Incident Investigation Report

Site: Dunbar **Location: Active Cell**

Smartlog ID: **Investigator:** [redacted]

Obtain General Information							
Date and Time of Incident	28th August 2023 – 13:50						
Fatal or Major	☐	Serious	☒	Minor	☐	Damage Only	☒
First Response to Incident	Firefighting, gas isolation, smother with inert material						
Injured Person(s)	0						
Witness(es)	[redacted] & Viridor ERF called Fire Brigade						
First on Scene in order of attendance	[redacted], Fire Brigade, [redacted] [redacted]						
Equipment/Infrastructure	2 x Dozer – lost 7 x Gas wells lost 1 x Leachate well lost Cell to be monitored before recommencing waste inputs.						
Environmental Conditions	Temp 18 C, Rainfall morning Wind speed above average 15mph Wind direction – West, SouthWest						
Record - take photographs	See Appendix A of Google images						

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Collate Evidence	
Witness Statements	CCR, [redacted] [redacted]
Investigation Interview	[redacted] [redacted]
CCTV footage Valencia	Reviewed – no footage of flank. Footage of entrance documented for timelog.
CCTV footage Viridor	Fire started approximately 13:25
Procedure(s)	Fire Management Plan UEP – Surface Fire
SOP(s) / Work Instruction(s)	Out of Hours Response to Fire Compacting Waste Daily Cover
Risk Assessment(s)	Fire Risk Assessment Landfill Operations
Other	Permit Suspect loads – WTN/Ticket/Photos Site Safety Plan

Establish Circumstances

What happened? .

Whilst the site was closed, a fire started on the active cell. Fire was first detected by CCTV Operators in the ERF site at approximately 13:50 and reported to the emergency services. The fire was also noticed by a Valencia employee who had recently left site and was driving past. The Valencia employee notified CCR and met with the Scottish Fire Rescue Service (SFRS) at 14:00. Site Supervisor arrived at 14:51.

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Emergency Response:

SFRS made attempts to get water to the fire using the hydrant at the front of site, which was too far away for the available hoses. Further attempts were made to access water from a small lagoon at the base of the active cell. Access along this road was initially blocked and was cleared by the SFRS, however fire trucks could not use this access and there was insufficient pressure to retrieve water.

Fire continued to take hold for 50 minutes until Site Supervisor arrived at site, at which point work began to smother the fire with soils. All cover material received during the previous week had been applied by the end of Friday, so an area of inert material was identified and excavated from a location next to the cell (in in line with section 4.1 of the Fire Management Plan).

Operators attempting to cover the fire with soils did not construct an effective fire break to protect themselves and the machines from the heat, nor to effectively contain the spread of the fire. This resulted in machine breakdown due to overheating, ultimately resulting in the loss of both dozers which were being used to smother the fire.

The SFRS left site with the fire burning on Monday night whilst Valencia staff monitored throughout the night.

Valencia's external communication plan and procedure was not initiated until Thursday 31. Once the comms plan was activated the communications worked well, however it should have been activated immediately and the delay caused confusion and concern with members of the public in the immediate vicinity.

A Community Liaison Group (CLG) Meeting has been arranged for the evening of the 27 September to discuss the incident with local residents representatives'.

Incident Close-out:

On Tuesday 29th, Senior Management arrived and a further machine was transported to site. An effective fire break was then constructed and smothering of the area continued. SFRS were in attendance. Fire watch in operation.

By Thursday 31st, 75% of the area was smothered with cover materials.

The fire was confirmed out on Friday 1st September. Monitoring and temperature checks undertaken. See Appendix B for photos.

Conclusion	
Was there an immediate or underlying Root Cause Excess Vapes in waste stream are likely cause of fire, with potential ignition source rain. Appendix C The extent of incident was impacted by: • Limited experience in immediate response (e.g. ineffective fire breaks) • Breakdown in reporting escalation impacted Incident Control • Insufficient Emergency Preparedness (e.g. proximity of water availability) • Vehicle breakdown • No immediate external communications	**YES**
Preventative Action Required Review Fire Management Plans and Fire UEP – to include considerations for access to water/stockpiles of inert materials. Review and update 'grab bag' emergency procedure. Review of customer inputs into the site and communications strategy to explain the danger of lithium batteries (specifically Vapes). Potential banning of customers that continue to send material with a high proportion of material containing Lithium batteries from the site. Manager to ensure sufficient cover material has been applied at the end of each working day as per Permit requirements and Daily Cover Work Instruction.	**YES**

Lesson Learned Escalation hierarchy – notifying Senior Management and Relevant Authorities Emergency Preparedness and Response Prioritise external communications	**YES**
Training Required See Lessons Learned	**YES**
SOP / RA / FMP review required (Mandatory)	**YES**
HR Investigation required	**NO**
Insurance Claim	**TBC**
RIDDOR Reportable	**NO**
SEPA Reportable	**YES**
Environmental Impact Environmental monitoring data that has been collected since the fire occurred does not indicate any adverse impact on the surrounding environment. Of note: - There is no evidence of landfill gas migration in the perimeter borehole network. - Surface water quality remains in line with historic trends, showing no evidence of any contamination. - Groundwater quality has remained in line with historic trends. Monitoring of the surrounding environment will continue in line with Permit requirements.	**NO**

Action	Close Out & Remediation	TARGET DATE
1	**Confirm no Sub-Surface Fires** A monitoring plan is in place to monitor for the presence of any ongoing sub-surface fires. To date, monitoring data does not indicate any ongoing sub-surface fire, but as a precaution the monitoring plan will remain in place until the gas collection system is operating in line with normal parameters (noting that the system is still being operated conservatively to prevent air ingress.)	17/11/2023
2	**Inspect and Repair Cell Lining System** An inspection of the lining system has been undertaken. Very minor fire damage has been detected at the top of the sidewall liner; this poses no environmental risk. Patch repairs will be completed under the supervision of a CQA Engineer when engineering works are next undertaken on site (i.e., next capping project.)	31/12/2023
3	**Repair/Replace In Waste Environmental Control Infrastructure (Gas and Leachate Wells)** Any gas and leachate wells that were damaged by the fire will be repaired or replaced. This will be completed following the close out of Action 1.	31/12/2023
4	**Lessons Learned** Produce a Lessons Learnt document to be communicated to the business and actioned on all operational Valencia sites.	10/11/2023
5	**Refresher training – *Landfill Surface Fire Management Workshop*** Refresher training to be undertaken on how to manage surface fires with the operational team at Dunbar. Note that Toolbox Talks have already been undertaken with site-based site to cover inspection of incoming wastes, identification of potential fire hazards (e.g., vapes and batteries), and daily cover.	30/11/2023

Appendix A

Valencia

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Appendix B

Appendix C