

CDC'S RADIOLOGICAL LABORATORY- A HISTORICAL PROSPECTIVE AND CURRENT CAPABILITES

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After 9/11/2001 there was a greatly renewed interest in terrorism preparedness. In late 2001 at CDC the Laboratory Response Network – Biological (LRN-B) was in existence for 2 years and the beginnings of the Laboratory Response Network – Chemical (LRN-C) was just established. At the time there was no radiobioassay capability at CDC to be able to respond to a public health emergency involving people contaminated with radionuclides. So, in 2002 the Director of the Division of Laboratory Sciences at the National Center for Environmental Health decided that CDC needed a laboratory to be able to respond to a public health emergency involving radionuclides. He directed the Elemental Analysis laboratory to develop analytical methods to identify and quantify the threat radionuclides in people so that critical medical management decisions could be made in a timely manner. The Elemental analysis lab leadership decided to visit several DOE labs as well as the FDA and EPA labs that were analyzing samples for radionuclides for workers, food, and environmental samples. This gave CDC an idea of how to approach the analytical issues without “re-inventing the wheel”. These visits and collaborations were very useful, but CDC could not simply implement their analytical procedures as they were not “fit for purpose” for rapid public health assessments. This talk will describe the reasoning, background, analytical methods, and methods automation for the development of the first and currently only radiobioassay laboratory in the country able to respond to a public health emergency involving people contaminated with radionuclides. In addition, several radiological incidents in which the radiobioassay laboratory has been involved with over the years using the analytical methods that were developed will be described.