stakeholders ample opportunity to fully address their concerns. EPA then met again with representatives of AMC and TFI, at their request, on February 25, 1994 to receive further information and hear their views on the matter.

This supplemental proposal was developed based on careful consideration of all information and comments received since the reporting exemptions for certain radionuclide releases were originally promulgated. EPA will develop a final rule on this matter based on combined information and comments received on both the November 30, 1992, NPRM and this supplemental proposal.

II. Regulatory Reporting Exemptions

A. Proposed Exemptions

EPA is proposing to broaden the present reporting exemption for land disturbance activities to include land disturbance incidental to extraction activities at all mines except certain categories of mines that are likely to handle raw materials with "elevated" radionuclide concentrations. The particular types of mines that would not be within the scope of the reporting exemption would be uranium, phosphate, tin, titanium, zirconium, hafnium, vanadium, and rare earth mines. For the purpose of this preamble and proposed rule, mines that extract monazite (a particular kind of rare earth mineral) for its thorium content are considered rare earth mines. Releases of naturally occurring radionuclides from land disturbance at all other types of mines would be exempted from CERCLA section 103 and EPCRA section 304 reporting requirements. For the purpose of this proposal, land disturbance incidental to extraction activities would include land clearing, overburden removal and stockpiling, and excavating, handling, transporting, and storing ores and other raw materials. Beneficiation and mineral processing activities, including the associated handling, transporting, and storing of bulk materials, would not be included within the scope of the exemption because such operations may tend to (1) concentrate radionuclides in waste streams or other materials well above natural background levels, and/or (2) result in substantially greater releases than associated with land disturbance incidental to extraction (e.g., smokestack emissions from smelters may far exceed fugitive releases from mining). Additionally, this broader exemption would exempt radionuclide releases from the subject land disturbance activities only from CERCLA section 103 and EPCRA section 304 reporting requirements, not from CERCLA response or liability provisions.

EPA also is proposing to broaden the existing exemptions for coal and coal ash piles to include radionuclide releases to and from coal and coal ash piles at all kinds of sites, not just sites where there is a coal-fired boiler. As with the broader land disturbance exemption, this exemption for coal and coal ash piles would apply only to CERCLA section 103 and EPCRA section 304 reporting requirements, not to the related response or liability provisions. In the 1989 final radionuclide RQ adjustment rulemaking, the reporting exemptions for radionuclide releases to and from coal and coal ash piles at boiler sites were granted based both upon the risks posed and the appropriateness of a federal response to such releases under CERCLA (54 FR 22529, May 24, 1989). The exemptions were limited to only boiler sites because there was sufficient information available to quantify the radiological risks of coal and coal ash piles at boiler sites, but not other kinds of sites. As discussed in more detail below, EPA is proposing today that a quantitative risk assessment is not necessary to support a CERCLA and EPCRA reporting exemption, if threshold questions about the appropriateness and feasibility of a federal response can be answered by a simple determination that radionuclide releases are at or near natural background levels. While this approach would be a departure from the detailed risk analysis performed for coal and coal ash piles at boiler sites, it would in fact be consistent with the original exemptions granted for undisturbed land holdings and land disturbance activities such as farming and construction, which were based on a qualitative review of radionuclide releases relative to background rather than a quantitative risk assessment.

EPA is proposing these broader exemptions for three primary reasons, which apply equally to both land disturbance at certain mines and to coal and coal ash piles at non-boiler sites. First, the concentrations of naturally occurring radionuclides in the different materials that would be subject to the exemption (e.g., overburden and ores in the subject mining sectors, coal, and coal ash) are generally within the range of "typical" background concentrations in surficial rocks and soils in the U.S. Second, EPA believes that a CERCLA response, to the release otherwise reportable, would be very unlikely and possibly infeasible or inappropriate, because (1) the concentrations of materials being handled are at or near

background, and (2) the resulting radionuclide releases are expected to be continuously low, spread over large areas, and widely dispersed in the environment. Third, the submission of individual notifications of these releases does not appear necessary for the government to assess whether a response action is needed, since the releases should be similarly low across all sites subject to the broader exemptions. As a result, the broader reporting exemptions are intended to allow EPA to focus its resources on the most serious releases and to protect public health and welfare and the environment more effectively and efficiently. At the same time, the exemptions would eliminate unnecessary reporting burdens on persons responsible for land disturbance at certain mine sites and any sites where coal or coal ash is stored or disposed.

With respect to radionuclide concentrations, EPA reviewed available data on the concentrations of naturally occurring radionuclides in surficial rocks and soils, as well as in various ores, coal, and coal ash. These data are presented in a Technical Background Document ("Technical Background **Document Supporting Proposed** Administrative Reporting Exemptions for Certain Releases of Radionuclides" available for inspection in the U.S. EPA CERCLA Docket Office (Mail Code 5201G), Crystal Gateway #1, 12th Floor, 1235 Jefferson Davis Highway, Arlington, VA 22202. As discussed in more detail in this document, typical concentrations of uranium-238 thorium-232, and their respective decay products in surficial rocks and soils in the U.S. hover around 1 picocurie per gram (pCi/g), although data developed by Myrick et al. 1 and other researchers show that uranium-238 concentrations may range from 0.12 to 3.8 pCi/g and thorium-232 concentrations may range from 0.10 to 3.4 pCi/g. Concentrations well above these typical values, however, are known to occur in certain hot spot areas of the country. For example, elevated radioactivity has been observed in association with certain faults and shear zones in the Reading Prong region of Pennsylvania, New York, and New Jersey, with uranium-York, and New Jersey, with 238 concentrations as high as 27 pCi/g being reported in one "profound case." Similarly, uranium-238 concentrations

¹ Myrick, T.E., B.A. Berven, and F.F. Haywood, "Determination of Concentrations of Selected Radionuclides in Surface Soil in the U.S.," *Health Physics*, Vol. 45, No. 3 (September), pp. 631–642, 1982

² Smith et al., "Radon: A Profound Case," Pennsylvania Geology, Volume 18, No. 2, p. 1–7, 1987