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The Development of Environmentally Acceptable Demil in Australia

Presented by Chris Deighton
Executive Director

Today “Climate Change” is no longer a proposition, is it a reality?



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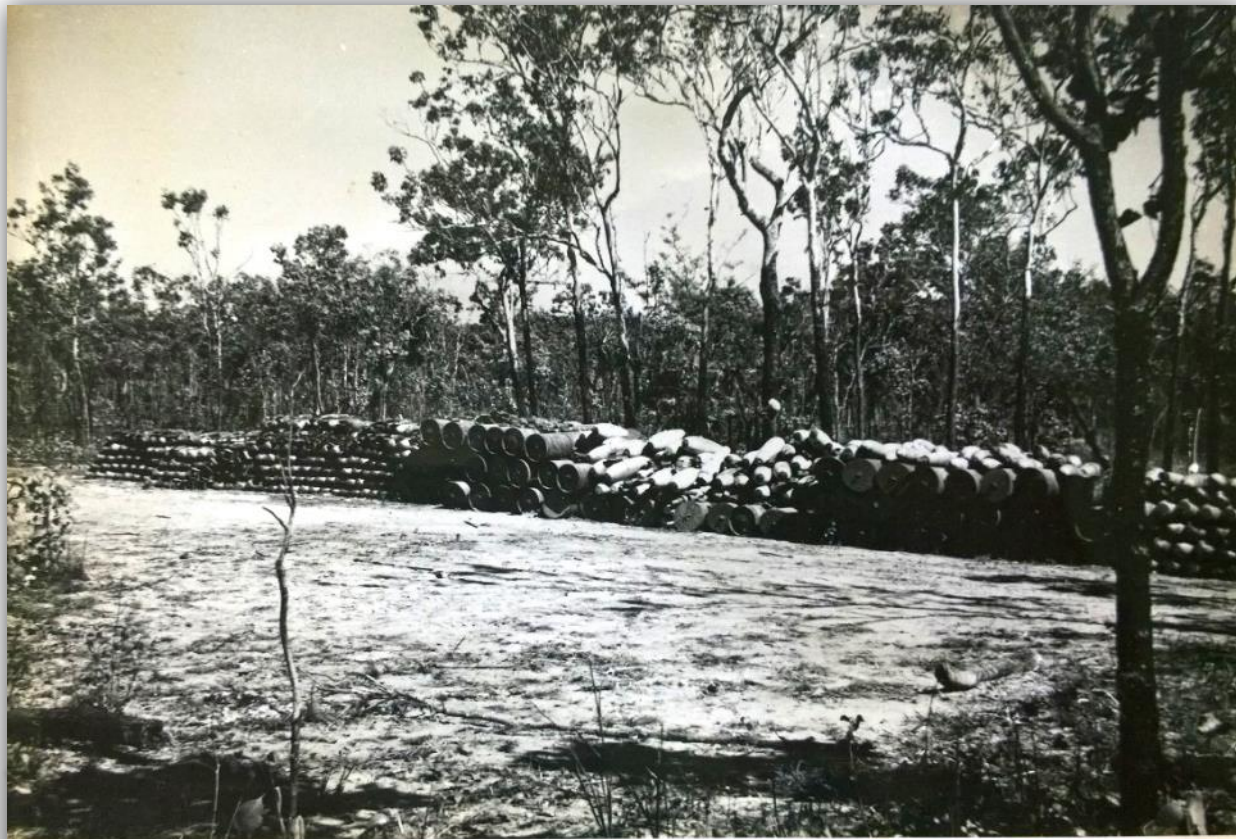


British actress Emma Thompson visits the Arctic Ocean to send Tony Abbott a climate change message – The Guardian, August 2014

Disposal methodologies 1948



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7. READY FOR BLOWING 7/8/48



8. FIRST BLOW (SEE PICTURE No.9)

Disposal methodologies 1948 – is this acceptable?



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9. TAKEN FROM SAME SPOT AS No.8.
HALF AN HOUR AFTER

Woomera



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What is our challenge?

Disposal Methodologies:

- Open Burn
- Open Detonation
- Sea Dumping

1994 The Beginning of Change!



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1997 – An even braver decision by the Department of Defence!



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1997 – An even braver decision by the Department of Defence! cont'd...



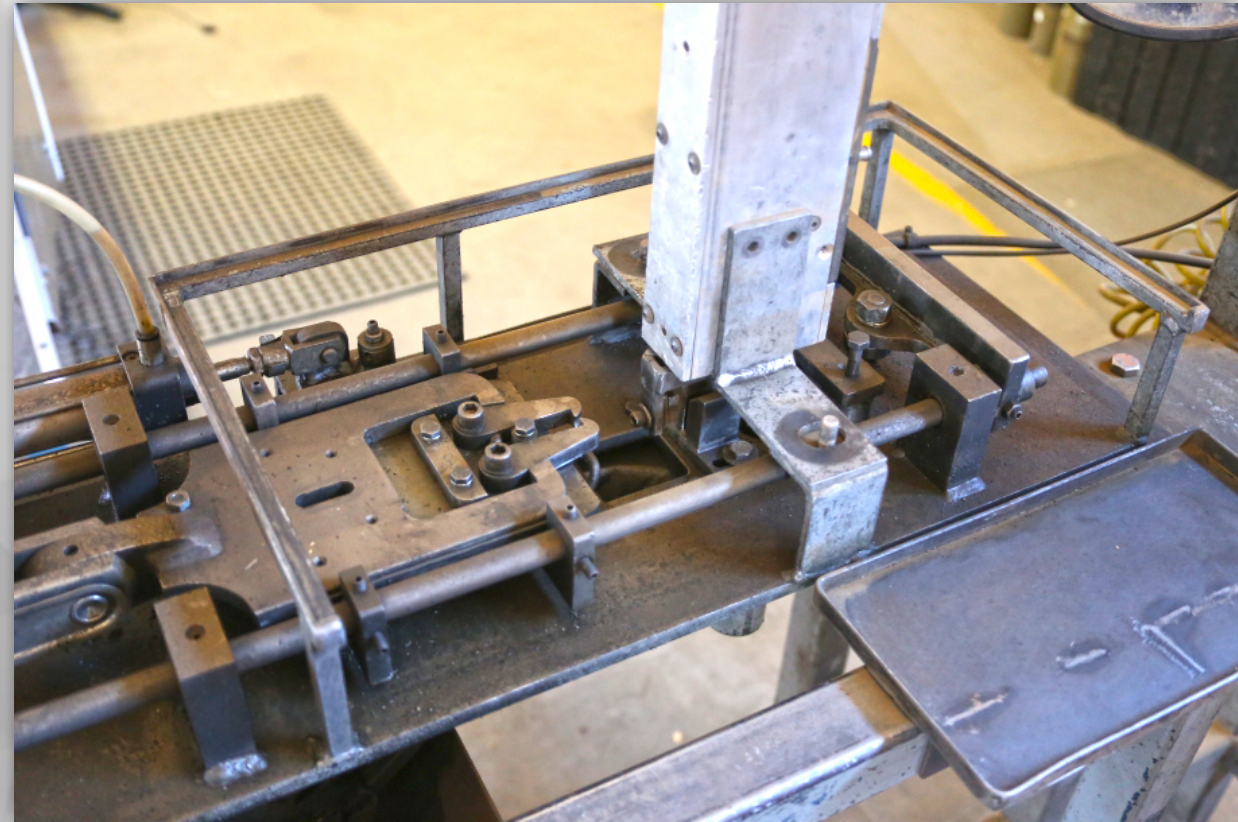
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Small Arms Breakdown and Disposal Contract 2003–2015



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Bullet Guillotine and Shotgun



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Case Functioner and Crusher



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Primer Dust Capture and Filtration



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Robotics and Remote Breakdown



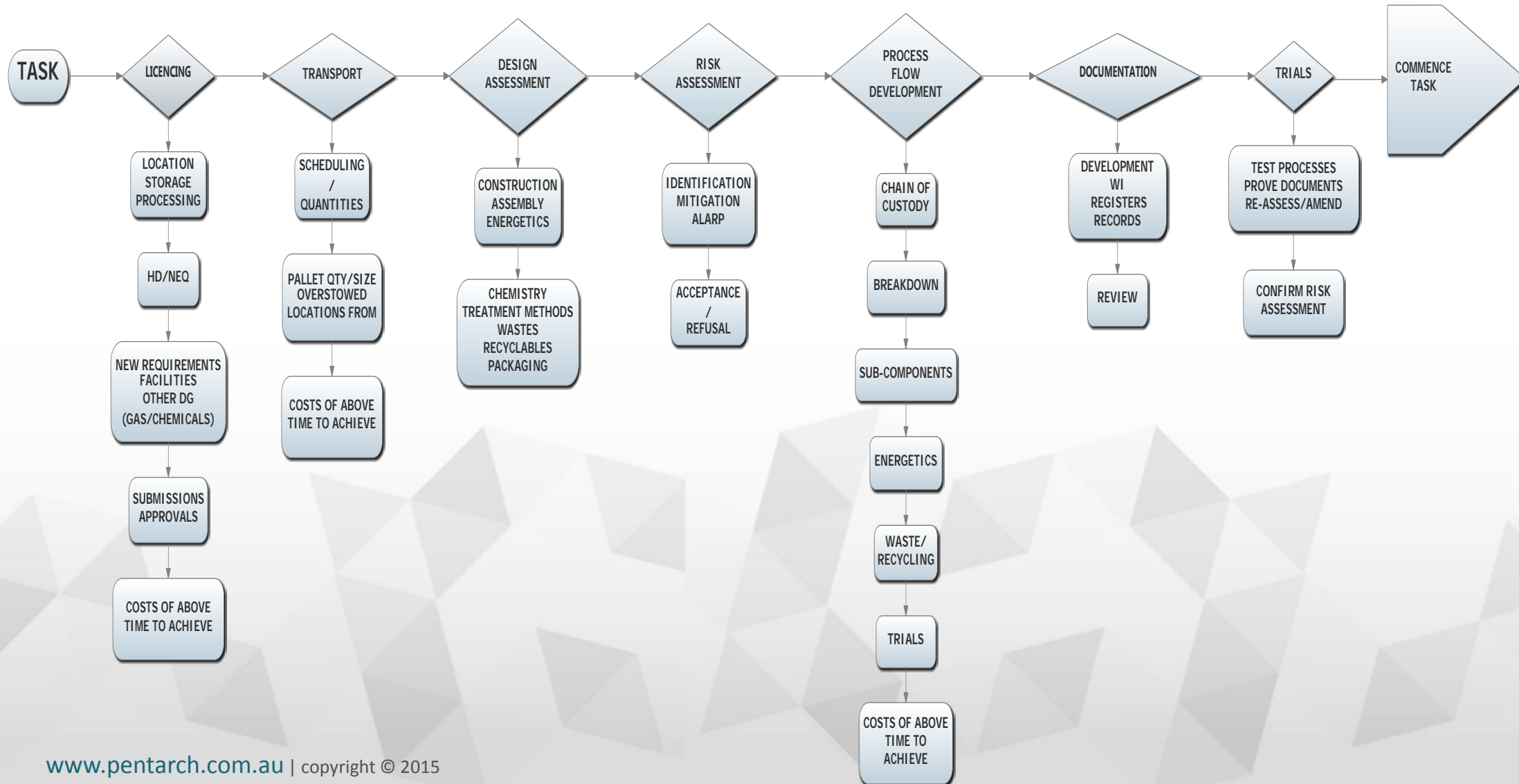
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Since 2004 we have completed the breakdown, component disposal and recycling of:

- 7.62mm Various
- 5.56mm Various
- .30 Cal Various
- .50Cal API APIT 6000 per day
- .50Cal Ball and Blank
- Shotgun Cartridges
- 20MM various
- Sonar Bouys
- 40/60 Breakup shot rounds
- 76mm Prac Tracer.
- 105mm HCBE
- 81mm prac
- 105mm Illum
- 155 illum

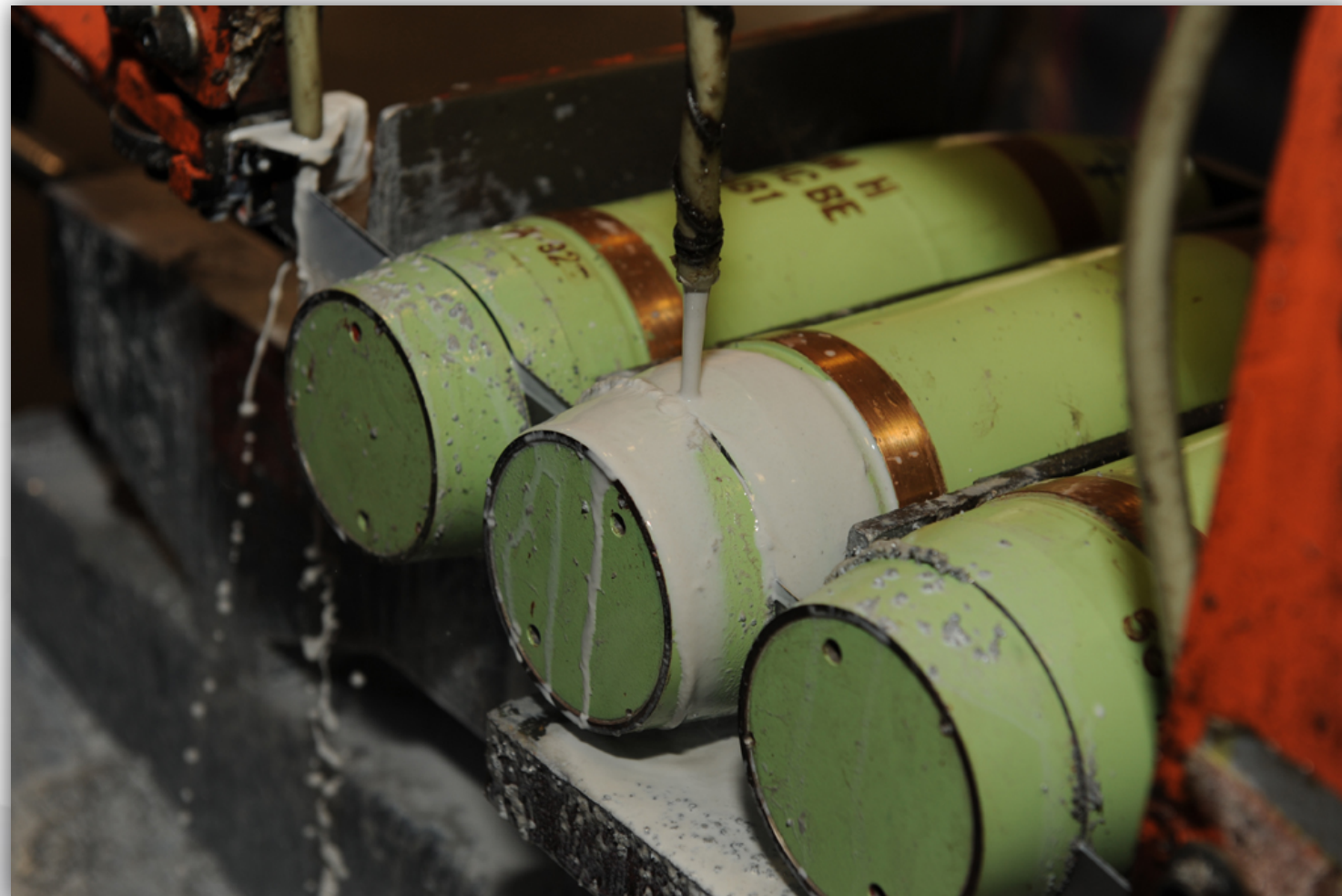
Project Planning



Fuse Removal and Base Cutting



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Wet Scrubber



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Emissions of White Smoke



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The Filtered Plume



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Geobags



Propellant Disposal



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Function 105mm Cases – Primer Intact followed by inspecting for “Free from Explosives Declaration”



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Results:

- Destruction of approximately 93,000 white smoke canisters.
- Destruction of approximately 30,500 fuse assemblies.

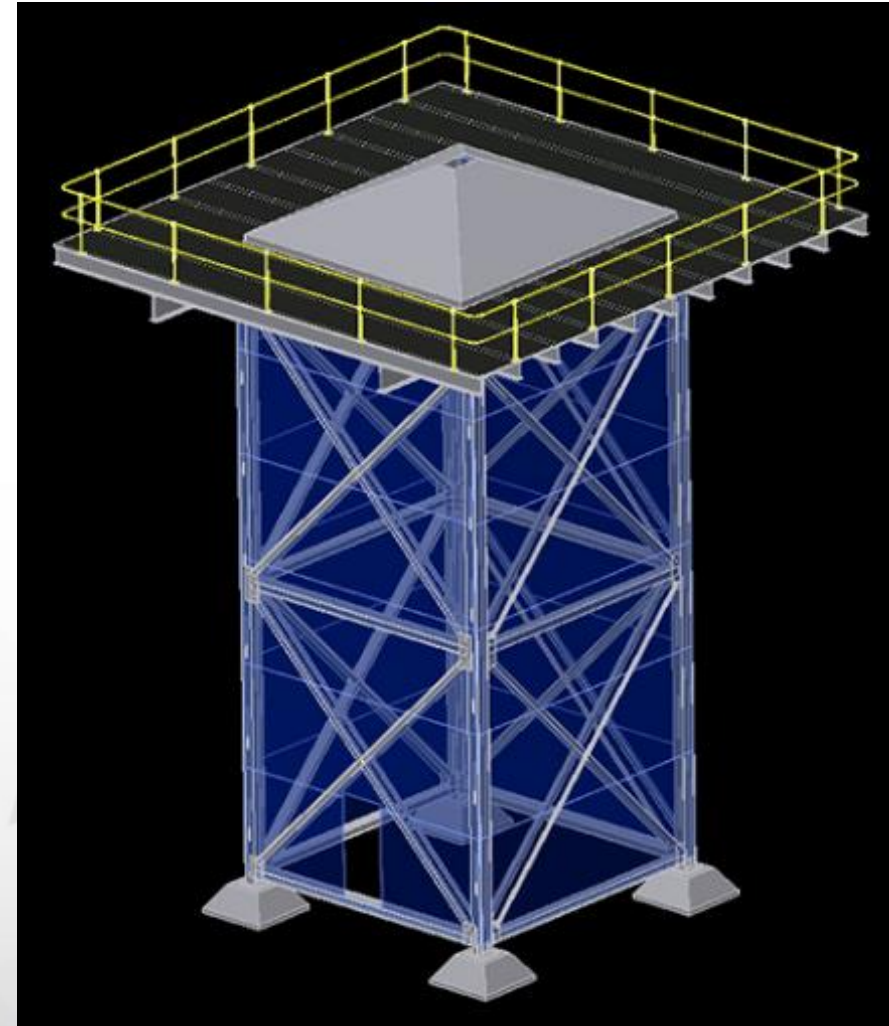
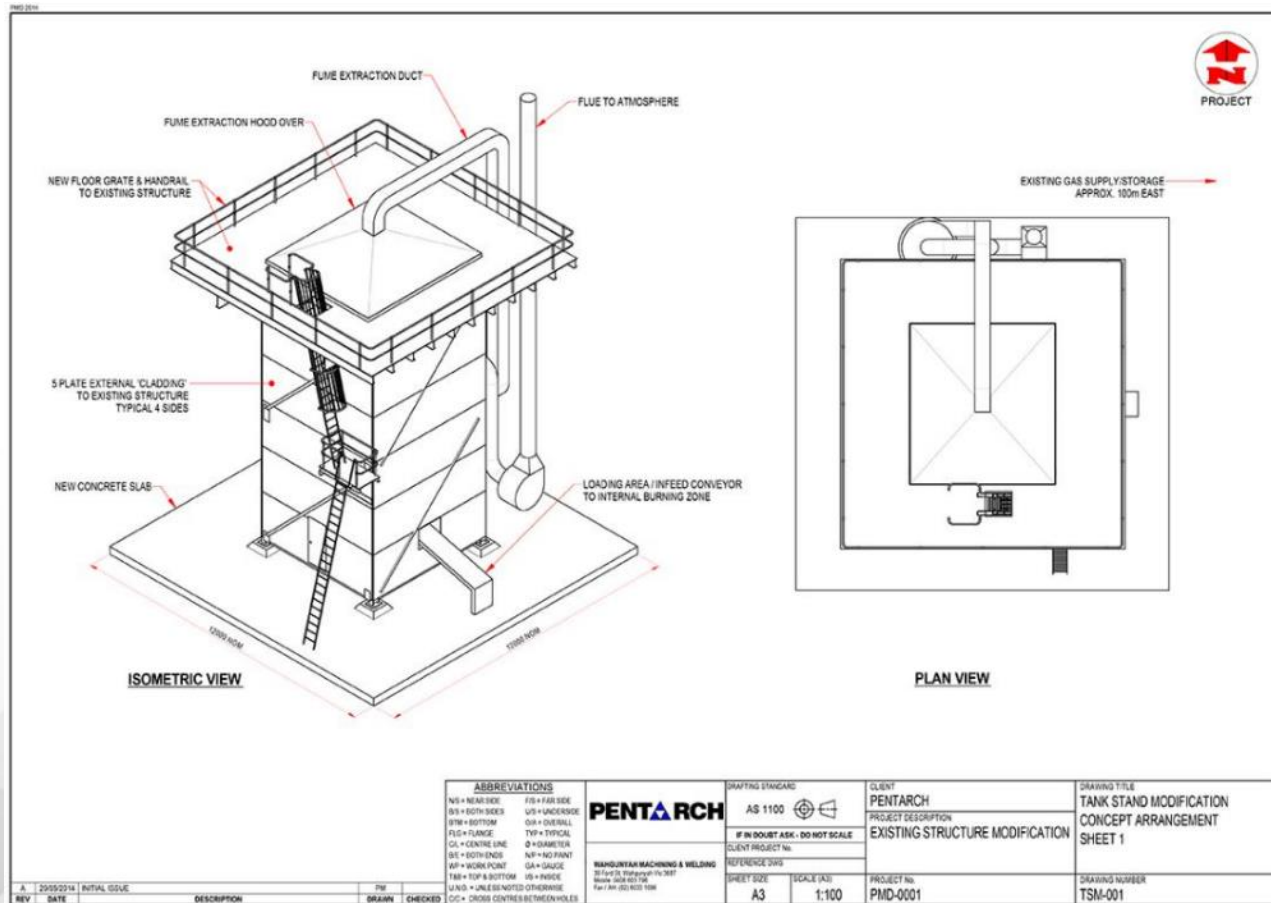
Generating:

- Destruction of approximately 75 tons of single and double based propellants
- Destruction of approximately 2 tons kilograms of black powder.
- Recovery of $\text{ZN}(\text{OH})_2$ – possible 33.6 tonnes of Zinc recovered from a possible 35.25
- Recycling of approximately 750 KG of lead foil.
- Recycling approximately 118,500 Tons of brass.
- Recycling approximately 210 Tons of mild steel.
- Recycling over 15,000 wooden ammunition boxes.
- Recycling 4,400 KG of ammunition box internal furniture.

Enclosed burn facility



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Cooling Fume



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“The Development of Environmentally Acceptable Demil in Australia”

Pentarch Industrial offers specialised, environmentally acceptable solutions to the disposal of munitions and other hazardous goods and the management of ammunition packaging.

Chris Deighton
Executive Director