

Rattlechain Lagoon Update on Human Health Risk Assessment Project:



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Project Aims and Objectives



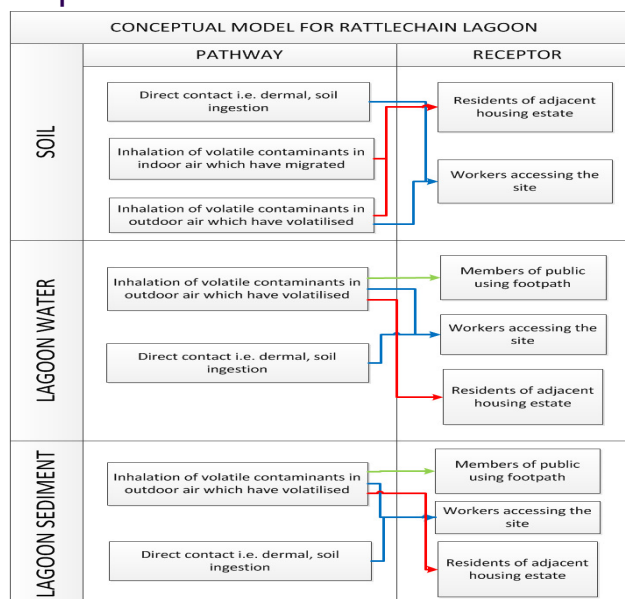
- Review quality of existing data and advise on further data requirements to provide a robust dataset ✓
- Assess all plausible pollutant linkages relating to human health ✓
- Establish a Steering Group with key stakeholders to monitor the progress and consider the results of the HHRA ✓
- Produce a human health risk assessment report
- Assess the risk to human health based on the current use of the site in accordance with UK guidance and best practice

Project Aims and Objectives



- Work does **not** include:
 - Assessment of risks to wildlife
 - Assessment of risks to controlled waters
 - Assessment of risks from future uses of the site
 - Excludes assessment of risks to workers accessing site:
 - covered by HSE legislation not part of contaminated land regime

Conceptual site model



Additional Site Investigation



- Rhodia commissioned further analysis at the site based on HPA recommendations following review of available data
- Further samples of soil, sediment, soil gas and ambient air collected
- Results received in June 2011
- Further ambient air sampling undertaken in July due to lower detection limit required

Investigation locations



Key

- Soil sample and vapour well
- Ambient air sample
- Lagoon sediment Sample
- Water sample

NB The locations are approximate locations and do not necessarily reflect the exact location of the samples

Site Investigation Results (1)



- **Investigation was conducted consistent with UK best practice**
- **Soil samples:**
 - no elemental white phosphorus or phosphine above detection limit. No elevated concentrations of other organic or inorganic contaminants detected
- **Soil vapour samples:**
 - no phosphine above detection limit in soil vapour wells

Site Investigation Results (2)



- **Lagoon sediment samples:**
 - chemicals detected consistent with historical waste (i.e. predominately calcium phosphate). Elemental white phosphorus detected. No phosphine above detection limit.
- **Lagoon water sample:**
 - low levels of elemental white phosphorus detected. No phosphine above detection limit
- **Ambient air:**
 - Further sampling does not appear to indicate any phosphine but further analysis of data required.

Report Structure



- **Executive Summary**
- **Introduction**
 - Includes Background, Objectives of project and Limitations
- **Site Walkover**
- **Chemistry and Toxicity of Phosphorous Compounds**
- **Review of Existing Data**
 - Including review of similar studies
- **Conceptual Site Model**
- **Human Health Risk Assessment**
- **Recommendations and Conclusions**

Revised Project Timelines



- Data received July 2011
- Review of available data and development of Conceptual Site Model (CSM)- July 2011
- Toxicological and Exposure Modelling- September 2011
- Report of findings- September/October 2011
- Presentation of Results- October 2011

NB- Draft timescales dependent on data availability



Any questions?