APPENDIX A
ADDITIONAL SCENARIOS

Probability of Additional Scenarios

Do Nothing: CWS remains insitu

Would Occur	Would Probably Occur	May Occur	Would Probably Not Occur	Would Occur Only in Exceptional Circumstances
Mown/maintain	Leachate requires removal and treatment. Three years and involves groundwater/subsurface leachate extraction and treatment through a treatment plant (on or off site)		Gas migration to surrounding buildings following future development of the site	Major stockpile failure as a result of a seizmic event, major climatic event
Monitor (gas and leachate)	Moderate repairs to cap (2% - <10% cap surface)		Leachate reaches downstream receptors. Leachate requires removal and treatment. Three years and involves groundwater/subsurface leachate extraction and treatment through a treatment plant (on or off	
Leachate discharges from the site (Surface and groundwater)	Community access capped waste stockpile			
Minor repairs to cap (<2% cap surface)	Complete remediation consistent with option 2 in response to cap failure; changing regulation; monitoring shows impacts of significance; development around cell required. Future construction on surrounding properties encounters leachate and gas			

Option 2: Containment Cell

Would Occur	Would Probably Occur	May Occur	Would Probably Not Occur	Would Occur Only in Exceptional Circumstances
CWS material is removed from current location	Heavy rainfall causes leachate discharge to onsite surface water	Heavy rainfall causes leachate discharge to offsite surface water	Truck turnover spilling contaminated load onsite	Major Containment Cell failure as a result of a seizmic event, major climatic event
CWS is transported to onsite containment cell	Minor repairs to cap (<2% cap surface)	Moderate repairs to cap (2-<10% cap surface)	Leachate tanker spills/overtops	
Containment cell is capped		Heavy rainfall causes erosion and sediment lost off site during works	Containment Cell leaks causing leachate migration to groundwater	
CWS is rehabilitated			Major cap repair (10-<20%)	
Containment cell is maintained in perpetuity – maintain and follow LTMP				
Community access containment cell location following completion				
Monitor (gas and leachate)				

Option 3: Sorting of Recyclables from the CWS and Treatment of Non-Recyclables Placed in Containment Cell

Would Occur	Would Probably Occur	May Occur	Would Probably Not Occur	Would Occur Only in Exceptional Circumstances
CWS is removed from current location	Minor repairs to cap (<2% cap surface)	Asbestos containing material is sent to recycler	Truck turnover spilling contaminated load onsite	Major Containment Cell failure as a result of a seizmic event, major climatic event
CWS material is sorted and cleaned by high pressure water	Heavy rainfall causes erosion and sediment lost off site during works	Asbestos containing materials are distributed to consumer in recycled products	Leachate tanker spills/overtops	
Carbon is pulverised ready for off site recycling	Carbon material containing asbestos is pulverised	Recyclable carbon material has no end user	Containment Cell leaks causing leachate migration to groundwater	
Remaining crushable waste is crushed, treated and relocated to the onsite containment cell for placement with non-crushables	Heavy rainfall causes leachate discharge to offsite surface water	Recyclable steel material has no end user due to asbestos risk	Major cap repair (10-<20%)	
CWS is rehabilitated		Leachate activates lime which crystallises and clogs leachate capture system resulting in increased gas emissions due to water content	Treatment with lime doesn't reduce leachable F concentration	
Community access containment cell location following completion		Moderate repairs to cap (2-<10% cap surface)		
Containment cell is maintained in perpetuity – maintain and follow LTMP				
Heavy rainfall causes leachate impacts to onsite surface water				

Option 4: Treatment of All Material within Containment Cell

Would Occur	Would Probably Occur	May Occur	Would Probably Not Occur	Would Occur Only in Exceptional Circumstances
CWS is removed from current location	Heavy rainfall causes erosion and sediment lost off site during works	Heavy rainfall causes leachate discharge to offsite surface water	Truck turnover spilling contaminated load onsite	Major Containment Cell failure as a result of a seizmic event, major climatic event
CWS is transported to onsite containment cell	Minor repairs to cap (<2% cap surface)	Treatment with lime doesn't reduce leachable F concentration	Leachate tanker spills/overtops	
Containment cell is capped		Leachate activates lime which crystallises and clogs leachate capture system resulting in increased gas emissions due to water content	Containment Cell leaks causing leachate migration to groundwater	
CWS is rehabilitated		Moderate repairs to cap (2-<10% cap surface)	Major cap repair (10-<20%)	
Containment cell is maintained in perpetuity – maintain and follow LTMP		Heavy rainfall causes erosion and sediment lost off site during works		
Monitor (gas and leachate)				
Lime is placed with daily cover at the Containment Cell				
Community access containment cell location				

Probability of Additional Scenarios

Option 5: Offsite Disposal of CWS to Licensed Waste Facility in NSW

Would Occur	Would Probably Occur	May Occur	Would Probably Not Occur	Would Occur Only in Exceptional Circumstances
CWS is removed from current location	Heavy rainfall causes leachate discharge to offsite surface water	Community access containment cell location and exposed to gas	Truck spills contaminated load on public road	Major Containment Cell failure as a result of a seizmic event, major climatic event
CWS material is sorted and recyclable steel cleaned by high pressure water	Heavy rainfall event causes erosion and sediment lost offsite at the receiving facility	Space for landfill insufficient	Leachate tanker spills/overtops	
Carbon is pulverised frrom attached steel	Leachate reacts with other waste leachate within the larger cell	Financial assurance for long term management insufficient or has lower regulatory requirement – government assistance required	Containment Cell leaks causing leachate migration to groundwater	
Steel is transported to offsite recycling facility	Minor repairs to cap (<2% cap surface)	Asbestos containing material is sent to recycler	Treatment with lime doesn't reduce leachable F concentration	
Remaining waste is relocated to offsite containment cell in NSW crushable materials are crushed, treated and placed in cell with non-crushables	Heavy rainfall causes erosion and sediment lost off site during works	Asbestos containing materials are distributed to consumer in recycled products	Truck spills contaminated load onsite	
CWS is rehabilitated		Recyclable steel material has no end user due to asbestos risk	Major cap repair (10-<20%)	
Containment cell is maintained in perpetuity – maintain and follow LTMP		Leachate activates lime which crystallises and clogs leachate capture system resulting in increased gas emissions due to water content	Containment Cell leaks causing leachate migration to groundwater	
Monitor (gas and leachate)		Moderate repairs to cap (2-<10% cap surface)		
Heavy rainfall causes leachate impacts to onsite surface water				

Option 6: Offsite Disposal of CWS to Tellus Facility

Would Occur	Would Probably Occur	May Occur	Would Probably Not Occur	Would Occur Only in Exceptional Circumstances
CWS is removed from current location	Heavy rainfall causes erosion and sediment lost off site during works	Gas build up in salt cavity of flamable/toxic gas (cavity not vented)	Truck spills contaminated load on public road	Landfill leaks causing impact to groundwater or surface water
CWS material is sorted	Heavy rainfall causes leachate discharge to offsite surface water	Asbestos containing material is sent to recycler	Train derailment causing spillage	
Crushable material containing asbestos is pulverised then crushed and heat treated to remove gas generation capacity		Asbestos containing materials are distributed to consumer in recycled products	Groundwater seepage to salt cavity	
CWS material is bagged and transferred by truck/train/truck to NT in shipping containers		Recyclable steel material has no end user due to asbestos risk	Extreme weather event occurs during transport or transitory storage causing damage to containers and bags and uncontrolled release in air and water	
CWS is rehabilitated			Truck spills contaminated load onsite	
Shipping containers are transferred underground and placed in salt mine for isolation			Leachate tanker spills/overtops	
Time delay until 2022 – facility available			Material interacts with co-disposed waste	
Heavy rainfall causes leachate impacts to onsite surface water				

Option 7: Onsite Destruction (Plasma Gasification) of CWS Material

Would Occur	Would Probably Occur	May Occur	Would Probably Not Occur	Would Occur Only in Exceptional Circumstances
CWS is removed from current location	Heavy rainfall causes erosion and sediment lost off site during works	Asbestos containing material is sent to recycler	Truck spills contaminated load onsite	Plasma gasification plant explodes
CWS material is sorted	Plant delays due to heterogenity of material feed	Asbestos containing materials are distributed to consumer in recycled products	Plasma gasification plant gas leak occurs	
Carbon and steel is separated	Heavy rainfall causes leachate discharge to offsite surface water	Recyclable steel material has no end user due to asbestos risk	Leachate tanker spills/overtops	
Steel cleaned and transported to offsite facility		Slag end product requires landfilling		
Carbon and remaining crushable waste is mixed and crushed to appropriate size transported to plasma gasification plant				
Treatment of material using plasma gasification				
Non-crushable waste and gas cleaning residue transferred to offsite disposal				
Heavy rainfall causes leachate impacts to onsite surface water				