

CHAPTER 6

CONCLUSION AND SUGGESTION

6.1. Conclusion

Some conclusions from this research are as follows:

1. The method that is appropriate to solve the complex real situation in PT Budi Makmur Jayamurni, especially for the imported chemical material is using the Fixed-Period approach as proposed in this research.
2. The existing method of defining the order point and order quantity is not appropriate as it causes a very high procurement cost. By the new proposed method, the total procurement cost can be decreased in very significant value. The total cost comparison between the current policy and the new proposed policy can be seen on table 6.1, 6.2, and 6.3.

Table 6.1. Total Cost Comparison for Mine Trading

	SETUP	HOLDING	SHORTAGE	TOTAL
CURRENT	31,500,000.00	48,267,885.20	21,243,417.70	101,011,302.90
PROPOSED	28,000,000.00	30,447,543.00	22,010,775.80	80,458,318.80

Table 6.2. Total Cost Comparison for Buckman

	SETUP	HOLDING	SHORTAGE	TOTAL
CURRENT	36,000,000.00	28,318,915.90	9,673,857.94	73,992,773.84
PROPOSED	27,000,000.00	20,374,048.25	14,240,166.35	61,614,214.60

Table 6.3. Total Cost Comparison for ALPA

	SETUP	HOLDING	SHORTAGE	TOTAL
CURRENT	60,000,000.00	58,951,300.40	9,206,516.85	128,157,817.25
PROPOSED	32,000,000.00	35,691,288.70	16,764,450.20	84,455,738.90

6.2. Suggestion

It is recommended this method will be practiced to the real system. This company also needs to follow all the developing issue related to industrial in the global environment. This company still needs to train some of their employees, especially in industrial engineering subjects, such as introducing the MRP system, etc, so that this research can be easily applied. Many factors that were ignored have to be considered in the next policy application, such as setup cost, holding cost, and the consideration between local purchasing and importing.

The following research that can be conducted is by modifying this method using other lot-size defining rule. The details are also necessary to be reviewed. The other alternative for the next research is revising

this proposed policy so that the tendency of high stock level in the end of the year will not occur.



REFERENCES

Fogarty, D.W., 1991, Production Inventory and Management, 2nd edition, pp. 156-205, 228, South-Western Publishing Co., Ohio.

Silver, E.A., 1998, Inventory Management and Production Planning and Scheduling, pp.421-425, John Wiley & Sons, New York.

Sipper, D., 1998, Production Planning, Control, and Integration, pp.239, McGraw-Hill, New York.

Stekpi, May 3rd 2007, Inventory Models, http://www.stekpi.ac.id/skin/download10/bab_9MO.pdf

Tersine, R.J., 1988, Principles of Inventory and Materials Management, third edition, pp.3-6, Elsevier Science Publishing, North Holland.

UAPB, May 3rd 2007, Inventory Management, <http://www.uapb.edu/busmg/classes/purchim.htm>

Attachment 1.1. Mine Trading Source Chemicals List

NO	CODE	NAME	PRICE	LOCAL PRICE
1	101D24	F-700	30,721.31	33,255.25
2	101D27	RP 300	39,904.62	42,525.62
3	101D28	TAL-ASL	27,578.25	29,585.76
4	101D29	TAL-ASK	65,061.92	66,825.50
5	101D31	TOC EX FC 10	150,186.31	151,788.23
6	702D22	BS 757	33,472.96	34,125.22
7	702D24	F 700	32,467.06	32,951.01
8	702D25	OIL 18	31,080.00	32,000.23
9	702D26	OIL LXN 2	31,455.29	32,065.12
10	702D27	RP 300A	40,482.91	40,895.12
11	702D29	TAL SK	64,507.87	64,875.02
12	702D30	TITE OIL II	30,708.94	32,044.52
13	702D32	TYSOFT KT	43,540.45	43,975.89

Attachment 1.2. Buckman Source Chemicals List

NO	CODE	NAME	PRICE	LOCAL PRICE
1	204B61	BLACK JB	47,409.12	48,975.62
2	204B61	BROWN DA	81,833.21	83,565.33
3	204B61	BROWN DD	79,508.40	82,525.36
4	702B21	BD 9087	20,463.77	20,987.23
5	702B22	BD 9089	13,477.12	14,526.33
6	702B23	BD 9095	19,662.22	20,111.23
7	702B24	BD 9119	98,046.89	99,066.45
8	702B25	BD 9120	30,934.44	31,905.02
9	702B26	BD 9121	51,374.25	51,500.11
10	702B27	BD 9122	52,900.88	53,368.26
11	702B28	BD 9123	125,694.97	127,598.32
12	702B31	BD 9129	15,453.16	15,850.00
13	702B32	BD 9130	17,736.90	18,200.00

Attachment 1.3. ALPA Source Chemicals List

NO	CODE	NAME	PRICE	LOCAL PRICE
1	101L22	TAN 608	15,731.30	16,230.29
2	101L22	SINTAS B	25,033.82	25,581.02
3	101L22	TAN 100	17,800.00	18,300.00
4	101L22	SINTAX A	11,545.00	11,839.62
5	101L22	SINTAX 280	18,061.54	18,660.25
6	308A25	LTL HD SP	24,391.50	25,800.00
7	308A25	LTL NP	37,108.11	38,225.01
8	308A25	OIL FT 28	52,466.94	53,365.51
9	308A25	PERLACOR BRONZE	180,117.17	203,225.66
10	308A25	PERLACOR GOLD	227,316.94	230,000.00
11	308A25	PERLACOR PLATINUM	181,556.89	182,575.65
12	308A25	PERLACOR SILVER	186,434.43	210,005.33
13	308A25	PERLACOR WHITE	215,371.76	218,664.12
14	308A25	SLV BLUE	24,341.47	24,700.10
15	702L14	INGGRAS 79 D	27,617.52	28,859.98
16	702L16	INGGRAS E123	29,808.49	30,000.00
17	702L17	INGGRAS H50	23,826.11	25,085.87
18	702L18	TAN 04	17,013.75	17,750.25
19	702L19	TAN 65	18,271.74	18,725.00
20	702L21	TAN 92	17,530.88	18,593.23
21	702L24	TAN 3	20,984.27	22,525.65
22	702L26	TAN FO	25,342.72	26,525.65
23	702L27	TAN MT	34,488.93	35,100.20
24	702L28	TAN 70	17,433.60	18,350.65
25	702L32	SINTAS 6	13,862.46	14,500.00
26	702L34	SINTAX 24	30,802.94	31,215.66
27	702L36	SINTAP 60	21,644.88	22,500.36
28	702L38	SINTAX 2	80,627.10	81,759.02
29	909A21	LTL 175	29,114.35	29,785.69
30	909A33	LTL 11	33,561.79	34,050.25
31	909A44	LTL BE	36,640.63	37,589.22
32	909A46	LTL T	25,160.25	25,880.55
33	909A48	LTL F	27,656.37	28,500.00
34	909A62	ACR OCHRE	26,591.80	27,200.10
35	909A64	ACR RUBINE	45,852.48	46,650.25
36	909A81	LTL 06	31,235.86	32,010.00
37	909A82	LTL 1	42,233.84	43,532.26
38	909A84	LTL K 72	39,598.33	40,125.20
39	909A85	SINTAX 48	42,970.13	43,650.03
40	909A87	SINTAX 05 K	41,769.36	45,023.33

Shipping cost per container per setup = Rp 4,000,000.00

Order Lead Time = 2 months

Attachment 2.1. Mine Trading 2005 Purchasing Record

		date	Supplier	Chemical	kgs
current policy	january	8	MINE TRADING COMPANY	101D27	700.00
		8	MINE TRADING COMPANY	101D28	800.00
		8	MINE TRADING COMPANY	101D31	102.00
		8	MINE TRADING COMPANY	702D26	3,420.00
		8	MINE TRADING COMPANY	702D30	2,160.00
		8	MINE TRADING COMPANY	702D32	1,080.00
					8,262.00
	feb				0.00
	march	9	MINE TRADING COMPANY	101D27	500.00
		9	MINE TRADING COMPANY	101D31	68.00
		9	MINE TRADING COMPANY	702D22	1,000.00
		9	MINE TRADING COMPANY	702D24	1,800.00
		9	MINE TRADING COMPANY	702D25	1,260.00
		9	MINE TRADING COMPANY	702D26	1,900.00
		9	MINE TRADING COMPANY	702D30	900.00
		9	MINE TRADING COMPANY	702D32	360.00
					7,788.00
	april	7	MINE TRADING COMPANY	101D24	1,400.00
		7	MINE TRADING COMPANY	101D27	300.00
		7	MINE TRADING COMPANY	101D28	200.00
		7	MINE TRADING COMPANY	101D29	150.00
		7	MINE TRADING COMPANY	101D31	102.00
		7	MINE TRADING COMPANY	702D22	1,400.00
		7	MINE TRADING COMPANY	702D25	1,620.00
		7	MINE TRADING COMPANY	702D30	2,700.00
		7	MINE TRADING COMPANY	702D32	540.00
					8,412.00
	may	6	MINE TRADING COMPANY	702D24	2,200.00
		6	MINE TRADING COMPANY	702D25	1,800.00
		6	MINE TRADING COMPANY	702D26	3,230.00
		6	MINE TRADING COMPANY	702D29	600.00
		6	MINE TRADING COMPANY	702D30	900.00
		6	MINE TRADING COMPANY	702D32	900.00
					9,630.00

Attachment 2.1.continued

june	14	MINE TRADING COMPANY	702D26	2,280.00
	14	MINE TRADING COMPANY	702D27	130.00
	14	MINE TRADING COMPANY	702D29	750.00
	14	MINE TRADING COMPANY	702D30	5,400.00
	14	MINE TRADING COMPANY	702D32	1,440.00
				10,000.00

27	MINE TRADING COMPANY	702D22	600.00	
27	MINE TRADING COMPANY	702D24	1,000.00	
27	MINE TRADING COMPANY	702D25	1,440.00	
27	MINE TRADING COMPANY	702D27	500.00	
27	MINE TRADING COMPANY	702D29	300.00	
27	MINE TRADING COMPANY	702D30	5,400.00	
27	MINE TRADING COMPANY	702D32	720.00	
				9,960.00

july 0.00

august	4	MINE TRADING COMPANY	702D22	500.00
	4	MINE TRADING COMPANY	702D30	12,240.00
	4	MINE TRADING COMPANY	702D32	360.00
				13,100.00

september 0.00

october	19	MINE TRADING COMPANY	702D22	900.00
	19	MINE TRADING COMPANY	702D25	3,600.00
	19	MINE TRADING COMPANY	702D26	1,330.00
				5,830.00

november 0.00

december 0.00

Attachment 2.2. Buckman 2005 Purchasing Record

january	24	BUCKMAN	702B21	500.00
	24	BUCKMAN	702B22	220.00
	24	BUCKMAN	702B23	6,300.00
	24	BUCKMAN	702B26	1,080.00
	24	BUCKMAN	702B28	420.00
	24	BUCKMAN	702B31	4,500.00

feb	4	BUCKMAN	204B61	300.00	
	4	BUCKMAN	204B63	250.00	
	4	BUCKMAN	702B21	1,000.00	
	4	BUCKMAN	702B22	1,320.00	
	4	BUCKMAN	702B23	4,410.00	
	4	BUCKMAN	702B24	840.00	
	4	BUCKMAN	702B25	508.00	
	4	BUCKMAN	702B26	1,080.00	
	4	BUCKMAN	702B27	440.00	
	4	BUCKMAN	702B28	420.00	
	4	BUCKMAN	702B31	4,000.00	
					14,568.00

24	BUCKMAN	702B22	880.00	
24	BUCKMAN	702B23	4,410.00	
24	BUCKMAN	702B24	420.00	
24	BUCKMAN	702B25	508.00	
24	BUCKMAN	702B26	540.00	
24	BUCKMAN	702B27	220.00	
24	BUCKMAN	702B28	525.00	
24	BUCKMAN	702B31	2,000.00	
24	BUCKMAN	702B32	500.00	
				10,003.00

march 0.00

april	15	BUCKMAN	204B61	700.00
	15	BUCKMAN	204B63	250.00
	15	BUCKMAN	702B21	400.00
	15	BUCKMAN	702B22	220.00
	15	BUCKMAN	702B24	1,050.00
	15	BUCKMAN	702B25	1,116.00
	15	BUCKMAN	702B26	720.00
	15	BUCKMAN	702B27	660.00
	15	BUCKMAN	702B28	630.00
	15	BUCKMAN	702B32	600.00

Attachment 2.2. continued

may	21	BUCKMAN	204B61	1,240.00
	21	BUCKMAN	702B27	220.00
	21	BUCKMAN	702B28	210.00
	21	BUCKMAN	702B32	4,000.00
				5,670.00

june	23	BUCKMAN	204B61	4,000.00
	23	BUCKMAN	702B22	220.00
	23	BUCKMAN	702B23	3,990.00
	23	BUCKMAN	702B25	254.00
	23	BUCKMAN	702B32	1,500.00
				9,964.00

july 0.00

august	12	BUCKMAN	204B61	1,750.00
	12	BUCKMAN	702B21	800.00
	12	BUCKMAN	702B22	1,100.00
	12	BUCKMAN	702B23	2,940.00
	12	BUCKMAN	702B24	840.00
	12	BUCKMAN	702B25	762.00
	12	BUCKMAN	702B26	180.00
	12	BUCKMAN	702B27	660.00
	12	BUCKMAN	702B28	630.00
	12	BUCKMAN	702B32	5,500.00

september	24	BUCKMAN	204B61	500.00
	24	BUCKMAN	702B21	200.00
	24	BUCKMAN	702B22	500.00
	24	BUCKMAN	702B23	2,520.00
	24	BUCKMAN	702B25	726.00
	24	BUCKMAN	702B26	180.00
	24	BUCKMAN	702B27	440.00
	24	BUCKMAN	702B28	420.00
	24	BUCKMAN	702B31	2,000.00
	24	BUCKMAN	702B32	2,500.00

october 0.00

november 0.00

Attachment 2.2. continued

december	21	BUCKMAN	702B21	700.00
	21	BUCKMAN	702B22	880.00
	21	BUCKMAN	702B23	2,940.00
	21	BUCKMAN	702B24	210.00
	21	BUCKMAN	702B25	508.00
	21	BUCKMAN	702B27	440.00
	21	BUCKMAN	702B28	630.00
	21	BUCKMAN	702B31	1,500.00
	21	BUCKMAN	702B32	2,000.00
				9,808.00



Attachment 2.3. ALPA 2005 Purchasing Record

current policy	date	Supplier	kgs	
JAN	24	ALPA	101L37	150.00
	24	ALPA	308A49	150.00
	24	ALPA	308A69	100.00
	24	ALPA	308A71	25.00
	24	ALPA	308A73	25.00
	24	ALPA	308A79	25.00
	24	ALPA	702L16	200.00
	24	ALPA	702L17	1,000.00
	24	ALPA	702L18	500.00
	24	ALPA	702L24	1,225.00
	24	ALPA	702L28	2,200.00
	24	ALPA	702L36	1,000.00
	24	ALPA	909A33	500.00
	24	ALPA	909A46	500.00
	24	ALPA	909A48	50.00
	24	ALPA	909A62	25.00
	24	ALPA	909A64	25.00
	24	ALPA	909A84	125.00
	24	ALPA	909A85	55.00
				7,880.00

current policy	date	Supplier	kgs	
FEB	15	ALPA	101L37	100.00
	15	ALPA	101L43	4,700.00
	15	ALPA	101L44	4,860.00
	15	ALPA	308A49	150.00
	15	ALPA	308A73	50.00
	15	ALPA	702L14	100.00
	15	ALPA	702L16	100.00
	15	ALPA	702L17	1,500.00
	15	ALPA	702L18	375.00
	15	ALPA	702L19	375.00
	15	ALPA	702L34	500.00
	15	ALPA	702L36	500.00
	15	ALPA	909A21	300.00
	15	ALPA	909A33	1,000.00
	15	ALPA	909A46	1,000.00
	15	ALPA	909A48	100.00
	15	ALPA	909A62	25.00
				15,735.00

Attachment 2.3.continued

MAR	16	ALPA	101L43	3,900.00
	16	ALPA	101L44	4,975.00
	16	ALPA	308A49	200.00
	16	ALPA	308A69	100.00
	16	ALPA	308A73	50.00
	16	ALPA	702L17	1,500.00
	16	ALPA	702L18	375.00
	16	ALPA	702L19	500.00
	16	ALPA	702L21	500.00
	16	ALPA	702L24	500.00
	16	ALPA	702L34	300.00
	16	ALPA	909A33	500.00
	16	ALPA	909A44	100.00
	16	ALPA	909A64	25.00
	16	ALPA	909A81	125.00
	16	ALPA	909A82	55.00
				13,705.00

APR 0.00

MAY 0.00

JUN 0.00

JUL	2	ALPA	702L17	3,500.00
	2	ALPA	702L32	2,835.00
	2	ALPA	702L34	4,600.00
	2	ALPA	702L36	3,000.00
	2	ALPA	909A62	50.00
				13,985.00

28	ALPA	308A99	100.00	
28	ALPA	702L17	5,750.00	
28	ALPA	702L24	1,600.00	
28	ALPA	702L32	1,345.00	
28	ALPA	702L34	2,500.00	
28	ALPA	702L36	2,500.00	
28	ALPA	909A33	1,000.00	
28	ALPA	909A62	25.00	
28	ALPA	909A64	25.00	
				14,845.00

AUG 0.00

Attachment 2.3.continued

SEP	8	ALPA	702L17	2,500.00
	8	ALPA	702L27	7,500.00
	8	ALPA	702L34	1,000.00
	8	ALPA	702L36	500.00
				11,500.00

29	ALPA	702L17	2,500.00	
29	ALPA	702L27	2,000.00	
29	ALPA	702L32	1,345.00	
29	ALPA	702L34	2,300.00	
29	ALPA	702L36	500.00	
				8,645.00

OCT	27	ALPA	308A25	125.00
	27	ALPA	702L16	200.00
	27	ALPA	702L32	2,690.00
	27	ALPA	702L34	200.00
	27	ALPA	702L36	500.00
	27	ALPA	909A21	100.00
	27	ALPA	909A48	100.00
	27	ALPA	909A62	25.00
	27	ALPA	909A87	125.00
				4,065.00

NOV	1	ALPA	702L38	1,215.00

DEC	7	ALPA	702L26	200.00
	7	ALPA	702L34	2,200.00
	7	ALPA	702L38	1,750.00
	7	ALPA	909A21	300.00
	7	ALPA	909A33	625.00
				5,075.00

Attachment 3.1. Mine Trading Chemicals Requirement

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ON HAND	TOTAL USAGE	TOTAL REQ	PROPORTION
101D24			441.10		290.20						156.76	678.17	0	1566.23	1566.23	0.0189
101D27	506.33	622.50	302.90	294.95	19.60								1181.5	1746.28	564.78	0.0068
101D28	920.69	276.00	124.30	2.50		2102.60							0	3426.09	3426.09	0.0414
101D29	268.37	417.60	475.34	708.40	25.00						4.02	27.38	779	1926.11	1147.11	0.0139
101D31	24.70	56.90	33.60	46.10									526.5	161.30	0	
101D51									31.50	140.90	4.98	33.87	1046.66	211.25	0	
101D54									16.70	49.80	14.86	101.04	910.37	182.40	0	
101D56									7.40	24.70	15.07	102.48	633.78	149.65	0	
702D22	930.10	1069.90	1000.00	860.00	927.00	1913.00	380.00	540.00	180.00		437.00	463.00	680	8700.00	8020.00	0.0969
702D24	816.80	939.20	1250.00	1150.00	747.00	1520.00	727.00	1465.00	435.00	200.00			22	9250.00	9228.00	0.1115
702D25	1952.80	2247.44	2320.00	1800.00	1448.00	1312.00	1080.00	360.00			1320.00	950.00	1432	14790.24	13358.24	0.1614
702D26	1632.90	1926.50	2600.00	1900.00	1642.00	3110.00	2800.00	2380.00	1416.00	400.00	680.00	650.00	2629.11	21137.40	18508.29	0.2236
702D27					200.00	956.00	610.00	223.00	211.00				0	2200.00	2200.00	0.0266
702D29					280.00	575.00	525.00	180.00	90.00				779	1650.00	871.00	0.0105
702D30	1219.50	1403.84	1430.00	1480.00	1200.00	2050.00	2350.00	4585.00	2425.00	1250.00	3700.00	2908.00	6309.7	26001.34	19691.64	0.2379
702D32	442.80	509.59	560.00	490.00	350.00	1050.00	015.00	875.00	588.00		100.00	85.00	1473.1	5665.39	4192.29	0.0506
	8715	9469.5	10537	8731.95	7128.8	14588.6	9087	10608	5400.6	2065.4	6432.7	5998.9	18402.7	98763.68	82773.67	

>>80000

Attachment 3.2. Buckman Chemicals Requirement

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ON HAND	TOTAL USAGE	TOTAL REQ	PROPORTION
204B61	158.40	84.20	31.00	807.24	150.60	1262.21	1112.30	1002.80	1309.90	317.70			0	6236.35	6236.35	0.0704
204B62		2.30					3.17	14.02	12.11				92.36	31.60	0	
204B63	79.30	73.30	85.10	92.37	6.90	35.96	17.24	25.50	10.93				133.72	426.60	292.88	0.0033
204B64	33.20		20.90	16.87	0.12	0.85	0.50	1.56	13.99	6.34			36.02	94.33	58.31	0.0007
702B21	523.20	602.01	636.00	330.00	109.00			210.00	275.00	115.00			225	2800.21	2575.21	0.0291
702B22	1539.86	137.00	985.00	730.00		488.00	300.00	265.00	460.00	155.00			440	5059.86	4619.86	0.0522
702B23	2719.00	3127.70	3625.00	3290.00	2100.00	5300.00	3888.00	2850.00	2500.00	1890.00			300	31289.70	30989.70	0.3498
702B24		625.00	395.00	415.00	123.00	332.00		125.00	195.00	100.00			0	2310.00	2310.00	0.0261
702B25		1249.00	429.00	439.00		69.00	156.00	345.00	285.00	230.00			0	3202.00	3202.00	0.0361
702B26		1469.00	591.00	710.00		10.00		140.00	180.00	40.00			180	3140.00	2960.00	0.0334
702B27		1053.00	47.00	220.00	220.00	220.00		135.00	250.00	175.00	100.00		0	2420.00	2420.00	0.0273
702B28	582.70	670.30	730.00	530.00	347.00	493.00	380.00	570.00	550.00	390.00			542.15	5243.00	4700.85	0.0531
702B31	999.90		1000.00	200.10	1790.00	3930.00	3380.00		650.00	1350.00			225	13300.00	13075.00	0.1476
702B32		300.00	200.00	200.00	800.00	3350.00	2480.00	2205.00	3227.00	1635.00	1203.00		456.15	15600.00	15143.85	0.1710
	6635.56	9392.81	8775.00	7980.58	5646.62	15491.02	11717.21	7888.88	9918.93	5404.04	1303.00	0.00	2630.40	91153.65	88584.01	

>>90000

Attachment 3.3. ALPA Chemicals Requirement

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL USAGE	ON HAND	TOTAL REQ	PROPORTION
101L22	566.78						41.90	161.90	602.65	100.20	42.76	129.35	1645.54	247.45	1398.09	0.0166
101L37	7.15	41.90	291.76	134.43	21.10								496.34	188.63	307.71	0.0036
101L39		35.60	36.32	445.60	121.40	363.80	1234.50	287.10					2524.32	2462.76	61.56	0.0007
101L43	3188.78	3508.72	67.50	10.20	956.80	617.00	663.10	2324.12	456.22	17.06			11809.50	1070	10739.50	0.1272
101L44	3639.40	4159.80	428.95	47.25	1721.95	498.30	492.95	2342.81	583.45	811.84			14726.70	5218.03	9508.67	0.1127
308A25	6.25	50.78		0.47				54.75	12.75		4.06	39.94	169.00	45.25	123.75	0.0015
308A49		149.90	70.00	157.50	8.40	3.50	28.25			82.35			499.90	100	399.90	0.0047
308A67	9.90	7.19		1.19	3.45		0.73	1.20					23.66	40.03	0	
308A69				44.50	0.60	0.25	11.87	42.78	21.87	26.00			147.87	63.5	84.37	0.0010
308A71	5.70	0.30	3.90	0.50	3.12	3.03	3.95						20.50	14.66	5.84	0.0001
308A73	2.40		10.70	4.94	3.79	6.42	10.56			10.42	4.81	47.25	101.29	14.15	87.14	0.0010
308A76	2.60	23.53	5.37	0.30	7.50	3.75	5.79						48.84	24.21	24.63	0.0003
308A78				3.00	9.34	1.28	2.61			17.77	2.54	24.96	61.50	47.9	13.60	0.0002
308A79			22.42	2.58	15.45	6.31	3.24						50.00	23.6	26.40	0.0003
308A99			11.95	2.45	4.42	5.60	15.45			8.63			48.50	83.93	0	
702L14	275.3	316.66	205.00	330.00		278.00	65.00	30.00					1499.96	847.35	652.61	0.0077
702L16		245.00		255.00		210.00	40.00	50.00					865.00	97	768.00	0.0091
702L17	1078.60	1241.40	840.00	1640.00	700.00		2120.00	3145.00	3100.00	1600.00	1585.00	1247.00	18297.00	4150	14147.00	0.1676
702L18	390.90	438.70		250.00		480.00		475.00		15.00	250.00		2299.60	2625	0	
702L19	262.50	302.81		265.00	200.00	550.00	325.00						1905.31	2225.98	0	
702L21	218.60	300.34		430.00	190.00		430.00	215.00		15.00	50.00		1848.94	523.29	1325.65	0.0157
702L24	733.40	842.72	738.00	430.00			220.00	345.00	300.00	155.00			3909.12	2471.65	1437.47	0.0170
702L26	137.20	158.47		305.00	160.00	140.00							1050.67	653.7	396.97	0.0047
702L27		225.10	1175.00						1900.00	1425.00	1025.00	725.00	6475.10	3188.2	3286.90	0.0389
702L28	1316.00	1513.95		495.00		1210.00	386.00	504.00					5424.95	1105.58	4319.37	0.0512

Attachment 3.3. continued

702L32				1.10			1278.00	1300.00	1120.00	875.00	1000.00	997.00	6571.10	1780	4791.10	0.0568
702L34	606.70	699.09	454.00	1250.00	791.00	100.00	1685.00	1760.00	3000.00	1550.00	2075.00	1860.00	15830.79	0	15830.79	0.1876
702L36	582.50	726.00	680.00	760.00	557.00		430.00	1000.00	1670.00	1010.00	1390.00	850.00	9655.50	109.15	9546.35	0.1131
702L38	121.00	138.65		125.00	35.00		90.00				485.00	415.00	1409.65	2090.28	0	
909A21	184.90	2.10		135.00		180.00	80.00	40.00			100.00		722.00	94.62	627.38	0.0074
909A33	94.90	955.10		350.00		600.00	260.00	460.00	580.00	400.00		120.00	3820.00	672.83	3147.17	0.0373
909A44				90.00		180.00	20.00	45.00	10.00	25.00			370.00	543.63	0	
909A46	555.00			600.00		465.00	320.00	500.00	160.00				2600.00	1858.38	741.62	0.0088
909A48	45.80	55.58		82.00		50.00	22.00	28.00					283.38	201.37	82.01	0.0010
909A62		25.02	50.00			15.00		45.00	10.00	20.00	20.00	5.00	190.32	66.02	124.30	0.0015
909A64	5.40	8.60	10.00	10.00		16.00	8.00	18.00	19.00	20.00		5.00	120.00	68.86	51.14	0.0006
909A81	50.40	79.60		30.00			9.00	65.00	8.00	15.00	25.00		282.00	467.8	0	
909A82	8.90	14.28		20.00		16.20	15.00	35.00					109.38	20	89.38	0.0011
909A84	14.00			15.00		10.00	30.00	33.00	13.00	10.00			125.00	161.66	0	
909A85	13.60	21.40		35.00	23.00		42.00	30.00					165.00	213.88	0	
909A87		30.00	10.00	150.00	5.00	5.00					55.00	20.00	275.00	0	275.00	0.0033
	14124.56	16318.59	5110.87	8908.01	5538.32	6014.44	10389.90	15337.66	13566.94	8209.27	8114.17	6845.50	118478.23	35880.3	84405.00	

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Attachment 4.1. Mine Trading Order Estimation

	1st	2nd	3rd	4th	5th	6th	7th	8th
101D24	189.22	189.22	189.22	189.22	189.22	189.22	189.22	189.22
101D27	68.23	68.23	68.23	68.23	68.23	68.23	68.23	68.23
101D28	413.91	413.91	413.91	413.91	413.91	413.91	413.91	413.91
101D29	138.58	138.58	138.58	138.58	138.58	138.58	138.58	138.58
101D31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101D51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101D54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101D56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
702D22	968.91	968.91	968.91	968.91	968.91	968.91	968.91	968.91
702D24	1,114.85	1,114.85	1,114.85	1,114.85	1,114.85	1,114.85	1,114.85	1,114.85
702D25	1,613.83	1,613.83	1,613.83	1,613.83	1,613.83	1,613.83	1,613.83	1,613.83
702D26	2,236.01	2,236.01	2,236.01	2,236.01	2,236.01	2,236.01	2,236.01	2,236.01
702D27	265.79	265.79	265.79	265.79	265.79	265.79	265.79	265.79
702D29	105.23	105.23	105.23	105.23	105.23	105.23	105.23	105.23
702D30	2,378.97	2,378.97	2,378.97	2,378.97	2,378.97	2,378.97	2,378.97	2,378.97
702D32	506.48	506.48	506.48	506.48	506.48	506.48	506.48	506.48
total	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00

Attachment 4.2. Buckman Order Estimation

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
204B61	704.00	704.00	704.00	704.00	704.00	704.00	704.00	704.00	704.00
204B62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
204B63	33.06	33.06	33.06	33.06	33.06	33.06	33.06	33.06	33.06
204B64	6.58	6.58	6.58	6.58	6.58	6.58	6.58	6.58	6.58
702B21	290.71	290.71	290.71	290.71	290.71	290.71	290.71	290.71	290.71
702B22	521.52	521.52	521.52	521.52	521.52	521.52	521.52	521.52	521.52
702B23	3,498.34	3,498.34	3,498.34	3,498.34	3,498.34	3,498.34	3,498.34	3,498.34	3,498.34
702B24	260.77	260.77	260.77	260.77	260.77	260.77	260.77	260.77	260.77
702B25	361.46	361.46	361.46	361.46	361.46	361.46	361.46	361.46	361.46
702B26	334.15	334.15	334.15	334.15	334.15	334.15	334.15	334.15	334.15
702B27	273.19	273.19	273.19	273.19	273.19	273.19	273.19	273.19	273.19
702B28	530.67	530.67	530.67	530.67	530.67	530.67	530.67	530.67	530.67
702B31	1,476.00	1,476.00	1,476.00	1,476.00	1,476.00	1,476.00	1,476.00	1,476.00	1,476.00
702B32	1,709.55	1,709.55	1,709.55	1,709.55	1,709.55	1,709.55	1,709.55	1,709.55	1,709.55
TOTAL	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00

Attachment 4.3. ALPA Order Estimation

	1st	2nd	3rd	4th	5th	6th	7th	8th
101L22	165.64	165.64	165.64	165.64	165.64	165.64	165.64	165.64
101L37	36.46	36.46	36.46	36.46	36.46	36.46	36.46	36.46
101L39	7.29	7.29	7.29	7.29	7.29	7.29	7.29	7.29
101L43	1272.38	1272.38	1272.38	1272.38	1272.38	1272.38	1272.38	1272.38
101L44	1126.55	1126.55	1126.55	1126.55	1126.55	1126.55	1126.55	1126.55
308A25	14.66	14.66	14.66	14.66	14.66	14.66	14.66	14.66
308A49	47.38	47.38	47.38	47.38	47.38	47.38	47.38	47.38
308A67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
308A69	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
308A71	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
308A73	10.32	10.32	10.32	10.32	10.32	10.32	10.32	10.32
308A76	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92
308A78	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61
308A79	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13
308A99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
702L14	77.32	77.32	77.32	77.32	77.32	77.32	77.32	77.32
702L16	90.99	90.99	90.99	90.99	90.99	90.99	90.99	90.99
702L17	1676.09	1676.09	1676.09	1676.09	1676.09	1676.09	1676.09	1676.09
702L18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
702L19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
702L21	157.06	157.06	157.06	157.06	157.06	157.06	157.06	157.06
702L24	170.31	170.31	170.31	170.31	170.31	170.31	170.31	170.31
702L26	47.03	47.03	47.03	47.03	47.03	47.03	47.03	47.03
702L27	389.42	389.42	389.42	389.42	389.42	389.42	389.42	389.42
702L28	511.74	511.74	511.74	511.74	511.74	511.74	511.74	511.74
702L32	567.63	567.63	567.63	567.63	567.63	567.63	567.63	567.63
702L34	1875.57	1875.57	1875.57	1875.57	1875.57	1875.57	1875.57	1875.57
702L36	1131.02	1131.02	1131.02	1131.02	1131.02	1131.02	1131.02	1131.02
702L38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
909A21	74.33	74.33	74.33	74.33	74.33	74.33	74.33	74.33
909A33	372.87	372.87	372.87	372.87	372.87	372.87	372.87	372.87
909A44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
909A46	87.86	87.86	87.86	87.86	87.86	87.86	87.86	87.86
909A48	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72
909A62	14.73	14.73	14.73	14.73	14.73	14.73	14.73	14.73
909A64	6.06	6.06	6.06	6.06	6.06	6.06	6.06	6.06
909A81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
909A82	10.59	10.59	10.59	10.59	10.59	10.59	10.59	10.59
909A84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
909A85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
909A87	32.58	32.58	32.58	32.58	32.58	32.58	32.58	32.58
total	10000.00	10000.00	10000.00	10000.00	10000.00	10000.00	10000.00	10000.00

Attachment 5.1. Mine Trading Order Decision

	1st	2nd	3rd	4th	5th	6th	7th	8th
101D24	185	185	185	185	185	185	185	185
101D27	65	65	65	65	65	65	65	65
101D28	415	415	415	415	415	415	415	415
101D29	140	140	140	140	140	140	140	140
101D31	0	0	0	0	0	0	0	0
101D51	0	0	0	0	0	0	0	0
101D54	0	0	0	0	0	0	0	0
101D56	0	0	0	0	0	0	0	0
702D22	970	970	970	970	970	970	970	970
702D24	1,115	1,115	1,115	1,115	1,115	1,115	1,115	1,115
702D25	1,615	1,615	1,615	1,615	1,615	1,615	1,615	1,615
702D26	2,235	2,235	2,235	2,235	2,235	2,235	2,235	2,235
702D27	270	270	270	270	270	270	270	270
702D29	105	105	105	105	105	105	105	105
702D30	2,380	2,380	2,380	2,380	2,380	2,380	2,380	2,380
702D32	505	505	505	505	505	505	505	505
total	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00

Attachment 5.2. Buckman Order Decision

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
204B61	700	700	700	700	700	700	700	700	700
204B62	0	0	0	0	0	0	0	0	0
204B63	30	30	30	30	30	30	30	30	30
204B64	10	10	10	10	10	10	10	10	10
702B21	290	290	290	290	290	290	290	290	290
702B22	520	520	520	520	520	520	520	520	520
702B23	3,465	3,465	3,465	3,465	3,465	3,465	3,465	3,465	3,465
702B24	315	315	315	315	315	315	315	315	315
702B25	360	360	360	360	360	360	360	360	360
702B26	330	330	330	330	330	330	330	330	330
702B27	270	270	270	270	270	270	270	270	270
702B28	525	525	525	525	525	525	525	525	525
702B31	1,475	1,475	1,475	1,475	1,475	1,475	1,475	1,475	1,475
702B32	1,710	1,710	1,710	1,710	1,710	1,710	1,710	1,710	1,710
TOTAL	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

Attachment 5.3. ALPA Order Decision

	1st	2nd	3rd	4th	5th	6th	7th	8th
101L22	165	165	165	165	165	165	165	165
101L37	35	35	35	35	35	35	35	35
101L39	10	10	10	10	10	10	10	10
101L43	1,270	1,270	1,270	1,270	1,270	1,270	1,270	1,270
101L44	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130
308A25	15	15	15	15	15	15	15	15
308A49	45	45	45	45	45	45	45	45
308A67	0	0	0	0	0	0	0	0
308A69	10	10	10	10	10	10	10	10
308A71	5	5	5	5	5	5	5	5
308A73	10	10	10	10	10	10	10	10
308A76	5	5	5	5	5	5	5	5
308A78	5	5	5	5	5	5	5	5
308A79	5	5	5	5	5	5	5	5
308A99	0	0	0	0	0	0	0	0
702L14	75	75	75	75	75	75	75	75
702L16	95	95	95	95	95	95	95	95
702L17	1,675	1,675	1,675	1,675	1,675	1,675	1,675	1,675
702L18	0	0	0	0	0	0	0	0
702L19	0	0	0	0	0	0	0	0
702L21	150	150	150	150	150	150	150	150
702L24	170	170	170	170	170	170	170	170
702L26	45	45	45	45	45	45	45	45
702L27	385	385	385	385	385	385	385	385
702L28	510	510	510	510	510	510	510	510
702L32	570	570	570	570	570	570	570	570
702L34	1,875	1,875	1,875	1,875	1,875	1,875	1,875	1,875
702L36	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130
702L38	0	0	0	0	0	0	0	0
909A21	70	70	70	70	70	70	70	70
909A33	375	375	375	375	375	375	375	375
909A44	0	0	0	0	0	0	0	0
909A46	90	90	90	90	90	90	90	90
909A48	10	10	10	10	10	10	10	10
909A62	15	15	15	15	15	15	15	15
909A64	5	5	5	5	5	5	5	5
909A81	0	0	0	0	0	0	0	0
909A82	10	10	10	10	10	10	10	10
909A84	0	0	0	0	0	0	0	0
909A85	0	0	0	0	0	0	0	0
909A87	35	35	35	35	35	35	35	35
total	10,000							

Attachment 6.1. Mine Trading Holding and Shortage
Cost Comparison

	current policy			proposed policy		
	holding	shortage	total	holding	shortage	total
101D24	1,524,221.77	1,127,607.75	2651829.52	447751.82	443441.25	891193.07
101D27	2,434,020.73	0.00	2434020.73	633061.47	1100820.00	1733881.47
101D28	291,187.78	4,878,249.30	5169437.08	1001978.10	3553292.70	4555270.82
101D29	456,813.72	1,763,580.00	2220393.72	1759245.80	1437317.70	3196563.46
101D31	5,694,712.10	0.00	5694712.10	3584158.50	0.00	3584158.49
702D22	1,085,052.47	2,361,181.20	3446233.67	1568137.10	1650217.80	3218354.94
702D24	1,389,403.59	2,047,108.50	3436512.09	1717110.30	2097923.25	3815033.58
702D25	2,024,007.09	4,573,543.10	6597550.19	3276645.38	4297474.10	7574119.48
702D26	3,539,027.84	3,844,978.15	7384005.99	3103627.00	3198558.35	6302185.37
702D27	279,976.87	647,169.70	927146.57	1177394.83	414271.05	1591665.88
702D29	3,507,603.76	0.00	3507603.76	1904925.90	124831.00	2029756.89
702D30	21,359,109.69	0.00	21359109.69	8530790.20	3085189.80	11615979.96
702D32	4,682,747.79	0.00	4682747.79	1742716.60	607438.80	2350155.40

Attachment 6.2. Buckman Holding and Shortage
Cost Comparison

	current policy			proposed policy		
	holding	shortage	total	holding	shortage	total
204B61	5,476,291.92	791,082.50	6267374.42	2285586.21	2114775.00	4401361.21
204B63	1,101,718.81	0.00	1101718.81	199491.13	199193.80	398684.93
204B64	98,673.71	150,848.00	249521.71	128992.50	0.00	128992.50
702B21	389,870.06	41,876.80	431746.86	604199.91	565336.80	1169536.71
702B22	613,664.75	969,470.04	1583134.79	402354.06	1463647.95	1866002.01
702B23	3,544,040.58	2,923,055.10	6467095.68	2781228.90	3300223.50	6081452.40
702B24	4,816,647.14	214,107.60	5030754.74	3064848.29	749376.60	3814224.89
702B25	1,484,804.13	645,435.70	2130239.83	834352.76	1009403.20	1843755.96
702B26	2,686,193.12	0.00	2686193.12	2057232.04	201376.00	2258608.04
702B27	1,319,219.69	205,647.20	1524866.89	1047908.29	327166.00	1375074.29
702B28	1,800,494.69	2,797,924.50	4598419.19	2704733.42	1998517.50	4703250.92
702B31	3,233,654.83	228,183.00	3461837.83	1617037.96	1468308.00	3085345.96
702B32	1,753,642.47	706,227.50	2459869.97	2645082.78	842842.00	3487924.78

Attachment 6.3. ALPA Holding and Shortage
Cost Comparison

	Current policy			proposed policy		
	holding	shortage	total	holding	shortage	total
101L22	768,332.65	698,586.00	1,466,918.65	268,911.10	172,151.55	441,062.65
101L37	107,232.91	32,832.00	140,064.91	153,807.86	131,328.00	285,135.86
101L39	1,242,171.14	242,935.55	1,485,106.69	1,257,453.67	56,062.05	1,313,515.72
101L43	1,350,160.02	624,594.40	1,974,754.42	1,573,567.56	1,650,710.60	3,232,278.16
101L44	3,454,089.60	0	3,454,089.60	1,236,273.15	2,050,581.75	3,286,854.90
308A25	93,847.37	112,680.00	206,527.37	47,510.52	28,170.00	75,680.52
308A49	445,357.64	0	445,557.64	148,882.55	223,380.00	372,262.55
308A69	553,463.69	0	553,463.69	121,582.36	22,464.25	144,046.61
308A71	257,957.81	0	257,957.81	180,057.13	0	180,057.13
308A73	1,274,894.93	0	1,274,894.93	252,380.39	53,661.20	306,041.59
308A76	94,974.18	25,469.00	120,443.18	118,054.21	10,187.60	128,241.81
308A78	457,754.94	0	457,754.94	555,166.93	0	555,166.93
308A79	202,417.34	16,461.80	218,879.14	157,166.39	32,923.60	190,089.99
308A99	84,897.29	0	84,897.29	23,806.05	3,586.30	27,392.35
702L14	331,744.08	689,565.30	1,021,309.38	338,201.03	496,984.00	835,185.03
702L16	251,257.98	77,561.55	328,819.53	18,652.02	63,198.30	250,150.32
702L17	7,379,045.33	0	7,379,045.33	3,067,919.47	3,426,547.20	6,494,466.67
702L18	2,357,661.78	0	2,357,661.78	1,223,057.32	0	1,223,057.32
702L19	1,825,159.14	0	1,825,159.14	1,016,634.65	0	1,016,634.65
702L21	268,599.62	833,944.75	1,102,544.37	206,466.71	658,657.00	865,123.71
702L24	2,562,845.16	0	2,562,845.16	535,529.12	508,655.40	1,044,184.52
702L26	236,144.22	319,391.10	555,535.32	272,620.99	136,036.95	408,657.94
702L27	8,131,137.73	0	8,131,137.73	4,826,848.87	363,705.65	5,190,554.52
702L28	691,452.51	1,944,146.00	2,635,598.51	712,682.24	2,090,874.00	2,803,556.24
702L32	2,351,482.76	0	2,351,482.76	1,585,333.49	513,219.70	2,098,553.19
702L34	2,940,013.68	1,281,495.60	4,221,509.28	2,674,639.65	1,108,153.20	3,782,792.85
702L36	2,191,628.54	1,454,316.00	3,645,944.54	1,053,576.18	1,492,812.60	2,546,388.78
702L38	9,498,201.42	0	9,498,201.42	7,914,317.55	0	7,914,317.55
909A21	206,909.66	161,121.60	368,031.26	106,831.24	177,905.10	284,736.34
909A33	1,630,825.50	14,653.80	1,645,479.30	623,352.26	459,152.40	1,082,504.66
909A44	933,681.60	0	933,681.60	755,974.55	0	755,974.55
909A46	2,410,142.78	0	2,410,142.78	977,100.64	212,488.50	1,189,589.14
909A48	258,747.93	0	258,747.93	93,724.52	37,963.35	131,687.87
909A62	85,048.91	0	85,048.91	36,840.73	9,124.50	45,965.23
909A64	178,167.45	0	178,167.45	86,269.91	15,955.40	102,225.31
909A81	736,076.74	0	736,076.74	546,709.34	0	546,709.34
909A82	40,851.15	25,968.40	66,819.55	33,744.51	45,444.70	79,189.21
909A84	51,958.39	0	51,958.39	237,020.29	0	237,020.29
909A85	423,705.89	0	423,705.89	288,994.54	0	288,994.54
909A87	123,858.92	650,794.00	774,652.92	195,326.99	504,365.35	699,692.34

Attachment 7.1. Mine Trading Setup Cost Comparison

	current policy		proposed policy	
	quantity (kgs)	Cost (Rp)	quantity (kgs)	cost (Rp)
1	8,262	3,500,000	10,000	3,500,000
2	0	0	10,000	3,500,000
3	7,788	3,500,000	10,000	3,500,000
4	8,412	3,500,000	10,000	3,500,000
5	9,630	3,500,000	10,000	3,500,000
6	10,000	3,500,000	10,000	3,500,000
7	9,960	3,500,000	10,000	3,500,000
8	0	0	10,000	3,500,000
9	13,100	7,000,000	0	0
10	0	0	0	0
11	5,830	3,500,000	0	0
12	0	0	0	0
TOTAL		31,500,000		28,000,000

Attachment 7.2. Buckman Setup Cost Comparison

	current policy		proposed policy	
	quantity (kgs)	Cost (Rp)	quantity (kgs)	cost (Rp)
1	13,020	6,000,000	10,000	3,000,000
2	14,568	6,000,000	10,000	3,000,000
3	10,003	3,000,000	10,000	3,000,000
4	0	0	10,000	3,000,000
5	6,346	3,000,000	10,000	3,000,000
6	5,670	3,000,000	10,000	3,000,000
7	9,964	3,000,000	10,000	3,000,000
8	0	0	10,000	3,000,000
9	15,162	6,000,000	10,000	3,000,000
10	9,986	3,000,000	0	0
11	0	0	0	0
12	0	0	0	0
13	9,808	3,000,000	0	0
TOTAL		36,000,000		27,000,000

Attachment 7.3. ALPA Setup Cost Comparison

	current policy		proposed policy	
	quantity (kgs)	Cost (Rp)	quantity (kgs)	cost (Rp)
1	7,880	4,000,000	10,000	4,000,000
2	15,735	8,000,000	10,000	4,000,000
3	13,705	8,000,000	10,000	4,000,000
4	0	0	10,000	4,000,000
5	0	0	10,000	4,000,000
6	0	0	10,000	4,000,000
7	13,985	8,000,000	10,000	4,000,000
8	14,845	8,000,000	10,000	4,000,000
9	0	0	0	0
10	11,500	8,000,000	0	0
11	8,645	4,000,000	0	0
12	4,065	4,000,000	0	0
13	1,215	4,000,000	0	0
14	5,075	4,000,000	0	0
TOTAL		60,000,000		32,000,000

Attachment 8.1. Mine Trading Total Cost Comparison

	SETUP	HOLDING	SHORTAGE	TOTAL
CURRENT	31,500,000.00	48,267,885.20	21,243,417.70	101,011,302.90
PROPOSED	28,000,000.00	30,447,543.00	22,010,775.80	80,458,318.80

Attachment 8.2. Buckman Total Cost Comparison

	SETUP	HOLDING	SHORTAGE	TOTAL
CURRENT	36,000,000.00	28,318,915.90	9,673,857.94	73,992,773.84
PROPOSED	27,000,000.00	20,374,048.25	14,240,166.35	61,614,214.60

Attachment 8.3. ALPA Total Cost Comparison

	SETUP	HOLDING	SHORTAGE	TOTAL
CURRENT	60,000,000.00	58,951,300.40	9,206,516.85	128,157,817.25
PROPOSED	32,000,000.00	35,691,288.70	16,764,450.20	84,455,738.90