Table I. Results from the Aspen Plus User Interface simulation run of hydrogen plant of Solvay Chemicals Finland Oy

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Stream ID		DMW1	DMW2	DMW3	DMW4	DMW5	DMWFEED	FEED1	FEED2	FEED3+
Temperature	C	100,0	107,0	107,0	214,4	107,0	47,0	20,0	390,0	270,0
Pressure	bar	1,70	21,00	21,00	21,00	21,00	1,70	21,90	21,90	16,50
Vapor Frac		0,000	0,000	0,000	0,007	0,000	0,000	1,000	1,000	1,000
Mole Flow	kmol/hr	416,313	416,313	249,788	249,788	166,525	416,313	93,842	93,842	349,181
Mass Flow	kg/hr	7500,000	7500,000	4500,000	4500,000	3000,000	7500,000	1540,000	1540,000	6140,000
Volume Flow	cum/hr	8,167	8,234	4,941	8,895	3,294	7,712	100,280	237,814	927,705
Enthalpy	MMBtu/hr	-111,471	-111,216	-66,730	-64,318	-44,486	-113,297	-6,660	-5,122	-62,316
Mole Flow	kmol/hr									
METHA-01								91,815	91,815	91,815
ETHAN-01								0,845	0,845	0,845
PROPA-01								0,282	0,282	0,282
N-BUT-01								0,094	0,094	0,094
N-PEN-01								0,009	0,009	0,009
NITRO-01								0,751	0,751	0,751
CARBO-01										
CARBO-02								0,047	0,047	0,047
HYDRO-01										
WATER		416,313	416,313	249,788	249,788	166,525	416,313			255,339
AIR										
Stream ID		FEED4+	H2	PURGEGAS	STEAM1	STEAMIN	STEAMOUT	SYNGAS2	SYNGAS3	SYNGAS4
Temperature	C	540,0	35,0	35,0	210,0	210,0	210,0	335,0	310,0	400,0
Pressure	bar	16,50	15,00	15,00	16,50	16,50	16,50	15,50	15,50	15,50
Vapor Frac		1,000		1,000	1,000	1,000	1,000	1,000	1,000	1,000
Mole Flow	kmol/hr	349,181	300,627	95,568	416,313	255,339	160,974	501,996	505,669	505,669
Mass Flow	kg/hr	6140,000	606,027	3561,773	7500,000	4600,000	2900,000	6140,000	6140,000	6140,000
Volume Flow	cum/hr	1423,888		155,591	943,222	578,510	364,713	1642,039	1587,247	1833,081
Enthalpy	MMBtu/hr	-58,418		-27,525	-93,251	-57,194	-36,057	-47,058	-48,161	-46,677
Mole Flow	kmol/hr									
METHA-01		91,815		16,527				18,363	16,527	16,527
ETHAN-01		0,845								
PROPA-01		0,282								
N-BUT-01		0,094								
N-PEN-01		0,009								
NITRO-01		0,751		0,751				0,751	0,751	0,751
CARBO-01				10,623				38,204	10,623	10,623
CARBO-02		0,047		67,668				38,251	67,668	67,668
HYDRO-01			300,627					265,701	300,627	300,627
WATER		255,339			416,313	255,339	160,974	140,727	109,474	109,474
AIR										
Stream ID		SYNGAS5	SYNGAS6	SYNGAS7	SYNGAS8	SYNGAS9	SYNGAS11	SYNGAS12	WASTEWAT	
Temperature	C	306,7	157,0	127,7	35,0	35,0	790,0	790,0	35,0	
Pressure	bar	15,50	15,50	15,50	15,30	15,30	15,50	15,50	15,30	
Vapor Frac		1,000	1,000	0,931	0,786	1,000	1,000	1,000	0,000	
Mole Flow	kmol/hr	505,669	505,669	505,669	505,669	396,195	501,996	501,996	109,474	
Mass Flow	kg/hr	6140,000	6140,000	6140,000	6140,000	4167,800	6140,000	6140,000	1972,200	
Volume Flow	cum/hr	1578,329	1166,440	1014,237	670,982	667,152	2871,919	2872,248	2,004	
Enthalpy	MMBtu/hr	-48,215	-50,626	-52,452	-57,262	-27,414	-38,106	-39,341	-29,898	
Mole Flow	kmol/hr									
METHA-01		16,527	16,527	16,527	16,527	16,527	18,363	18,363		
ETHAN-01										
PROPA-01										
N-BUT-01										
N-PEN-01										
NITRO-01		0,751	0,751	0,751	0,751	0,751	0,751	0,751		
CARBO-01		10,623	10,623	10,623	10,623	10,623	76,408	38,204		
CARBO-02		67,668	67,668	67,668	67,668	67,668	0,047	38,251		
HYDRO-01		300,627	300,627	300,627	300,627	300,627	227,497	265,701		
WATER		109,474	109,474	109,474	109,474		178,931	140,727	109,474	
AIR										