Review of Proposed Concepts and Technologies to Recapture and Destroy Residual Methyl Bromide (MB) after Log Fumigations at New Zealand Ports

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RECAPTURE AND DESTRUCTION TECHNOLOGIES

What do we require?

- Environmentally sustainable solutions
- EPA requirements post 2020
- Economically viable
  - cap ex
  - op ex
  - minimal impact on logistics

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RECAPTURE AND DESTRUCTION TECHNOLOGIES

What options have we got?

Carbon capture

- does not destroy methyl bromide
- large volumes are required
- direct disposal – issues/costs
- sustainable?
- chemical reaction - effluent disposal
- recycling – technically possible

Destruction

- combustion
- chemical

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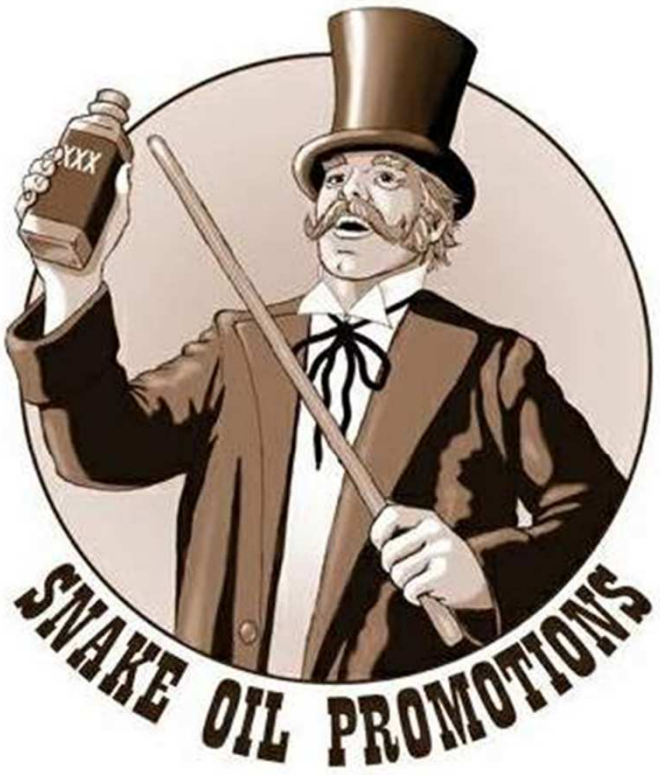
RECAPTURE AND DESTRUCTION TECHNOLOGIES

What do we get?

- Aware of global research
- Claims that systems work
- Unsubstantiated



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RECAPTURE AND DESTRUCTION TECHNOLOGIES

What do we do?

- Treat equally – we want a solution
- Scan globe for solutions
- Ask for data to support clair
- Offer validation testing
  - independent
  - testing protocol
  - at STIMBR's cost

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RECAPTURE AND DESTRUCTION TECHNOLOGIES

What do we know with regards log fumigations?

Armstrong reviewed 11 systems:

- Direct combustion - incineration – undesirable by products
- Catalytic decomposition – expensive
- Bletchley - chemical – failed validation testing
- Salience Solutions / PyroPlas – expensive, failed to respond
- Ozone – not feasible
- Value Recovery – log specific data needed
- Nordiko – log specific data needed
- BioFume / Ecotool Systems – unproven concept
- BioDesorb – desk top study. Unproven
- TIGG / Chemtura – expensive
- Genera – research data reviewed

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RECAPTURE AND DESTRUCTION TECHNOLOGIES

GENERA

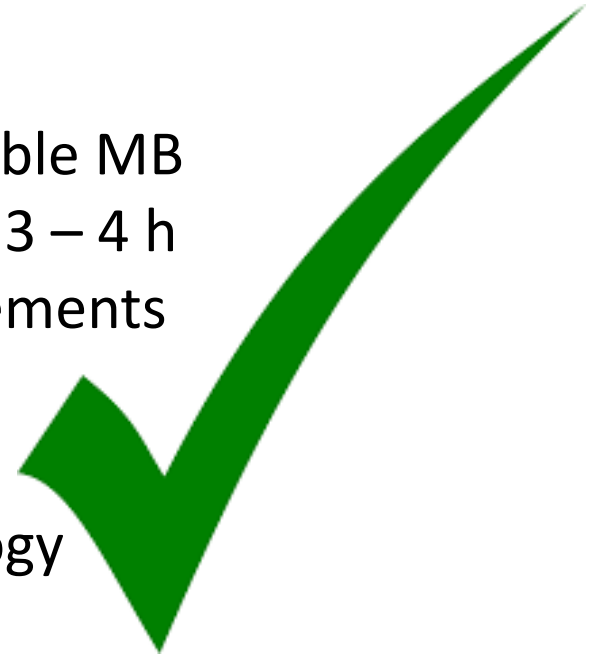
Points of difference:

- Genera involved in a 2020 goal-oriented research program
- system is unique
- scientists, engineers and support staff
- follows a systematic research and development scheme
- created specifically to achieve set goals.

RECAPTURE AND DESTRUCTION TECHNOLOGIES

Genera technology

- validation testing by PFR
- using STIMBR guidelines
- demonstrated to remove 87% of the available MB
- laboratory tests 70% recapture rate within 3 – 4 h
- is in use to meet Council air quality requirements



Genera

- is actively working to develop the technology
- plans confirmatory tests at critical stages.

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