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Environment Building
Singapore 228231
DID: 67086188
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Your Ref : L3 New [redacted]

Our Ref : NEA/EP/PCD/[redacted]

Date: 2 Jul 2021

M/S [redacted] SINGAPORE PTE LTD
Attn Mr [redacted] (EHS & Facilities Manager)

Dear Sir

PROPOSED INSTALLATION OF AMMONIA GAS DRY SCRUBBER SYSTEM FOR M/S [redacted] SINGAPORE PTE LTD AT [redacted] JTC MEDTECH HUB @ MEDTECH PARK SINGAPORE [redacted]

- **Technical Details Submission for Alkaline Gas Dry Scrubber System**

Please refer to the above-mentioned proposal submitted on your behalf by M/s Advanteq Engineering & Construction Pte Ltd for the proposed new dry scrubber system for treatment of ammonia gases emitted from the Lab Instruments machine and ammonia gas cylinder storage cabinet at [redacted], [redacted] JTC MedTech Hub @ Medtech Park, Singapore [redacted].

2. We have in-principle no objection to the proposal, subject to compliance with the requirements:

a) Emissions from the proposed ammonia gas dry scrubber system shall comply with the emission standards as stipulated in the Environmental Protection and Management (Air Impurities) Regulations. For air impurities with no prescribed emission limits, the best practical means shall be provided to control the emissions to ensure that the emissions will not cause health hazard or nuisance problems.

b) The outlet of the proposed ammonia gas dry scrubber shall be properly positioned such that emissions are directed away from neighboring premises and would not cause any public nuisance.

c) Testing facilities shall be provided at the exhaust stack of the proposed ammonia gas dry scrubber and shall comply with the guidelines as included in the appendix.

d) Measures shall be taken, if required, to ensure the noise from the proposed development will not cause any noise nuisance. The noise level as measured at the boundary of the premises shall comply with the standards as stipulated in the Environmental Protection and Management (Boundary Noise Limits for Factory Premises) Regulations.

Yours faithfully

for DIRECTOR
DEVELOPMENT CONTROL AND LICENSING DIVISION
This is a digital signed document. No signature is necessary.

Cc: M/s Advanteq Engineering & Construction Pte Ltd
Attn: Mr Lee Choon Lye (Elvin)

Appendix

General Specifications for Sampling Holes
For Installation of Portable Monitoring Equipment

1 **Sampling Hole**

One 38-mm diameter sampling hole for gaseous pollutants or two 100-mm diameter sampling ports for particulate shall be provided at a straight portion of the exhaust stack/duct. The 38-mm diameter hole shall be located at least 1.5 times the stack diameters from any bend, inlet, outlet, constriction or any other air disturbances and the flow velocity is at least 5 m/s. The 100-mm diameter holes shall be located at least 8 stack diameters from any bend, inlet or constriction and at least 2 stack diameters below the stack exit. The two100-mm diameter holes shall be provided as shown in the diagram below: -

For exhaust stacks/ducts where the 8 and 2 stack diameter criteria cannot be met, the two 100-mm diameter holes may be located at least 2 stack diameters downstream and a half stack diameter upstream from any flow disturbances.

2 **Hole Fittings**

38-mm or 100-mm sockets (female thread) and 38-mm or 100-mm plug shall be fitted to the sampling hole. For steel stacks, sockets shall be flushed with inside of wall; on light gauge stacks sockets can be fixed to 250-mm gauge plate and held on with self-tacking screws. The socket shall be sealed with plug when not in use.

3 **Access Platform**

A steel platform with dimension of width 1.4 metres and length 1.7 metres shall be provided at a height of 1.4 metres below the sampling holes. The steel platform should be free of large openings and solid rails are to be fitted at 0.6 metres and 1.0 metres above the floor and with a kick-board 10-cm wide all around the platform. Permanent access ladder shall be provided to the platform.