

Appendix 4 - Failure and Abnormal Event Summary Table						
Item No.	Odour Generating Process	Release Points	Abnormal Situation / Failure	Potential Outcome / Impact	Control Measure	Action (Responsible Person)
1	Decomposition of waste at a faster rate than normal.	Waste and Effluent storage areas.	Extended duration of hot stable meteorological conditions.	Elevated odour concentrations at potentially all receptors.	1.Meteorological forecasts. 2. Olfactory surveys. 3. Complaint monitoring. 4. Suspension of operations.	Site Environmental Officer and Health & Safety Officer to complete point 1-3 and advise when step 4 required. Site Managing Director to complete step 4.
2	Removal of animal waste.	Manure storage under the lairage.	Cleaning out area under lairage.	Elevated odour concentrations at receptors particularly those down wind.	1. Inform NRW in advance of activity starting. 2. Complete on a still day with little wind.	Site Environmental Officer and Health & Safety Officer to complete point 1-2.
3	Waste retained at site for longer than normal, so further along decomposition process before leaving site.	Animal by-products trailers.	Failure of by-products trailer to be removed at end of a day.	Elevated localised odour concentrations at site during storage. Potentially intermittent odour at receptors during movement off site.	1. Call contractor and determine what problem is and when they can remove the trailer from site. If it will be complete the next day no further action required. 2. If more than 1 day will pass before the contractor can remove the trailer contact a different contractor to remove the trailer.	Point 1 & 2 Operations Manager is responsible.
4	Waste retained at site for longer than normal, so further along decomposition process before leaving site.	Blood storage tank during collection.	Failure of blood to be removed at designated time.	Elevated odour concentrations at receptors, during collection particularly those down wind.	1. Call contractor and determine what problem is and when they can remove the blood from site. If it will be complete the next day no further action required. 2. If more than 1 day will pass before the contractor can remove the blood contact a different contractor to remove the blood.	Point 1 & 2 Operations Manager is responsible.
5	Waste retained at site for longer than normal, so further along decomposition process before leaving site.	General waste skip.	Failure of general waste to be removed at designated time.	Elevated localised odour concentrations at site during storage. Potentially intermittent odour at receptors during movement off site.	1. Call contractor and determine what problem is and when they can remove the general waste from site. If it will be complete the next day no further action required. 2. If more than 1 day will pass before the contractor can remove the general waste contact a different contractor to remove the general waste.	Transport Manager is responsible for point 1. Environmental & Technical Compliance Officer and Operations Manager is responsible for point 2.
6	Product retained at site, causes decomposition of product at a faster rate than normal.	Pet Food Soft Offal Container	Breakdown of the refrigeration system for the pet food soft offal container.	Elevated localised odour concentrations at site during storage. Potentially intermittent odour at receptors during movement off site.	1. Determine the length of time required to fix the refrigeration. 2. If longer than a couple of hours arrange for an alternative refrigerated container to be used. 3. Soft offal is stored in dolavs with ice to keep it fresh for longer. 4. If longer than 24 hours and an alternative container is not available dispose via animal by-products trailer.	The Site Maintenance Manager is responsible for point 1. The Operations Manager is responsible for point 2 and the Site Managing Director is responsible for point 4.
7	Effluent retained at site for longer than normal, so further along decomposition process before leaving site or being treated at ETP.	Pump pit, tank or effluent storage area within ETP.	Failure of a pump within a sump/tank/or ETP.	Elevated localised odour concentrations at site during storage.	1. Determine cause of failure and length of time required to repair pump, repair pump as soon as possible. 2. If standby pump has not automatically been switched on investigate and manually turn on. 3. If there is not a standby pump available at this location and the repair will take more than a couple of hours determine if a standby pump at another location can be used while the pump is being repaired. 4. If there is not another pump available for this purpose hire a pump to use in repair period. 5. If a pump can not be located cease effluent treatment operations and tanker from the system to prevent excessive build up of effluent or effluent stagnation. 6. All pumps are part of preventative maintenance schedule and are regularly checked by maintenance.	Site Maintenance Manager or Effluent Treatment Plant Operative responsible for points 1, 2, 3 and 4. Maintenance Manager responsible for point 5 once agreed with Site Managing Director. Site Maintenance Manager & or Effluent Treatment Plant Operative is responsible for point 6.
8	Effluent retained at site for longer than normal, so further along decomposition process before leaving site or being treated at ETP.	Pump pit, tank or effluent storage area within ETP.	ETP becomes hydraulically overloaded as ETP has not treated effluent to correct standard.	Elevated localised odour concentrations at site during storage.	1. Determine why ETP has not performed to correct standard and take remedial measures to correct cause of standard exceedence. 2. Arrange for tankers of effluent to be removed to another waste water treatment works.	The Effluent Treatment Plant Operative is responsible for point 1, Maintenance Manager & Environmental Officer are responsible for Point 2.
9	Waste retained at site for longer than normal, so further along decomposition process before leaving site.	Trailer below sludge press area.	Failure of sludge cake and screenings to be removed at designated time.	Elevated localised odour concentrations at site during storage. Potentially intermittent odour at receptors during movement off site.	1. Call contractor and determine what problem is and when they can remove the sludge cake and rotary screen screenings from site. If it will be complete the next day no further action required. 2. If more than 1 day will pass before the contractor can remove the sludge cake and rotary screen screenings contact a different contractor to remove this waste.	Point 1 & 2 Maintenance Manager is responsible.
10	pH is one of the controlling factors of the reactions that take place in the anoxic tank and aeration tank. If the pH is not within the optimum range effluent treatment may generate odour as the effluent will not be sufficiently treated at these stages.	Anoxic tank and aeration tank.	pH of anoxic tank drops below 6.5.	Elevated odour concentrations at receptors.	1. pH probe in influent to anoxic tank should alarm when pH falls outside the optimum range. A manual sample is complete every day and the pH is checked. 2. There are automatic dosing points for pH balancing in the ETP treatment process prior to the anoxic tank. If these have failed cause to be determined and repairs made. 3. pH buffer solution is available for addition to the tanks to give immediate impact to the pH within the tank. 4. The pH dosing pumps and points are part of a preventative maintenance schedule which involves manual checks.	The Maintenance Manager is responsible for points 1 to 3. The Effluent Treatment Plant Operative is responsible for point 4.

11	Effluent retained at site for longer than normal, so further along decomposition process before leaving site or being treated at ETP.	Pump pit, tank or effluent storage area within ETP.	Insufficient chemicals available to run ETP.	Elevated localised odour concentrations at site during storage.	1. Chemicals ordered with delivery organised as soon as possible. 2. Spare retention time within ETP utilised if delivery time will be one day. 3. Arrange for tankers of effluent to be removed to another waste water treatment works. 4. Bulk storage tanks allow 10 tonnes of both caustic and coagulant solutions to be stored lasting up to 6 weeks which is ample time to restock.	Environmental Officer and ETP Operative is responsible for points 1 and 4. Effluent treatment plant operative responsible for point 2. maintenance Manager is responsible for point 3.
----	---	---	--	---	--	--