

LINES

BATTERY LIMIT AND PACKAGE LIMIT

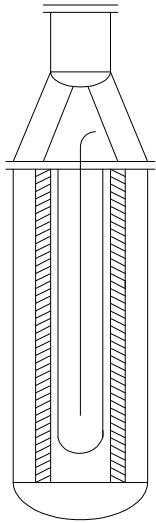
MAIN PROCESS LINE

SECONDARY PROCESS OR UTILITY STREAM

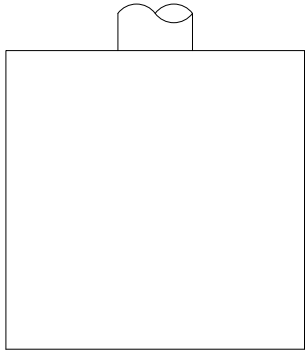
INSTRUMENT SIGNAL LINE

ELECTRICAL SIGNAL


EQUIPMENT



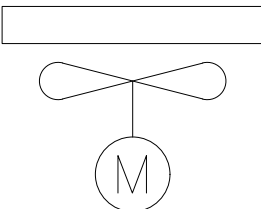
REACTOR



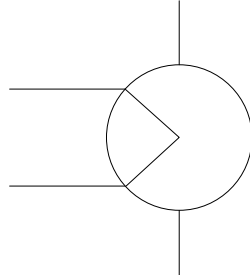
HEATER



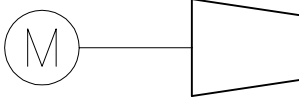
DRUM



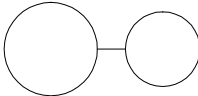
AIR COOLER




HEAT EXCANGER



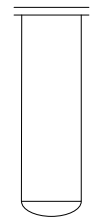
COMPRESSOR



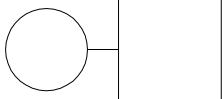
CENTRIFUGAL PUMP



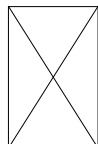
FILTERS



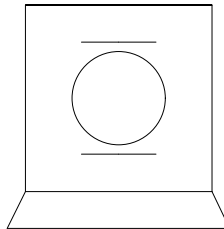
TANK



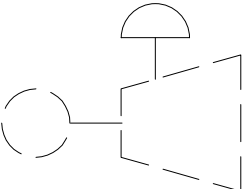
RECIPROCATON PUMP



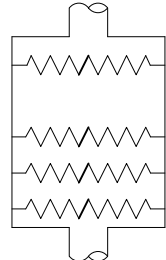
PADDING



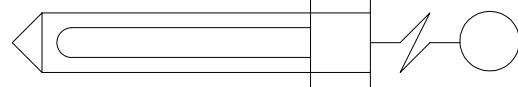
COMPRESSOR




GENERATOR



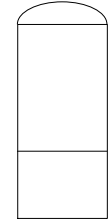
CONVECTION SECTION



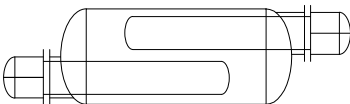
ELECTRIC HEATER



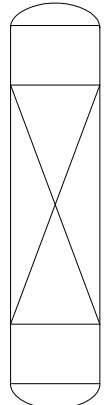
HORIZONTAL VESSEL



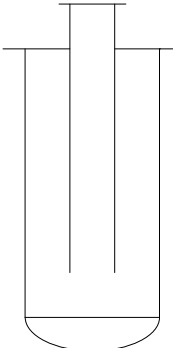
VAPORIZER



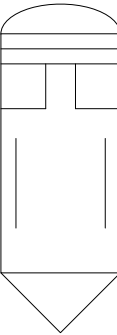
PROPANE HEATER SYSTEM



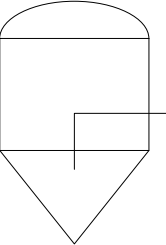
SHP REACTOR



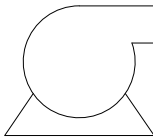
LIFT ENGAGER



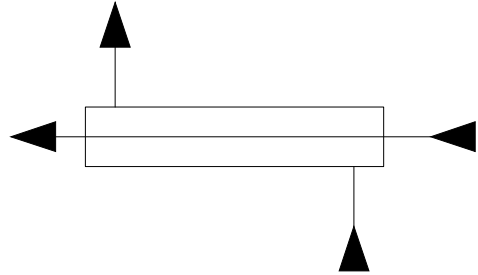
CATALYST COLLECTOR



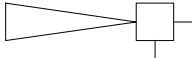
LOCK HOPPER



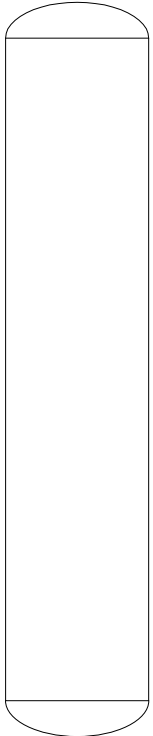
BLOWER



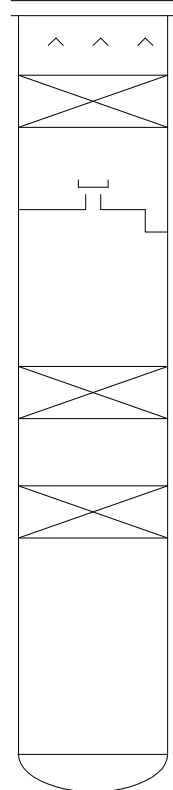
DOUBLE-PIPE-HEAT EXCHANGER



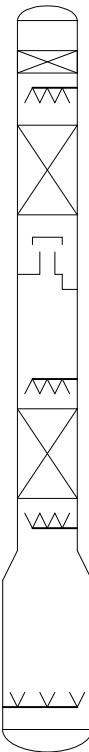
EDUCTOR



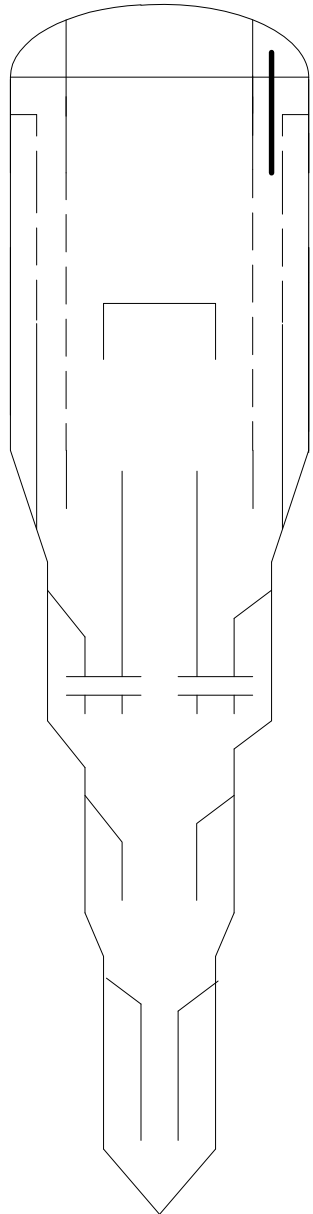
TOWER



COLUMN






SCRUBBER



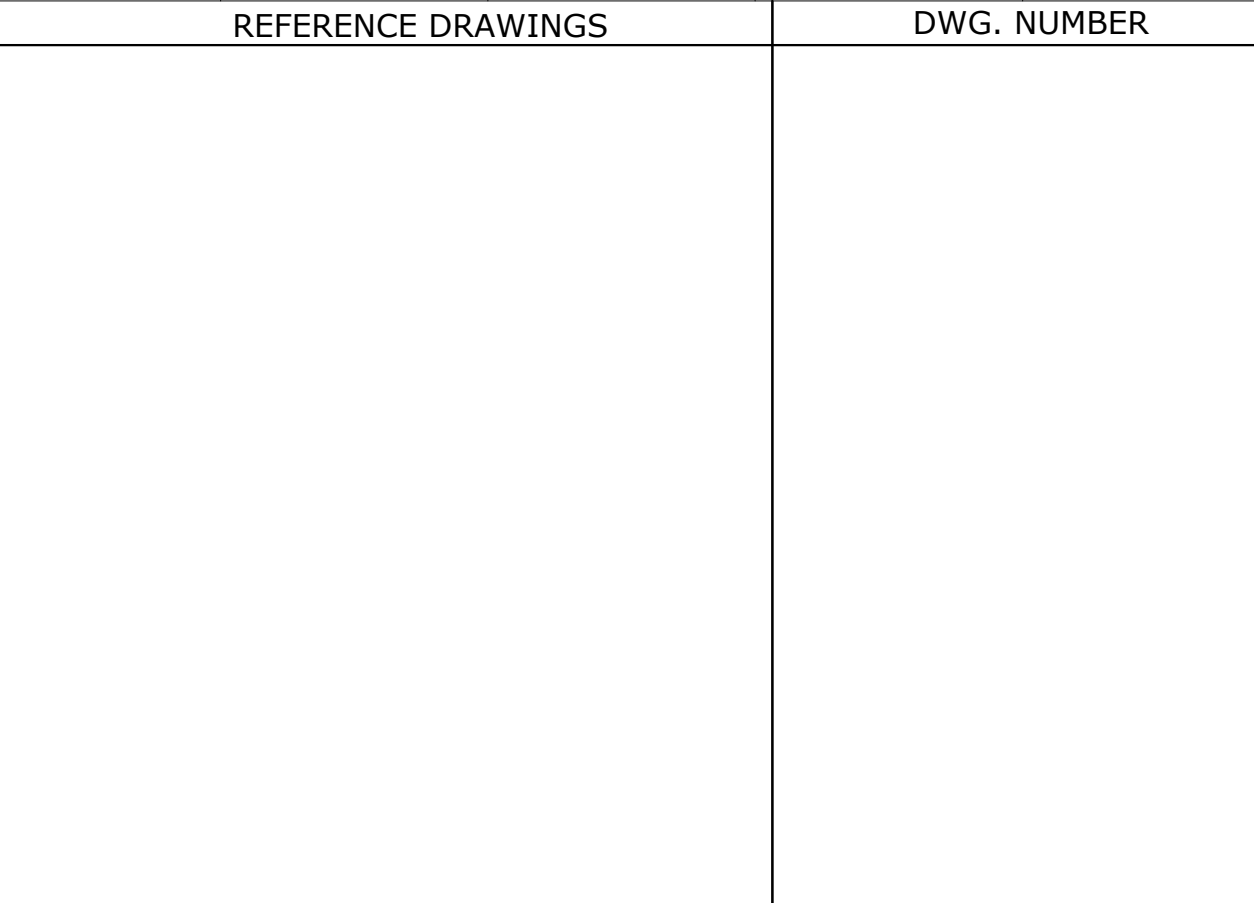
REGENERATION TOWER

REFERENCE DRAWINGS

DWG. NUMBER

02	Approved for Design	18-Dec-2024	GYN	LHJ	ZGC			
01	Issued for Approval	26-Nov-2024	GYN	LHJ	ZGC			
00	Issued for Comment	12-Oct-2024	GYN	LHJ	ZGC			
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED			
OWNER: <div></div>		MC: <div></div>	CONTRACTOR/CONSULTANT: <div></div>					
PROJECT TITLE: <div>PROPANE DEHYDROGENATION (PDH) PROJECT</div>								
DOCUMENT TITLE: <div>Process Flow Diagram—Legend for PFD</div>								
DOC NO.:	PROJ.CODE	UNIT	PHASE	DEP.	DOC. TYPE			
	3981	00	BA	PR	PFD			
SCALE:		SIZE: A1	SHEET NO: 1	REVISION: 2	CLASS: 1			

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NOTES:

1. CONTROL PRESSURE SET AT 0.105 MPA(A)
2. THE TOTAL SULFUR INJECTION RATE OF THE REACTOR IS 75-85 PPM WT.

END OF RUN																																										
STREAM NUMBER	2155	2159	2162	2163	2165	2166	2168	2169	2170	2172	2173	2175	2176	2177	2179	2180	2183	2184	2186	2187	2188	2191	2255	2260	2262	2264	2267	2269	2275	2278	2283	2284	2287	2288	2290	2292	2295	2297	2298	2301	2900	
TEMPERATURE, DEG C	43	43	527	595	545	527	614	456	614	564	381	627	563	627	574	450	574	629	577	145	414	629	122	122	621	130	344	621	130	122	122	344	621	122	344	130	621	122	486	470	150	122
PRESSURE, MPa	0.35	0.34	0.128	0.128	0.107	0.107	0.107	0.107	0.107	0.107	0.06	0.05	0.05	0.02	NOITE	1	0.05	0.05	0.02	NOITE	1	0.003	0.02	0.20	0.20	0.12	0.12	0.02	0.02	0.06	0.02	0.18	0.02	0.16	0.02	0.02	0.01	0.01	0.01	0.01	0.01	
TOTAL MASS FLOW, kg/h	303199	303210	303285	303285	303373	303310	303534	229	303373	303627	248	304035	303875	303875	304118	229	304347	304347	304567	304567	271	304507	82	164	141	160	125	122	72	75	160	125	66	160	108	125	59	737	954	305521	272	
ENTHALPY, MW	-191.709	-191.938	-70.449	-48.528	-48.767	-70.740	-26.202	0.398	-26.342	-26.862	0.299	-5.325	-26.563	-5.465	-6.132	0.296	-5.836	12.730	11.369	-109.830	0.295	12.870	0.032	0.395	0.019	0.140	0.302	0.017	0.028	0.029	0.140	0.302	0.026	0.140	0.015	0.302	0.023	1.291	1.547	-108.260	0.105	
MOLE WEIGHT, kg/kg MOLE	30.7	30.7	30.6	30.6	29.2	30.7	29.0	2.0	29.2	27.8	0.22	27.3	25.75	25.6	26.2	0.22	25.9	25.9	24.8	24.8	2.2	25.8	2.0	2.0	2.0	2.4	2.4	2.0	2.4	2.0	2.4	2.0	2.4	2.0	2.4	2.0	2.4	2.0	2.1	2.1	2.4	2.0
YAPOR PHASE																																										
DENSITY, kg/m3	5.40	5.28	1.75	1.32	1.20	1.89	0.88	0.03	0.90	0.82	0.08	0.60	0.82	0.62	0.55	0.06	0.55	0.43	0.37	0.64	0.04	0.41	0.18	0.08	0.16	0.10	0.06	0.12	0.20	0.14	0.08	0.04	0.10	0.06	0.08	0.03	0.07	0.03	0.03	0.61	0.34	
VISCOSITY, cP	0.01	0.01	0.02	0.03	0.02	0.02	0.03	0.02	0.03	0.02	0.02	0.03	0.02	0.03	0.02	0.02	0.02	0.03	0.03	0.01	0.02	0.04	0.01	0.02	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.01	0.01

HEATER AND EXCHANGER DUTY SUMMARY					
END OF RUN					
ITEM NUMBER	81-E-101A/B/C/D	81-H-101	81-H-102	81-H-103	81-H-104
DUTY, MW	121.335	21.921	22.425	21.097	18.566

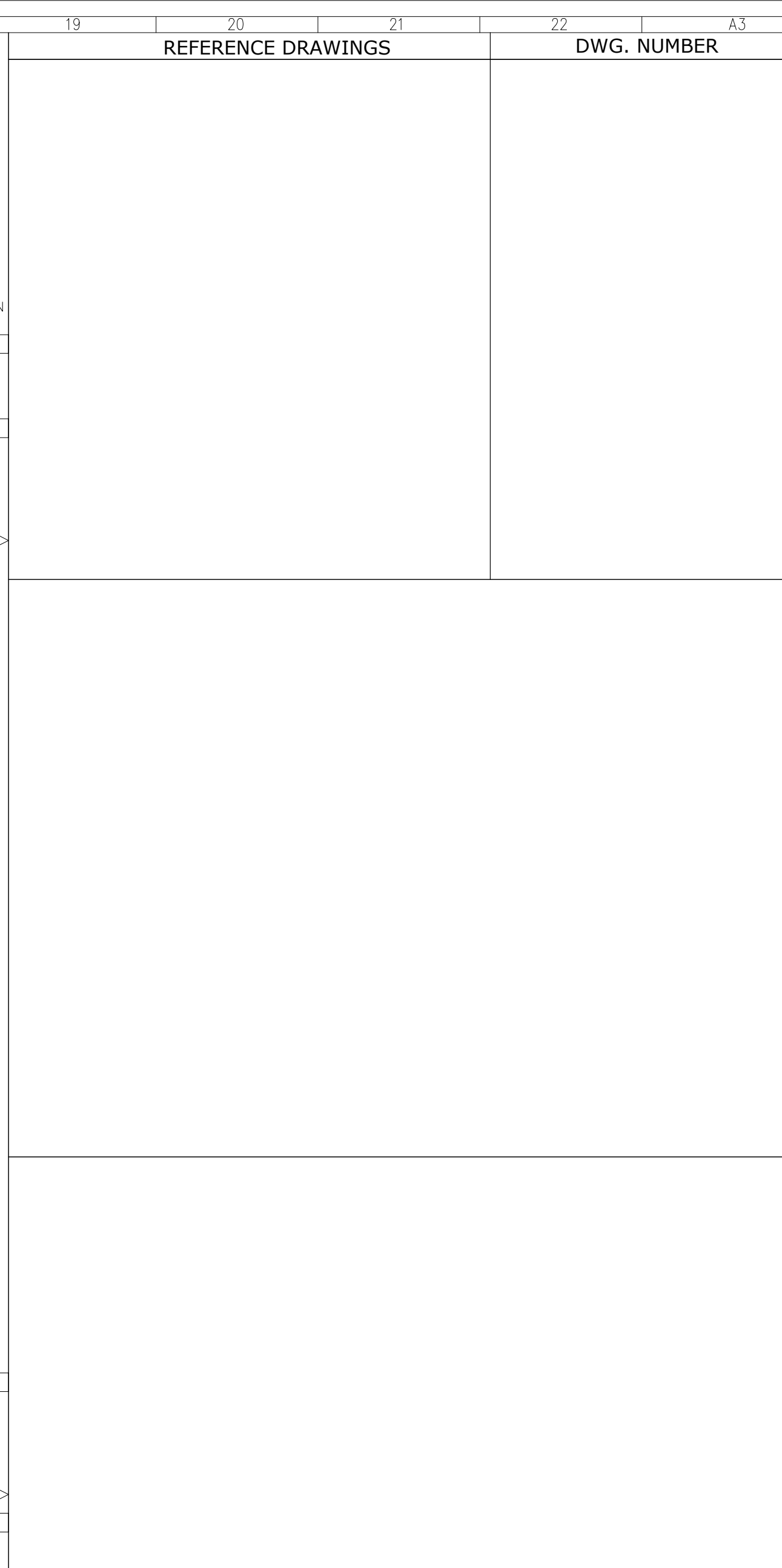
<p>OWNER:</p>  <p>شرکت پتروشیمی پارس</p>	<p>MC:</p>  <p>A.P.G</p>	<p>CONTRACTOR/CONSULTANT:</p>  <p>SINOWEY</p>
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DOCUMENT TITLE:

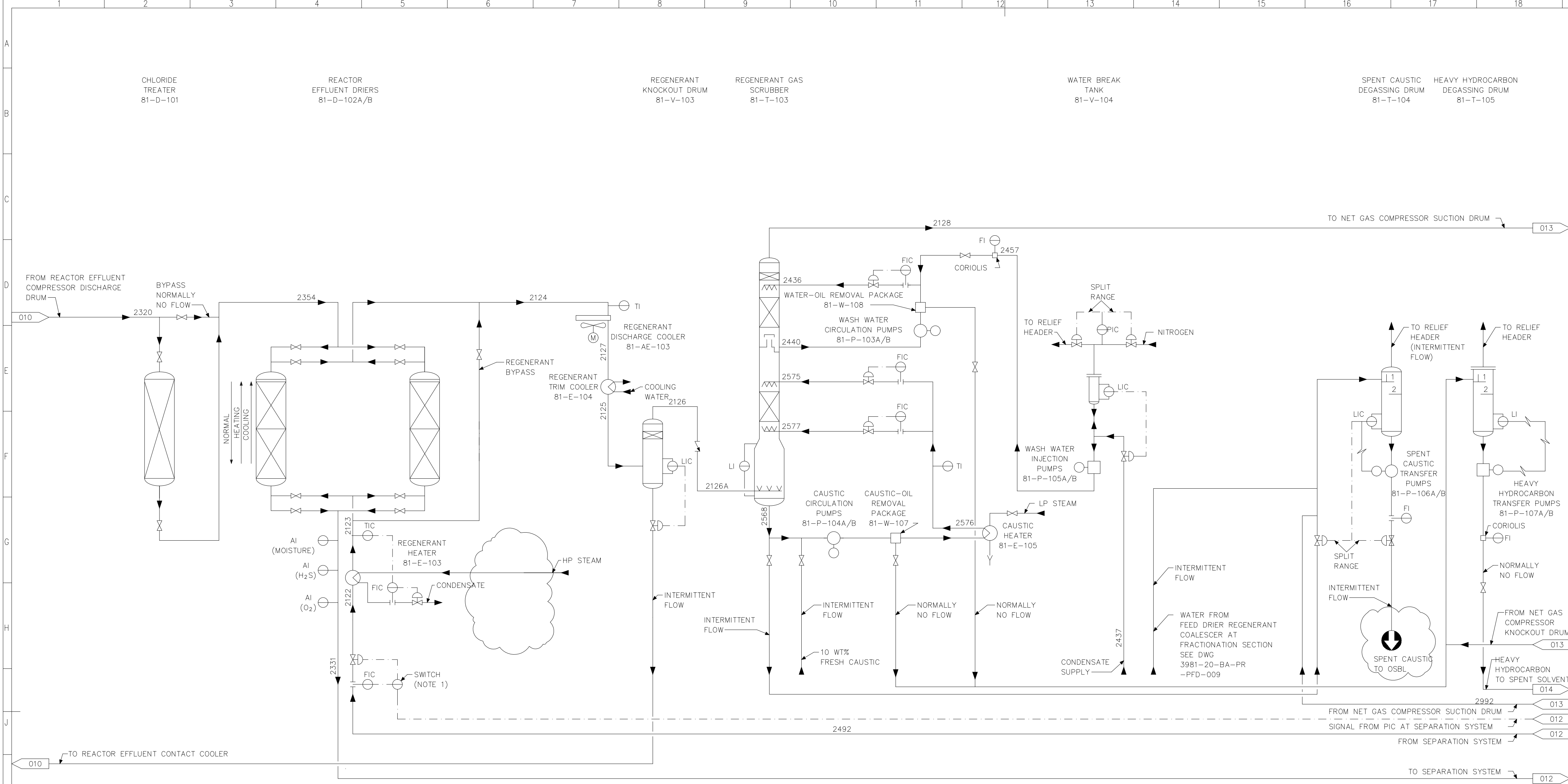
Process Flow Diagram—Reactors And Heaters Section

DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	10	BA	PR	PFD	009
SCALE:	SIZE: A1	SHEET NO: 1			REVISION: 2	CLASS: 1

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DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	10	BA	PR	PFD	010
SCALE:	SIZE: A1	SHEET NO: 1			REVISION:4	CLASS: 1



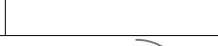
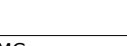


STREAM DATA SUMMARY																					
START OF RUN																					
STREAM NUMBER	2122	2123	2124	2125	2126	2126A	2127	2128	2320	2331	2354	2436	2437	2440	2457	2492	2568	2575	2576	2577	2992
TEMPERATURE, DEG C	43	232	232	43	43	43	65	43	50	50	50	43	39	43	39	43	43	43	43	41	
PRESSURE, MPa(g)	0.51	0.49	0.48	0.46	0.46	0.46	0.47	0.38	1.32	1.25	1.29	0.61	0.35	0.39	1.11	0.61	0.39	0.57	0.95	0.40	0.06
TOTAL MASS FLOW, kg/h	5845	5845	6271	6272	6271	6271	6271	6421	276751	276715	276739	63677	248	63428	248	5845	88899	71119	88899	17780	618
ENTHALPY, MW	-1.188	2.450	1.901	-1.766	-1.766	-1.766	-1.344	-3.428	-111.111	-111.055	-111.090	-279.271	-1.091	-278.193	-1.091	-1.127	-366.975	-293.580	-366.915	-73.395	-2.707
MOLE WEIGHT, kg/kg MOLE	2.5	2.5	2.7	2.7	2.7	2.7	2.7	2.7	23.5	23.5	23.5	18.0	18.0	18.0	18.0	2.5	19.1	19.1	19.1	----	18.0
VAPOR PHASE																					
DENSITY, kg/m3	0.58	0.35	0.37	0.57	0.57	0.57	0.54	0.50	13.00	12.30	12.80	-----	-----	-----	-----	0.67	-----	-----	-----	-----	
VISCOSITY, cP	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-----	-----	-----	-----	0.01	-----	-----	-----	-----	
LIQUID PHASE																					
DENSITY, kg/m3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	976.15	992.83	976.31	993.16	-----	1006.87	1006.87	1006.87	1006.87	991.75
VISCOSITY, cP	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.63	0.67	0.63	0.67	-----	0.81	0.81	0.81	0.81	0.64

STREAM DATA SUMMARY																					
DESIGN CASE																					
STREAM NUMBER	2122	2123	2124	2125	2126	2126A	2127	2128	2320	2331	2354	2436	2437	2440	2457	2492	2568	2575	2576	2577	2992
TEMPERATURE, DEG C	43	232	232	43	43	43	65	43	50	50	50	43	39	43	39	43	43	43	43	41	
PRESSURE, MPa(g)	0.51	0.49	0.48	0.46	0.45	0.45	0.47	0.38	1.32	1.25	1.29	0.61	0.35	0.39	1.11	0.61	0.39	0.57	0.95	0.40	0.06
TOTAL MASS FLOW, kg/h	5662	5662	6126	6126	6126	6126	6126	6234	307328	307307	307333	62806	216	62590	216	5662	87833	70267	87834	17567	616
ENTHALPY, MW	-0.878	2.689	2.083	-1.576	-1.576	-1.576	-1.155	-3.178	-130.400	-130.342	-130.383	-275.450	-0.947	-274.516	-0.947	-0.878	-362.448	-289.959	-362.448	-72.490	-2.685
MOLE WEIGHT, kg/kg MOLE	2.4	2.4	2.6	2.6	2.6	2.6	2.6	2.6	24.0	24.0	24.0	18.0	18.0	18.0	18.0	2.4	19.1	19.1	19.1	19.1	18.0
VAPOR PHASE																					
DENSITY, kg/m3	0.56	0.34	0.36	0.55	0.54	0.54	0.52	0.48	13.40	12.70	13.10	-----	-----	-----	-----	0.65	-----	-----	-----	-----	-----
VISCOSITY, cP	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-----	-----	-----	-----	0.01	-----	-----	-----	-----	-----
LIQUID PHASE																					
DENSITY, kg/m3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	976.15	993.00	976.30	993.00	-----	1006.21	1006.21	1006.21	1006.21	991.93
VISCOSITY, cP	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.63	0.66	0.63	0.66	-----	0.81	0.81	0.81	0.81	0.64

HEATER AND EXCHANGER DUTY SUMMARY				
START OF RUN				
ITEM NUMBER	81-E-103	81-E-104	81-E-105	81-AE-103
DUTY, MW	3.638	0.421	1.107	3.245

HEATER AND EXCHANGER DUTY SUMMARY				
DESIGN CASE				
ITEM NUMBER	81-E-103	81-E-104	81-E-105	81-AE-103
DUTY, MW	3.567	0.421	1.093	3.238

03	Approved for Design	05-Jun-2025	LC	ZGC	YGH
02	Approved for Design	22-Feb-2025	GYN	LHJ	ZGC
01	Issued for Approval	26-Jan-2025	GYN	LHJ	ZGC
00	Issued for Comment	08-Oct-2024	GYN	LHJ	ZGC

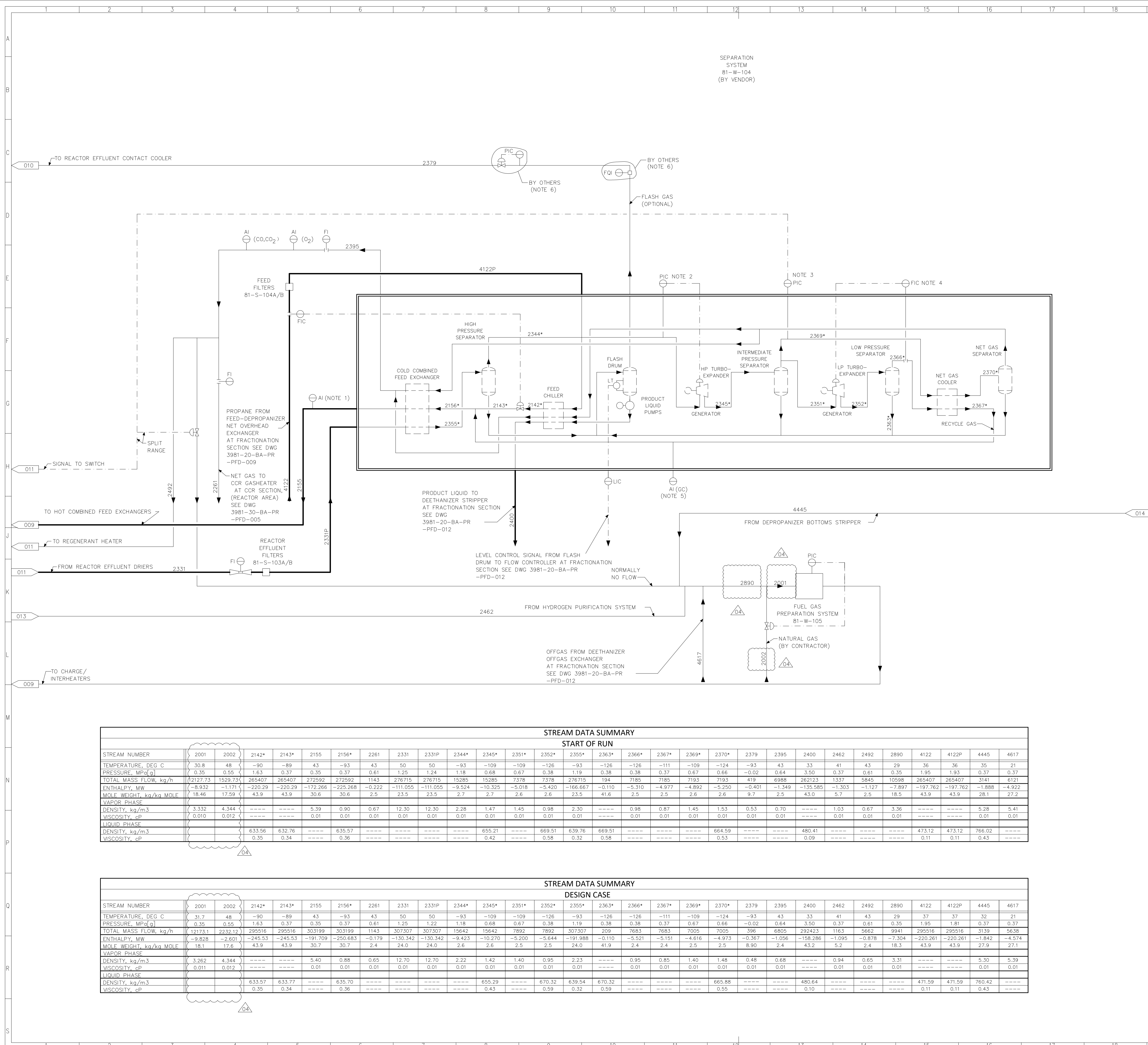
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:		MC:		CONTRACTOR/CONSULTANT:	
				 Farah Sanat Pars  SINOWEY	

PROJECT TITLE:					
PROPANE DEHYDROGENATION (PDH) PROJECT					

DOCUMENT TITLE:					
Process Flow Diagram – Reactor Effluent Drier Section					

DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	10	BA	PR	PFD	011
SCALE:	SIZE: A1	SHEET NO: 1		REVISION: 3		CLASS: 1

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REFERENCE DRAWINGS						DWG. NUMBER

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- NOTE 1: ANALYZED COMPONENTS INCLUDE HYDROGEN, METHANE, ETHANE, ETHYLENE, PROPANE, PROPYLENE. DETAILS REFER 3981100-994-SEPARATION SYSTEM
- NOTE 2: PIC SIGNAL FROM HP TURBO EXPANDER INLET TO CONTROL TURBO EXPANDER INLET GUIDE VANE
- NOTE 3: PIC SIGNAL FROM INTERMEDIATE SEPARATOR NET GAS TAKE OFF
- NOTE 4: RECYCLE GAS FIC SIGNAL TO CONTROL LP TURBO EXPANDER INLET GUIDE VANE AND BYPASS VALVE
- NOTE 5: RECYCLE GAS COMPOSITION, ANALYZED COMPONENTS INCLUD HYDROGEN, METHANE, ETHYLENE, ETHANE, PROPYLENE AND PROPANE REFER 3981200-994-SEPARATION SYSTEM
* FOR REFERENCE ONLY, WITHIN SCOPE OF SEPARATION SYSTEM.
** EQUIPMENT NUMBERS RESERVED FOR SEPARATION SYSTEM.
- NOTE 6: PROVIDED BY SEPARATION SYSTEM SUPPLIER

04	Approved for Design	24-Apr-2025	GYN	LHJ	ZGC
03	Approved for Design	16-Mar-2025	GYN	LHJ	ZGC
02	Issued for Approval	26-Feb-2025	GYN	LHJ	ZGC
01	Issued for Approval	26-Jan-2025	GYN	LHJ	ZGC
00	Issued for Comment	08-Oct-2024	GYN	LHJ	ZGC

REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:					
MC:					
CONTRACTOR/CONSULTANT:					

PROJECT TITLE:
PROPANE DEHYDROGENATION (PDH) PROJECT

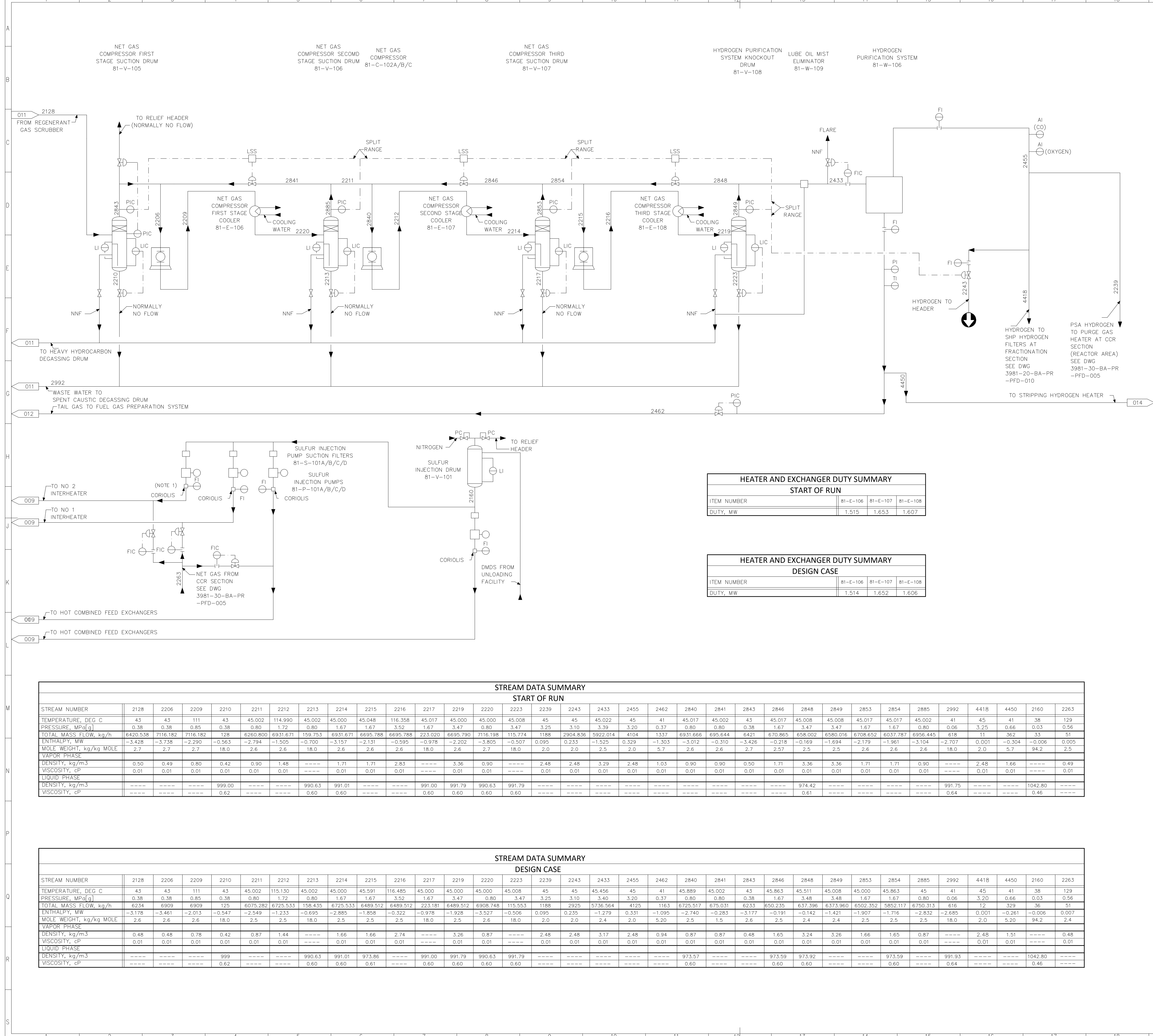
DOCUMENT TITLE:
Process Flow Diagram – Separation System Section

DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	10	BA	PR	PFD	012
SCALE:	SIZE: A1	SHEET NO: 1		REVISION: 4		CLASS: 1

STREAM DATA SUMMARY																														
START OF RUN																														
STREAM NUMBER	2001	2002	2142*	2143*	2155	2156*	2261	2331	2331P	2344*	2345*	2351*	2352*	2355*	2363*	2366*	2367*	2369*	2370*	2379	2395	2400	2462	2492	2890	4122	4122P	4445	4617	
TEMPERATURE, DEG C	30.8	48	-90	-89	43	-93	43	50	50	-93	-109	-109	-126	-93	-126	-126	-111	-109	-124	-93	43	33	41	43	29	36	36	35	21	
PRESSURE, MPa(g)	0.35	0.55	1.63	0.37	0.35	0.37	0.61	1.25	1.24	1.18	0.68	0.67	0.38	1.19	0.38	0.38	0.37	0.67	0.66	-0.02	0.64	3.50	0.37	0.61	0.35	1.95	1.93	0.37	0.37	
TOTAL MASS FLOW, kg/h	12127.73	1529.73	265407	265407	272592	272592	1143	276715	276715	15285	15285	7378	7378	276715	194	7185	7185	7193	7193	419	6988	262123	1337	5845	10598	265407	265407	3141	6121	
ENTHALPY, MW	-8.932	-1.171	-220.29	-220.29	-172.266	-225.268	-0.222	-111.055	-111.055	-9.524	-10.325	-5.018	-5.420	-166.667	-0.110	-5.310	-4.977	-4.892	-5.250	-0.401	-1.349	-135.585	-1.303	-1.127	-7.897	-197.762	-197.762	-1.888	-4.922	
MOLE WEIGHT, kg/kg MOLE	18.46	17.59	43.9	43.9	30.6	30.6	2.5	23.5	23.5	2.7	2.7	2.6	2.6	23.5	41.6	2.5	2.5	2.6	2.6	9.7	2.5	43.0	5.7	2.5	18.5	43.9	43.9	28.1	27.2	
VAPOR_PHASE																														
DENSITY, kg/m3	3.332	4.344	-----	-----	5.39	0.90	0.67	12.30	12.30	2.28	1.47	1.45	0.98	2.30	-----	0.98	0.87	1.45	1.53	0.53	0.70	-----	1.03	0.67	3.36	-----	-----	5.28	5.41	
VISCOSITY, cP	0.010	0.012	-----	-----	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-----	0.01	0.01	0.01	0.01	0.01	0.01	-----	0.01	0.01	0.01	-----	-----	0.01	0.01	
LIQUID_PHASE																														
DENSITY, kg/m3	633.56	632.76	-----	-----	635.57	-----	-----	-----	-----	655.21	-----	669.51	639.76	669.51	-----	-----	-----	-----	664.59	-----	-----	480.41	-----	-----	-----	-----	473.12	473.12	766.02	-----
VISCOSITY, cP	0.35	0.34	-----	-----	0.36	-----	-----	-----	-----	0.42	-----	0.58	0.32	0.58	-----	-----	-----	-----	0.53	-----	-----	0.09	-----	-----	-----	-----	0.11	0.11	0.43	-----

STREAM DATA SUMMARY																													
DESIGN CASE																													
STREAM NUMBER	2001	2002	2142*	2143*	2155	2156*	2261	2331	2331P	2344*	2345*	2351*	2352*	2355*	2363*	2366*	2367*	2369*	2370*	2379	2395	2400	2462	2492	2890	4122	4122P	4445	4617
TEMPERATURE, DEG C	31.7	48	-90	-89	43	-93	43	50	50	-93	-109	-109	-126	-93	-126	-126	-111	-109	-124	-93	43	33	41	43	29	37	37	32	21
PRESSURE, MPa(g)	0.35	0.55	1.63	0.37	0.35	0.37	0.61	1.25	1.22	1.18	0.68	0.67	0.38	1.19	0.38	0.38	0.37	0.67	0.66	-0.02	0.64	3.50	0.37	0.61	0.35	1.95	1.81	0.37	0.37
TOTAL MASS FLOW, kg/h	12173.1	2232.12	295516	295516	303199	303199	1143	307307	307307	15642	15642	7892	7892	307307	209	7683	7683	7005	7005	396	6805	292423	1163	5662	9941	295516	295516	3139	5638
ENTHALPY, MW	-9.828	-2.601	-245.53	-245.53	-191.709	-250.683	-0.179	-130.342	-130.342	-9.423	-10.270	-5.200	-5.644	-191.988	-0.110	-5.521	-5.151	-4.616	-4.973	-0.367	-1.056	-158.286	-1.095	-0.878	-7.304	-220.261	-220.261	-1.842	-4.574
MOLE WEIGHT, kg/kg MOLE	18.1	17.6	43.9	43.9	30.7	30.7	2.4	24.0	24.0	2.6	2.6	2.5	2.5	24.0	41.9	2.4	2.4	2.5	2.5	8.90	2.4	43.2	5.2	2.4	18.3	43.9	43.9	27.9	27.1
VAPOR PHASE																													
DENSITY, kg/m3	3.262	4.344	-----	-----	5.40	0.88	0.65	12.70	12.70	2.22	1.42	1.40	0.95	2.23	-----	0.95	0.85	1.40	1.48	0.48	0.68	-----	0.94	0.65	3.31	-----	-----	5.30	5.39
VISCOSITY, cP	0.011	0.012	-----	-----	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-----	0.01	0.01	0.01	0.01	0.01	0.01	-----	0.01	0.01	0.01	-----	-----	0.01	0.01
LIQUID PHASE																													
DENSITY, kg/m3	633.57	633.77	-----	-----	635.70	-----	-----	-----	-----	655.29	-----	670.32	639.54	670.32	-----	-----	-----	-----	665.88	-----	-----	480.64	-----	-----	-----	471.59	471.59	760.42	-----
VISCOSITY, cP	0.35	0.34	-----	-----	0.36	-----	-----	-----	-----	0.43	-----	0.59	0.32	0.59	-----	-----	-----	-----	0.55	-----	-----	0.10	-----	-----	-----	0.11	0.11	0.43	-----

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STREAM DATA SUMMARY

START OF RUN

STREAM NUMBER	2128	2206	2209	2210	2211	2212	2213	2214	2215	2216	2217	2219	2220	2223	2239	2243	2433	2455	2462	2840	2841	2843	2846	2848	2849	2853	2854	2885	2992	4418	4450	2160	2263
TEMPERATURE, DEG C	43	43	111	43	45.002	114.990	45.002	45.000	45.048	116.358	45.017	45.000	45.000	45.008	45	45	45.022	45	41	45.017	45.002	43	45.017	45.008	45.008	45.017	45.017	45.002	41	45	41	38	129
PRESSURE, MPa(g)	0.38	0.38	0.85	0.38	0.80	1.72	0.80	1.67	1.67	3.52	1.67	3.47	0.80	3.47	3.25	3.10	3.39	3.20	0.37	0.80	0.80	0.38	1.67	3.47	3.47	1.67	1.67	0.80	0.06	3.25	0.66	0.03	0.56
TOTAL MASS FLOW, kg/h	6420.538	7116.182	7116.182	128	6260.800	6931.671	159.753	6931.671	6895.788	6695.788	223.020	6695.790	7116.198	115.774	1188	2904.836	5922.014	4104	1337	6931.866	695.644	6421	670.865	658.002	6580.016	6708.652	6037.787	6956.445	618	11	362	33	51
ENTHALPY, MW	-3.428	-3.738	-2.290	-0.563	-2.794	-1.505	-0.700	-3.157	-2.131	-0.595	-0.978	-2.202	-3.805	-0.507	0.095	0.233	-1.525	0.329	-1.303	-3.012	-0.310	-3.428	-0.218	-0.169	-1.694	-2.179	-1.961	-3.104	-0.304	-0.006	0.005		
MOLE WEIGHT, kg/kg MOLE	2.7	2.7	2.7	18.0	2.6	2.6	18.0	2.6	2.6	2.6	18.0	2.6	2.7	18.0	2.0	2.0	2.5	2.0	5.7	2.6	2.6	2.7	2.57	2.5	2.5	2.6	2.6	2.6	18.0	2.0	5.7	94.2	2.5
VAPOR PHASE																																	
DENSITY, kg/m3	0.50	0.49	0.80	0.42	0.90	1.48	-----	1.71	1.71	2.83	-----	3.36	0.90	-----	2.48	2.48	3.29	2.48	1.03	0.90	0.90	0.50	1.71	3.36	3.36	1.71	1.71	0.90	-----	2.48	1.66	-----	0.49
VISCOSITY, cP	0.01	0.01	0.01	0.01	0.01	0.01	-----	0.01	0.01	0.01	-----	0.01	0.01	-----	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-----	0.01	0.01	-----	0.01
LIQUID PHASE																																	
DENSITY, kg/m3	-----	-----	-----	999.00	-----	-----	990.63	991.01	-----	-----	991.00	991.79	990.63	991.79	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	991.75	-----	-----	1042.80	-----
VISCOSITY, cP	-----	-----	-----	0.62	-----	-----	0.60	0.60	-----	-----	0.60	0.60	0.60	0.60	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.64	-----	-----	0.46	-----

STREAM DATA SUMMARY

DESIGN CASE

STREAM NUMBER	2128	2206	2209	2210	2211	2212	2213	2214	2215	2216	2217	2219	2220	2223	2239	2243	2433	2455	2462	2840	2841	2843	2846	2848	2849	2853	2854	2885	2992	4418	4450	2160	2263
TEMPERATURE, DEG C	43	43	111	43	45.002	115.130	45.002	45.000	45.591	116.485	45.000	45.000	45.008	45	45	45.456	45	41	45.889	45.002	43	45.863	45.511	45.008	45.000	45.863	45	41	45	41	38	129	
PRESSURE, MPo(g)	0.38	0.38	0.85	0.38	0.80	1.72	0.80	1.67	1.67	3.52	1.67	3.47	0.80	3.47	3.25	3.10	3.40	3.20	0.37	0.80	0.80	0.38	1.67	3.48	3.48	1.67	1.67	0.80	0.06	3.20	0.66	0.03	0.56
TOTAL MASS FLOW, kg/h	6234	6909	6909	125	6075.282	6725.533	158.435	6725.533	6489.512	6489.512	223.181	6489.512	6908.748	115.553	1188	2925	5736.564	4125	1163	6725.517	675.031	6233	650.235	637.396	6373.960	6502.352	5852.117	6750.313	616	12	329	36	51
ENTHALPY, MW	-3.178	-3.461	-2.013	-0.547	-2.549	-1.233	-0.695	-2.885	-1.858	-0.322	-0.978	-1.928	-3.527	-0.506	0.095	0.235	-1.279	0.331	-1.095	-2.740	-0.283	-3.177	-0.191	-0.142	-1.421	-1.907	-1.716	-2.832	-2.685	0.001	-0.261	-0.006	0.007
MOLE WEIGHT, kg/kg MOLE	2.6	2.6	2.6	18.0	2.5	2.5	18.0	2.5	2.5	2.5	18.0	2.5	2.6	18.0	2.0	2.0	2.4	2.0	5.20	2.5	1.5	2.6	2.5	2.4	2.4	2.5	2.5	2.5	18.0	2.0	5.20	94.2	2.4
VAPOR PHASE																																	
DENSITY, kg/m3	0.48	0.48	0.78	0.42	0.87	1.44	-----	1.66	1.66	2.74	-----	3.26	0.87	-----	2.48	2.48	3.17	2.48	0.94	0.87	0.87	0.48	1.65	3.24	3.26	1.66	1.65	0.87	-----	2.48	1.51	-----	0.48
VISCOSITY, cP	0.01	0.01	0.01	0.01	0.01	0.01	-----	0.01	0.01	0.01	-----	0.01	0.01	-----	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-----	0.01	0.01	-----	0.01
LIQUID PHASE																																	
DENSITY, kg/m3	-----	-----	-----	999	-----	-----	990.63	991.01	973.86	-----	991.00	991.79	990.63	991.79	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	991.93	-----	-----	1042.80	-----
VISCOSITY, cP	-----	-----	-----	0.62	-----	-----	0.60	0.60	0.61	-----	-----	0.60	0.60	0.60	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.64	-----	-----	0.46	-----

REFERENCE DRAWINGS

DWG. NUMBER

NOT1 1. THE TOTAL SULFUR INJECTION RATE OF THE REACTOR IS 75-85 PPM WT.

02	Approved for Design	22-Feb-2025	GYN	LHJ	ZGC
01	Issued for Approval	26-Jan-2025	GYN	LHJ	ZGC
00	Issued for Comment	08-Oct-2024	GYN	LHJ	ZGC

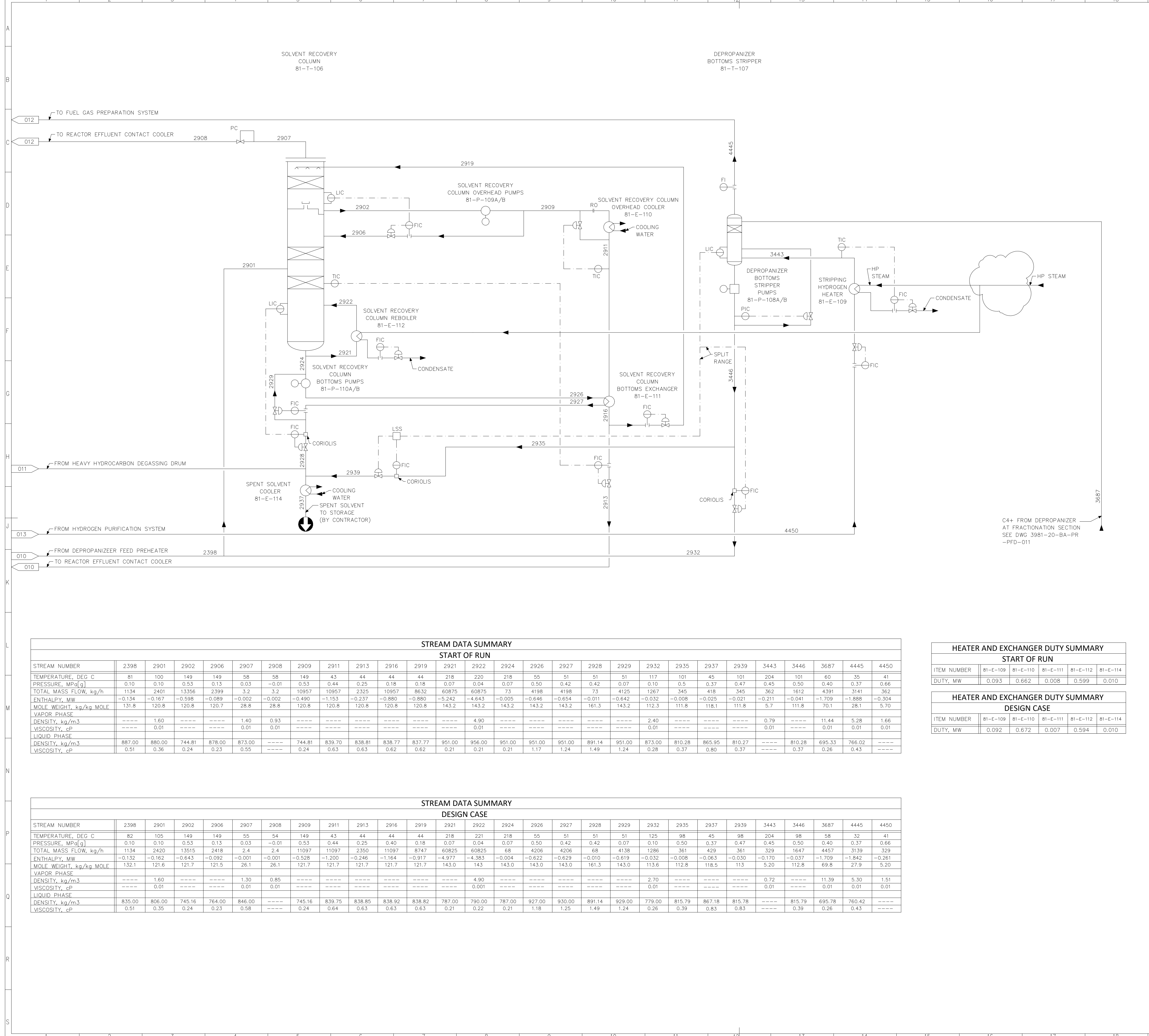
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:		MC:		CONTRACTOR/CONSULTANT:	

PROJECT TITLE:	PROPANE DEHYDROGENATION (PDH) PROJECT
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DOCUMENT TITLE:	PROCESS FLOW DIAGRAM-HYDROGEN PURIFICATION SYSTEM
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DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	10	BA	PR	PFD	013
SCALE:	SIZE: A1	SHEET NO: 1	REVISION: 2	CLASS: 1		

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STREAM DATA SUMMARY																											
START OF RUN																											
STREAM NUMBER	2398	2901	2902	2906	2907	2908	2909	2911	2913	2916	2919	2921	2922	2924	2926	2927	2928	2929	2932	2935	2937	2939	3443	3446	3687	4445	4450
TEMPERATURE, DEG C	81	100	149	149	58	58	149	43	44	44	44	218	220	218	55	51	51	51	117	101	45	101	204	101	60	35	41
PRESSURE, MPa[g]	0.10	0.10	0.53	0.13	0.03	-0.01	0.53	0.44	0.25	0.18	0.18	0.07	0.04	0.07	0.50	0.42	0.42	0.07	0.10	0.5	0.37	0.47	0.45	0.50	0.40	0.37	0.66
TOTAL MASS FLOW, kg/h	1134	2401	13356	2399	3.2	3.2	10957	10957	2325	10957	8632	60875	60875	73	4198	4198	73	4125	1267	345	418	345	362	1612	4391	3141	362
ENTHALPY, MW	-0.134	-0.167	-0.598	-0.089	-0.002	-0.002	-0.490	-1.153	-0.237	-0.880	-0.880	-5.242	-4.643	-0.005	-0.646	-0.654	-0.011	-0.642	-0.032	-0.008	-0.025	-0.021	-0.211	-0.041	-1.709	-1.888	-0.304
MOLE WEIGHT, kg/kg_MOLE	131.8	120.8	120.8	120.7	28.8	28.8	120.8	120.8	120.8	120.8	120.8	143.2	143.2	143.2	143.2	143.2	161.3	143.2	112.3	111.8	118.1	111.8	5.7	111.8	70.1	28.1	5.70
VAPOR PHASE																											
DENSITY, kg/m3	----	1.60	----	----	1.40	0.93	----	----	----	----	----	----	4.90	----	----	----	----	----	2.40	----	----	----	0.79	----	11.44	5.28	1.66
VISCOSITY, cP	----	0.01	----	----	0.01	0.01	----	----	----	----	----	----	0.01	----	----	----	----	----	0.01	----	----	----	0.01	----	0.01	0.01	0.01
LIQUID PHASE																											
DENSITY, kg/m3	887.00	880.00	744.81	878.00	873.00	----	744.81	839.70	838.81	838.77	837.77	951.00	956.00	951.00	951.00	951.00	891.14	951.00	873.00	810.28	865.95	810.27	----	810.28	695.33	766.02	----
VISCOSITY, cP	0.51	0.36	0.24	0.23	0.55	----	0.24	0.63	0.63	0.62	0.62	0.21	0.21	0.21	1.17	1.24	1.49	1.24	0.28	0.37	0.80	0.37	----	0.37	0.26	0.43	----

STREAM DATA SUMMARY																												
DESIGN CASE																												
STREAM NUMBER	2398	2901	2902	2906	2907	2908	2909	2911	2913	2916	2919	2921	2922	2924	2926	2927	2928	2929	2932	2935	2937	2939	3443	3446	3687	4445	4450	
TEMPERATURE, DEG C	82	105	149	149	55	54	149	43	44	44	44	218	221	218	55	51	51	51	125	98	45	98	204	98	58	32	41	
PRESSURE, MPa[g]	0.10	0.10	0.53	0.13	0.03	-0.01	0.53	0.44	0.25	0.40	0.18	0.07	0.04	0.07	0.50	0.42	0.42	0.07	0.10	0.50	0.37	0.47	0.45	0.50	0.40	0.37	0.66	
TOTAL MASS FLOW, kg/h	1134	2420	13515	2418	2.4	2.4	11097	11097	2350	11097	8747	60825	60825	68	4206	4206	68	4138	1286	361	429	361	329	1647	4457	3139	329	
ENTHALPY, MW	-0.132	-0.162	-0.643	-0.092	-0.001	-0.001	-0.528	-1.200	-0.246	-1.164	-0.917	-4.977	-4.383	-0.004	-0.622	-0.629	-0.010	-0.619	-0.032	-0.008	-0.063	-0.030	-0.170	-0.037	-1.709	-1.842	-0.261	
MOLE WEIGHT, kg/kg_MOLE	132.1	121.6	121.7	121.5	26.1	26.1	121.7	121.7	121.7	121.7	121.7	143.0	143	143.0	143.0	143.0	161.3	143.0	113.6	112.8	118.5	113	5.20	112.8	69.8	27.9	5.20	
VAPOR PHASE																												
DENSITY, kg/m3	----	1.60	----	----	1.30	0.85	----	----	----	----	----	----	4.90	----	----	----	----	----	----	2.70	----	----	----	0.72	----	11.39	5.30	1.51
VISCOSITY, cP	----	0.01	----	----	0.01	0.01	----	----	----	----	----	----	0.001	----	----	----	----	----	----	0.01	----	----	----	0.01	----	0.01	0.01	
LIQUID PHASE																												
DENSITY, kg/m3	835.00	806.00	745.16	764.00	846.00	----	745.16	839.75	838.85	838.92	838.82	787.00	790.00	787.00	927.00	930.00	891.14	929.00	779.00	815.79	867.18	815.78	----	815.79	695.78	760.42	----	
VISCOSITY, cP	0.51	0.35	0.24	0.23	0.58	----	0.24	0.64	0.63	0.63	0.63	0.21	0.22	0.21	1.18	1.25	1.49	1.24	0.26	0.39	0.83	0.83	----	0.39	0.26	0.43	----	

HEATER AND EXCHANGER DUTY SUMMARY					
START OF RUN					
ITEM NUMBER	81-E-109	81-E-110	81-E-111	81-E-112	81-E-114
DUTY, MW	0.093	0.662	0.008	0.599	0.010

HEATER AND EXCHANGER DUTY SUMMARY					
DESIGN CASE					
ITEM NUMBER	81-E-109	81-E-110	81-E-111	81-E-112	81-E-114
DUTY, MW	0.092	0.672	0.007	0.594	0.010

03	Approved for Design	05-Jun-2025	LC	ZGC	YGH
02	Approved for Design	22-Feb-2025	GYN	LHJ	ZGC
01	Issued for Approval	26-Jan-2025	GYN	LHJ	ZGC
00	Issued for Comment	08-Oct-2024	GYN	LHJ	ZGC

REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:		MC:		CONTRACTOR/CONSULTANT: 	

PROJECT TITLE:
PROPANE DEHYDROGENATION (PDH) PROJECT

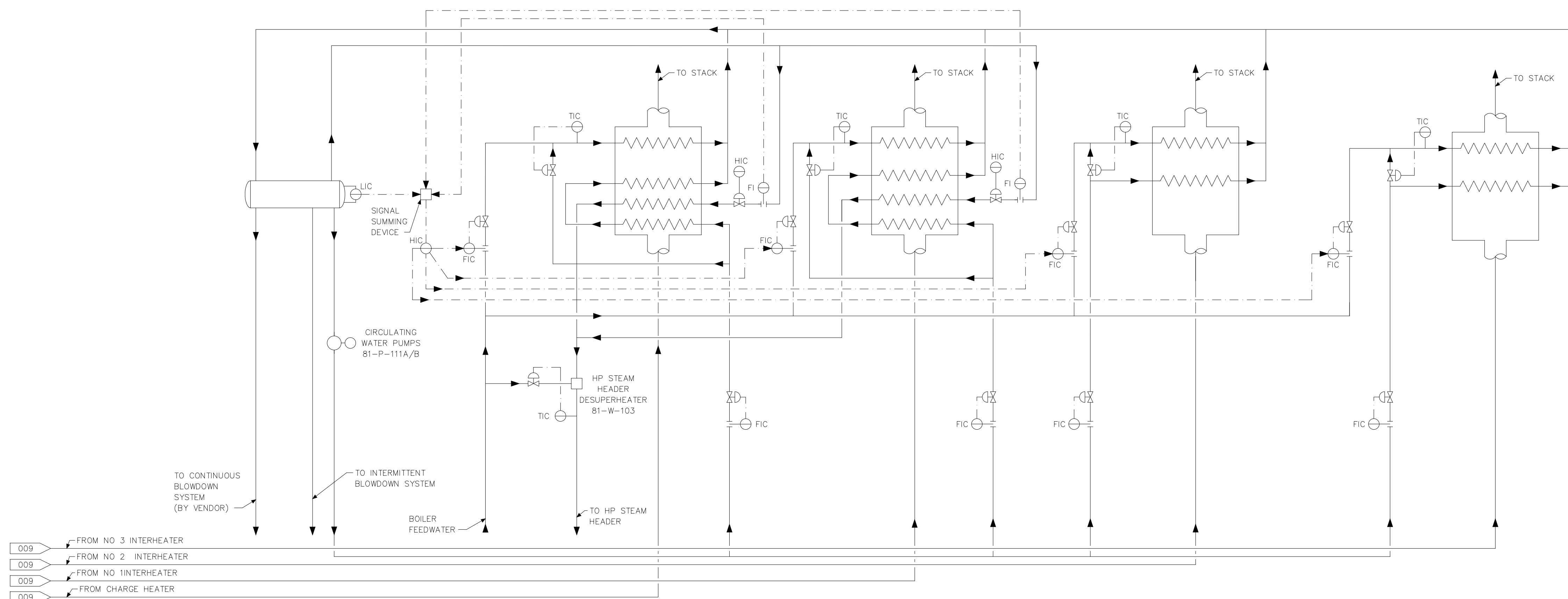
DOCUMENT TITLE:
Process Flow Diagram – Solvent Recovery Section

DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	10	BA	PR	PFD	014
SCALE:	SIZE: A1	SHEET NO: 1		REVISION: 3	CLASS: 1	

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STEAM
DISENGAGING DRUM
81-V-109

STEAM GENERATION
CONVECTION SECTION
(PART OF 81-H-101 TO 81-H-104)



	DWG. NUMBER
--	-------------

1. PLEASE REFER TO PID FOR DETAILED VENDOR SUPPLY SCOPE.

<p>OWNER:</p> 	<p>MC:</p> 	<p>CONTRACTOR/CONSULTANT:</p> 
-----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------

DOCUMENT TITLE:

Process Flow Diagram—Steam Generation Section

DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	10	BA	PR	PFD	015
SCALE:	SIZE: A1	SHEET NO: 1			REVISION: 3	CLASS: 1

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																		REFERENCE DRAWINGS			DWG. NUMBER	

MATERIAL BALANCE, kmol/h														
START OF RUN														
STREAM	2239	2241	2243	2261	2263	2383	2384	2400	2900	2937	3687	4122	4418	4617
WATER	----	----	----	----	----	TRACE	TRACE	----	----	----	----	----	----	----
HYDROGEN	589.29	----	1440.82	442.36	20.02	1.16	1.16	1.22	135.00	----	----	3.59	5.46	1.22
METHANE	TRACE	----	TRACE	13.63	0.61	0.31	0.31	42.40	TRACE	----	----	TRACE	TRACE	42.40
ACETYLENE	----	----	----	TRACE	TRACE	TRACE	TRACE	TRACE	----	----	----	----	----	TRACE
ETHYLENE	----	----	----	0.11	TRACE	0.06	0.06	10.00	----	----	----	----	----	10
ETHANE	----	----	----	0.74	0.03	1.53	1.53	171.17	----	----	----	59.18	----	171.16
PROPADIENE	----	----	----	TRACE	TRACE	TRACE	TRACE	0.18	----	----	TRACE	TRACE	----	TRACE
METHYLACETYLENE	----	----	----	TRACE	TRACE	0.04	0.04	0.71	----	----	TRACE	0.02	----	TRACE
PROPYLENE	----	----	----	0.09	TRACE	39.57	39.57	1855	----	----	TRACE	73.57	----	0.20
PROPANE	----	----	----	0.08	TRACE	87.32	87.32	3983.42	----	----	0.60	5893.18	----	0.05
1,3-BUTADIENE	----	----	----	----	TRACE	TRACE	TRACE	0.09	----	----	TRACE	TRACE	----	----
1-BUTENE	----	----	----	TRACE	----	0.02	0.02	0.19	----	----	0.16	0.02	----	----
cis-2-BUTENE	----	----	----	----	----	0.02	0.02	0.16	----	----	0.17	TRACE	----	----
trans-2-BUTENE	----	----	----	----	----	0.02	0.02	0.20	----	----	0.26	TRACE	----	----
ISOBUTENE	----	----	----	TRACE	TRACE	0.30	0.30	4.85	----	----	4.31	0.76	----	----
n-BUTANE	----	----	----	TRACE	----	0.03	0.03	0.29	----	----	7.94	0.12	----	----
ISOBUTANE	----	----	----	TRACE	TRACE	0.26	0.26	4.65	----	----	33.84	10.40	----	TRACE
ISOPRENE	----	----	----	----	TRACE	TRACE	TRACE	TRACE	----	----	----	----	----	----
1-PENTENE	----	----	----	----	TRACE	TRACE	TRACE	TRACE	----	----	TRACE	TRACE	----	----
cis-2-PENTENE	----	----	----	----	TRACE	TRACE	TRACE	TRACE	----	----	TRACE	----	----	----
trans-2-PENTENE	----	----	----	----	TRACE	TRACE	TRACE	0.01	----	----	0.02	----	----	----
2-METHYL-1-BUTENE	----	----	----	----	TRACE	TRACE	TRACE	0.04	----	----	TRACE	TRACE	----	----
3-METHYL-1-BUTENE	----	----	----	----	TRACE	TRACE	TRACE	TRACE	----	----	TRACE	TRACE	----	----
2-METHYL-2-BUTENE	----	----	----	----	TRACE	TRACE	TRACE	TRACE	----	----	0.04	----	----	----
n-PENTANE	----	----	----	----	TRACE	TRACE	TRACE	0.01	----	----	0.01	----	----	----
ISOPENTANE	----	----	----	----	TRACE	TRACE	TRACE	0.02	----	----	0.03	TRACE	----	----
BENZENE	----	----	----	----	6.91	6.91	0.90	----	TRACE	0.91	----	----	----	----
TOLUENE	----	TRACE	----	----	38.11	38.11	1.43	----	TRACE	1.43	----	----	----	----
STYRENE	----	----	----	----	7.53	7.53	0.06	----	TRACE	0.06	----	----	----	----
XYLENE	----	TRACE	----	----	585.54	585.54	7.49	----	TRACE	7.48	----	----	----	----
HYDROGEN SULFIDE	----	----	----	----	TRACE	TRACE	TRACE	----	----	----	----	----	----	----
HEAVIES	----	----	----	----	57.52	57.52	----	----	0.05	----	----	----	----	----
SOLVENT	----	1.30	----	----	8971.30	8971.30	4.95	----	0.46	4.95	----	----	----	----
TOTAL	589.29	1.30	1440.82	457.01	20.39	9797.61	9797.61	6089.57	135.00	3.54	63.8	6040.83	5.46	225.04
MASS FLOW, kg/h	1188	174	2905	1143	51	1291374	1291374	262123	272	417.86	4457	265407	11	6121
MOLE WEIGHT,	2.02	134.11	2.02	2.49	2.49	131.81	131.81	43.00	2.02	118	69.85	43.93	2.02	27.20
LIQ STD VOL FLOW, m3/h	0	0.19	0	0	0	1456.21	1456.21	545.62	0	0.48	3.8	560.98	0	0
LIQ STD DENSITY, kg/m3	0	894.1	0	0	0	886.8	886.8	480.4	0	865.9	695	473	0	0
VAP STD VOL FLOW, std m3/h	480	0	1173.65	1695	103	0	0	0	809	0	713	0	4.44	1131
VAP STD DENSITY, kg/m3	2.48	0	2.48	0.67	0.49	0	0	0	0.33	0	11.39	0	2.48	5.4




MATERIAL BALANCE, kmol/h														
END OF RUN														
STREAM	2239	2241	2243	2261	2263	2383	2384	2400	2900	2937	3687	4122	4418	4617
WATER	----	----	----	----	----	TRACE	TRACE	----	----	TRACE	----	----	----	----
HYDROGEN	589.29	----	1450.89	459.02	20.49	1.22	1.22	1.48	135.00	TRACE	TRACE	4.46	6.02	1.48
METHANE	TRACE	----	TRACE	11.76	0.52	0.27	0.27	39.84	TRACE	TRACE	----	TRACE	TRACE	39.84
ACETYLENE	----	----	----	TRACE	TRACE	TRACE	TRACE	TRACE	----	TRACE	----	TRACE	----	TRACE
ETHYLENE	----	----	----	0.08	TRACE	0.05	0.05	8.39	----	TRACE	----	TRACE	----	8.39
ETHANE	----	----	----	0.63	0.03	1.31	1.31	157.90	----	TRACE	----	58.73	----	157.87
PROPADIENE	----	----	----	TRACE	TRACE	TRACE	TRACE	0.15	----	TRACE	TRACE	TRACE	----	TRACE
METHYLACETYLENE	----	----	----	TRACE	TRACE	0.03	0.03	0.58	----	TRACE	TRACE	0.02	----	TRACE
PROPYLENE	----	----	----	0.09	TRACE	35.87	35.87	1853.57	----	TRACE	0.01	73.75	----	0.24
PROPANE	----	----	----	0.09	TRACE	93.21	93.21	4681.69	----	TRACE	4.18	6575.09	----	0.07
1,3-BUTADIENE	----	----	----	----	TRACE	0.01	0.06	----	----	TRACE	TRACE	TRACE	----	TRACE
1-BUTENE	----	----	----	TRACE	----	0.01	0.01	0.15	----	TRACE	0.11	0.02	----	TRACE
cis-2-BUTENE	----	----	----	----	----	0.01	0.01	0.12	----	TRACE	0.12	TRACE	----	TRACE
trans-2-BUTENE	----	----	----	----	----	0.02	0.02	0.16	----	TRACE	0.16	TRACE	----	TRACE
ISOBUTENE	----	----	----	TRACE	TRACE	0.25	0.25	4.62	----	TRACE	3.84	0.78	----	TRACE
n-BUTANE	----	----	----	----	----	0.02	0.02	0.27	----	TRACE	7.79	0.16	----	----
ISOBUTANE	----	----	----	TRACE	TRACE	0.29	0.29	5.77	----	TRACE	32.66	11.09	----	----
ISOPRENE	----	----	----	----	TRACE	TRACE	TRACE	TRACE	----	----	----	----	----	----
1-PENTENE	----	----	----	----	TRACE	TRACE	TRACE	TRACE	----	TRACE	TRACE	----	----	----
cis-2-PENTENE	----	----	----	----	TRACE	TRACE	TRACE	TRACE	----	TRACE	TRACE	----	----	----
trans-2-PENTENE	----	----	----	----	TRACE	TRACE	TRACE	TRACE	----	TRACE	0.01	----	----	----
2-METHYL-1-BUTENE	----	----	----	----	TRACE	0.01	0.03	----	----	TRACE	0.01	----	----	----
3-METHYL-1-BUTENE	----	----	----	----	TRACE	TRACE	TRACE	TRACE	----	TRACE	TRACE	----	----	----
2-METHYL-2-BUTENE	----	----	----	----	TRACE	TRACE	TRACE	TRACE	----	TRACE	0.03	----	----	----
n-PENTANE	----	----	----	----	TRACE	TRACE	0.01	----	----	TRACE	0.01	----	----	----
ISOPENTANE	----	----	----	----	TRACE	TRACE	0.02	----	----	TRACE	0.05	----	----	----
BENZENE	----	----	----	----	5.39	5.39	0.85	----	----	0.15	0.85	----	----	----
TOLUENE	----	TRACE	----	----	31.96	31.96	1.30	----	----	0.27	1.30	----	----	----
STYRENE	----	----	----	----	8.16	8.16	0.07	----	----	0.02	0.07	----	----	----
XYLENE	----	TRACE	----	----	512.97	512.97	7.08	----	----	1.52	7.08	----	----	----
HYDROGEN SULFIDE	----	----	----	----	TRACE	0.01	----	----	----	----	----	----	----	----
HEAVIES	----	----	----	----	55.55	55.55	----	----	----	0.38	----	----	----	----
SOLVENT	----	1.2	----	----	9442.70	9442.70	5.56	----	----	1.26	5.56	----	----	----
TOTAL	589.29	1.2	1450.89	471.67	21.05	10189.34	10189.34	6769.72	135.00	3.62	63.81	6724.09	6.02	207.89
MASS FLOW, kg/h	1188	155	2925	1143	51	1345798	1345798	292423	272	428.76	4457.1	295516	12	5637.77
MOLE WEIGHT,	2.02	134.11	2.02	2.42	2.41	132.08	132.1	43.20	2.02	118.49	69.85	43.95	2.02	27.12
LIQ STD VOL FLOW, m3/h	0	0.18	0	0	0	1638.8	1611.30	608.40	0	0.49	3.8	626.63	0	0
LIQ STD DENSITY, kg/m3	0	877	0	0	0	822	836	480.6	0	867.1	696	471.59	0	0
VAP STD VOL FLOW, std m3/h	480	0	1182	1749.4	106.6	0	0	0	808.9	0	713	0	4.8	1045.08
VAP STD DENSITY, kg/m3	2.48	0	2.48	0.65	0.48	0	0	0	0.34	0	11.6	0	2.48	5.39

REFERENCE DRAWINGS				DWG. NUMBER	

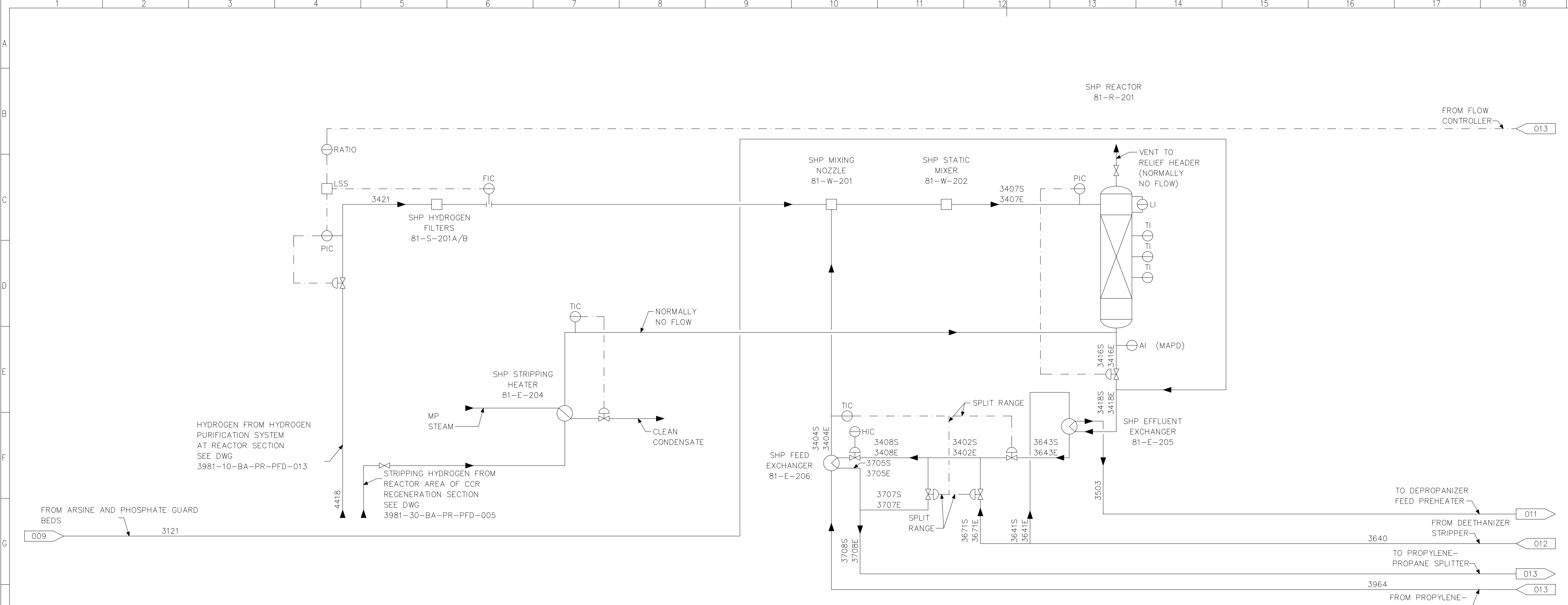
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02	Approved for Design	22-Feb-2025	GYN	LHJ	ZGC
01	Issued for Approval	04-Feb-2025	GYN	LHJ	ZGC
00	Issued for Comment	08-Oct-2024	GYN	LHJ	ZGC

REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:		MC:	CONTRACTOR/CONSULTANT:		
					

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STREAM DATA SUMMARY

START OF RUN

STREAM NUMBER	3121	3402S	3402E	3404S	3404E	3407S	3407E	3408S	3408E	3416S	3416E	3418S	3418E	3421	3503	3640	3641S	3641E	3643S	3643E	3671S	3671E	3705S	3705E	3707S	3707E	3708S	3708E	3964	4418
TEMPERATURE, DEG C	32	63	72	40	60	40	60	63	72	40	60	37	51	45	52	75	75	75	63	56	----	75	48	50	63	----	54	50	24	45
PRESSURE, MPa[g]	1.85	2.92	2.89	2.52	2.55	2.47	2.45	2.91	2.89	2.40	2.40	1.85	1.85	2.94	1.82	3.00	2.95	2.95	2.92	2.92	----	2.95	2.81	2.79	2.81	----	2.81	2.78	2.60	3.20
TOTAL MASS FLOW, kg/h	88970	255993	255993	180807	180807	180818	180818	155000	255993	180818	180818	269788	269788	11	269788	255993	255993	51199	255993	51199	----	204794	155000	255993	100993	----	255993	255993	180807	11
ENTHALPY, MW	-67.395	-124.174	-120.799	-131.734	-128.784	-131.732	-128.782	-74.504	-120.799	-131.732	-128.782	-199.127	-196.178	0.002	-195.659	-119.703	-119.703	-24.229	-123.124	-25.325	----	-95.763	-76.669	-126.330	-48.574	----	-125.446	-126.330	-134.038	0.001
MOLE WEIGHT, kg/kg MOLE	44.0	43.7	43.7	44.3	44.3	44.3	44.3	43.7	43.7	44.3	44.3	44.2	44.2	2.0	44.2	43.7	43.7	43.7	43.7	43.7	----	43.7	43.7	43.7	43.7	----	43.7	43.7	44.3	2.0
VAPOR PHASE																														
DENSITY, kg/m3	----	----	----	----	----	----	----	----	----	----	----	----	----	2.28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.48
VISCOSITY, cP	----	----	----	----	----	----	----	----	----	----	----	----	----	0.01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	0.01
LIQUID PHASE																														
DENSITY, kg/m3	480.13	426.33	404.44	470.93	432.20	470.49	432.02	426.37	404.44	470.48	431.40	473.97	448.54	----	446.74	394.57	394.62	394.62	426.33	442.90	----	394.62	462.16	453.60	426.68	----	448.31	453.61	496.71	----
VISCOSITY, cP	0.09	0.06	0.05	0.08	0.06	0.08	0.06	0.06	0.05	0.08	0.06	0.08	0.07	----	0.07	0.05	0.05	0.05	0.06	0.06	----	0.05	0.07	0.07	0.06	----	0.06	0.07	0.10	----

STREAM DATA SUMMARY

END OF RUN

STREAM NUMBER	3121	3402S	3402E	3404S	3404E	3407S	3407E	3408S	3408E	3416S	3416E	3418S	3418E	3421	3503	3640	3641S	3641E	3643S	3643E	3671S	3671E	3705S	3705E	3707S	3707E	3708S	3708E	3964	4418
TEMPERATURE, DEG C	32	63	72	40	60	40	60	63	72	40	60	37	52	45	52	75	75	75	64	56	----	75	47	50	64	----	54	50	24	45
PRESSURE, MPa[g]	1.85	2.92	2.89	2.52	2.55	2.47	2.45	2.91	2.89	2.40	2.40	1.85	1.85	2.94	1.82	2.96	2.95	2.95	2.92	2.92	----	2.95	2.81	2.79	2.81	----	2.81	2.78	2.60	3.20
TOTAL MASS FLOW, kg/h	88292	286785	286785	211669	211669	211681	211681	173484	286785	211681	211681	299973	299973	12	299973	286785	286785	57357	286785	57357	----	229428	173484	286785	113301	----	286785	286785	211669	12
ENTHALPY, MW	-66.882	-145.416	-142.859	-154.887	-151.430	-154.885	-151.428	-87.967	-144.490	-154.885	-151.428	-221.766	-218.310	0.002	-217.942	-141.652	-141.652	-28.657	-145.416	-29.864	----	-113.322	-90.504	-149.343	-57.450	----	-148.138	-149.343	-157.582	0.001
MOLE WEIGHT, kg/kg MOLE	44.0	43.7	43.7	44.3	44.3	44.3	44.3	43.7	43.7	44.3	44.3	44.2	44.2	2.0	44.2	43.7	43.7	43.7	43.7	43.7	----	43.7	43.7	43.7	43.7	----	43.7	43.7	44.3	2.0
VAPOR PHASE																														
DENSITY, kg/m3	----	----	----	----	----	----	----	----	----	----	----	----	----	2.28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.48
VISCOSITY, cP	----	----	----	----	----	----	----	----	----	----	----	----	----	0.01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	0.01
LIQUID PHASE																														
DENSITY, kg/m3	480.49	425.82	402.90	470.46	431.65	470.05	431.50	425.85	402.90	469.99	431.11	473.40	446.76	----	446.52	393.20	393.25	393.25	425.82	440.66	----	393.25	461.57	454.23	426.16	----	447.73	454.24	496.27	----
VISCOSITY, cP	0.09	0.06	0.05	0.08	0.06	0.08	0.06	0.08	0.08	0.08	0.06	0.08	0.07	----	0.07	0.05	0.05	0.05	0.06	0.06	----	0.05	0.07	0.07	0.06	----	0.06	0.07	0.10	----

HEATER AND EXCHANGER DUTY SUMMARY

START OF RUN

ITEM NUMBER	81-E-205S	81-E-205E	81-E-206S	81-E-206E
DUTY, MW	3.421	1.096	2.322	5.531

HEATER AND EXCHANGER DUTY SUMMARY

END OF RUN

ITEM NUMBER	81-E-205S	81-E-205E	81-E-206S	81-E-206E	81-E-204
DUTY, MW	3.764	1.207	2.720	6.484	0.294

REFERENCE DRAWINGS

DWG. NUMBER

NOTES:

- 1."S" OR "E" IN STREAM NUMBERS DENOTES SHP CONDITIONS AT "START OF RUN" AND "END OF RUN" RESPECTIVELY.
- 2.FOR FRESH FEED SHP BYPASS OPERATION.
- 3.FOR DETAILS OF IMPORT AND EXPORT LOGISTICS OF INTERMITTENT STREAM81-E-204, PLEASE REFER TO THE PROCESS DATA SHEET, STREAM IS NOT INDICATED IN PFD.

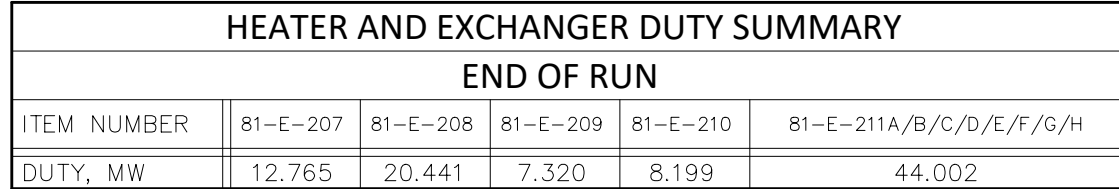
03	Approved for Design	20-May-2025	LC	ZGC	YGH
02	Issued for Approval	28-Mar-2025	GYN	LHJ	ZGC
01	Issued for Approval	04-Feb-2025	GYN	LHJ	ZGC
00	Issued for Comment	16-Oct-2024	GYN	LHJ	ZGC

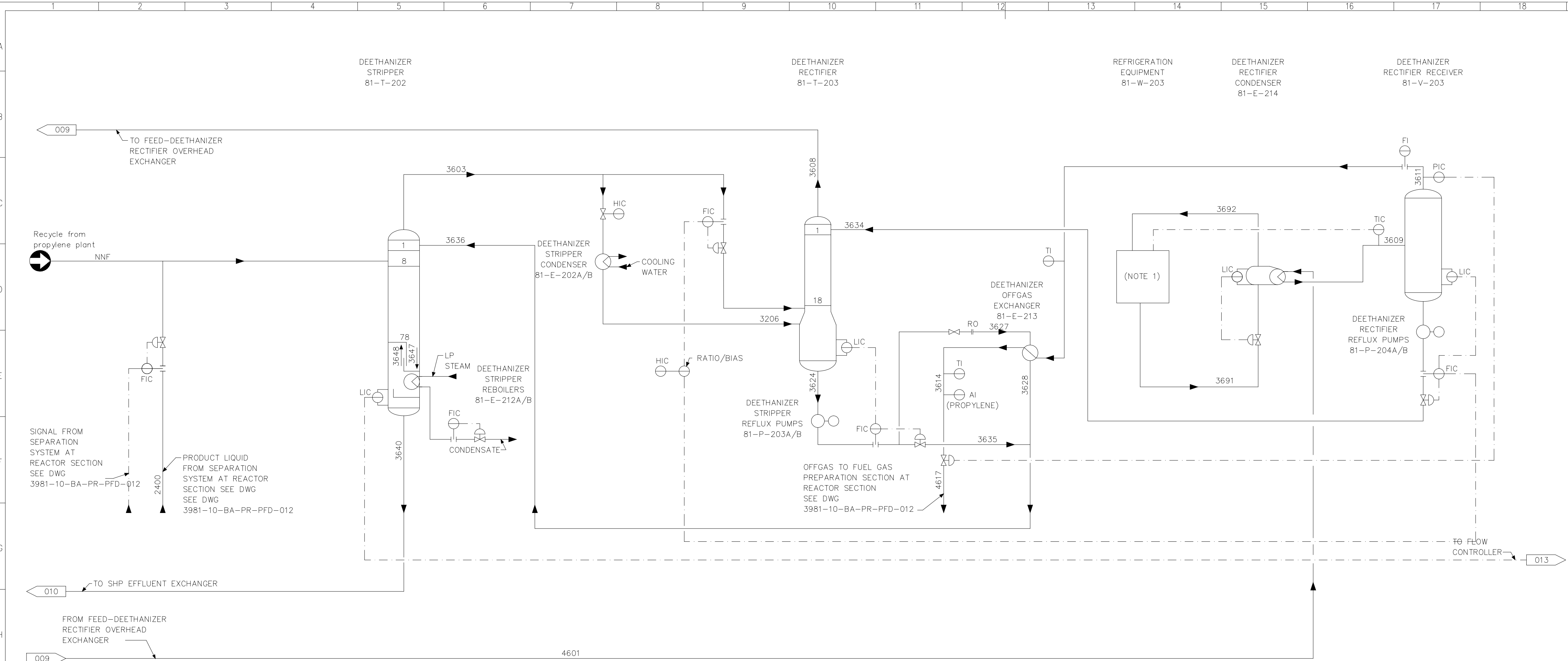
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:		MC:		CONTRACTOR/CONSULTANT: 	

PROJECT TITLE:
PROPANE DEHYDROGENATION (PDH) PROJECT

DOCUMENT TITLE:
PROCESS FLOW DIAGRAM - SHP SECTION

DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	20	BA	PR	PFD	010
SCALE:	SIZE: A1	SHEET NO: 1		REVISION: 3	CLASS: 1	





REFERENCE DRAWINGS						DWG. NUMBER

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NOTE 1: DETAILS REFER 391-20-BA-PR-DSP-069
PROCESS DUTY SPECIFICATION FOR REFRIGERATION EQUIPMENT PACKAGE (81-W-203)

STREAM DATA SUMMARY																				
START OF RUN																				
STREAM NUMBER	2400	3206	3603	3608	3609	3611	3614	3624	3627	3628	3634	3635	3636	3640	3647	3648	3691	3692	4601	4617
TEMPERATURE, DEG C	33	58	61	2.6	-5.9	-6.3	46	56	57	52	-5.7	57	57	75	75	75	-15	-15	2.0	26
PRESSURE, MPa[g]	3.50	2.83	2.87	2.78	2.65	2.62	2.53	2.80	3.20	3.17	2.98	3.20	3.17	2.96	2.95	2.96	0.26	0.26	2.76	0.37
TOTAL MASS FLOW, kg/h	262123	344858	344858	76900	76900	6130	6130	338728	33873	33873	70770	304855	338728	255993	858115	858115	46500	46500	76900	6130
ENTHALPY, MW	-135.577	-147.857	-131.804	-59.374	-65.511	-4.938	-4.727	-148.883	-14.013	-14.224	-60.267	-133.903	-148.988	-119.703	-394.302	-361.597	1.284	5.126	-61.669	-4.922
MOLE WEIGHT, kg/kg MOLE	43.0	40.6	40.6	29.1	29.1	27.2	27.2	40.9	40.9	40.9	29.3	40.9	40.9	43.7	43.5	43.5	42.1	42.1	29.1	27.2
VAPOR PHASE																				
DENSITY, kg/m3	----	66.94	73.46	57.65	48.93	48.31	31.24	----	----	----	----	----	----	----	----	80.60	7.68	7.68	53.59	5.30
VISCOSITY, cP	----	0.01	0.01	0.01	0.01	0.01	0.01	----	----	----	----	----	----	----	----	0.01	0.01	0.01	0.01	0.01
LIQUID PHASE																				
DENSITY, kg/m3	480.41	413.39	----	----	400.88	----	----	415.57	412.60	426.66	401.76	412.60	414.12	394.57	392.44	393.72	566.77	566.77	391.91	----
VISCOSITY, cP	0.08	0.05	----	----	0.05	----	----	0.05	0.05	0.08	0.05	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.05	----

STREAM DATA SUMMARY																				
END OF RUN																				
STREAM NUMBER	2400	3206	3603	3608	3609	3611	3614	3624	3627	3628	3634	3635	3636	3640	3647	3648	3691	3692	4601	4617
TEMPERATURE, DEG C	33	57	61	2.3	-6.4	-7	41	55	56	52	-6.2	56	56	75	75	75	-15	-15	1.6	26
PRESSURE, MPa[g]	3.50	2.84	2.87	2.78	2.65	2.62	2.53	2.80	3.20	3.17	2.98	3.20	3.17	2.96	2.96	2.96	0.26	0.26	2.76	0.37
TOTAL MASS FLOW, kg/h	292423	364858	364858	75783	75783	5638	5638	359220	35922	35922	70146	323298	359220	286785	947394	947394	43500	43500	75783	5638
ENTHALPY, MW	-158.286	-162.161	-144.380	-59.006	-65.094	-4.583	-4.404	-163.503	-16.106	-16.285	-59.556	-147.058	-163.588	-141.652	-460.686	-424.968	1.040	4.833	-61.300	-4.574
MOLE WEIGHT, kg/kg MOLE	43.2	40.5	40.5	29.1	29.1	27.1	27.1	40.8	40.8	40.8	29.3	40.8	40.8	43.7	43.6	43.6	42.1	42.1	29.1	27.1
VAPOR PHASE																				
DENSITY, kg/m3	----	66.74	67.55	57.42	48.71	48.10	36.87	----	----	----	----	----	----	----	----	80.83	7.68	7.68	53.55	5.39
VISCOSITY, cP	----	0.01	0.01	0.01	0.01	0.01	0.01	----	----	----	----	----	----	----	----	0.01	0.01	0.01	0.01	0.01
LIQUID PHASE																				
DENSITY, kg/m3	480.64	412.87	----	----	400.282	----	----	415.11	412.18	423.34	401.86	412.18	413.41	393.20	392.09	393.66	566.66	566.65	391.58	----
VISCOSITY, cP	0.10	0.05	----	----	0.05	----	----	0.05	0.05	0.08	0.05	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.05	----

HEATER AND EXCHANGER DUTY SUMMARY					
START OF RUN					
ITEM NUMBER	81-E-202A/B	81-E-212A/B	81-E-213	81-E-214	
DUTY, MW	16.906	32.041	0.205	3.674	

HEATER AND EXCHANGER DUTY SUMMARY					
END OF RUN					
ITEM NUMBER	81-E-202A/B	81-E-212A/B	81-E-213	81-E-214	
DUTY, MW	18.557	36.195	0.190	3.664	

04	Approved for Design	05-Jun-2025	LC	ZGC	YGH
03	Issued for Approval	21-May-2025	LC	ZGC	YGH
02	Issued for Approval	28-Mar-2025	GYN	LHJ	ZGC
01	Issued for Approval	05-Feb-2025	GYN	LHJ	ZGC
00	Issued for Comment	16-Oct-2024	GYN	LHJ	ZGC

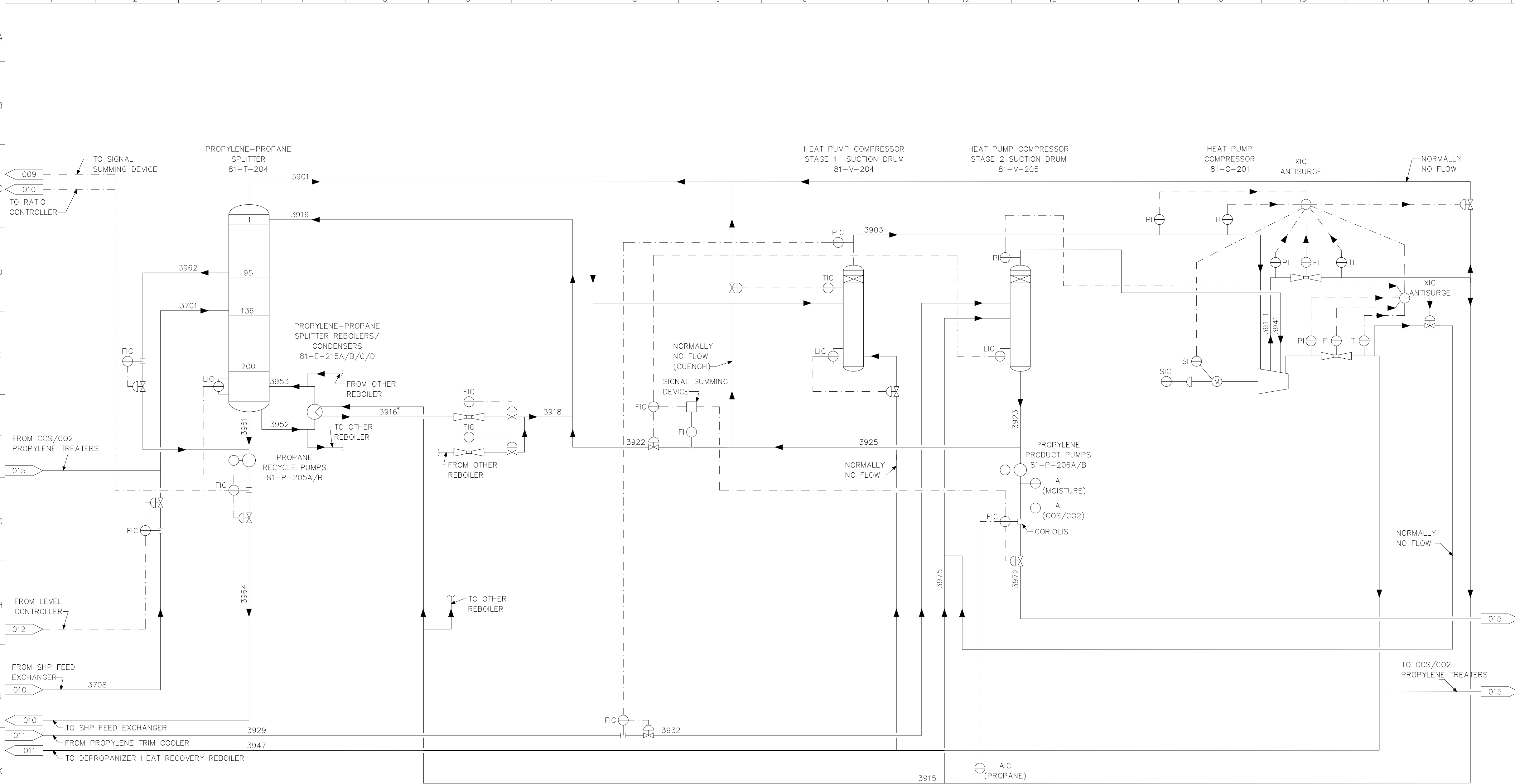
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:		MC:	CONTRACTOR/CONSULTANT:		

PROJECT TITLE:
PROPANE DEHYDROGENATION (PDH) PROJECT

DOCUMENT TITLE:
Process Flow Diagram – Deethanizer Section

DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	20	BA	PR	PFD	012
SCALE:	SIZE: A1	SHEET NO: 1		REVISION: 4	CLASS: 1	

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STREAM DATA SUMMARY																				
START OF RUN																				
STREAM NUMBER	3701	3708	3901	3903	3911	3915	3916	3918	3919	3922	3923	3925	3929	3932	3941	3947	3952	3953	3961	3962
TEMPERATURE, DEG C	26	53	10	10	42	42	25	23	11	25	31	43	33	31	77	22	22	22	14	24
PRESSURE, MPa[g]	0.96	2.81	0.68	0.67	1.32	1.28	1.20	1.0	0.70	1.05	1.25	2.57	1.31	1.25	2.70	0.78	0.80	0.78	0.73	2.60
TOTAL MASS FLOW, kg/h	255993	255993	1705394	1705394	1705394	1475510	1475510	1630208	154698	229884	154698	268717	268717	268717	6216088	6216088	178268	2539	180807	75186
ENTHALPY, MW	-126.339	-126.339	202.713	202.713	219.193	189.646	42.234	42.234	47.456	5.223	7.372	5.223	11.414	11.057	32.749	36.016	-4660.599	-4515.234	-132.629	-0.768
MOLE WEIGHT, kg/kg MOLE	43.7	43.7	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	44.4	44.4	44.4	42.7	44.3	42.1
VAPOR PHASE																				
DENSITY, kg/m3	22.74	----	16.34	16.21	28.7	27.77	----	23.16	16.83	24.26	----	----	----	30.11	28.74	59.78	----	19.44	----	17.50
VISCOSITY, cP	0.01	----	0.01	0.01	0.01	0.01	----	0.01	0.01	0.01	----	----	----	0.01	0.01	0.01	----	0.01	----	0.01
LIQUID PHASE																				
DENSITY, kg/m3	497.08	448.31	----	----	----	----	506.66	509.54	528.81	506.55	495.11	495.11	474.35	491.83	----	----	500.07	499.61	500.07	520.15
VISCOSITY, cP	0.10	0.09	----	----	----	----	0.07	0.07	0.08	0.07	0.07	0.07	0.06	0.07	----	----	0.12	0.12	0.12	0.09

STREAM DATA SUMMARY																				
END OF RUN																				
STREAM NUMBER	3701	3708	3901	3903	3911	3915	3916	3918	3919	3922	3923	3925	3929	3932	3941	3947	3952	3953	3961	3962
TEMPERATURE, DEG C	23	53	10	10	42	42	25	23	11	22	31	43	33	31	77	22	22	22	14	24
PRESSURE, MPa[g]	0.85	2.81	0.68	0.67	1.32	1.28	1.20	1.0	0.69	1.25	1.25	2.57	1.31	1.25	2.70	0.78	0.80	0.78	0.73	2.60
TOTAL MASS FLOW, kg/h	286785	286785	1866004	1866004	1866004	1611994	1611994	1790888	178894	254010	178894	297003	297003	297003	6016186	6016186	208819	2850	211669	75116
ENTHALPY, MW	-149.149	-149.149	220.269	221.653	239.648	207.057	46.001	46.001	52.028	6.028	8.143	6.028	12.605	12.216	36.185	39.744	-4523.553	-4363.898	-155.774	-0.736
MOLE WEIGHT, kg/kg MOLE	43.7	43.7	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	44.3	44.3	44.3	42.8	44.3
VAPOR PHASE																				
DENSITY, kg/m3	20.45	----	16.34	16.19	28.69	27.76	----	23.16	16.57	22.73	----	----	----	30.11	28.74	59.68	----	19.45	----	17.54
VISCOSITY, cP	0.01	----	0.01	0.01	0.01	0.01	----	0.01	0.01	0.01	----	----	----	0.01	0.01	0.01	----	0.01	----	0.01
LIQUID PHASE																				
DENSITY, kg/m3	502.47	447.73	----	----	----	----	505.01	509.54	529.69	510.75	495.11	495.11	473.35	491.83	----	----	499.68	499.23	499.68	518.50
VISCOSITY, cP	0.11	0.09	----	----	----	----	0.07	0.07	0.08	0.07	0.07	0.07	0.06	0.07	----	----	0.12	0.12	0.12	0.09

HEATER AND EXCHANGER DUTY SUMMARY	
START OF RUN	
ITEM NUMBER	81-E-215A/B/C/D
DUTY, MW	121.447

HEATER AND EXCHANGER DUTY SUMMARY	
END OF RUN	
ITEM NUMBER	81-E-215A/B/C/D
DUTY, MW	163.135

REFERENCE DRAWINGS

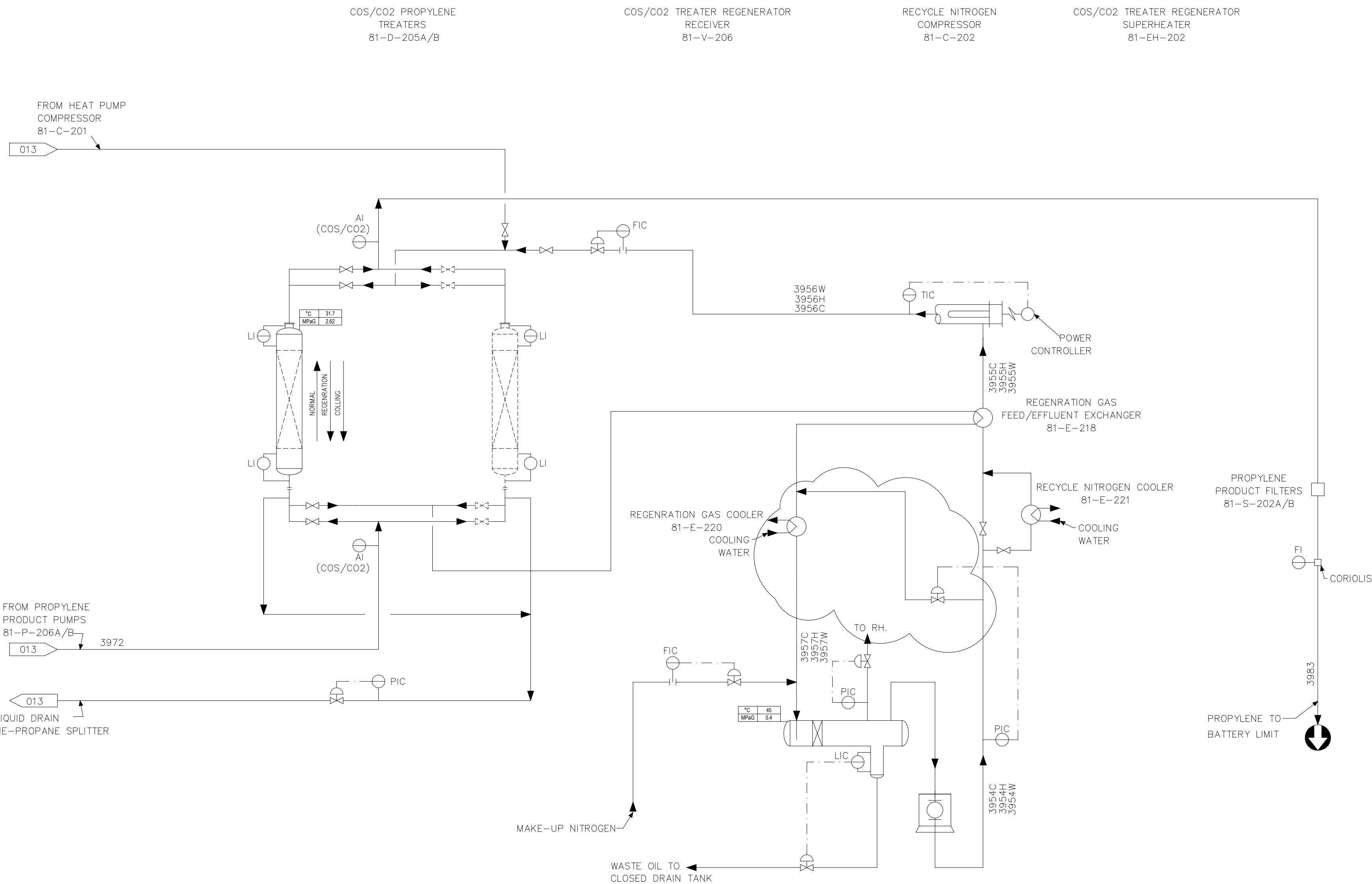
DWG. NUMBER

* - FLOW SHOWN IS FOR THE TOTAL STREAM

03	Approved for Design	20-May-2025	LC	ZGC	YGH			
02	Issued for Approval	28-Mar-2025	GYN	LHJ	ZGC			
01	Issued for Approval	05-Feb-2025	GYN	LHJ	ZGC			
00	Issued for Comment	16-Oct-2024	GYN	LHJ	ZGC			
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED			
OWNER:		MC:	CONTRACTOR/CONSULTANT:					
PROJECT TITLE:								
PROPANE DEHYDROGENATION (PDH) PROJECT								
DOCUMENT TITLE:								
Process Flow Diagram - Propylene - Propane Splitter Section								
DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE			
	3981	20	BA	PR	PFD			
SCALE:	SERIAL NO.			REVISION: 3	CLASS: 1			
	013							

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																		REFERENCE DRAWINGS			DWG. NUMBER	



STREAM DATA SUMMARY						
DESIGN CASE (WARM PURGE STEP)						
STREAM NUMBER		3972	3983	3954W	3955W	3956W
TEMPERATURE	DEG C	31.7	31.7	105	109	120
PRESSURE	MPa (g)	2.62	2.55	0.75	0.65	0.55
WEIGHT FLOW	KG/H	75186	75186	10006	10006	10006

STREAM DATA SUMMARY						
DESIGN CASE (HEATING STEP)						
STREAM NUMBER		3972	3983	3954H	3955H	3956H
TEMPERATURE	DEG C	31.7	31.7	105	195	290
PRESSURE	MPa (g)	2.62	2.55	0.75	0.65	0.55
WEIGHT FLOW	KG/H	75186	75186	10006	10006	10006

STREAM DATA SUMMARY						
DESIGN CASE (COOLING STEP)						
STREAM NUMBER		3972	3983	3954C	3955C	3956C
TEMPERATURE	DEG C	31.7	31.7	45	45	45
PRESSURE	MPa (g)	2.62	2.55	0.75	0.62	0.52
WEIGHT FLOW	KG/H	75186	75186	10006	10006	10006

EXCHANGER DATA SUMMARY				
REDUCTION ZONE				
EXCHANGER ITEM NUMBER		81-EH-202	81-E-218	81-E-220
DUTY , MW		0.377	0.26	0.46

EQUIPMENT	COMPONENT	INLET	OUTLET
81-D-205A/B	CO2	5.0PPMMOL	≤0.03PPMMOL
	COS	1.0PPMMOL	≤0.01PPMMOL

04	Approved for Design	05-Jun-2025	LC	ZGC	YGH
03	Approved for Design	20-May-2025	LC	ZGC	YGH
02	Issued for Approval	28-Mar-2025	GYN	LHJ	ZGC
01	Issued for Approval	05-Feb-2025	GYN	LHJ	ZGC
00	Issued for Comment	16-Oct-2024	GYN	LHJ	ZGC

REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
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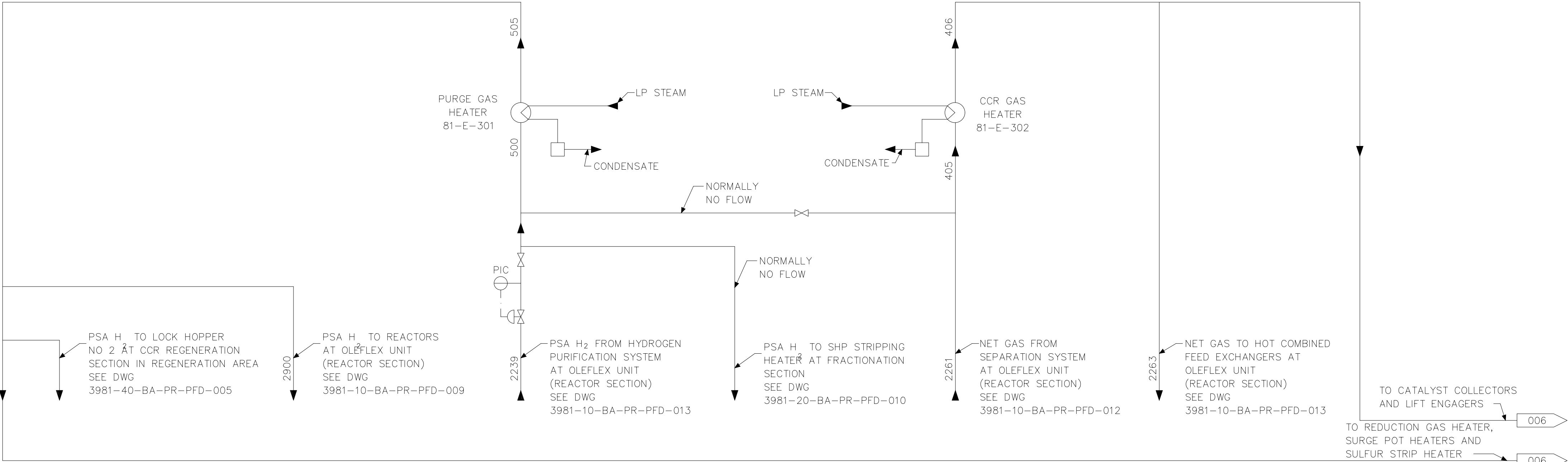
PROJECT TITLE:					
PROPANE DEHYDROGENATION (PDH) PROJECT					

DOCUMENT TITLE:					
Process Flow Diagram – Propylene Treater Section					

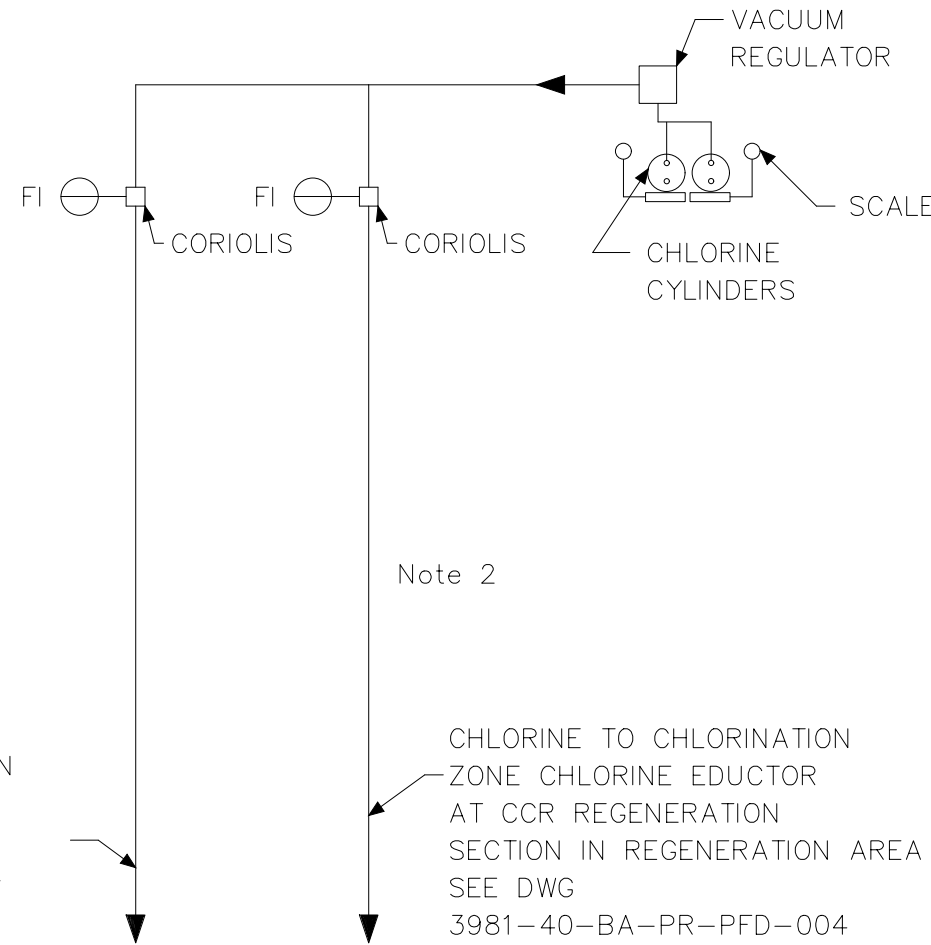
DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	20	BA	PR	PFD	015
SCALE:	SIZE: A1	SHEET NO:1		REVISION: 4		CLASS: 1

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CHLORINATION
SYSTEM
(LOCATE IN SHELTER)
81-W-301



CHLORINE TO BURN ZONE
CHLORINE EDUCTOR AT
CCR REGENERATION SECTION
IN REGENERATION AREA
SEE DWG
3981-40-BA-PR-PFD-004



Note 2

CHLORINE TO CHLORINATION
ZONE CHLORINE EDUCTOR
AT CCR REGENERATION
SECTION IN REGENERATION AREA
SEE DWG
3981-40-BA-PR-PFD-004

STREAM DATA SUMMARY CATALYST TRANSFER SYSTEM			
STREAM NUMBER		405	406
TEMPERATURE	DEG C	43	129
PRESSURE	MPa (g)	0.582	0.561
WEIGHT FLOW	KG/H	851	851
DENSITY (FLWG)	KG/M3	0.64	0.49

STREAM DATA SUMMARY REDUCTION ZONE			
STREAM NUMBER		500	505
TEMPERATURE	DEG C	45	129
PRESSURE	MPa (g)	0.469	0.448
WEIGHT FLOW	KG/H	1188	1188
DENSITY (FLWG)	KG/M3	0.43	0.33

EXCHANGER DATA SUMMARY CATALYST TRANSFER SYSTEM	
EXCHANGER ITEM NUMBER	81-E-302
DUTY , MW	0.24

EXCHANGER DATA SUMMARY REDUCTION ZONE	
EXCHANGER ITEM NUMBER	81-E-301
DUTY , MW	0.40

REFERENCE DRAWINGS

DWG. NUMBER

NOTES:

- 1 FOUR DIGIT STREAM NUMBERS DENOTE CROSSTIE STREAMS THAT ARE FLAGGED IN PROJECT 3981-10.
- 2 CHLORINATION SYSTEM STREAM DATA REFER 3981-30-BA-PR-DSP-029 PROCESS DUTY SPECIFICATION FOR CHLORINATION SYSTEM (81-W-301)

AUTOMATIC VALVE CONTROLLED BY LOGIC SYSTEM

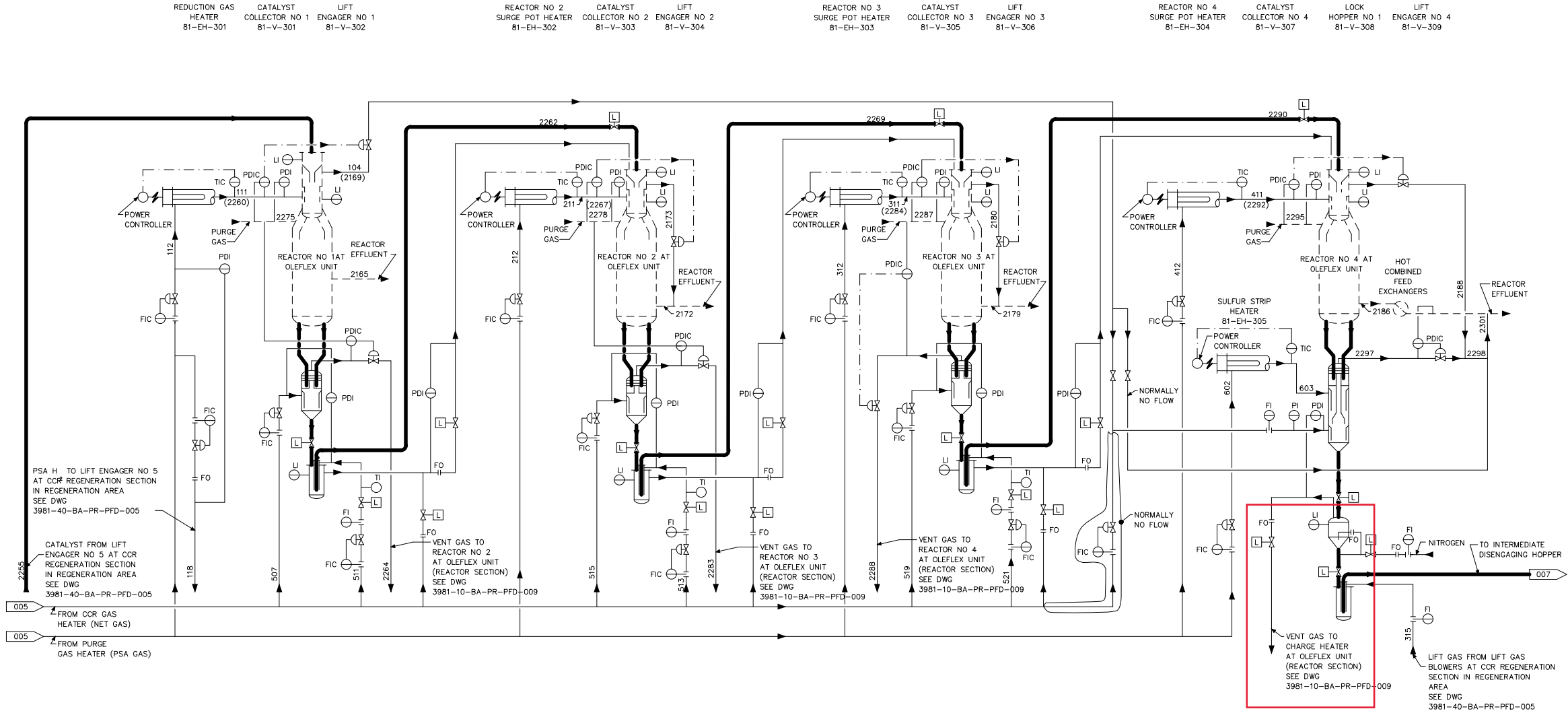
02	Approved for Design	05-Jun-2025	LC	ZGC	YGH
01	Issued for Approval	05-Feb-2025	GYN	LHJ	ZGC
00	Issued for Comment	10-Sep-2024	GYN	LHJ	ZGC
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER: 		MC: 	CONTRACTOR/CONSULTANT: 		

PROJECT TITLE:
PROPANE DEHYDROGENATION (PDH) PROJECT

DOCUMENT TITLE:
Process Flow Diagram – CCR Regeneration Section Auxiliary Equipment

DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	30	BA	PR	PFD	005
SCALE:	SIZE: A1	SHEET NO: 1		REVISION: 2	CLASS: 1	

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STREAM DATA SUMMARY						
CATALYST TRANSFER SYSTEM						
STREAM NUMBER	507	511	513	515	519	521
TEMPERATURE	DEG C	129	129	129	129	129
PRESSURE	MPa (g)	0.561	0.561	0.561	0.561	0.561
WEIGHT FLOW	KG/H	160	141	121	160	108
DENSITY (FLWG)	KG/M3	0.49	0.49	0.49	0.49	0.49

STREAM DATA SUMMARY											
REDUCTION ZONE											
STREAM NUMBER	104	111	112	118	211	212	311	312	411	412	602
TEMPERATURE	DEG C	227	645	129	129	648	129	648	129	129	588
PRESSURE	MPa (g)	0.208	0.21	0.231	0.448	0.129	0.15	0.071	0.091	0.025	0.014
WEIGHT FLOW	KG/H	243	164	164	82	125	125	125	125	125	267
DENSITY (FLWG)	KG/M3	0.16	0.08	0.2	0.33	0.06	0.15	0.05	0.12	0.03	0.07

EXCHANGER DATA SUMMARY					
REDUCTION ZONE					
EXCHANGER ITEM NUMBER	81-EH-301	81-EH-302	81-EH-303	81-EH-304	81-EH-305
DUTY, MW	0.36	0.28	0.28	0.28	0.51

REFERENCE DRAWINGS

DWG. NUMBER

FOUR DIGIT STREAM NUMBERS DENOTE CROSSTIE STREAMS THAT ARE FLAGGED IN PROJECT 3981-10. LOGIC SYSTEM REFER 3981-00-BA-IN-DIG-025 (Logic Diagram for DCS) 3981-00-BA-IN-DIG-026 (Logic Diagram for ESD) PIPING AND EQUIPMENT SHOWN ON REACTOR SECTION DRAWING.

AUTOMATIC VALVE CONTROLLED BY LOGIC SYSTEM

04	Approved for Design	16-Mar-2025	GYN	LHJ	ZGC
03	Issued for Approval	26-Feb-2025	GYN	LHJ	ZGC
02	Issued for Approval	05-Feb-2025	GYN	LHJ	ZGC
01	Issued for Approval	30-Oct-2024	GYN	LHJ	ZGC
00	Issued for Comment	10-Sep-2024	GYN	LHJ	ZGC

REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
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OWNER:	MC:	CONTRACTOR/CONSULTANT:

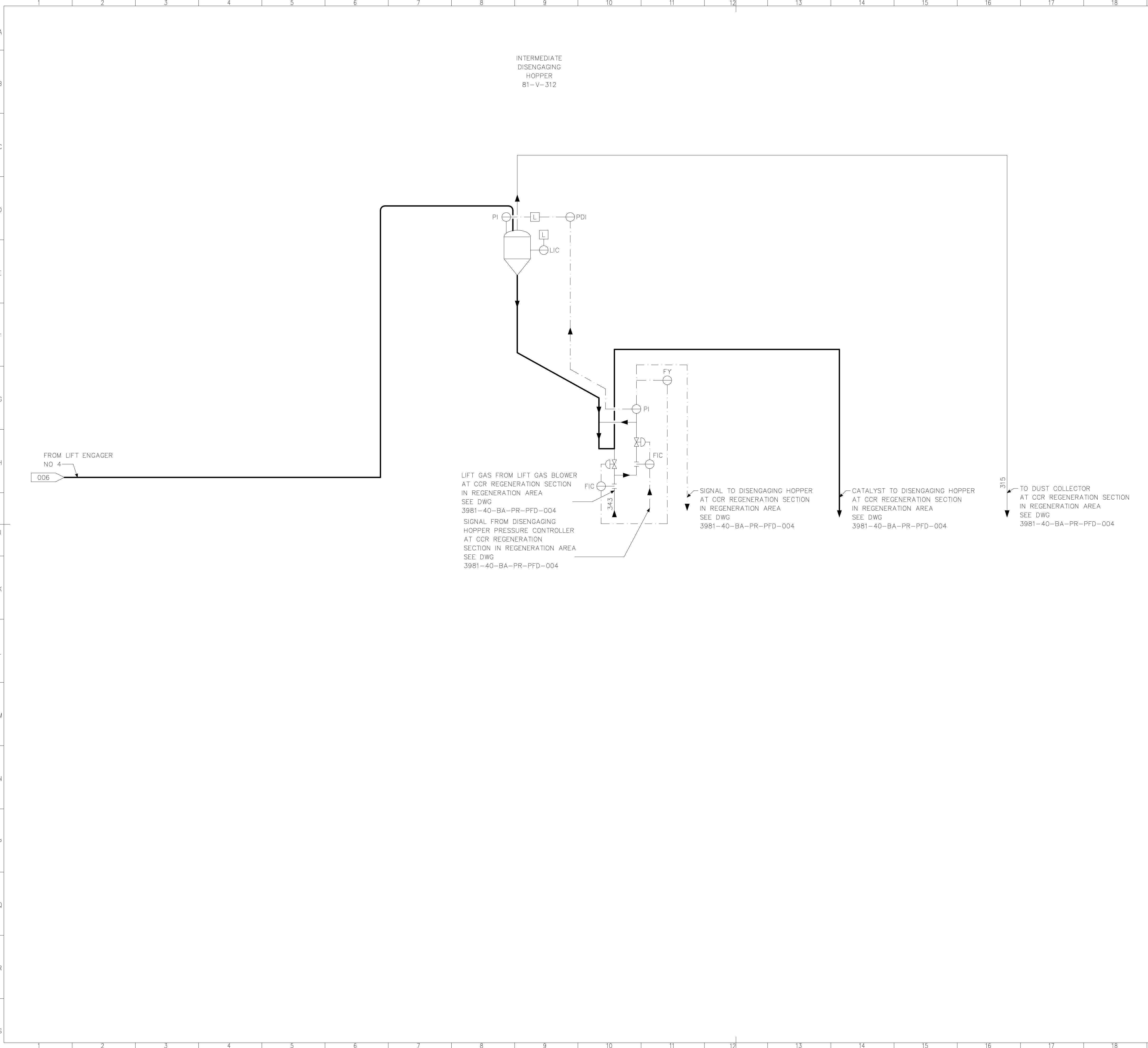
PROJECT TITLE: PROPANE DEHYDROGENATION (PDH) PROJECT

DOCUMENT TITLE: PROCESS FLOW DIAGRAM-INTER-REACTOR CATALYST TRANSPORT

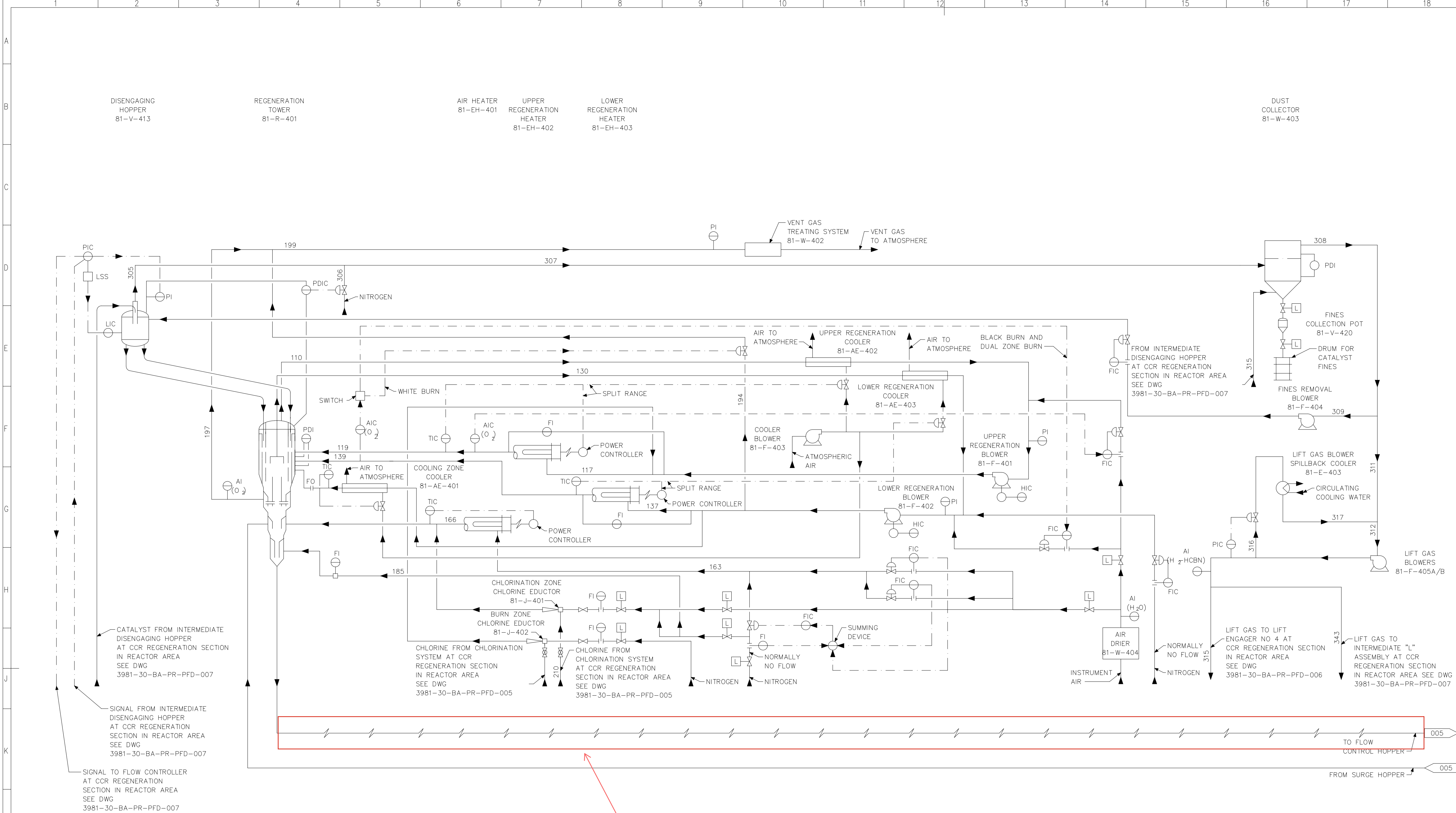
DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	30	BA	PR	PFD	006

SCALE:	SIZE: A1	SHEET NO: 1	REVISION: 4	CLASS: 1
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19	20	21	22	A3
REFERENCE DRAWINGS			DWG. NUMBER	



STREAM DATA SUMMARY												
NITROGEN SECTION												
STREAM NUMBER		305	306	307	308	309	311	312	315	316	317	343
TEMPERATURE	DEG C	38	38	38	38	38	38	39	38	151	43	38
PRESSURE	MPa (g)	0.005	0.004	0.004	0.003	0.003	0.003	0	0.082	0.082	0	0.029
WEIGHT FLOW	KG/H	4105	6	4111	4422	3800	621	777	311	155	155	311
DENSITY (FLWG)	KG/M3	1.15	1.14	1.14	1.13	1.13	1.13	1.1	1.99	1.46	1.08	1.41

STREAM DATA SUMMARY														
AIR SECTION														
STREAM NUMBER		110	117	119	130	137	139	163	166	185	194	197	199	210
TEMPERATURE	DEG C	521	481	477	520	529	525	-3	610	38	532	524	490	-1
PRESSURE	MPa (g)	0.001	0.007	0.003	0.001	0.007	0.003	0.014	0.003	0.007	0.007	0.001	0.001	NOTE
WEIGHT FLOW	KG/H	42211	43210	43210	44174	43108	43108	1060	1060	14	1119	1147	2266	11
DENSITY (FLWG)	KG/M3	0.47	0.53	0.51	0.47	0.49	0.48	1.48	0.41	1.17	0.49	0.45	0.48	1.52

EXCHANGER DATA SUMMARY	
NITROGEN SECTION	
EXCHANGER ITEM NUMBER	81-E-403
DUTY , MW	0.0243

EXCHANGER DATA SUMMARY						
AIR SECTION						
EXCHANGER ITEM NUMBER	81-EH-401	81-EH-402	81-EH-403	81-AE-401	81-AE-402	81-AE-403
DUTY , MW	0.20	0.62	0.62	0.095	0.53	0.28

REFERENCE DRAWINGS

DWG. NUMBER

NOTE
LOGIC SYSTEM REFER
3981-00-BA-IN-DIG-025 (Logic Diagram for DCS)
3981-00-BA-IN-DIG-026 (Logic Diagram for ESD)
 AUTOMATIC VALVE CONTROLLED BY LOGIC SYSTEM
HEAT EXCHANGER SUPPLIERS SHOULD CONSIDER 110% OVERDESIGN.

04	Approved for Design	05-Jun-2025	LC	ZGC	YGH
03	Issued for Approval	21-May-2025	LC	ZGC	YGH
02	Issued for Approval	28-Mar-2025	GYN	LHJ	ZGC
01	Issued for Approval	05-Feb-2025	GYN	LHJ	ZGC
00	Issued for Comment	01-Nov-2024	GYN	LHJ	ZGC

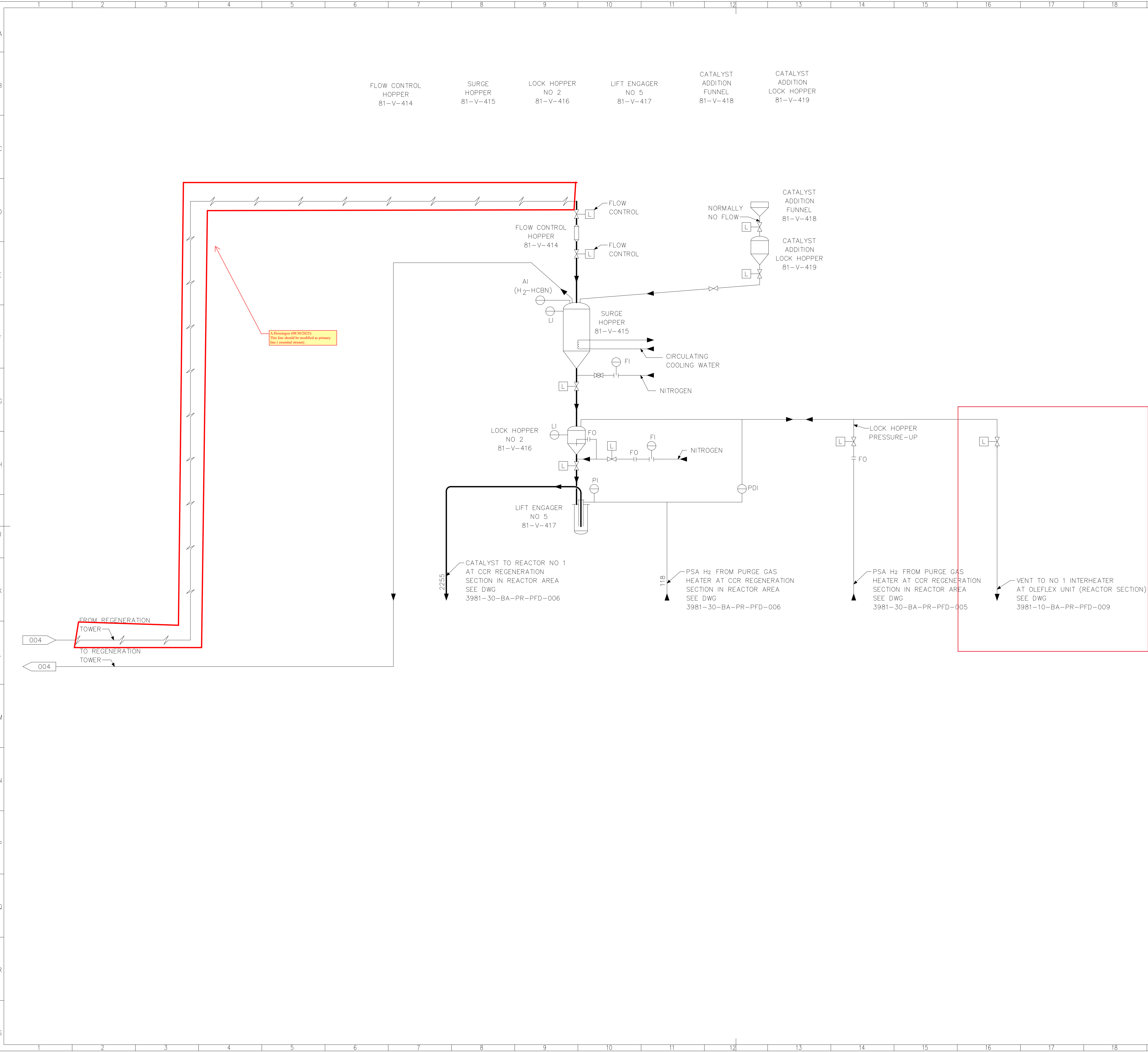
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:		MC:		CONTRACTOR/CONSULTANT: 	

PROJECT TITLE:
PROPANE DEHYDROGENATION (PDH) PROJECT

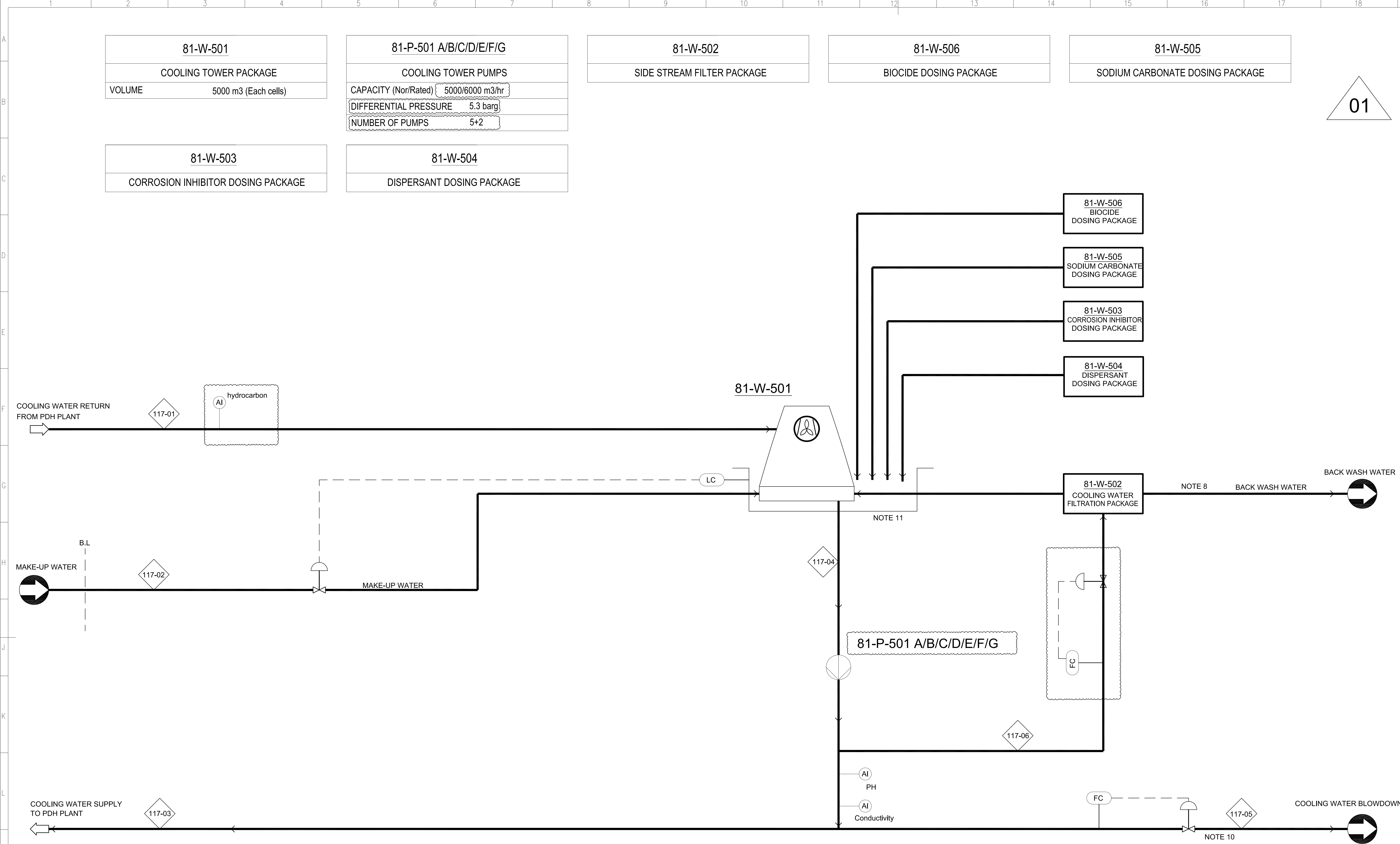
DOCUMENT TITLE:
Process Flow Diagram – Regeneration Tower



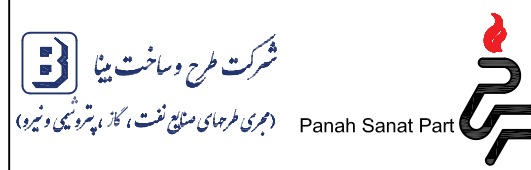
DOC NO.:	PROJ.CODE	SEC.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	40	BA	PR	PFD	004
SCALE:	SIZE: A1	SHEET NO: 1		REVISION: 4		CLASS: 1

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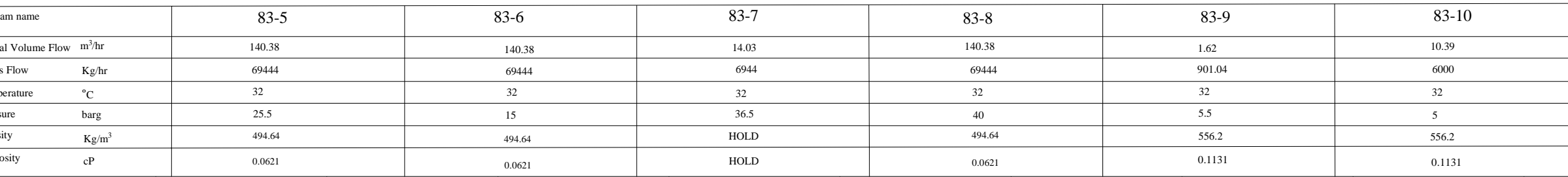


19	20	21	22	A3
REFERENCE DRAWINGS			DWG. NUMBER	
FOUR DIGIT STREAM NUMBERS DENOTE CROSSTIE STREAMS THAT ARE FLAGGED IN PROJECT 3981–10.				
<div><div><div></div><div></div></div><div>AUTOMATIC VALVE CONTROLLED BY LOGIC SYSTEM</div></div>				



19	20	21	22	A3	
REFERENCE DRAWINGS			DWG. NUMBER		
Note :					
1. FILLING LINE.					
2. REQUIRED DOSING PACKAGES SHALL BE REVIEWED BY VENDOR DURING DETAIL ENGINEERING.					
3. COOLING WATER SUPPLY DEMAND WILL BE FINALIZED DURING DETAIL DESIGN.					
4. TOTAL NUMBER OF REQUIRED COOLING TOWER CELLS WILL BE FINALIZED BY VENDOR DURING DETAIL DESIGN.					
5. 7 ELECTRICAL PUMPS ARE CONSIDERED FOR COOLING WATER PUMPS. (5 DUTY PUMPS + 2 SPARE PUMPS).					
6. NECESSITY OF MIN FLOW PROTECTION LINE FOR COOLING WATER PUMPS SHALL BE CHECKED BY VENDOR DURING DETAIL ENGINEERING.					
7. REQUIRED CONTROL FLOW VALVE SHALL BE CONSIDERED BY FILTRATION PACKAGE VENDOR.					
8. STREAM PRESSURE ARE PRELIMINARY AND WILL BE VERIFIED AFTER HYDRAULIC CALCULATION DURING DETAIL DESIGN.					
9. COOLING TOWER PACKAGE OUTLET PRESSURE WILL BE FINALIZED AFTER RECEIVING VENDOR DATA DURING DETAIL DESIGN.					
10. COOLING WATER BLOW DOWN FLOW RATE IS PRELIMINARY AND WILL BE FINALIZED BY VENDOR DURING DETAIL DESIGN.					
11. 6 (5+1) COOLING WATER CELLS CONSIDERED IN INITIAL CONSIDERATION.					
12. ALL DATA TO BE FINALIZED DURING DETAIL DESIGN AFTER RECEIVING VENDOR DESIGN DATA					
13. NUMBER AND CAPACITY OF COOLING WATER PUMPS AND THEIR COOLING TOWER CELLS WILL BE FINALIZED DURING DETAIL DESIGN AFTER RECEIVING VENDOR DESIGN DATA.					
14. CHLORINE PACKAGE TO BE REVIEWED BY THE VENDOR.					
15. THIS ITEM WILL BE FINALIZED BY THE OWNER					
Legend :					
CWS : COOLING WATER SUPPLY					
CWR : COOLING WATER RETURN					
Stream No.					
Pressure					
Temperature					
Flow Rate					
01	ISSUED FOR APPROVAL	14-May-2024	M.AFSAR	A.HADIPOUR	A.AGHAEI
00	ISSUE FOR APPROVED	27-Nov-2023	F.EBRAHIMI	A.HADIPOUR	A.AGHAEI
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:		MC:		CONTRACTOR/CONSULTANT:	
					
PROJECT TITLE:					
PROPANE DEHYDROGENATION (PDH) PROJECT					
DOCUMENT TITLE:					
PFD for Cooling Tower System					
DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE
	3981	50	BA	PR	PFD
SCALE: 1:100	SIZE: A3	SHEET NO: 1 OF 1		REVISION: 01	CLASS: 1
19	20	21	22	A3	

STREAM NO. (Note 4)	117-01	117-02	117-03	117-04	117-05	117-06
TEMPERATURE C	47	25 (Note 15)	37	37	37	37
PRESSURE barg	3.5	5.5	5.5	0.2	5.5	5.5
MASS FLOW Kg/h	24,732,500	538,434	24,825,066	24,830,000	9,934	1,241,750
MASS ENTHALPY KJ/Kg	-	-	-	-	-	-
VAPOR PHASE						
MOLE WEIGHT Kg/Kgmole	-	-	-	-	-	-
DENSITY (ACT) Kg/m3	-	-	-	-	-	-
LIQUID PHASE						
DENSITY (ACT) Kg/m3	989.3000	997.1000	993.4000	993.2	993.4	993.4
VISCOSITY CP	0.5731	0.8904	0.6904	0.6904	0.6904	0.6904



83-P-806A/B
BUTENE-1 TANK PUMP
CAP.: m3/hr
D.P.: 2.5 bar

83-P-803 A/B

DAILY OFF-SPEC
PRODUCT TANK PUMP

CAP. : m3/hr
D.P. : 23.8 bar

83-P-802 A/B

DAILY PRODUCT TANK PUMP

CAP. : m3/hr

D.P. : 2.3 bar





83-P-804A/B/C
MAIN HOT PRODUCT
STORAGE TANK PUMP
CAP. : m3/hr
D.D. : 23 bar

Process Design Basis




3981-00-BA-PR-BOD-008

1.ALL DIMENSION & COORDINATES ARE IN METER UNLESS OTHERWISE NOTED.

2. IT WILL BE FINALIZED LATER.

 PRESSURE (barg)  Temperature °C
 Stream Number  FLOWRATE (Kg/hr)

OSBL OUTSIDE BATTERY LIMIT

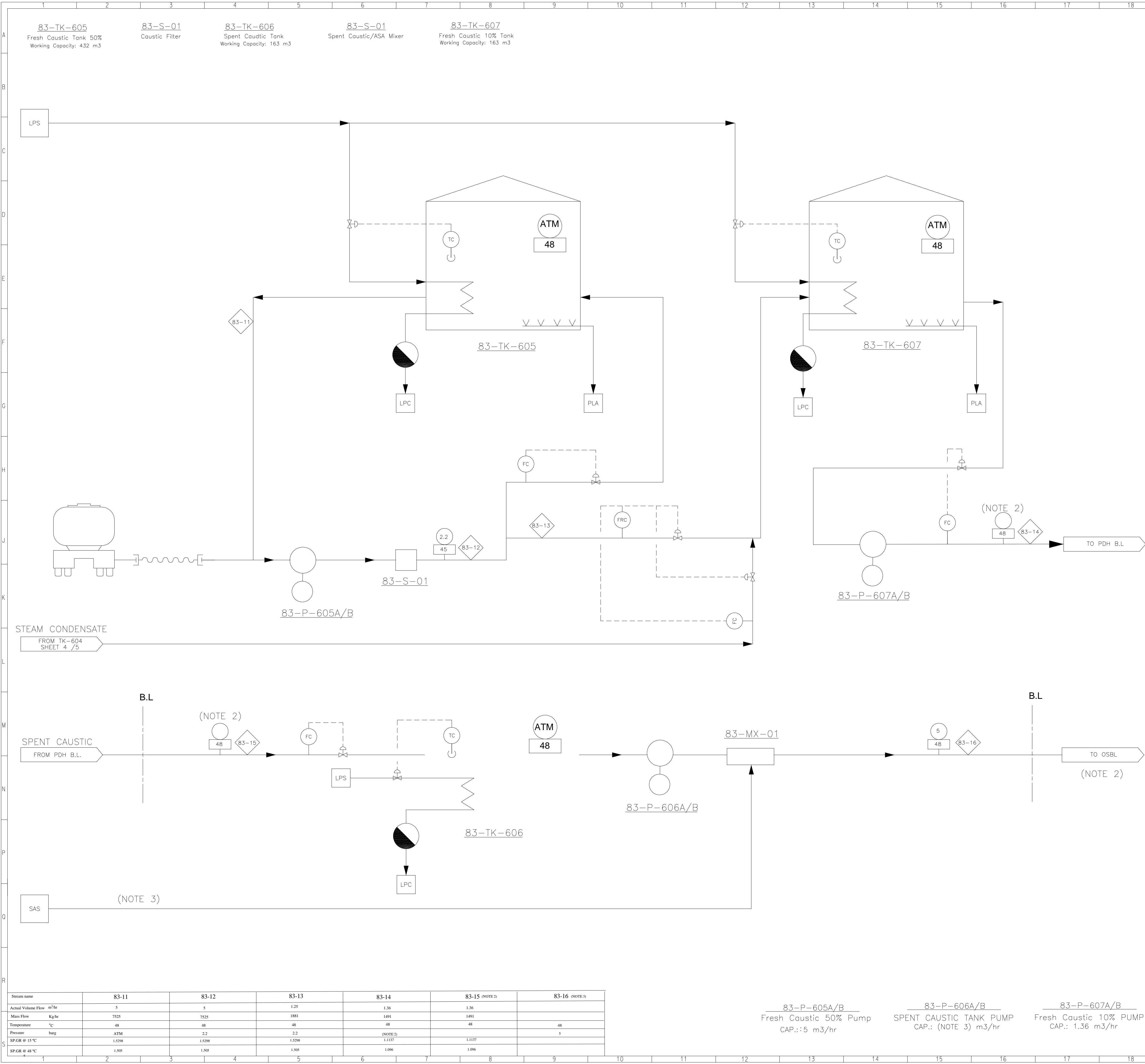
<p>OWNER:</p>  <p>شرکت کرام پتروشیمی</p>	<p>MC:</p>  <p>A.P.G</p>	<p>CONTRACTOR/CONSULTANT:</p>  <p>شرکت پرورش سات پٹی</p>
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DOCUMENT TITLE: Process Flow Diagram
Storage Tanks for Tankage & Offsite Area

DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3983	80	BA	PR	PFD	002

SCALE:	SIZE: A1	SHEET NO: 2/5	REVISION: 00	CLASS:1
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REFERENCE DRAWINGS		DWG. NUMBER	
SYMBOL & LEGEND (PFD)		3981-00-BA-PFD-041-00	
DESIGN PHILOSOPHY		ANNEX 2A-1	
Process Design Basis		3981-00-BA-PR-BOD-008	

Note :

1. ALL DIMENSION & COORDINATES ARE IN METER UNLESS OTHERWISE NOTED.

2. IT WILL BE FINALIZED BY CLIENT/PSP.

3. IT WILL BE FINALIZED LATER.



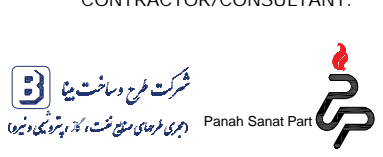
Legend :

○ PRESSURE (barg) □ Temperature °C

◇ Stream Number □ FLR FLARE SYSTEM

□ LPS LOW PRESSURE STEAM □ SAS SULFURIC ACID

REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
00	Issued for Comment	19-NOV-2024	P. Karimzadeh	A. Tabatabaei	M. Eshraghi

OWNER:  MC:  CONTRACTOR/CONSULTANT: 

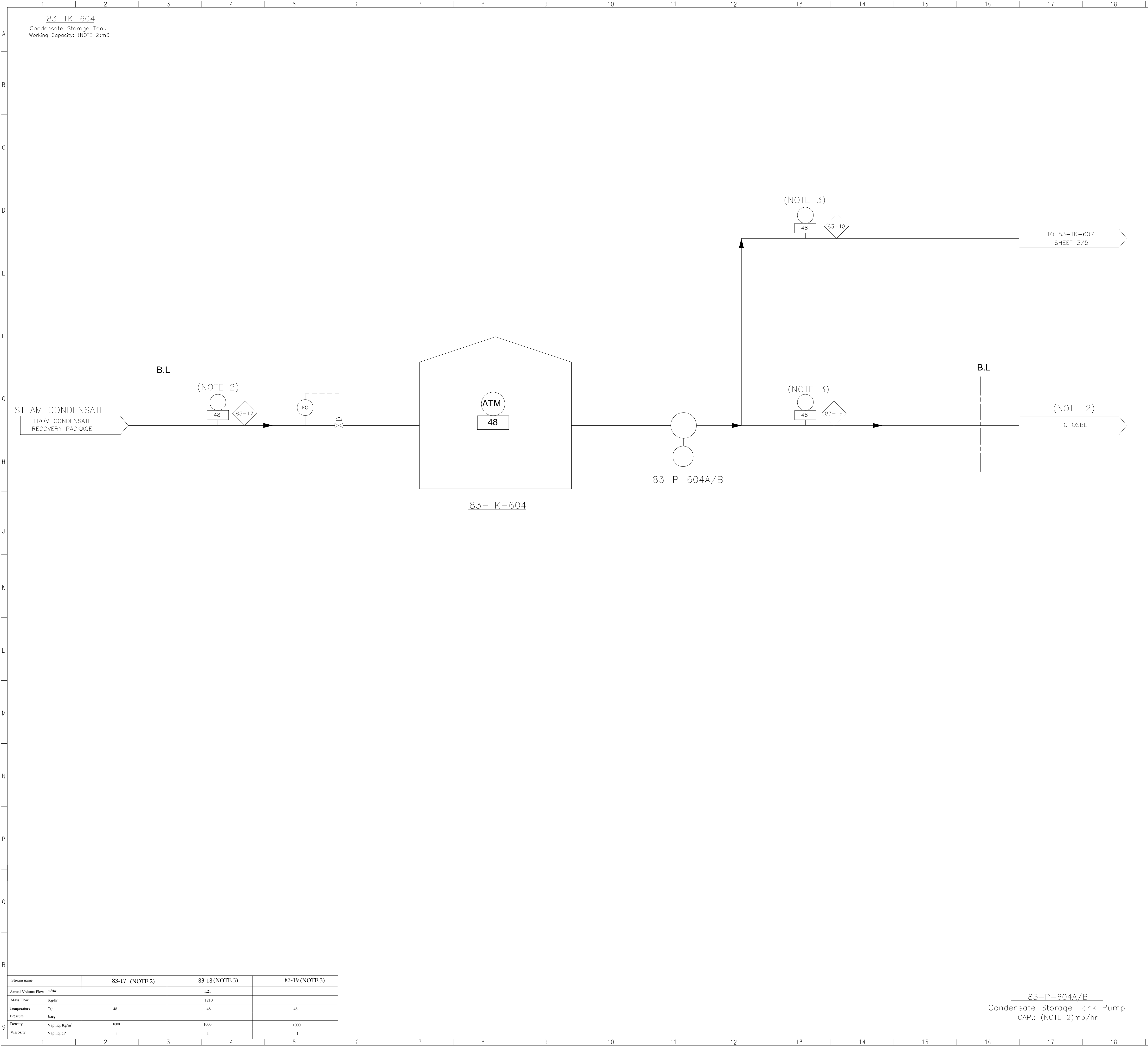
PROJECT TITLE: PROPANE DEHYDROGENATION (PDH) PROJECT

DOCUMENT TITLE: Process Flow Diagram
Storage Tanks for Tankage & Offsite Area

DOC NO.:	PROJ. CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3983	80	BA	PR	PFD	002

SCALE: SIZE: A1 SHEET NO: 3/5 REVISION: 00 CLASS: 1

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REFERENCE DRAWINGS

SYMBOL& LEGEND (PFD)

DESIGN PHILOSOPHY

Process Design Basis

DWG. NUMBER

3981-00-BA-PFD-041-00

ANNEX 2A-1

3981-00-BA-PR-BOD-008

Note :

1.ALL DIMENSION & COORDINATES ARE IN METER UNLESS OTHERWISE NOTED.

2. IT WILL BE FINALIZED BY CLIENT/PSP.

3. IT WILL BE FINALIZED LATER.

Legend :

PRESSURE (barg)

Stream Number

LPS

LOW PRESSURE STEAM

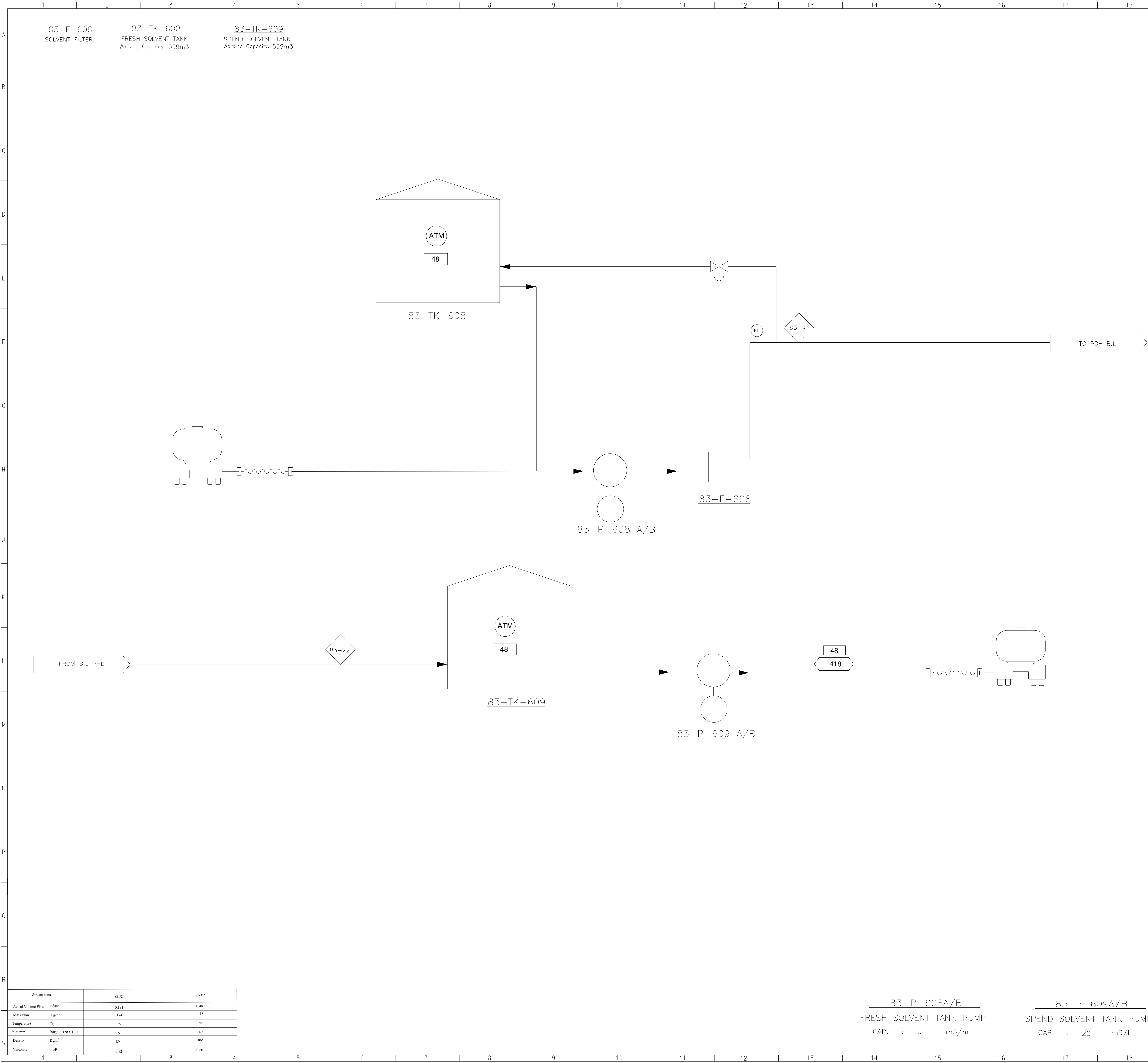
Temperature °C

FLR

FLARE SYSTEM

00	Issued for Comment	19-NOV-2024	P. Karimzadeh	A. Tabatabaei	M. Eshraghi	
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED	
OWNER:	MC:		CONTRACTOR/CONSULTANT:			
<div>PROJECT TITLE:</div> <div>PROPANE DEHYDROGENATION (PDH) PROJECT</div> <div>DOCUMENT TITLE:</div> <div>Process Flow Diagram Storage Tanks for Tankage & Offsite Area</div>						
DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3983	80	BA	PR	PFD	002
SCALE:	SIZE: A1	SHEET NO: 4/5		REVISION: 00		CLASS: 1

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REFERENCE DRAWINGS

SYMBOL& LEGEND (PFD)

DESIGN PHILOSOPHY

Process Design Basis

DWG. NUMBER

3981-00-BA-PFD-041-00

ANNEX 2A-1

3981-00-BA-PR-BOD-008

Note :

1. IT WILL BE FINALIZED LATER.

Legend :

○

PRESSURE (barg)

◇

Stream Number

FLR

FLARE SYSTEM

NNF

NORMALLY NO FLOW

□

TEMPERATURE °C

C3 REF.

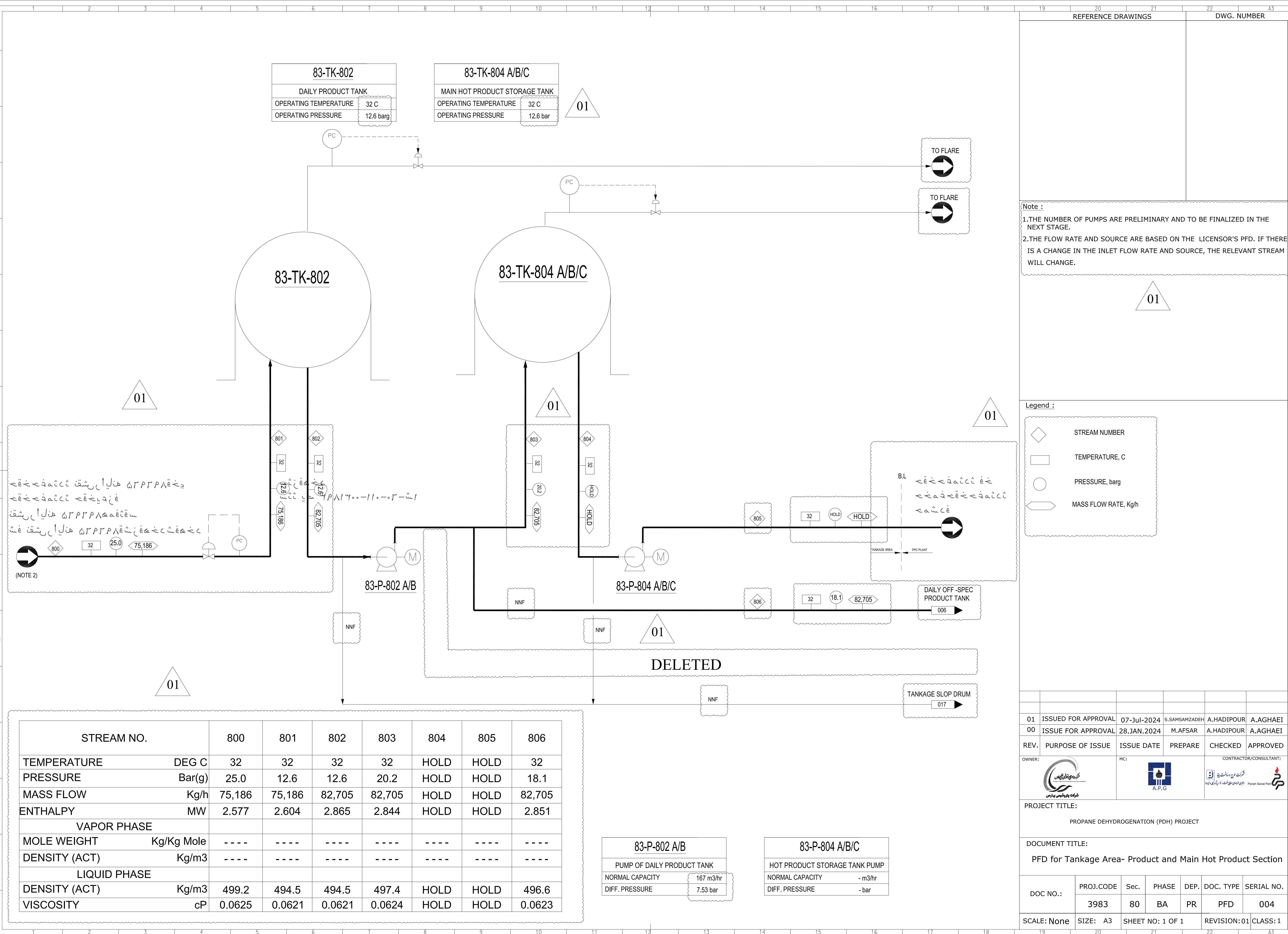
PROPANE/PROPYLENE REFRIGERATION


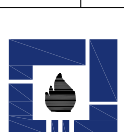

◇

FLOW TARE KG/HR

00	Issued for Comment	19-NOV-2024	P.Karimzadeh	A.Tabatabaei	M.Eshraghi
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:	<div><div>شرکت پارس پارس</div></div>		MC:	<div><div>A.P.G</div></div>	
CONTRACTOR/CONSULTANT:					
<div><div>گروه صنعتی پارس</div><div>پارس سارل پارت</div></div>					
PROJECT TITLE:					
PROPANE DEHYDROGENATION (PDH) PROJECT					
DOCUMENT TITLE:					
Process Flow Diagram Storage Tanks for Fresh Solvent & Spent Solvent					
DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE
	3983	80	BA	PR	PFD
SCALE:	SIZE: A1	SHEET NO: 5/5		REVISION: 00	CLASS: 1

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01	ISSUED FOR APPROVAL	07-Jul-2024	S.SAMSAMZADEH	A.HADIPOUR	A.AGHAEI
00	ISSUE FOR APPROVAL	28.JAN.2024	M.AFSAR	A.HADIPOUR	A.AGHAEI
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:		MC:		CONTRACTOR/CONSULTANT:	
 <p>شرکت پتروشیمی کرام</p>		 <p>A.P.G</p>		 <p>گروه پارس سانی پانل</p>	

PROJECT TITLE:

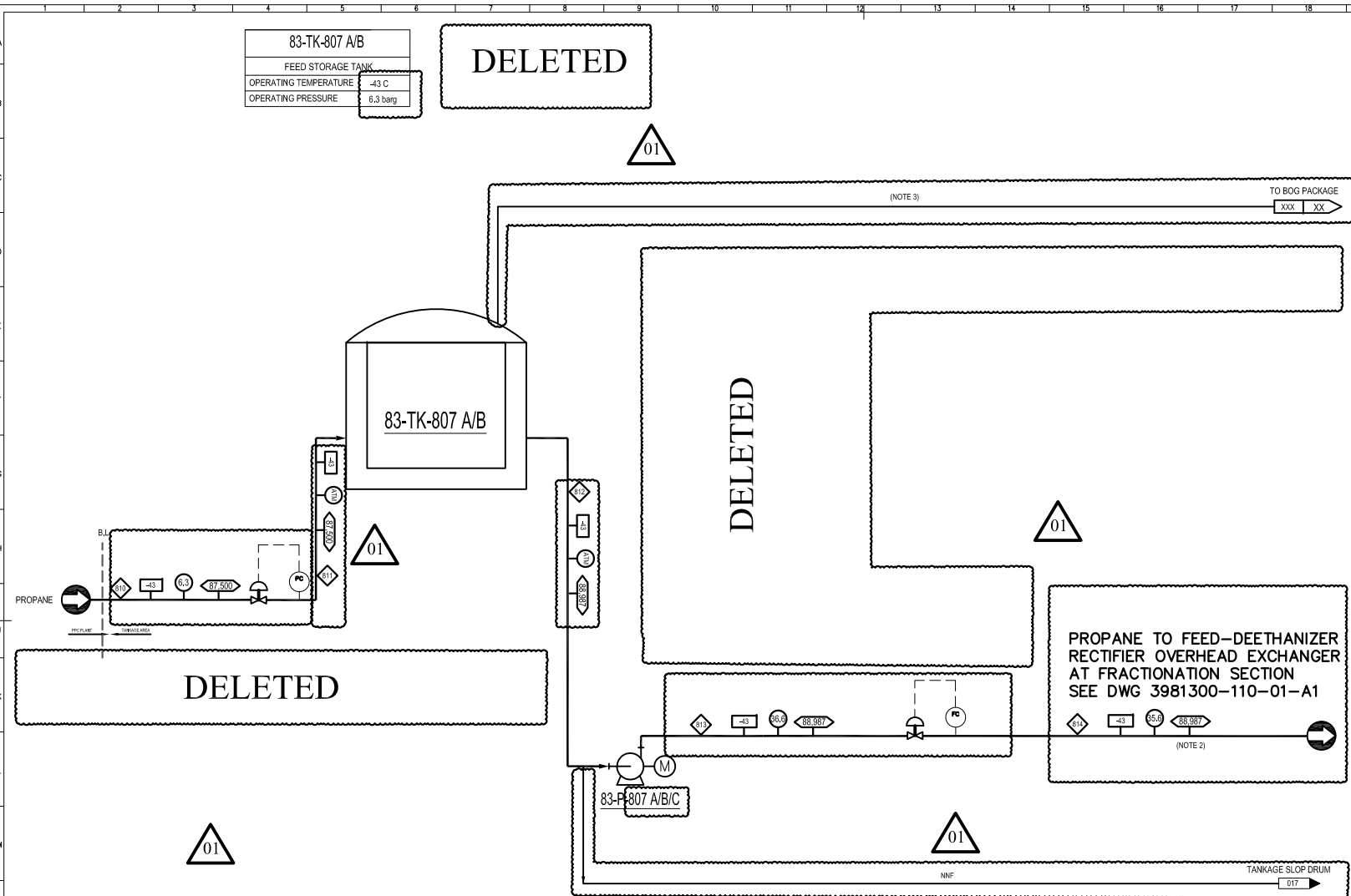
PROPANE DEHYDROGENATION (PDH) PROJECT

DOCUMENT TITLE:

PFD for Tankage Area- Product and Main Hot Product Section

DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3983	80	BA	PR	PFD	004
SCALE: None	SIZE: A3	SHEET NO: 1 OF 1			REVISION: 01	CLASS: 1

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STREAM NO.	810	811	812	813	814
TEMPERATURE	C	-43	-43	-43	-43
PRESSURE	barg	6.3	0.5	0.5	36.6
MASS FLOW	Kg/h	87,500	87,500	88,987	88,987
MASS ENTHALPY	MW	-70.243	-70.253	-70.253	-70.176
VAPOR PHASE					
MOLE WEIGHT	Kg/Kgmole	-	-	-	-
DENSITY (ACT)	Kg/m3	-	-	-	-
LIQUID PHASE					
DENSITY (ACT)	Kg/m3	583.2	582.6	582.6	586.6
VISCOSITY	CP	0.2000	0.1998	0.1998	0.2008

83-P-807 A/B/C	
FEED STORAGE TANK PUMP	
NORMAL CAPACITY	150 m3/hr
DIFF. PRESSURE	36.2 bar

REFERENCE DRAWINGS

DWG. NUMBER

Note :

1.THE NUMBER OF PUMPS ARE PRELIMINARY AND TO BE FINALIZED IN THE NEXT STAGE.

2.THE FLOW RATE, SOURCE AND DESTINATION ARE BASED ON THE LICENSOR'S PFD, IF THERE IS A CHANGE IN THE INLET FLOW RATE AND SOURCE, THE RELEVANT STREAM WILL CHANGE.

3.VTA

Legend :

◇

STREAM NUMBER

□

TEMPERATURE, C

○

PRESSURE, barg

➡

MASS FLOW RATE, Kg/h

01	ISSUE FOR APPROVAL	20.JUN.2024	S.SAMSAMZADEH	A.HADIPOUR	A.AGHAEI
00	ISSUE FOR APPROVAL	28.JAN.2024	M.AFSAR	A.HADIPOUR	A.AGHAEI
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED

OWNER:

CONTRACTOR/CONSULTANT:

PROJECT TITLE:

PROPANE DEHYDROGENATION (PDH) PROJECT

DOCUMENT TITLE:

PFD for Tankage Area- Feed Section

DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3983	80	BA	PR	PFD	005

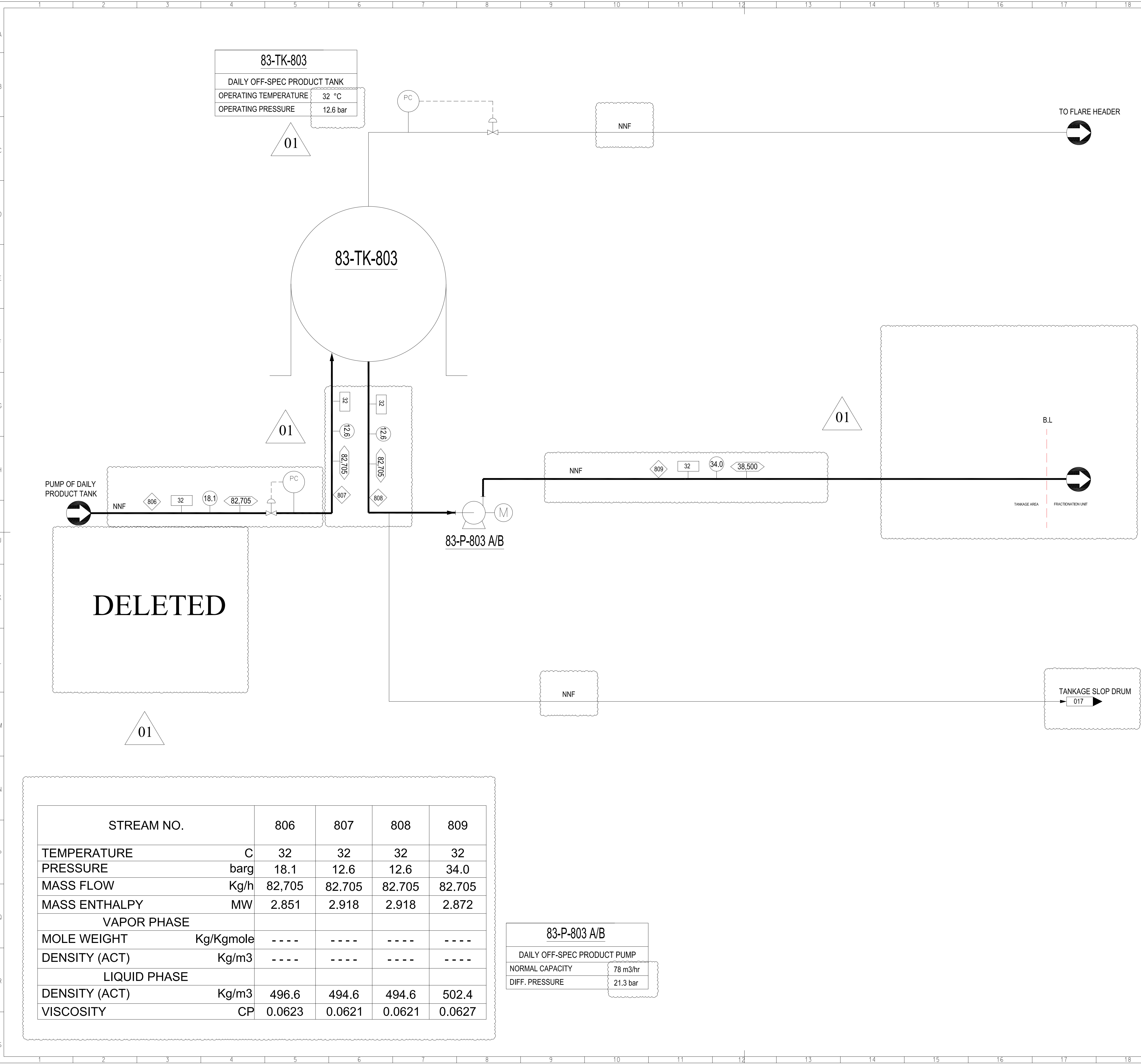
SCALE:

SIZE: A3

SHEET NO: 1 OF 1

REVISION: 01

CLASS: 1



REFERENCE DRAWINGS

DWG. NUMBER

Note :

1.THE NUMBER OF PUMPS ARE PRELIMINARY AND TO BE FINALIZED IN THE NEXT STAGE.

2.THE FLOW RATE AND SOURCE ARE BASED ON THE CONTRACT. IF THERE IS A CHANGE IN THE INLET FLOW RATE AND SOURCE, THE RELEVANT STREAM WILL CHANGE.

Legend :

◇

STREAM NUMBER

▭

TEMPERATURE, C

○

PRESSURE, barg

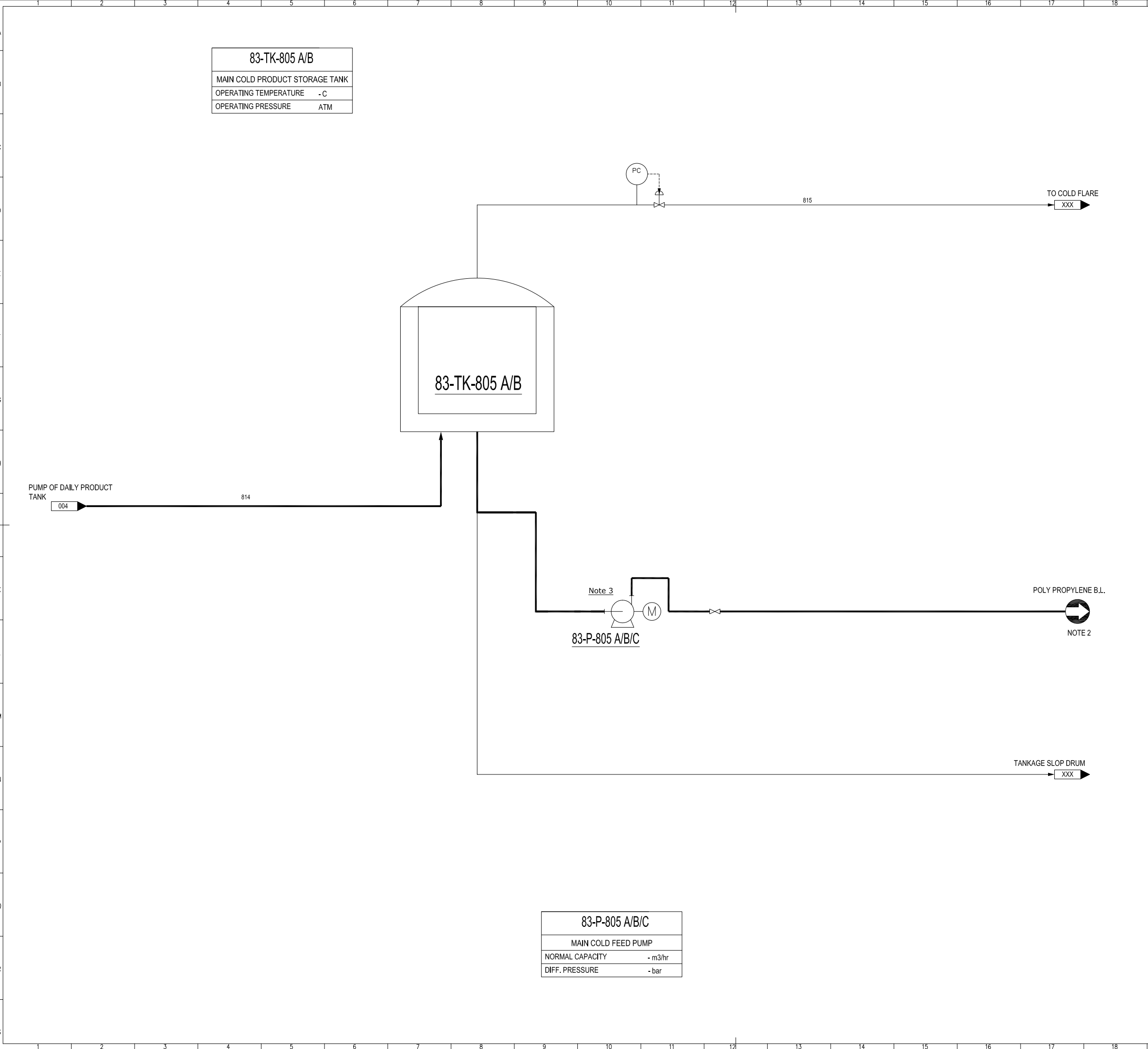
➡

MASS FLOW RATE, Kg/h

01

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A3



19	20	21	22	A3
REFERENCE DRAWINGS			DWG. NUMBER	
<p><u>Note :</u></p> <p>1. THE DIAGRAM IS PRELIMINARY. IT WILL BE FINALIZED IN THE DETAIL STAGE</p> <p>2. THE DESTINATION IS PRELIMINARY AND TO BE ADVISED BY THE OWNER.</p> <p>3. THE NUMBER OF PUMPS ARE PRELIMINARY AND TO BE FINALIZED IN THE NEXT STAGE</p>				
<p><u>Legend :</u></p>				

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MATERIAL BALANCE, kmol/h																	
STREAM	unit	800	802	803	805	806	807	808	809	810	811	813	814	815	816	817	818
Propylene	%Mol	>99.7	>99.7	>99.7	>99.7	>99.7	>99.7	>99.7	-	-	-	-	>99.7	>99.7	>99.7	>99.7	>99.7
Propane	%Mol	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	-	-	-	<0.2	<0.2	<0.2	<0.2	<0.2
Ethane	Mol-ppm	<20	<20	<20	<20	<20	<20	<20	-	-	-	-	<20	<20	<20	<20	<20
Non-condensable (N2, CH4,...)	Mol-ppm	<20	<20	<20	<20	<20	<20	<20	-	-	-	-	<20	<20	<20	<20	<20
Ethylene	Mol-ppm	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	<1	<1	<1	<1	<1
Hydrogen	Mol-ppm	<5	<5	<5	<5	<5	<5	<5	-	-	-	-	<5	<5	<5	<5	<5
Acetylene	Mol-ppm-max	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	<1	<1	<1	<1	<1
Methyl acetylene	Mol-ppm-max	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	<1	<1	<1	<1	<1
Propadiene	Mol-ppm-max	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	<1	<1	<1	<1	<1
Butenes & pentenes	Mol-ppm-max	<10	<10	<10	<10	<10	<10	<10	-	-	-	-	<10	<10	<10	<10	<10
Oxygen	Mol-ppm-max	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	<1	<1	<1	<1	<1
Total sulfur	Mol-ppm-max	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	<1	<1	<1	<1	<1
Methanol	Mol-ppm-max	<3	<3	<3	<3	<3	<3	<3	-	-	-	-	<3	<3	<3	<3	<3
Carbon monoxide	Mol-ppm-max	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	-	-	-	-	<0.03	<0.03	<0.03	<0.03	<0.03
Carbon dioxide	Mol-ppm-max	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	-	-	-	-	<0.03	<0.03	<0.03	<0.03	<0.03
COS	Mol-ppm-max	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorides	Mol-ppm-max	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	<1	<1	<1	<1	<1
Arsine & phosphine	Mol-ppm-max	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
Ammonia	Mol-ppm-max	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	<1	<1	<1	<1	<1
Ethane and lighter	%wt.	-	-	-	-	-	-	-	0.3	0.3	0.3	0.3	-	-	-	-	-
Propane	%wt.	-	-	-	-	-	-	-	99	99	99	99	-	-	-	-	-
N-butane	%wt.	-	-	-	-	-	-	-	0.15	0.15	0.15	0.15	-	-	-	-	-
Iso-butane	%wt.	-	-	-	-	-	-	-	0.5	0.5	0.5	0.5	-	-	-	-	-
N-pentane	%wt.	-	-	-	-	-	-	-	0.02	0.02	0.02	0.02	-	-	-	-	-
Iso-pentane	%wt.	-	-	-	-	-	-	-	0.03	0.03	0.03	0.03	-	-	-	-	-
Moisture	Mol-ppm-max	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	<2	<2	<2	<2	<2
MASS FLOW	kg/hr																
MOLE WEIGHT	-																
LIQ STD VOL FLOW	m3/hr																
LIQ STD DENSITY	kg/m3																
VAP STD VOL FLOW	m3/h																
VAP STD DENSITY	kg/m3																
Temperature	C	34							-42								
Pressure	barg	25							17								

REFERENCE DRAWINGS

DWG. NUMBER

Note :

Legend :

00	ISSUE FOR APPROVAL	28.JAN.2024	M.AFSAR	A.HADIPOUR	A.AGHAEI
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER: <div></div>		MC:		CONTRACTOR/CONSULTANT: <div></div>	
PROJECT TITLE: <div>PROPANE DEHYDROGENATION (PDH) PROJECT</div>					
DOCUMENT TITLE: <div>PFD for Tankage Area- Material Balance</div>					
DOC NO.:	PROJ.CODE	UNIT	PHASE	DEP.	DOC. TYPE
	3983	80	BA	PR	PFD
SCALE: 1:100	SIZE: A0	SHEET NO: 1 OF 1		REVISION:00	CLASS:1

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