

SALT PLANT MAJOR SHUTDOWN 2021														
Botswana Ash (Pty) Ltd 														
ID		Task Mode	Asset code	Task Name	Resource Names	Duration	Start	Finish	Predecessors	2020	2021	2022	2023	2024
142				Inspect sealing rubber and replace worn ones	K Machenge,T Phiri	4 hrs	Mon 02/08/21 12:30	Mon 02/08/21 16:30	141					
143				Repair strips that hold down the skirting	K Raphiri,S Monna	1 hr	Mon 02/08/21 16:30	Mon 02/08/21 17:30	142					
144				Inspect gates and repair those worn/corroded	Bm(Salt),K Machenge,T Phiri	5 hrs	Mon 02/08/21 17:30	Tue 03/08/21 10:30	143					
145				Inspect winch	O Manere,A Omphile	8 hrs	Tue 03/08/21 10:30	Wed 04/08/21 07:00	144					
146				Grease	O Manere,A Omphile	8 hrs	Wed 04/08/21 07:00	Wed 04/08/21 15:30	145					
147				Clear permit	K Machenge,T Phiri	0.25 hrs	Wed 04/08/21 15:30	Wed 04/08/21 15:45	146					
148				ST2 - Screen		21 hrs	Mon 02/08/21 06:30	Tue 03/08/21 16:30						
149				Dip 10 loads of cultrate on ST2 channel		6 hrs	Mon 02/08/21 06:30	Mon 02/08/21 13:00						
150				Establish a ramp for the excavator to stand		2 hrs	Mon 02/08/21 13:00	Mon 02/08/21 15:00	149					
151				Position the excavator next to ST2 pump		3 hrs	Mon 02/08/21 15:00	Mon 02/08/21 18:00	150					
152				Remove the screen using a bucket of the excavator		1 hr	Mon 02/08/21 18:00	Tue 03/08/21 07:00	151					
153				Inspect the screen / repair if necessary		5 hrs	Tue 03/08/21 07:00	Tue 03/08/21 12:00	152					
154				Install the screen after inspection using the excavator		4 hrs	Tue 03/08/21 12:30	Tue 03/08/21 16:30	153					
155			Area 26A	SALT WASHING		169.75 hrs?	Mon 02/08/21 06:30	Mon 16/08/21 15:45						
156				Maintenance		169.75 hrs?	Mon 02/08/21 06:30	Mon 16/08/21 15:45						
157			26A2FB01	# 1 WASH TANK - Open Up ,check rubberlining,agitator & baffle plates		61.5 hrs	Mon 02/08/21 06:30	Sat 07/08/21 10:30						
158				Drain tank (prior)	Operations	3 hrs	Mon 02/08/21 06:30	Mon 02/08/21 09:30						
159				Issue vessel entry permit	Operations	0.25 hrs	Mon 02/08/21 09:30	Mon 02/08/21 09:45	158					
160				Perform Gas Test (Every 8 Hours)	Operations	0.25 hrs	Mon 02/08/21 09:45	Mon 02/08/21 10:00	159					
161				Accept permit	Lab	0.25 hrs	Mon 02/08/21 10:00	Mon 02/08/21 10:15	160					
162				Risk assessment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
163				Open manhole	O Thokweng,O Dintwe	0.5 hrs	Mon 02/08/21 10:15	Mon 02/08/21 10:45	161					
164				Remove product build up	Operations	4 hrs	Mon 02/08/21 10:45	Mon 02/08/21 14:45	163					
165				Erect scaffold (movable)	O Manere,A Omphile	2 hrs	Mon 02/08/21 14:45	Mon 02/08/21 16:45	164					
166				Remove paddles & drop shaft for removal	30Tcr,O Thokweng,O Dintwe,O Manere,A Omphile	4 hrs	Mon 02/08/21 16:45	Tue 03/08/21 08:45	165					
167				Disconnect Motor & remove geared unit	K Opelo,C Mmabe	1.5 hrs	Tue 03/08/21 08:45	Tue 03/08/21 10:15	166					
168				Inspect rubber lining & repair	30Tcr,Contractor,O Thokweng,O Dintwe,O Manere,A Omphile	12 hrs	Tue 03/08/21 10:15	Wed 04/08/21 10:45	167					
169				Tighten all bolts for the supporting beams	O Thokweng,O Dintwe	4 hrs	Wed 04/08/21 10:45	Wed 04/08/21 15:15	168					
170				Remove grating and replace	K Raphiri,S Monna	6 hrs	Wed 04/08/21 15:15	Thu 05/08/21 09:15	169					
171				Service geared-motor & install it	O Thokweng,O Dintwe	2 hrs	Thu 05/08/21 09:15	Thu 05/08/21 11:15	170					
172				Drain, flush & change gearbox oil	30Tcr,O Thokweng,O Dintwe,O Manere,A Omphile	1.5 hrs	Thu 05/08/21 11:15	Thu 05/08/21 13:15	171					
173				Inspect tank wall, identify defect areas and repair	30Tcr,O Thokweng,O Dintwe,O Manere,A Omphile	12 hrs	Thu 05/08/21 13:15	Fri 06/08/21 13:45	172					
174				Inspect isolation valves	O Thokweng,O Dintwe	4 hrs	Fri 06/08/21 13:45	Fri 06/08/21 17:45	173					
175				Connect Motor	O Thokweng,O Dintwe,O Manere,A Omphile,K Opelo,C Mmabe	0.5 hrs	Fri 06/08/21 17:45	Fri 06/08/21 18:15	174					
176				Remove scaffold	O Manere,A Omphile	2 hrs	Fri 06/08/21 18:15	Sat 07/08/21 08:15	175					
177				Box Up manhole cover and drain v/v	O Thokweng,O Dintwe	2 hrs	Sat 07/08/21 08:15	Sat 07/08/21 10:15	176					
178				House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
179				Clear Permit	O Thokweng,O Dintwe	0.25 hrs	Sat 07/08/21 10:15	Sat 07/08/21 10:30	177					
180			26A2FB01	# 2 WASH TANK - Open Up ,check rubberlining,agitator & baffle plates		63.75 hrs	Mon 02/08/21 06:30	Sat 07/08/21 13:15						
181				Drain tank (prior) and make new manhole covers and tank flange	K Raphiri,S Monna	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30						
182				Issue vessel entry permit	Operations	3 hrs	Mon 02/08/21 06:30	Mon 02/08/21 09:30	181					
183				Perform Gas Test (Every 8 Hours)	Operations	0.25 hrs	Mon 02/08/21 09:30	Mon 02/08/21 09:45	182					
184				Accept permit	Operations	0.25 hrs	Mon 02/08/21 09:45	Mon 02/08/21 10:00	183					
185				Risk assessment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
186				Open manhole	Lab</									

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ID	Task Mode	Asset code	Task Name	Resource Names	Duration	Start	Finish	Predecessors	2020	2021	2022	2023	2024
236			Check spigots & vortex finders and replace if necessary	30Tcr,O Thokweng,O Dintwe	4 hrs	Mon 02/08/21 13:30	Mon 02/08/21 17:30	235					
237			Replace gaskets & box up cyclones	O Thokweng,O Dintwe,O Manere,A Omphile	2 hrs	Mon 02/08/21 17:30	Tue 03/08/21 07:30	236					
238			House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
239			Clear permit	O Thokweng,O Dintwe	0.25 hrs	Tue 03/08/21 07:30	Tue 03/08/21 07:45	237					
240		26A2FF03	# A TERTIARY CYCLONE - Open, check spigots & vortex finders		12.75 hrs	Mon 02/08/21 06:30	Tue 03/08/21 07:45						
241			Erect scaffold (prior)	SA Scaffold	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30						
242			Fabricate spigot prior	K Raphiri,S Monna	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30	241					
243			Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45	242					
244			Accept permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	243					
245			Risk assessment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
246			Open all cyclone	O Thokweng,O Dintwe,O Manere,A Omphile	6 hrs	Mon 02/08/21 07:00	Mon 02/08/21 13:30	244					
247			Check spigots & vortex finders and replace if necessary	30Tcr,O Thokweng,O Dintwe	4 hrs	Mon 02/08/21 13:30	Mon 02/08/21 17:30	246					
248			Replace gaskets & box up cyclones	O Thokweng,O Dintwe,O Manere,A Omphile	2 hrs	Mon 02/08/21 17:30	Tue 03/08/21 07:30	247					
249			House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
250			Clear permit	O Thokweng,O Dintwe	0.25 hrs	Tue 03/08/21 07:30	Tue 03/08/21 07:45	248					
251		26A2EA02	BRINE HEATER - Carry out inspection		58.75 hrs	Mon 02/08/21 06:30	Sat 07/08/21 07:45						
252			Make up pipe (prior)	K Raphiri,S Monna	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30						
253			Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45	252					
254			Accept permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	253					
255			Risk assessment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
256			Remove manual valves (verify)	O Thokweng,O Dintwe,K Raphiri,S Monna,O M	2 hrs	Mon 02/08/21 07:00	Mon 02/08/21 09:00	254					
257			Remove & replace worn out steam outlet pipe	O Thokweng,O Dintwe,K Raphiri,S Monna,O M	12 hrs	Mon 02/08/21 09:00	Tue 03/08/21 09:30	256					
258			Loosen all tie rods nuts	O Thokweng,O Dintwe	4 hrs	Tue 03/08/21 09:30	Tue 03/08/21 14:00	257					
259			Push back follower plate	O Thokweng,O Dintwe	1 hr	Tue 03/08/21 14:00	Tue 03/08/21 15:00	258					
260			Replace damaged plates & gasket	O Thokweng,O Dintwe,K Raphiri,S Monna,O M	8 hrs	Tue 03/08/21 15:00	Wed 04/08/21 11:00	259					
261			Assemble the pack	Civils,K Raphiri,S Monna	8 hrs	Wed 04/08/21 11:00	Thu 05/08/21 07:30	260					
262			Push back follower plate and box up	O Thokweng,O Dintwe	1 hr	Thu 05/08/21 07:30	Thu 05/08/21 08:30	261					
263			replace manual isolation valves	O Thokweng,O Dintwe,O Manere,A Omphile	8 hrs	Thu 05/08/21 08:30	Thu 05/08/21 17:00	262					
264			replace manual valves(bypass)	O Thokweng,O Dintwe,K Raphiri,S Monna,O M	8 hrs	Thu 05/08/21 17:00	Fri 06/08/21 13:30	263					
265			Check pressure gauge	O Thokweng,O Dintwe,O Manere,A Omphile	2 hrs	Fri 06/08/21 13:30	Fri 06/08/21 15:30	264					
266			Check conductivity meters	Inst(Salt)	2 hrs	Fri 06/08/21 15:30	Fri 06/08/21 17:30	265					
267			Box up	Inst(Salt)	2 hrs	Fri 06/08/21 17:30	Sat 07/08/21 07:30	266					
268			House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
269			Clear permit	O Thokweng,O Dintwe	0.25 hrs	Sat 07/08/21 07:30	Sat 07/08/21 07:45	267					
270		26A2EA02	BRINE HEATER SAFETY RELIEF VALVE - STATUTORY INSPECTION		4.75 hrs	Mon 02/08/21 06:30	Mon 02/08/21 11:15						
271			Make out permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
272			Accept permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	271					
273			Risk assessment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
274			Remove relief valves 2 off and transport to workshop	O Thokweng,O Dintwe	0.5 hrs	Mon 02/08/21 07:00	Mon 02/08/21 07:30	272					
275			Repair and set valves pressure 400kpa	ELI	3 hrs	Mon 02/08/21 07:30	Mon 02/08/21 10:30	274					
276			Confirm quality checks	Engineer	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
277			Install vaves	O Thokweng,O Dintwe	0.5 hrs	Mon 02/08/21 10:30	Mon 02/08/21 11:00	275					
278			House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
279			Clear permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 11:00	Mon 02/08/21 11:15	277					
280		26A2RP01	BUCKET ELEVATOR - Carry out overhaul		27 hrs	Mon 02/08/21 06:30	Wed 04/08/21 10:30						
281			Wash out boot (prior)	Operations	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30						
282			Wash out head pulley (prior)	Operations	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30	281					
Project: Salt plant shutdown 20 Date: Wed 19/05/21 10:48			Task Split Milestone Summary Project Summary Inactive Task Inactive Milestone Inactive Summary Manual Task Duration-only Manual Summary Rollup Manual Summary Start-only Finish-only External Tasks External Milestone Deadline Critical Critical Split Progress Manual Progress										

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ID		Task Mode	Asset code	Task Name	Resource Names	Duration	Start	Finish	Predecessors	2020	2021	2022	2023	2024
283				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45	282					
284				Accept permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	283					
285				Carry out risk assesment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 07:00	Mon 02/08/21 07:15	284					
286				Open the boot and covers	O Thokweng,O Dintwe,O Manere,A Omphile	2 hrs	Mon 02/08/21 07:15	Mon 02/08/21 09:15	285					
287				Inspect carrier belt, buckets & replace where necessary	O Thokweng,O Dintwe	12 hrs	Mon 02/08/21 09:15	Tue 03/08/21 09:45	286					
288				Inspect & replace tail end bearings if necessary	O Thokweng,O Dintwe	2 hrs	Tue 03/08/21 09:45	Tue 03/08/21 11:45	287					
289				Inspect & replace drive end bearings	O Thokweng,O Dintwe	4 hrs	Tue 03/08/21 11:45	Tue 03/08/21 16:15	288					
290				Replace discharge chute (prior)	O Thokweng,O Dintwe,O Manere,A Omphile	6 hrs	Mon 02/08/21 06:30	Mon 02/08/21 13:00						
291				Close the covers and boot	O Thokweng,O Dintwe	4 hrs	Tue 03/08/21 16:15	Wed 04/08/21 08:15	289					
292				Drain,flush & top up gearbox oil	O Thokweng,O Dintwe	2 hrs	Wed 04/08/21 08:15	Wed 04/08/21 10:15	291					
293				House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
294				Clear permit	O Thokweng,O Dintwe	0.25 hrs	Wed 04/08/21 10:15	Wed 04/08/21 10:30	292					
295			26A2GD02	COARSE SALT CENTRIFUGE - overhaul		99.25 hrs	Mon 02/08/21 06:30	Tue 10/08/21 14:15						
296				clean the machine prior	Operations	12 hrs	Mon 02/08/21 06:30	Mon 02/08/21 18:30						
297				fabricate the designed structure and accesories (prior)	K Raphiri,S Monna	0 hrs	Mon 02/08/21 18:30	Mon 02/08/21 18:30	296					
298				Make out permit	Operations	0.25 hrs	Mon 02/08/21 18:30	Mon 02/08/21 18:45	297					
299				Accept permit	O Thokweng,O Dintwe	0.25 hrs	Tue 03/08/21 06:30	Tue 03/08/21 06:45	298					
300				Carry out risk assesment	O Thokweng,O Dintwe	0.25 hrs	Tue 03/08/21 06:45	Tue 03/08/21 07:00	299					
301				remove inlet,discharge chutes ,guards and mounting bolts	O Thokweng,O Dintwe,O Manere,A Omphile	4 hrs	Tue 03/08/21 07:00	Tue 03/08/21 11:00	300,320					
302				Disconnect main drive & hydraulic pump motors	K Opelo,C Mmabe	0.5 hrs	Tue 03/08/21 11:00	Tue 03/08/21 11:30	301					
303				Remove centrifuge & transport to workshop	7Tcr,O Thokweng,O Dintwe,O Manere,A Omphile	6 hrs	Tue 03/08/21 11:30	Tue 03/08/21 18:00	302					
304				overhaul the CSC, assess damage to parts and replace.	O Thokweng,O Dintwe,K Raphiri,S Monna,O M	60 hrs	Tue 03/08/21 18:00	Mon 09/08/21 08:30	303					
305				transport unit to the the plant	O Thokweng,O Dintwe,O Manere,A Omphile	2 hrs	Mon 09/08/21 08:30	Mon 09/08/21 10:30	304					
306				rig in position the unit,level and secure with mouting bolts	O Thokweng,O Dintwe,K Raphiri,S Monna,O M	6 hrs	Mon 09/08/21 10:30	Mon 09/08/21 17:00	305					
307				rig in the inlet and outlet chutes/hoppers and secure	O Thokweng,O Dintwe,K Raphiri,S Monna,O M	2 hrs	Mon 09/08/21 17:00	Tue 10/08/21 07:00	306					
308				Mount supporting beams	Civils,O Manere,A Omphile	24 hrs	Mon 02/08/21 06:30	Wed 04/08/21 07:30						
309				install the guards	O Thokweng,O Dintwe,O Manere,A Omphile	1 hr	Tue 10/08/21 07:00	Tue 10/08/21 08:00	307					
310				Top up oil in the tank	O Thokweng,O Dintwe	1 hr	Tue 10/08/21 08:00	Tue 10/08/21 09:00	309					
311				Carry out electrical connections on oil pump and main drive motors	K Opelo,C Mmabe	2 hrs	Tue 10/08/21 09:00	Tue 10/08/21 11:00	310					
312				install the instruments pressure guages	Inst(Salt)	2 hrs	Tue 10/08/21 11:00	Tue 10/08/21 13:30	311					
313				Box up	O Thokweng,O Dintwe	0.5 hrs	Tue 10/08/21 13:30	Tue 10/08/21 14:00	312					
314				House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
315				clear permit	Operations,O Thokweng,O Dintwe	0.25 hrs	Tue 10/08/21 14:00	Tue 10/08/21 14:15	313					
316				cold commission	Inst(Salt),Operations,O Thokweng,O Dintwe,K	0 hrs	Tue 10/08/21 14:15	Tue 10/08/21 14:15	315					
317			26A2GD01	FINE SALT CENTRIFUGE - Carry out yearly Inspection		76.75 hrs	Mon 02/08/21 06:30	Sun 08/08/21 14:45						
318				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
319				Accept permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	318					
320				Carry out risk assesment	O Thokweng,O Dintwe	0.25 hrs	Tue 03/08/21 06:45	Tue 03/08/21 07:00	299					
321				Remove inlet chute,front cover collecting channel & scrapers	O Thokweng,O Dintwe,O Manere,A Omphile	6 hrs	Mon 02/08/21 07:00	Mon 02/08/21 13:30	319					
322				Strip drum assembly on site (stakeholders)	O Thokweng,O Dintwe,O Manere,A Omphile	20 hrs	Mon 02/08/21 13:30	Wed 04/08/21 10:00	321					
323				Replace oil pump coupling & vee belts	O Thokweng,O Dintwe	4 hrs	Wed 04/08/21 10:00	Wed 04/08/21 14:30	322					
324				Replace sieve and pusher segments	O Thokweng,O Dintwe	8 hrs	Wed 04/08/21 14:30	Thu 05/08/21 10:30	323					
325				Install the drum assembly	O Thokweng,O Dintwe,O Manere,A Omphile	16 hrs	Thu 05/08/21 10:30	Fri 06/08/21 15:30	324					
326				Set Pusher Plate Gaps to 1mm	O Thokweng,O Dintwe	4 hrs	Fri 06/08/21 15:30	Sat 07/08/21 07:30	325					
327				Replace scraper wings and set even clearance	O Thokweng,O Dintwe	4 hrs	Sat 07/08/21 07:30	Sat 07/08/21 11:30	326					
328				Install Inlet chute	O Thokweng,O Dintwe,O Manere,A Omphile	4 hrs	Sat 07/08/21 11:30	Sat 07/08/21 16:00	327					
329				Check pressure gauge and calibrate	Inst(Salt)	2 hrs	Sat 07/08/21 16:00	Sat 07/08/21 18:00	328					
Project: Salt plant shutdown 20 Date: Wed 19/05/21 10:48				Task Split Milestone Summary Project Summary Inactive Task Inactive Milestone Inactive Summary Manual Task Duration-only Manual Summary Rollup Manual Summary Start-only Finish-only External Tasks External Milestone Deadline Critical Critical Split Progress Manual Progress										

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Botswana Ash (Pty) Ltd 														
ID		Task Mode	Asset code	Task Name	Resource Names	Duration	Start	Finish	Predecessors	2020	2021	2022	2023	2024
330				Change drum oil with new hydraulic oil	30Tcr,O Thokweng,O Dintwe,O Manere,A Omphile	4 hrs	Sat 07/08/21 18:00	Sun 08/08/21 10:00	329					30Tcr,O Thokweng,O Dintwe,O Manere,A Omphile
331				Check cable glands & connections	K Opelo,C Mmabe	1 hr	Sun 08/08/21 10:00	Sun 08/08/21 11:00	330					K Opelo,C Mmabe
332				Open and inspect oil cooler	O Thokweng,O Dintwe	2 hrs	Sun 08/08/21 11:00	Sun 08/08/21 13:30	331					O Thokweng,O Dintwe
333				Check vibration monitoring instrument for functionality	Inst(Salt),K Opelo,C Mmabe	1 hr	Sun 08/08/21 13:30	Sun 08/08/21 14:30	332					Inst(Salt),K Opelo,C Mmabe
334				House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						O Thokweng,O Dintwe
335				Clear permit	O Thokweng,O Dintwe	0.25 hrs	Sun 08/08/21 14:30	Sun 08/08/21 14:45	333					O Thokweng,O Dintwe
336			26A2GA02	PRIMARY CYCLONE PUMP -Replace pump base		68.25 hrs	Mon 02/08/21 06:30	Sat 07/08/21 17:45						
337				Fabricate base (prior)	K Raphiri,S Monna	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30						02/08
338				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45	337					Operations
339				Accept permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	338					O Thokweng,O Dintwe
340				Risk assessment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						O Thokweng,O Dintwe
341				Disconnect motor	K Opelo,C Mmabe	0.5 hrs	Mon 02/08/21 07:00	Mon 02/08/21 07:30	339					K Opelo,C Mmabe
342				Remove guards , v-belts and pulleys	O Thokweng,O Dintwe	2 hrs	Mon 02/08/21 07:30	Mon 02/08/21 09:30	341					O Thokweng,O Dintwe
343				Remove motor	O Thokweng,O Dintwe	2 hrs	Mon 02/08/21 09:30	Mon 02/08/21 11:30	342					O Thokweng,O Dintwe
344				Remove pipes (suction & discharge)	O Thokweng,O Dintwe	6 hrs	Mon 02/08/21 11:30	Mon 02/08/21 18:00	343					O Thokweng,O Dintwe
345				Remove pump	O Thokweng,O Dintwe,O Manere,A Omphile	8 hrs	Mon 02/08/21 18:00	Tue 03/08/21 14:30	344					O Thokweng,O Dintwe
346				Remove and replace pump base	Civils	36 hrs	Tue 03/08/21 14:30	Fri 06/08/21 16:00	345					Civils
347				Inspect pump ie barrel,volute liner and impeller,replace glands	O Thokweng,O Dintwe,O Manere,A Omphile	6 hrs	Fri 06/08/21 16:00	Sat 07/08/21 10:00	346					O Thokweng,O Dintwe
348				install pump and motor	O Thokweng,O Dintwe	4 hrs	Sat 07/08/21 10:00	Sat 07/08/21 14:30	347					O Thokweng,O Dintwe
349				Replace pulleys ,v-belts, align pulleys & guards	O Thokweng,O Dintwe	1.5 hrs	Sat 07/08/21 14:30	Sat 07/08/21 16:00	348					O Thokweng,O Dintwe
350				Connect motor	K Opelo,C Mmabe	0.5 hrs	Sat 07/08/21 16:00	Sat 07/08/21 16:30	349					K Opelo,C Mmabe
351				Commission	K Opelo,C Mmabe	1 hr	Sat 07/08/21 16:30	Sat 07/08/21 17:30	350					K Opelo,C Mmabe
352				House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						O Thokweng,O Dintwe
353				Clear permit	O Thokweng,O Dintwe	0.25 hrs	Sat 07/08/21 17:30	Sat 07/08/21 17:45	351					O Thokweng,O Dintwe
354			26A2FF01	PRIMARY CYCLONE - Open, check spigots & vortex finders		18.75 hrs	Mon 02/08/21 06:30	Tue 03/08/21 14:15						
355				Erect scaffold (prior)	SA Scaffold	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30						02/08
356				Fabricate spigot prior(Inform Raphiri)	K Raphiri,S Monna	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30	355					02/08
357				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45	356					Operations
358				Accept permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	357					O Thokweng,O Dintwe
359				Risk assessment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						O Thokweng,O Dintwe
360				Open all cyclones	O Thokweng,O Dintwe,O Manere,A Omphile	6 hrs	Mon 02/08/21 07:00	Mon 02/08/21 13:30	358					O Thokweng,O Dintwe
361				Check spigots & vortex finders and replace if necessary	30Tcr,O Thokweng,O Dintwe	4 hrs	Mon 02/08/21 13:30	Mon 02/08/21 17:30	360					30Tcr,O Thokweng,O Dintwe
362				Replace gaskets & box up cyclones	O Thokweng,O Dintwe,O Manere,A Omphile	8 hrs	Mon 02/08/21 17:30	Tue 03/08/21 14:00	361					O Thokweng,O Dintwe
363				House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						O Thokweng,O Dintwe
364				Clear permit	O Thokweng,O Dintwe	0.25 hrs	Tue 03/08/21 14:00	Tue 03/08/21 14:15	362					O Thokweng,O Dintwe
365			26A2RN01A	ROAD HOPPERS - Inspect & repair stainless steel lining		58.75 hrs	Mon 02/08/21 06:30	Sat 07/08/21 07:45						
366				Empty & clean the hoppers (prior)	Operations	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30						02/08
367				Clean hopper grid (jack hammer)	Operations	24 hrs	Mon 02/08/21 06:30	Tue 03/08/21 06:30	366					Operations
368				Clean with water before removing grill	Operations	24 hrs	Tue 03/08/21 06:30	Wed 04/08/21 06:30	367					Operations
369				Make out Vessel Entry permit	O Thokweng,O Dintwe	0.25 hrs	Wed 04/08/21 06:30	Wed 04/08/21 06:45	368					O Thokweng,O Dintwe
370				Accept permit	O Thokweng,O Dintwe	0.25 hrs	Wed 04/08/21 06:45	Wed 04/08/21 07:00	369					O Thokweng,O Dintwe
371				Risk assessment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						O Thokweng,O Dintwe
372				Remove road hopper grill	30Tcr,O Thokweng,O Dintwe,K Raphiri,S Monna	3 hrs	Wed 04/08/21 07:00	Wed 04/08/21 10:00	370					30Tcr,O Thokweng,O Dintwe
373				Erect scaffold	O Manere,A Omphile	6 hrs	Wed 04/08/21 10:00	Wed 04/08/21 16:30	372					O Manere,A Omphile
374				Repair defected areas (satainless steel lining)	SA Scaffold	20 hrs	Wed 04/08/21 16:30	Fri 06/08/21 13:30	373					SA Scaffold
375				Remove scaffold	30Tcr,O Manere,A Omphile	3 hrs	Fri 06/08/21 13:30	Fri 06/08/21 16:30	374					30Tcr,O Manere,A Omphile
376				Replace road hopper grill	O Thokweng,O Dintwe	3 hrs	Fri 06/08/21 16:30	Sat 07/08/21 07:30	375					O Thokweng,O Dintwe
Project: Salt plant shutdown 20 Date: Wed 19/05/21 10:48				Task Split Milestone Summary Project Summary Inactive Task Inactive Milestone Inactive Summary Manual Task Duration-only Manual Summary Rollup Manual Summary Start-only Finish-only External Tasks External Milestone Deadline Critical Critical Split Progress Manual Progress										

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SALT PLANT MAJOR SHUTDOWN 2021														
Botswana Ash (Pty) Ltd														
ID		Task Mode	Asset code	Task Name	Resource Names	Duration	Start	Finish	Predecessors	2020	2021	2022	2023	2024
471				Replace siezed rollers and idlers	O Thokweng,O Dintwe	4 hrs	Thu 05/08/21 16:00	Fri 06/08/21 08:00	470					
472				Inspect gearbox and drain and flush its oil	O Thokweng,O Dintwe	2 hrs	Fri 06/08/21 08:00	Fri 06/08/21 10:00	471					
473				Inspect boggie sheave wheel bearings (12 off)	O Thokweng,O Dintwe,O Manere,A Omphile	8 hrs	Fri 06/08/21 10:00	Fri 06/08/21 18:30	472					
474				Lift boom	30Tcr,O Manere,A Omphile	0.5 hrs	Sat 07/08/21 06:30	Sat 07/08/21 07:00	473					
475				House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
476				Clear permit	O Thokweng,O Dintwe	0.25 hrs	Sat 07/08/21 07:00	Sat 07/08/21 07:15	474					
477				SINGLE BOOM STACKER - Replace rail		8 hrs?	Mon 02/08/21 06:30	Mon 02/08/21 15:00						
478				Make out permit	Operations	8 hrs?	Mon 02/08/21 06:30	Mon 02/08/21 14:30						
479				Accept permit	O Thokweng,O Dintwe	8 hrs?	Mon 02/08/21 06:30	Mon 02/08/21 15:00						
480			26A2GA05	TERTIARY CYCLONE PUMP -Replace pump base		68.25 hrs	Mon 02/08/21 06:30	Sat 07/08/21 17:45						
481				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
482				Accept permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	481					
483				Risk assessment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
484				Disconnect motor	K Opelo,C Mmabe	0.5 hrs	Mon 02/08/21 07:00	Mon 02/08/21 07:30	482					
485				Remove guards , v-belts and pulleys	O Thokweng,O Dintwe	2 hrs	Mon 02/08/21 07:30	Mon 02/08/21 09:30	484					
486				Remove motor	O Thokweng,O Dintwe	2 hrs	Mon 02/08/21 09:30	Mon 02/08/21 11:30	485					
487				Remove pipes (suction & discharge)	O Thokweng,O Dintwe	6 hrs	Mon 02/08/21 11:30	Mon 02/08/21 18:00	486					
488				Remove pump	O Thokweng,O Dintwe,O Manere,A Omphile	8 hrs	Mon 02/08/21 18:00	Tue 03/08/21 14:30	487					
489				Remove and replace pump base	O Manere,A Omphile,K Opelo,C Mmabe	36 hrs	Tue 03/08/21 14:30	Fri 06/08/21 16:00	488					
490				Inspect pump ie barrel,volute liner and impeller,replace glands	O Thokweng,O Dintwe,O Manere,A Omphile	6 hrs	Fri 06/08/21 16:00	Sat 07/08/21 10:00	489					
491				install pump and motor	O Thokweng,O Dintwe	4 hrs	Sat 07/08/21 10:00	Sat 07/08/21 14:30	490					
492				Replace pulleys ,v-belts, align pulleys & guards	O Thokweng,O Dintwe	1.5 hrs	Sat 07/08/21 14:30	Sat 07/08/21 16:00	491					
493				Connect motor	K Opelo,C Mmabe	0.5 hrs	Sat 07/08/21 16:00	Sat 07/08/21 16:30	492					
494				Commission	K Opelo,C Mmabe	1 hr	Sat 07/08/21 16:30	Sat 07/08/21 17:30	493					
495				House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
496				Clear permit	O Thokweng,O Dintwe	0.25 hrs	Sat 07/08/21 17:30	Sat 07/08/21 17:45	494					
497			26A2RH01	VIBRATOR FEEDER-Replace vibrator		10.5 hrs	Mon 02/08/21 06:30	Mon 02/08/21 17:30						
498				make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
499				accept permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	498					
500				Carry out risk assesment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 07:00	Mon 02/08/21 07:15	499					
501				disconnect both motors	O Thokweng,O Dintwe,K Opelo,C Mmabe	0.5 hrs	Mon 02/08/21 07:15	Mon 02/08/21 07:45	500					
502				rig out vibrator to the ground	O Thokweng,O Dintwe,O Manere,A Omphile	2 hrs	Mon 02/08/21 07:45	Mon 02/08/21 09:45	501					
503				Rig in new vibrator	O Thokweng,O Dintwe	4 hrs	Mon 02/08/21 09:45	Mon 02/08/21 14:15	502					
504				replace springs	O Thokweng,O Dintwe	2 hrs	Mon 02/08/21 14:15	Mon 02/08/21 16:15	503					
505				connect motors	O Thokweng,O Dintwe,K Opelo,C Mmabe	1 hr	Mon 02/08/21 16:15	Mon 02/08/21 17:15	504					
506				House keeping	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
507				clear permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 17:15	Mon 02/08/21 17:30	505					
508			26A2RE03	WASH FEED CONVEYOR - Replace conveyor		56.25 hrs	Mon 02/08/21 06:30	Fri 06/08/21 17:15						
509				Wash	Operations	24 hrs	Mon 02/08/21 06:30	Tue 03/08/21 06:30						
510				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
511				Accept permit	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	510					
512				Risk assessment	O Thokweng,O Dintwe	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
513				Lift counterweights	30Tcr,O Thokweng,O Dintwe,O Manere,A Omphile	1 hr	Mon 02/08/21 07:00	Mon 02/08/21 08:00	511					
514				Grease pulley bearings & replace if necessary	O Thokweng,O Dintwe,K Raphiri,S Monna,O Mphahlele	12 hrs	Mon 02/08/21 08:00	Tue 03/08/21 08:30	513					
515				Remove and replace conveyor then splice	Contractor,O Thokweng,O Dintwe,O Manere,A Omphile	12 hrs	Tue 03/08/21 08:30	Wed 04/08/21 09:00	514					
516				Split the gearbox and replace the gearbox seals.	O Thokweng,O Dintwe,O Manere,A Omphile	8 hrs	Wed 04/08/21 09:00	Wed 04/08/21 17:30	515					
517				Refill gearbox oil, inspect sheave wheel bearings	O Thokweng,O Dintwe	6 hrs	Wed 04/08/21 17:30	Thu 05/08/21 11:30	516					
Project: Salt plant shutdown 20 Date: Wed 19/05/21 10:48				Task Split Milestone Summary Project Summary Inactive Task Inactive Milestone Inactive Summary Manual Task Duration-only Manual Summary Rollup Manual Summary Start-only Finish-only External Tasks External Milestone Deadline Critical Critical Split Progress Manual Progress										

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SALT PLANT MAJOR SHUTDOWN 2021														
Botswana Ash (Pty) Ltd 														
ID		Task Mode	Asset code	Task Name	Resource Names	Duration	Start	Finish	Predecessors	2020	2021	2022	2023	2024
612				Remove traverse & main drive	7Tcr,O Manere,A Omphile,O Gabana,M Basisi	3 hrs	Mon 02/08/21 10:30	Mon 02/08/21 14:00	611					
613				Uncouple and remove discharge screw	7Tcr,O Manere,A Omphile,O Gabana,M Basisi	1.5 hrs	Mon 02/08/21 14:00	Mon 02/08/21 15:30	612					
614				Remove top & bottom crown bearings	7Tcr,O Manere,A Omphile,O Gabana,M Basisi	4 hrs	Mon 02/08/21 15:30	Tue 03/08/21 07:30	613					
615				Remove screw barrel, strip, fit new bearings, grease and assemble it	O Manere,A Omphile,O Gabana,M Basisi	8 hrs	Tue 03/08/21 07:30	Tue 03/08/21 16:00	614					
616				Inspect sprockets,drive chain and replace if necessary	O Gabana,M Basisi	3 hrs	Tue 03/08/21 16:00	Wed 04/08/21 07:00	615					
617				Strip top crown bearing, clean balls and assemble it	O Gabana,M Basisi	12 hrs	Wed 04/08/21 07:00	Thu 05/08/21 07:30	616					
618				Strip bottom crown bearing, clean balls and assemble it	O Gabana,M Basisi	12 hrs	Thu 05/08/21 07:30	Fri 06/08/21 08:00	617					
619				Install bottom bearing assembly & ensure lube points are ok	O Gabana,M Basisi	3 hrs	Fri 06/08/21 08:00	Fri 06/08/21 11:00	618					
620				Install top bearing assembly & ensure lube points are ok	O Gabana,M Basisi	3 hrs	Fri 06/08/21 11:00	Fri 06/08/21 14:30	619					
621				Connect auto lubes to top, bottom and main screw bearings	O Gabana,M Basisi	1 hr	Fri 06/08/21 14:30	Fri 06/08/21 15:30	620					
622				Drain, flush & replace gearbox oil	O Gabana,M Basisi	1 hr	Fri 06/08/21 15:30	Fri 06/08/21 16:30	621					
623				Inspect and grease main ring gears	O Gabana,M Basisi	1 hr	Fri 06/08/21 16:30	Fri 06/08/21 17:30	622					
624				Install barrel housing and couple to screw	O Manere,A Omphile,O Gabana,M Basisi	4 hrs	Fri 06/08/21 17:30	Sat 07/08/21 09:30	623					
625				Install and couple main screw drive + traverse	O Gabana,M Basisi	2.5 hrs	Sat 07/08/21 09:30	Sat 07/08/21 12:00	624					
626				Install the dome and fasten using impact	7Tcr,O Manere,A Omphile,O Gabana,M Basisi	4 hrs	Sat 07/08/21 12:30	Sat 07/08/21 16:30	625					
627				Connect up drive	K Opelo,C Mmabe	1 hr	Sat 07/08/21 16:30	Sat 07/08/21 17:30	626					
628				Remove timbers, free the crane	O Gabana,M Basisi	1 hr	Sat 07/08/21 17:30	Sat 07/08/21 18:30	627					
629				Housekeeping	O Gabana,M Basisi	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
630				Clear permit	O Gabana,M Basisi	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
631			26B2RE02	DRIER FEED CONVEYOR -Remove and replace worn out components		70.25 hrs	Mon 02/08/21 06:30	Sun 08/08/21 07:45						
632				Erect scaffold prior by the counterweight	O Manere,A Omphile	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30						
633				Clean the belt, idlers, rollers and structure with water	Operations	12 hrs	Mon 02/08/21 06:30	Mon 02/08/21 18:30	632					
634				Make out Permit To Work and Lockout	Operations	0.25 hrs	Mon 02/08/21 18:30	Mon 02/08/21 18:45	633					
635				Accept Permit To Work and Do a Risk Assessment	O Gabana,M Basisi	0.25 hrs	Tue 03/08/21 06:30	Tue 03/08/21 06:45	634					
636				Lift counterweight and secure with a 3/4 - 1 ton hoists	O Gabana,M Basisi	0.5 hrs	Tue 03/08/21 06:45	Tue 03/08/21 07:15	635					
637				Disconnect motor or drop connected motor to the floor	O Gabana,M Basisi,K Opelo,C Mmabe	0.5 hrs	Tue 03/08/21 07:15	Tue 03/08/21 07:45	636					
638				Remove 3 Take up pulleys and 2 Head pulleys	O Gabana,M Basisi	12 hrs	Tue 03/08/21 07:45	Wed 04/08/21 08:15	637					
639				Re-lag all the 5 pulleys and allow for curing (contractor) (with ceramic tile)	O Gabana,M Basisi	24 hrs	Wed 04/08/21 08:15	Fri 06/08/21 09:15	638					
640				Re-lag 2 head pulleys without ceramic tile	O Gabana,M Basisi	12 hrs	Mon 02/08/21 06:30	Tue 03/08/21 07:00						
641				Remove guards and inspect and adjust scrapers	O Gabana,M Basisi	1 hr	Fri 06/08/21 09:15	Fri 06/08/21 10:15	639					
642				Inspect, free and replace siezed idlers and rollers	O Gabana,M Basisi	2 hrs	Fri 06/08/21 10:15	Fri 06/08/21 12:45	641					
643				Inspect pulley bearings and replace if need be	O Gabana,M Basisi	3 hrs	Fri 06/08/21 12:45	Fri 06/08/21 15:45	642					
644				Drain and refill gearbox oil, install Split bearing	O Gabana,M Basisi	1 hr	Fri 06/08/21 15:45	Fri 06/08/21 16:45	643					
645				Fit bearings on pulleys and install all 5 pulleys	O Gabana,M Basisi	12 hrs	Fri 06/08/21 16:45	Sat 07/08/21 17:15	644					
646				Replace skirting with new and do frame repairs	O Gabana,M Basisi	1.5 hrs	Sat 07/08/21 17:15	Sun 08/08/21 06:45	645					
647				Drop the couterweight	O Gabana,M Basisi	0.5 hrs	Sun 08/08/21 06:45	Sun 08/08/21 07:15	646					
648				Do housekeeping and separate waste	O Gabana,M Basisi	0.25 hrs	Sun 08/08/21 07:15	Sun 08/08/21 07:30	647					
649				Clear Permit	O Gabana,M Basisi	0.25 hrs	Sun 08/08/21 07:30	Sun 08/08/21 07:45	648					
650			26B2RH01	VIBRATOR DISTRIBUTORS - Carry out complete overhaul		14.25 hrs	Mon 02/08/21 06:30	Tue 03/08/21 09:15						
651				Carry out cleaning	Operations	4 hrs	Mon 02/08/21 06:30	Mon 02/08/21 10:30						
652				Make out permit	Operations	0.25 hrs	Mon 02/08/21 10:30	Mon 02/08/21 10:45	651					
653				Accept permit	O Gabana,M Basisi	0.25 hrs	Mon 02/08/21 10:45	Mon 02/08/21 11:00	652					
654				risk assesment	O Gabana,M Basisi	0.25 hrs	Mon 02/08/21 07:00	Mon 02/08/21 07:15	1020					

SALT PLANT MAJOR SHUTDOWN 2021														
Botswana Ash (Pty) Ltd														
ID		Task Mode	Asset code	Task Name	Resource Names	Duration	Start	Finish	Predecessors	2020	2021	2022	2023	2024
753				Housekeeping	O Gabana,M Basisi	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
754				Clear permit	O Gabana,M Basisi	0.25 hrs	Mon 09/08/21 09:30	Mon 09/08/21 09:45	752					
755			26B2RH06	MILLED SALT VIBRATOR TUBE FEEDER - Carry out Inspectin and Replace		17.75 hrs	Mon 02/08/21 06:30	Tue 03/08/21 13:15						
756				Erect scaffold	O Manere,A Omphile	0 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:30						
757				Clean out feeder	Operations	12 hrs	Mon 02/08/21 06:30	Mon 02/08/21 18:30	756					
758				Make out permit	Operations	0.25 hrs	Mon 02/08/21 18:30	Mon 02/08/21 18:45	757					
759				Accept permit	O Gabana,M Basisi	0.5 hrs	Tue 03/08/21 06:30	Tue 03/08/21 07:00	758					
760				Risk assessment	O Gabana,M Basisi	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
761				Remove rubber socks	O Gabana,M Basisi	1 hr	Tue 03/08/21 07:00	Tue 03/08/21 08:00	759					
762				Inspect weights & setting	O Gabana,M Basisi	2 hrs	Tue 03/08/21 08:00	Tue 03/08/21 10:00	761					
763				Replace Springs 4 off	K Raphiri,S Monna,O Manere,A Omphile,O Gal	1 hr	Tue 03/08/21 10:00	Tue 03/08/21 11:00	762					
764				Remove cover for Ops to clear build up	Operations,O Gabana,M Basisi	2 hrs	Tue 03/08/21 11:00	Tue 03/08/21 13:00	763					
765				Housekeeping	O Gabana,M Basisi	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
766				Clear permit	O Gabana,M Basisi	0.25 hrs	Tue 03/08/21 13:00	Tue 03/08/21 13:15	764					
767			26B2RP02	MILLED SALT ELEVATOR - Inspection		20.25 hrs	Mon 02/08/21 06:30	Tue 03/08/21 15:45						
768				Wash out boot (prior)	Operations	12 hrs	Mon 02/08/21 06:30	Mon 02/08/21 18:30						
769				Erect Scaffold	SA Scaffold	0 hrs	Mon 02/08/21 18:30	Mon 02/08/21 18:30	768					
770				Make out permit	Operations	0.25 hrs	Mon 02/08/21 18:30	Mon 02/08/21 18:45	769					
771				Accept permit	O Gabana,M Basisi	0.25 hrs	Tue 03/08/21 06:30	Tue 03/08/21 06:45	770					
772				Risk assessment	O Gabana,M Basisi	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
773				Remove inspection cover	O Manere,A Omphile,O Gabana,M Basisi	1 hr	Tue 03/08/21 06:45	Tue 03/08/21 07:45	771					
774				Inspect belt assembly,Joint and buckets	O Manere,A Omphile,O Gabana,M Basisi	2 hrs	Tue 03/08/21 07:45	Tue 03/08/21 09:45	773					
775				Inspect Casing panels, repair if necessary	K Raphiri,S Monna,O Gabana,M Basisi	4 hrs	Tue 03/08/21 09:45	Tue 03/08/21 14:15	774					
776				Replace teflon sealing discs on pulley shaft	O Gabana,M Basisi	1 hr	Mon 02/08/21 06:30	Mon 02/08/21 07:30						
777				Replace all bearings	O Gabana,M Basisi	4 hrs	Mon 02/08/21 07:30	Mon 02/08/21 11:30	776					
778				Replace loose elevator joint,broken or loose buckets	O Gabana,M Basisi	12 hrs	Mon 02/08/21 11:30	Tue 03/08/21 12:00	777					
779				Install back inspection cover	O Manere,A Omphile,O Gabana,M Basisi	1 hr	Tue 03/08/21 12:30	Tue 03/08/21 13:30	778					
780				Remove gearbox,inspect shaft & key	O Gabana,M Basisi	8 hrs	Mon 02/08/21 06:30	Mon 02/08/21 15:00						
781				Install gearbox	O Gabana,M Basisi	6 hrs	Mon 02/08/21 06:30	Mon 02/08/21 13:00						
782				Housekeeping	O Gabana,M Basisi	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
783				Clear permit	O Gabana,M Basisi	0.25 hrs	Tue 03/08/21 13:30	Tue 03/08/21 13:45	779					
784				Dismantle scaffold	O Manere,A Omphile	2 hrs	Tue 03/08/21 13:45	Tue 03/08/21 15:45	783					
785			26B2GN02	MILLED SALT SCREEN - Carry out inspection		82.5 hrs	Mon 02/08/21 06:30	Mon 09/08/21 08:30						
786				Carry out cleaning	Operations	12 hrs	Mon 02/08/21 06:30	Mon 02/08/21 18:30						
787				Make up spare magnets (prior)	O Gabana,M Basisi	0 hrs	Mon 02/08/21 18:30	Mon 02/08/21 18:30	786					
788				Make out permit	Operations	0.25 hrs	Mon 02/08/21 18:30	Mon 02/08/21 18:45	787					
789				Accept permit	O Gabana,M Basisi	0.25 hrs	Tue 03/08/21 06:30	Tue 03/08/21 06:45	788					
790				Risk assessment	O Gabana,M Basisi	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
791				Identify leaks and make provision to seal	O Gabana,M Basisi	2.5 hrs	Tue 03/08/21 06:45	Tue 03/08/21 09:15	789					
792				Open,inspect and service winch and rope	O Manere,A Omphile,O Gabana,M Basisi	4 hrs	Tue 03/08/21 09:15	Tue 03/08/21 13:45	791					
793				Close the winch	O Gabana,M Basisi	2 hrs	Tue 03/08/21 13:45	Tue 03/08/21 15:45	792					
794				Remove door & fix leaking areas	K Raphiri,S Monna,O Gabana,M Basisi	3 hrs	Tue 03/08/21 15:45	Wed 04/08/21 06:45	793					
795				Remove top deck mesh, clean & let dry	O Gabana,M Basisi	4 hrs	Wed 04/08/21 06:45	Wed 04/08/21 10:45	794					
796				Remove bottom deck mesh, clean & dry	O Gabana,M Basisi	3 hrs	Wed 04/08/21 10:45	Wed 04/08/21 14:15	795					
797				Inspect beater bars & profile ledges	O Gabana,M Basisi	8 hrs	Wed 04/08/21 14:15	Thu 05/08/21 10:15	796					
798				Inspect and overhaul/replace vibrator heads 12 off	O Gabana,M Basisi,K Opelo,C Mmabe	14 hrs	Thu 05/08/21 10:15	Fri 06/08/21 13:15	797					
799				Inspect dust extraction pipe, unblock if blocked	Operations,O Gabana,M Basisi	6.75 hrs	Fri 06/08/21 13:15	Sat 07/08/21 07:15	798					
Project: Salt plant shutdown 20 Date: Wed 19/05/21 10:48				Task Split Milestone Summary Project Summary Inactive Task Inactive Milestone Inactive Summary Manual Task Duration-only Manual Summary Rollup Manual Summary Start-only Finish-only External Tasks External Milestone Deadline Critical Critical Split Progress										
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Start-only

Finish-only

External Tasks

External Milestone

Deadline

Critical

Critical Split

Progress

Manual Progress

SALT PLANT MAJOR SHUTDOWN 2021														
Botswana Ash (Pty) Ltd														
ID		Task Mode	Asset code	Task Name	Resource Names	Duration	Start	Finish	Predecessors	2020	2021	2022	2023	2024
1176				Clear permit	O Gabana,M Basisi	0.25 hrs	Mon 09/08/21 07:15	Mon 09/08/21 07:30	1175					
1177				SUPPLEMENTARY CRUSHERS		175.25 hrs	Mon 02/08/21 06:30	Tue 17/08/21 09:15						
1178				Maintenance		175.25 hrs	Mon 02/08/21 06:30	Tue 17/08/21 09:15						
1179			26B2RF03	CRUSHER-Carry out inspection		18.75 hrs	Mon 02/08/21 06:30	Tue 03/08/21 14:15						
1180				make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1181				accept permit	O Gabana,M Basisi	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	1180					
1182				remove guards and v-belts	O Gabana,M Basisi	0.5 hrs	Mon 02/08/21 07:00	Mon 02/08/21 07:30	1181					
1183				remove & inspect pulleys	O Gabana,M Basisi	2 hrs	Mon 02/08/21 07:30	Mon 02/08/21 09:30	1182					
1184				remove bearings &inspect rollers then replace bearings if rollers are ok	O Gabana,M Basisi	8 hrs	Mon 02/08/21 09:30	Mon 02/08/21 18:00	1183					
1185				tighten all mounting bolts	O Gabana,M Basisi	4 hrs	Mon 02/08/21 18:00	Tue 03/08/21 10:00	1184					
1186				repair all cracks around the crushers	K Raphiri,S Monna	0.5 hrs	Tue 03/08/21 10:00	Tue 03/08/21 10:30	1185					
1187				install pulleys&v-belts then align	O Gabana,M Basisi	2 hrs	Tue 03/08/21 10:30	Tue 03/08/21 13:00	1186					
1188				put back guards	O Gabana,M Basisi	1 hr	Tue 03/08/21 13:00	Tue 03/08/21 14:00	1187					
1189				clear permit	O Gabana,M Basisi	0.25 hrs	Tue 03/08/21 14:00	Tue 03/08/21 14:15	1188					
1190			26B2GG04	MILL#1-Carry out inspection		22.75 hrs	Tue 03/08/21 14:15	Thu 05/08/21 14:00						
1191				make out permit	Operations	0.25 hrs	Tue 03/08/21 14:15	Tue 03/08/21 14:30	1189					
1192				accept permit	O Gabana,M Basisi	0.25 hrs	Tue 03/08/21 14:30	Tue 03/08/21 14:45	1191					
1193				remove guards and v-belts	O Gabana,M Basisi	0.5 hrs	Tue 03/08/21 14:45	Tue 03/08/21 15:15	1192					
1194				remove & inspect pulleys	O Gabana,M Basisi	2 hrs	Tue 03/08/21 15:15	Tue 03/08/21 17:15	1193					
1195				remove bearings &inspect rollers then replace bearings if rollers are ok	O Gabana,M Basisi	8 hrs	Tue 03/08/21 17:15	Wed 04/08/21 13:45	1194					
1196				tighten all mounting bolts	O Gabana,M Basisi	4 hrs	Wed 04/08/21 13:45	Wed 04/08/21 17:45	1195					
1197				repair all cracks around the crushers	K Raphiri,S Monna	0.5 hrs	Wed 04/08/21 17:45	Wed 04/08/21 18:15	1196					
1198				install pulleys&v-belts then align	O Gabana,M Basisi	2 hrs	Wed 04/08/21 18:15	Thu 05/08/21 08:15	1197					
1199				check feed roller&and replace bearigs	O Gabana,M Basisi	4 hrs	Thu 05/08/21 08:15	Thu 05/08/21 12:45	1198					
1200				put back guards	O Gabana,M Basisi	1 hr	Thu 05/08/21 12:45	Thu 05/08/21 13:45	1199					
1201				clear permit	O Gabana,M Basisi	0.25 hrs	Thu 05/08/21 13:45	Thu 05/08/21 14:00	1200					
1202			26B2GG05	MILL#2-Carry out inspection		22.75 hrs	Thu 05/08/21 14:00	Sat 07/08/21 13:45						
1203				make out permit	Operations	0.25 hrs	Thu 05/08/21 14:00	Thu 05/08/21 14:15	1201					
1204				accept permit	O Gabana,M Basisi	0.25 hrs	Thu 05/08/21 14:15	Thu 05/08/21 14:30	1203					
1205				remove guards and v-belts	O Gabana,M Basisi	0.5 hrs	Thu 05/08/21 14:30	Thu 05/08/21 15:00	1204					
1206				remove & inspect pulleys	O Gabana,M Basisi	2 hrs	Thu 05/08/21 15:00	Thu 05/08/21 17:00	1205					
1207				remove bearings &inspect rollers then replace bearings if rollers are ok	O Gabana,M Basisi	8 hrs	Thu 05/08/21 17:00	Fri 06/08/21 13:30	1206					
1208				tighten all mounting bolts	O Gabana,M Basisi	4 hrs	Fri 06/08/21 13:30	Fri 06/08/21 17:30	1207					
1209				repair all cracks around the crushers	K Raphiri,S Monna	0.5 hrs	Fri 06/08/21 17:30	Fri 06/08/21 18:00	1208					
1210				install pulleys&v-belts then align	O Gabana,M Basisi	2 hrs	Fri 06/08/21 18:00	Sat 07/08/21 08:00	1209					
1211				check feed roller&and replace bearigs	O Gabana,M Basisi	4 hrs	Sat 07/08/21 08:00	Sat 07/08/21 12:00	1210					
1212				put back guards	O Gabana,M Basisi	1 hr	Sat 07/08/21 12:30	Sat 07/08/21 13:30	1211					
1213				clear permit	O Gabana,M Basisi	0.25 hrs	Sat 07/08/21 13:30	Sat 07/08/21 13:45	1212					
1214			26B2RH10	VIBRATOR FEEDER 400/1000-Carry out inspection		6.75 hrs	Sat 07/08/21 13:45	Sun 08/08/21 08:30						
1215				make out permit	Operations	0.25 hrs	Sat 07/08/21 13:45	Sat 07/08/21 14:00	1213					
1216				accept permit	O Gabana,M Basisi	0.25 hrs	Sat 07/08/21 14:00	Sat 07/08/21 14:15	1215					
1217				remove guards and inspect weights	O Gabana,M Basisi	2 hrs	Sat 07/08/21 14:15	Sat 07/08/21 16:15	1216					
1218				replace springs	O Gabana,M Basisi	2 hrs	Sat 07/08/21 16:15	Sat 07/08/21 18:15	1217					
1219				box up	O Gabana,M Basisi	2 hrs	Sat 07/08/21 18:15	Sun 08/08/21 08:15	1218					
1220				clear permit	O Gabana,M Basisi	0.25 hrs	Sun 08/08/21 08:15	Sun 08/08/21 08:30	1219					
1221			26B2RH11	VIBRATOR FEEDER 600/1000-Carry out inspection		6.75 hrs	Sun 08/08/21 08:30	Sun 08/08/21 15:45						
1222				make out permit	Operations	0.25 hrs	Sun 08/08/21 08:30	Sun 08/08/21 08:45	1220					
Project: Salt plant shutdown 20 Date: Wed 19/05/21 10:48				Task Split Milestone Summary Project Summary Inactive Task Inactive Milestone Inactive Summary Manual Task Duration-only Manual Summary Rollup Manual Summary Start-only Finish-only External Tasks External Milestone Deadline Critical Critical Split Progress Manual Progress										
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SALT PLANT MAJOR SHUTDOWN 2021														
Botswana Ash (Pty) Ltd 														
ID		Task Mode	Asset code	Task Name	Resource Names	Duration	Start	Finish	Predecessors	2020	2021	2022	2023	2024
1364				Disconnect instruments	K Nxele,T Mbangiwa	0.5 hrs	Mon 02/08/21 07:00	Mon 02/08/21 07:30	1362					
1365				Remove valve	Ft,K Nxele,T Mbangiwa,O Manere,A Omphile	2 hrs	Mon 02/08/21 07:30	Mon 02/08/21 09:30	1364					
1366				Overhaul valve	K Nxele,T Mbangiwa	3 hrs	Mon 02/08/21 09:30	Mon 02/08/21 13:00	1365					
1367				Install valve	Ft,K Nxele,T Mbangiwa,O Manere,A Omphile	2 hrs	Mon 02/08/21 13:00	Mon 02/08/21 15:00	1366					
1368				Stroke check valve	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 15:00	Mon 02/08/21 15:15	1367					
1369				Clear permit	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 15:15	Mon 02/08/21 15:30	1368					
1370			26TC012	Salt Drier temperature valve - replace valve		8.5 hrs	Mon 02/08/21 06:30	Mon 02/08/21 15:30						
1371				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1372				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1373				Accept permit	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	1371					
1374				Risk assessment	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1375				Disconnect instruments	K Nxele,T Mbangiwa	0.5 hrs	Mon 02/08/21 07:00	Mon 02/08/21 07:30	1373					
1376				Remove valve	Ft,K Nxele,T Mbangiwa,O Manere,A Omphile	2 hrs	Mon 02/08/21 07:30	Mon 02/08/21 09:30	1375					
1377				Replace valve	Aveng,K Nxele,T Mbangiwa	3 hrs	Mon 02/08/21 09:30	Mon 02/08/21 13:00	1376					
1378				Install valve	Ft,K Nxele,T Mbangiwa,O Manere,A Omphile	2 hrs	Mon 02/08/21 13:00	Mon 02/08/21 15:00	1377					
1379				Stroke check valve	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 15:00	Mon 02/08/21 15:15	1378					
1380				Clear permit	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 15:15	Mon 02/08/21 15:30	1379					
1381			26PC018	Salt cooler control valve - overhaul valve		8.5 hrs	Mon 02/08/21 06:30	Mon 02/08/21 15:30						
1382				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1383				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1384				Accept permit	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	1382					
1385				Risk assessment	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1386				Disconnect instruments	K Nxele,T Mbangiwa	0.5 hrs	Mon 02/08/21 07:00	Mon 02/08/21 07:30	1384					
1387				Remove valve	Ft,K Nxele,T Mbangiwa,O Manere,A Omphile	2 hrs	Mon 02/08/21 07:30	Mon 02/08/21 09:30	1386					
1388				Overhaul valve	K Nxele,T Mbangiwa	3 hrs	Mon 02/08/21 09:30	Mon 02/08/21 13:00	1387					
1389				Install valve	Ft,K Nxele,T Mbangiwa,O Manere,A Omphile	2 hrs	Mon 02/08/21 13:00	Mon 02/08/21 15:00	1388					
1390				Stroke check valve	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 15:00	Mon 02/08/21 15:15	1389					
1391				Clear permit	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 15:15	Mon 02/08/21 15:30	1390					
1392			26PC019	Fluid bed cooler pressure control valve - Overhaul valve		8 hrs	Mon 02/08/21 06:30	Mon 02/08/21 15:00						
1393				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1394				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1395				Accept permit	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	1393					
1396				Risk assessment	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1397				Disconnect instruments	K Nxele,T Mbangiwa	1 hr	Mon 02/08/21 07:00	Mon 02/08/21 08:00	1395					
1398				Remove valve	Ft,K Nxele,T Mbangiwa,O Manere,A Omphile	2 hrs	Mon 02/08/21 08:00	Mon 02/08/21 10:00	1397					
1399				Overhaul valve	K Nxele,T Mbangiwa	2 hrs	Mon 02/08/21 10:00	Mon 02/08/21 12:00	1398					
1400				Install valve	Ft,K Nxele,T Mbangiwa,O Manere,A Omphile	2 hrs	Mon 02/08/21 12:30	Mon 02/08/21 14:30	1399					
1401				Stroke check valve	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 14:30	Mon 02/08/21 14:45	1400					
1402				Clear permit	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 14:45	Mon 02/08/21 15:00	1401					
1403			26PC026	Bitterns pressure control valve - replace valve		6.5 hrs	Mon 02/08/21 06:30	Mon 02/08/21 13:30						
1404				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1405				Make out permit	Operations	0.25 hrs	Mon 02/08/21 06:30	Mon 02/08/21 06:45						
1406				Accept permit	K Nxele,T Mbangiwa	0.25 hrs	Mon 02/08/21 06:45	Mon 02/08/21 07:00	1404					
1407														

