SCHEDULE 5 RESPONSE ADDITIONAL INFORMATION (01/11/2016)

APPLICATION REF: PAN – 000505

OPERATOR: GRAYS BIOGAS LTD

FACILITY: MONA AD PLANT, MONA INDUSTRIAL ESTATE, GWALCHMAI LL65 4RJ

Additional information supplied by the Technical Provider

CONTAINMENT

2/ Proposed containment and control measures for Phase 2

There is no risk of spillage as apart from the sulphuric acid delivery, there are only closed systems in phase 2. There is (with the exception of the sulphuric acid delivery which is detailed separately), no unloading/filling that has to be done by manually coupling/decoupling pipes together

Additionally all the devices have level sensors and in case the overfill high level is reached, the process will stop to avoid an overfill scenario.

5/ Sulphuric acid delivery point

An operation procedure will be in place to ensure that no spills can leave the interfaces of the AD plant. The offloading of H_2SO_4 will only be permitted by the operator once the closure of the value after the attenuation pond has been closed. This valve will only be opened again after loading has been completed without spillages.

Copy of the operational procedures involving the delivery of sulphuric acid onto the Mona AD site and details of the sulphuric acid delivery point (wall mounted cabinet with filling line and integrated drip tray) are detailed below.

There will be a spill kit next to the connection cabinet to be able to trap the sulfuric acid and avoid a contamination of the drainage system. The general filling procedure is described as follows:

Refilling

Refilling the tank has to be operator supervised. It is a manual operation to amend for the potential harmfulness of sulphuric acid. To ensure the safety of the tanker operator, two emergency showers and eye showers are mounted. One is positioned inside the dryer hall, next to the sulphuric acid tank and the second one is positioned outside the dryer hall, next to the filling cabinet. When planning the tank refill, the exact amount of sulfuric acid needed has to be specified and ordered. Therefore an overfill scenario is avoided. Nevertheless, when refilling the tank with a tanker the level gauge has to be observed continuously while the tank is filled slowly. If the maximum filling level is reached, tanking is stopped. In case of unawareness there is a second line of defence L (-05BG302), which activates an acoustic signal (-05SG001) to ensure operators notice.

Because of the small amounts of sulphuric acid used a weekly, better a daily, check of the level to order refilling is performed. The maximum filling volume flow is 15 m^3/h.

The filling has to be conducted by at least two persons both wearing appropriate personal protection equipment. The plant operator has to check the ullage in the tank again and define the maximum volume pumped to the tank. The routine is as follows:

1. Check and make sure that both emergency showers and eye showers are accessible and working.
2. Check and make sure that spill kit is accessible and complete.
3. Close manual valve at attenuation pond outlet. **The site operator has to confirm and sign that these action was taken.**
4. Filling routine as described by the H2SO4 delivery company (Brenntag).
5. When filling is completed: Closing of manual membrane valve at the filling cabinet.
6. Disconnection of tanker hose.
7. In case of no spillage, opening of manual valve at attenuation pond outlet.

Spillage of H_2SO_4

If in the unlikley case there is a spillage at the tanker connection point there are several safety measures depending on the amount of sulphuric acid spilt. Any spillage has to be reported and cleaned before allowing anyone else into the area.

Small amounts can be collected inside the filling cabinet, which can be emptied by a drain valve at the underpart of the cabinet and then disposed appropriately.

If the filling cabinet cannot hold the amount of spilled sulphuric acid, a spill kit is lodged next to the connection point. The spill kit will has to be used to prevent the sulphuric acid from spreading outside the dryer hall and flowing into the draining system.

If in spite of all the fore-mentioned safe guards being in place, sulphuric acid has contaminated the draining system, the valve at the outlet of the attenuation pond is not allowed to be opened until the whole drainage system is cleaned and the acid is disposed.

In case of spillage the following steps have to be taken:

1. Close source of spillage (only when wearing suitable personal protection equipment).
2. Use spill kit to embank the sulphuric acid.
3. Use spill kit to absorb the sulphuric acid.
4. When the spilled H_2SO_4 is cleaned, the used spill kit absorbents have to be disposed appropriately to an authorized facility for disposal.