



DEPARTMENT FOR HEALTH SERVICES

CABINET FOR HUMAN RESOURCES

COMMONWEALTH OF KENTUCKY

FRANKFCRT 40621-0001

DOCKET NUMBER ^{19,}
PROPOSED RULE PR 20,21 et al
(59 FR 6792)
DOCKETED
USNRC

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April 11, 1994

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
ATTN: Docketing and Service Branch

RE: 10 CFR Part 76, Proposed Rule: Certification of Gaseous
Diffusion Plants.

The statement in the Background section indicating the gaseous diffusion facilities have operated safely for approximately 40 years is incorrect. For example, operation of the Paducah Gaseous Diffusion Plant (PGDP) by the U.S. Department of Energy for the past 40 years has led to significant environmental problems at the facility, including radiological and chemical contamination of groundwater, soil, and surface water. In addition, the PGDP has been proposed for inclusion on the National Priorities List. Oversight by the U.S. Nuclear Regulatory Commission (NRC) of these facilities must be conducted in a manner to ensure protection of worker and public health and safety and ensure no further impact on the human environment. 10 CFR 76 must be structured to ensure compliance of the Corporation with all applicable state and federal requirements.

Section 76.35 details the contents needed in the application, such as environmental and effluent monitoring data and other information for compliance status which should be provided to the Commonwealth of Kentucky for evaluation. Kentucky, as an NRC Agreement State, should be provided all information which impacts its citizens. Furthermore, Kentucky conducts an extensive environmental monitoring program to evaluate the impacts of the PGDP on health and safety. Radiological and other information generated by the Corporation, either in its application or during operations, could supplement data collected by the Commonwealth and could provide for a joint state and federal evaluation of the impact on public health and safety. Gathering of this information should not place a burden on the Corporation and will provide valuable long-term insight into operations at the facilities. The NRC should also provide health and safety information to Kentucky in order to assist in ongoing efforts to protect health and safety and the environment.

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The Commission has specifically requested comments on paragraphs 76.35(k) and 76.45(l) as to whether they should be eliminated from the proposed 10 CFR Part 76. Section 76.35(k) and 76.35(l) should not be eliminated since this information appears critical to certification and continued evaluation of the facilities.

Section 76.35(k) deals with waste management issues such as waste streams, volumes of waste, etc. while the facility is operational. This information is essential to the Commonwealth of Kentucky and the Central Midwest Interstate Low-Level Radioactive Waste Compact in their evaluation of the operational status of the diffusion plant, especially with regard to waste generation and the Corporation's need for storage, treatment and disposal at a regional facility.

Section 76.35(l) is applicable to all waste generated at the facility during its operational life and is especially critical to addressing the volumes of depleted uranium (DU) that will be generated during operation of the facility. Disposal of the DU will be required at shutdown of the facility; therefore, 76.35(l) will be necessary to ensure final disposal of this waste stream.

These subsections do not appear to be limited to final decommissioning of the facilities since they deal with ongoing waste management at the facilities. Any interpretation of these paragraphs as being limited to decommissioning appears to be outside the intent of the Act and NRC's mandate which requires protection of public health and safety. Without continual evaluation of waste streams and management of waste, it is likely the facilities may encounter difficulty in meeting and maintaining certification requirements. It would appear that NRC must require the Corporation to adhere to all NRC requirements in 10 CFR Part 61 and NRC's Branch Technical Position on Waste Form (January 1992).

Based on DOE's past operation history and oversight, NRC must maintain regulation of these facilities through decontamination and decommissioning. More importantly, NRC is developing decommissioning criteria for contaminated facilities and these requirements must be applicable to the diffusion plants in order to ensure timely and proper decommissioning. Any program for final decontamination and decommissioning should involve the host state since the health and safety of its citizens and their environment could be adversely impacted by improper cleanup and release of radioactive material from these facilities.

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In the Section on Technical Safety Requirements (page 6795), it is indicated that the Corporation must provide a level of protection from accidents which limits the total radiation dose to the whole body of 25 rems at the site boundary. In this section it is stated that this level was chosen because "there is little risk of permanent damage in the event of an accidental release." Table 2-4 (attachment 1) from the U.S. Environmental Protection Agency's *Manual of Protection Actions for Nuclear Incidents* (EPA 520/1-75-001-1, January 1990) with updated chapters 1, 2 and 5 indicates the level of risk for a 25 rem dose does not support this statement. Plans to address accidents must utilize USEPA's *Manual of Protection Actions for Nuclear Incidents*. Furthermore, protection of public health must, at a minimum, utilize the requirements of 10 CFR Part 20, 40 CFR Part 61, and 40 CFR Part 190. In addition, all dose to workers and the public and release to the environment must be maintained "as low as reasonably achievable."

Section 76.60 must include the applicable regulatory requirements of 10 CFR Part 61 which deal with waste classification and waste stabilization. These requirements are essential for the proper handling and disposal of all waste at these facilities.

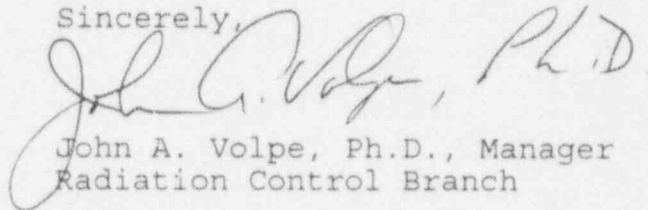
Section 76.68 should not allow the Corporation to make changes at these facilities without modification of the certificate. Given the past lack of oversight at these facilities, it is unreasonable to allow the corporation to make changes without first notifying the Commission. Clearly, any modification to the facility or processes must be conducted through the proper regulatory channels and receive NRC's approval. Without such approval, no mechanism exists to protect workers, public health and safety, and the environment.

The provisions of 76.76 should become effective immediately when 10 CFR Part 76 becomes final. No justification exists for allowing the Corporation additional time to demonstrate compliance with all applicable state and federal requirements. This facility has operated for over 40 years and it is past time for the facilities to come into compliance. Furthermore, no change in contractor has occurred at these facilities and many of the Corporation staff have come from DOE who have worked at these facilities; therefore, no justification exists for delaying the implementation of 10 CFR Part 76. If the Commission allows a delay, they should determine how workers and public health and

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safety will be protected. Finally, the Commission should also establish the mechanism for compliance with other applicable standards and requirements which are in place.

Sincerely,

A handwritten signature in dark ink, appearing to read "John A. Volpe, Ph.D.", written in a cursive style. The signature is positioned above the typed name and title.

John A. Volpe, Ph.D., Manager
Radiation Control Branch

ATTACHMENT 1

Table 2-3 Health Effects Associated with Whole-Body Absorbed Doses Received Within a Few Hours* (see Appendix B)

| Whole Body Absorbed dose (rad) | Early Fatalities ^b (percent) | Whole Body Absorbed dose (rad) | Prodromal Effects ^c (percent affected) |
|--------------------------------|---|--------------------------------|---|
| 140 | 5 | 50 | 2 |
| 200 | 15 | 100 | 15 |
| 300 | 50 | 150 | 50 |
| 400 | 85 | 200 | 85 |
| 460 | 95 | 250 | 98 |

*Risks will be lower for protracted exposure periods.

^bSupportive medical treatment may increase the dose at which these frequencies occur by approximately 50 percent.

^cForewarning symptoms of more serious health effects associated with large doses of radiation.

Table 2-4 Approximate Cancer Risk to Average Individuals from 25 Rem Effective Dose Equivalent Delivered Promptly (see Appendix C)

| Age at exposure (years) | Appropriate risk of premature death (deaths per 1,000 persons exposed) | Average years of life lost if premature death occurs (years) |
|-------------------------|--|--|
| 20 to 30 | 9.1 | 24 |
| 30 to 40 | 7.2 | 19 |
| 40 to 50 | 5.3 | 15 |
| 50 to 60 | 3.5 | 11 |