

## APPENDIX 2

### SAMPLE TAKING AND ANALYSIS

For the analysis of the samples, three analytical chemists with Ph. D degrees specialized in toxicology were appointed. The samples were taken by the facility personnel under the supervision of the chemists.

It is worth mentioning that the points of sample taking were specified before the inspection proceeded.

The samples were taken in double by appropriate means and equipment such as sampling pumps.

The points where examples were taken were as follows:

- Raw material storage vessels and holding tanks.
- Reactor, before the initiation of the reaction, half time of the completion of the reaction and in the end of the batch time by using the sampling valve attached to the reactor.
- The dust on the filters of masks (in random selection) and the air conditioning system.
- Condensate of the reaction gases from the heat exchanger.
- The bottom flow and the upper flow of the distillation column.
- Pumps connected to the reactor before and after the operation, by washing with solvent. Because of the batch operation of the process, sample taking from the pumps did not disturb the production programme of the facility.
- Dust around the reactor area.
- Waste treatment area; (washing solvent and sludge). The sample taking was done by floating the sample jar.  
  
Soil around the waste treatment area.
- Dust on the filter of masks (in random manner selection) and air conditioning system.
- Product and byproduct storage vessels and drums (random order).

### ANALYSIS

Instrumental analysis was carried out for all samples including DDVP, to detect the purity compounds.

Instruments which were used are: