BAT reference Number	*BAT Statement*	*Applicability to installation*	*Proposed/ in place*
5.1.1.1.	*Tank design* BAT for a proper design is to take into account at least the following: • the physico-chemical properties of the substance being stored • how the storage is operated, what level of instrumentation is needed, how many operators are required, and what their workload will be • how the operators are informed of deviations from normal process conditions (alarms) • how the storage is protected against deviations from normal process conditions (safety instructions, interlock systems, pressure relief devices, leak detection and containment, etc.) • what equipment has to be installed, largely taking account of past experiences of the product (construction materials, valve quality, etc.) • which maintenance and inspection plan needs to be implemented and how to ease the maintenance and inspection work (access, layout, etc.) • how to deal with emergency situations (distances to other tanks, facilities and to the	Applicable	Soiled water arising from washing procedures is stored in 2 no underground tanks located adjacent to Poultry sheds are built to Department Of Agriculture, Food and the Marine Specifications S123 *Minimum Specification for Bovine Livestock Units and Reinforced Tanks.* **Tank Integrity Testing** Tank Integrity Testing will be carried which will involve a visual inspection of all tanks on site for any cracks or leaks. This will be carried out once the tanks have been completely emptied for health and safety reasons. **Emergency Response Plan** An Emergency Response Plan and Procedures has been put in place to deal with which includes: • Identification of potential hazards that may be encountered during the operational phase. • Emergency telephone numbers including, local doctor, garda station and fire brigade along with numbers for other various response services including contact details for the Environmental Directorate. • Emergency response procedures for accidental spills, fire or injury to personnel. • Identification of the person in

	boundary, fire protection, access for emergency services such as the fire brigade, etc.). *Inspection and maintenance* BAT is to apply a tool to determine proactive maintenance plans and to develop risk-based inspection plans such as the risk and reliability based maintenance approach; see Section 4.1.2.2.1. *Location and layout* BAT is to locate a tank operating at, or close to, atmospheric pressure aboveground. However, for storing flammable liquids on a site with restricted space, underground tanks can also be considered. For liquefied gases, underground, mounded storage or spheres can be considered, depending on the storage volume. *Tank colour* BAT is to apply either a tank colour with a reflectivity of thermal or light radiation of at least 70 %, or a solar shield on aboveground tanks which contain volatile substances, see Section 4.1.3.6 and 4.1.3.7 respectively.		charge of the site and implementation of the emergency plan. The emergency plan will also detail information in relation to the incident which would have to be recorded in order to prevent a similar incident occurring again.
5.1.1.3.	*Safety and risk management* BAT in preventing incidents and accidents is to apply a safety management system as described in Section 4.1.6.1. *Operational procedures and training*	Applicable	**Emergency Response Plan** An Emergency Response Plan and Procedures has been put in place to deal with which includes: • Identification of potential hazards that may be encountered during the operational phase. • Emergency telephone numbers

	BAT is to implement and follow adequate organisational measures and to enable training and instruction of employees for safe and responsible operation of the installation as described in Section 4.1.6.1.1. <u>*Leakage due to corrosion and/or erosion*</u> BAT is to prevent corrosion by: • selecting construction material that is resistant to the product stored • applying proper construction methods • preventing rainwater or groundwater entering the tank and if necessary, removing water that has accumulated in the tank • applying rainwater management to bund drainage • applying preventive maintenance, and • where applicable, adding corrosion inhibitors, or applying cathodic protection on the inside of the tank. Additionally for an underground tank, BAT is to apply to the outside of the tank: • a corrosion-resistant coating • plating, and/or • a cathodic protection system. .		including, local doctor, garda station and fire brigade along with numbers for other various response services including contact details for the Environmental Directorate. • Emergency response procedures for accidental spills, fire or injury to personnel. • Identification of the person in charge of the site and implementation of the emergency plan. The emergency plan will also detail information in relation to the incident which would have to be recorded in order to prevent a similar incident occurring again. **Facilities** The buildings and their layout are state of the art for the industry. A thorough review was undertaken of best available techniques to minimise emissions from the development, and to maximise welfare conditions for animals and staff alike on site. The proposed animal houses are compliant with BAT. All buildings and tanks will be built to Department Of Agriculture, Food and the Marine Farm Building and Structures Specifications and BAT. All surface water from hardcore areas and roofs are diverted to an monitoring point identified as SW1 on the Site Layout Plan. This soiled wash water is discharged to the underground storage tanks.

	Instrumentation and automation to detect leakage BAT is to apply leak detection on storage tanks containing liquids that can potentially cause soil pollution. *Risk-based approach to emissions to soil below tanks* BAT is to achieve a 'negligible risk level' of soil pollution from bottom and bottom-wall connections of aboveground storage tanks *Soil protection around tanks – containment* BAT for aboveground tanks containing flammable liquids or liquids that pose a risk for significant soil pollution or a significant pollution of adjacent watercourses is to provide secondary containment For existing tanks within a bund, BAT is to apply a risk-based approach, considering the significance of risk from product spillage to the soil, to determine if and which barrier is best applicable. For chlorinated hydrocarbon solvents (CHC) in single walled tanks, BAT is to apply CHC-proof laminates to concrete barriers (and containers), based on phenolic or furan resins.		

	BAT for underground and mounded tanks containing products that can potentially cause soil pollution is to: • apply a double walled tank with leak detection, see Section 4.1.6.1.16, or • to apply a single walled tank with secondary containment and leak detection, see Section 4.1.6.1.17.		
5.2.1.	*Inspection and maintenance* BAT is to apply a tool to determine proactive maintenance plans and to develop risk-based inspection plans such as, the risk and reliability based maintenance approach; *Leak detection and repair programme* BAT is to apply a leak detection and repair programme. *Emissions minimisation principle in tank storage* BAT is to abate emissions from tank storage, transfer and handling that have a significant negative environmental effect, *Safety and risk management* BAT in preventing incidents and accidents is to apply a safety management system as described in Section 4.1.6.1. *Operational procedures and training* BAT is to implement and follow	Applicable	**Emergency Response Plan** An Emergency Response Plan and Procedures has been put in place to deal with which includes: • Identification of potential hazards that may be encountered during the operational stage. • Emergency telephone numbers including, local doctor, garda station and fire brigade along with numbers for other various response services including contact details for the Environmental Directorate. • Emergency response procedures for accidental spills, fire or injury to personnel. • Identification of the person in charge of the site and implementation of the emergency plan. • The emergency plan will include for training of employees with regards to potential hazards. The emergency plan will also detail information in relation to the incident which would have to be recorded in order to prevent a similar incident occurring again. Continuous visual monitoring and

	adequate organisational measures and to enable the training and instruction of employees for safe and responsible operation of the installation as described in Section 4.1.6.1.1.		inspections of the monitoring point SW1will be carried out weekly. All inspections will be recorded.
5.3.2.	BAT for sheds is to apply proper designed ventilation and filtering systems and to keep the doors closed. See Section 4.3.4.2.	Applicable	All buildings and tanks are built to Department Of Agriculture, Food and the Marine Farm Building and Structures Specifications and BAT.
5.3.4.	BAT in preventing incidents and accidents is applying a safety management system as described in Section 4.1.7.1.		An Emergency Response Plan and Procedures has been put in place to deal with which includes: • Identification of potential hazards that may be encountered during the operational stage. • Emergency telephone numbers including, local doctor, garda station and fire brigade along with numbers for other various response services including contact details for the Environmental Directorate. • Emergency response procedures for accidental spills, fire or injury to personnel. • Identification of the person in charge of the site and implementation of the emergency plan. • The emergency plan will include for training of employees with regards to potential hazards. The emergency plan will also detail information in relation to the incident which would have to be recorded in order to prevent a similar incident occurring again.

5.4.1.	BAT is to prevent dust dispersion due to loading and unloading activities in the open air, by scheduling the transfer as much as possible when the wind speed is low. However, and taking into account the local situation, this type of measure cannot be generalised to the whole EU and to any situation irrespective of the possible high costs. See Section 4.4.3.1. While driving, vehicles might swirl up dust from solids spread on the ground. BAT then is to adjust the speed of vehicles on-site to avoid or minimise dust being swirled up; see Section 4.4.3.5.2. BAT is to clean roads that are fitted with hard surfaces according to Section 4.4.6.12.	Applicable	Construction and operational procedures have the potential to generate dust emissions. The potential for impact from dusts depend on the distance to potentially sensitive locations and whether the wind can carry the dust to these locations. Most of the dust would be deposited close to the potential source and any impacts from dust deposition would typically be within several hundred metres or so of the construction area. *Mitigation Measures* • The site access road onto the public road will be regularly cleaned and maintained as appropriate. • The site will be regularly dampened during dry and/or windy conditions if required. • Vehicles delivering materials to site will be enclosed or covered with tarpaulins, where necessary. • Material handling systems and stockpiling of materials on site will be arranged to minimise exposure to wind. • During movement of soil/fill material both on and off-site, trucks will be covered with tarpaulins, where required. • Vehicles are to be kept in good working order and serviced regularly to minimise emissions. • Vehicles travelling on access roads will not exceed the designated speeding limit i.e. 20km.