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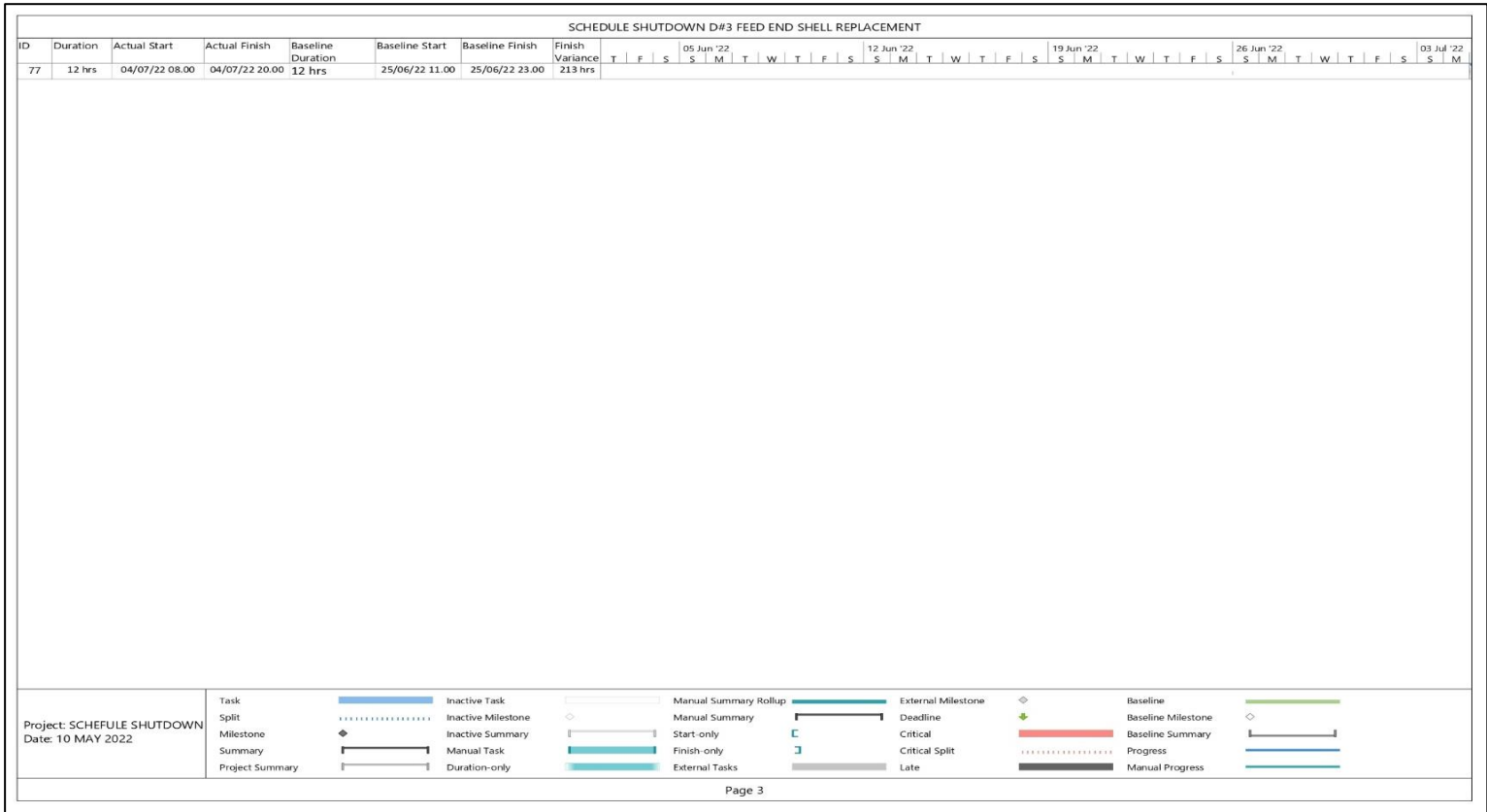
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## LAMPIRAN

Lampiran 1 Schedule Plan dan Aktual Dryer #3 Feed end Shell Replacement

ID	Task Name	Predecessor	Duration	Actual Start	Baseline Start	05 Jun 22							12 Jun 22							19 Jun 22							26 Jun 22							03 Jul 22							T										
						T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	T
1	<b>SHUTDOWN D33 FEED END SHELL REPLACEMENT</b>		780 hrs	02/06/22 00.00	02/06/22 07.00																																											100%			
2	Setting railing automatic gas cutting machine 2 Set		3 hrs	06/06/22 14.00	02/06/22 07.00																																														
3	Buka dan Turunkan atap	2	50 hrs	05/06/22 17.00	02/06/22 10.00																																														
4	Bongkar Feed chute and canopy	3	8 hrs	05/06/22 16.00	04/06/22 12.00																																														
5	Pasang pipa scaffolding sesuai kebutuhan dalam shell dry	4	3 hrs	06/06/22 00.00	04/06/22 20.00																																														
6	Buka dan lepas lifter di area pemotongan	555+4 hrs	20 hrs	06/06/22 04.00	05/06/22 00.00																																														
7	Install bracing di inside dryer sesuai standar (Existing)	655+12 hrs	36 hrs	06/06/22 16.00	05/06/22 12.00																																														
8	Rapatkan saddle ke shell dryer	255	50 hrs	02/06/22 00.00	02/06/22 07.00																																														
9	Nyalakan dan potong shell pada cutting line sampai terpisah	8,7	8 hrs	04/06/22 09.00	07/06/22 00.00																																														
10	Posisikan crane sesuai lifting plan	9	5 hrs	05/06/22 13.00	07/06/22 08.00																																														
11	Geser potongan segment 1 ke arah inlet utk gap akses lifting	9	3 hrs	05/06/22 23.00	07/06/22 08.00																																														
12	Angkat potongan shell ( segment 2) existing dan turunkan sesuai lifting plan	11	4 hrs	06/06/22 10.00	07/06/22 11.00																																														
13	Geser potongan shell ( segment 1) inlet kearah center lifting crane arah out let	12	3 hrs	07/06/22 13.00	07/06/22 15.00																																														
14	Angkat dan turunkan shell ( segment 1 ) existing	13	6 hrs	08/06/22 09.00	07/06/22 18.00																																														
15	Bevel shell existing sesuai sudut bevel shell baru ( gerinda sesuai SOP )	14	12 hrs	08/06/22 15.00	08/06/22 00.00																																														
16	pengangkatan Shell Bar		63 hrs	08/06/22 15.00	08/06/22 00.00																																														
17	Pemasangan Wire Sling	14	4 hrs	08/06/22 15.00	08/06/22 00.00																																														
18	Angkat dan naikan shell segment 1 (7130) sisi inlet posisi sesuai marking plan	17	7 hrs	10/06/22 09.00	08/06/22 04.00																																														
19	Moving segmen 1 (7130) to inlet/hotpoint with skid roller	18	8 hrs	10/06/22 16.00	08/06/22 11.00																																														
20	Angkat dan naikan shell segment 2 (5000) keposisi ujung shell existing	19	6 hrs	11/06/22 00.00	08/06/22 19.00																																														
21	Pasang scaffolding pada posisi pengelasan segment 2 & 1 inside dryer	20	48 hrs	11/06/22 06.00	09/06/22 01.00																																														
22	Instal track bolt, jackbolt dan strong back shell existing	2155	20 hrs	12/06/22 08.00	09/06/22 01.00																																														
23	alignment shell segmen 2 & 1 (Welding Feed End)	22	12 hrs	12/06/22 08.00	09/06/22 21.00																																														
24	Polarity shell segment 2 & 1	2355	8 hrs	12/06/22 08.00	09/06/22 21.00																																														
25	Pemasangan atap	23	108 hrs	26/06/22 00.00	10/06/22 09.00																																														
26	Pasang scaffolding outside dryer	25	7 hrs	12/06/22 16.00	10/06/22 21.00																																														
27	Install PWRH Equipment untuk preheat suhu pengelasan > 230° C	26	18 hrs	12/06/22 23.00	11/06/22 04.00																																														
28	Track weld sambungan shell segmen 2 & 1	27	8 hrs	13/06/22 17.00	11/06/22 22.00																																														
29	<b>NEW SHELL TO NEW SHELL</b>		142 hrs	14/06/22 01.00	12/06/22 06.00																																														
30	Pengelasan outside SMAW metode ( electrode E8015-B3 with barrier layer dan E 7016 )		62 hrs	14/06/22 01.00	12/06/22 06.00																																														
31	Welding root + hot pass	28	6 hrs	14/06/22 01.00	12/06/22 06.00																																														
32	Filler & Capping pass	31	12 hrs	14/06/22 07.00	12/06/22 12.00																																														
33	cooling time	32	8 hrs	14/06/22 19.00	13/06/22 00.00																																														
34	Buka pas track bolt dan strong back plate	33	24 hrs	15/06/22 03.00	13/06/22 08.00																																														
35	Cleaning inside dryer with grinding machine	34	12 hrs	16/06/22 03.00	14/06/22 08.00																																														





*Lampiran 2 Data Persentase Kumulatif Progres setiap shift*

<b>Tanggal</b>	<b>Plan (%)</b>	<b>Aktual (%)</b>
02/06/2022 16.23	2,75%	0,55%
02/06/2022 20.46	2,75%	0,83%
03/06/2022 10.48	4,43%	1,96%
03/06/2022 17.32	6,13%	2,73%
04/06/2022 07.11	8,40%	5,13%
04/06/2022 18.35	11,23%	7,30%
05/06/2022 07.50	16,35%	9,37%
05/06/2022 17.15	16,35%	11,66%
06/06/2022 08.12	18,40%	14,73%
06/06/2022 18.19	20,48%	15,87%
07/06/2022 07.49	23,63%	16,89%
07/06/2022 00.00	25,52%	17,14%
08/06/2022 06.56	26,53%	17,38%
08/06/2022 20.48	34,70%	18,63%
09/06/2022 09.22	38,10%	20,92%
09/06/2022 00.00	40,32%	21,04%
10/06/2022 06.24	42,64%	23,28%
10/06/2022 19.58	44,43%	24,80%
11/06/2022 07.38	46,16%	28,20%
11/06/2022 17.52	47,83%	30,98%
12/06/2022 06.51	49,53%	33,53%
12/06/2022 06.51	49,53%	36,05%
13/06/2022 16.13	54,62%	38,56%
13/06/2022 16.38	56,31%	40,41%
14/06/2022 16.18	58,00%	42,36%
14/06/2022 16.18	59,66%	43,39%
15/06/2022 06.02	61,41%	45,32%
15/06/2022 18.20	63,10%	47,54%
16/06/2022 06.13	64,78%	48,16%
16/06/2022 16.31	66,46%	49,67%
17/06/2022 06.05	68,43%	52,16%
17/06/2022 21.47	71,83%	53,29%
18/06/2022 05.41	75,22%	53,80%
18/06/2022 00.00	78,02%	54,36%
19/06/2022 00.00	80,91%	55,79%
19/06/2022 00.00	83,81%	57,00%
20/06/2022 04.51	88,95%	59,99%
20/06/2022 15.41	90,59%	60,45%
21/06/2022 07.19	93,68%	60,45%

<b>Tanggal</b>	<b>Plan (%)</b>	<b>Aktual (%)</b>
21/06/2022 00.00	96,95%	61,13%
22/06/2022 08.55	96,46%	61,80%
22/06/2022 00.00	95,11%	62,39%
23/06/2022 07.11	96,85%	62,77%
23/06/2022 00.00	97,21%	64,81%
24/06/2022 05.10	98,54%	66,26%
24/06/2022 00.00	100,00%	69,71%

*Lampiran 3 Rencana Anggaran Biaya Feed End Shell Dryer #3 Replacement*

<b>Description</b>	<b>Plan</b>
<i>Fabrication</i>	\$ 1.000.000,00
<i>Fabrication</i>	
<i>Instalation</i>	
<i>Instalation</i>	\$ 2.000.000,00
<i>Instalation</i>	
Material	
Material	
Material	\$ 2.400.000,00
Material	
Material	
Material	
<i>Meals, Travel &amp; Acomodation</i>	\$ 50.000,00
<i>Meals, Travel &amp; Acomodation</i>	
<i>PTVI Engineering</i>	\$ 200.000,00
<i>PTVI Engineering</i>	
<b>Total</b>	<b>\$ 5.650.000,00</b>

*Lampiran 4 Biaya Aktual Feed end Shell Dryer #3 Replacement*

<b>Description</b>	<b>Aktual</b>
<i>Fabrication</i>	\$ 412.197,39
<i>Fabrication</i>	\$ 390.101,42
<i>Instalation</i>	\$ 1.613.065,73
<i>Instalation</i>	\$ 110.117,74
<i>Instalation</i>	\$ 1.023,74
Material	\$ 1.246.240,26
Material	\$ 55.452,81
Material	\$ 17.252,69
Material	\$ 821.988,72
Material	\$ 5.253,03
Material	\$ 38.105,83
<i>Meals, Travel &amp; Acomodation</i>	\$ 31.435,25
<i>Meals, Travel &amp; Acomodation</i>	\$ 471,92
<i>PTVI Engineering</i>	\$ 91.136,72
<i>PTVI Engineering</i>	\$ 7.331,07
<b>Total</b>	<b>\$ 4.841.174.32</b>

*Lampiran 5 Rekapitulasi Perhitungan nilai BCWS*

<b>waktu</b>	<b>Nilai Anggaran Proyek</b>	<b>Bobot (%)</b>	<b>BCWS (\$)</b>
02/06/2022 16.23	\$ 5.650.000,00	2,75%	\$ 155.375,00
02/06/2022 20.46	\$ 5.650.000,00	2,75%	\$ 155.375,00
03/06/2022 10.48	\$ 5.650.000,00	4,43%	\$ 250.295,00
03/06/2022 17.32	\$ 5.650.000,00	6,13%	\$ 346.345,00
04/06/2022 07.11	\$ 5.650.000,00	8,40%	\$ 474.600,00
04/06/2022 18.35	\$ 5.650.000,00	11,23%	\$ 634.495,00
05/06/2022 07.50	\$ 5.650.000,00	16,35%	\$ 923.775,00
05/06/2022 17.15	\$ 5.650.000,00	16,35%	\$ 923.775,00
06/06/2022 08.12	\$ 5.650.000,00	18,40%	\$1.039.600,00
06/06/2022 18.19	\$ 5.650.000,00	20,48%	\$1.157.120,00
07/06/2022 07.49	\$ 5.650.000,00	23,63%	\$1.335.095,00
07/06/2022 00.00	\$ 5.650.000,00	25,52%	\$1.441.880,00
08/06/2022 06.56	\$ 5.650.000,00	26,53%	\$1.498.945,00
08/06/2022 20.48	\$ 5.650.000,00	34,70%	\$1.960.550,00
09/06/2022 09.22	\$ 5.650.000,00	38,10%	\$2.152.650,00
09/06/2022 00.00	\$ 5.650.000,00	40,32%	\$2.278.080,00
10/06/2022 06.24	\$ 5.650.000,00	42,64%	\$2.409.160,00
10/06/2022 19.58	\$ 5.650.000,00	44,43%	\$2.510.295,00
11/06/2022 07.38	\$ 5.650.000,00	46,16%	\$2.608.040,00
11/06/2022 17.52	\$ 5.650.000,00	47,83%	\$2.702.395,00
12/06/2022 06.51	\$ 5.650.000,00	49,53%	\$2.798.445,00



<b>Waktu</b>	<b>Nilai Anggaran Proyek</b>	<b>Bobot (%)</b>	<b>BCWS (\$)</b>
12/06/2022 06.51	\$ 5.650.000,00	52,39%	\$2.960.035,00
13/06/2022 16.13	\$ 5.650.000,00	54,62%	\$3.086.030,00
13/06/2022 16.38	\$ 5.650.000,00	56,31%	\$3.181.515,00
14/06/2022 16.18	\$ 5.650.000,00	58,00%	\$3.277.000,00
14/06/2022 16.18	\$ 5.650.000,00	59,66%	\$3.370.790,00
15/06/2022 06.02	\$ 5.650.000,00	61,41%	\$3.469.665,00
15/06/2022 18.20	\$ 5.650.000,00	63,10%	\$3.565.150,00
16/06/2022 06.13	\$ 5.650.000,00	64,78%	\$3.660.070,00
16/06/2022 16.31	\$ 5.650.000,00	66,46%	\$3.754.990,00
17/06/2022 06.05	\$ 5.650.000,00	68,43%	\$3.866.295,00
17/06/2022 21.47	\$ 5.650.000,00	71,83%	\$4.058.395,00
18/06/2022 05.41	\$ 5.650.000,00	75,22%	\$4.249.930,00
18/06/2022 00.00	\$ 5.650.000,00	78,02%	\$4.407.988,75
19/06/2022 00.00	\$ 5.650.000,00	80,91%	\$4.571.612,75
19/06/2022 00.00	\$ 5.650.000,00	83,81%	\$4.735.236,75
20/06/2022 04.51	\$ 5.650.000,00	88,95%	\$5.025.675,00
20/06/2022 15.41	\$ 5.650.000,00	88,59%	\$5.005.335,00
21/06/2022 07.19	\$ 5.650.000,00	90,68%	\$5.123.420,00
21/06/2022 00.00	\$ 5.650.000,00	91,79%	\$5.186.135,00
22/06/2022 08.55	\$ 5.650.000,00	92,46%	\$5.223.990,00
22/06/2022 00.00	\$ 5.650.000,00	94,11%	\$5.317.215,00
23/06/2022 07.11	\$ 5.650.000,00	96,85%	\$5.472.025,00
23/06/2022 00.00	\$ 5.650.000,00	97,21%	\$5.492.365,00
24/06/2022 11.00	\$ 5.650.000,00	98,54%	\$5.567.510,00
24/06/2022 00.00	\$ 5.650.000,00	100,00%	\$5.650.000,00

*Lampiran 6 Rekapitulasi Perhitungan Nilai BCWP*

<b>Waktu</b>	<b>Nilai Anggaran Proyek</b>	<b>Bobot (%)</b>	<b>BCWP (\$)</b>
02/06/2022 16.23	\$ 5.650.000,00	0,55%	\$ 31.075,00
02/06/2022 20.46	\$ 5.650.000,00	0,83%	\$ 46.895,00
03/06/2022 10.48	\$ 5.650.000,00	1,96%	\$ 110.740,00
03/06/2022 17.32	\$ 5.650.000,00	2,73%	\$ 154.245,00
04/06/2022 07.11	\$ 5.650.000,00	5,13%	\$ 289.845,00
04/06/2022 18.35	\$ 5.650.000,00	7,30%	\$ 412.450,00
05/06/2022 07.50	\$ 5.650.000,00	9,37%	\$ 529.405,00
05/06/2022 17.15	\$ 5.650.000,00	11,66%	\$ 658.790,00
06/06/2022 08.12	\$ 5.650.000,00	14,73%	\$ 832.245,00
06/06/2022 18.19	\$ 5.650.000,00	15,87%	\$ 896.655,00
07/06/2022 07.49	\$ 5.650.000,00	16,89%	\$ 954.285,00
07/06/2022 00.00	\$ 5.650.000,00	17,14%	\$ 968.410,00
08/06/2022 06.56	\$ 5.650.000,00	17,38%	\$ 981.970,00

<b>Waktu</b>	<b>Nilai Anggaran Proyek</b>	<b>Bobot (%)</b>	<b>BCWP (\$)</b>
08/06/2022 20.48	\$ 5.650.000,00	18,63%	\$ 1.052.595,00
09/06/2022 09.22	\$ 5.650.000,00	20,92%	\$ 1.181.980,00
09/06/2022 00.00	\$ 5.650.000,00	21,04%	\$ 1.188.647,00
10/06/2022 06.24	\$ 5.650.000,00	23,28%	\$ 1.315.320,00
10/06/2022 19.58	\$ 5.650.000,00	24,80%	\$ 1.401.200,00
11/06/2022 07.38	\$ 5.650.000,00	28,20%	\$ 1.593.300,00
11/06/2022 17.52	\$ 5.650.000,00	30,98%	\$ 1.750.370,00
12/06/2022 06.51	\$ 5.650.000,00	33,53%	\$ 1.894.445,00
12/06/2022 06.51	\$ 5.650.000,00	36,05%	\$ 2.036.825,00
13/06/2022 16.13	\$ 5.650.000,00	38,56%	\$ 2.178.640,00
13/06/2022 16.38	\$ 5.650.000,00	40,41%	\$ 2.283.165,00
14/06/2022 16.18	\$ 5.650.000,00	42,36%	\$ 2.393.340,00
14/06/2022 16.18	\$ 5.650.000,00	43,39%	\$ 2.451.535,00
15/06/2022 06.02	\$ 5.650.000,00	45,32%	\$ 2.560.580,00
15/06/2022 18.20	\$ 5.650.000,00	47,54%	\$ 2.686.010,00
16/06/2022 06.13	\$ 5.650.000,00	48,16%	\$ 2.721.040,00
16/06/2022 16.31	\$ 5.650.000,00	49,67%	\$ 2.806.355,00
17/06/2022 06.05	\$ 5.650.000,00	52,16%	\$ 2.947.040,00
17/06/2022 21.47	\$ 5.650.000,00	53,29%	\$ 3.010.885,00
18/06/2022 05.41	\$ 5.650.000,00	53,80%	\$ 3.039.700,00
18/06/2022 00.00	\$ 5.650.000,00	54,36%	\$ 3.071.340,00
19/06/2022 00.00	\$ 5.650.000,00	55,79%	\$ 3.152.135,00
19/06/2022 00.00	\$ 5.650.000,00	57,00%	\$ 3.220.500,00
20/06/2022 04.51	\$ 5.650.000,00	59,99%	\$ 3.389.435,00
20/06/2022 15.41	\$ 5.650.000,00	60,45%	\$ 3.415.425,00
21/06/2022 07.19	\$ 5.650.000,00	60,45%	\$ 3.415.425,00
21/06/2022 00.00	\$ 5.650.000,00	61,13%	\$ 3.453.845,00
22/06/2022 08.55	\$ 5.650.000,00	61,80%	\$ 3.491.700,00
22/06/2022 00.00	\$ 5.650.000,00	62,39%	\$ 3.525.035,00
23/06/2022 07.11	\$ 5.650.000,00	62,77%	\$ 3.546.505,00
23/06/2022 00.00	\$ 5.650.000,00	64,81%	\$ 3.661.765,00
24/06/2022 11.00	\$ 5.650.000,00	66,26%	\$ 3.743.690,00
24/06/2022 00.00	\$ 5.650.000,00	69,71%	\$ 3.938.615,00

*Lampiran 7 Rekapitulasi Perhitungan Nilai ACWP*

<b>Waktu</b>	<b>Biaya Aktual Proyek</b>	<b>Bobot (%)</b>	<b>ACWP (\$)</b>
02/06/2022 16.23	\$ 4.841.174,32	0,55%	\$ 26.626,46
02/06/2022 20.46	\$ 4.841.174,32	0,83%	\$ 40.181,75
03/06/2022 10.48	\$ 4.841.174,32	1,96%	\$ 94.887,02
03/06/2022 17.32	\$ 4.841.174,32	2,73%	\$ 132.164,06
04/06/2022 07.11	\$ 4.841.174,32	5,13%	\$ 248.352,24
04/06/2022 18.35	\$ 4.841.174,32	7,30%	\$ 353.405,73
05/06/2022 07.50	\$ 4.841.174,32	9,37%	\$ 453.618,03
05/06/2022 17.15	\$ 4.841.174,32	11,66%	\$ 564.480,93
06/06/2022 08.12	\$ 4.841.174,32	14,73%	\$ 713.104,98
06/06/2022 18.19	\$ 4.841.174,32	15,87%	\$ 768.294,36
07/06/2022 07.49	\$ 4.841.174,32	16,89%	\$ 817.674,34
07/06/2022 00.00	\$ 4.841.174,32	17,14%	\$ 829.777,28
08/06/2022 06.56	\$ 4.841.174,32	17,38%	\$ 841.396,10
08/06/2022 20.48	\$ 4.841.174,32	18,63%	\$ 901.910,78
09/06/2022 09.22	\$ 4.841.174,32	20,92%	\$ 1.012.773,67
09/06/2022 00.00	\$ 4.841.174,32	21,04%	\$ 1.018.486,25
10/06/2022 06.24	\$ 4.841.174,32	23,28%	\$ 1.127.025,38
10/06/2022 19.58	\$ 4.841.174,32	24,80%	\$ 1.200.611,23
11/06/2022 07.38	\$ 4.841.174,32	28,20%	\$ 1.365.211,16
11/06/2022 17.52	\$ 4.841.174,32	30,98%	\$ 1.499.795,80
12/06/2022 06.51	\$ 4.841.174,32	33,53%	\$ 1.623.245,75
12/06/2022 06.51	\$ 4.841.174,32	36,05%	\$ 1.745.243,34
13/06/2022 16.13	\$ 4.841.174,32	38,56%	\$ 1.866.756,82
13/06/2022 16.38	\$ 4.841.174,32	40,41%	\$ 1.956.318,54
14/06/2022 16.18	\$ 4.841.174,32	42,36%	\$ 2.050.721,44
14/06/2022 16.18	\$ 4.841.174,32	43,39%	\$ 2.100.585,54
15/06/2022 06.02	\$ 4.841.174,32	45,32%	\$ 2.194.020,20
15/06/2022 18.20	\$ 4.841.174,32	47,54%	\$ 2.301.494,27
16/06/2022 06.13	\$ 4.841.174,32	48,16%	\$ 2.331.509,55
16/06/2022 16.31	\$ 4.841.174,32	49,67%	\$ 2.404.611,28
17/06/2022 06.05	\$ 4.841.174,32	52,16%	\$ 2.525.156,53
17/06/2022 21.47	\$ 4.841.174,32	53,29%	\$ 2.579.861,80
18/06/2022 05.41	\$ 4.841.174,32	53,80%	\$ 2.604.551,78
18/06/2022 00.00	\$ 4.841.174,32	54,36%	\$ 2.631.662,36
19/06/2022 00.00	\$ 4.841.174,32	55,79%	\$ 2.700.891,15
19/06/2022 00.00	\$ 4.841.174,32	57,00%	\$ 2.759.469,36
20/06/2022 04.51	\$ 4.841.174,32	59,99%	\$ 2.904.220,47
20/06/2022 15.41	\$ 4.841.174,32	60,45%	\$ 2.926.489,88
21/06/2022 07.19	\$ 4.841.174,32	60,45%	\$ 2.926.489,88
21/06/2022 00.00	\$ 4.841.174,32	61,13%	\$ 2.959.409,86

Waktu	Biaya Aktual Proyek	Bobot (%)	ACWP (\$)
22/06/2022 08.55	\$ 4.841.174,32	61,80%	\$2.991.845,73
22/06/2022 00.00	\$ 4.841.174,32	62,39%	\$3.020.408,66
23/06/2022 07.11	\$ 4.841.174,32	62,77%	\$3.038.805,12
23/06/2022 00.00	\$ 4.841.174,32	64,81%	\$3.137.565,08
24/06/2022 11.00	\$ 4.841.174,32	66,26%	\$3.207.762,10
24/06/2022 00.00	\$ 4.841.174,32	69,71%	\$3.374.782,62

*Lampiran 8 Perbandingan Nilai BCWS, BCWP, & ACWP*

Waktu	BCWS (\$)	BCWP (\$)	ACWP (\$)
02/06/2022 16.23	\$ 155.375,00	\$ 31.075,00	\$ 26.626,46
02/06/2022 20.46	\$ 155.375,00	\$ 46.895,00	\$ 40.181,75
03/06/2022 10.48	\$ 250.295,00	\$ 110.740,00	\$ 94.887,02
03/06/2022 17.32	\$ 346.345,00	\$ 154.245,00	\$ 132.164,06
04/06/2022 07.11	\$ 474.600,00	\$ 289.845,00	\$ 248.352,24
04/06/2022 18.35	\$ 634.495,00	\$ 412.450,00	\$ 353.405,73
05/06/2022 07.50	\$ 923.775,00	\$ 529.405,00	\$ 453.618,03
05/06/2022 17.15	\$ 923.775,00	\$ 658.790,00	\$ 564.480,93
06/06/2022 08.12	\$ 1.039.600,00	\$ 832.245,00	\$ 713.104,98
06/06/2022 18.19	\$ 1.157.120,00	\$ 896.655,00	\$ 768.294,36
07/06/2022 07.49	\$ 1.335.095,00	\$ 954.285,00	\$ 817.674,34
07/06/2022 00.00	\$ 1.441.880,00	\$ 968.410,00	\$ 829.777,28
08/06/2022 06.56	\$ 1.498.945,00	\$ 981.970,00	\$ 841.396,10
08/06/2022 20.48	\$ 1.960.550,00	\$1.052.595,00	\$ 901.910,78
09/06/2022 09.22	\$ 2.152.650,00	\$1.181.980,00	\$ 1.012.773,67
09/06/2022 00.00	\$ 2.278.080,00	\$1.188.647,00	\$ 1.018.486,25
10/06/2022 06.24	\$ 2.409.160,00	\$1.315.320,00	\$ 1.127.025,38
10/06/2022 19.58	\$ 2.510.295,00	\$1.401.200,00	\$ 1.200.611,23
11/06/2022 07.38	\$ 2.608.040,00	\$1.593.300,00	\$ 1.365.211,16
11/06/2022 17.52	\$ 2.702.395,00	\$1.750.370,00	\$ 1.499.795,80
12/06/2022 06.51	\$ 2.798.445,00	\$1.894.445,00	\$ 1.623.245,75
12/06/2022 06.51	\$ 2.960.035,00	\$2.036.825,00	\$ 1.745.243,34
13/06/2022 16.13	\$ 3.086.030,00	\$2.178.640,00	\$ 1.866.756,82
13/06/2022 16.38	\$ 3.181.515,00	\$2.283.165,00	\$ 1.956.318,54
14/06/2022 16.18	\$ 3.277.000,00	\$2.393.340,00	\$ 2.050.721,44
14/06/2022 16.18	\$ 3.370.790,00	\$2.451.535,00	\$ 2.100.585,54
15/06/2022 06.02	\$ 3.469.665,00	\$2.560.580,00	\$ 2.194.020,20
15/06/2022 18.20	\$ 3.565.150,00	\$2.686.010,00	\$ 2.301.494,27
16/06/2022 06.13	\$ 3.660.070,00	\$2.721.040,00	\$ 2.331.509,55
16/06/2022 16.31	\$ 3.754.990,00	\$2.806.355,00	\$ 2.404.611,28
17/06/2022 06.05	\$ 3.866.295,00	\$2.947.040,00	\$ 2.525.156,53
17/06/2022 21.47	\$ 4.058.395,00	\$3.010.885,00	\$ 2.579.861,80

18/06/2022 05.41	\$ 4.249.930,00	\$3.039.700,00	\$ 2.604.551,78
18/06/2022 00.00	\$ 4.407.988,75	\$3.071.340,00	\$ 2.631.662,36
19/06/2022 00.00	\$ 4.571.612,75	\$3.152.135,00	\$ 2.700.891,15
20/06/2022 04.51	\$ 5.025.675,00	\$3.389.435,00	\$ 2.904.220,47
20/06/2022 15.41	\$ 5.118.335,00	\$3.415.425,00	\$ 2.926.489,88
21/06/2022 07.19	\$ 5.292.920,00	\$3.415.425,00	\$ 2.926.489,88
21/06/2022 00.00	\$ 5.355.635,00	\$3.453.845,00	\$ 2.959.409,86
22/06/2022 08.55	\$ 5.449.990,00	\$3.491.700,00	\$ 2.991.845,73
22/06/2022 00.00	\$ 5.373.715,00	\$3.525.035,00	\$ 3.020.408,66
23/06/2022 07.11	\$ 5.472.025,00	\$3.546.505,00	\$ 3.038.805,12
23/06/2022 00.00	\$ 5.492.365,00	\$3.661.765,00	\$ 3.137.565,08
24/06/2022 11.00	\$ 5.567.510,00	\$3.743.690,00	\$ 3.207.762,10
24/06/2022 00.00	\$ 5.650.000,00	\$3.938.615,00	\$ 3.374.782,62

*Lampiran 9 Nilai Schedule Variance & Cost Variance*

<b>Waktu</b>	<b>CPI</b>	<b>SPI</b>
02/06/2022 16.23	1,17	0,20
02/06/2022 20.46	1,17	0,30
03/06/2022 10.48	1,17	0,44
03/06/2022 17.32	1,17	0,45
04/06/2022 07.11	1,17	0,61
04/06/2022 18.35	1,17	0,65
05/06/2022 07.50	1,17	0,57
05/06/2022 17.15	1,17	0,71
06/06/2022 08.12	1,17	0,80
06/06/2022 18.19	1,17	0,77
07/06/2022 07.49	1,17	0,71
07/06/2022 00.00	1,17	0,67
08/06/2022 06.56	1,17	0,66
08/06/2022 20.48	1,17	0,54
09/06/2022 09.22	1,17	0,55
09/06/2022 00.00	1,17	0,52
10/06/2022 06.24	1,17	0,55
10/06/2022 19.58	1,17	0,56
11/06/2022 07.38	1,17	0,61
11/06/2022 17.52	1,17	0,65
12/06/2022 06.51	1,17	0,68
12/06/2022 06.51	1,17	0,69
13/06/2022 16.13	1,17	0,71
13/06/2022 16.38	1,17	0,72
14/06/2022 16.18	1,17	0,73
14/06/2022 16.18	1,17	0,73

<b>Waktu</b>	<b>CPI</b>	<b>SPI</b>
15/06/2022 06.02	1,17	0,74
15/06/2022 18.20	1,17	0,75
16/06/2022 06.13	1,17	0,74
16/06/2022 16.31	1,17	0,75
17/06/2022 06.05	1,17	0,76
17/06/2022 21.47	1,17	0,74
18/06/2022 05.41	1,17	0,72
18/06/2022 00.00	1,17	0,70
19/06/2022 00.00	1,17	0,69
19/06/2022 00.00	1,17	0,68
20/06/2022 04.51	1,17	0,67
20/06/2022 15.41	1,17	0,67
21/06/2022 07.19	1,17	0,65
21/06/2022 00.00	1,17	0,64
22/06/2022 08.55	1,17	0,64
22/06/2022 00.00	1,17	0,66
23/06/2022 07.11	1,17	0,65
23/06/2022 00.00	1,17	0,67

*Lampiran 10 Perbandingan Nilai SPI & CPI*

<b>Waktu</b>	<b>CPI</b>	<b>SPI</b>
02/06/2022 16.23	1,17	0,20
02/06/2022 20.46	1,17	0,30
03/06/2022 10.48	1,17	0,44
03/06/2022 17.32	1,17	0,45
04/06/2022 07.11	1,17	0,61
04/06/2022 18.35	1,17	0,65
05/06/2022 07.50	1,17	0,57
05/06/2022 17.15	1,17	0,71
06/06/2022 08.12	1,17	0,80
06/06/2022 18.19	1,17	0,77
07/06/2022 07.49	1,17	0,71
07/06/2022 00.00	1,17	0,67
08/06/2022 06.56	1,17	0,66
08/06/2022 20.48	1,17	0,54
09/06/2022 09.22	1,17	0,55
09/06/2022 00.00	1,17	0,52
10/06/2022 06.24	1,17	0,55
10/06/2022 19.58	1,17	0,56
11/06/2022 07.38	1,17	0,61
11/06/2022 17.52	1,17	0,65

<b>Waktu</b>	<b>CPI</b>	<b>SPI</b>
12/06/2022 06.51	1,17	0,68
12/06/2022 06.51	1,17	0,69
13/06/2022 16.13	1,17	0,71
13/06/2022 16.38	1,17	0,72
14/06/2022 16.18	1,17	0,73
14/06/2022 16.18	1,17	0,73
15/06/2022 06.02	1,17	0,74
15/06/2022 18.20	1,17	0,75
16/06/2022 06.13	1,17	0,74
16/06/2022 16.31	1,17	0,75
17/06/2022 06.05	1,17	0,76
17/06/2022 21.47	1,17	0,74
18/06/2022 05.41	1,17	0,72
18/06/2022 00.00	1,17	0,70
19/06/2022 00.00	1,17	0,69
19/06/2022 00.00	1,17	0,68
20/06/2022 04.51	1,17	0,67
20/06/2022 15.41	1,17	0,67
21/06/2022 07.19	1,17	0,65
21/06/2022 00.00	1,17	0,64
22/06/2022 08.55	1,17	0,64
22/06/2022 00.00	1,17	0,66
23/06/2022 07.11	1,17	0,65
23/06/2022 00.00	1,17	0,67

## Lampiran 11 Surat Izin Penelitian



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI  
**FAKULTAS TEKNIK**  
**UNIVERSITAS HASANUDDIN**  
 Jalan Poros Malino KM 6. Bontomarannu (92171) Gowa, Sulawesi Selatan  
<http://ie.unhas.ac.id/> email: [info@tiunhas.net](mailto:info@tiunhas.net)

Nomor : 7629/UN4.7.1/PT.01.04/2024  
 Hal : Pengambilan Data Penelitian

Gowa, 2 April 2024

Kepada Yth : **PT. Vale Indonesia Tbk**  
 Jl. Ternate 44 Pontada, Nuha, Luwu Timur 92984 Sulawesi Selatan, Indonesia

Dengan hormat, kami sampaikan bahwa dalam rangka penyelesaian Tugas Akhir/Skripsi pada Program Teknik Industri Fakultas Teknik Universitas Hasanuddin, maka mohon kebijaksanaan Bapak/Ibu kiranya berkenan memberikan kesempatan melakukan pengambilan data penelitian bagi mahasiswa yang tersebut dibawah ini :

Nama : Rara Pasolang  
 Nim : D071201057

Judul Tugas Akhir : “**Evaluasi Penjadwalan Proyek menggunakan Metode Algoritma Greedy (Studi Kasus: Pembangunan Infrastruktur PT Vale Indonesia Tbk)**”

Atas perhatian dan kerjasama yang baik kami sampaikan terima kasih.

a.n. Dekan  
 Wakil Dekan Bidang Akademik dan Kemahasiswaan



**Dr. Amil Ahmad Ilham, ST., M.IT**  
 NIP.19731010 199802 1 001







**KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET,  
DAN TEKNOLOGI**  
**DEPARTEMEN TEKNIK INDUSTRI**  
**FAKULTAS TEKNIK UNIVERSITAS HASANUDDIN**

Jalan Poros Malino KM 6. Bontomarannu (92171) Gowa, Sulawesi Selatan  
<http://ie.unhas.ac.id/> email: [industri@unhas.ac.id](mailto:industri@unhas.ac.id)

Nomor : 7627/UN4.7.7/PT.01.04/2024  
Hal : Pengambilan Data Penelitian

Gowa, 2 April 2024

Kepada Yth : **Wakil Dekan**  
**Bidang Akademik dan Kemahasiswaan**  
**Fakultas Teknik Universitas Hasanuddin**  
di-  
**Gowa**

Dengan hormat,

Mahasiswa yang tersebut dibawah ini :

Nama : Rara Pasolang

Nim : D071201057

Judul Tugas Akhir : **“Evaluasi Penjadwalan Proyek menggunakan Metode Algoritma Greedy  
(Studi Kasus: Pembangunan Infrastruktur PT Vale Indonesia Tbk)”**

Dapat dibuatkan surat pengantar untuk pengambilan data penelitian Tugas Akhir/Skripsi pada :  
**PT. Vale Indonesia Tbk**

Tempat Penelitian : Jl. Ternate 44 Pontada, Nuha, Luwu Timur 92984 Sulawesi Selatan,  
Indonesia

Ketua Departemen Teknik Industri  
Fakultas Teknik Universitas Hasanuddin



Ir. Kifayah Amar, ST., M.Sc., Ph.D, IPU  
NIP. 19740621 200604 2 001



Lampiran 12 Dokumentasi Penelitian

