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## David's

- 75kg per shift every hour
- Can Run 24 hrs
- Cleansing shift every 10 shifts

## General Atomics John Fallon (SP)

- Super Critical Water Oxidizer
- SCWO Competes favorably w/ disposal on site
- Have a Subpart & permit @ Camp Minden
- Have to destroy this M6
- one unit @ Camp Minden.
- 10g/m @ McAlister.
- 3 g/m 8ppm 10g/m 20.6ppm Max Ant
- 13-15 months to complete
- Not buying units just renting them out, believe they can do it w/in the budget
- Water can go to Commercial Waste Water System
- limiting is the g/m
- Test programs for Army
- Don't know about M6, but grinding is under water & low concentration of M6 in water
- Water System Treatment System is an issue
- This generates a lot of water. Can it be recycled?
- They are not a prime

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Ch2m Hill - Tunnel Furnaces

120 kg  $\approx$  250 lb/hr

- 2 Thermal destruction units
- Will have to fabricate
- Working w/ Siebel & have been handling M6 & know logistical issues @ Camp Minden
- 6-9 months to install
- .05% or less AsL - 99.95% consumed.
- Dry waste generated to
- Secondary Combustion Chamber w/ Bag house
- Continuous Monitoring
- 2450 lb/hr 10 months w/ 2 tunnel furnaces
- 10 months destruction which includes a testing phase
- 99.999% destruction at end of Secondary Combustion
- Not used on M6, <sup>before</sup> DNT will be combusted
- Ch2m Hill Dyna Safe & Expel IS Prime

MuniRem

- Believe there are Cost Savings 20-30%
- Bench Scale Test: Propellant destruction kit for small amounts of Propellant
- Slight Chance of a Runaway Reaction
- 34,000 lb/day
- No larger scaled studies
- Need to install a Waste Water Treatment Plant

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ATON High Technologies

- Microwave Thermal Treatment
- Created in 2010
- Mb is Mixed of Sand
- Base Plant about \$8 million
- Seems Experimental

Applied Microwave Industry

- Proposal for Red Water
- The Presenter was not ~~\$~~totally familiar w/ the Technology
- Didn't discuss the managing of the mb

Clean Harbors

- Teamed up w/ ECC ← Demol Experts
- Thermal Treatment
- Thermal Oxidation
- 1200 lb/hr? It think they are doing this rate somewhere else
- Bag house
- Continuous Monitoring System
- 4 month design, 8 mos to operate
- Will do a Magazine Assessment
- Bag house for Particulate Control
- Up flow entrained combustor
- No Secondary Combustion Chamber, over charge the upper stages of de-densifier

100,000 lb/day  
3:1 scale up from  
their cement activities

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- Have handled much more pounds of Explosive Material

## Arctech

- 80,000 lbs per day
- Batch Process
- 1-2% of mte would go to landfill if it is dewatered
- 2 shifts
- No toxic hydrolysis
- Wont Build will acquire + make safety changes

## Eldorado - Contained Burned

- Team as Sub of ESI (Prime)
- Thermal Treatment is best
- Well suited for Bulk Propellant
- Batch Process
- Have Burned 50,000 lb/burn Cycle
- Pollution Abatement System Measures the Release of Gases
- 1000-2500 lb/hr ; 800 lb/cycle 2-3 cycles per hr.
- Can burn Boxes + Sacks in the system. This helps on handling but would increase emissions

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- Bag House, & After Burner
- 24/7 operation expect to complete w/in a year
- PM is scrubbed out by Cyclone, Bag House, & HEMA
- Can do Hold Test, Release, However he suggested Continuous Monitoring is the way to go.
- Fabricate w/in 18 wk - 5-6 months to implementation

### El Dorado Rotary Kiln

- Think Tunnel Furnace is 4<sup>th</sup>
- Core Capability for Demil activities
- \$ 516 TNT Eq max per feed, 2-3 feeds/min
- 150-350 lbs/hr
- Rotary Kiln Requires more handling than the Contained Burn Technologies.
- After burner
- Continuous Process
- Brian Selchove asked about Activated Carbon filter on the back end.
- Permitted Subpart D permit, Contain Burn is Subpart X RCRA
- Setup 4-6 months, might have to build 4-6 Rotary Kilns to get the throughput