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Investigating how SRS Fields can be used for Identifying Samples that may have Received Radioactivity from the Same Release Event as a Level 5 Sample

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Samples from International Monitoring System (IMS) stations which contain multiple CTBT-relevant radionuclides with abnormal activity concentrations (Level 5 for particulates) are sent to IMS radionuclide laboratories for further analysis. Since a reanalysis of spectra at IMS radionuclide laboratories might enhance the reliability of analysis results, it is proposed to investigate a method that can be used to identify potentially associated samples (that are most likely not categorized as Level 5) at the same or at neighbouring stations that may have received radioactivity from the same release event as the Level 5 sample. We investigate the methods to associate the Level 5 samples at an IMS station with the other samples at the same and at neighbouring stations using the source-receptor sensitivity (SRS) fields produced routinely for each sample by atmospheric transport modelling (ATM). This investigation can help to determine a suitable method for adding associated samples to the Standard Screened Radionuclide Event Bulletin (SSREB) of a Level 5 sample. This method can also be used to implement the triggering condition for sending samples to IMS radionuclide laboratories which may contain radioactivity from the same release event.

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Promotional text

The investigation on the methods to associate the Level 5 samples at an IMS station with the other samples at the same and neighboring stations are important for enhancement of IDC products.

Oral preference format

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