COVER SHEET OF

ALARM AND SET POINT LIST

FOR

UREA GRANULATION UNIT

TOTAL PAGES : **14**

DE	EXT	AFC	A
Eng. Phase	**Purpose Of Distribution (POD)**	**Purpose Of Issue (POI)**	**Owner's Action**

Rev.	Date	Description	Prepared by	Checked by	Approved by	Project
02	03.06.2023	APPROVED FOR CONSTRUCTION	P. KIANI	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

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EPCC Contractor :	HENGAM FERTILIZER PROJECT	Owner :	MC :
PIDEC	ALARM AND SET POINT LIST FOR UREA GRANULATION UNIT		
Project No. : 1208	Doc. No. : 1208-18-PR-LST-052 — Rev. : 02	Project No. :	

Sheet No.	Internal Issue	Change Index During Formal Issues						Reason Of latest Change
		First Issue	Second Issue	Third Issue	Fourth Issue	Fifth Issue	Sixth Issue	
	Rev. 0A	Rev.00	Rev.01	Rev.02	Rev.03	Rev.04	Rev.05	
1		✓		✓				Vendor documents implementation
2		✓		✓				
3		✓						
4		✓		✓				
5		✓		✓				
6		✓		✓				
7		✓		✓				
8		✓		✓				
9		✓		✓				
10		✓		✓				
11		✓	✓	✓				
12		✓	✓	✓				
13		✓		✓				
14		✓	✓					

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
00	18-AAH-2071	18-AIC-2071	062	UREA SOLUTION RECYCLE TO 18-T-150A	HIGH	kg/m3	1130	
00	18-AAL-2071	18-AIC-2071	062	UREA SOLUTION RECYCLE TO 18-T-150A	LOW	kg/m3	1100	
00	18-AAH-2091	18-AIC-2091	070	AMMONIUM SULPHATE SOLUTION RECYCLE TO T-150B	HIGH	kg/m3	980	
00	18-AAL-2091	18-AIC-2091	070	AMMONIUM SULPHATE SOLUTION RECYCLE TO 18-T-150B	LOW	kg/m3	1100	
00	18-AAH-2164	18-AIC-2164	070	AMMONIUM SULPHATE SOLUTION RECYCLE TO 18-T-150B	HIGH		6(1)	(1) PH
00	18-AAL-2164	18-AIC-2164	070	AMMONIUM SULPHATE SOLUTION RECYCLE TO 18-T-150B	LOW		1.5(1)	(1) PH

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-18-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
00	18-FAL-2171	18-FI-2171	051	UREA SOLUTION FROM 11-P-108A/B TO GRANULATOR	LOW	m3/h	64	
00	18-FAH-2171	18-FI-2171	051	UREA SOLUTION FROM 11-P-108A/B TO GRANULATOR	HIGH	m3/h	142	
00	18-FAL-2021	18-FI-2021	054	FLUIDIZATION AIR FROM 18-E-150 A GRANULATOR FLUIDIZATION AIR	LOW	Nm3/h	75555	
00	18-FAL-2022	18-FI-2022	054	FLUIDIZATION AIR FROM 18-E-150 B GRANULATOR FLUIDIZATION AIR	LOW	Nm3/h	52889	
00	18-FAL-2023	18-FI-2023	054	FLUIDIZATION AIR FROM 18-E-150 C GRANULATOR FLUIDIZATION AIR	LOW	Nm3/h	71777	
00	18-FAL-2024	18-FI-2024	054	FLUIDIZATION AIR FROM 18-E-150 D GRANULATOR FLUIDIZATION AIR	LOW	Nm3/h	71777	
00	18-FAL-2025	18-FI-2025	054	FLUIDIZATION AIR FROM 18-C-151 TO L-150A/B GRANULATOR	LOW	Nm3/h	52889	
00	18-FAL-2026	18-FI-2026	054	FLUIDIZATION AIR FROM 18-C-151 TO L-150A/B GRANULATOR	LOW	Nm3/h	52889	
00	18-FAL-2031	18-FI-2031	055	ATOMIZATION AIR FROM 18-E-151 GRANULATOR ATOMIZATION AIR	LOW	Nm3/h	38300	
00	18-FAL-2041	18-FI-2041	058	FINE UREA FROM VIBRATING SCREEN SR-151A TO 18-HE-156A DIVERTER	LOW	kg/h	10750	
00	18-FAL-2042	18-FI-2042	058	RECYCLE UREA GRANULES TO 18-L-150A GRANULATOR UPPER CASING	LOW	kg/h	10750	
00	18-FAL-2051	18-FI-2051	059	FINE UREA FROM VIBRATING SCREEN 18-SR-151C TO HE-156C	LOW	kg/h	10750	
00	18-FAL-2052	18-FI-2052	059	RECYCLE UREA GRANULES TO 18-L-150A GRANULATOR UPPER CASING	LOW	kg/h	10750	
02	18-FAL-2071	18-FI-2071	062	PROCESS CONDENSATE TO T-150A DEMISTERS FLUSHING	LOW	kg/h	2,700	(1) DELETED
02	18-FAH-2071	18-FI-2071	062	PROCESS CONDENSATE TO T-150A DEMISTERS FLUSHING	HIGH	kg/h	4,600	(1) DELETED
02	18-FAL-2072	18-FI-2072	062	UREA SOLUTION TO 18-T-150A GRANULATOR SCRUBBER SPRAYS	LOW	kg/h	200,000	(1) DELETED
02	18-FAH-2072	18-FI-2072	062	UREA SOLUTION TO 18-T-150A GRANULATOR SCRUBBER SPRAYS	HIGH	kg/h	250,000	(1) DELETED
02	18-FAL-2073	18-FI-2073	062	UREA SOLUTION TO 18-T-150A GRANULATOR SCRUBBER TRAYS	LOW	kg/h	176,000	(1) DELETED
02	18-FAL-2074	18-FI-2074	062	UREA SOLUTION RECYCLE TO 18-T-150A GRANULATOR SCRUBBER	LOW	m3/h	1	(1) DELETED
00	18-FAL-2011	18-FI-2011	062	UREA SOLUTION FROM 18-P-152 A/B TO 18-T-150A	LOW	m3/h	6	
00	18-FAH-2011	18-FI-2011	062	UREA SOLUTION FROM 18-P-152 A/B TO 18-T-150A	HIGH	m3/h	25	
02	18-FAL-2081	18-FI-2081	063	PROCESS CONDENSATE TO 18-T-151 DEMISTER FLUSHING	LOW	kg/h	10,800	(1) DELETED
02	18-FAH-2081	18-FI-2081	063	PROCESS CONDENSATE TO T-151 DEMISTER FLUSHING	HIGH	kg/h	13,200	(1) DELETED
02	18-FAL-2082	18-FI-2082	063	UREA SOLUTION TO 18-T-151 COOLERS SCRUBBER SPRAYS	LOW	kg/h	152,000	(1) DELETED
02	18-FAL-2083	18-FI-2083	063	UREA SOLUTION TO 18-T-151 COOLERS SCRUBBER TRAYS	LOW	kg/h	173,000	(1) DELETED
00	18-FAL-2091	18-FIC-2091	067	UF-85 SOLUTION TO 11-P-108A/B	LOW	m3/h	0.36	
00	18-FRAL-2091	18-FRI-2091	067	UF-85 SOLUTION TO 11-P-108A/B	LOW	%WT	0.57	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-18-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
00	18-FRAH-2091	18-FRII-2091	067	UF-85 SOLUTION TO 11-P-108A/B	HIGH	%WT	0.70	
02	18-FAL-2094	18-FI-2094	070	AMMONIUM SULPHATE RECYCLE TO 18-T-150B	LOW	m3/h	1.00	(1) DELETED
00	18-FAL-2095	18-FI-2095	070	SULPHURIC ACID&AMM. SULPH. TO T-150B GRAN. AMMONIA SCRUBBER	LOW	m3/h	100.00	
02	18-FALL-2095	18-FI-2095	070	SULPHURIC ACID&AMM. SULPH. TO 18-T-150B GRAN. AMMONIA	LOW LOW	m3/h	95	(1) DELETED
02	18-FAL-2097	18-FI-2097	070	PROCESS CONDENSATE TO 18-T-150B DEMISTER FLUSHING	LOW	kg/h	420	(1) DELETED
02	18-FAH-2097	18-FI-2097	070	PROCESS CONDENSATE TO 18-T-150B DEMISTER FLUSHING	HIGH	kg/h	7,300	(1) DELETED
02	18-FAL-2093	18-FI-2093	070	AMMONIUM SULPHATE SOLUTION RECYCLE TO 18-T-150 B	LOW	m3/h	100	(1) DELETED

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
00	18-LAL-2001B	18-LI-2001B	053	18-L-150 A/B GRANULATOR UPPER CASING AND LOWER CASING	LOW	%	35	
00	18-LALL-2001B	18-LI-2001B	053	18-L-150 A/B GRANULATOR UPPER CASING AND LOWER CASING	LOW LOW	mmWC(g)	300	
00	18-LAH-2001B	18-LI-2001B	053	18-L-150 A/B GRANULATOR UPPER CASING AND LOWER CASING	HIGH	%	70	
00	18-LAL-2001A	18-LI-2001A	053	18-L-150 A/B GRANULATOR UPPER CASING AND LOWER CASING	LOW	%	35	
00	18-LALL-2001A	18-LI-2001A	053	18-L-150 A/B GRANULATOR UPPER CASING AND LOWER CASING	LOW LOW	mmWC(g)	300	
00	18-LAH-2001A	18-LI-2001A	053	18-L-150 A/B GRANULATOR UPPER CASING AND LOWER CASING	HIGH	%	70	
00	18-LDAH-2001A	18-LI-2001A/B	053	18-L-150 A/B GRANULATOR UPPER CASING AND LOWER CASING	HIGH	%	5	
00	18-LAL-2002	18-LI-2002	055	18-V-169 ATOM. AIR STEAM SATURATOR	LOW	mm	350	
00	18-LAH-2002	18-LI-2002	055	18-V-169 ATOM. AIR STEAM SATURATOR	HIGH	mm	780	
02	18-LAL-2003	18-LT-2003	055	18-V-169 ATOM. AIR STEAM SATURATOR	LOW	mm	300	
02	18-LALL-2003	18-LT-2003	055	18-V-169 ATOM. AIR STEAM SATURATOR	LOW LOW	mm	250	
02	18-LAL-2071	18-LI-2071	062	18-T-150 A GRANULATOR DUST SCRUBBER	LOW	mm	1000	(1) DELETED
02	18-LAH-2071	18-LI-2071	062	18-T-150 A GRANULATOR DUST SCRUBBER	HIGH	mm	2000	(1) DELETED
02	18-LALL-2071	18-LI-2071	062	18-T-150 A GRANULATOR DUST SCRUBBER	LOW LOW	mm	700	
02	18-LAHH-2071	18-LI-2071	062	18-T-150 A GRANULATOR DUST SCRUBBER	HIGH HIGH	mm	2300	
00	18-LDAH-2071	18-LDI-2071	062	18-T-150 A GRANULATOR DUST SCRUBBER	HIGH	%	5	
02	18-LAL-2073	18-LI-2073	062	18-T-150 A GRANULATOR DUST SCRUBBER	LOW	mm	1000	(1) DELETED
02	18-LAH-2073	18-LI-2073	062	18-T-150 A GRANULATOR DUST SCRUBBER	HIGH	mm	2000	(1) DELETED
02	18-LALL-2073	18-LI-2073	062	18-T-150 A GRANULATOR DUST SCRUBBER	LOW LOW	mm	700	
02	18-LAHH-2073	18-LI-2073	062	18-T-150 A GRANULATOR DUST SCRUBBER	HIGH HIGH	mm	2300	
02	18-LAL-2081	18-LI-2081	063	18-T-151 COOLERS SCRUBBER	LOW	mm	1000	(1) DELETED
02	18-LAH-2081	18-LI-2081	063	18-T-151 COOLERS SCRUBBER	HIGH	mm	2000	(1) DELETED
02	18-LALL-2081	18-LI-2081	063	18-T-151 COOLERS SCRUBBER	LOW LOW	mm	700	
00	18-LDAH-2081	18-LDI-2081	063	18-T-151 COOLERS SCRUBBER	HIGH	%	5	
02	18-LAL-2082	18-LI-2082	063	18-T-151 COOLERS SCRUBBER	LOW	mm	1000	(1) DELETED
02	18-LAH-2082	18-LI-2082	063	18-T-151 COOLERS SCRUBBER	HIGH	mm	2000	(1) DELETED
02	18-LAHH-2082	18-LI-2082	063	18-T-151 COOLERS SCRUBBER	HIGH HIGH	mm	2300	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
00	18-LAL-2101	18-LI-2101	065	18-TK-153 UREA SOLUTION RECYCLE TANK	LOW	mm	700	
00	18-LALL-2101	18-LI-2101	065	18-TK-153 UREA SOLUTION RECYCLE TANK	LOW LOW	mm	650	
00	18-LAL-2102	18-LIC-2102	065	18-TK-153 UREA SOLUTION RECYCLE TANK	LOW	mm	800	
00	18-LAH-2102	18-LIC-2102	065	TK-153 UREA SOLUTION RECYCLE TANK	HIGH	mm	920	
02	18-LAL-2181A	18-LI-2181A	066	18-TK-155 GRANULATION STEAM CONDENSATE RECOVERY TANK	LOW	mm	400	
00	18-LAH-2181A	18-LI-2181A	066	18-TK-155 GRANULATION STEAM CONDENSATE RECOVERY TANK	HIGH	mm	1300	
02	18-LALL-2181A	18-LI-2181A	066	18-TK-155 GRANULATION STEAM CONDENSATE RECOVERY TANK	LOW LOW	mm	300	
00	18-LAHH-2181A	18-LI-2181A	066	18-TK-155 GRANULATION STEAM CONDENSATE RECOVERY TANK	HIGH HIGH	mm	1600	
02	18-LAL-2181B	18-LI-2181B	066	18-TK-155 GRANULATION STEAM CONDENSATE RECOVERY TANK	LOW	mm	400	
00	18-LAH-2181B	18-LI-2181B	066	18-TK-155 GRANULATION STEAM CONDENSATE RECOVERY TANK	HIGH	mm	1300	
02	18-LALL-2181B	18-LI-2181B	066	18-TK-155 GRANULATION STEAM CONDENSATE RECOVERY TANK	LOW LOW	mm	300	
00	18-LAHH-2181B	18-LI-2181B	066	18-TK-155 GRANULATION STEAM CONDENSATE RECOVERY TANK	HIGH HIGH	mm	1600	
00	18-LDAH-2181	18-LDI-2181	066	18-TK-155 GRANULATION STEAM CONDENSATE RECOVERY TANK	HIGH	%	5	
00	18-LAL-2182	18-LI-2182	066	18-TK-194 EMERGENCY CHEMICAL SEWER	LOW	mm	400	
00	18-LAH-2182	18-LI-2182	066	18-TK-194 EMERGENCY CHEMICAL SEWER	HIGH	mm	1200	
00	18-LAL-2091	18-LI-2091	067	18-TK-150 UF-85 STORAGE TANK	LOW	mm	300	
00	18-LAH-2091	18-LI-2091	067	18-TK-150 UF-85 STORAGE TANK	HIGH	mm	11400	
02	18-LAL-2092	18-LI-2092	067	18-TK-150 UF-85 STORAGE TANK	LOW	mm	1250	
02	18-LAH-2092	18-LI-2092	067	18-TK-150 UF-85 STORAGE TANK	HIGH	mm	10000	
00	18-LDAH-2092	18-LDI-2092	067	18-TK-150 UF-85 STORAGE TANK	HIGH	%	5	
00	18-LAL-2141	18-LI-2141	068	18-V-161 CHILLING SEPARATOR FOR GRANULATOR	LOW	mm	300	
02	18-LAH-2141	18-LI-2141	068	18-V-161 CHILLING SEPARATOR FOR GRANULATOR	HIGH	mm	860	
00	18-LAL-2151	18-LI-2151	068	18-V-160 NH3 CHILLING SEPARATOR FOR FINAL	LOW	mm	300	
02	18-LAH-2151	18-LI-2151	068	18-V-160 NH3 CHILLING SEPARATOR FOR FINAL	HIGH	mm	1200	
00	18-LAL-2112A	18-LI-2112A	069	18-TK-156 SULPHURIC ACID STORAGE TANK	LOW	mm	300	
00	18-LAH-2112A	18-LI-2112A	069	18-TK-156 SULPHURIC ACID STORAGE TANK	HIGH	mm	6200	
00	18-LAHH-2112A	18-LI-2112A	069	18-TK-156 SULPHURIC ACID STORAGE TANK	HIGH HIGH	mm	6350	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
00	18-LAL-2112B	18-LI-2112B	069	18-TK-156 SULPHURIC ACID STORAGE TANK	LOW	mm	300	
00	18-LAH-2112B	18-LI-2112B	069	18-TK-156 SULPHURIC ACID STORAGE TANK	HIGH	mm	6200	
00	18-LAHH-2112B	18-LI-2112B	069	18-TK-156 SULPHURIC ACID STORAGE TANK	HIGH HIGH	mm	6350	
00	18-LDAH-2112	18-LDI-2112	069	18-TK-156 SULPHURIC ACID STORAGE TANK	HIGH	%	5	
02	18-LAL-2094	18-LI-2094	070	18-T-150 B GRANULATOR AMMONIA SCRUBBER SEAL	LOW	mm	621	(1) DELETED
02	18-LAH-2094	18-LI-2094	070	18-T-150 B GRANULATOR AMMONIA SCRUBBER SEAL	HIGH	mm	800	(1) DELETED
02	18-LAL-2072	18-LI-072	070	18-T-150 B GRANULATOR AMMONIA SCRUBBER	LOW	mm	621	(1) DELETED
02	18-LAH-2072	18-LI-2072	070	18-T-150 B GRANULATOR AMMONIA SCRUBBER	HIGH	mm	800	(1) DELETED
00	18-LDAH-2072	18-LDI-2072	070	18-T-150 B GRANULATOR AMMONIA SCRUBBER	HIGH	%	5	
02	18-LAL-2093	18-LI-2093	070	18-T-150 B GRAN. AMMONIA SCR. CHIMNEY TRAY	LOW	mm	621	(1) DELETED
02	18-LAH-2093	18-LI-2093	070	18-T-150 B GRAN. AMMONIA SCR. CHIMNEY TRAY	HIGH	mm	800	(1) DELETED
02	18-LALL-2093	18-LI-2093	070	18-T-150 B GRAN. AMMONIA SCR. CHIMNEY TRAY	LOW LOW	mm	200	(1) DELETED
02	18-LAHH-2093	18-LI-2093	070	18-T-150 B GRAN. AMMONIA SCR. CHIMNEY TRAY	HIGH HIGH	mm	1150	(1) DELETED
00	18-LAL-2184A	18-LI-2184A	071	18-TK-158 AMM. SULPHATE CLOSE DRAIN TANK	LOW	mm	600	
00	18-LAH-2184A	18-LI-2184A	071	18-TK-158 AMM. SULPHATE CLOSE DRAIN TANK	HIGH	mm	1200	
00	18-LAL-2184B	18-LI-2184B	071	18-TK-158 AMM. SULPHATE CLOSE DRAIN TANK	LOW	mm	600	
00	18-LAH-2184B	18-LI-2184B	071	18-TK-158 AMM. SULPHATE CLOSE DRAIN TANK	HIGH	mm	1200	
00	18-LDAH-2184	18-LI-2184B	071	18-TK-158 AMM. SULPHATE CLOSE DRAIN TANK	HIGH	%	5	
00	18-LAL-2111	18-LI-2111	072	18-TK-157 AMMONIUM SULPHATE SOLUTION STORAGE TANK	LOW	mm	300	
00	18-LAH-2111	18-LI-2111	072	18-TK-157 AMMONIUM SULPHATE SOLUTION STORAGE TANK	HIGH	mm	8840	
00	18-LAL-2114	18-LI-2114	072	18-TK-157 AMMONIUM SULPHATE SOLUTION STORAGE TANK	LOW	mm	300	
00	18-LAH-2114	18-LI-2114	072	18-TK-157 AMMONIUM SULPHATE SOLUTION STORAGE TANK	HIGH	mm	8840	
00	18-LAH-2051	18-LI-2051	075	18-TK-154 START-UP BIN	HIGH	%	80	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
00	18-PAL-2172	18-PI-2172	051	UREA SOLUTION TO 18-L-150 A/B GRANULATOR	LOW	barg.	0.8	
00	18-PAH-2172	18-PI-2172	051	UREA SOLUTION TO 18-L-150 A/B GRANULATOR	HIGH	barg.	4.0	
00	18-PAL-2001A	18-PI-2001A	052	18-L-150A GRANULATOR UPPER CASING	LOW	barg.	-0.01	
00	18-PAH-2001A	18-PI-2001A	052	18-L-150A GRANULATOR UPPER CASING	HIGH	barg.	0.0	
00	18-PAL-2001B	18-PI-2001B	052	18-L-150A GRANULATOR UPPER CASING	LOW	barg.	-0.01	
00	18-PAH-2001B	18-PI-2001B	052	18-L-150A GRANULATOR UPPER CASING	HIGH	barg.	0.0	
00	18-PAL-2003	18-PT-2003	052	ATOMIZATION AIR TO 18-L-150B GRANULATOR LOWER CASING	LOW	barg.	0.3	
00	18-PALL-2003	18-PT-2003	052	ATOMIZATION AIR TO 18-L-150B GRANULATOR LOWER CASING	LOW LOW	barg.	0.15	
02	18-PAL-2004	18-PI-2004	052	UREA SOLUTION TO 18-L-150B GRANULATOR LOWER CASING	LOW	barg.	0.8	
02	18-PALL-2004	18-PI-2004	052	UREA SOLUTION TO 18-L-150B GRANULATOR LOWER CASING	LOW LOW	barg.	0.50	
02	18-PAH-2004	18-PI-2004	052	UREA SOLUTION TO 18-L-150B GRANULATOR LOWER CASING	HIGH	barg.	4.0	
02	18-PAL-2010	18-PI-2010	052	UREA SOLUTION TO 18-L-150B GRANULATOR LOWER CASING	LOW	barg.	2.8	
00	18-PAL-2031	18-PI-2031	055	ATOMIZATION AIR TO 18-E-151 GRANULATOR ATOMIZATION AIR HEATER	LOW	barg.	0.3	
00	18-PAH-2031	18-PI-2031	055	ATOMIZATION AIR TO 18-E-151 GRANULATOR ATOMIZATION AIR HEATER	HIGH	barg.	0.55	
00	18-PAL-2002	18-PI-2002	055	MSS STEAM TO 18-E-151	LOW	barg.	20.0	
00	18-PAH-2002	18-PI-2002	055	MSS STEAM TO 18-E-151	HIGH	barg.	24.0	
00	18-PAL-2111	18-PI-2111	056	DUST LADEN AIR FROM L-151 FIRST FLUID BED COOLER	LOW	barg.	-0.01	
02	18-PAL-2311	18-PI-2311	056	FLUIDIZATION AIR TO C-152 FIRST FLUID BED COOLER FLUIDIZATION FAN	LOW	barg.	0.028	(1) DELETED
00	18-PAL-2113	18-PI-2113	061	DUST LADEN AIR FROM L-156 FINAL FLUID BED COOLER	LOW	barg.	-0.01	
02	18-PDAH-2072	18-PDI-2072	062	18-T-150A GRANULATOR DUST SCRUBBER DEMISTERS	HIGH	barg.	0.003	(1) DELETED
00	18-PAL-2075A	18-PI-2075A	062	DUST AIR FROM 18-L-150A GRANULATOR UPPER CASING	LOW	barg.	-0.02	
00	18-PAH-2075A	18-PI-2075A	062	DUST AIR FROM 18-L-150A GRANULATOR UPPER CASING	HIGH	barg.	-0.011	
00	18-PAL-2081	18-PI-2081	063	T-151 FLUID BED COOLERS SCRUBBER OUTLET	LOW	barg.	-0.047	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
00	18-PAH-2081	18-PI-2081	063	T-151 FLUID BED COOLERS SCRUBBER OUTLET	HIGH	barg.	-0.0015	
02	18-PAL-2101	18-PT-2101	065	STEAM COLD CONDENSATE TO 18-P-153A UREA SOLUTION RECYCLE PUMP	LOW	barg.	4.2	(1) DELETED
02	18-PALL-2101	18-PT-2101	065	STEAM COLD CONDENSATE TO 18-P-153A UREA SOLUTION RECYCLE PUMP	LOW LOW	barg.	4.0	(1) DELETED
02	18-PAL-2102	18-PT-2102	065	STEAM COLD CONDENSATE TO 18-P-153B UREA SOLUTION RECYCLE PUMP	LOW	barg.	4.2	(1) DELETED
02	18-PALL-2102	18-PT-2102	065	STEAM COLD CONDENSATE TO 18-P-153B UREA SOLUTION RECYCLE PUMP	LOW LOW	barg.	4.0	(1) DELETED
00	18-PAL-2092	18-PI-2092	067	18-P-150B UF-85 METERING PUMP DISCHARGE	LOW	barg.	3.0	
00	18-PAH-2092	18-PI-2092	067	18-P-150B UF-85 METERING PUMP DISCHARGE	HIGH	barg.	6.0	
00	18-PAL-2096	18-PI-2096	067	18-P-150A UF-85 METERING PUMP DISCHARGE	LOW	barg.	3.0	
00	18-PAH-2096	18-PI-2096	067	18-P-150A UF-85 METERING PUMP DISCHARGE	HIGH	barg.	6.0	
00	18-PAL-2160	18-PI-2160	068	AMMONIA GAS FROM 18-V-160	LOW	barg.	2.6	
00	18-PAL-2164	18-PI-2164	069	18-P-158A/B SULPHURIC ACID PUMPS DISCHARGE	LOW	barg.	5.5	
00	18-PAH-2164	18-PI-2164	069	18-P-158A/B SULPHURIC ACID PUMPS DISCHARGE	HIGH	barg.	7.5	
00	18-PAL-2075B (1)	18-PI-2075B (1)	070	DUST AIR FROM 18-T-150B GRANULATOR AMMONIA SCRUBBER	LOW	barg.	-0.09	
00	18-PAH-2075B (1)	18-PI-2075B (1)	070	DUST AIR FROM 18-T-150B GRANULATOR AMMONIA SCRUBBER	HIGH	barg.	-0.059	
02	18-PAL-2161	18-PI-2161	068	AMMONIA GAS FROM 18-V-161	LOW	barg.	6.6	

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02	18-PDAH-2075	18-PDI-2075B	062	DUST AIR FROM T-150B GRANULATOR AMMONIA SCRUBBER & P-152A/B DISCHARGE	HIGH	mbar	58.0	
02	18-PDAH-2614	18-PDI-2614	070	18-T-150 B GRAN. AMMONIA SCRUBBER DEMISTER	HIGH	mbar	2.0	1) DELETED
02	18-PDAH-2615	18-PDI-2615	070	18-T-150 B GRAN. AMMONIA SCRUBBER TRAYS	HIGH	mbar	19.0	1) DELETED
02	18-PDAH-2079	18-PDI-2079	062	18-T-150A GRANULATOR DUST SCRUBBER TRAYS	HIGH	mbar	19.000	1) DELETED
02	18-PDAH-2082	18-PDI-2082	063	18-T-151 FLUID BED COOLERS SCRUBBER DEMISTER	HIGH	mbar	1.800	1) DELETED
02	18-PDAH-2083	18-PDI-2083	063	18-T-151 COOLERS SCRUBBER TRAY	HIGH	mbar	16.00	1) DELETED
02	18-PDAH-2310	18-PDI-2310	056	FIRST FLUID BED COOLER AIR INLET	HIGH	mmWC(G)	-55.00	1) DELETED

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
00	18-TAL-2171	18-TI-2171	051	UREA SOLUTION TO 18-L-150A/B GRANULATOR	LOW	°C	128	
00	18-TAH-2171	18-TI-2171	051	UREA SOLUTION TO 18-L-150A/B GRANULATOR	HIGH	°C	137	
00	18-TAL-2001	18-TI-2001	052	UREA SOLUTION FROM 18-L-150A/L-150B GRANULATOR TO 18-TK-153 UREA SOLUTION RECYCLE TANK	LOW	°C	90	
00	18-TAL-2002	18-TIC-2002	052	18-L-150A GRANULATOR UPPER CASING CHAMBER 1	LOW	°C	98	
00	18-TAH-2002	18-TIC-2002	052	18-L-150A GRANULATOR UPPER CASING CHAMBER 1	HIGH	°C	110	
00	18-TAL-2003	18-TIC-2003	052	18-L-150A GRANULATOR UPPER CASING CHAMBER 2	LOW	°C	98	
00	18-TAH-2003	18-TIC-2003	052	18-L-150A GRANULATOR UPPER CASING CHAMBER 2	HIGH	°C	110	
00	18-TAL-2004	18-TIC-2004	052	18-L-150A GRANULATOR UPPER CASING CHAMBER 3	LOW	°C	100	
00	18-TAH-2004	18-TIC-2004	052	18-L-150A GRANULATOR UPPER CASING CHAMBER 3	HIGH	°C	110	
00	18-TAL-2005	18-TIC-2005	052	18-L-150A GRANULATOR UPPER CASING CHAMBER 4	LOW	°C	100	
00	18-TAH-2005	18-TIC-2005	052	18-L-150A GRANULATOR UPPER CASING CHAMBER 4	HIGH	°C	110	
00	18-TAL-2006	18-TIC-2006	052	18-L-150A GRANULATOR UPPER CASING CHAMBER 6	LOW	°C	90	
00	18-TAH-2006	18-TIC-2006	052	18-L-150A GRANULATOR UPPER CASING CHAMBER 6	HIGH	°C	100	
00	18-TAH-2007	18-TI-2007	052	18-L-150A GRANULATOR UPPER CASING	HIGH	°C	110	
02	18-TAH-2031	18-TI-2031	052	ATOMIZATION AIR FROM 18-E-151 GRANULATOR ATOMIZATION AIR HEATER	HIGH	°C	150	
00	18-TAL-2031	18-TI-2031	052	ATOMIZATION AIR FROM 18-E-151 GRANULATOR ATOMIZATION AIR HEATER	LOW	°C	130	
02	18-TAL-2022	18-TIC-2022	054	FLUIDIZATION AIR FROM 18-C-151 GRAN. FLUIDIZATION AIR FAN	LOW	°C	17	
00	18-TAH-2025A	18-TIC-2025A	054	FLUIDIZATION AIR FROM 18-E-150 A GRANULATOR FLUIDIZATION AIR HEATER	HIGH	°C	100	
00	18-TAH-2025B	18-TIC-2025B	054	FLUIDIZATION AIR FROM 18-E-150 B GRANULATOR FLUIDIZATION AIR HEATER	HIGH	°C	100	
00	18-TAH-2025C	18-TIC-2025C	054	FLUIDIZATION AIR FROM 18-E-150 C GRANULATOR FLUIDIZATION AIR HEATER	HIGH	°C	100	
00	18-TAH-2025D	18-TIC-2025D	054	FLUIDIZATION AIR FROM 18-E-150 D GRANULATOR FLUIDIZATION AIR HEATER	HIGH	°C	100	
02	18-TAH-2282	18-TIC-2282	054	FLUIDIZATION AIR FROM 18-C-151 GRAN. FLUIDIZATION AIR FAN	HIGH	°C	47	
00	18-TAL-2283	18-TIC-2283	054	FLUIDIZATION AIR FROM 18-C-151 GRAN. FLUIDIZATION AIR FAN	LOW	°C	45	
00	18-TAL-2032	18-TI-2032	055	ATOMIZATION AIR FROM 18-E-151 GRANULATOR ATOMIZATION AIR HEATER	LOW	°C	130	

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00	18-TAL-2083	18-TI-2083	055	MSS STEAM TO 18-E-151	LOW	°C	215	
00	18-TAH-2083	18-TI-2083	055	MSS STEAM TO 18-E-151	HIGH	°C	224	
00	18-TAHH-2083	18-TI-2083	055	MSS STEAM TO 18-E-151	HIGH HIGH	°C	230	
00	18-TAL-2111	18-TIC-2111	056	FLUIDIZATION AIR FROM 18-C-152 FIRST FLUID BED COOLER FLUIDIZATION AIR FAN	LOW	°C	40	
00	18-TAH-2111	18-TIC-2111	056	FLUIDIZATION AIR FROM C-152 FIRST FLUID BED COOLER FLUIDIZATION	HIGH	°C	60	
02	18-TAH-2312	18-TIC-2312	056	FLUIDIZATION AIR TO C-152 FIRST FLUID BED COOLER FLUIDIZATION AIR FAN	HIGH	°C	62	(1) DELETED
00	18-TAH-2113	18-TI-2113	056	UREA GRANULES TO 18-HE-151 A BUCKET ELEVATOR FROM L-151 FIRST FLUID BED COOLER	HIGH	°C	85	
00	18-TAH-2114	18-TI-2114	056	UREA GRANULES TO 18-HE-151 B BUCKET ELEVATOR FROM 18-L-151 FIRST FLUID BED COOLER	HIGH	°C	85	
00	18-TAL-2131	18-TIC-2131	061	FLUIDIZATION AIR TO 18-L-156 FINAL FLUID BED COOLER	LOW	°C	6	
00	18-TAH-2131	18-TIC-2131	061	FLUIDIZATION AIR TO 18-L-156 FINAL FLUID BED COOLER	HIGH	°C	29	
00	18-TAH-2132	18-TIC-2132	061	UREA PRODUCT TO HANDLING	HIGH	°C	52	
00	18-TAL-2133	18-TI-2133	061	NH3 VAPOR FROM 18-E-153 FINAL FLUID BED COOLER AIR CHILLER	LOW	°C	-3	
02	18-TAL-2372	18-TI-2372	061	FLUIDIZATION AIR TO C-156 FINAL FLUID BED COOLER AIR FAN	LOW	°C	3	(1) DELETED
02	18-TAL-2381	18-TI-2381	061	FLUIDIZATION AIR TO E-154 AIR PRE-HEATER	LOW	°C	3	(1) DELETED
02	18-TAH-2381	18-TI-2381	061	FLUIDIZATION AIR TO E-154 AIR PRE-HEATER	HIGH	°C	12	(1) DELETED
00	18-TAH-2072	18-TI-2072	062	18-T-150A GRANULATOR DUST SCRUBBER	HIGH	°C	107	
00	18-TAH-2081	18-TI-2081	063	DUST LADEN AIR FROM 18-T-151 COOLERS SCRUBBER	HIGH	°C	60	
00	18-TAH-2082	18-TI-2082	063	18-T-151 COOLERS SCRUBBER	HIGH	°C	73	
00	18-TAL-2101	18-TI-2101	065	18-TK-153 UREA SOLUTION RECYCLE TANK	LOW	°C	40	
00	18-TAH-2101	18-TI-2101	065	18-TK-153 UREA SOLUTION RECYCLE TANK	HIGH	°C	60	
00	18-TAH-2181	18-TIC-2181	066	18-TK-155 GRANULATION STEAM CONDENSATE RECOVERY TANK	HIGH	°C	102	
00	18-TAL-2091	18-TI-2091	067	18-TK-150 UF-85 STORAGE TANK	LOW	°C	35	
00	18-TAH-2091	18-TI-2091	067	18-TK-150 UF-85 STORAGE TANK	HIGH	°C	50	
00	18-TAL-2160	18-TI-2160	068	AMMONIA VAPOURS TO AMMONIA PLANT	LOW	°C	-3	
00	18-TAH-2160	18-TI-2160	068	AMMONIA VAPOURS TO AMMONIA PLANT	HIGH	°C	10	
00	18-TAL-2161	18-TI-2161	068	AMMONIA VAPOURS TO AMMONIA PLANT	LOW	°C	10	

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REV.	ITEM	SIGNAL FROM	P&ID NO. 1208-11-PR-PID-	SERVICE/EQUIPMENT	LEVEL	UNIT	VALUE	REMARK
00	18-TAH-2161	18-TI-2161	068	AMMONIA VAPOURS TO AMMONIA PLANT	HIGH	°C	30	
00	18-TAL-2170	18-TI-2170	069	18-TK-156 SULPHURIC ACID STORAGE TANK	LOW	°C	10	
00	18-TAH-2170	18-TI-2170	069	18-TK-156 SULPHURIC ACID STORAGE TANK	HIGH	°C	50	
00	18-TAH-2071	18-TI-2071	070	EXHAUST AIR FROM 18-T-150 B GRAN. AMMONIA SCRUBBER	HIGH	°C	60	
00	18-TAH-2073	18-TI-2073	070	18-T-150 B GRAN. AMMONIA SCRUBBER	HIGH	°C	107	
00	18-TAL-2175	18-TI-2175	072	18-TK-157 AMMONIUM SULPHATE SOLUTION STORAGE TANK	LOW	°C	40	
01	18-TAH-2175	18-TI-2175	072	18-TK-157 AMMONIUM SULPHATE SOLUTION STORAGE TANK	HIGH	°C	60	

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