|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Hazard | Receptor | Pathway | Risk Management Techniques | Probability of exposure | Consequence | Overall risk |
| Airborne lead dusts from the process  | Workforce Nearby businesses Local flora/fauna | Air  | Lead processing contained within the building. Operational process for cleaning to reduce build of internal dust. Annual air monitoring for Lead Pb. PPE for workforce (Health & Safety Measure)**Reference Documents:**[**Halo Operational Contingency Plan V1**](https://www.dropbox.com/scl/fi/ctrhjn2o4ub0wauysctuv/Halo-Operational-Contingency-Plan-V1.docx?dl=0&rlkey=s545iifukcyxfsit7bjr0x2ah) | Very Low when control measures are applied | - Nuisance to local environment if dust is not contained. - In the long term, dust has the potential to cause respiratory issues in workforce or people at nearby businesses | **Very Low** |
| Flooding: waste washed off site because of a flood  | Local area  | Flood  | Waste stored in secure containers | Low Local flood risk is 1 so it is an unlikely scenario.  | If waste is washed off site it may contaminate buildings / gardens / natural habitats downstream. | **Low** |
| Spillage of Liquids | Land and surface water | Battery acid leaching from battery casing  | Primary and secondary containment. Batteries delivered in Dolavs or IBC and inspected on receiptSite and site substrate maintenance.  | Battery acid could potentially seep into the ground if not correctly stored  | Land and surface water contamination  | **Low** |
| Release of Bulk Liquids from primary containment Battery acid diluted with water and sodium hydroxide collected from the process and stored in primary containment | Land and surface water  | Surface water drains and ground | Bulk liquids are stored within the operational plant which is bunded sufficient to contain >110% of the contents of the primary bunding.Maintenance of plant and equipment and secondary containment  | Very Low if control measures are adhered to and any escape from primary containment would be contained within secondary containment. | Liquid would spill into the secondary containment | **Very Low** |
| Noise & Vibration: The mechanical crushing process will generate some noise and vibrations as a result | Workforce Nearby Businesses | Air. Ground | Adhere to local noise constraints (decibels reading, frequency of activities)Monitor noise levels with boundary assessments. Maintain machinery so that no excess noise/vibration is producedPPE for workforce (Health & Safety measures) | Certain – noise will be produced | Nuisance to local businesses if there is too much noise - Compromise workforce safety (ear damage) | **Low** |
| Fire: potential from fire from materials stored on site if proper handling is neglected, in the event of a fire the firewater run-off could be contaminated and cause harm to the environment if measures are not put in place  | Workforce Nearby businesses Local flora/fauna Local watercourses | Air/wind & materials can spread fire, and firewater run-off can transport potentially contaminated water via watercourse | Separation of incompatible / combustible materials and ignition sources to remove potential ignition sourcesConsultation with waste carriers to ensure that battery chemistries are packaged and transported correctly. No smoking policy on-siteMinimise stockpile, incorporate fire-breaks in material storage Fire training and emergency drills Provision of fire extinguishers and fire safety equipmentStore materials on an impermeable surface within a bunded area in close proximity to foul drainage in order to prevent firewater run-off reaching the environment | Highly unlikely when control measures are applied. | Nuisance to local environment if dust is not contained. - In the long term, dust has the potential to cause respiratory issues in workforce or people at nearby businesses | **Very Low** |