DW EXPANSION DRUM	LOW LOW	mm	250	
	11-LAL-1210A	11-LI-1210A	078	11-V-170 DW EXPANSION DRUM	LOW	mm	300	
	11-LAH-1210A	11-LI-1210A	078	11-V-170 DW EXPANSION DRUM	HIGH	mm	900	
	11-LAL-1213	11-LIC-1213	079	11-V-111 BLOW DOWN SEPARATOR	LOW	%	10	
	11-LAH-1213	11-LIC-1213	079	11-V-111 BLOW DOWN SEPARATOR	HIGH	%	90	
	11-LDAH-1013	11-LDI-1013	055	11-E-105A 1st CARBAMATE CONDENSER	HIGH	%	5%	
	11-LDAH-1113	11-LDI-1113	055	11-E-105B 2nd CARBAMATE CONDENSER	HIGH	%	5%	
	11-LDAH-1016	11-LDI-1016	059	11-V-105 AMMONIA RECEIVER	HIGH	%	5%	
	11-LDAH-1009	11-LDI-1009	075	11-V-109 STRIPPER STEAM CONDENSATE SEPARATOR	HIGH	%	5%	

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	11-PAH-1011	11-PI-1011	052	FROM 11-P-102A/B TO 11-L-119	HIGH	barg	180.0	
	11-PAL-1012	11-PI-1012	052	FROM 11-T-101 TO 11-P-102A/B SUCTION	LOW	barg	15.0	
	11-PAH-1018A/B/C	11-PT-1018 A/B/C	053	CO2 TO 11-R-101 INLET	HIGH	barg	162.0	
	11-PAHH-1018A/B/C	11-PT-1018 A/B/C	053	CO2 TO 11-R-101 INLET	HIGH HIGH	barg	165.0	
	11-PAH-1020	11-PIC-1020	054	11-E-101 INLET (STEAM SIDE)	HIGH	barg	24.0	
	11-PAL-1021	11-PI-1021 A/B	056	11-V-101 TOP OUTLET	LOW	barg	138.0	
	11-PAH-1021	11-PI-1021 A/B	056	11-V-101 TOP OUTLET	HIGH	barg	148.0	
02	11-PAL-1022	11-PI-1022A/B	056	NH3 FROM 11-E-107	LOW	barg	210.0	
	11-PAH-1022	11-PI-1022A/B	056	NH3 FROM 11-E-107	HIGH	barg	240.0	
	11-PAH-1024	11-PI-1024	057	11-V-102 TOP OUTLET	HIGH	barg	22.0	
	11-PAL-1025	11-PI-1025	058	11-T-101 TOP OUTLET	LOW	barg	17.3	
	11-PAH-1025	11-PI-1025	058	11-T-101 TOP OUTLET	HIGH	barg	21.5	
	11-PAH-1026	11-PI-1026A/B	059	11-V-105 AMMONIA RECEIVER	HIGH	barg	21.5	
	11-PAH-1027	11-PI-1027	051	11-P-101 A/B DISCHARGE	HIGH	barg	257.4	
02	11-PAL-1029	11-PI-1029	064	11-V-104 VACUUM PRECONCENTRATOR SEPARATOR	LOW	bara	0.25	
02	11-PAH-1029	11-PI-1029	064	11-V-104 VACUUM PRECONCENTRATOR SEPARATOR	HIGH	bara	0.50	
	11-PAL-1031	11-PI-1031	061	FROM 11-V-103 TO 11-E-107	LOW	barg	3.0	
	11-PAH-1031	11-PI-1031	061	FROM 11-V-103 TO 11-E-107	HIGH	barg	4.2	
	11-PAL-1032	11-PI-1032	064	11-V-104 VACUUM PRECONCENTRATOR SEPARATOR	LOW	bara	0.25	
	11-PAH-1032	11-PI-1032	064	11-V-104 VACUUM PRECONCENTRATOR SEPARATOR	HIGH	bara	0.50	
02	11-PAL-1033A/B	11-PI-1033A/B	063	11-V-106 CARBONATE SOLUTION ACCUMULATOR	LOW	barg	3.0	
02	11-PAH-1033A/B	11-PI-1033A/B	063	11-V-106 CARBONATE SOLUTION ACCUMULATOR	HIGH	barg	4.0	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
02	11-PAL-1034A/B	11-PI-1034A/B	065	11-V-114 VACUUM SEPARATOR	LOW	bara	0.25	
02	11-PAH-1034A/B	11-PI-1034A/B	065	11-V-114 VACUUM SEPARATOR	HIGH	bara	0.40	
	11-PAL-1035	11-PI-1035	066	FROM 11-L-114 TO 11-P-108 A/B SUCTION	LOW	barg	0.2	
	11-PAH-1053	11-PT-1053	054	PASSIVATION AIR FROM 11-C-102A/B	HIGH	barg	156.0	
02	11-PSHH-1053	11-PT-1053	054	PASSIVATION AIR FROM 11-C-102A/B	HIGH HIGH	barg	159.0	
	11-PAL-1037	11-PI-1037	066	FROM 11-P-108 TO GRANULATION	LOW	barg	4.0	
	11-PAL-1038	11-PI-1038A/B	062	FROM 11-T-102 & 11-R-102 TO E-107	LOW	barg	3.0	
	11-PAH-1038	11-PI-1038A/B	062	FROM 11-T-102 & 11-R-102 TO E-107	HIGH	barg	4.5	
	11-PAL-1039	11-PI-1039	072	11-TK-104 OUTLET TO DISCONTINUOUS FLARE	LOW	barg	-0.063	
02	11-PAH-1039	11-PI-1039	072	11-TK-104 OUTLET TO DISCONTINUOUS FLARE	HIGH	barg	0.250	
02	11-PALL-1039	11-PT-1039	072	11-TK-104 OUTLET TO DISCONTINUOUS FLARE	LOW LOW	barg	-0.070	
	11-PAH-1040	11-PIC-1040	070	11-R-102 UREA HYDROLYZER	HIGH	barg	36.0	
	11-PAL-1041	11-PIC-1041	073	11-V-110 STEAM CONDENSATE ACCUMULATOR	LOW	barg	0.2	
	11-PAH-1041	11-PIC-1041	073	V-110 STEAM CONDENSATE ACCUMULATOR	HIGH	barg	1.5	
	11-PAL-1042	11-PIC-1042	074	FROM 11-P-110A/B TO LW DISTRIBUTION	LOW	barg	6.0	
	11-PAH-1042	11-PIC-1042	074	FROM 11-P-110A/B TO LW DISTRIBUTION	HIGH	barg	11.0	
	11-PAL-1045	11-PIC-1045	074	FROM 11-P-110A/B TO HW DISTRIBUTION	LOW	barg	20.0	
	11-PAH-1045	11-PIC-1045	074	FROM 11-P-110A/B TO HW DISTRIBUTION	HIGH	barg	28.0	
	11-PAH-1048	11-PI-1048	076	MS HEADER	HIGH	barg	25.0	
	11-PAL-1048	11-PI-1048	076	MS HEADER	LOW	barg	22.0	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
	11-PAL-1051	11-PT-1051	068	11-TK-101 VENT TO DISCONTINUOUS FLARE	LOW	barg	-0.063	
02	11-PAH-1051	11-PT-1051	068	11-TK-101 VENT TO DISCONTINUOUS FLARE	HIGH	barg	0.250	
02	11-PALL-1051	11-PT-1051	068	11-TK-101 VENT TO DISCONTINUOUS FLARE	LOW LOW	barg	-0.070	
	11-PAL-1052	11-PI-1052	069	11-T-102 TOP GAS OUTLET	LOW	barg	3.4	
	11-PAH-1052	11-PI-1052	069	11-T-102 TOP GAS OUTLET	HIGH	barg	4.5	
	11-PAL-1017	11-PIC-1017	053	CO2 FROM 11-C-101	LOW	barg	100.0	
	11-PAH-1017	11-PIC-1017	053	CO2 FROM 11-C-101	HIGH	barg	160.0	
	11-PAL-1059	11-PIC-1059	076	MLS STEAM FROM 11-E-105A	LOW	barg	4.0	
	11-PAH-1059	11-PIC-1059	076	MLS STEAM FROM 11-E-105A	HIGH	barg	6.5	
	11-PAL-1060	11-PIC-1060	076	LS STEAM TO DISTRIBUTION	LOW	barg	2.5	
	11-PAH-1060	11-PIC-1060	076	LS STEAM TO DISTRIBUTION	HIGH	barg	4.5	
	11-PAL-1064	11-PT-1064	01-PR-UDD-053	COOLING WATER SUPPLY FROM HEADER	LOW	barg	4.0	
02	11-PAH-1090							DELETED
02	11-PAL-1090	11-PI-1090	072	COLD STEAM CONDENSATE TO 11-P-116 A	LOW	barg	2.0	
02	11-PAH-1091							DELETED
02	11-PAL-1091	11-PI-1091	072	COLD STEAM CONDENSATE TO 11-P-116 B	LOW	barg	2.0	
02	11-PAH-1093	11-PT-1093	067	11-TK-102 VENT TO DISCONTINUOUS FLARE	HIGH	barg	-0.063	
02	11-PAL-1093	11-PT-1093	067	11-TK-102 VENT TO DISCONTINUOUS FLARE	LOW	barg	0.250	
02	11-PALL-1093	11-PT-1093	067	11-TK-102 VENT TO DISCONTINUOUS FLARE	LOW LOW	barg	-0.070	
	11-PAL-1144	11-PIC-1144	074	FROM 11-P-111 A/B TO 11-V-110	LOW	barg	162.0	
	11-PAH-1144	11-PIC-1144	074	FROM 11-P-111 A/B TO 11-V-110	HIGH	barg	178.0	
	11-PAL-1162	11-PI-1162	077	11-TK-125 VENT TO DISCONTINUOUS FLARE	LOW	barg	-0.063	
02	11-PAH-1162	11-PI-1162	077	11-TK-125 VENT TO DISCONTINUOUS FLARE	HIGH	barg	0.250	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
02	11-PALL-1162	11-PT-1162	077	11-TK-125 VENT TO DISCONTINUOUS FLARE	LOW LOW	barg	-0.070	
	11-PAL-1195 B	11-PT-1195 B	01-PR-UDD-053	COOLING WATER SUPPLY FROM HEADER	LOW	barg	4.0	
02	11-PAL-1002A	11-PI-1002A	051	11-P-101A/B SUCTION	LOW	barg	23.0	
02	11-PALL-1002A	11-PT-1002A	051	11-P-101A/B SUCTION	LOW LOW	barg	22.0	
02	11-PAL-1002B	11-PI-1002B	051	11-P-101A/B SUCTION	LOW	barg	23.0	
02	11-PALL-1002B	11-PT-1002B	051	11-P-101A/B SUCTION	LOW LOW	barg	22.0	
	11-PAL-1210	11-PI-1210	078	11-P-170 A/B DISCHARGE	LOW	barg	5.0	
	11-PALL-1594	11-PT-1594 A-C	011	PRODUCT CO2 FROM 30-V-303	LOW LOW	barg	0.50	
	11-PALL-1595	11-PT-1595 A-C	011	HIGH PRESSURE CO2 TO 11-R-101	LOW LOW	barg	147	
	11-PAHH-1595	11-PT-1595 A-C	011	HIGH PRESSURE CO2 TO 11-R-101	HIGH HIGH	barg	165	
02	11-PAL-1057	11-PI-1057	074	11-P-110A/B DISCHARGE	LOW	barg	23	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
02	11-PDAH-1021	11-PDI-1021	056	11-V-101 TOP OUTLET	HIGH	bar	1.0	
	11-PDAH-1033	11-PDI-1033	063	11-V-106 CARBONATE SOLUTION ACCUMULATOR	HIGH	bar	0.2	
02	11-PDAH-1034	11-PDI-1034	065	11-V-114 VACUUM SEPARATOR	HIGH	bar	0.20	
	11-PDAH-1038	11-PI-1038B	062	FROM 11-T-102 & 11-R-102 TO E-107	HIGH	bar	0.5	
	11-PDAH-1023	11-PDI-1023	068	11-F-101 A/B DIFFERENTIAL PRESSURE	HIGH	bar	0.5	
02	11-PDAH-1035	11-PDI-1035	059	11-F-102 A/B FILTERS	HIGH	bar	0.5	
02	11-PDAH-1013	11-PDI-1013	051	11-P-101 A SUCTION FILTER F-103A	HIGH	bar	0.5	
02	11-PDAH-1014	11-PDI-1014	051	11-P-101 B SUCTION FILTER F-103B	HIGH	bar	0.5	
02	11-PDAH-1022	11-PDI-1022	056	NH3 LIQUID FROM 11-E-107 TO L-101	HIGH	bar	1.0	
02	11-PDAH-1026	11-PDI-1026	059	11-V-105 AMMONIA RECEIVER	HIGH	bar	0.5	
02	11-PDAH-1032	11-PDI-1032	064	11-V-104 VACUUM PRECONCENT. SEPARATOR	HIGH	bar	0.1	
02	11-PDAH-1038	11-PDI-1038	062	FROM 11-T-102 & 11-R-102 TO 11-E-107	HIGH	bar	0.5	
02	11-PDAH-1024	11-PDI-1024	057	11-V-102 TOP OUTLET	HIGH	bar	1.5	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
	11-TAH-1011	11-TT-1011	054	11-E-101 UREA STRIPPER (steam side)	HIGH	°C	225	
	11-TAHH-1011	11-TT-1011	054	11-E-101 UREA STRIPPER (steam side)	HIGH HIGH	°C	230	
	11-TAL-1017	11-TI-1017	054	11-E-101 UREA STRIPPER BOTTOM	LOW	°C	202	
	11-TAH-1017	11-TI-1017	054	11-E-101 UREA STRIPPER BOTTOM	HIGH	°C	206	
	11-TAH-1010	11-TI-1010	054	MSS STEAM TO 11-E-101 (SHELL SIDE)	HIGH	°C	225	
02	11-TAL-1020	11-TI-1020	056	AMMONIA TO 11-L-101	LOW	°C	85	
	11-TAL-1021	11-TIC-1021	057	11-L-102 M.P. DECOMPOSER HOLDER	LOW	°C	157	
	11-TAH-1021	11-TIC-1021	057	11-L-102 M.P. DECOMPOSER HOLDER	HIGH	°C	163	
02	11-TAH-1022	11-TI-1022	057	11-E-102B CONDENSATE INLET	HIGH	°C	225	
	11-TAHH-1022	11-TT-1022	057	11-E-102B CONDENSATE INLET	HIGH HIGH	°C	225	
	11-TAL-1024	11-TI-1024	058	11-E-106 INLET (DW SIDE)	LOW	°C	43	
	11-TAH-1025	11-TI-1025	058	11-E-106 OUTLET (DW SIDE)	HIGH	°C	63	
	11-TAL-1026	11-TIC-1026	058	11-E-106 OUTLET (PROCESS SIDE)	LOW	°C	86	
	11-TAH-1026	11-TIC-1026	058	11-E-106 OUTLET (PROCESS SIDE)	HIGH	°C	94	
	11-TAH-1090	11-TI-1090	058	11-T-101 M.P. ABSORBER bottom outlet	HIGH	°C	88	
	11-TAH-1028	11-TI-1028	058	11-T-101 M.P. ABSORBER top outlet	HIGH	°C	51	
	11-TAH-1030	11-TI-1030	058	11-T-101 M.P. ABSORBER 4th tray	HIGH	°C	51	
	11-TAH-1031	11-TI-1031	058	11-T-101 M.P. ABSORBER 3rd tray	HIGH	°C	52	
	11-TAH-1032	11-TI-1032	058	11-T-101 M.P. ABSORBER 2nd tray	HIGH	°C	53	
	11-TAL-1040	11-TI-1040	058	11-T-101 M.P. ABSORBER BOTTOM liquid phase	LOW	°C	75	
	11-TAH-1033	11-TI-1033	058	11-T-101 M.P. ABSORBER 1st tray	HIGH	°C	54	
02	11-TAH-1034							DELETED
	11-TAL-1037	11-TI-1037	059	11-V-105 AMMONIA RECEIVER	LOW	°C	0	
	11-TAH-1038	11-TI-1038	059	FROM 11-F-102 TO 11-T-105	HIGH	°C	35	
	11-TAH-1041	11-TI-1041	060	T-103 BOTTOM OUTLET	HIGH	°C	70	
	11-TAL-1043	11-TIC-1043	061	11-L-103 L.P. DECOMPOSER HOLDER	LOW	°C	138	
	11-TAH-1043	11-TIC-1043	061	11-L-103 L.P. DECOMPOSER HOLDER	HIGH	°C	152	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
	11-TAL-1044	11-TIC-1044	065	11-V-114 VACUUM SEPARATOR	LOW	°C	102	
	11-TAH-1044	11-TIC-1044	065	11-V-114 VACUUM SEPARATOR	HIGH	°C	140	
	11-TAH-1047	11-TI-1047	064	11-L-104 VACUUM PRECONC. HOLDER	HIGH	°C	105	
	11-TAL-1047	11-TI-1047	064	11-L-104 VACUUM PRECONC. HOLDER	LOW	°C	98	
	11-TAL -1048	11-TIC -1048	062	11-E-108 OUTLET SHELL	LOW	°C	40	
	11-TAH-1049	11-TIC-1049	063	CARBAMATE SOLUTION ACCUMULATOR	HIGH	°C	50	
	11-TAL-1049	11-TIC-1049	063	CARBAMATE SOLUTION ACCUMULATOR	LOW	°C	38	
	11-TAL-1051	11-TI-1051	065	11-L-114 VACUUM SEPARATOR HOLDER	LOW	°C	130	
	11-TAH-1051	11-TI-1051	065	11-L-114 VACUUM SEPARATOR HOLDER	HIGH	°C	137	
	11-TAL-1057	11-TI-1057	068	11-TK-101 UREA SOLUTION TANK	LOW	°C	100	
	11-TAH-1057	11-TI-1057	068	11-TK-101 UREA SOLUTION TANK	HIGH	°C	120	
	11-TAL-1058	11-TI-1058	062	11-E-107 OUTLET	LOW	°C	95	
	11-TAH-1058	11-TI-1058	062	11-E-107 OUTLET	HIGH	°C	133	
	11-TAH-1061	11-TIC-1061	074	HW FROM E-110	HIGH	°C	55	
	11-TAL-1062	11-TI-1062	071	11-E-116 OUTLET	LOW	°C	90	
	11-TAL-1063	11-TI-1063	069	11-T-102 DISTILLATION TOWER top outlet	LOW	°C	110	
	11-TAH-1063	11-TI-1063	069	11-T-102 DISTILLATION TOWER top outlet	HIGH	°C	130	
	11-TAL-1068	11-TI-1068	069	11-T-102 DISTILLATION TOWER bottom	LOW	°C	150	
	11-TAL-1071	11-TI-1071	070	11-R-102 UREA HYDROLYZER	LOW	°C	230	
	11-TAH-1071	11-TI-1071	070	11-R-102 UREA HYDROLYZER	HIGH	°C	240	
02	11-TAH-1072	11-TI-1072	070	11-R-102 UREA HYDROLYZER	HIGH	°C	240	
	11-TAHH-1072	11-TT-1072	070	11-R-102 UREA HYDROLYZER	HIGH HIGH	°C	245	
02	11-TAH-1073	11-TI-1073	071	11-E-122 OUTLET	HIGH	°C	65	
	11-TAL-1076	11-TI-1076 A/B/C	076	11-L-118 OUTLET	LOW	°C	153	
	11-TAH-1076	11-TI-1076 A/B/C	076	11-L-118 OUTLET	HIGH	°C	170	
	11-TAL-1080	11-TI-1080	065	FROM 11-E-160 TO 11-E-114	LOW	°C	70	
02	11-TAH-1125							DELETED

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
02	11-TAHH-1125							DELETED
	11-TAH-1172	11-TIC-1172	073	11-V-110 STEAM CONDENSATE ACCUMULATOR	HIGH	°C	130	
	11-TAL-1172	11-TIC-1172	073	11-V-110 STEAM CONDENSATE ACCUMULATOR	LOW	°C	110	
	11-TAH-1173	11-TI-1173	073	FROM 11-E-123 TO B.L.	HIGH	°C	60	
02	11-TAH-1176	11-TI-1176	072	CARBONATE CLOSE DRAIN TANK	HIGH	°C	90	
02	11-TAL-1176	11-TI-1176	072	CARBONATE CLOSE DRAIN TANK	LOW	°C	40	
	11-TAL-1177	11-TI-1177	079	BLOW DOWN HEADER	LOW	°C	10	
	11-TAH-1091	11-TI-1091	058	11-T-101 M.P. ABSORBER bottom	HIGH	°C	87	
	11-TAL-1092	11-TI-1092	058	11-T-101 M.P. ABSORBER bottom	LOW	°C	70	
	11-TAH-1092	11-TI-1092	058	11-T-101 M.P. ABSORBER bottom	HIGH	°C	87	
02	TDAL-1081A	TDI-1081A	064	11-E-104 SHELL SIDE	LOW	°C	10	
	TDAH-1076	TDI-1076	076	11-L-118 OUTLET	HIGH	°C	5	
	11-TAL-1210	11-TIC-1210	078	DM WATER TO E-170	LOW	°C	35	