

Dispersion Report

Workspace: 72438-1RiempFSRU-1H

Study: Riempimento FSRU-ME4

Equipment Item: 1H Sistema BOG

72438-1RiempFSRU-1H\Riempimento FSRU-ME4\1H Sistema BOG

Material	GAS NATURALE	
East	0	m
North	0	m

Scenario (User defined source) : 350mm-Q0,1

72438-1RiempFSRU-1H\Riempimento FSRU-ME4\1H Sistema BOG\350mm-Q0,1

Material to track	GAS NATURALE
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Weather: Category 2/F

Wind speed [m/s]	2
Pasquill stability	F stable - night with moderate clouds and light/moderate wind
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	100

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0	0	kg/s	0,1	0	0,1
2	Continuous	3600	0	kg/s	0,1	0	0,1

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Line height [m]	C/Line conc [ppm]	Effective width [m]	Effective depth [m]	C/Line vapour temperature [degC]	C/Line liquid fraction	Centroid velocity [m/s]	C/Line cloud density [kg/m ³]
1	0	0	25	999.99 9,37	0,0230 295	0,0115 28	10,9061	0	242,43 3	0,7768 58
1	0,01	0,03201 59	25,56 02	174.70 6,23	0,1632 38	0,0817 037	21,9863	0	28,768 2	1,1059 7
1	0,02	0,06945 98	25,78 67	115.93 3,13	0,2479 04	0,1240 72	22,9794	0	18,864 7	1,1276 3
1	0,03	0,10682 6	25,94 79	89.784, 96	0,3198 87	0,1600 91	23,4326	0	14,653 8	1,1371 6
1	0,04	0,14380 6	26,07 65	74.310, 11	0,3850 25	0,1926 81	23,7042	0	12,233 8	1,1427 8
1	0,05	0,18057 4	26,18 54	63.864, 82	0,4454 9	0,2229 3	23,889	0	10,640 3	1,1465 5
1	0,06	0,21720 6	26,28 05	56.262, 45	0,5022 6	0,2513 29	24,0242	0	9,5069 9	1,1492 9
1	0,07	0,25373 9	26,36 45	50.454, 20	0,5558 19	0,2781 2	24,1279	0	8,6602 8	1,1513 7
1	0,08	0,29020 4	26,44	45.849, 02	0,6066 12	0,3035 26	24,2104	0	8,0036 5	1,1530 3
1	0,09	0,32662 1	26,50 86	42.096, 59	0,6549 32	0,3276 93	24,2778	0	7,4802 9	1,1543 7
1	0,1	0,363	26,57 14	38.973, 86	0,7009 97	0,3507 32	24,334	0	7,0542 8	1,1554 9
1	0,11	0,39935 2	26,62 93	36.329, 17	0,7450 11	0,3727 44	24,3817	0	6,7013 8	1,1564 3
1	0,12	0,43568 8	26,68 33	34.055, 97	0,7871 61	0,3938 23	24,4227	0	6,4047 2	1,1572 4
1	0,13	0,47201 8	26,73 42	32.076, 68	0,8276 32	0,4140 61	24,4585	0	6,1521 4	1,1579 4



1	0,14	0,50833	26,78	30.339,	0,8664	0,4334	24,4899	0	5,9352	1,1585
		6	18	70	58	76			8	6
1	0,15	0,54465	26,82	28.800,	0,9037	0,4521	24,5178	0	5,7473	1,1591
		1	69	05	98	47			1	1
1	0,16	0,58096	26,86	27.424,	0,9397	0,4701	24,5427	0	5,5830	1,1596
		7	98	38	67	33			5	
1	0,17	0,61728	26,91	26.188,	0,9744	0,4874	24,5651	0	5,4386	1,1600
		1	04	40	18	58			8	4
1	0,18	0,65359	26,94	25.070,	1,0078	0,5041	24,5854	0	5,3109	1,1604
		8	93	22	7	82			1	3
1	0,19	0,68992	26,98	24.052,	1,0402	0,5203	24,6039	0	5,1971	1,1607
		1	66	95		48			9	9
1	0,2	0,72624	27,02	23.124,	1,0714	0,5359	24,6208	0	5,0955	1,1611
		8	24	02	6	75			6	2
1	0,204	0,74180	27,03	22.750,	1,0845	0,5425	24,6276	0	5,0553	1,1612
	282	7	73	14	4	14				5
1	0,212	0,76985	27,06	22.108,	1,1076	0,5540	24,6392	0	4,9871	1,1614
		5	39	90	8	83			3	8
1	0,226	0,82220	27,11	21.019,	1,1491	0,5748	24,659	0	4,8739	1,1618
	4	8	06	32	9	4			2	6
1	0,243	0,88505	27,16	19.859,	1,1967	0,5986	24,6801	0	4,7573	1,1622
	68	4	37	44	4	08			4	7
1	0,264	0,96051	27,22	18.648,	1,2505	0,6255	24,7022	0	4,6402	1,1627
	416	6	24	48	4	04			1	
1	0,289	1,05111	27,28	17.392,	1,3115	0,6559	24,7251	0	4,5241	1,1631
	299		9	07		79			3	4
1	0,319	1,15991	27,36	16.111,	1,3799	0,6901	24,7484	0	4,4119	1,1635
	159		34	09	4	89			5	9
1	0,354	1,29056	27,44	14.821,	1,4564	0,7284	24,7719	0	4,3059	1,1640
	991		64	85	1	09				4
1	0,397	1,44748	27,53	13.539,	1,5415	0,7709	24,7953	0	4,2079	1,1644
	989		99	83	3	57			3	9
1	0,449	1,63599	27,64	12.286,	1,6355	0,8179	24,8182	0	4,1199	1,1649
	587		34	16	7	56			3	2
1	0,511	1,86253	27,75	11.077,	1,7389	0,8696	24,8402	0	4,0429	1,1653
	504		67	17	4	17			8	4
1	0,560	2,04108	27,83	10.291,	1,8144	0,9073	24,8546	0	3,9974	1,1656
	239		92	44	2	39			7	1



2	3600	0	25	999.99	0,0230	0,0115	10,9061	0	242,43	0,7768
				9,37	295	28			3	58
2	3600,01	0,0320159	25,5602	174.706,23	0,163238	0,0817037	21,9863	0	28,7682	1,10597
2	3600,02	0,0694598	25,7867	115.933,13	0,247904	0,124072	22,9794	0	18,8647	1,12763
2	3600,03	0,106826	25,9479	89.784,96	0,319887	0,160091	23,4326	0	14,6538	1,13716
2	3600,04	0,143806	26,0765	74.310,11	0,385025	0,192681	23,7042	0	12,2338	1,14278
2	3600,05	0,180574	26,1854	63.864,82	0,44549	0,22293	23,889	0	10,6403	1,14655
2	3600,06	0,217206	26,2805	56.262,45	0,50226	0,251329	24,0242	0	9,50699	1,14929
2	3600,07	0,253739	26,3645	50.454,20	0,555819	0,27812	24,1279	0	8,66028	1,15137
2	3600,08	0,290204	26,4402	45.849,02	0,606612	0,303526	24,2104	0	8,00365	1,15303
2	3600,09	0,326621	26,5086	42.096,59	0,654932	0,327693	24,2778	0	7,48029	1,15437
2	3600,1	0,363	26,5714	38.973,86	0,700997	0,350732	24,334	0	7,05428	1,15549
2	3600,11	0,399352	26,6293	36.329,17	0,745011	0,372744	24,3817	0	6,70138	1,15643
2	3600,12	0,435688	26,6833	34.055,97	0,787161	0,393823	24,4227	0	6,40472	1,15724
2	3600,13	0,472018	26,7342	32.076,68	0,827632	0,414061	24,4585	0	6,1521	1,15794
2	3600,14	0,508336	26,7818	30.339,70	0,866458	0,433476	24,4899	0	5,93528	1,15856
2	3600,15	0,544651	26,8269	28.800,05	0,903798	0,452147	24,5178	0	5,74731	1,15911
2	3600,16	0,580967	26,8698	27.424,38	0,939767	0,470133	24,5427	0	5,58305	1,15965
2	3600,17	0,617281	26,9104	26.188,40	0,974418	0,487458	24,5651	0	5,43868	1,16004
2	3600,18	0,65359	26,94	25.070,	1,0078	0,5041	24,5854	0	5,3109	1,1604



	18	8	93	22	7	82			1	3
2	3600,19	0,689921	26,9866	24.052,95	1,0402	0,520348	24,6039	0	5,19719	1,16079
2	3600,2	0,726248	27,0224	23.124,02	1,07146	0,535975	24,6208	0	5,09556	1,16112
2	3600,2	0,741807	27,0373	22.750,14	1,08454	0,542514	24,6276	0	5,0553	1,16125
2	3600,21	0,769855	27,0639	22.108,90	1,10768	0,554083	24,6392	0	4,98713	1,16148
2	3600,23	0,822208	27,1106	21.019,32	1,14919	0,57484	24,659	0	4,87392	1,16186
2	3600,24	0,885054	27,1637	19.859,44	1,19674	0,598608	24,6801	0	4,75734	1,16227
2	3600,26	0,960516	27,2224	18.648,48	1,25054	0,625504	24,7022	0	4,64021	1,16279
2	3600,29	1,051119	27,289	17.392,07	1,3115	0,655979	24,7251	0	4,52413	1,16314
2	3600,32	1,15991	27,3634	16.111,09	1,37994	0,690189	24,7484	0	4,41195	1,16359
2	3600,35	1,29056	27,4464	14.821,85	1,45641	0,728409	24,7719	0	4,3059	1,16404
2	3600,4	1,44748	27,5399	13.539,83	1,54153	0,770957	24,7953	0	4,20793	1,16449
2	3600,45	1,63599	27,6434	12.286,16	1,63557	0,817956	24,8182	0	4,11993	1,16492
2	3600,51	1,86253	27,7567	11.077,17	1,73894	0,869617	24,8402	0	4,04298	1,16534
2	3600,56	2,04108	27,8392	10.291,44	1,81442	0,907339	24,8546	0	3,99747	1,16561

Weather: Category 5/D

Wind speed [m/s]	5
Pasquill stability	D neutral - little sun and high wind or overcast/windy night
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	800

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0	0	kg/s	0,1	0	0,1
2	Continuous	3600	0	kg/s	0,1	0	0,1

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Li ne height [m]	C/Li ne conc [ppm]	Effect ive width [m]	Effect ive depth [m]	C/Line vapour temperature [degC]	C/Li ne liqui d fraction	Centr oid veloci ty [m/s]	C/Li ne cloud densi ty [kg/m3]
1	0	0	25	999.99	0,0230	0,0115	10,9061	0	242,43	0,7768
				9,37	427	214			3	58
1	0,01	0,06838	25,52	150.05	0,1882	0,0941	22,1578	0	25,233	1,1161
		14	37	2,20	3	148			3	8
1	0,02	0,14547	25,70	94.355,	0,2939	0,1469	23,0907	0	16,513	1,1367
		2	7	23	12	56				



1	0,03	0,220568	25,8327	70.858,76	0,380195	0,190097	23,4933	0	13,1596	1,14528
1	0,04	0,293671	25,9303	57.482,69	0,453967	0,226984	23,7248	0	11,3873	1,15014
1	0,05	0,365587	26,0113	48.725,69	0,51848	0,25924	23,8773	0	10,3044	1,15332
1	0,06	0,436712	26,0813	42.500,69	0,575775	0,287887	23,9861	0	9,58321	1,15557
1	0,07	0,507276	26,1433	37.824,02	0,62732	0,31366	24,068	0	9,07389	1,15725
1	0,08	0,577398	26,1989	34.170,23	0,674175	0,337088	24,132	0	8,69853	1,15857
1	0,09	0,647147	26,2491	31.231,33	0,717126	0,358563	24,1836	0	8,41277	1,15963
1	0,1	0,716603	26,295	28.809,64	0,756839	0,378419	24,2262	0	8,18922	1,16052
1	0,11	0,785822	26,3373	26.775,07	0,793833	0,396917	24,2619	0	8,01047	1,16123
1	0,12	0,854833	26,3766	25.039,07	0,828504	0,414252	24,2924	0	7,86473	1,16185
1	0,13	0,923667	26,4131	23.538,27	0,861173	0,430587	24,3188	0	7,74422	1,16239
1	0,135	0,96386849	26,4334	22.750,14	0,879466	0,439733	24,3327	0	7,68304	1,16267
1	0,14	0,992361	26,4475	22.225,58	0,892119	0,446059	24,3419	0	7,64314	1,16286
1	0,15	1,0609195	26,4795	21.069,99	0,921461	0,46073	24,3622	0	7,55761	1,16327
1	0,16	1,1293191	26,5091	20.045,24	0,949352	0,474676	24,3802	0	7,48455	1,16364
1	0,17	1,197668	26,538	19.120,20	0,97623	0,488115	24,3964	0	7,42097	1,16397
1	0,18	1,2658948	26,5648	18.288,56	1,00194	0,500972	24,411	0	7,36572	1,16427
1	0,19	1,3340911	26,5911	17.529,16	1,02685	0,513423	24,4244	0	7,31696	1,16454
1	0,2	1,4022161	26,6161	16.836,18	1,05089	0,525444	24,4365	0	7,27387	1,16478



1	0,212	1,48393	26,64	16.076,	1,0788	0,5394	24,4498	0	7,2282	1,1650
			55	46	5	24			4	5
1	0,226	1,5819	26,67	15.256,	1,1111	0,5555	24,4642	0	7,1808	1,1653
	4		94	09	5	76			8	5
1	0,243	1,69937	26,71	14.381,	1,1483	0,5741	24,4795	0	7,1326	1,1656
	68		82	82	2	61			6	6
1	0,251	1,75238	26,73	14.021,	1,1645	0,5822	24,4858	0	7,1134	1,1657
	483		5	07	8	92			5	9
2	3600	0	25	999.99	0,0230	0,0115	10,9061	0	242,43	0,7768
				9,37	427	214			3	58
2	3600,	0,06838	25,52	150.05	0,1882	0,0941	22,1578	0	25,233	1,1161
	01	14	37	2,20	3	148			3	8
2	3600,	0,14547	25,70	94.355,	0,2939	0,1469	23,0907	0	16,513	1,1367
	02	2	7	23	12	56				
2	3600,	0,22056	25,83	70.858,	0,3801	0,1900	23,4933	0	13,159	1,1452
	03	8	27	76	95	97			6	8
2	3600,	0,29367	25,93	57.482,	0,4539	0,2269	23,7248	0	11,387	1,1501
	04	1	03	69	67	84			3	4
2	3600,	0,36558	26,01	48.725,	0,5184	0,2592	23,8773	0	10,304	1,1533
	05	7	13	69	8	4			4	2
2	3600,	0,43671	26,08	42.500,	0,5757	0,2878	23,9861	0	9,5832	1,1555
	06	2	13	69	75	87			1	7
2	3600,	0,50727	26,14	37.824,	0,6273	0,3136	24,068	0	9,0738	1,1572
	07	6	33	02	2	6			9	5
2	3600,	0,57739	26,19	34.170,	0,6741	0,3370	24,132	0	8,6985	1,1585
	08	8	89	23	75	88			3	7
2	3600,	0,64714	26,24	31.231,	0,7171	0,3585	24,1836	0	8,4127	1,1596
	09	7	91	33	26	63			7	3
2	3600,	0,71660	26,29	28.809,	0,7568	0,3784	24,2262	0	8,1892	1,1605
	1	3	5	64	39	19			2	
2	3600,	0,78582	26,33	26.775,	0,7938	0,3969	24,2619	0	8,0104	1,1612
	11	2	73	07	33	17				3
2	3600,	0,85483	26,37	25.039,	0,8285	0,4142	24,2924	0	7,8647	1,1618
	12	3	66	07	04	52			3	5
2	3600,	0,92366	26,41	23.538,	0,8611	0,4305	24,3188	0	7,7442	1,1623
	13	7	31	27	73	87			2	9
2	3600,	0,96386	26,43	22.750,	0,8794	0,4397	24,3327	0	7,6830	1,1626



	14		34	14	66	33			4	7
2	3600, 14	0,99236 1	26,44 75	22.225, 58	0,8921 19	0,4460 59	24,3419	0	7,6431 4	1,1628 6
2	3600, 15	1,06091	26,47 95	21.069, 99	0,9214 61	0,4607 3	24,3622	0	7,5576 1	1,1632 7
2	3600, 16	1,12931	26,50 91	20.045, 24	0,9493 52	0,4746 76	24,3802	0	7,4845 5	1,1636 4
2	3600, 17	1,19766	26,53 8	19.120, 20	0,9762 3	0,4881 15	24,3964	0	7,4209 7	1,1639 7
2	3600, 18	1,26589	26,56 48	18.288, 56	1,0019 4	0,5009 72	24,411	0	7,3657 2	1,1642 7
2	3600, 19	1,33409	26,59 11	17.529, 16	1,0268 5	0,5134 23	24,4244	0	7,3169 6	1,1645 4
2	3600, 2	1,40221	26,61 61	16.836, 18	1,0508 9	0,5254 44	24,4365	0	7,2738 7	1,1647 8
2	3600, 21	1,48393	26,64 55	16.076, 46	1,0788 5	0,5394 24	24,4498	0	7,2282 4	1,1650 5
2	3600, 23	1,5819	26,67 94	15.256, 09	1,1111 5	0,5555 76	24,4642	0	7,1808 8	1,1653 5
2	3600, 24	1,69937	26,71 82	14.381, 82	1,1483 2	0,5741 61	24,4795	0	7,1326 6	1,1656 6
2	3600, 25	1,75238	26,73 5	14.021, 07	1,1645 8	0,5822 92	24,4858	0	7,1134 5	1,1657 9

