ARCO

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December 16, 1993

Docket Clerk
U. S. Environmental Protection Agency
Mail Stop LE-131
Air Docket No. A-93-27
Room M-1500, First Floor Waterside Mail
401 M Street, SW
Washington, DC 20460

RE: Comments on Advance Notice of Proposed Rule Making
Radiation Site Cleanup Regulations, 40 CFR Part 195

Dear Docket Clerk:

Attached are two copies of the Atlantic Richfield Company's (ARCO) comments on Environmental Protection Agency's (EPA) Advance Notice of Proposed Rulemaking (ANPR) regarding Radiation Site Cleanup Regulations, 40 CFR Part 195. The ANPR was published by the EPA in the Federal Register (FR 58, 54474), October 21, 1993.

ARCO is commenting because it owns the Bluewater Uranium Mill Site (Site) which is located near Grants, New Mexico. The Site is a Title II site licensed by the U. S. Nuclear Regulatory Commission (NRC) under Atomic Energy Act (AEA) and is being remediated under an NRC approved Decommission and Reclamation Plan.

ARCO, as a member of American Mining Congress (AMC), incorporates the comments separately submitted by the AMC on the ANPR into this submittal. ARCO appreciates the opportunity to comment on the ANPR and respectfully requests EPA's consideration of these comments.

Sincerely,

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Project Manager

/cah

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COMMENTS ON
EPA'S RADIATION SITE CLEANUP REGULATIONS;
ADVANCE NOTICE OF PROPOSED RULEMAKING
58 Federal Register 54474 (October 21, 1993)

Submitted by

Atlantic Richfield Company
Bluewater Uranium Mill Site
Grants, New Mexico

The U. S. Environmental Protection Agency (EPA) is developing regulations that will set forth requirements for cleanup levels for sites contaminated with radionuclides. EPA requested comments on the issues under consideration regarding cleanup requirements in an Advance Notice of Propose Rulemaking (ANPR) published at 58 Federal Register 54474 (October 21, 1993) and Issues Paper on Radiation Site Cleanup Regulations. The Bluewater Uranium Mill Site (Site) located near Grants, New Mexico is owned by the Atlantic Richfield Company (ARCO). The Site is a Title II site licensed by the U. S. Nuclear Regulatory Commission (NRC) under the Atomic Energy Act (AEA). The Mill at the Site was decommissioned in 1990 under an NRC-approved Decommissioning Plan. Currently, the remediation of the mill tailings at the Site is in progress under an NRC-approved Reclamation Plan. ARCO has reviewed the ANPR and the related Issue Paper on Radiation Site cleanup regulations. ARCO concurs with EPA that radiation sites must be cleaned up to provide protection to human health and the environment. ARCO is pleased to provide the following comments on some issues discussed in the ANPR for effective regulations.

Statutory Authority and Current Regulatory Controls

EPA states in the ANPR that the new regulations will apply to al sites contaminated with radioactive material which are either subject to the Atomic Energy Act (AEA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). EPA states that it is establishing the regulations under its AEA authority to develop site cleanup guidance and regulations for radioactive material. However, NRC regulations currently exist, also under AEA, that address radiation contamination and cleanup that

provides sufficient level of protection of human health and the environment. EPA asserts in the ANPR that it is coordinating its efforts with NRC through a Memorandum of Understanding (MOU) and states that if EPA determines that NRC's regulatory program achieves a sufficient level of protection of the public health and the environment, EPA will propose that the NRC licensees be exempt from the EPA radiation site cleanup regulations. ARCO believes that coordination between EPA and NRC is very crucial to avoid duplicative regulation which would be unreasonable and burdensome to both NRC licensees and the agencies.

While a dual approach to regulations may help assure the EPA that its cleanup regulations and NRC's decommissioning standards are consistent, it will create a duplicative regulatory framework that is unnecessary and unwarranted. An example of this occurred when EPA developed radon emission standards under the Clean Air Act (CAA), 40 CFR Part 61 Subpart T, for the disposal of uranium mill tailings. EPA finalized numerical standards that were the same as NRC's existing standards in 10 CFR Part 40. However, because of EPA's unfamiliarity with the current NRC process and plans for reclaiming uranium mill tailings sites, EPA imposed compliance periods that were literally impossible for any NRC licensee to meet, causing industry concerns about unavoidable noncompliance. Since the NRC and the Department of Energy (DOE) have the necessary expertise and most familiarity with uranium mill tailings sites, EPA should limit its role to issuing generally applicable guidance to the NRC and DOE and allow those agencies to develop the regulations accordingly.

In fact, sufficient guidance and standards which meet the goal of protecting human health and the environment already exist for uranium mill tailings sites subject to the AEA. Even EPA's Issue Paper for the ANPR acknowledges this fact. EPA's regulations (40 CFR Part 192) established under the Uranium Mill Tailings Radiation Control Act (UMTRCA) adequately addresses uranium mill tailings cleanup. NRC, who regulates the sites through licenses, also has regulations (10 CFR Part 40) for uranium mill tailings developed under its AEA authority that were made consistent with EPA's 40 CFR Part 192. Currently, the majority of the NRC licensed mill tailings sites have been or are in the process of being reclaimed pursuant to those regulations. In addition, the mill tailings sites have agreed with

EPA and the NRC on schedules for expeditious completion of tailings reclamation. Since the industry is in the process of site remediation, any consideration of changes from the current regulatory requirements would be unnecessarily disruptive and costly. Therefore, ARCO suggests that uranium mill tailings sites should be exempted from EPA's radiation site cleanup regulations.

Level of Protection

In the Issues Paper, the EPA is considering four basic approaches for establishing cleanup levels: to levels of detection; to background levels; to risk-based levels or a range of risk-based levels; or to Technology based levels. EPA's objective is to limit exposure to acceptable levels.

Cleanup levels should be based on a practical dose or risk level consistent with guidance from the (International Commission on Radiation Protection (ICRP) and National Council on Radiation Protection and Measurements (NCRP). As Low As Reasonably Achievable (ALARA) considerations should then be employed to adjust the levels for site specific circumstances. An example of this approach occurred when EPA established the indoor radon concentration limits. The exposure to ambient levels of radon daughters is known to be present at an elevated calculated risk relative to exposure to ambient levels of most other radionuclides. However, because of practical considerations, EPA established acceptable but realistic limits that are elevated compared to those of nuclear industry. This flexibility must be incorporated into EPA's regulations. The cleanup levels for radiation contamination must consider, rather than be established at, detection limits and background levels. ARCO agrees with EPA that it is technically impractical and infeasible to reduce concentrations to the detection limit. Cleanup to incremental levels that are within the variability in naturally occurring radionuclide concentrations within a region of the country may also be imprudent.

Establishing radiation cleanup levels at the CERCLA risk levels of 10^{-6} to 10^{-4} would be inappropriate for many radiologically contaminated sites. In most situations, a risk of 10^{-6} will result in cleanup of radionuclides below detectable limits and definitely far below

background concentrations for the natural series of radionuclides. This risk range would correspond to an external exposure rate of about 0.003 to 0.3 μR/hr. This is about 0.02 to percent of the natural background levels from the external exposure pathway alone. As ndicated in EPA's Issues Paper, there are several limits and standards that are established under AEA by EPA, NRC, and DOE that adequately provide protection to human health and the environment. NRC's and DOE's approach of annual radiation dose limit and application of ALARA below the limit of 100 mrem assures protection to workers, the public, and the environment to the maximum extent practical. Therefore, ARCO recommends a risk level that is based on a practical, incremental risk level above background, which is flexible enough and which is consistent with the existing standards.

Regulatory Approaches

The four basic regulatory approaches for the cleanup regulations that EPA is considering are dose or risk limit, look-up table, look-up table and pathways model, and a technology requirement. EPA's comparison of criteria for these approaches in Table 3 of the Issues Paper clearly indicates that the dose or risk limit would be most appropriate. This approach is most consistent with other current environmental regulations. The regulatory approaches taken under EPA's regulations for CERCLA (40 CFR Part 300), CAA (40 CFR Part 61), and AEA (40 CFR Part 191) consist of either dose or risk limits. NRC's regulations under AEA in 10 CFR Part 20 (Standards for Protection Against Radiation), and 10 CFR Part 61 (Land Disposal of Radioactive Waste) consist of dose limits. Also DOE's regulations under AEA for disposal of radioactive waste, and standards and requirements for protection of the public and the environment against undue risk from radiation consist of dose limits. Consistency of using dose or risk limit approaches in various environmental regulations, as noted above, satisfies EPA's criterion of consistency with existing regulations. Moreover, this approach is also flexible enough for any future coverage of NORM and mixed waste.

The look-up table approach considered by EPA is not appropriate since it treats all sites alike. Standards for use at a remote site should be significantly different from those used in urban areas for protection of human health and the environment. The look-up table

approach normally leads to over-conservative standards as it is based on risk assessments using generic and fallacious default values since this approach cannot accommodate a wide range of site specific information. Parameters other than the source term are rarely measured with a degree of certainty that would be required for use in place of the default value. This naturally leads to all sites being treated identically and an overprediction of the risk. This approach will also not provide EPA flexibility to properly address mixed waste.

The technology-based approach considered by EPA is the least appropriate as it requires a risk standard or some form of target cleanup level linked with a technology requirement. This approach would be very difficult for EPA to enforce and for industry to comply with. There are vast amounts of technologies that are applicable for various physical and chemical forms of radioactive contamination. One technology would not be applicable for all sites, and would hinder rather than aid in adequate and expeditious cleanup. Therefore, this approach does not appear suitable to every situation. Site-specific conditions require technology tailored to the site for an adequate and efficient cleanup. ARCO believes that the disadvantages of this approach far outweigh any advantages described in the Issue Paper.

Summary

ARCO concurs with the policy that the decommissioning of nuclear facilities should be done in such a manner that adequately provides protection to human health and the environment. In order to effectively use resources, generally applicable guidance on acceptable dose or acceptable risk should be established. Site-specific cleanup should then be conducted using the ALARA Policy that has been so successfully used throughout the nuclear industry. The acceptable risk should be at a level that prevents attempted cleanups to small fraction of the variability of the radiation that already exists in the natural environment. Look-up tables or standard methods where calculations are based on generic and conservative scenarios and model parameters appear to prevent realistic risk assessments and thus do not provide realistic protection of human health and the environment.

EPA might consider a program to evaluate any impact of the diffuse NORM materials, recognizing that because of the large quantities of material normally involved and levels of natural radiation in the environment, levels of acceptable risk comparable to that used in the CERCLA program (10^{-6} to 10^{-4}) may have an unacceptable impact on those industries. Each industry should be evaluated on its societal value and the costs weighed accordingly.

NRC's regulatory program, developed under its AEA authority, achieves a sufficient level of protection of the public health and the environment. Coordination between EPA and NRC through the MOU is very crucial to avoid counterproductive duplicative regulation at sites with radioactive material subject to AEA since adequate regulations and standards for cleanup of uranium mill tailings sites have already been established by the EPA, NRC, and DOE to protect human health and the environment. Because these sites are already in the process of remediation or are in the planning stages consistent with the existing regulations, ARCO believes that any changes in the regulations or the regulatory framework would be disruptive and result in undue delays of site remediation. Therefore, ARCO recommends that the mill tailings sites be exempt from EPA's radiation site cleanup regulations.