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REMARKS
Chuck DILLSEY

attached is a draft letter to EPA re. its letter to APSC + Boulder. Please review and be prepared to discuss next wed. Mary Hamed will call you ~~tomorrow~~ to set up a time.

Frank Post

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1/12

2/13/87

Ms. Alexandra Smith
Acting Regional Administrator
U.S. Environmental Protection Agency
Region VIII
One Denver Place
999 18th Street, Suite 1300
Denver, CO 80202-2405

RE: Rocky Flats Compliance Agreement of July 31, 1986

Dear Ms. Smith.

We have reviewed EPA's recent letters of January 14, 1987 to the American Friends Service Committee of January 14, 1987 and of January 27, 1987 to the Honorable Linda Jourgensen on the above matter. We have serious reservations about several statements made in these letters and felt it was necessary to review our concern with you. Our comments on these matters are outlined below.

1. Scope of Compliance Agreement - Offsite Plutonium in Soil:

We do not concur with the implication of your letters that the Compliance Agreement was intended to cover, or does cover, further study or actions with respect to the matter of the extremely low concentrations of plutonium found in certain lands directly east of the Rocky Flats Plant. Our reasons for this opinion are as follows:

- a. The RCRA portions of the Compliance Agreement apply only to "hazardous waste" and "radioactive mixed waste". Plutonium, as "special nuclear material" under the Atomic Energy Act of 1954 is neither and RCRA specifically excludes "special nuclear material" from the definition of "solid waste" (42 U.S.C. 6903(27)). Accordingly, offsite plutonium in soils is clearly not regulated under RCRA or the RCRA portion of the Compliance Agreement.
- b. The CERCLA portions of the Compliance Agreement, contained within paragraph 10 ("Remedial/Corrective Actions") do not require additional actions with regard to offsite plutonium in soil for the following reasons:

(1) the parties to the Compliance Agreement recognized that DOE's CEARP Program is CERCLA-equivalent and would be used in lieu of the N.P.L. procedure. CEARP Phase I, (~~equivalent to the "Remedial Investigation"~~), completed in April 1986 and provided to EPA and CDH, concluded that: "Based on current data, existing conditions do not pose

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an environmental risk (EPA ¹⁹⁷⁷ 1976). Monitoring will be continued to detect any changes in existing conditions." Neither EPA nor CDH ~~CDH~~ made objection to this conclusion at the time and therefore we believed that all parties recognized that this matter was not part of the Compliance Agreement. Certainly there is no language in the Compliance Agreement directly supporting the inclusion of this subject. Accordingly, no work was planned to be done on this matter under CEARP Phase II.

(2) Neither the technical Schedules to the Compliance Agreement nor the work product delivered to date under such Schedules have dealt with offsite plutonium in soils. Such work products have included for example: a July 31, 1986 draft work plan for all identified actual or potential SWMU and CERCLA areas; a September 1, 1986 draft work plan for performance of feasibility studies; An October 31, 1986 comprehensive schedule for remedial investigation and feasibility studies; a November 28 1986 comprehensive site characterization, December 9, 1986 radioecology and airborne pathway data, and a February 16, 1987 list of high priority SWMU and CERCLA areas for corrective and/or remedial action. At no time since execution of the Compliance Agreement has EPA objected to submittals made thereunder on the basis that they did not address offsite plutonium in soils.

(3) This matter has been definitively studied previously by EPA, as indicated in paragraph (1) above. DOE's CEARP Phase I relied extensively on EPA's 1976 "Technical Assessment _____". Having studied extensively the public health effects of plutonium in soil on lands directly east of the Plant, EPA concluded that: "

_____".

It should be noted that the EPA conclusions were based on unrestricted use of the lands without the remedial action program provided for such lands in the lawsuit settlement discussed in page (4) below. It should also be noted that DOE has extensively studied this matter in its 1980 Environmental Impact Statement and in connection with the lawsuit discussed below. Extensive soil sampling and analysis was performed on plaintiffs' lands and a document entitled "Defendants' Analysis of Health Risks" was filed in that case. Additionally, the Plant has performed soil sampling and analysis on many other parcels of land around the Plant and has found no other areas which exceed background levels of plutonium. Accordingly both EPA and DOE, the two agencies charged with dealing with this subject, have conducted definitive studies on offsite plutonium in soils and have concluded that the health risks associated therewith is immeasurable.

(4) The case of Perry S. McKay v. United States, Dow Chemical, Rockwell International, State of Colorado and Jefferson County, Civil Action 75-M-1162, United States District Court for the District of Colorado significantly impacts this matter. In that case, Plaintiffs, owners of land near the Plant, including lands directly east of the Plant, sued for damages due to "plutonium contamination" of their lands. After ten years of court proceedings, this case was settled in December 1984 after extensive settlement negotiations directed by the Chief Judge, U. S. District Court. The Settlement Agreement was approved by the Department of Justice on behalf of the United States. The Settlement Agreement provided in part as follows:

- a. Plaintiffs' lands directly east of the Plant would be conveyed to the City of Broomfield and Jefferson County for use as "open space" by such entities.
- b. Rockwell and the Department of Energy agreed to do additional soil testing on such lands and to perform a remedial action program, consisting generally of plowing, discing and re-seeding, on those

portions of the lands which exceed Colorado's plutonium in soil guidelines entitled "R. H. 4.21. Permissible Levels of Radioactive Materials in Uncontrolled Areas," dated May 1973. Such remedial action program has already begun on a significant portion of such lands.

EPA, in a letter to the City of Broomfield of June 7, 1985, gave its approval to such remedial action plan. While reserving comment on "past radioactive releases from the facility found in the sediment at Great Western Venture" for possible CERCLA activity, the letter commented that in view of the low existing plutonium concentrations on such lands and the proposed remedial program to reduce such concentrations further to below the Colorado guidance, "if remedial action is conducted, special care should be taken to assure that other adverse environmental impacts are minimized, specifically impacts from soil erosion." It is significant to note that such letter did not reject the remedial action program and require full CERCLA/NPL treatment of this matter.

Additionally, as part of the Settlement Agreement, the Court was requested to make findings in the case. Such Findings of Facts and Conclusion of Law were issued by the Court on July 3, 1985. Included in such Findings are the following statements:

Pg. 7-8 "The results of the testing program can be characterized as follows: the lowest individual sample sites on plaintiffs' lands yielded values below the detection limits of the technology then available, the highest individual site yielded a value approximately 50 times the median background level; the median values for plaintiffs' land east of the Plant are 8 and 15 times the median background level, for the remaining plaintiffs' lands south and west of the Plant, the median values were between 37 percent (for heavily cultivated lands) of the median background level and 125 percent of the median background level. For an overwhelming majority of the sampling locations on plaintiffs' lands, the value for plutonium was less than one percent of the

total value for naturally-occurring, alpha-emitting radionuclides. The highest values for plutonium on plaintiffs' lands were below 25 percent of the total value for naturally-occurring, alpha-emitting radionuclides. (emphasis added)

Pg. 9-10 "Addressing the evidence before this court in a larger focus, the issue may be phrased in terms of what it shows concerning the reliability of the governmental agencies involved in the protection of the public from any health hazards caused by operations at the Rocky Flats Plant. As I observed in the Memorandum Opinion and Order entered in Good Fund, Ltd. - 1972 v. Church, supra, the Environmental Protection Agency has been given the responsibility for establishing generally applicable standards for protection of the general environment from radioactive material. That agency evaluated the hazards associated with the known releases of plutonium from the Rocky Flats Plant in a study in 1977, which was undertaken in connection with the EPA's issuance of a proposed guidance on exposure of persons to transuranium elements in the general environment. The conclusion of the EPA was that risks to persons who might occupy the lands adjoining the Rocky Flats Plant were insufficient to require restrictions on the use of those lands.

The proposed guidance which the EPA has issued seeks to insure that the risks to populations exposed to transuranium elements in the general environment is kept below 1 in 1 million per person per year for fatal cancers and genetic effects. To translate such a risk into an amount of transuranium elements which might become airborne from soil concentrations, the EPA established screening levels for soil concentrations of these materials. The screening level established by EPA in its proposed guidance was 200 millicuries per square kilometer in the top centimeter of soil. The EPA concluded that the dose limitations in its proposed guidance would not be exceeded if soil concentrations were below the screening levels. All of the results of soil sampling for plaintiffs' properties were well below the EPA's screening levels. (emphasis added)

Pg. 11-12 "While the levels of plutonium and americium in the subject land do not exceed the EPA's screening levels, there are areas which indicate soil concentrations in excess of the Colorado standard. Accordingly, the parties as a part of the settlement in this litigation have agreed to certain remedial measures to insure that concentrations on all of the lands would be below the State

standard. ... From all of the evidence now before this court, the general conclusion reached is that the lands involved in this litigation are suitable for the development and use anticipated in the settlement agreements, and that the remedial measures to be undertaken are sufficient to assure that the affected populations will not be subject to any elevated risk of adverse health effects from such use and development." (emphasis added)

It is DOE's view that these Findings are final and conclusive with respect to the lands involved in this litigation and the remedial action program therefor. Accordingly, no further study or action under CERCLA is required of plutonium concentration on these lands.*

(5) In addition to the above matters, it should also be noted that we have in the past advised you of our question as to whether releases of plutonium offsite would, under these circumstances, even fall within the coverage of CERCLA (See memo Currier/Lawrence, July 16, 1985). In any event we have recently called to EPA's attention language in the SARA Conference Report which states at page 241:

"Following notification under Section 103, where the EPA Administrator concurs that a response to source, special nuclear or by-product material (as defined by the Atomic Energy Act) is being conducted in accordance with the National Contingency Plan under other Federal statutes, docketing under subsection (c) is not required."

* It should be noted that sampling of the City of Broomfield's lands surrounding its Great Western Reservoir shows several locations where plutonium concentrations exceed the State standard. As part of the Settlement Agreement Rockwell and DOE agreed to perform the same remedial action program on such Broomfield lands.

We believe that this language could be applicable to our situation since: (1) EPA has been notified of the "release"; (2) the remedial action program is a "response" to "special nuclear material ... (as defined by the Atomic Energy Act); and (3) the remedial action program" "is being conducted in accordance with the NCP under other Federal statutes" (i.e. the Atomic Energy Act). EPA's letter to Broomfield of June 7, 1985 certainly could be considered the EPA concurrence.

For these reason, we believe that further action with regard to offsite plutonium in soil is not part of the Compliance Agreement nor required by CERCLA. Further, we believe that this matter has been conclusively analyzed by the cognizant federal and state agencies and the proposed remedial action plan reviewed and approved by such agencies as well as by the federal court. Accordingly, we do not propose to study this matter further under CEARP or the Compliance Agreement.

2. Scope of Compliance Agreement - Plutonium in Great Western Reservoir

The matter of further study of plutonium in sediment of the Great Western Reservoir (GWR) under the Compliance Agreement raises many of the same issues as does the plutonium in soil matter. Our position on this matter is outlined below.

- a. As indicated previously, RCRA does not regulate "special nuclear material." Accordingly, no RCRA provisions of the Compliance Agreement are applicable to the plutonium in sediment matter.
- b. With regard to the CERCLA portion of the Compliance Agreement, certain points need to be considered:

- (1) By way of background, EPA did consider plutonium in GWR as a factor in scoring the Rocky Flats Plant for inclusion on the NPL.

DOE made extensive comments to EPA on the Plant's proposed listing, including the difficulty inherent in using the "Mitre Model" for radioactive materials. The status of NPL listing for the Plant is unclear although under SARA an extensive process of evaluation is required before listing of federal facilities on the NPL.

(2) CEARP Phase I addressed plutonium in sediment issue and made the following findings:

Great Western Reservoir. Small amounts of plutonium-239 have accumulated in the sediments of the Great Western Reservoir, which lies approximately 1.5 mi east of the eastern edge of the plant boundary. Part of the influent into this body of water is from the north and south forks of Walnut Creek, both of which flow east from the plant site. Great Western Reservoir (3,250 acre ft) is used as part of the municipal water supply for the city of Broomfield and has the capacity to support about 14,500 persons.

Numerous studies of plutonium and americium concentrations in the Great Western Reservoir have been made, including two by the EPA and others (EPA 1973, EPA 1975; Krey 1975, Thomas 1981, Setlock 1983). These studies have shown that detectable levels of plutonium exist at depth in the sedimentary column, but that the levels of radioactivity present (higher than fallout levels) do not constitute an environmental hazard. The plutonium in this sedimentary column is firmly attached to particulates, does not exhibit post-depositional migration, and is very insoluble in water.

The total plutonium and americium inventories (based on a single core sample) in the Great Western Reservoir are estimated at 244 mCi plutonium and 73 mCi americium, with most of this activity located in the deep sediment deposits at the eastern end of the reservoir (Thomas 1981).

Rockwell International has collected an extensive data base on the Great Western Reservoir to address plutonium concentrations in reservoir sediment as related to plant operations (Setlock 1985a). Analyses of more than 60 sampling locations within the reservoir have shown that sedimentation rates within the reservoir are not uniform, but rather sediments accumulate at a higher rate in the eastern (deeper) portion of the reservoir. In addition, these data validate the studies performed in the 1970s showing fallout levels of plutonium in sediments from above-ground weapon tests conducted elsewhere in the 1950s and 1960s. Sediment core

profiles show plutonium concentrations peak at depth (former deposition), and indicate that no post-depositional migration is occurring in the sedimentary column (the plutonium is fixed to particulates at depth). Data from this study will be used to update inventories of radioisotopes in the Great Western Reservoir.

The naturally occurring radium-226 in surface and domestic waters near the plant represents a much greater relative contribution to public radiation exposure than do traces of plutonium. The measured activity of radium-226 has been 100 to 1,00 times greater than that of plutonium (Thomas 1981). Therefore, no additional studies will be performed on the Great Western Reservoir under CEARP. (emphasis added)

CERCLA Finding - Measured radioactivity below EPA screening levels; verification will be made under CEARP Phase V; therefore, a CERCLA finding for FFSDIF, PA, and PSI is not appropriate, nor is HRS or MHRs scoring.

Planned Future Action - Based on current data, existing conditions do not pose an environmental risk (EPA 1976). Monitoring will be continued to detect any changes in existing conditions. Based on this data, appropriate actions will be taken.

No objection to this Phase I Report or its conclusion that no further action other than monitoring was received from EPA at the time.

(3) The only report submitted under the Compliance Agreement which addresses GWR was the December 19, 1986 Radioecology and Airborne Pathway Survey Report. In the Report several extensive studies of plutonium in GWR sediment were reviewed and the Report concludes that:

"Because concentrations of plutonium are low and the plutonium is bound to sediments, no measureable health hazards are expected as a result of drinking Great Western Reservoir water (Setlock 1985). This is confirmed by background levels of plutonium observed in routine surface water samples over the past decade. ..."

"The above studies indicate that although plutonium is present in aquatic sediments on and near the Plant, there is no evidence of

an ecological hazard. The majority of the plutonium is tied up with sediment, the sediment is relatively immobile, and relatively little bioaccumulation of plutonium was found."

(4) In view of the matters set forth in paragraphs (2) and (3) above, we believe that all necessary work on plutonium in sediment in GWR under the Compliance Agreement has been completed and no additional work is planned. If and when EPA lists the Rocky Flats Plant on the NPL and plutonium in sediment in GWR is one of the reasons, we will consider this matter further at that time.

3. Exclusion of High Level Radioactive Waste (January 14, 1987 EPA Letter).

We disagree that "other transuranic materials are within the scope of the agreement provided the transuranic material falls within the definition of hazardous or mixed waste... ." By definition in the Agreement "transuranic material" is different from and not a part of "hazardous waste" or "radioactive mixed waste". The words in the definition of "transuranic material", "which shall be stored and ultimately shipped to DOE's Waste Isolation Pilot Plant," are words of description, not exclusion.

Accordingly it is our view that any transuranic material which is not to be shipped to WIPP is outside the scope of the Agreement and continues to be subject to DOE's exclusive authority and control.

In conclusion, we feel obligated to point out our disappointment over the EPA's issuance of the referenced letters. It appears to me that difficult technical, legal, and policy issues can best be resolved through detailed discussions and negotiations between our respective agencies rather than through the issuance of public statements, particularly to groups

whose interest in the environment is secondary to hidden political agendas. We remain available to discuss these matters with EPA at any time or place convenient to EPA.

Sincerely,

Albert E. Whiteman
Area Manager

cc:

A. J. Hazle, Dir, Rad Control Div, CDH
J. J. Chavez, Ofc of Gen'l Counsel, DOE, HQ
J. Axelrad, Dir, Torts Br, Dept of Justice, Wash, DC