

secure chain of custody for the samples from the facility to the off-site analytical laboratory. It was noted that a "secure container" would be required for samples.

#### 17. Analysis of samples

Samples of feedstock, product and reactor contents were analysed on-site by facility personnel in the presence of inspectors. Sophisticated analytical methods (gas chromatography (GC) and combined gas chromatography - mass spectrometry (GC-MS)) were used. Duplicates of these samples were also analysed off-site at a DOD lab. All samples requiring analysis at trace levels, including soil samples, wipe samples and waste water samples, were analysed at the off-site lab. The following analytical methods were used:

- nuclear magnetic resonance (NMR): for phosphorus and fluorine;
- gas chromatography (GC): for checking the on-site analyses;
- gas chromatography - mass spectrometry (GC-MS): for chemicals present at trace levels;
- ion chromatography: for fluoride ion;
- atomic absorption - inductively coupled plasma spectrometry: for phosphorus and sulfur.

#### 18. Types of analyses

On-site analyses were performed to verify the presence and purity of the declared chemicals to assist in determining the material balance. Off-site analyses were performed to validate these results and analyse for trace amounts of chemicals that might indicate previous production of Schedule [1] chemicals or non-declared Schedule [2] chemicals.

#### 19. Documentation of the inspection

The trial inspection was documented through still photographs of the DMMP reactor system and sampling points and video tapes of the principal activities.

#### 20. Evaluation by inspectors

The inspectors' evaluation covered the following aspects:

- deviation from initial plans;
- problems encountered;
- usefulness of inspection procedures;
- conclusions that could be drawn about the facility's activities; and
- matters or concerns about which no conclusions could be drawn.