

Seafield Strategic Odour Review – Potassium Permanganate Trials

Update on Offsite Dosing Trials completed by Wood Environment and Infrastructure Solutions (Wood) formerly Amec Foster Wheeler with Scottish Water Horizons Bo'ness Waste Water Test facility



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Question 1 –

Does potassium permanganate reduce odour emissions from Seafield raw sewage?

Question 2 –

Does the addition of potassium permanganate to Seafield raw sewage generate a chemical-type odour?



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Results – odour



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Results – hydrogen sulphide



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Conclusions

- Dose rates of KMnO_4 of between 1 mg/l and 10 mg/l into wastewater are effective at reducing emissions of odour and H_2S
- Dosing of raw wastewater that had been artificially aged for between 3 and 7 days and adulterated with seawater (to simulate saline intrusion into the sewer network) achieved substantial odour and H_2S reductions
- There was no indication at all that dosing of KMnO_4 into raw wastewater, and raw wastewater containing sea water, resulted in increases in odour emissions



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