Tullamarine Closed Landfill

SAMPLING PROGRAM AND CONSIDERATIONS

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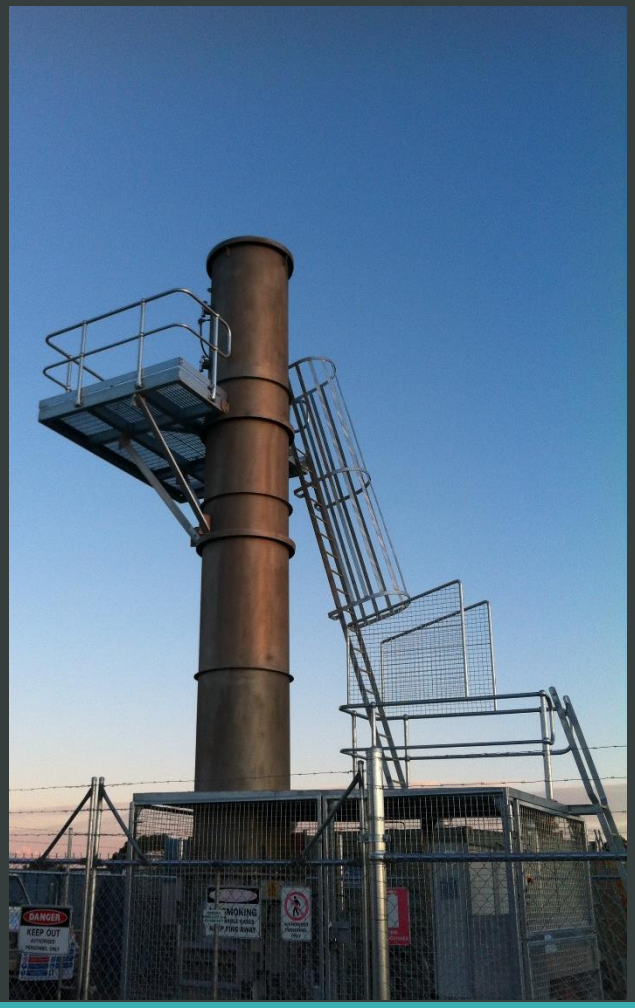
Topics to be discussed

- Development of the Stack sampling plan
- Conducting/Limitations of stack sampling
- Ambient Monitoring considerations



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Development of Stack Sampling Plan

- Stack analyte suite developed by external consultant (URS) in their Landfill Gas Treatment Options Review.
- Analytes selected from previous air and LNAPL monitoring
- Combustion process analytes included in scope

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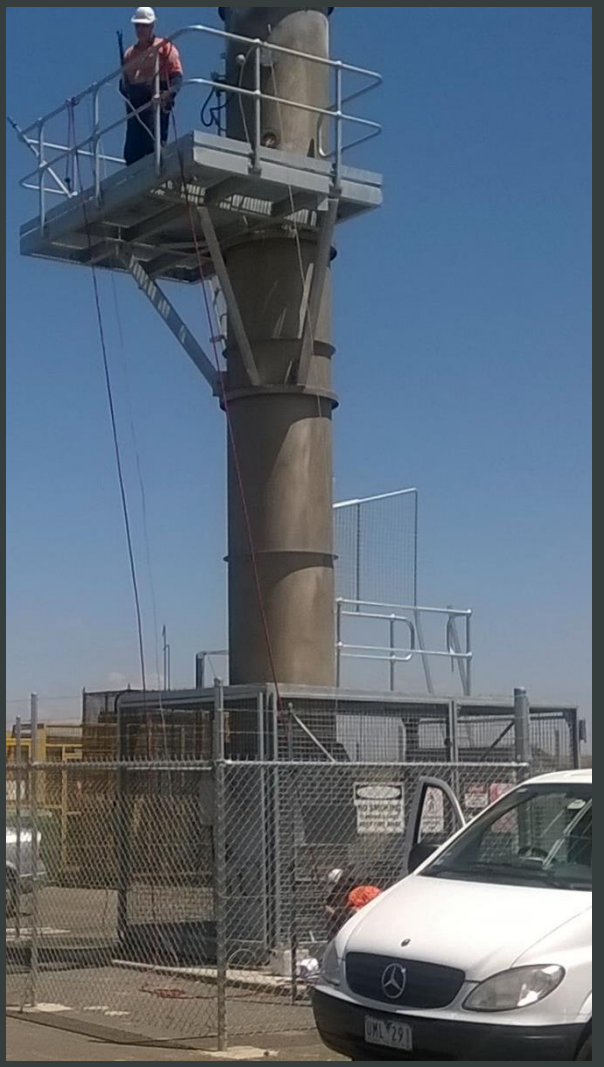
Development of Stack Sampling Plan cont.

- Victorian EPA (Pub 440.1) approved methodologies wherever possible
- Plan submitted to EPA auditor for approval
- Approval received and testing conducted
- Results to be used to develop ambient monitoring program

Conducting/Limitations of the Stack sampling

- Stack sampling conducted over several days
- Samples analysed at NATA accredited laboratories
- Report draft sent and reviewed before final release
- Several difficulties associated with the sampling including:
  - High temperature of the stack gas
  - Specialised equipment required for high temperature
  - Complexity of the testing suite
  - Media - non specific, temperature affected
- Ambient plan now to be developed



Ambient Monitoring Program Considerations

- What Ambient analytes to analyse - not all analytes from stack program have an ambient method
- How to analyse - Recognised Ambient methods (Australian Standard, USEPA methods)
- Detection limits – modelling shows extremely low concs
- Background sampling – other potential sources

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Ambient Monitoring Considerations cont.

- Where - Locations where the sampling to be conducted
  - Weather is highly variable - placing units downwind dependent on day.
  - Many methods require power for collecting
  - Using generators introduces another source
  - Battery operated systems can be unreliable
  - Passive samplers are available but they are limited in what they can detect