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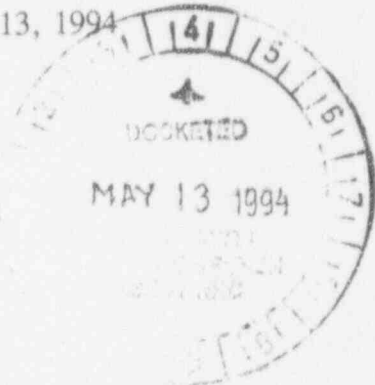
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ATLAS CORPORATION |

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 Vice President of Environmental
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May 13, 1994



The Honorable Samuel J. Chilk, Secretary
 U.S. Nuclear Regulatory Commission
 Washington, D.C. 20555
 Attn: Docketing and Services Branch

Re: **Reclamation of Atlas Corporation's
 Uranium Mill Facility at Moab, UT
 Intent to Prepare an Environmental Impact Statement**

Dear Secretary Chilk:

Atlas Corporation submits these comments in response to the Nuclear Regulatory Commission's (NRC) notice of intent to prepare an Environmental Impact Statement (EIS) and conduct a scoping process for the EIS on the decommissioning and reclamation of Atlas' uranium mill facility at Moab, Utah. 59 Fed. Reg. 14912 (March 20, 1994).

As the Commission is aware, Atlas strongly believes that its proposed reclamation plan as last revised in April 1993 to satisfy revisions in NRC stabilization requirements and in accordance with NRC license conditions noted in NRC's notice of intent to approve the revised reclamation plan (58 Fed. Reg. 38796 (July 20, 1993)) will assure adequate protection of public health and safety and the environment. Atlas' plan meets NRC's 10 CFR Part 40, Appendix A requirements and should be approved. Nonetheless, in the interest of addressing concerns raised by NRC, the State of Utah, federal agencies and the general public, Atlas intends to continue to cooperate with NRC as it undertakes the EIS process.

These comments set forth several points for NRC to consider in developing the scope of the EIS and in preparing the actual statement.

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Introduction

During the April public meeting in Moab, the NRC staff emphasized that:

the [determination to prepare an] environmental impact statement does not mean that we have made a decision that the tailings should be moved. In fact, the environmental impact statement is an evaluation of Atlas' proposed action, which is reclamation of the tailings in place and considering reasonable alternatives, one of which is moving the tailings pile. But, the focus of the EIS is of reclamation in place, the licensee's proposed actions... Going to an EIS did not mean we necessarily decided that the tailings need to be moved. (Tr. at 5) (Emphasis added.)

Atlas urges the Commission to adhere firmly to this position not to proceed under a presumption that moving the tailings pile will be necessary or warranted. Atlas also agrees with the Commission and the State of Utah (Tr. at 11) that the EIS's detailed analysis of the reclamation options should be limited to on-site stabilization of the tailings and the primary alternative of moving the tailings pile to the airport site (Alternative A).

It is Atlas' position that given the long history of NRC licensing and regulation at the Moab site a wealth of data exists on all aspects of the site including critical aspects of the proposed reclamation plan. Therefore, it should be necessary to update existing data or develop new data only when studied analysis suggests it is absolutely necessary.

NRC has stated repeatedly that reclamation plans must satisfy NRC requirements and that there is no need or requirement for a plan to be the very best plan imaginable. The EIS should explain the applicable statutory and regulatory requirements that drive NRC's uranium mill tailings regulatory program to put into context the relevance of the Appendix A criteria and the site-specific nature of reclamation decisions. Atlas' reclamation plan has not just appeared out of the blue. It has been modified several times since the original submission in 1981 under NRC guidance to meet changing NRC requirements. It presently meets those requirements. Atlas respectfully requests that in reviewing the Atlas plan the Commission consider this historical context in applying its criteria to the site-specific circumstances at the Moab site, but at the same time to do so in a manner consistent with recent approvals of reclamation plans at other Title II sites and other 11e.(2) sites in Utah.

To that end, to satisfy the requirements for an EIS, NRC must evaluate the "net impact" of the two prime alternatives. The net impact will require analysis of several components including

the "net risk" to public health and the environment and the "net economic impact" of the alternatives, as well as the "net regulatory impacts" and related complexities, and costs thereof. Off-site burial would create more risks to public health and the environment, more costs and more regulatory complications than the on-site reclamation plan. Instead of decreasing public health risk, moving the tailings pile will likely result in substantially increasing the risks to public health and the environment.

In the final analysis, a decision to move the tailings pile should not be based on "perceptions" or "beliefs" or "feelings", but only for sound technical reasons -- that is, reasons why in place stabilization will not satisfy NRC requirements and reasons why Alternative A would do so more effectively in terms of cost and risk.

The following comments develop more fully these guiding principles for the EIS.

I. Background - The Reclamation Plan

The Moab uranium mill and tailings site has been strictly regulated and licensed by NRC since the mid-1950's. Based on extensive data, a materials renewal license was issued in 1988. Atlas submitted its original reclamation plan to NRC in 1981. The plan was revised in 1988 and 1989 due to changes in NRC requirements. Again, in April 1993, in response to NRC's questions and comments on Atlas' proposed reclamation plan and changes in NRC requirements, Atlas submitted a modified plan (prepared by Canonie Environmental Services Corporation). All these submittals were in response to changing regulatory requirements. As summarized in the 1993 Canonie report, the major modifications and clarifications to the plan include:

1. Regrading of the top of the impoundment to create a depressed channel versus an original domed top configuration to promote surface water drainage. This modification significantly reduces the anticipated settlement of the tailings and the associated potential for damage to the final cover, provides greater long-term stability of the impoundment, and minimizes materials handling quantities, exposed tailings, and reclamation costs.
2. Reducing the soil cover thickness for radon attenuation purposes, based on an increase in the allowable radon emanation rate from 2 pCi/m²/sec to 20 pCi/m²/sec since the time of the original reclamation plan submittal to the NRC (Dames & Moore, 1981).

3. Providing designs for riprapped surface water control ditches, rock armor slope protection of the reclaimed tailings disposal impoundment embankments, and soil/rock matrix erosion protection of the reclaimed tailings disposal impoundment top.
4. Relocating and reconfiguring of the Moab Wash Channel to contain the Probable Maximum Flood (PMF) and minimize the flood's impact on the reclaimed site. (Canonie report, p. 2) (Emphasis added.)

Atlas has never attempted to avoid its reclamation responsibility, but rather has always responded to NRC inquiries or requirements to modify its plan to satisfy NRC requirements.

II. The UMTRCA Regulatory Program

As an initial matter, the EIS needs to explain the UMTRCA regulatory program and the site-specific flexibility built into the criteria governing disposal of uranium mill tailings to the public at large. One of the purposes of UMTRCA, is upon termination of uranium mill operations, "to stabilize and control such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public health." 42 U.S.C. § 7901. UMTRCA and the regulatory program developed under the Act provide for site-specific flexibility in determining compliance with the regulations. UMTRCA provides that a licensee may propose alternatives to specific requirements that:

take into account local or regional conditions, including geology, topography, hydrology and meteorology. The Commission may treat such alternatives as satisfying Commission requirements if the Commission determines that such alternative will achieve a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with such sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by standards and requirements adopted and enforced by the Commission for the same purpose and any final standards promulgated by the Administrator of the Environmental Protection Agency...42 U.S.C. § 2114.

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Appendix A to 10 C.F.R. Part 40 notes that "in many cases flexibility is provided in the criteria to allow achieving an optimum tailings disposal program on a site-specific basis." (Emphasis added.)

Indeed, flexibility is a critical component of NRC disposal decisions since the criteria sometimes may appear to be in conflict. For example, Criterion 3 notes that the "prime option" for tailings disposal is below grade placement. Many sites, though, have above-ground tailings piles that were in existence long before the UMTRCA regulatory program was developed. If this criteria were strictly applied, causing all of these piles to be moved for burial below grade, there would be a conflict with Criterion 2 which dictates against creating multiple disposal sites. NRC recognizes this problem and, therefore, looks at site-specific circumstances. While below grade disposal may often be the best option, NRC has allowed above-ground disposal where, according to NRC, burial would not necessarily provide greater stability. For example, the NRC recently approved an above-ground disposal plan for another tailings pile in Utah.

Thus, it is important that NRC explain its regulatory program in the EIS so that the public can understand the realities of the operating framework. For example, NRC should explain that where a groundwater standard cannot be met at the point of compliance (POC), a licensee must undertake a correction action program (CAP). Even where NRC limits are exceeded beyond the POC, if there is a CAP in place (which may include Alternate Concentration Limits (ACLs)), then the licensee is in compliance with NRC requirements. NRC must ultimately determine whether a CAP, which may include an ACL, provides adequate protection for public health and the environment. Again, this involves consideration of site specific factors. For example, with respect to the Moab site, the EIS needs to acknowledge that there is not an aquifer beneath the site (in terms of a usable source of groundwater) that would be impacted. In light of this, NRC must evaluate the realistic impact of the potential threat to public health and the environment from any contamination that can be attributed to tailings seepage, if any.

The flexibility inherent in the existing mill tailings regulatory program must be reflected in the EIS. Most of the uranium mill tailings (including the Atlas pile) were in place before these UMTRCA-driven requirements became effective and, as a result, these requirements were developed and have been implemented with that basic fact in mind. The legislative history of UMTRCA demonstrates that Congress was concerned with the law's impact on existing licensees as follows:

The Committee notes that many of the provisions of the [Mill Tailings] Act may make it difficult for existing licensees to comply with because of the financial impact or the time it will take to do so. The NRC should take such factors into account.¹

III. Reliance on Existing Data

NRC should recognize that the reclamation plan has been developed in the context of a mature, comprehensive and highly restrictive regulatory program. A tremendous amount of data on the Moab facility is available to NRC. NRC should take full advantage of this material in preparing the EIS. There is no need to spend valuable resources or time, in effect, to "reinvent the wheel." Only where NRC deems it absolutely necessary should new data be sought. Where material needs to be updated, then it is appropriate to do so. Otherwise, the Commission should rely on the existing, extensive data on the Atlas tailings pile and the proposed reclamation plan.

Moreover, the EIS can incorporate by reference relevant data from other sites. For example, seismic data on the Colorado Plateau has already been evaluated in conjunction with the Envirocare of Utah's application for an 11e.(2) disposal license. The Record of Decision (ROD) for the Homestake mill site in Grants, New Mexico found that there was no increased radon exposure to residents living in homes in residential developments directly abutting the facility fence line at the site.

IV. Beliefs vs. Facts

On a related note, the EIS must have a factual basis for its findings. Many of the comments sent to NRC in response to the Finding of No Significant Impact (FONSI) simply made bold (and often emotional) assertions or conclusions without any supporting data. It is not sufficient to say we "believe" there may be an impact as the National Park Service did in its comments. NRC must make its findings in the EIS on the basis of facts, and sound scientific, technical and regulatory analyses.

As explained at length in prior submissions to the Commission, Atlas' proposed above-ground disposal plan meets NRC's reclamation requirements. It is Atlas' expectation as a licensee that the guiding factor in reclamation is protection of public health and the environment from significant risks of harm. It is Atlas' position that its reclamation plan does protect public health

¹ H.R. Rep. No. 1480, Part 2, 95th Cong. 2d Sess. 44 (1978).

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and the environment. For example, it is generally recognized that radiological standards designed to protect human health also adequately protect the environment and other species.²

The public disclosure on the Atlas site also appears to be clouded by misperceptions about decisions at Title I sites judging by references to sites that DOE has moved. As the Commission is well aware, NRC does not decide that a tailings pile at Title I site should be moved, but rather only has authority to approve of such plans if submitted by DOE, the agency responsible for management of those sites. The Title I UMTRCA program (including moving several sites) has cost American taxpayers hundreds of millions of dollars as a result of guilt-edged closure plans and other decisional consideration that were not necessary to satisfy NRC requirements. NRC's EIS should only address whether moving the Moab pile is appropriate given the net impact of such an alternative and not whether it would represent the best of all possible theoretical solutions. NRC can only require that the tailings pile be moved for technical reasons and only if the proposed reclamation plan does not meet NRC requirements.

V. Moving the Tailings Pile - Creation of New Risks

Although there were a few individuals at the public meeting in Moab that described the alternative of moving the tailings pile to the airport site as the "near perfect" spot for containment, there are significant potential adverse health effects associated with this alternative. A thorough consideration of the risks associated with this alternative may indicate that there would be little, if any, net risk reduction as compared to Atlas' proposed reclamation plan or, indeed, a net risk increase. Atlas' preliminary analyses indicate that when the off-site burial alternative is considered in its entirety (i.e., net risk benefits with realistic cost estimates), this proposal cannot be justified on public health and environmental protection grounds as, at a minimum, it does not provide significant incremental risk reduction benefits and, at worst, it significantly increases net impact (i.e., net risks, net costs and net regulatory impacts).

Moving the tailings pile is not an appropriate option if by so doing the risks to health and the environment are increased or are merely moved around and at a greatly increased cost. As EPA's Science Advisory Board (SAB) stated with respect to EPA's proposed radon in drinking water rule the Agency should "consider performing a risk assessment that includes the occupational risks to reassure itself, and others, that the risks of exposure to radionuclides in

² See, International Commission on Radiological Protection (ICRP), Publication 26 (1977); ICRP Publication 60 (1991); National Council on Radiation Protection and Measurements, Report No. 109, "Effects of Ionizing Radiation on Aquatic Organisms" (1991); National Academy of Science "Biological Effects of Ionizing Radiation" (1972).

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drinking water are indeed being reduced and not just moved around as the result of their concentration and disposal.³ The EIS for the Atlas site must consider the impacts both to workers and the general public from staging areas at both sites, transportation from the old to the new, construction at the new site, water pumping and dewatering at the sites for dust control, to name just a few of the many activities associated with moving the tailings pile. For example, in the process of moving the pile (which could take 10 to 15 years versus the five year time-frame for on-site disposal) there could be precipitation or other events that would create hazardous releases from the tailings at both sites and from the material in transit. The EIS evaluation process will require much more than just looking at each site in isolation. The cumulative impacts associated with each alternative must be evaluated.

Off-site burial of tailings, moreover, would complicate the reclamation process. The groundwater, rock armor and other such issues surrounding the Atlas site would need to be addressed at a new site as well. By moving the tailings pile, NRC would create a 20 mile corridor subject to contamination. Transporting the tailings involves risks from accidents, releases due to rain or snowfall, and increased occupational exposure as the tailings are loaded and unloaded. If transport is by slurry, the tailings will have to be dewatered which would delay placement of a radon barrier, result in two sites releasing radon, and pose a contaminated water disposal problem. If transport is by rail or truck and the tailings are dry, there will be a "dusting" problem at both sites. The potential for a major spill contaminating a third site during transport remains a problem whatever the mode of transport. There are also regulatory issues that must be addressed. Will the disposal at the Alternative A site be required to comply with EPA's Clean Air Act work practice standards in Subpart W of 40 C.F.R. Part 61 -- i.e. continuous disposal of dry tailings with no more than 10 acres uncovered or phased disposal in 40 acre impoundments with no more than two impoundments operating at one time. What would compliance with either of these standards do to cost estimates and time to complete? A variance from 10 C.F.R. Part 20 exposure limits might be necessary for emissions during transportation for the entire "closure" period throughout the entire transportation corridor.

In light of these issues (which are only an illustrative few of the multitude facing a move to another site), the EIS should include a net impact analysis. The National Council of Radiation Protection (NCRP) has stated:

³ Draft of SAB Radiation Advisory Committee Comments on EPA's "Suggested Guidelines for the Disposal of Drinking Water Treatment Wastes Containing Naturally-Occurring Radionuclides," July 6, 1992 at 12-14

In risk-benefit analysis for purposes of decision making, numerical estimates of radiation-related risks, even when realistic, are of little use in a vacuum, i.e. without comparable numerical estimates of associated benefits, and of risks and benefits for alternative means to achieve the desired ends.⁴

And Congress stated in the legislative history of UNTRCA, as amended:

The conferees are of the view that the economic and environmental cost associated with standards and requirements established by the Agencies (EPA and NRC) should bear a reasonable relationship to the benefits expected to be derived.⁵ (Emphasis added.)

The complications surrounding creation of a new site - questions on phased or continuous disposal, increased time frame to complete reclamation, and increased health risks to workers and the public - need to be factored into the net impact analysis. In addition, the costs associated with moving the tailings pile must be considered. Atlas estimates the costs would be more than \$100 million to move the pile, as opposed to the approximate \$13 million under Atlas' reclamation plan. Atlas does not have the resources to sustain such an economic burden. The socio-economic consequences to Atlas as a company, its employees and Eureka County, Nevada would be devastating. Where there is little or no net risk reduction from the alternative and the costs are, as they are here, beyond reasonable levels, then the alternative should be dismissed from further consideration.

Conclusion

Atlas has provided NRC with extensive data on the mill operations and closure plans throughout the years the Moab site has been licensed and regulated by the Commission. Atlas is ready and able to begin reclamation and, indeed, wants to see the Moab site reclaimed and decommissioned

⁴ NCRP Report No. 43, "Review of the Current State of Radiation Protection Philosophy," (1975), at 3.

⁵ H.R. Rep. No. 884 (Conference Report), 97th Cong., 2d Sess. 47 (1982).

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as soon as possible, thereby minimizing potential radon emissions. To that end, Atlas requests that there be no more surprises from the Commission, such as the earlier rescission of the original FONSI. Such surprises could delay or entirely frustrate final closure and add significantly to the costs thereof. In the final analysis, moving the pile would result in two disposal sites that must meet NRC's decontamination, decommissioning and reclamation standards, while increasing greatly the risks to public health and the environment from both piles and in the transportation corridor between the two piles and would destroy Atlas as a company. Such an outcome is unnecessary and unwarranted and should be rejected by NRC in the EIS.

Please contact me if you have any questions or if we can provide further assistance.

Sincerely,

Richard E. Blubaugh

cc: Joseph J. Holonich