

device prevented the untimely switching on of the dilution air ventilator. A flame ionization detector was used to check if unburnt mustard was leaving the chimney. A paramagnetic oxygen analyser measured the oxygen content of the effluent gases to check the combustion process. The temperature of the effluent gases was also measured continuously, because if the temperature would become too low, the upper part of the chimney might be attacked by the corrosive action of sulphur dioxide and hydrochloric acid whereas too high a temperature would be detrimental to the chimney's mechanical stability.

23. The power for the installation was provided by two sets of 10 KVA electricity generators. The whole installation was controlled from within a Portakabin, which housed the control panels and the measuring instruments.

24. The portable pump unit was designed and built at the Prins Maurits Laboratory. The pump itself was an air-driven membrane pump with Viton membranes and teflon valves. A diesel engine air compressor supplied the pressurized air. Filters were installed to prevent clogging of the nozzles of the burner by particulate material. The system offered the following possibilities:

- (a) pumping of mustard from the storage tanks into the transport tanks;
- (b) backflushing of the suction line with oil to decontaminate the suction part;

(c) flushing of the pressure line with oil for decontamination and emptying this line by blowing some air through it. This procedure assured that virtually no mustard was spilled when disconnecting the transport tank from the pump unit.

25. The different functions were obtained by opening and closing valves according to a strict procedure.

26. A meteo mast was erected and the wind speed and wind direction were measured continuously at a height of 10 metres. The variations in wind direction were used to estimate the stability of the atmosphere. A portable measuring instrument for sulphur dioxide and semi-continuous measuring instruments for sulphur dioxide and hydrogen chloride were used to check the concentrations of these gases on and outside the artillery shooting range. The incinerator was constructed on a concrete foundation and was provided with lightning conductors.

27. A safety manual was written and strictly adhered to. During pumping, full protective gear consisting of mask, permeable protective clothing, boots and gloves were worn. This outfit was also worn when connecting the transport tank to the incinerator. Under the circumstances of high temperature and high humidity this put a large physiological burden on the personnel and could only be sustained for relatively short periods. In other situations as mentioned above, therefore, a partial protected posture was adopted which was changed to full protection only whenever liquid mustard was suspected to be present. Means for detection of mustard in liquid or gaseous form were available.

28. Decontamination and cleansing stations were set up near the incinerator and on the storage site. First aid means were available and medical assistance was assured by the presence of a medical doctor and an ambulance for transport to the Cimahi Hospital during the incineration phase.