

## APPENDIX F – FLAME SCANNERS AND SENSORS

Figures F.1 and F.2 depict the gas detector scan footprint (blue). The six combustible gas detectors monitor both hydrogen and natural gas levels in the equipment room in 1% increments of lower flammability limit (LFL). An alarm condition exists if 25% of LFL for either hydrogen or natural gas is reached. An emergency shutdown (ESD) is initiated when 50% LFL is reached for either hydrogen or natural gas.

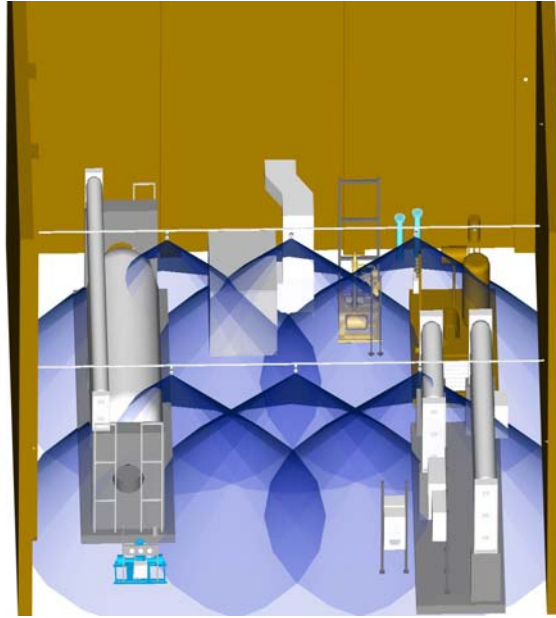


Figure F.1. Gas detector scan footprint (overhead).

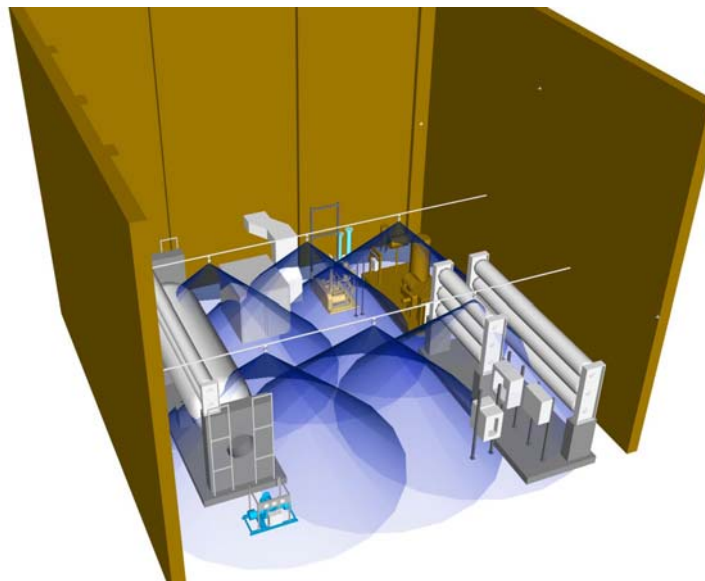


Figure F.2. Gas detector scan footprint (oblique).

Figure F.3 depicts the high-level IR/UV flame scanner footprint (red). The two scanners located mid-depth at a level of 35 ft above the floor elevation monitor the foot print space for sources of infrared or ultraviolet radiation. If a flame is detected, an ESD is initiated within 3 milliseconds.

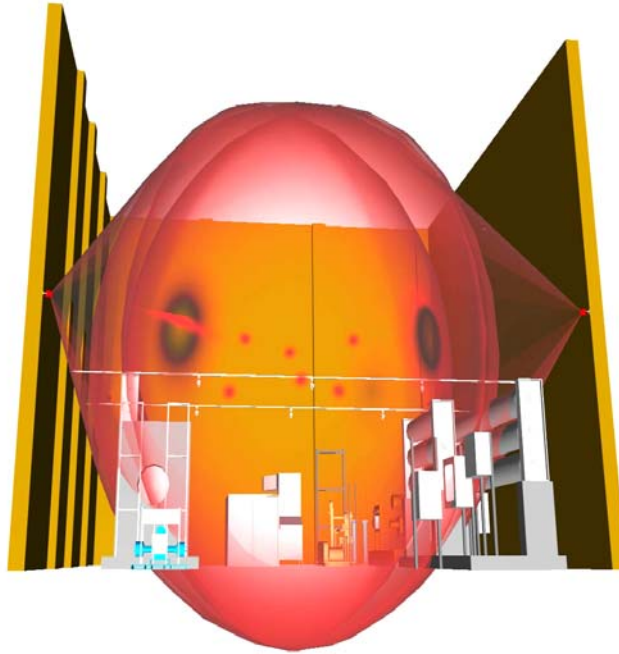


Figure F.3; IR/UV High Level Scanner Footprint (ground level)

Figure F.4 depicts the high-level IR/UV flame scanner footprint (red). The two scanners located mid-depth at a level of 35 ft above the floor elevation monitor the foot print space for sources of infrared or ultraviolet radiation. If a flame is detected, an ESD is initiated within 3 milliseconds.

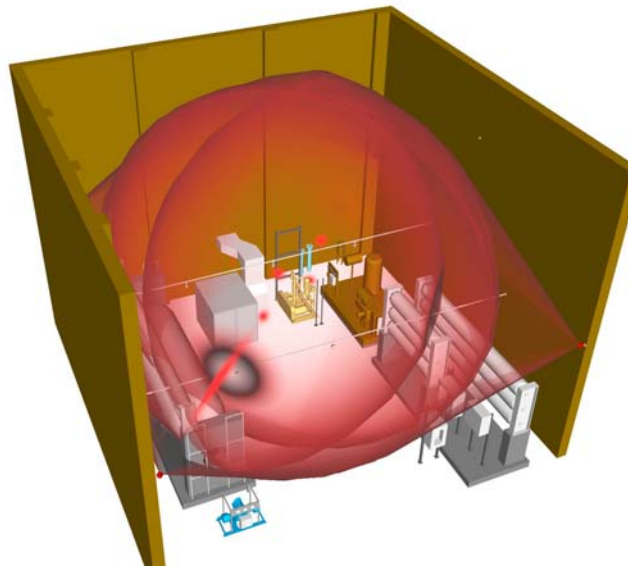


Figure F.4. IR/UV high-level scanner footprint (oblique).

Figure F.5 depicts the corner IR/UV flame scanner footprint (red). The four scanners located at the room corners at a level of 13 ft above the floor elevation monitor the foot print space for sources of infrared or ultraviolet radiation. If a flame is detected, an ESD is initiated within 3 milliseconds.

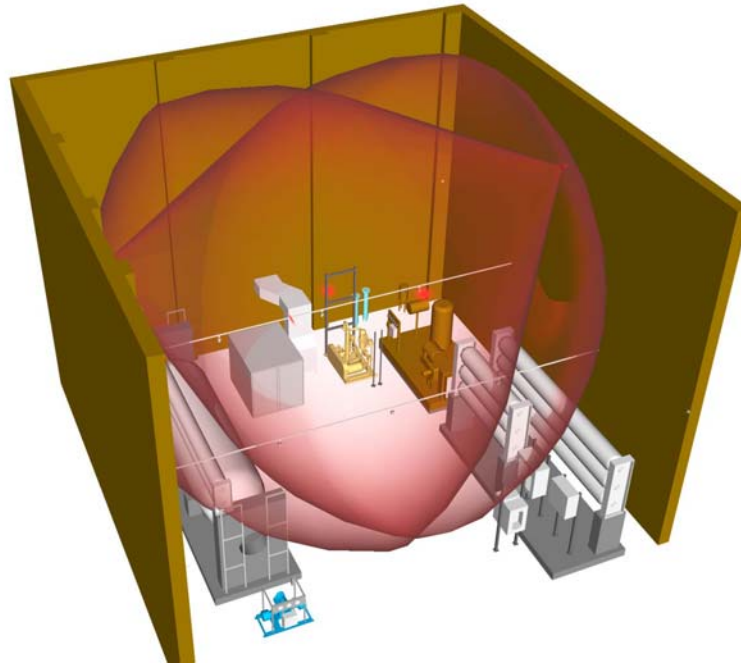


Figure F.5. IR/UV corner scanner footprint (oblique).

Figure F.6 depicts the corner IR/UV flame scanner footprint (red). The four scanners located at the room corners at a level of 13 ft above the floor elevation monitor the foot print space for sources of infrared or ultraviolet radiation. If a flame is detected, an ESD is initiated within 3 milliseconds.

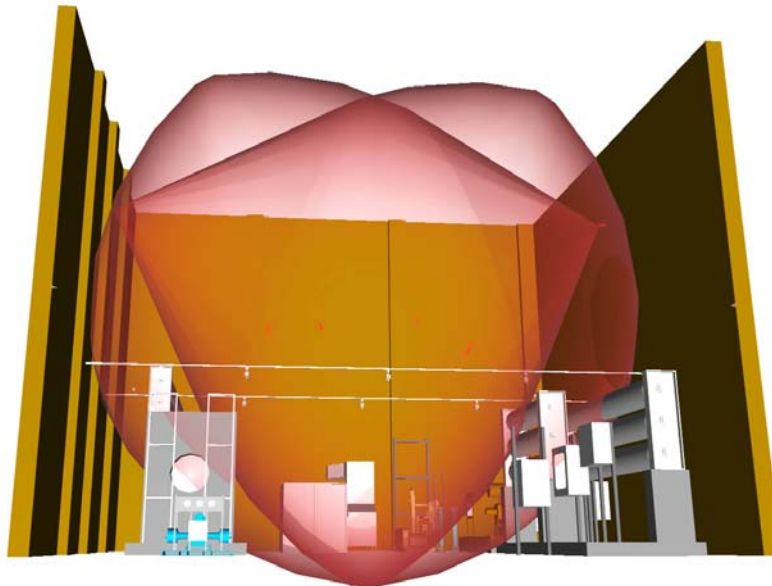


Figure F.6. IR/UV corner scanner footprint (ground level).