

Abbreviated Fact Sheet Informed Consent About the Rocky Flats Cleanup

*Contributors: Rocky Mountain Peace and Justice Center; Caron Balkany, Esq;
Jacque Brever, M. EPM*

1. Although the legislation creating the Rocky Flats National Wildlife Refuge requires that the designation as a refuge not result in lower cleanup levels than had RF been designated for other use, in fact the cleanup is less thorough than had RF been designated for housing, farming, or an urban park.¹
2. DOE's methods of sampling the soils to look for contamination actually overlook small areas of elevated concentrations of contamination and are not in compliance with the recommendations of the independent scientists hired by the Rocky Flats Radionuclide Soil Action Levels Oversight Panel.²
3. DOE will not be removing all contamination from the site.³
4. The price DOE was willing to spend on the cleanup was set behind closed doors, without participation of the citizens of Colorado, and was made before DOE knew how much would have to be cleaned up.⁴
5. DOE set the cleanup levels at RF by trading off more surface cleanup for less subsurface cleanup in order to save money.⁵
6. DOE and its contractor actually have an incentive to cut corners on the RF cleanup. Cleanup money that's been budgeted but is not spent for the RF cleanup will go to DOE's cleanup contractor, Kaiser Hill --which will pocket 1/3 of every budgeted dollar that isn't spent on the cleanup --and to DOE for other sites. And a maximum of 7% of the budget is being spent on actual cleanup of the soils and waters.⁶
7. DOE states that radioactive materials left in the subsurface soils will not move to where they can come in contact with people using the site for recreation as long as the soil isn't disturbed. But, some of this contamination -- as high as 3000 picocuries per gram --is to be found at depths as little as three feet below the surface. And DOE admits that disturbances such as snow and

wind and burrowing animals can move the contaminants. Also, U.S. Fish & Wildlife Service is planning construction in these areas, which will cause exactly the disturbance it needs to avoid. Hiking and horse riding will also disturb these areas and bring the contamination to the surface where it can be inhaled in the dust, causing a high risk of lung cancer, or tracked back into people's homes and cars on their shoes. And the heavy rains and winds at Rocky Flats will also disturb the soils and move this contamination so that people can come in contact with it.⁷

8. The International Commission on Radiological Protection has indicated for years that there is no safe level of exposure to radiation. The National Council on Radiation Protection and Measurements agrees. DOE, however, while acknowledging that there is some risk from the contaminants left at Rocky Flats, repeatedly states it's an acceptable risk.⁸

9. Government safety standards have been consistently changed to require lower levels of exposure as scientists learn more about the harmful effects of low-doses of radiation. A recent British study by the Committee Examining Radiation Risks of Internal Emitters, a group of government and independent scientists – recently concluded that plutonium in even low doses could be at least ten times more harmful than present radiation protections standards assume.⁹

10. Parents and others deciding whether to go to Rocky Flats have the right to know these and other facts about the risks at Rocky Flats so they can give an informed consent if they choose to go. The bottom line is that there is a dispute even among experts about what's safe --what's clean enough. That's why it's best to inform the public and let people make up their own minds.

¹ Private communications from Dr. Niels Schonbeck, Chemistry Dept at Metro State College.

² Compositing samples – taking soil from several different areas and combining it before analysis - is one of the principal method used for most of the Rocky Flats site. The kriging maps that DOE uses to show radionuclide concentration and distribution

rely on compositing of samples taken from relatively large areas. One of the tasks assigned by Rocky Flats Radionuclide Soil Action Levels Oversight Panel to the independent scientific group Risk Assessment Corporation was to propose sampling protocols. Their "Final Report. Task 6: Sampling Protocols, December 1999," submitted to the Radionuclide Soil Action Level Oversight Panel, states on p. 25: "RAC recommends that soil samples not be composited for the soil action levels study. Compositing soil samples eliminates information necessary to determine if small areas of elevated contamination are present in the survey unit. Therefore, the individual soil samples should be analyzed for their radionuclide contaminants."

³ The cleanup agreement allows DOE to leave concentrations of 50 picocuries of plutonium per gram of soil in the top 3 feet of soil. At a depth of 3-6 feet, the amount left behind can be as high as 1,000 picocuries per gram, and as much as 6,000 picocuries per gram can be left in small areas. Also, below 6 feet, there is no limit on how much plutonium is allowed to remain. Rocky Flats Cleanup Agreement (RFCA) Modifications, May 28, 2004.

⁴ Personal observations of Dr. LeRoy Moore and others who have been long time participants in the public processes at Rocky Flats.

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⁶ "With respect to the trade-off of more contaminated surface soil removal and possibly less subsurface removal, the RFCA Parties {Rocky Flats Cleanup Agreement} have always stipulated that they would have to make some difficult cleanup decisions." DOE/EPA/CDPHE, May 28, 2003, RFCA Modifications. General Comments. Cat. A, Page 12.

⁷ Contract, DOE and Kaiser-Hill.

"Haste makes waste: are we paying for cut-rate, shoddy military cleanup?" ***E: The Environmental Magazine***, Nov-Dec, 2003, by Tasha Eichenseher.

"Any budget that does not have to be devoted to Rocky Flats is available to reduce high priority risks at other DOE sites." DOE/EPA/CDPHE, May 28, 2003, RFCA Modifications, General Comments, Cat. H, Page 133.

"The approximate \$7 billion cleanup cost covers the entire cleanup effort from 1995 through closure, so much of this \$7 billion has already been spent. Most of these costs cover nuclear operations, removal of radioactive materials and wastes from site buildings, as well as the decontamination and demolition of these buildings." DOE/EPA/CDPHE, May 28, 2003, RFCA Modifications, General Comments, Cat. A, Page 12.

⁸ DOE/EPA/CDPHE, May 28, 2003, RFCA Modifications Memorandum Describing Final Approved Modifications to Rocky Flats Cleanup Agreement Attachments, Page 1;

"[T]he radionuclides in the surface soils could be mobilized by wind action (sustained winds over 50 miles per hour are not unusual at RFETS). This mobilization could result in transport of radionuclides to distant downwind locations. *** Surface water migration [of radionuclides] is most likely to occur during periods of intense rainfall, such as is associated with the summer thunderstorms common to the RFETS vicinity." EG&G Rocky Flats for DOE, 1994, *Final Proposed Action Memorandum Hot Spot Removal*, page 21.

⁹ National Council on Radiation Protection and Measurements, 2001. *Evaluation of the Linear-Nonthreshold Dose Response Model for Ionizing Radiation*, publication 136; *Final Report*, Committee Examining Radiation Risks of Internal Emitters, October 2004; LeRoy Moore, "The bait-and-switch cleanup," *Bulletin of the Atomic Scientists*, Jan/Feb. 2005.