## ATTACHMENT 6 - MONITORING STRATEGY DURING MUSTARD OPERATIONS

H, HT, and HD shall be monitored as HD. Monitoring locations during mustard operations are illustrated in Figure 14. Table 20 details the monitoring equipment that will be used during mustard operations.

**Table 20 - Mustard Monitoring Application and Monitor Type**

| Analyte | Monitor/Equipment | Notes |
|---|---|---|
| NRT Monitoring | | |
| H, HD/HT[a] or HN-3 | MINICAMS® | MINICAMS configured with a PCT and an XSD or an FPD |
| Historical Monitoring | | |
| H, HD/HT[a] or HN-3 | DAAMS; GC | Quantitative analysis |
| Confirmation of NRT Alarm | | |
| H, HD/HT[a] or HN-3 | DAAMS; GC | Qualitative confirmation of MINICAMS alarm |
| Confirmation of Historical Monitoring[b] | | |
| H, HD/HT[a] or HN-3 | DAAMS; GC | Qualitative or quantitative confirmation of DAAMS or MINICAMS alarm |

Notes:

[a] H, HT, and HD shall be monitored as HD.

[b] If historical DAAMS tubes are analyzed on GC/MS, confirmation is not required.

DAAMS = Depot Area Air Monitoring System

FPD = flame photometric detector

GC = gas chromatograph

HD = distilled sulfur mustard

HN-3 = nitrogen mustard

HT = mustard-T mixture

NRT = near real-time

PCT = preconcentrator tube

XSD = halogen selective detector

During H/HD or HT operations, NRT monitoring for worker protection shall be conducted at the 15-minute STEL for HD [0.003 milligram per cubic meter ($mg/m^3$)] and process monitoring will be conducted at the VSL for HD (0.003 $mg/m^3$).

During HN-3 operations, NRT monitoring for worker protection shall be conducted at the 15-minute STEL for HN-3 (0.003 $mg/m^3$ ) and process monitoring will be conducted at the VSL for HN-3 (0.003 $mg/m^3$ ).

NRT monitoring shall be performed at the midbed or the postbed (stack) locations of the air filtration unit. Monitoring shall be performed using an HTSL interfaced with a MINICAMS located in the monitoring shed.

The MINICAMS monitoring the air filtration system unit shall operate in conjunction with an automatic stream selection system that allows collection and analysis of samples at each of the three levels of the midbed. In the event of an alarm at one of the midbed locations, the stream selection system will be manually switched to monitor the stack location.

The Permittee shall ensure a single MINICAMS will have the capability of monitoring at either the sample area/unpack area or the area above the waste drums by employing the use of a stream selection device. The stream selection device will be manually switched to the appropriate location depending on the operational procedure being performed at that time.

NRT monitoring of the sample area/unpack area shall be performed using an HTSL interfaced with a MINICAMS located in the monitoring shed. The HTSL shall be coiled and hung over the table in the unpack area such that it is less than 2 feet above the unpack table.

NRT monitoring of the waste drum area shall be performed using an HTSL interfaced with a MINICAMS located in the monitoring shed. The HTSL shall be coiled and hung over the waste drums such that it is less than 2 feet above the drums.

NRT monitoring of the Containment Vessel shall be performed using an HTSL interfaced with a MINICAMS located in the monitoring shed. The HTSL shall be coiled and hung over the Containment Vessel such that it is less than 2 feet above and slightly in front of the Containment Vessel door.

NRT monitoring inside the PDS shall be performed using an HTSL interfaced with a MINICAMS located in the monitoring shed. The HTSL shall be coiled and hung on the wall. This monitoring location serves for monitoring of potentially exposed workers.

DAAMS tube station for confirmation of NRT HD alarms shall be co-located at all NRT monitoring locations.

Confirmation equipment shall be co-located at the distal end of the MINICAMS HTSL located over the EDS Containment Vessel. A DAAMS tube station shall be used to collect confirmation DAAMS tubes in the event of an NRT alarm.

Confirmation equipment shall be co-located at the distal end of the MINICAMS HTSL located over the EDS unpack area. A DAAMS tube station shall be used to collect confirmation DAAMS tubes in the event of an NRT alarm.

Confirmation equipment shall be co-located at the distal end of the MINICAMS HTSL located over the EDS waste drums. A DAAMS tube station shall be used to collect confirmation DAAMS tube samples in the event of an NRT alarm.

Confirmation equipment shall be co-located at the distal end of the MINICAMS HTSL located inside the PDS. A DAAMS tube station shall be used to collect confirmation DAAMS tube samples in the event of an NRT alarm during operations. Note: Confirmation DAAMS tubes are not for use when monitoring potentially exposed workers.

DAAMS tube stations for historical monitoring shall be located at the filter inlet and at the postbed (stack). Each station shall consist of a primary and a confirmation tube.