APPENDIX 15: Usage, consumption and storage of process chemicals

Existing Boiler Plant Chemical usage

Chemical description	Kg/Day	Kg/wk	4 wk usage (kg)	Site storage		Location		Drawing Ref: DRW 50-BR-113
EWS S22 - Phosphate	5	35	140	1500	litres	Roll Grinding Room	Bunded Tank	A
EWS S10 - Sulphite	15	105	420	1500	litres	Roll Grinding Room	Bunded Tank	A
EWS S88 - Amine	6	42	168	2000	litres	Roll Grinding Room	Bunded Tank	A
EWS SH32 - Caustic	12	84	336	2000	litres	Roll Grinding Room	Bunded Tank	A
EWS S456N - Polymer	5	35	140	1000	litres	Boiler Plant	Bunded Tank	B

Future Boiler Plant Chemical usage

Chemical description	Kg/Day	Kg/wk	4 wk usage (kg)	Site storage		Location		Drawing Ref: DRW 50-BR-113
EWS S22 - Phosphate	6	42	168	1500	litres	Roll Grinding Room	Bunded Tank	A
EWS S10 - Sulphite	15	105	420	1500	litres	Roll Grinding Room	Bunded Tank	A
EWS S88 - Amine	10	70	280	2000	litres	Roll Grinding Room	Bunded Tank	A
EWS SH32 - Caustic	20	140	560	2000	litres	Roll Grinding Room	Bunded Tank	A
EWS S456N - Polymer	6	42	168	1000	litres	Boiler Plant	Bunded Tank	B

APPENDIX 15: Usage, consumption and storage of process chemicals

Existing Chemical usage directly on Jupiter Machine

Paper Production (to/d)	150
Paper Production (to/a)	55.000

Chemical description	*Kg/Tonne*	*Kg/Day*	*Kg/wk*	*4 wk usage (kg)*
Sodium Hypochlorite 15%	27,75	4163	29138	116550
Odourless Kerosene	0,82	123	861	3444
Retention Aid	1,25	188	1313	5250
Adhesion Crepetech DT	4,54	681	4767	19068
Biocide Busperse 2454	0,93	140	977	3906
Flocculant Bufloc 5563	0,41	62	431	1722
Coagulant Bufloc 5290	0,11	17	116	462
Antifoam Bubreak 4243	0,23	35	242	966
Modifier Palmod	0,21	32	221	882
Stickies Bufloc 59Lo	0,27	41	284	1134
Stickies Bufloc 5031	0,48	72	504	2016
Cold Pick Up	0,022	3	23	92,4
Bulab 9715	0,15	23	158	630
Nutromex	0,25	38	263	1050
P.A.C (WFP)	0,62	93	651	2604
Screw Press - Axfloc 2160	0,102	15	107	428,4
Corrosion - Bulab 9044	0,47	71	494	1974
Anionic Screw Press AF135	0,39	59	410	1638

APPENDIX 15: Usage, consumption and storage of process chemicals

Anticipated Chemical usage for Neptune P/M

Paper Production (to/d)	212
Paper Production (to/a)	75.000

Chemical description	Kg/Tonne	Kg/Day	Kg/wk	4 wk usage (kg)	Annual usage (to)	Storage Type	Storage Volume	Unit	Comments	Storage Location	Existing Mill Drw Ref : 50-BR-113	Neptune Basement Drw Ref: 51303	Future Mill Drw Ref: 51300
Sodium Hypochlorite 15%	27,75	5876	41135	164541	1974,5	Bult Tank	35000	Litres	Bulk storage for all areas of site	External to Dept B	H*	-	M
Odourless Kerosene	0,82	174	1216	4862	58,3	IBC	1000	Litres	This is additional to the existing Qty 3 off IBC stored in Jonathan Basement	Jonathan Basement	E & C	L	-
Retention Aid	1,25	265	1853	7412	88,9	IBC	4000	Litres	Additional to existing 4 IBC's for Jupiter	Neptune Basement	I & C	L	-
Adhesion Crepetech DT	2,91	615	4307	17228	206,7	IBC	0		No additional storage on site. Existing storage @ 24 IBC Max	Already stored in Jonathan Basement	D&C	L	-
Biocide Busperse 2454	0,93	197	1379	5514	66,2	IBC	3000	Litres	Additional to existing 4 IBC's for Jupiter	Qty 1 @ Dept B, Qty 2 Neptune Basement & 1ibc at filtration plant	D& F	L	-
Flocculant Bufloc 5563	0,41	87	608	2431	29,2	IBC	2000	Litres	Additional to existing 4 IBC's for Jupiter	Neptune Basement	D	L	-
Coagulant Bufloc 5290	0,11	23	163	652	7,8	Bags	25kg x 40	kg	Additional to existing 40 bags @ 25kg (1000kg)	Neptune Basement	D	L	-
Antifoam Bubreak 4243	0,23	49	341	1364	16,4	IBC	2000	litres	Additional to existing 2 IBC's for Jupiter	Neptune Basement	D	L	-
Modifier Palmod	0,13	28	199	797	9,6	IBC	2000	litres	Additional to existing 2 IBC's for Jupiter	Neptune Basement	D	L	-
Stickies Bufloc 59Lo	0,27	57	400	1601	19,2	IBC	2000	litres	Additional to existing 2 IBC's for Jupiter	Qty 1 @ Dept B, Qty 1 Neptune Basement	H* & C	L	-
Stickies Bufloc 5031	0,48	102	712	2846	34,2	IBC	2000	litres	Additional to existing 2 IBC's for Jupiter	Qty 1 @ Dept B, Qty 1 Neptune Basement	I&C	L	-
Core Pick Up	0,02	5	33	130	1,6	IBC	1000	Litres	Additional to existing 2 IBC's for Jupiter	Qty 1 @ Dept B, Qty 1 Neptune Basement	K&C	L	-
Bulab 9715	0,15	32	222	889			0		Steel Yankee. Chemical not required.		E	?	-

APPENDIX 15: Usage, consumption and storage of process chemicals

Chemical description	Kg/Tonne	Kg/Day	Kg/wk	4 wk usage (kg)	Annual usage (to)	Storage Type	Storage Volume	Unit	Comments	Storage Location	Existing Mill Drw Ref : 50-BR-113	Neptune Basement Drw Ref: 51303	Future Mill Drw Ref: 51300
Nutromex	0,25	53	371	1482		Bulk Tank			Effluent plant Chemical. This will not be increased	External and adjacent to sewerage plant	G	-	-
P.A.C (WFP)	0,62	131	919	3676					Water filtration plant chemical, no increase, current storage @ 4 x IBCs (4m³)	Jonathan Basement & Jupiter Basement	F & C	-	-
Screw Press - Axfloc 2160	0,10	22	151	605					Sludge press Polymer. Storage will not increase	Jonathan basement & sludge press building	J**	-	N
Corrosion - Bulab 9044	0,00	0	0	0					Turbo Blower not Liquid ring so chemical not required	Jupiter Basement	E	?	-
Anionic Screw Press AF135	0,39	83	578	2312					Sludge press Polymer. Storage will not increase	Jonathan basement & sludge press building	J**	-	N

Notes:

** This location will become redundant when new storage is commissioned at Dept B

**This location will become redundant when new sludge press building is completed

APPENDIX 15: Usage, consumption and storage of process chemicals

Wet Strength Chemicals	***Kg/Tonne***	**Storage Type**	**Storage Volume**	**Unit**	**Comments**	**Storage Location**	**Existing Mill Drwg Ref: 50-BR-113**	**Neptune Drwg Ref: 51303**	**Neptune Drwg Ref: 51300**
Kymene LHP20	33,133	Bulk Tank		Litres	Bulk storage for all areas of site	Already stored Jupiter Basement	E	-	-
Hercobond 2515	14,056	Bulk Tank		Litres	Bulk storage for all areas of site	Already stored Jupiter Basement (Starch area)	D	-	-