**Non-technical Summary**

PGM Technologies Ltd are applying for an Environmental Permit for the treatment of contaminated scrap metal, and the associated waste storage, at their premises at Unit 5 Whitelea Grove Trading Estate, Mexborough S64 9QP.

The sole purpose of the activity is to recover Platinum Group Metals (Platinum, Rhodium and Palladium) from the demolition or cleaning of plant associated with nitric acid or caprolactum production. These metals are used as catalysts in those processes. Their degradation in use deposits them as a mixture of PGM and ferrous dusts on the internals of the reaction vessels.

The plant receives the waste as either complete or sectioned items of plant, or dust from their off-site cleaning activities.

The dust is delivered in drums and transferred on to recovery companies without treatment.

The scrap metal items are cut to manageable size in an enclosure with airborne dust captured by Local Extraction Vents (LEVs) and passed through a bag filter to remove the dust before venting to air. A mobile filtered vacuum cleaner is used to gather up the dust settled on the floor and walls.

The cut scrap is then placed in a tank of 10-15% hydrochloric acid, heated to 25$^{o}$C. This dissolves the ferrous dusts in the contamination and allows the PGM dust to fall to the floor of the tank as a 'wet sludge'. Vapours from the tank pass through a wet scrubber with automatic exhaust monitoring and the condensed vapours returned to the tank.

After 12-18 hours the metal is transferred to a rinse tank and washed with high pressure water to dislodge any remaining material.

The scrap is then stored in skips to be recovered by a permitted scrap merchant.

'Spent' acid (pH>2 and/or >10 ppm Fe) and wash waters are pumped through a filter press to remove any PGM residues, and then stored in bunded tanks outside the building to be removed to a permitted disposal site by a licenced waste carrier.

The PGM sludge is pumped through the filter press, with the acid or water supernatant pumped to the appropriate storage tank for disposal. The filter cake is stored in drums pending transport to a permitted recovery site.

The site expects to accept approximately 300 tonnes of contaminated waste steel per annum, along with 3 tonnes of waste cutting dust. All of this will be recovery by third parties. Approximately 240$m^3$ of waste acid/wash water will be produced by the process for disposal.

The site fully adheres to the EAs 'Chemical waste: appropriate measures for permitted facilities' guidance available at

https://www.gov.uk/guidance/chemical-waste-appropriate-measures-for-permitted-facilities

Sensitive receptors are detailed at 'Sensitive Receptors' elsewhere in this application, as is an Environmental Risk Assessment.