

Annex G4

## Event and Action Plan for Landfill Gas Monitoring

**Annex G4**     *Event and Action Plan for Landfill Gas Monitoring*

| Event  | Action   |   |  |
|--|--|---|--|
|  | ET   | IEC   | Contractor   |
| Limit Level being exceeded for field monitoring at the perimeter monitoring wells      | <ul style="list-style-type: none"> <li>Investigate the cause(s) of exceedance</li> <li>Prepare the Notification of Exceedance within 24 hours</li> <li>Check monitoring data, all plant, equipment and the Contractor’s working methods</li> <li>Inform Contractor, IEC, Project Proponent and EPD (EIAO Authority) whether the cause of exceedance is due to the Project</li> <li>Discuss with Contractor and IEC for remedial measures required</li> <li>Ensure remedial measures are properly implemented</li> <li>Increase the monitoring frequency to daily if exceedance is due to the Project for monitoring wells in the areas where there is development within 250m of the SENTX Site Boundary and to weekly for other monitoring wells, until no exceedance of limit level</li> </ul> | <ul style="list-style-type: none"> <li>Verify the Notification of Exceedance</li> <li>Discuss with ET and Contractor on proposed remedial measures</li> <li>Review proposals on remedial measures</li> <li>Audit the implementation of the remedial measures</li> <li>Audit the effectiveness of the implemented remedial measures</li> </ul> | <ul style="list-style-type: none"> <li>Repeat field measurement to confirm findings</li> <li>Check the performance of landfill gas management system</li> <li>Rectify unacceptable practice</li> <li>Discuss with the ET and IEC and submit proposals for remedial measures to IEC</li> <li>Implement the agreed proposals</li> <li>Amend proposal if appropriate</li> </ul> |
| Limit Level being exceeded for the bulk gas sampling at the perimeter monitoring wells | <ul style="list-style-type: none"> <li>Check and compare the results of field monitoring and laboratory analyse of bulk samples</li> <li>If the results of field monitoring also show exceedance, the action(s) for limit level being exceeded for field monitoring would have been triggered</li> <li>If the results of field monitoring does not show exceedance, the sampling procedures should be checked and if deems necessary, to repeat the monitoring and recalibrate the portable monitoring instruments</li> <li>Notify the above findings to Contractor and IEC</li> </ul>   | <ul style="list-style-type: none"> <li>Verify the findings by ET</li> </ul>   | <ul style="list-style-type: none"> <li>Nil</li> </ul>  |

| Event   | Action   |   |   |
|---|--|---|---|
|   | ET   | IEC   | Contractor  |
| Limit Level being exceeded at the permanent gas monitoring system | <ul style="list-style-type: none"> <li>Investigate the cause(s) of exceedance</li> <li>Prepare the Notification of Exceedance within 24 hours</li> <li>Check the methane gas level at the perimeter monitoring wells, manholes or utilities duct</li> <li>Check monitoring data, all plant, equipment and the Contractor's working methods</li> <li>Inform Contractor, IEC, Project Proponent and EPD (EIAO Authority) whether the cause of exceedance is due to the Project</li> <li>Discuss with Contractor and IEC for remedial measures required</li> <li>Ensure remedial measures are properly implemented</li> </ul>   | <ul style="list-style-type: none"> <li>Verify the Notification of Exceedance</li> <li>Discuss with ET and Contractor on proposed remedial measures</li> <li>Review proposals on remedial measures</li> <li>Audit the implementation of the remedial measures</li> <li>Audit the effectiveness of the implemented remedial measures</li> </ul> | <ul style="list-style-type: none"> <li>Evacuate all staff in the concerned building</li> <li>Open the doors and window of all rooms on the ground floor</li> <li>Do not allow staff to go back to the room if methane level is higher than 1% gas</li> <li>Check the performance of the landfill gas management system</li> <li>Rectify unacceptable practice</li> <li>Consider changes of working methods</li> <li>Discuss with the ET and IEC and submit proposals for remedial measures to IEC</li> <li>Implement the agreed proposals</li> <li>Amend proposal if appropriate</li> </ul> |
| Limit Level being exceeded during surface emission monitoring     | <ul style="list-style-type: none"> <li>Repeat the measurement to confirm findings</li> <li>Investigate the cause(s) of exceedance</li> <li>Prepare the Notification of Exceedance within 24 hours</li> <li>Check monitoring data, all plant, equipment and the Contractor's working methods</li> <li>Inform Contractor, IEC, Project Proponent and EPD (EIAO Authority) whether the cause of exceedance is due to the Project</li> <li>Discuss with Contractor and IEC for remedial measures required</li> <li>Ensure remedial measures are properly implemented</li> <li>Increase the monitoring frequency to monthly if exceedance is due to the Project until no exceedance of limit level</li> </ul> | <ul style="list-style-type: none"> <li>Verify the Notification of Exceedance</li> <li>Discuss with ET and Contractor on proposed remedial measures</li> <li>Review proposals on remedial measures</li> <li>Audit the implementation of the remedial measures</li> <li>Audit the effectiveness of the implemented remedial measures</li> </ul> | <ul style="list-style-type: none"> <li>Check landfill gas management system</li> <li>Rectify unacceptable practice</li> <li>Consider changes of working methods</li> <li>Discuss with the ET and IEC and submit proposals for remedial measures to IEC</li> <li>Implement the agreed proposals</li> <li>Amend proposal if appropriate</li> </ul>  |

| Event   | Action  |   |   |
|---|---|---|---|
|   | ET  | IEC   | Contractor  |
| Limit Level being exceeded at the service voids, utilities pits, manholes and location of vegetation stress | <ul style="list-style-type: none"> <li>Repeat the measurement to confirm findings</li> <li>Investigate the cause(s) of exceedance</li> <li>Prepare the Notification of Exceedance within 24 hours</li> <li>Check monitoring data, all plant, equipment and the Contractor's working methods</li> <li>Inform Contractor, IEC, Project Proponent and EPD (EIAO Authority) whether the cause of exceedance is due to the Project</li> <li>Discuss with Contractor and IEC for remedial measures required</li> <li>Ensure remedial measures are properly implemented</li> <li>Increase the monitoring frequency to weekly if exceedance is due to the Project until no exceedance of limit level</li> </ul> | <ul style="list-style-type: none"> <li>Verify the Notification of Exceedance</li> <li>Discuss with ET and Contractor on proposed remedial measures</li> <li>Review proposals on remedial measures</li> <li>Audit the implementation of the remedial measures</li> <li>the effectiveness of the implemented remedial measures</li> </ul> | <ul style="list-style-type: none"> <li>Check landfill gas management system</li> <li>Rectify unacceptable practice</li> <li>Discuss with the ET and IEC and submit proposals for remedial measures to IEC</li> <li>Implement the agreed proposals</li> <li>Amend proposal if appropriate</li> </ul> |