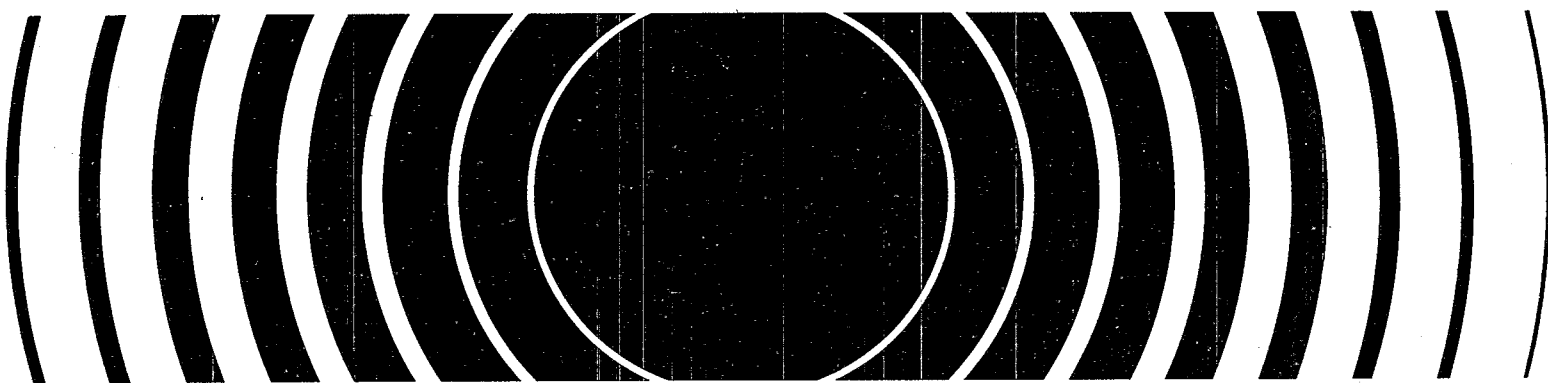
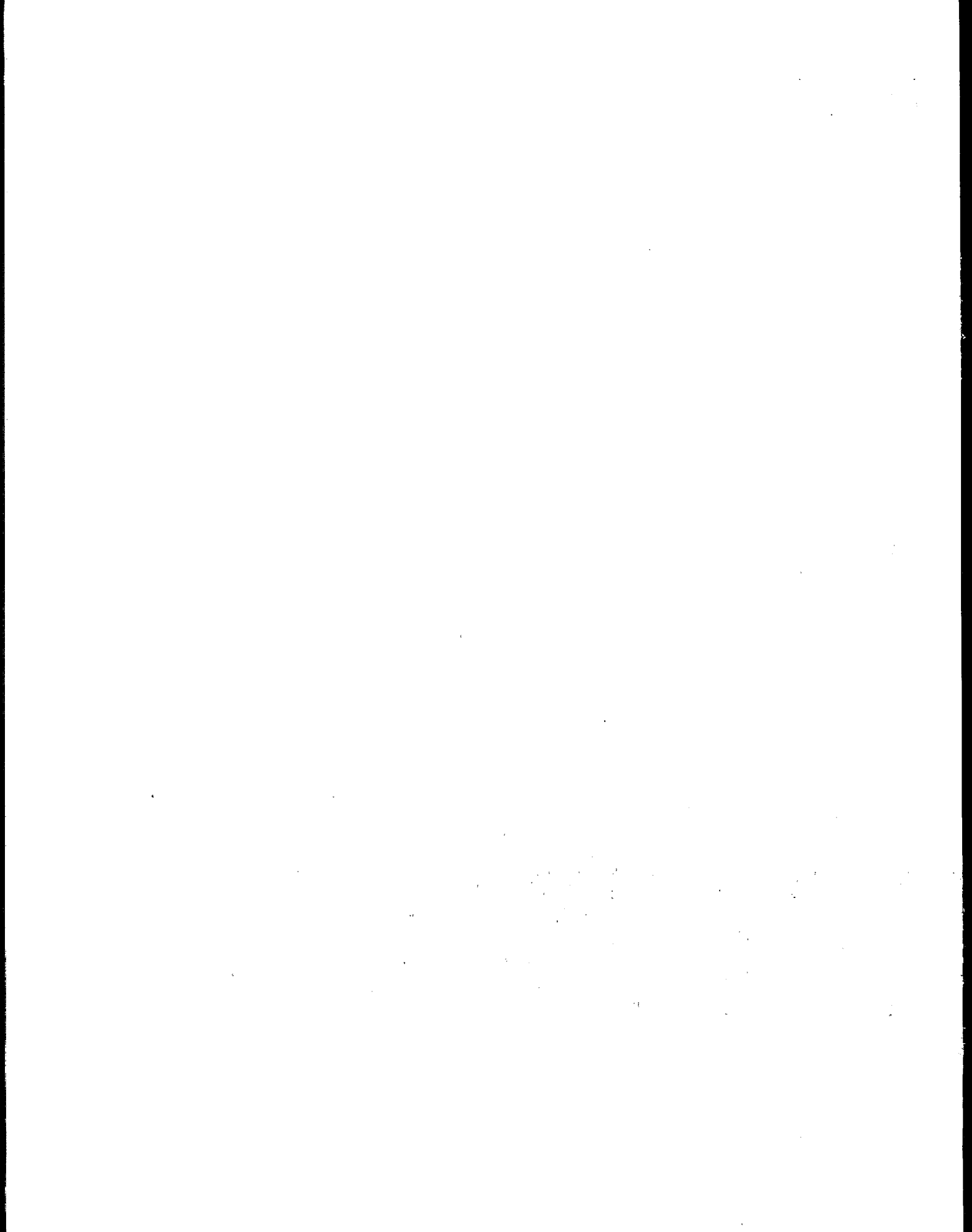




# Comments and Response to Comments

## NESHAPS for Radionuclides





40 CFR Part 61  
National Emission Standards  
for Hazardous Air Pollutants

EPA 520/1-89-031

Comments and Response to Comments

Environmental Impact Statement  
for NESHAPS Radionuclides

BACKGROUND INFORMATION DOCUMENT

January 1990  
U.S. Environmental Protection Agency  
Office of Radiation Programs  
Washington, D.C. 20460

1000

## Preface

The Environmental Protection Agency is promulgating National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Radionuclides. An Environmental Impact Statement (EIS) has been prepared in support of the rulemaking. The EIS consists of the following three volumes:

### VOLUME I - Risk Assessment Methodology

This document contains chapters on hazard identification, movement of radionuclides through environmental pathways, radiation dosimetry, estimating the risk of health effects resulting from exposure to low levels of ionizing radiation, and a summary of the uncertainties in calculations of dose and risks.

### VOLUME II - Risk Assessments

This document contains a chapter on each radionuclide source category studied. The chapters include an introduction, category description, process description, control technology, health impact assessment, supplemental control technology, and cost. It has an appendix which contains the inputs to all the computer runs used to generate the risk assessment.

### VOLUME III - Economic Assessment

This document has chapters on each radionuclide source category studied. Each chapter includes an introduction, industry profile, summary of emissions, risk levels, the benefits and costs of emission controls, and economic impact evaluations.

Copies of the EIS in whole or in part are available to all interested persons; an announcement of the availability appears in the Federal Register.

For additional information, contact James Hardin at  
(202) 475-9610 or write to:

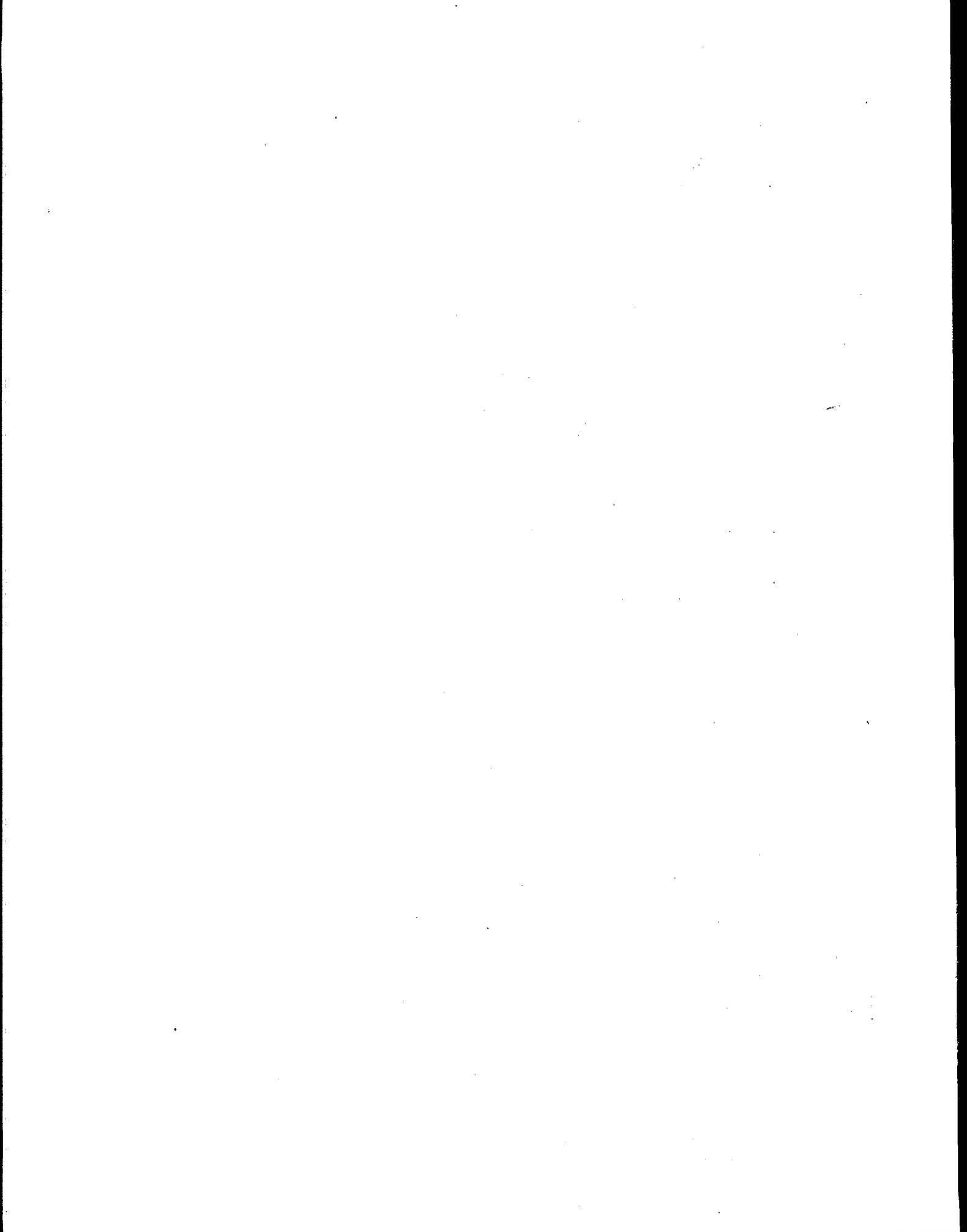
Director, Criteria and Standards Division  
Office of Radiation Programs (ANR-460)  
Environmental Protection Agency  
401 M Street, SW  
Washington, DC 20460

## LIST OF PREPARERS

Various staff members from EPA's Office of Radiation Programs contributed in the development and preparation of the EIS.

Terrence McLaughlin	Chief, Environmental Standards Branch	
James Hardin	Health Physicist	Project Officer
Byron Bunger	Economist	Author/Reviewer
Fran Cohen	Attorney Advisor	Reviewer
Albert Colli	Environmental Scientist	Author/Reviewer
Larry Gray	Environmental Scientist	Author/Reviewer
W. Daniel Hendricks	Environmental Scientist	Reviewer
Paul Magno	Environmental Scientist	Author/Reviewer
Christopher B. Nelson	Environmental Scientist	Author
Dr. Neal S. Nelson	Radiobiologist	Author
Barry Parks	Health Physicist	Reviewer
Dr. Jerome Puskin	Chief Bioeffects Analysis Branch	Author/Reviewer
Jack L. Russell	Engineer	Author/Reviewer
Dr. James T. Walker	Radiation Biophysicist	Author
Larry Weinstock	Attorney Advisor	Reviewer

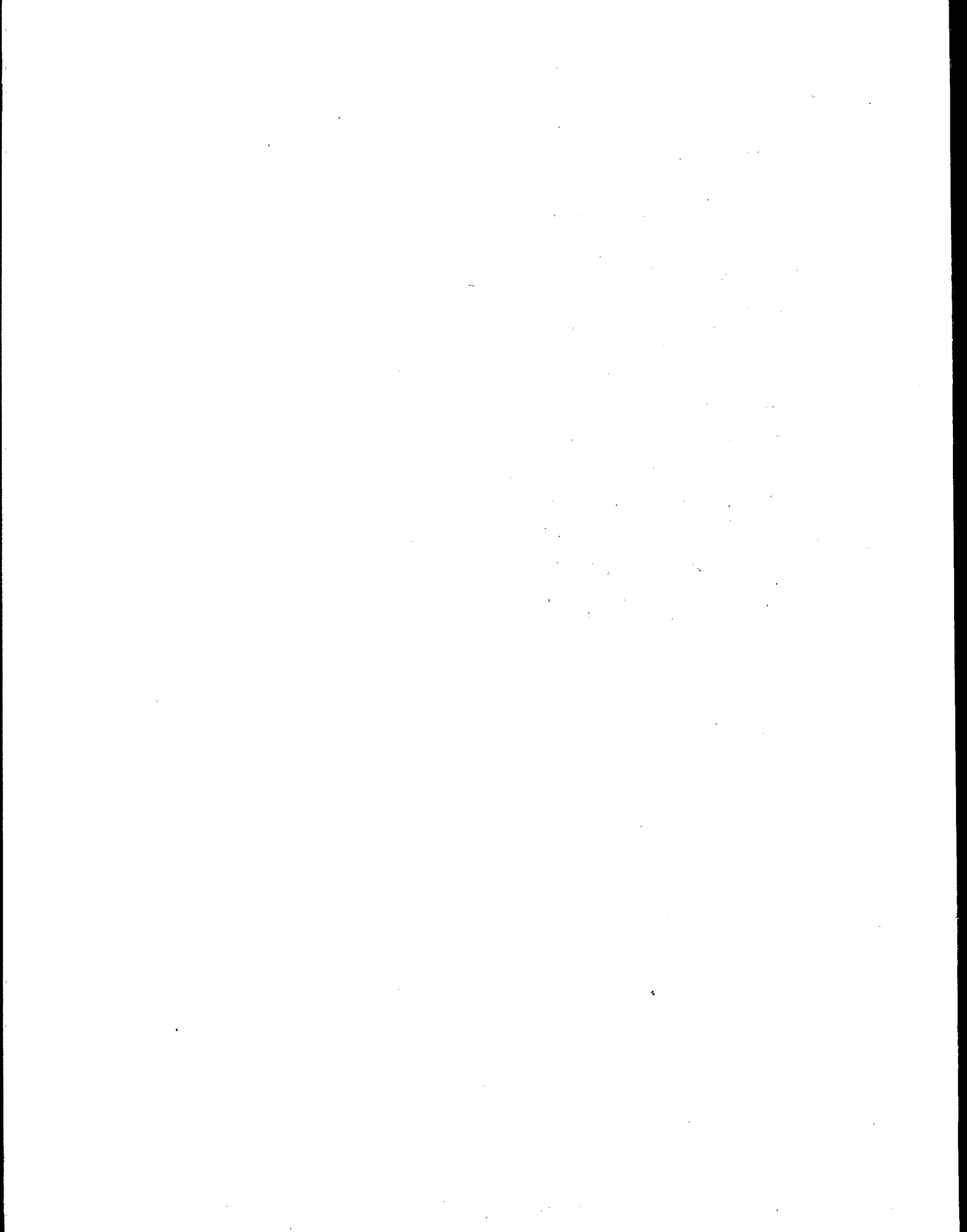
An EPA contractor, S. Cohen and Associates, Inc., McLean, VA, provided significant technical support in the preparation of the EIS.





## TABLE OF CONTENTS

1.	INTRODUCTION . . . . .	1
2.	COMPLIANCE ISSUES . . . . .	2
	2.1 POINT OF COMPLIANCE . . . . .	2
	2.2 ACCIDENTS . . . . .	4
	2.3 REPORTING REQUIREMENTS . . . . .	4
	2.4 MODIFICATIONS AND NEW CONSTRUCTION . . . . .	5
3.	USE OF COMPUTER MODELS . . . . .	7
	3.1 GENERAL COMMENTS . . . . .	7
	3.2 USE OF DOSE RESPONSE MODELS IN RISK ASSESSMENT . . . . .	9
	3.3 THE CAP-88 RISK ASSESSMENT CODE . . . . .	14
4.	SOURCE CATEGORY SPECIFIC COMMENTS . . . . .	24
	4.1 DOE FACILITIES . . . . .	24
	4.2 NRC-LICENSED AND NON-DOE FEDERAL FACILITIES . . . . .	31
	4.3 URANIUM FUEL CYCLE FACILITIES . . . . .	41
	4.4 HIGH LEVEL WASTE FACILITIES . . . . .	48
	4.5 ELEMENTAL PHOSPHORUS FACILITIES . . . . .	49
	4.6 COAL-FIRED UTILITY AND INDUSTRIAL BOILERS . . . . .	55
	4.7 INACTIVE AND LICENSED URANIUM MILL TAILINGS . . . . .	59
	4.8 DOE RADON SITES . . . . .	67
	4.9 UNDERGROUND URANIUM MINES . . . . .	69
	4.10 SURFACE URANIUM MINES . . . . .	74
	4.11 PHOSPHOGYPSUM STACKS . . . . .	76



## 1. INTRODUCTION

On March 7, 1989, the EPA published in the FEDERAL REGISTER (54 Fed. Reg. 9612) proposed National Emission Standards for Hazardous Air Pollutants (NESHAPs) for radionuclides emitted to air from 12 source categories. The proposal requested public comments on the proposed NESHAPs and the specific risk management approaches that were used to develop them. Informal public hearings were held in Washington, DC and Las Vegas, Nevada to give interested parties an opportunity to present their views, and written comments were solicited. Comments were received from almost 300 individuals and organizations representing state and federal agencies, public interest groups, industry and private citizens. This document addresses the comments relating to compliance procedures, modeling, risk assessment, and those specific to each source category. The EPA's response to comments addressing significant legal and policy issues are presented in Section VII of the preamble to the final rule on radionuclides, published at 54 Fed. Reg. 51654.

## 2. COMPLIANCE ISSUES

### 2.1 Point of Compliance

Concerns regarding this topic generally fell into two groups; those agreeing with determination of compliance based on maximum radionuclide ambient air concentration at the nearest residence but often disagreeing with EPA's exposure calculations as unrealistically high or low, and those who stated that some other point should be used.

2.1.1 Regulations based on the nearest exposed individual at maximum concentration appear to conflict with standards in Title 10 of the Code of Federal Regulations ("CFR"); these require controls which restrict radiation levels in any non-restricted area.

Response: The limits established by the NESHAPs apply to any member of the public exposed to ambient air emissions of radionuclides. As a practical matter, for most facilities this will be the nearest exposed individual at maximum concentration. Similarly, implementation of standards under 10 CFR to any non-restricted area assure that no member of the public receives a dose greater than the standards allow. Although the implementation is different and the facility will sometimes have to meet both standards, the NESHAP or the 10 CFR regulations that requires the lowest emissions will be controlling for that facility. In the context of NRC-licensed facilities, the EPA anticipates that any inefficiency that arises from the additional NESHAP implementation scheme will be mitigated through cooperation agreements entered into by the EPA and the NRC.

2.1.2 The NESHAP should be based on effective dose equivalent at the off-site point of maximum concentration regardless of whether a person currently lives there. This is necessary due to the limited ability of dispersion models to accurately predict concentrations at any given location and also because a residence may in the future come to be located at the point of predicted maximum ground-level concentration. Moreover, as a matter of policy, NESHAP decisions should be based on the conservative assumption that the nearest resident lives at the facility boundary or at the point of highest ground level concentration. Alternately, it has been suggested that a "critical group" approach be utilized as preferable to the moving target represented by the maximally exposed individual.

Response: The EPA's implementation procedures specify that the limit applies to the most exposed member of the population. This comports with the EPA's belief that its compliance and implementation modeling and procedures are capable of reasonable accuracy and are practical to use. This also implements the

EPA's policy that NESHAPs protect real persons. Moreover, since compliance is on an annual basis, should in the future some individual come to leave his or her residence located in the area of maximum concentration, that change in the MIR will be accounted for. The implementation procedures not only allow but require, the regulated community to specify the locations of nearby individuals. The compliance models then assess dose to the individual located at the point of highest environmental risk. The EPA believes this is consistent with its authority under the CAA.

2.1.3 Adjustments to the models or calculations so as to more accurately reflect the exposure of the maximum exposed individual to the activity being regulated are appropriate. These could include consideration of occupancy factors and building sheltering, temporal variations, particle size, air concentrations, etc. Monte Carlo modeling techniques of occupancy factors and other variables would give best estimate of risk and also the distribution of probable values about the risk estimate.

Response: The EPA's assessment and compliance codes do account for particle sizes and differing air concentrations due to dispersion as well as occupancy factors and building sheltering, but not temporal variations. The EPA has also performed uncertainty analyses using Monte Carlo techniques. The results indicate that while residency factors have a large influence on the estimated risk (factors of 10 to 15), the risk estimates used by the EPA are within 95 percent confidence interval.

2.1.4 The proposed regulation appears to limit airborne radionuclide emissions from a given facility. The wording on this is not very clear or consistently stated throughout the supplementary documents.

Response: The rules were developed to apply to individual sites where the release is from stacks or vents, and individual sources where the releases are from area sources such as mill tailings.

2.1.5 The hypothetical, maximally exposed individual is such an arbitrarily conceived concept that it serves no useful analytical purpose, and is assumed to be at the point of maximum exposure.

Response: The EPA disagrees. The maximum exposed individual identified in the risk assessment for 12 source categories, is not hypothetical as the EPA used all resources available, within the time constraints, in an attempt to ascertain where an individual actually lives and at what level that individual is exposed. This included demographic surveys, company reports, and

U.S. Geological Survey maps. In so doing, the location of the maximum exposed individual is not the point where maximum exposure occurs, but the location where an actual individual lives who receives the maximum annual exposure from the source.

## 2.2 ACCIDENTS

2.2.1 The final rule should specify the basis for coverage of accidents, any special provisions concerning treatment of accidents for compliance purposes, and the types of accidents included in EPA's supporting assessments for the proposed rule. Accidents are a special case and should be evaluated in the ample margin of safety checklist. Estimated radionuclide releases due to accidental release should be specifically included in the demonstration of compliance to the NESHAP and in the dose/risk assessment for new and modified sources.

Response: The issue as to what constitutes an accident and whether accidents must be differently treated from other hazardous pollutant emissions to ambient air, is not addressed by the CAA and has not been considered in the development of these standards. Nor are accidents anticipated to be considered when the EPA evaluates applications for modification or new construction. Therefore, accidents that result in the release of radionuclides in excess of the standard would constitute a violation that is enforceable by the Agency.

## 2.3 REPORTING REQUIREMENTS

2.3.1 EPA should specify more frequent record-keeping and compliance reporting requirements.

Response: The EPA believes that the specified record-keeping and annual reporting requirements are adequate. EPA is not aware of any additional environmental or safety benefits that would be derived from requiring additional records or more frequent reporting.

2.3.2 NESHAP standards for radionuclide emissions should apply for the calendar year rather than "...any period of 12 consecutive months..."

Response: The EPA disagrees as this measure is taken to more accurately reflect whether a facility is emitting excessive radionuclides into ambient air and thereby jeopardizing public health.

2.3.3 In seeking EPA approval for proposed construction and/or modification activity, the applicant should only be required to describe to EPA the proposal and its calculated increased emissions to ambient air. Some of the reporting requirements are

not clear and some may be needlessly complex. These should be clarified and, where possible, simplified through use of a 1 percent threshold compliance reporting limit and one-time reporting where appropriate.

Response: Applications for construction or modification are required to supply the information necessary to identify the activity and to justify the estimated impact upon public health due to the potential increase of radionuclide emissions. Reporting requirements have been simplified wherever possible. Appropriate threshold compliance reporting limits have been established.

## 2.4 MODIFICATIONS AND NEW CONSTRUCTION

2.4.1 The proposed threshold value of 1 percent of the standard for potential emission increases from modifications or new construction is unreasonably low. EPA approval should not be required unless the increase will exceed 10 mrem/yr. In the alternative, a 1 percent threshold based on a standard of 25 mrem/yr would provide considerable administrative relief. However, it should be noted that, although prior approval to construct or modify is not required for small dose contributors, start-up notification is still required and the annual report to the EPA must contain all the information in the application so there is no savings in paperwork.

Response: The EPA believes the threshold value of a potential emissions increase of 1 percent of the 10 mrem/y ede standard, above which EPA approval to construct or modify is required, is reasonable and proper. This has been added to the final rule as a result of comments to the proposed rules and should provide considerable administrative relief; trivial sources need not apply, but sources releasing significant amounts of radionuclides would be required to do so.

2.4.2 Permit use of the COMPLY code to determine whether an application need be made to the EPA for approval to construct a new source or modify an existing source.

Response: COMPLY may be used for this purpose.

2.4.3 The interpretation that any increase in radionuclide emissions triggers requirements of 40 CFR Part 52, PSD is especially troublesome; a threshold should be established, consistent with the approach for other priority air pollutants.

Response: The Agency is aware of this issue and is considering a threshold of that kind.

2.4.4 For the section "Distinction between Construction and Modification," the construction of a new building is now defined as new construction at the facility. Additional clarification should be added to this section. For example, is the expansion of an existing building to allow replacement of an existing process with new state-of-the-art equipment, which will not increase emissions, defined as new construction? One could say the expansion is a new building and that this constitutes new construction. Assuming that this is not new construction, if a new building to house the process is built adjacent to the existing facility, is this new construction?

Response: EPA is preparing detailed guidance for its regional offices and the states in dealing with situations such as these. If the facility is in doubt, it should contact the EPA regional office for clarification.



### 3. USE OF COMPUTER MODELS

#### 3.1 General Comments

3.1.1 Use of AIRDOS-EPA, RADRISK, and other EPA-approved codes to demonstrate compliance should be permitted. The RADSCREEN Model is equivalent to COMPLY and should be accepted by the EPA as an alternative to COMPLY; documentation is available from the Ohio EPA on request. Any computer program used to demonstrate compliance should be peer reviewed, validated if appropriate, and meet nuclear quality assurance (NQA-1) requirements. The EPA should include a provision for approval of alternate programs.

Response: The EPA has devoted considerable resources and time to the development of the CAP-88 and COMPLY models for determining compliance. The intent of the COMPLY code is to assure the protection of public health while minimizing the data collection and input burden on affected licensees. While the EPA believes that these codes are sufficient for all licensees, it has provided for alternative compliance procedures to be used once they are submitted to the agency for review and approval. The EPA codes are available for peer review and have been widely distributed to the regulated community. There is no benefit in requiring compliance codes to meet nuclear quality assurance requirements.

3.1.2 Facilities with multiple sources should be modeled in a multiple source mode with radionuclide emission parameters representative of each individual source; AIRDOS-EPA model cannot accommodate sources at more than a single physical location.

Response: The AIRDOS-EPA model does co-locate multiple stacks. For compliance purposes, where only the exposure of the maximum individual is required, multiple code runs can be made to more exactly calculate the contribution to dose from widely separated sources to a single location. Guidance on performing such multiple calculations is available by contacting the EPA's Office of Radiation Programs.

3.1.3 In general, area sources are not monitored by measuring the radon flux; most of the time boundary measurements are made. A more uniform approach would be to base the limit on the total curies released per second per site; another method would be to base the limit on the concentration of radon in the air at the site boundary.

Response: The EPA is fully aware that radon releases from area sources are only infrequently monitored by direct measurements on the source. The standards that the EPA has promulgated for such sources (i.e., inactive phosphogypsum stacks, uranium mill tailings disposal sites, and DOE Radon sites) specify design

basis radon flux rates per unit area, to be confirmed by post-remediation monitoring of the flux on the source.

3.1.4 Approach A should be modified to include the NAS recommendations of measurements of actual radionuclides rather than following the current practice of placing undue reliance on general models.

Response: At the levels established by the NESHAPS, concentrations of many radionuclides may be difficult to distinguish from natural background levels or below the limits of detection of even state-of-the-art detection systems. Therefore, the Agency will continue to rely primarily upon modeling techniques to assess the risk of radionuclides released into the ambient air.

3.1.5 Existing air emission monitoring equipment and methodology should be allowed to remain in service for DOE's and NRC-licensed facilities provided emissions from the source do not account for more than 1 percent of the permitted value for the facility.

Response: The EPA has reviewed the existing monitoring and analytical procedures for both DOE and NRC-Licensed facilities. Based on these reviews, the EPA has determined that existing procedures, as specified or referenced in each licensee's technical specifications, are satisfactory and may be used.

3.1.6 There are no instruments or proven techniques available for monitoring some of the isotopes at the detection levels necessary to comply with the proposed standards.

Response: Absent specific examples, the Agency is unable to determine the accuracy or significance of this comment. However, the NESHAPS are promulgated with the provision that alternative methods of determining emissions may be submitted to the Agency for review and approval.

3.1.7 The EPA should allow use of certified test results as an alternative to the adjustment factors in Table 1 of Appendix D.

Response: The Agency believes that most licensees will be able to demonstrate compliance simply by using the approval adjustment factors. However, the EPA will allow the use of factors based on "certified" test results when the pertinent data relating to the certification and details of the certification tests are submitted to the agency for review and approval.

3.1.8 Regulated facilities should be required to acquire and utilize in emissions models site specific meteorological data.

Response: Sensitivity analyses of meteorological data sets have shown that the variation between data sets is relatively small.

The EPA sees little benefit to the public health and safety to be gained by requiring site-specific meteorological data versus data from the nearest station.

3.1.9 Population data for performing dose/risk assessments are based upon United States census tract data. What base year census data is used to perform these analyses? Are the data adjusted to account for population growth in the period after the census was taken?

Response: The assessments use 1980 census data for the 0-80 km population estimates, augmented where noted by site-specific data for the nearby individuals. No adjustment to the census data has been made.

3.1.10 The EPA numbers are not real deaths, nor should they be considered as such. The numbers are nothing more than a statistical calculation and have little or no relevance in biological or public health terms.

Response: The EPA is fully aware of the statistical nature of the risk numbers that it calculates. However, it strongly disagrees that the estimates have no biological or public health significance. There is a broad consensus in the radiation protection field that the approach used by EPA is prudent and appropriate for risk calculations in the radiation field. In addition, this methodology has been reviewed and accepted by the SAB.

### 3.2 Use of Dose Response Models in Risk Assessment

3.2.1 The linear non-threshold Dose Response Model is overly conservative and does not represent scientific consensus when used to extrapolate to the extremely small doses allowed in the proposed rulemaking. BEIR III specifically cautions against extrapolation of its risk estimates to such low doses (i.e., less than 100 mrem/year) due to the high degree of uncertainty. No scientific studies to date have been able to prove or disprove that health effects occur at doses below a few hundred millirem per year. Consequently, risk coefficients applied to such low doses become so uncertain as to be meaningless.

Response: Although the EPA acknowledges the comment that linear non-threshold dose response model is often considered overly conservative and not representative of a scientific consensus, some dose-response relationship must be assumed or dose and risk cannot be effectively determined. (ICRP #26, par 27,28). The Agency believes this assumption is reasonable and realistic and

has more adequate scientific support than for any other hypothesis. The Agency has also tried to quantify the sources of uncertainty in the risk factors produced and has indicated the range of uncertainty in the risk factor. Model uncertainty is one of the uncertainties subsumed in this range.

3.2.2 The EPA has ignored recommendations made by its own Science Advisory Board. The EPA is in error in treating risk estimates as scientific fact. Conservative best guess estimates must be clearly identified as such when presented to the public and decision-makers. In general, the EPA's risk methodology fails to represent the scientific community inasmuch as it ignores other models which more closely represent scientific observations. The preferred approach is to present a range of values corresponding to various accepted dose response models so that decision-makers can be informed as to the lack of certainty in risk estimation.

Response: The Agency believes it has followed the scientific recommendations of the SAB to the greatest extent possible. The central value risk coefficients, response projection model, and range of risk used by the Agency have been endorsed by the SAB. Moreover, the Agency disagrees with the suggestion that it has ignored superior models or that it has engaged in improper decision-making.

3.2.3 The EPA uses a lifetime fatal cancer risk of  $400 \times 10^{-6}$  per rem. The justification of this value is insufficiently supported and does not agree with risk coefficients proposed by BEIR III, ICRP, NCRP.

Response: The risk factor of  $400 \times 10^{-6}$  fatal cancers per rem is the estimate developed using the BEIR III linear, relative risk model. It would also be about the number developed using the linear relative risk model, risk coefficients from the UNSCEAR 1988 Report and a dose rate effectiveness factor of 3. The ICRP risk estimate is over 18 old and does not represent the best of the current scientific information on the subject. The NCRP has not made a numerical estimate of cancer for total body gamma exposure.

3.2.4 The EPA's lifetime risks (Table 3) are inconsistent with previously published lifetime occupational risks.

Response: Agency estimates of lifetime risk of cancer should not be expected to be consistent with occupational risk estimates. The Agency estimates population risk, birth to age 110 in a lifetable; occupational risk estimates are for ages 18-65.

3.2.5 Although Volume I of the BID addresses teratogenic and genetic risks, it is not clear whether these risks were considered in combination with the carcinogenic risks in the proposed emission standards.

Response: The Agency calculates genetic and teratogenic risk factors. In the NESHAPs assessments the genetic and teratologic risks were inconsequential compared to both the risk of carcinogenesis and the overall uncertainty in the estimates. They were not specifically quantified in the risk assessment.

3.2.6 EPA's risk estimates do not include updated information for Japanese A-bomb survivors with regard to mortality data and changes in dosimetry, nor do they reference more current risk estimates such as BEIR V, UNSCEAR 86 and UNSCEAR 88.

Response: The Agency is familiar with the new data from Japan addressed in Shumizu et al (Rad. Research 118: 502-524 (1989) and RERF Technical Report 5-88 (1988), Stather, et al (NRPB publication, NRPB-R226 (1988)) and the UNSCEAR 1988 Report. The revised BID will show how this new data may affect Agency radiation risk estimates. However, the Agency is awaiting a review and analysis of the BEIR V Report with risk coefficients calculated for North Americans, before attempting to revise Agency risk coefficients. The final BID (or FEIS) discusses the genetic risk estimates given in the UNSCEAR 1986 and 1988 Reports.

3.2.7 The EPA's reason(s) for electing an RBE of 2.7 for gammas for genetic effects is not sufficiently substantiated.

Response: Although the support for an RBE of 2.7 is not overwhelming, additional reference that the genetic effects of alpha emitters are no greater than those due to acute x-rays can be found in the UNSCEAR 1986 Report (par 402 page 87 and par 428 page 91). The risk from acute gamma or x-ray exposure was reduced by a factor of 3 to give the estimate due to chronic exposure, as noted in the BID. This is equivalent to using an RBE of 3.

3.2.8 For teratogenic effects, the new DS 86 dosimetry suggests a threshold for the developmental period of 8 - 15 weeks in the range of 10 to 20 rads.

Response: The Agency agrees. However, the conclusion is too uncertain to require a revision of risk coefficients at this time (Otake, et al, RERF Technical Report TR 16-87). For instance, only nineteen cases of mental retardation, distributed across six dose categories in the 8 to 15 week exposure group, comprise that data base. Perhaps the new cases of mental retardation identified (Otake, et al, RERF Technical Report TR 16-87), or the new data on IQ decrement (Otake, et al, RERF Technical Report TR

2-88; Schull, et al, RERF Technical Report TR 3-88) will help resolve this problem. Current scientific consensus on appropriate models for radiation risk projection has selected the relative risk model. The NCRP model is an absolute risk model. In addition, the NCRP risk factor is based on 1975 vital statistics. Generally speaking it is of historic interest but has been superseded by newer risk models and theories.

3.2.9 The EPA fails to explain why it believes the NCRP 78 radon risk estimate is outside the lower bound. Therefore, the EPA's radon risk coefficient of  $360 \times 10^{-6}$  per WLM may be on the high side since EPA did not include the NCRP value (I-91, I-143).

Response: The NCRP 78 model was rejected because (1) the assumed temporal dependence on risk--exponential decay of absolute risk--does not appear to be consistent with the epidemiological data (see BEIR IV); (2) the risk model is not properly normalized, further reducing the risk estimate by about one-third; and (3) the model fails to take into account the evidence for a synergism between smoking and radon. The assumed time dependence with its incorrect normalization leads to a substantial underestimate of the risk for the general population. Because the model does not consider smoking, it assigns the same risk to nonsmokers as smokers; as a result, its risk estimate for nonsmokers actually exceeds that obtained with the BEIR IV or ICRP 50 model.

3.2.10 The EPA's radon risk coefficient of  $360 \times 10^{-6}$  per WLM is based on BEIR IV and ICRP 50. Both BEIR IV and ICRP 50 estimates are relative risk models and assume a multiplicative interaction with smoking. However, the models differ with regard to time since exposure. This results in BEIR IV (and the EPA) adopting a methodology which is biased toward underestimation of exposure and hence overestimation of risk.

Response: This comment has been considered in light of both comments that say that the exposure of the US miner cohort was underestimated, and those that say the exposure is overestimated. However, the U.S. cohort is only one of four analyzed in BEIR IV or one of three in ICRP 50. The BEIR IV and ICRP 50 models are the authors best fit to their preferred model. While neither may be proven correct in the future, they are the current best estimate models.

3.2.11 The EPA, by using BEIR IV risk coefficients, does not adequately account for smoking as a confounding variable in estimating the lung cancer risks posed by exposure to radon. Since smoking was more likely prevalent among miners and since smoking is a potent lung carcinogen, the validity of the measurements of the much weaker radon dose response signal in the range of 0 - 300 WLM is in doubt.

Response: The EPA is aware that it is possible that a weakness to BEIR IV rests in the fact that smoking may be a confounding variable. When full smoking data is collected for the various cohorts, which has not been done as of this date, reanalysis may allow more detailed account to be taken of the radon-smoking interaction.

3.2.12 The miner exposure data used by BEIR IV are not measured values, only a small fraction of miner exposure data represents measured exposure. It is likely that these calculated exposure values overestimated true exposures.

Response: While not all exposure estimates are based entirely on measured data, there is no evidence that the calculated estimates either overestimate or underestimate exposure.

3.2.13 Of the four miner cohort data sets used to estimate the radon risk coefficient, there are two data sets for which there is an excess risk at zero excess exposure; incorrect dose assignment has been postulated as one possible cause. For the Eldorado miner cohort, the dose assignments are much lower than was actually experienced which leads to inflated risk coefficient. Thus, a 54% excess risk at zero exposure is included in the dose-response plot. The Malmerget data from Sweden also show as excess risk at zero dose intercept. These two data sets should, therefore, not be used until these problems are corrected by the renormalization of data.

Response: The Agency disagrees. The commenter provides neither adequate justification nor detailed explanation capable of supporting its position.

3.2.14 For radionuclides other than radon, the EPA distinguishes between fatal and non-fatal effects. The EPA has not explained why it assumes all radon induced lung cancers are fatal.

Response: Lung cancer is fatal with 95% or more of cases dying within a year or so of diagnosis. For the draft BID, only fatal lung cancers were calculated and listed in the case of radon exposure. In the case of low-LET exposure or deposited radionuclides, for many organs, 50% or less of the cases are fatal, so both fatal and non-fatal cancers exist. This is reflected in the BID in Tables 6-8 and 6-9 where mortality and incidence are tabulated by organ and age.

3.2.15 The uncertainties associated with the calculated risk estimates are not reflected once the risk estimate is carried forward for use in making regulatory decisions.

Response: The EPA disagrees. The uncertainties and other limits to risk assessment are fully articulated and considered in the decisionmaking of the final rule.

3.2.16 Dr. Radford provided observations regarding total risks for the Ontario uranium miners and the Czechoslovakian uranium miners. These populations are showing very similar risks. Instead of the risks coming down as purported in BEIR IV, the risk estimates continue to go up or, at least, stay the same. This data is backed up by bigger studies, more complete and extensive, but of shorter duration.

Response: We agree that the tempered dependence of risk following radon exposure is still uncertain. Further followup of all miner cohorts are desirable and should continue in order to settle this question.

3.2.17 The value of 730 deaths per  $10^6$  person-WLM attributed to BEIR III cannot be found in BEIR III. The actual figure, as noted by the EPA, is 440 deaths. Tables 1-1 and 2-13 of BEIR IV, and Table 6-12 of the BID are misleading.

Response: The 730 number is based on the effective working level months, a concept EPA no longer uses.

3.2.18 The reference in the draft BID at 6-36 to the risk factor of 830 fatalities per million person-WLM as being an Atomic Energy Control Board of Canada (AECB) estimate for lifetime exposure to Canadian males is incorrect; the value cannot be found in the cited source, the estimate was not accepted by the AECB, and the so-called best estimate is really the upper end of the range of risk values.

Response: EPA modifies the AEC BC value (see section 6.4.3, vol. 1 of the BID).

3.2.19 The EPA risk analysis should utilize the 40+ years of exposure data based on real people and real situations is available in the records of DOE and NRC (and predecessor agencies) (I-163)

Response: EPA's risk factors are based on human epidemiological studies of many kinds, including the atomic bomb survivors. The Agency knows of no definitive studies of NRC and DOE personnel that would significantly improve this data base.

### 3.3 The CAP-88 RISK ASSESSMENT CODE

3.3.1 The AIRDOS code is limited in its treatment of multiple release points and area sources. These limitations include the facts that all area sources are treated as circular, multiple



release points (whether stack or area sources) are co-located at the origin of coordinates, and it is questionable if the code can be used for receptor distances which are less than 2.5 the radius of the effective circular source.

Response: The EPA's CAP-88 assessment codes are limited with respect to multiple release points and do treat all area sources as circular, but have the advantage of practicability. Sensitivity studies have shown that these modeling simplifications have little impact on estimated population exposures. Nevertheless, with respect to maximum individual exposures, the co-location of all sources at a given site may sometimes either over- or under-estimate doses and risks depending upon the release location selected. The CAP-88 assessment codes may be used to assess exposures within 2.5 times the effective radius of an area source.

3.3.2 Releases are treated as point sources in calculating exposures which could result in an incorrect estimate of potential exposure for sites with many sources or covering large areas.

Response: As noted in II.2.1, the accuracy that is obtained from the CAP-88 codes is more a function of carefully selecting the release location for sites with multiple release points. The treatment of dispersion for area sources is not affected by the size of the area source.

3.3.3 Dose is calculated at the point of highest air concentration at ground level which for large sites results in dose estimates to the public at locations within restricted areas of the site.

Response: The commenter is mistaken. The maximum individual exposures and risks reported in the FEIS are either at the point of maximum off-site dose where detailed demographic data are not available, or at the occupied location of highest risk where such data are available.

3.3.4 Use of a Gaussian Plume Dispersion Model limits the application of the model in simulating transport and dispersion over complex terrains where terrain-induced flows can result in significant horizontal and vertical variations in wind speed and direction.

Response: The EPA is aware of the limitations of the Gaussian Plume model for complex terrain, and is working to develop assessment models that provide alternative dispersion models. However, until such time as these models are working and documented, the Agency will continue to rely upon the estimates obtained from the AIRDOS/DARTAB/RADRISK models. Validation studies of the dispersion portion of the code, which have

included sites located in complex terrains, have shown that the predicted air concentration are sometimes greater and sometimes lower than field measured values.

3.3.5 There are no provisions for surface perturbations, such as strong relief or surface roughness, nor particle resuspension.  
Response: Although the CAP-88 codes do not directly account for these factors in estimating environmental concentrations, in general, these are second order corrections that do not significantly affect the estimated concentrations and risks.

3.3.6 The set of radionuclides available for use (RADTAB data set) does not include all radionuclides produced by all facilities to which the model must be applied, specifically accelerator/research reactor products and those produced in medical uses are not included.

Response: The CAP-88 code includes all radionuclides likely to be produced in airborne emissions from accelerators, research reactors and from medical uses of radionuclides.

3.3.7 The assumptions regarding emission stack height, temperature, flow rate, etc. make no provisions for site-specific.

Response: The CAP-88 assessment codes do allow for the input of site-specific data regarding release height, stack temperature, and/or flow rates. While the codes do not allow for both momentum and buoyant plume rise, this is generally not a significant limitation. Where default values are used for these parameters it is due to the fact that the EPA has not been able to develop and substantiate site-specific data.

3.3.8 The food pathway has no provision for considering pigs, goats, goat's milk, or poultry.

Response: The Agency believes that consideration of cow's milk and beef for the ingestion pathway is sufficient to estimate the likely exposures resulting from the consumption of all foodstuffs.

3.3.9 The EPA's computer model should be upgraded to reflect state-of-the-art as recommended by the Science Advisory Board.

Response: The EPA is working on the development of its assessment codes. However, given the deadlines established by the Court's, this rulemaking cannot be delayed until the new codes become available.

3.3.10 CAP-88 should include a screening procedure to be used to determine whether a detailed analysis should be performed.

Response: The EPA disagrees. The CAP-88 code is approved for use by DOE Facilities. The quantities of radionuclides handled at these sites and the existence of site-specific demographic and meteorological data make it reasonable to use the CAP-88 code to determine the levels of exposure caused by airborne emissions.

3.3.11 The COMPLY program may indicate that the same facility is both in compliance and not in compliance, depending on how the data is described. For example, treating an entire stock of an isotope as one form will enormously change the compliance levels.

Response: Since the facility is required to put the data into the correct form of isotope, EPA does not consider there to be a problem with determining compliance.

3.3.12 Very conservative assumptions have been made in an effort to keep the model simple; the result is that the calculated population dose is significantly higher and less accurate than that calculated by other methods currently in use.

Response: COMPLY does not calculate doses that are significantly less accurate than other methods that are currently in use. Major differences in dose estimates stem from the fact that ICRP 2 methodology is required by the NRC for certain licensees.

3.3.13 Monte Carlo methods can be used to take into account uncertainty in the calculation of potential risk to the MIR posed by radon emissions (from mill tailings).

Response: The Monte Carlo technique has been employed to estimate uncertainty to the MEI posed by radon emissions. The results have been presented in Volume I of the final BID (FEIS).

3.3.14 For U-238, Th-230, Ra-226, and Pb-210, the EPA's risk factors are greater than those given by the ICRP by an average factor of 2.5.

Response: EPA's risk factors for the above radionuclides are based on organ specific risk models (chapter 6 of Vol. 1 of the final BID) and are believed to be realistic for long term chronic exposure. They are higher than those used by the ICRP.

3.3.15 EPA has accepted ICRP models for alpha-emitting bone seeking nuclides which yield incorrect dose/risk values.

Response: EPA believes its dose/risk models for alpha-emitting bone seeking radionuclides are reasonable. (Chapter 6 of Vol. 1 of the BID).

3.3.16 In its discussion of organ weighing factors, the EPA does not specify which organs correspond to "remainder of organs".

Response: The remainder category includes all other ICRP target organs that were not listed.

3.3.17 The EPA's dosimetry model for immersion dose to direct plume exposure ignores high energy gamma dose from overhead plume for locations close to an elevated release.

Response: This is true, but this is seldom an important consideration. When it could be, we do not use an elevated release for compliance calculations.

3.3.18 The EPA does not apply a dose rate effectiveness factor (DREF) which may reduce risk for low-LET doses by a factor of 2 to 10.

Response: The Agency is not persuaded that it is prudent to use a low dose rate effectiveness factor for low LET radiation with respect to all kinds of human cancers. This issue is discussed in detail in Section 6.2.3 of Vol. 1 of the final BID.

3.3.19 The  $f_1$  values for short-lived Pu-238, 240, 242 are different than those published by the ICRP in Publication 48. Why has the EPA adopted these values?

Response: These values were used in our 1975 guidance for protecting the public from transuranics. However, the EPA is currently revising its values to conform with the ICRP 48 recommendations, which are numerically similar.

3.3.20 The EPA's assumption of a 570 gram lung target region conflicts with the ICRP's recommendation of averaging over the entire 1000 grams of lung tissue.

Response: The EPA averages the dose over the entire lung using ICRP contemporary models. However, for estimating the risks, the EPA considers only the dose to the pulmonary region.

3.3.21 There is an inherent contradiction in the EPA's assessment methodology. It assumes an individual spends 24 hours/day outside for 70 years in calculation of risk from particulate radionuclide emission, however in calculating indoor radon exposure risk, it assumes 75% of the individual's time is spent indoors.

Response: As a practical matter, there is no contradiction. EPA assumes very small particulates enter residences without hinderences, behaving like air.

3.3.22 The EPA's assumption that the radon decay product concentrations in the air transported from the radon source to the receptors is in significant state of equilibrium with the parent radon is very conservative.

Response: The EPA calculates the equilibrium fraction as a function of distance. This simplification, which uses a uniform wind speed to relate distance to time, greatly reduces the calculational resources needed to compute precise equilibrium fractions. The Agency does not believe that this simplification greatly over- or under-estimates the equilibrium fraction at a given location.

3.3.23 The definition for "effective dose equivalent" is inaccurate - "effective dose equivalent is not a "risk-weighted average" but the sum of the risk-weighted organ dose equivalent commitments.

Response: The definition has been corrected in the final documentation.

3.3.24 The EPA emission factors and the NCRP screening model assumes that the nearest resident is at 10 meters and food production at 100 meters. This negates the assumption on page 9617 that stack height and area/facility size have negligible effects because they will have effects at these distances. In real life, we have not seen residents living at 10 meters or food production at 100 meters from facilities releasing significant quantities of radionuclides.

Response: The commenter is mistaken, neither the EPA emission factors nor the NCRP's screening models are based on the stated assumptions. The EPA did base the Table of Allowable Quantities on the assumption that no individual resides within 10 meters and no food is grown within 100 meters. Facilities, if they exist, which do not meet this condition, are prohibited from using the Table to determine compliance. Levels II through IV of the COMPLY code to consider building wake effects.

3.3.25 Does EPA assume that the regulation is geared towards protecting people in residences only based on the 10 meter release point? What about offices, factories, etc. - are they considered occupied residences?

Response: The regulations cover any member of the general public. The Table of Allowable Quantities was developed to minimize the burden of demonstrating compliance on small licensees while assuring the every member of the public received the full protection provided by the standards.

3.3.26 Section IV.D.2. apparently does not address precipitation which may have a significant affect on the dispersion of pollutants in some parts of the country.

Response: Level 4 of the COMPLY computer program has been revised to take precipitation into consideration.

3.3.27 While the emission factor specified may be appropriate for known volatile compounds of H-3 or iodine isotopes, we do not believe that it could be defended for elements which have no known volatile or gaseous compounds. This factor should be re-evaluated and reduced where appropriate.

Response: The release fractions were developed as a means of minimizing the burden of demonstrating compliance while assuring the public health is protected. Thus, the emission factors represent upper-bound limits. If a licensee cannot demonstrate compliance on the basis of the release factors and the effluent control adjustment factors, then monitoring is both appropriate and required.

3.3.28 The measurement methods in the proposed rule should be used as guidance only, i.e. acceptable but not required methods. Radiation measurement technology is constantly changing and facilities should have the explicit permission to adopt new better techniques as they become available.

Response: The Agency has amended the measurements methods to include those already approved by the NRC. However, it has not dropped the requirement that use of other methods be approved by the Administrator.

3.3.29 The SAB recommends against "deliberately producing biased measurements" when demonstrating compliance, that is the result that would occur using COMPLY.

Response: An uncertainty analysis, using a Monte Carlo simulation technique, in support of this rulemaking suggest that the CAP-88 codes produce median risk (or dose) values on an annual basis. While the lower levels of COMPLY are conservative, Level 4 produces results that are not biased and are similar to those calculated by the CAP-88 codes when the receptor is outside the building wake zone. At close distances, COMPLY calculates different air concentrations due to inclusion of building wake effects.

3.3.30 Considering that accidental releases are included in annual emissions, the EPA should include some additional provisions in its compliance procedures for dealing with accidents.

Response: Accidental releases that are not catastrophic can be adequately handled by the present codes. If the accident is catastrophic, then compliance with the NESHAPS would be mute and the EPA's Protective Action Guidelines should be applied.

3.3.31 The COMPLY code does not employ a finite modeling approach but calculates only doses from air immersion/inhalation which will tend to underestimate doses from an elevated release and overestimate doses from ground releases.

Response: To the extent that the EPA understands this comment, it disagrees. The COMPLY code can be applied to both ground level and elevated releases, and calculates doses based on air immersion, ground-surface contamination, inhalation, and ingestion.

3.3.32 The COMPLY computer code has no provisions for site-specific meteorology and topographical information.

Response: The commenter is misinformed. The COMPLY code has not provision for site-specific meteorological data at the lowest levels. Level 4 of COMPLY allows for using site-specific meteorological data in the form of a modified wind rose showing how frequently the wind blows from a given direction at a given wind speed. Although the code is unable to consider topographical details such as surface roughness, it does take into consideration building wake effects. Building wake effects will be more important than other terrain characteristics for most facilities in the NRC-Licensed category.

3.3.33 The COMPLY code does not allow for stability classes for calculating dispersion.

Response: Consistent with the recommendations of the NCRP, the COMPLY code assumes stability class D. This assumption makes a small difference in most cases and was adopted because it greatly simplifies the use of the code.

3.3.34 The COMPLY code only provides for one farm at one distance and that distance is applied in all 16 sectors.

Response: This assumption has been adopted to simplify the code.

3.3.35 The COMPLY code has no provision for time dependence to accommodate for cows on pasture versus cows on stored feed.

Response: Simplifying assumptions have been intentionally incorporated into the COMPLY code. Some of these assumptions tend to overestimate risk (residence at one location for 70 years), while other assumptions may underestimate risk to selected populations (infants and children). The dose calculated by COMPLY is not an actual dose but a dose for determining compliance with the NESHAP.

3.3.36 The COMPLY code accepts only information as to the nearest receptor in each of 16 sectors. The closest receptor may not always be worst case.

Response: The nearest receptor is at the maximum air concentration in COMPLY because the Gaussian dispersion factors use the concentration at the point where the plume touches down for distances located closer to the point of the release.

3.3.37 The EPA must clarify instructions as to the meaning of "maximum annual air concentration". This could be interpreted to mean location with highest annual average air concentration, location with highest 95th percentile Chi/Q or even location with highest single concentration reported during the year.

Response: No clarification is necessary. The "maximum annual air concentration" can be interpreted as the point closest to the point of release. Although the plume may come down beyond this point, the diffusion factors used provide for a constant concentration from the point of release to the point where the plume touches down.

3.3.38 Requiring the use of the COMPLY code by the nuclear industry disregards the existence of a carefully developed and very rigorous methodology already in existence for calculating risk to offsite individuals, and will result in different values being calculated and reported to EPA than are reported to NRC under guidelines of NUREG 0133, Regulatory Guide 1.109.

Response: Much of the NRC's existing framework is outdated, incomplete, and inconsistent. For material licensees and power reactors, the NRC uses the outdated ICRP 2 methodology to calculate doses. Further, building wake effects, accidental releases, and the contributions from radon decay products (notably Po-210 and Pb-210) are not included. For uranium milling facilities, the NRC used ICRP 26/30 methodology, while the EPA's AIRDOS methodology is used for conversion plants. It would be difficult for the EPA to be consistent with this system.

3.3.39 The COMPLY code and thorough documentation should be made available for evaluation and to allow demonstration of compliance with the regulations.

Response: The COMPLY code is extremely well documented. The methodology and equations used through Level 3 are from the NCRP's Commentary No. 3. The COMPLY code and Level 4 are



described in the EPA's Background Information Document "Procedures Approved for Demonstrating Compliance with 40 CFR Part 61, Subpart I. The Agency has not releases the source code for COMPLY to preclude the distribution of unauthorized versions.

3.3.40 The COMPLY code's requirement to calculate the building wake factor at distances beyond which there is a wake is unnecessary and should be deleted.

Response: The requirement is based on the recommendations of the NCRP in its Commentary No. 3. The Agency has no information indicating the correction is unnecessary.

3.3.41 The COMPLY computer code should be modified to allow use of the radioisotope and curie file for each release point so that if the program needs to be rerun these data could then be available without re-entry.

Response: The COMPLY computer program is intended for compliance. The EPA does not encourage many reruns of the code to achieve compliance.

3.3.42 In running the COMPLY computer program, it is not clear what is meant by "multiple emission vents". Can one emission point that represents the average flow conditions and accounts for all radionuclides emitted be used rather than considering 10 release points separately? Dow believes an operator should be allowed to aggregate emission points. This should not effect final results, but will make the running of the program much easier.

Response: Separate release points can be used if they are not far apart in comparison to the distance to the receptor.

3.3.43 Additional means for determining compliance should be considered by the EPA.

Response: The EPA is allowing provisions for approving alternative models that are equivalent to COMPLY.

3.3.44 The EPA assumes that radionuclides build up in the surrounding area for 100 years, rather than a more realistic 25-year period, before the exposed population comes into existence. This increases estimated ground concentrations, surface doses, and vegetation concentrations by a factor of three.

Response: EPA uses a 35 year half-life value for long half-life radionuclides on the ground, which modifies the ground build-up in surrounding areas.

## 4. SOURCE CATEGORY SPECIFIC COMMENTS

### 4.1. DOE FACILITIES

#### 4.1.1 Basis for the Standards (legal/procedural issues)

4.1.1.1 DOE proposes under Subpart H a 25 mrem/yr effective dose equivalent standard for emissions to the air from DOE facilities. The selection of an "acceptable level of risk" for air emissions at 25 mrem/yr effective dose equivalent is more consistent with the recommendations of national and international radiation protection standards-setting organizations than the levels considered by EPA in the proposed rule.

Response: The Administrator has considered the recommendations of both the national and international advisory committees in reaching decisions on what constitutes safe with an ample margin of safety. The 10 mrem/y EDE level established by the NESHAP provides the protection of public health with an ample margin of safety required by the Act.

4.1.1.2 In Section VII.A.3 of the BID, it is difficult to determine the basis for the levels of emission control proposed for DOE facilities. The proposal notes that DOE is well within the present NESHAP limitation of 25 mrem/yr, produces essentially no risk, either to individuals or the public at large, and is reducing emissions further. Given these facts, it is difficult to identify any basis for a change in the current NESHAP limit to 10 mrem/yr under Approach A. Risks are certainly not known within a factor of 5, and there is essentially no risk difference between 10 and 25 mrem/yr.

Response: The assessment of the risks posed by DOE facilities indicates that doses are generally well below the limits established by the existing NESHAP. The change from 25 mrem/y whole body and 75 mrem/y critical organ to 10 mrem/y EDE reflects the changes that have occurred in health physics and radiation protection. EPA has been urged to change to the new unit of effective dose equivalent for some time. For most facilities, the change in the NESHAP is not a significant increase or decrease in the stringency of the older limits, but is essentially equivalent.

#### 4.1.2 Dose and Risk Calculations and Analysis

4.1.2.1 The BID used emissions based on DOE's 1986 report of emissions and meteorological data taken from nearby weather stations. It is DOE's position that site specific methodology should be used when available. The EPA's use of site specific

data in conjunction with the less representative meteorological data from adjacent weather stations is a contributing factor in the technical errors in EPA's analysis of impacts from DOE's sites.

Response: The EPA uses site-specific meteorological data for DOE sites when such data can be obtained in the STAR format required by the assessment codes. Changes to the meteorological data between the draft and final EIS are documented in Appendix A of Volume II.

4.1.2.2 The principal release point for the Hanford facility is stated to be 61 m above the ground; however, a stack height of 10 m was assumed in the risk assessment. It is not possible to determine whether the assumed 10-m stack height for Reactive Metals, Inc. is appropriate. It is difficult to believe that a good approximation of the Y-12 stack height could not be determined. How was the other information, such as which building is the major effluent source, the effluent filtration systems, etc., obtained? It is clear that the assumed flow rate of 200 cf. is an unrealistically low value. There are two values for U-234 in Table 2.5-1. Table 2.5-4 shows 6000 people with lifetime risks exceeding  $1E-4$ , but Table 2.5-3 indicates that the maximum lifetime risk is  $8E-5$ . The effectiveness of the proposed cleanup depends directly on the fraction that is tritiated water vapor; the basis for the statement that "much" of it is in that form is not given. The sum of the U-234 releases listed for individual Y-12 buildings disagrees with the value for the facility that is given in Table 2.5-1.

Response: The EPA is limited in its assessments to the data in the DOE reports. Discrepancies in the DEIS have been corrected based on these and other technical comments and information received during the comment period. The discussion of applicable control technologies and effectiveness is based upon analyses performed by PNL for the Agency during 1983-1984.

4.1.2.3 It is stated in Section 2.7 that releases are expected to be double the 1981 values. Examination of the previous BID shows that releases of U-234 and U-238 have both declined from 0.113 Ci/y in 1981 to 0.02 Ci/y in 1986. For some reason the doses did not decrease proportionately (88 mrem to the lung in 1981 to 19 mrem to the same tissue in 1986). The heading for the second column of Table 2.7-5 is inconsistent with the table title; the same dollar values are called "HEPA Filter Installation Cost" in Table 2.7-6. The first paragraph under Table 2.7-6 doesn't make sense. If the total costs equal AE costs plus all other costs and the AE costs are 25% of all other costs, then the total costs will be 5 times the AE costs.

Response: The discrepancies noted have been corrected in the FEIS. The fact that the risks estimated for this facility have not decreased exactly with the reduction in emissions is due to use of a slightly different location of the maximum individual and minor changes in the assessment codes.

4.1.2.4 It is not clear from the discussion on page 2-72 that the Ar-41 releases at Brookhaven were assessed using the BMRR stack height of 45 m (plus plume rise), or whether they were included with some other sources released at much lower levels (10-18 m).

Response: In the FEIS, the site was modeled using actual release heights.

4.1.2.5 Sixty-one percent of the dose from operation of the Battelle-Columbus facility is attributed to K-40. Many of the nuclides in Table 2.19-1 are naturally occurring. The fact that these nuclides were reported in effluent air samples doesn't mean that they are effluents due to facility operation.

Response: The Agency assumes radionuclides reported in the DOE's Effluent Information System are due to process releases.

4.1.2.6 The population around the Oak Ridge National Laboratory is given as 850,000; a better estimate of the population is 600,000 (p.2-8).

Response: The EPA's estimate is based on results obtained from the SECPOP computer code. Based upon the latitude and longitude provided for each facility, the code estimates the 0-80 km population using 1980 census data.

4.1.2.7 The new regulation is in terms of the effective dose equivalent, but only organ doses are calculated in the BID. The BID should estimate the effective dose equivalent so that these can be directly compared with the new regulation.

Response: As explained in the FEIS, the Agency bases its decision-making not on doses but on risks. The EDE is chosen for the NESHAPS limits to allow facilities to implement the standards using methodologies with which they are familiar.

4.1.2.8 A suggested rewrite of section 2.3.4 follows.

#### 2.3.4 Supplementary Controls

##### 2.3.4.1 LAMPF Main Stack

Air activation products from the LAMPF target cells and beam stop are exhausted through the main stack, which is located near the center of the experimental areas of the east end of the half-mile long linear accelerator. Total emissions as measured at the stack in 1988 were 121,000 Ci. Over 99% of this activity was from short-lived radionuclides; the main contributors were the 2-min half-life oxygen-15 (58%), 20.4-min carbon-11 (25%), and 10-min nitrogen-13 (13%). The only radionuclide that is longer-lived than carbon-11 was argon-41 (110 min), which contributed 0.4%. The maximum individual annual dose for a member of the public for 1988 from LAMPF emissions, as calculated by AIRDOS-EPA/RAD RISK and using a 30% reduction for shielding by buildings, was approximately 9 mrem. However, long-range plans for LAMPF call for up to 40% increase in annual integrated beam current over 1988, so future maximum doses in the 10 to 15 mrem/year range are likely if no corrective action is taken.

Several potential methods for reducing the airborne radioactivity attributable to LAMPF operations have been considered. The large air flow to the LAMPF main stack (currently about 16,000 cu.ft./min) makes it very difficult to use any existing technology to remove the gaseous activation products from the air stream. The most realistic approach would be to provide significant holdup time to allow decay of the short-lived components before release. One favorable scheme would be to utilize a long duct of slowly moving air to provide an extended decay time. For example, an 8-ft diameter corrugated metal pipe that is 8000 ft long with a flow of 10,000 cu.ft./min would yield a transit time of 40 min. The (roughly) estimated construction cost of this air holdup system is \$3,000,000 (FY-92 dollars) including connection of the existing exhaust system, suitable trenching and dirt shielding for the pipe, and a new stack at the end of the delay line. Table A.1 presents the reduction in radionuclides emissions as a function of holdup time for the major constituents.

Implementation of the 40-min air holdup will result in a reduction of the stack emissions by a factor of about 13, with carbon-11 as the main component remaining at about 0.26 of its original concentration (25%). An additional dose reduction for both employees and the public should be realized with this installation because the most sensible construction plan would be to extend the decay pipe eastward on the long narrow LAMPF mesa, resulting in a stack location that produces lower dose to the surrounding population.

Table 1. Effect of hold time of the release of principal air products from LAMPF.

Radionuclide	Half-Life (min)		Percent of Total Activity		Decay Factor	20-min Holdup	40-min Holdup
	before holdup	before holdup	before holdup	before holdup			
Oxygen-15	2.0	58%	0.001	1E-6			
Carbon-11	20.4	25%				0.51	0.26
Nitrogen-13	10.0	13%				0.25	0.06

Response: The FEIS reflects the emissions from DOE facilities for 1986, the last year for which complete data were available at the time that the analysis was made. If future activities at LASL will result in doses exceeding the limits established by the NESHAP, then additional controls and/or programmatic curtailments will have to be implemented to assure that the public receives the protection provided by the standards. The discussion of control technology provided by the commentor indicates feasible emission controls are available to the facility operator

4.1.2.9 The example dose/risk assessment for the Rocky Flats Plant contains numerous errors, beginning with the radionuclides and their activities that were used as the emissions source terms. These are not the nuclides nor the activities that were reported by the Rocky Flats Plant in its 1986 air emissions report. The distance to the nearest nearby individuals also is incorrect; the distance used is within the Plant boundary. If this assessment is to be used as the technical basis for the rule, significant revision is necessary.

Response: The assessment of the RFP was based on the emissions reported in the DOE's Effluent Information System. Attempts were made to resolve discrepancies between that data base and the individual facility's annual operating reports. However, time considerations did not allow full resolution of all such discrepancies. The estimated exposures and risks from the RFP were not critical to the decision making for this source category.

4.1.2.10 The proposed rule does not specifically state whether the 10 mrem per year effective dose equivalent limit is based on committed dose or annual dose. Although probably implicit in the AIRDOS/RADRISK calculation methodology, which is specified, we suggest that the basis needs to be explicitly stated in the rule, because it is a significant element with regard to radiation protection.

Response: The standard is for the committed dose that results from one year's emissions.

4.1.2.11 What are the errors associated with the measuring of radionuclides and flow rates at the control devices? How are these errors compensated for in the compliance demonstration? How many unmonitored points of emission exist at these facilities? What are the estimated emissions from these unmonitored points of emission? How do the measured radionuclide emissions compare to radionuclide losses based upon facility-wide mass balance calculations? The estimation of radionuclide emissions include the estimate of a control device efficiency factor. How reliable are these factors? What is the procedure used to verify these factors? Since control device efficiency tends to deteriorate over the lifetime of the equipment, how often are these factors re-assessed? Are the emission rate calculations based upon the most favorable, the most conservative, or an average efficiency factor?

Response: The EPA bases its risk assessment of DOE Facilities on the emissions reported by the individual sites to the DOE's Effluent Information System. The vast majority of the reported emissions are based on measured release rates. The implementation procedures for the NESHAP require the facilities to determine emissions based on approved monitoring, sampling, and analytical methods. The error associated with these measurements are relatively small. EPA belief, based on engineering studies and general knowledge concerning the release potential of emission points, is that unmonitored points of emission do not release significant amounts of radionuclides.

#### 4.1.3 Control Technology

No Significant Comments.

#### 4.1.4 Level of Proposed Standards

4.1.3.1 It is inappropriate and inconsistent with the guidance of radiation-protection organizations to state that the dose limits apply to any member of the public. Rather, the dose limits should apply to reference individuals in critical population groups.

Response: The standards apply to all members of the general public. However, the implementation procedures calculate doses based on "reference man".

#### 4.1.5 Compliance and Implementation Procedures

4.1.5.1 EPA should delete the one-time reporting requirement in revising the standard, or, at least, exempt DOE sites that routinely operate at 20% of the standard or below.

Response: DOE facilities have already submitted their initial report. The rule only requires the submission of annual reports on operations.

4.1.5.2 The point of release in the annual reporting requirements should be the process areas at DOE facilities rather than the actual points of release since some larger facilities have multiple process areas with many separate release points.

Response: EPA does not object if all the release points of a single building are combined as one weighted average release point, provided that this is noted in the annual report.

4.1.5.3 The EPA should establish a threshold approach for annual reporting consistent with other source categories; we recommend a threshold for compliance reporting at 1 percent of the standard.

Response: EPA is requiring report from all DOE facilities that release radionuclides. The Agency believes that the limited number of DOE facilities make these reports practical and useful.

#### 4.1.6 Costs of Compliance

4.1.6.1 Many of the estimates of cost are incomplete and are therefore underestimates. The level of detail provided varies greatly by source category. The principal reference regarding costs for Section 2 "(Mo86)" is not included in the reference list (there are, however, several references listed which are never called out in the text). The basis for deciding when to consider dose reduction alternatives varies from category to category. In Section 2, it is clearly related to effective dose equivalent levels; however, in other sections, there is no estimate of effective dose equivalent (or even of lung dose) and the criteria appear to be risk level or number of predicted deaths.

Response: EPA calculated the cost of controls for those DOE facilities with the highest estimated individual risks. Since doses and risks are correlated, using doses does not result in a different analysis than if risks levels are the selection criterion. Cost estimates were based on reliable information and only considered in making the ample margin of safety decision.

#### 4.1.7 Other Comments

4.1.7.1 Environmental assessments, prepared by DOE for construction and operation of new radionuclide sources, should be reviewed by the EPA prior to issuance of NESHAP approval.



Response: DOE facilities will have to apply to EPA for approval to construct a new facility or modify an existing one in such a way that will result in increased emissions, as specified in the regulations of 40 CFR Part 61.

#### 4.2. NRC-LICENSED AND NON-DOE FEDERAL FACILITIES

##### 4.2.1 Basis for the Standards (legal/procedural issues)

4.2.1.1 Facilities which use limited amounts of sealed source devices for industrial purposes should be exempted from the proposed rule. Properly constructed and maintained sealed sources do not leak and, hence, do not emit radionuclides into the atmosphere.

Response: The EPA agrees, and facilities that only use or possess sealed sources are exempt.

4.2.1.2 The regulatory and record keeping burden imposed on facilities utilizing very small amounts of nuclear material would be excessive and is out of proportion when viewed in a holistic sense.

Response: The EPA has spent considerable time and resources to develop the tiered set of compliance procedures to minimize the burden on small users while still assuring that the public health and safety are protected. The Agency does not consider it to be an unreasonable or excessive burden to require facilities to account for the amount of material that they possess in the course of a year, especially since they already have procedures in place to assure that all such material is properly logged into and out of their facilities.

4.2.1.3 Clarification is needed as to whether or not the rule will apply to nuclear facilities operating under the Atomic Energy Act (AEA) of 1954. These are regulated by the NRC; the proposed regulations would be duplicative, unnecessary, and unlikely to produce any significant reduction in the already low levels of risk.

Response: The rule will apply to nuclear facilities operating under the AEA of 1954, as specified in the applicability provisions of the regulations. The CAA provides a different regulatory framework resulting in standards different than those promulgated under the AEA. These NESHAPS will provide a greater level of safety for the public for routine emissions of radionuclides.

4.2.1.4 Accidental releases should not be subject to the standard and may conflict with ongoing interagency efforts by EPA, FEMA, NRC, DOE, and other federal agencies to develop

guidance for accidental releases of radionuclides from federally owned or federally licensed nuclear facilities.

Response: Accidental releases are subject to the NESHAP, and can result in a violation of the standard. However, the procedures for implementing these NESHAPS do not involve specific measures directed at accident prevention. The risks and releases from accidents are not to be considered in granting approvals to construct or modify facilities. However, to the extent that non-routine emissions are to be expected from the operations at the facility they will be considered. EPA is not planning to develop any guidance for accidental releases which will conflict with other interagency efforts to develop guidance for accidental releases.

4.2.1.5 The EPA should limit the rulemaking on Subpart I to establishing an emission standard and rely on the NRC to enforce the standard under existing NRC regulations and requirements, since this proposed rule could render the U.S. uranium mining, milling, and fuel-fabrication industries less competitive nationally and internationally.

Response: EPA hopes to establish an Memorandum of Understanding (MOU) with NRC to reduce any duplicative requirements in the implementation of these standards, consistent with CAA Section 112.

4.2.1.6 NRC licensees should be allowed to take exception to the EPA guidance until such time that comparable NRC guidance is available.

Response: All regulated licensees will be required to follow EPA compliance procedures. EPA has received input from NRC in the development of the compliance guidance.

4.2.1.7 The NRC does not believe that it will have a sufficient basis to enforce the resulting standard for any of the approaches in this proposed rule under the current NRC-EPA Memorandum of Understanding since compliance with even the 10 mrem/yr dose limit cannot be validated by currently available measurement techniques.

Response: The implementation procedures do not require demonstration of compliance to be based on measurements. One of the reasons for the development of the COMPLY code is that environmental monitoring at the levels mandated by the NESHAPS is not always feasible.

4.2.1.8 There is a definite need for a State to have the ability to assume responsibility to locally administer the NESHAPS program; especially Agreement States.

Response: EPA will encourage the States to apply for delegation of authority to administer the radionuclide NESHAPS.

4.2.1.9 It is unclear whether the proposed rule is intended to cover releases of NARM from facilities licensed by NRC.

Response: The rule applies to all air emissions of radioactive materials released from facilities covered by the standard.

4.2.1.10 It should be stated in the subject Rule that if there is an inconsistency between the requirements or standards of the yet to be promulgated 40 CFR Part 191, Subpart B, regarding disposal, and those of the subject rule, emissions of radionuclides to the air resulting from spent fuel or high-level radioactive waste disposal shall not exceed those established for NRC-licensed facilities in Subpart I of the subject rule.

Response: There can be no inconsistency between 40 CFR Part 191, Subpart B and these NESHAPS since high level nuclear waste disposal operations are not covered by a NESHAP.

4.2.1.11 I-131 used for cancer therapy should be exempt from all regulation and compliance requirements within the scope of the proposed standard. Such an exemption could be justified on humanitarian grounds and substantiated with a benefit/risk analysis which clearly demonstrates the value of this activity in the preservation and extension of human life.

Response: The EPA disagrees, with the suggestion of an exemption. These standards will not prevent anyone from getting the I-131 therapy they need.

#### 4.2.2 Dose and Risk Calculations and Analysis

4.2.2.1 Hospital stacks and vents are normally on top of the building and hospitals are typically multi-story buildings. The assumption of a 6- or 15-m release height has no basis in reality. Nearby individuals within 100 or 150 m will clearly be in the building's wake.

Response: The FEIS reflects changes in the assumed stack height for the generic assessment of hospitals.

4.2.2.2 The source term for the large hospital doesn't include I-131 or other nuclides that might be used for tests and research.

Response: The assessment in the FEIS has been changed to include I-131. The assumed source term is based on reported releases.

4.2.2.3 Section 3.3.2.2 states that "actual site data were used for the risk assessments" but the "stack heights used were all 15 m." Perhaps it is a remarkable coincidence. Tables 3-7 and 3-8 are not consistent;  $2 \times 10^{-4}$  is given as the maximum lifetime risk. Most of the dose from Facility D is due to noble gases; reducing the radioiodine dose by a factor of 100 would still leave an effective dose equivalent of about 7 mrem/y (for the assumed conditions).

Response: It is a coincidence that the stack heights were all 15 meters for the radiopharmaceutical manufacturers.

4.2.2.4 Table 3-19 is not consistent with Table 3-18; Facility C has calculated lifetime risks greater than  $1 \times 10^{-4}$ .

Response: The distributions of risk are based on extrapolations from typical facilities to the entire segment. Thus, there is some inconsistency in the levels of risks between these distributions and the estimates made for specific facilities evaluated due to their greater potential for causing significant risks. The FEIS has been amended to clarify the level of risk associated with each of the segments.

4.2.2.5 There are no tables of numbers of people exposed at various lifetime risk levels for fuel fabrication, source material licensees, incinerators, or shipyards/DOD reactors.

Response: The distributions are included in the FEIS.

4.2.2.6 Table 3-32 shows no risks above  $1 \times 10^{-4}$  which is inconsistent with estimates presented previously and with the text on the same page (3-29).

Response: An asterisks (\*) has been inserted in the risk distribution tables in the FEIS where there is insufficient information to precisely quantify the risk. In this case it is known that only a very few people are exposed to those risks.

4.2.2.7 The EPA should allow use of the COMPLY computer program as an alternative to determining compliance.

Response: The COMPLY code is approved for use by NRC-Licensed and Non-DOE Federal facilities.

4.2.2.8 Risk estimates are inappropriate due to failure to include relevant model parameters such as occupancy time, shelter, plume buoyancy, site-specific factors, especially those which apply to urban facilities.

Response: The EPA performs site-specific analyses when it is appropriate. However, for the NRC-Licensed source category the number of facilities makes this impractical. As for appropriate model parameters, the EPA's generic assessments are either based on facilities defined on the basis of typical sites or are actual (reference) facilities. The EPA assessments assume 100 percent occupancy time, and assume a buoyant or momentum driven plume rise, as appropriate.

4.2.2.9 It is unclear how or why the EPA would propose such concentration limits in light of the ongoing NRC effort to revise 10 CFR 20. We recommend that the EPA discontinue its efforts to promulgate this rule, but, failing that, that its implementation be synchronized with the NRC's efforts regarding 10 CFR 20.

Response: The EPA concentration limits are explicitly developed for the limits imposed by the NESHAP and the limiting conditions imposed on their use. They are in no way connected with, nor should they be confused with, the MPC's that the NRC has used and is revising in 10 CFR 20.

#### 4.2.3 Control Technology

No Significant Comments.

#### 4.2.4 Level of Proposed Standards

4.2.4.1 EPA has argued that the 10 millirem limit is actually less stringent than the 25/75/25 provisions of 40 CFR Part 190, but this is not necessarily true.

Response: EPA believes that for most situations the NESHAP is somewhat less stringent than the Uranium Fuel Cycle standard, but recognizes there are situations where this would not be the case.

4.2.4.2 It is not clear what the licensee must do if the radionuclides in use are not listed in Tables 1 and 2. The limit for MO-99 in Column 4 of Table 1 needs to be corrected.

Response: The tables now include more than 400 radioisotopes. If a facility has an isotope that is not listed, it should contact the EPA for assistance. The Mo-99 limit has been corrected.

#### 4.2.5 Compliance and Implementation Procedures

4.2.5.1 Meeting this limit and its rules for implementation will require the Army to undertake extensive development of standing operating procedures (SOPs) to provide guidance to Army commanders. The proposed rule appears to lack sufficient, scientifically sound basis for such an effort.

Response: The EPA has prepared implementation guidance for the regulated community. There is no reason for the Army to undertake an extensive program to develop SOPs, but should simply use that guidance.

4.2.5.2 DOE recommends that EPA designate to the NRC the responsibility for implementing and enforcing compliance with radionuclide emission standards for NRC-licensed facilities. The NRC currently regulates radionuclide emissions under existing 10 CFR Parts 20 and 50 and implements the EPA's regulations for radionuclide emissions under 40 CFR Part 190 and Part 191, Subpart A.

Response: The EPA and the NRC are engaged in discussions to decide whether or not the NRC will enter into an MOU to implement the NESHAP.

4.2.5.3 NRC-licensed facilities should be afforded the same flexibility to use AIRDOS as is afforded to DOE facilities.

Response: AIRDOS is a much more difficult model for facilities to use and EPA is concerned that its widespread use would result in a large number of inaccurate reports. DOE facilities are allowed to use AIRDOS because they have been trained how to use AIRDOS correctly.

4.2.5.4 NRC-licensees should be allowed a suitable implementation period that will allow development of site specific models and procedures to demonstrate compliance.

Response: The development of the implementation models has already been completed by the Agency. Since the models were developed to require the minimum of site-specific information, there is no reason why additional time beyond that provided for by the Act is required.

4.2.5.5 Since the data required for demonstration of compliance with current NRC requirements will not be substantially changed, the current reporting methodology should be allowed to satisfy all regulatory reporting criteria (i.e., both NRC and EPA) until such time as a unified reporting and calculational format is developed.

Response: The NRC reporting requirements for licensees are not uniform. The EPA's reporting requirements have been developed to minimize the burden on licensees. The COMPLY code automatically generates the required report. In addition, NRC rules do not require compliance with a specific dose limit of 10 mrem/y to any member of the public and are, therefore, not applicable.

4.2.5.6 For sources with very small inventories, the owner or operator should be permitted to use process or source knowledge to demonstrate that potential releases are below the 0.1 percent continuous sampling level.

Response: EPA has developed a framework to allow facilities using small quantities of radionuclides to estimate emissions. These estimated emissions are then used to demonstrate compliance, either through the use of tables or the computer model COMPLY.

4.2.5.7 The proposed sampling and analysis plan is so different from the existing NRC radionuclide emissions reporting procedures that industry would be required to keep two sets of books. The monitoring plan proposed by the EPA conflicts with the NRC plan and would require major re-engineering of existing monitoring apparatus and substantial capital investment.

Response: Upon review of the NRC's requirements for monitoring and analysis at major fuel cycle facilities, the EPA has determined that these licensees can continue to use the monitoring plans specified in their license. For non-fuel cycle facilities, the compliance procedures specify calculational techniques that are believed to allow licensees to demonstrate compliance without changes to their facility or capital expenditures.

4.2.5.8 It is difficult, if not impossible, to predict the type and amounts of radionuclides that might be used in new medical facilities and universities.

Response: The standard does not require precise prediction but the reporting of past actions. However, some estimate of future uses can be made from prior history. These estimates should allow any facility to establish its own procedures to ensure compliance.

4.2.5.9 Problems were encountered with nuclide inventories, waste form, site configuration, and emissions in trying to evaluate the prescribed compliance procedures for low level waste sites. Many of the emissions are not point source releases, some possible nuclides are not listed even in compliance level 4, and the COMPLY code and instructions do not address area or volume sources or packaged wastes.

Response: While the COMPLY code does not explicitly account for area sources, such area sources can be assessed by assuming the release occurs at the center of the area. The radionuclides that may be assessed using COMPLY have been increased to over four hundred.

4.2.5.10 The principle shortcoming in regulating the doses listed in 54 FR 9612 comes in difficulty of measuring concentration levels as listed in Table 2, Appendix E. For some particular isotopes, the average natural background radiation in various parts of the country exceeds this limit. Demonstrating compliance would be difficult under the EPA's proposed limit.

Response: The EPA's implementation procedures do not call for environmental monitoring, in part because of the difficulties noted by the commentor.

4.2.5.11 The EPA must provide more flexible and more realistic methods for demonstrating compliance than are currently provided by the COMPLY computer code. Otherwise, it is likely that no mill can operate without major process or facility modification.

Response: The COMPLY code provides a realistic estimate of the annual dose to the maximally exposed individual. At level 4, the COMPLY program is complex enough to account for the conditions at a mill. No process changes should be required.

4.2.5.12 The EPA should develop guidance documents and training for the designated contacts to deal with computer problems and other problems such as emission estimates and area and volume sources.

Response: The EPA intends to provide training and implementation guidance for all agencies with compliance responsibilities.

#### 4.2.6 Costs of Compliance

4.2.6.1 NRC licensees will be faced with increased paperwork and costs from dual NRC/EPA inspections and requirements for analyses and reporting, applications for facility modifications, and unfeasible or expensive sampling requirements.

Response: The EPA does not agree that there will be a significant increased burden for licensees. EPA procedures have been designed to limit the burden to licensees. In addition, EPA hopes to establish a Memorandum of Understanding with NRC to further reduce any increase in burden to licensees.

4.2.6.2 Compliance with Approach D would be impractical and, if such a limit were imposed, the production of vital radioisotopes such as Mo-99, I-131, Xe-133, I-125, P-32 and others would have to be discontinued. Since 1 in 4 hospital patients in the United States have some nuclear diagnostic test performed with one or more of these isotopes, Approach D would have detrimental effects on the general health and welfare of the nation.

Response: The EPA has not promulgated the limits proposed under Approach D.



4.2.6.3 The EPA should balance the minimal risks associated with exposure to low levels of radiation with the risk of inhibiting technological advances in biomedical research.

Response: EPA does not believe that the standard will inhibit advances in biomedical research, since current operations comply with the standard.

#### 4.2.7 Other Comments

4.2.7.1 The final rulemaking should clarify the status of low-level radioactive waste disposal facilities; the intent of the CAA and Subpart I would appear to focus more on operations and stored wastes than on properly closed disposal sites.

Response: Closed disposal sites are covered under the NESHAP.

4.2.7.2 The applicability of Subpart I to temporary work sites and outdoor work sites must be further evaluated; the standard applies only to licensed facilities.

Response: The standard applies to all NRC-licensees and includes all activities under the control of a licensee whether indoor or outdoor, permanent or temporary.

4.2.7.3 The annual possession worksheet may overestimate quantities onsite at any particular time since it does not account for quantities being shipped out; license possession limits may be a more realistic quantity for calculation of potential release. The concentration worksheet does not accumulate concentrations of the same nuclide from different stacks or vent; this will underestimate quantities released.

Response: Since the NESHAP imposed an annual dose standard, the relevant quantity is the amount of material handled in one year. The EPA recognizes that this is different than the NRC's possession limits. The possession limit is not a useful tool because it only limits the total amount of radioactive material the licensee can possess at any one time. Some facilities only use a small fraction of their possession limit, while others can use many times their possession limit during the year. The implementation system does not account for material that is shipped out, in those cases where the package has been opened. The system of release fractions is based on the amount of radionuclides that would escape when a larger quantity of material is used. If EPA was going to allow deductions for material shipped out then it would have to use a different, and higher, set of release fractions. The compliance procedures do account for the additive exposures from multiple release points.

4.2.7.4 EPA needs to consider the potential impact of the three proposed dose limits on the development of new low-level waste disposal sites. Having to demonstrate compliance with release limits of 3 millirem/year or 0.03 millirem/year could limit the viability of engineered alternative disposal methods now being considered by States.

Response: EPA has considered the effect of the standard on all licensees at the second, ample margin of safety step. The final result of the two step process is a standard of 10 mrem/yr.

4.2.7.5 It is not clear whether the effluent discharge concentrations in Table 2 of Appendix E are applicable to releases from only one stack or whether they represent averaged or summed concentrations in those cases where the licensee maintains several such release points.

Response: The worksheets in the guidance document indicate that: (1) each nuclide released from the same stack or from different stacks must be summed; and (2) the same nuclide released from more than one stack should not be summed although the highest concentration from any stack should be used. This level of detail is not provided in Appendix E.

4.2.7.6 Will the NESHAP limits override the current MPC or proposed BAC limits of 10 CFR Part 20?

Response: Only when they are more restrictive.

4.2.7.7 The proposed regulations inappropriately group NRC/Agreement State-regulated facilities in the same category. Modeling assumptions are based on the largest emitters, meaning that nuclear power plants, hospitals, and universities are all considered and treated equally. Hospitals, universities and most radiopharmaceutical firms emit far smaller amounts of a very limited inventory of radionuclides than do nuclear reactors. The EPA's claim in VII-B-1 that these facilities emit large numbers of radionuclides is not necessarily true.

Response: The EPA's assessment of the facilities that are licensed by the NRC show that the doses and risks received by the individuals at greatest risk are roughly comparable across many of the segments including power reactors, radiopharmaceutical manufacturers, and hospitals. Even though individual licensees may emit only a handful of radionuclides, as a group NRC-licensees do emit a large number of different radionuclides.

### 4.3 URANIUM FUEL CYCLE FACILITIES

#### 4.3.1 Basis for the Standards (legal/procedural issues)

4.3.1.1 If any such new regulations are deemed necessary, before any new radiation standards are promulgated the EPA should implement the Memorandum of Understanding with the NRC to develop such a regulation on a joint basis, taking account of both the adequacy of the existing limits wherever possible and the need for consistency in methodology even where new standards are felt to be appropriate.

Response: EPA and NRC are currently discussing the possibility of creating a MOU which would help to reduce the regulatory burden on all NRC-licensees, including fuel cycle facilities. EPA hopes that these discussions can be brought to a successful conclusion. Unfortunately the court-ordered deadline for the promulgation of these rules did not allow enough time for these discussions to be completed. NRC has been actively involved in the development of the rulemaking. EPA has reviewed and approved current NRC sampling and analysis procedures for fuel cycle facilities.

#### 4.3.2 Dose and Risk Calculations and Analysis

4.3.2.1 It isn't clear why the fuel fabrication facilities are not analyzed on a site-by-site basis. There are very few facilities compared to other source categories which are all analyzed on a plant-by-plant basis.

Response: Given the level of risk estimated for the fuel fabrication facility with the greatest potential for emissions and the limited time available to the Agency under the Court order, it was determined that site-by-site analysis of this segment of the fuel cycle was not needed.

4.3.2.2 It is not reasonable to analyze only one "representative" of 100 reactors. In addition, one has only to look at the GSDs for the release rates (Tables 4-23 and -24) to realize that there are problems with this assessment. Apparently no consideration was given to whether the reactor operated for a long or short period during the year, whether it was a new plant or an old one, etc. One of the features of AIRDOS is that many different radionuclides can be analyzed, so why were surrogates for radionuclides used? It isn't clear that the surrogate release values were chosen to be comparable on a dose equivalent basis. A reasonable sample of facilities should be analyzed on a site-by-site basis using a credible set of source terms. Onsite meteorological data are available at all the plants. In fact, analyses for the plants have already been performed and can very likely be found in the same reports used to construct Table 4-31.

Response: Given the time and resources available to the Agency, the decision was made to evaluate power reactors based on model reactors typifying facilities with emissions near the mean. Data reported by individual plants were used to estimate the upper bound of individual risks. In the way the model plants were defined, the operating history of the individual plants for that year were not relevant. Surrogates, chosen on the basis of the contribution to dose, were only used to define the emission rates for other radionuclides. Appendix A to Volume II shows the actual source terms that were run. Within the time and resource limitations, on-site meteorological data in a suitable format were not available to the Agency. Finally, while assessments of all plants have been made, and are indeed made annually by PNL, the assessment methodology and dose/risk factors are not consistent with those used by the EPA.

4.3.2.3 The maximum individual risk, which is slightly higher in the calculation than the EPA preferred value of  $1 \times 10^{-4}$  lifetime risk, is to a hypothetical maximum exposed individual, with many conservatisms included in the calculation, exposed to the effluent from a mill. Use of such a hypothetical worst case calculation to conclude that the real risk is high enough to warrant additional regulation for the whole UFC is not warranted.

Response: The level of the risks calculated for the facilities in the UFC source category are but one of the factors that influenced the Administrator's decision to promulgate a NESHAP. As noted previously, the Act provides important mechanisms that provide additional assurance that the public health will be protected from routine operational releases.

4.3.2.4 As currently written, the standard indicates that the EPA believes, and assumes, that a plant being regulated will operate right at the limit every moment of its operating life. This is an erroneous assumption.

Response: The EPA makes no such assumption. In fact, the Agency believes that most plants will operate as far below the limits as is practical.

4.3.2.5 Risk handling should consider risk/benefit trade-offs and the relative risks of alternatives to the risk-producing activity, including the costs and risks inherent in the termination of that activity.

Response: The EPA agrees these consideration are appropriate for the second step, determining ample margin of safety.

#### 4.3.3 Control Technology

No Significant Comments.

#### 4.3.4 Level of Proposed Standards

4.3.4.1 The NCRP concluded in September, 1987 that about one-tenth of one percent of the radiation dose to the average person in the United States results from the uranium fuel cycle. This is hardly an amount worthy of additional regulation especially given the fact that average natural background radiation levels vary by 100 mrem in a year across the U.S..

Response: EPA regulations under the Clean Air Act are designed to protect the maximally exposed person as well as the average person.

4.3.4.2 Use of the EPA methodology, because of its many conservatisms, effectively results in significantly lowering the standard limit.

Response: The EPA believes that its compliance procedures result in reasonable estimates of actual exposures.

#### 4.3.5 Compliance and Implementation Procedures

4.3.5.1 Estimated doses to the maximum exposed individual off-site are routinely calculated by our facilities and reported to the NRC using a carefully developed system of sampling, analysis, and reporting. The NRC's system of inspecting and enforcing compliance is well developed. The data from our facilities produced in compliance with this rigorous methodology demonstrate that the emissions have represented and continue to represent an acceptable level of risk.

Response: The EPA has approved existing sampling and analytical methods for UFC facilities. However, since the NRC's calculational techniques are not uniform, and some are based on ICRP 2 methodology, the EPA has determined that doses must be calculating using its compliance procedures. EPA hopes that it and NRC will conduct negotiations to create an MOU to define the roles each will be responsible for in implementing the NESHAP for NRC-licensed facilities.

4.3.5.2 The proposed additions to 40 CFR Part 61 do not contain any provision to accommodate variances for unusual operations. It should recognize that temporary or unusual operating conditions may exist where standards could be exceeded for a short period of time and continuing operation may be in the public interest. Existing regulation allows such variances.

Response: The EPA limit is from exposure to total emissions over the course of a year. This should provide adequate operation flexibility.

4.3.5.3 The EPA's proposed reporting system would result in redundant and conflicting recordkeeping and reporting requirements.

Response: The EPA believes that its recordkeeping and reporting requirements are reasonable and do not impose an unreasonable burden on licensees.

4.3.5.4 Use of the prescribed simplistic COMPLY methodology for all plants is frequently inappropriate because of the extensive site-specific data employed in the current NRC mandated methodology. Demonstration of compliance should be allowed for nuclear power plants by employing existing NRC-approved methods. This existing methodology would more accurately represent the doses and risks to "real" people in the environment.

Response: As noted above, the EPA has prescribed the COMPLY methodology because the manner of calculating doses is not uniform under the existing NRC regulatory framework and in some cases relies on outdated ICRP 2 methodology.

4.3.5.5 EPA's proposed compliance procedures in this rulemaking reflect a total disregard of Section 122(c) of the Act and the EPA-NRC memorandum of understanding implementing that provision.

Response: The EPA disagrees, the compliance procedures have been developed with the input of the NRC.

4.3.5.6 Should a radionuclide NESHAPS for nuclear power plants be promulgated, the EPA should include provisions for a long implementation period.

Response: The EPA knows of no reason why power plants require a long implementation period. The compliance procedures have been developed and are extremely straightforward, and are ready for implementation 90 days after the effective date of the standard as required by Section 112.

4.3.5.7 Satisfying both NRC and EPA prescribed methods may be difficult, and perhaps impossible. It would be very difficult to monitor flow or sample for iodine being released from a pressurized water reactor vent, but continuous flow measurement and sample collection would be required by the current EPA proposal. Apparently any plan, other than continuous off-line sampling, would not be allowed by the proposed rules; if one wished to employ a different method, prior approval would be required. There is no basis given for this added requirement.

Response: The final rule permits the determination of releases using the monitoring provisions, calculational techniques, and analytical procedures incorporated in each fuel cycle facility's technical specifications.

4.3.5.8 Section 61.104 requires an annual report to include certain details regarding the facility which for our plants would be voluminous and unchanging. Such requirements are inappropriate for a large facility with unchanging process parameters, such as nuclear power plants.

Response: The EPA agrees that the report could be voluminous. However, the information requested is essential to enable the Agency to make a valid determination of whether or not the facilities are indeed complying with the standard. Given modern reproduction methods, facilities should be able to reproduce and submit this information on an annual basis.

4.3.5.9 Paragraph 61.107 should be changed such that an application under Paragraph 61.107 would not be required for construction of a new facility or modification of an existing facility if it has already been evaluated and accepted by the NRC.

Response: The EPA disagrees, EPA has a legal responsibility to ensure that the new facility will meet the requirements of its regulations; NRC approval is not designed to provide that assurance.

4.3.5.10 The 40 CFR Part 61 Proposed Rulemaking does not include any discussion of accidental release or associated limits/guidelines. If emissions during accident conditions are subject to this UFC NESHAP we recommend concise guidance be provided by the EPA as an integral part of any rulemaking. Associated EPA Protective Action Guidelines should be revised as necessary.

Response: Accidental releases are governed by the standard and can result in a violation of the standard. EPA intends to develop procedures to assist the regulated community in determining whether they are in compliance in accident conditions. EPA's Protective Action Guidelines will be reviewed to determine whether they should be revised to include discussion of radioactive NESHAP compliance.

#### 4.3.6 Costs of Compliance

4.3.6.1 The EPA's proposed standards would waste industry and government resources demonstrating and evaluating compliance at facilities that are already subject to stringent standards and compliance requirements.

Response: These standards will provide additional protection to the public from the risks of radionuclides from routine releases without requiring the wasteful expenditure of time or money from the regulated community.

4.3.6.2 The estimated cost is greater than \$1,000,000 per plant. This substantial sum of money will not reduce risk to the public and will not significantly improve effluent quantification.

Response: The estimate of \$1,000,000 per plant is wholly unsubstantiated and the EPA is not aware of any costs associated with this NESHAP beyond some procedure modifications and the minimal time needed to determine compliance and prepare the required reports.

4.3.6.3 The EPA has not provided a valid cost-benefit analysis in the record.

Response: This level of these standards was not determined using cost/benefit analysis and no such analysis is required.

4.3.6.4 Stringent effluent limits could increase significantly the price of nuclear fuel as a result of increased costs in the UFC facilities which would also be required to install expensive equipment having no commensurate benefits. Thus, stringent effluent limits could lead to substantial increases in electric rates for equipment which does not substantially increase public health and safety.

Response: The EPA does not have any information to indicate that fuel fabricators will have to install additional effluent controls to comply with the NESHAP.

4.3.6.5 The dose limit of 3 mrem/yr may force other nuclear facilities throughout the nation to operate under load restrictions. A reduction in nuclear power generation could impact the nation's economy, and impede the nation's efforts to reduce chemical emission pollutants.

Response: The promulgated limit is 10 mrem/y EDE.

#### 4.3.7 Other Comments

4.3.7.1 Making the citizen suit provisions of the Clean Air Act available will not provide a significant benefit. The industry has pervasive regulatory oversight. It is very difficult to imagine a situation where a plant would have a continued violation that could adversely affect public health and safety and then for the violation to continue after the NRC has been notified.



Response: NRC rules do not require that routine emissions be kept low enough to ensure that no member of the public receives a dose greater than 10 mrem/y ede. In addition NRC does not require its licensee to make such calculations as would be required to find out whether or not a facility provides this level of protection to the public. Therefore, it cannot be assumed that the NRC would prevent members of the public from receiving doses in excess of the acceptable level, of 10 mrem/y ede. In addition, EPA recognizes the Congress believes that provisions establishing the right of citizen suits do provide real additional protection to the public.

4.3.7.2 The EPA's analysis should consider the impacts of the alternative fuels which would substitute for the UFC; there is no discussion of increased CO<sub>2</sub> emission rates, the greenhouse effect or global warming.

Response: The EPA's analysis does not consider these effects as there is no information available to indicate that the promulgated rule will have an adverse impact on the generation of electricity by nuclear reactors, causing any increase in such effects.

#### 4.4 HIGH LEVEL WASTE FACILITIES

##### 4.4.1 Basis for the Standards (legal/procedural issues)

4.4.1.1 The EPA should not regulate air emissions from WIPP and MRS under the Clean Air Act. In the DEIS the EPA determined that the facilities that are covered under the High-Level Waste Disposal Facilities source category (i.e., the Waste Isolation Pilot Plant, High-Level Monitored Retrievable Storage (MRS) facility, and the Waste (HLW) repository) are designed with state-of-the-art effluent control systems enhanced by performance requirements of the waste forms and packages. The DEIS indicates that each of these facilities projects a lifetime cancer risk to individuals in the vicinity of less than  $10^{-6}$ . However, the EPA proposed no NESHAPS only for HLW disposal. We believe it was the EPA's intent not to propose NESHAPS for the WIPP or an MRS facility, as well; however, the EPA did not specifically exclude WIPP and MRS from the proposed regulation. We request that the EPA clarify its statement not to propose NESHAPS for WIPP and MRS consistent with its position not to propose NESHAPS for HLW disposal.

Response: EPA is not setting a standard regulating air emissions from high-level waste disposal facilities.

##### 4.4.2 Dose and Risk Calculations and Analysis

No Significant Comments.

##### 4.4.3 Control Technology

No Significant Comments.

##### 4.4.4 Level of Proposed Standards

4.4.4.1 In consideration of the factors and rationale that DOE has used in determining and recommending an acceptable or safe level, no further reduction below the safe level is required to provide an ample margin of safety.

Response: The Administrator has determined that the releases from the HLW Disposal source category do not require a NESHAP to assure the protection of the public health.

##### 4.4.5 Compliance and Implementation Procedures

No Significant Comments.

##### 4.4.6 Costs of Compliance

No Significant Comments.

## 4.5 ELEMENTAL PHOSPHOROUS FACILITIES

### 4.5.1 Basis for the Standards (legal/procedural issues)

4.5.1.1 We feel it is inappropriate to reduce levels of Po-210 emissions below the level of regulation finalized in the February 6, 1985, rulemaking.

Response: The Court decision under which this rulemaking has been conducted imposed a two-step methodology for determining the level of emissions that protect the public health with an ample margin of safety. The risk level that the Administrator has determined is acceptable requires limiting Po-210 emissions to less than the amount allowed under the previous NESHAP.

### 4.5.2 Dose and Risk Calculations and Analysis

4.5.2.1 The meteorological data used by the EPA in the assessment for Soda Springs is in error. The predominant wind direction is not out of the north blowing directly toward the Soda Springs population center, but rather out of the south/southeast and south/southwest blowing away from Soda Springs. This information, obtained from our onsite EPA-approved meteorological monitoring station, was provided to the EPA.

Response: The draft assessment used a data set from the on-site meteorological tower. Subsequent review indicated that the data set was invalid. The additional data provided by the plant was not in a form suitable for input to the assessment codes. Therefore, meteorological data from the nearest airport was used in the final assessment. Review of this data set indicates that the predominate wind directions closely approximate those reported by the plant.

4.5.2.2 The population in the 80-km radius of the Monsanto Soda Springs plant should be 75,000 rather than 100,000.

Response: The population cited is based on the results obtained from the SECPOP computer code which uses the 1980 census data.

4.5.2.3 EPA's assumptions of class Y solubility for the radionuclides and a sensitive lung mass of only 570 g have resulted in gross overestimates of dose. Also, EPA used the f1 factors of class D for Pb and class W for Po, thereby treating the Pb-210 and Po-210 as insoluble when applied to the lung dose and then treating them as soluble compounds when applied to the systemic dose. EPA cannot have it both ways. Also, ICRP recommends 1000 g for the lung mass rather than 570 g.

Response: EPA's use of Y solubility for radionuclides is based on solubility tests conducted on samples collected from calciner stacks at elemental phosphorus plants. The use of a 570 gram

lung mass is done because the estimate of risks is based only on the dose to the pulmonary region of the lung. Since almost all the risks from radionuclide emissions for elemental phosphorous plants is due to the radiation dose to the lung, the f1 factors used do not significantly affect the risk assessment.

4.5.2.4 The use of unreasonable default values by the EPA for environmental weathering, soil density, dairy and beef cattle populations and vegetable gardens is indefensible. Environmental weathering is usually represented with a 14-day half-life (the EPA used 35 years). The EPA chose a soil density of 220 kg/m<sup>3</sup> where 1,000 to 1,200 kg/m<sup>3</sup> would be more appropriate.

Response: EPA uses a 14 day half-life for the removal or weathering of radionuclides deposited on vegetation. The 35-year half life referred to in the comment applies only to the removal of radionuclides from soil. In addition, the EPA value for soil density is used for only top 15 cm of soil, for which such value is appropriate. Finally, none of the factors mentioned could significantly affect the risk assessment for elemental phosphorous plants since almost all the risk is from inhalation and exposure to the lung.

#### 4.5.3 Control Technology

4.5.3.1 Calciner technology used at the various elemental phosphorus plants are different and must be considered individually. For example, the grate calciner at FMC typically has only 0.5% of the feed in the off gas while others can have as much as 25%. Also, the grate calciner generates up to 2.5 times as much off gas as a nodulizing kiln. Such process differences require much different design criteria when selecting appropriate control technology.

Response: The estimates of performance for venturi scrubbers and wet ESP systems are based on actual particle size distributions collected at the Monsanto and FMC facilities and do not assume that the distributions are normal or the same for both types of calciners. The SD/FF and HEPA filter systems are relatively insensitive to particle size. The performance estimates for these systems are conservative for the particle size distributions found for both types of calciners.

4.5.3.2 The information presented in the BID on control technology is based on assumptions which are not supportable. The stack data collected on FMC's calciners do not support the pressure drop vs. emission assumptions used in the BID.

Response: The relationship between pressure drop and venturi scrubber performance is well established in the industry and is used by most control device manufacturers in system design. Because the Po-210 is concentrated in the fine particle fraction

at FMC, the removal efficiency is quite low for pressure drops of 6.5 and 10 in. w.c. Consequently the difference in emissions from these systems is estimated to be quite small (less than 10 percent). The differences cannot be measured reliably because of inherent process variation and uncertainty in the sampling and analysis methods. Comparable emissions rates such as those found at FMC are expected given these uncertainties.

4.5.3.3 Using venturi scrubbers, the reduction in Po-210 emissions stated in Table 6-17 of the BID are not achievable at the stated pressure drop. At a cost of \$7 million, FMC installed new venturi scrubbers on both calciners that were capable of a pressure drop of 10 inches w.c. Based on this data, the capital costs presented in Table 6-19 of the BID for venturi scrubbers appears to be low.

Response: The achievable reductions depend in part on the fraction of the radionuclides associated with the small particle sizes (see response to comment IV.5.3.4). The costing procedures used to develop the estimates presented in the BID are those outlined in the EAB cost manual. These procedures have been extensively used by the EPA to develop air control device costs for regulatory assessments and generally are adequate to provide reasonable costs with the  $\pm$  30 percent accuracy. The wet scrubber costs are based on standard manual estimates adjusted for high alloy construction. The cost estimates for venturi scrubbers compare reasonably well (10 to 40 percent difference) to costs of systems installed by the industry within the last 2 years. The EPA believes that the capital cost estimates used for the regulatory analysis are reasonable.

4.5.3.4 Of the four systems, HEPA filters would seem to be the least desirable. There is no data on the performance of HEPA filters on combustion systems or high-temperature furnaces. Installation downstream of a wet scrubber would appear to greatly shorten the life of disposable filters. This technology would have to be carefully examined before a system could be designed for consideration.

Response: HEPA filter systems were selected as one of the high-efficiency particulates control systems, although they have not been used on elemental phosphorus plants. However, they have been successfully used to control radionuclide emissions from uranium process plants and fine particulate emissions from high-volume air recycle streams at lead battery plants. Also, HEPA filters were selected because they provide a much greater level of control than is provided by the other control alternatives that were evaluated.

A major operating cost for HEPA filters is filter replacement, and cost estimates for HEPA filters include the costs of filter replacement and waste disposal. As a result, although the

capital costs for HEPA filters is the lowest of the four control technologies evaluated, the total annualized cost is higher than the other technologies.

4.5.3.5 Controls for Po-210 at elemental phosphorous plants may not provide adequate protection from the abnormally high Rn-222 emanation rate.

Response: Radon-222 releases were included in the source terms evaluated for these plants. The evaluation indicates that the radon-222 is not a major contributor to the total risk.

#### 4.5.4 Level of Proposed Standards

4.5.4.1 The regulation of radionuclides from elemental phosphorus plants is not warranted.

Response: The EPA disagrees, its risk assessment demonstrates that current emissions do not result in an acceptable level of risk to public health and do not protect public health with an ample margin of safety.

4.5.4.2 In the February 6, 1985 rule-making, the EPA Administrator correctly established that the risks from radionuclide emission from elemental phosphorus plants are "very small" and the limit of 21 Ci/y of Po-210 from calciner stacks effectively limited emissions.

Response: During this reconsideration, the Administrator reexamined the risks from elemental phosphorous plants and has determined the conclusions in the February 6, 1985 rule-making were incorrect and that 21 Ci/y does not provide the level of safety with an ample margin required by the law and the Court's guidance on determining the appropriate levels.

4.5.4.3 The Fort Hall Reservation is highly exposed to, and affected by, radionuclide emissions from elemental phosphorus plants. Thus, we urge EPA to adopt the emission standard of 0.6 Ci/y of Po-210 proposed in Approach C which would provide ample health risk protection and also represents the application of the best available control technology of a high energy scrubber which has proven to greatly reduce Po-210 emissions. We feel that Approaches A and B do not provide the surrounding community with an ample margin of safety required to protect the public health and therefore would not be in keeping with the intent of the district court remand decision or Section 112 of the Clear Air Act.

Response: The Administrator has determined that a NESFAP limit of 2 Ci/y will assure the protection of public health with an ample margin of safety.

#### 4.5.5 Compliance and Implementation Procedures

No Significant Comments.

#### 4.5.6 Compliance Costs

4.5.6.1 Information is not presented on the ability of a wet ESP or a spray dryer/fabric filter to remove less than 0.5 um Po-210 particulates. Therefore, pilot work would be required. FMC estimates installed costs of \$40 - 80 million for the wet ESP's, much higher than presented in Table 6-19 of the BID, and \$25 - 50 million for the spray dryer/fabric filter system.

Response: The fractional efficiency for the wet ESPs are based on 1) data from measurements of a wet ESP system applied to a calciner at an elemental phosphorus plant that included particle sizes below 0.5 micrometers, and 2) accepted design calculations. These fractional efficiency estimates did account for removal of particles less than 0.5 micrometers in size. In general, fabric filtration technologies have been found to be insensitive to inlet particulate matter loading and particle size distribution as long as properties of the inlet particulate matter allow good cake formation on the bags. Past experience with the SD/FF system with the lime slurry on similar process streams have shown this system to be particularly insensitive to the particle size distribution in the exhaust gas streams. These systems have demonstrated the ability to remove volatile metals such as arsenic from combustion source and metallurgical process exhaust gasses at greater than 99 percent efficiency. The EPA believes that the estimates of 99+ percent removal used for the analysis are reasonable.

#### 4.5.7 Other Comments

4.5.7.1 There is no indication that EPA used any of the ambient monitoring data from the Southeast Idaho Radiation Exposure Study to verify the AIRDOS dispersion model predictions. The EPA's Proposed Guidelines for Exposure Assessment (49FR46304) states, "When the estimates of environmental concentrations are based on mathematical models, the model results should be compared to available monitoring data, and any significant discrepancies should be discussed. Reliable, analytically determined values should be given precedence over estimated values whenever significant discrepancies are found. The monitoring data from the study indicate that the Soda Springs area currently has essentially background levels of Po-210 in the ambient air.

Response: EPA did review and evaluate data from the Southeast Idaho Radiation Exposure Study in developing standards for elemental phosphorous plants.

4.5.7.2 The EPA did not adhere to the stack test methods for point source particulates as described in Method 5 (40CFR60) when obtaining a sample for radionuclide analysis. Dilute nitric acid was used as a rinse of the probe after the acetone, and nitric acid was also used in the impinger solutions instead of a specified grade of water. The approved method states that no modifications shall be made without the Administrator's approval.

Response: The slight modifications to Method 111 were made to assure complete recovery of the polonium-210 and to provide a more accurate measure of polonium-210 emissions.

4.5.7.3 The particle size characterization of emissions is inadequate for exposure assessment purposes. The basic problem is that the measurement technique used could not accommodate the particle size distribution encountered. The 0.3 um diameter assumed in the EPA assessment was obtained by an extrapolation beyond measured data. Thus, the 0.3 um diameter is suspect and we feel it could easily be 0.2 um or less.

Response: Differences in particle size between 0.3 and 0.2 micrometers would have only a small impact on the estimated risks.

4.5.7.4 We ask you to waive the emission testing requirements for both Occidental Chemical Company's elemental phosphorus units at Columbia, TN based upon favorable emission test results. Furthermore, if the waiver of emission testing is granted, we assume that the requirement to install a device for measuring the phosphate rock feed to the kiln during service testing is also waived.

Response: The new rule no longer allows for waivers from testing.



## 4.6 COAL-FIRED UTILITY AND INDUSTRIAL BOILERS

### 4.6.1 Basis for the Standards (legal/procedural issues)

4.6.1.1 Regulation of coal-fired boilers under the Approach D alternative is unwarranted. Regulation of any radionuclide source category under Approach D is unrealistic and unjustified because of the conservative assumptions in this approach and because the releases fall well below those considered to be an acceptable risk to the public. Approaches A, B, and C were determined not to warrant regulations of radionuclide emissions from coal-fired boilers, even at the ample margin of safety decision.

Response: The EPA has not promulgated a NESHAP for coal-fired boilers.

4.6.1.2 Emissions from coal-fired boilers are presently regulated under the National Ambient Air Quality Standards (NAAQS) for particulate matter. In addition, the new larger coal-fired boilers have to meet NSPS requirements for other pollutants such as particulate, sulfur dioxide, and other hazardous pollutants.

Response: The EPA is aware of the existing regulations that apply to coal-fired boilers, their existence was considered in determining that standards would not be issued.

4.6.1.3 If the Agency intends to follow a two-step decision-making approach, and therefore make a "best estimate" of risk as part of the initial step, it must also reduce conservatism in the following areas: (1) average U-238 concentration in fly ash, (2) stack height and temperature profiles, (3) food transfer factors, and (4) the linear, non-threshold dose response model.

Response: The value for uranium in fly ash is based on the geometric mean value of uranium in coals and enrichment factors based on monitoring data. The stack heights and temperature profiles used are also based on the actual plant parameters. The basis of the linear no-threshold dose response assumption and the food transfer factors are discussed extensively in Volume I of the FEIS.

### 4.6.2 Dose and Risk Calculations and Analysis

4.6.2.1 What is the meaning of the enrichment factor for the two radon nuclides in fly ash? Does it mean that the radon wasn't released during combustion? The post-combustion concentration of radon in fly ash is 20 times greater than the original concentration in the coal.

Response: The enrichment of radon in the fly ash would be more accurately stated as the enrichment of radon in the effluent off-gas. The factor of 20 is based on the EPA's monitoring results.

4.6.2.2 While it is clearly not reasonable to expect the Agency to perform site by site evaluations of 1200 coal-fired power plants, the extrapolation from four facilities to 1200 seems to be inadequate. This may be due to the fact that the extrapolation procedure is not described explicitly. Similarly, the extrapolation for the industrial boilers is even greater and involves more uncertainty. It would be more appropriate to take a larger representative sample of both categories of boilers and to use those results to estimate the country wide impact of those facilities.

Response: The methodology employed to extrapolate risks from "representative" utility plants and a single large industrial boiler was chosen based on the time and resource restraints imposed on the Agency by the Court order. The EPA believes that these estimates are accurate enough for decision-making purposes, and doubts that evaluation of even a larger fraction of facilities would result in a significant change in the estimate.

4.6.2.3 Other assessments of this question have been performed. The results of the EPA assessment should be compared to those and the differences between the results should be discussed and rationalized.

Response: The assessment has been compared with other evaluations, notably those performed by OAQPS. Reasons for the differences in the estimated risks have been identified. These include differing methodologies for determining locations of nearby individuals, differences in accounting for total uranium releases, and differences in the versions of the assessment codes used.

4.6.2.4 Apportioning radionuclide emissions based on the number of boilers fails to account for, among other things, units with different capacities and units with different levels of particulate control technology; radionuclide emissions can be apportioned more accurately based on annual particulate emissions.

Response: Use of plants with typical particulate emissions in the assessment obviates the need for explicitly accounting for differences in capacities and particulate control technology. The extrapolation method allows for the accounting in demographic variations, and these can be at least as important as the other factors mentioned.

4.6.2.5 The EPA assumes a population of 17.2 million residing within a radius of 80 kilometers; yet only two coal-fired power plants in the U.S. have a surrounding population in excess of 10 million.

Response: The reference plants evaluated were chosen to reflect typical and extreme emissions characteristics for plants located in urban, suburban, rural, and remote locations. Since the risks in terms of deaths/y were calculated for each location segment separately and normalized to the total population of the United States, the choice of a plant with a very large surrounding population does not greatly effect the estimate.

4.6.2.6 The very fact that existing electric utility generating facilities are being and will continue to be replaced by new electric utility generating facilities which must meet 40 CFR Part 60 Subpart D(a) anyway, means that the risk of death due to radionuclide emissions from coal-fired boilers will drop irrespective of 40 CFR Part 61 Subpart U. By forcing retrofits on older boilers, thus requiring them to operate longer in order to retrieve the retrofitting costs, it will stymie their replacement.

Response: The EPA acknowledges that emissions are unlikely to increase given the NSPS. This is one factor considered in the decision not to promulgate a NESHAP for this source category.

4.6.2.7 The EPA's estimates are based on numerous conservative assumptions, for example, 1) individuals reside in the predominant wind direction at a distance of 750 meters from the plant, 2) a large fraction of the foodstuffs consumed by the individual are grown at that location, 3) individuals reside at a single location for 70 years at the point of maximum exposure. Given these many conservatisms, EPA's risk estimates can easily be an order of magnitude or more higher than more realistic assessments.

Response: The EPA does not consider these assumptions necessarily "conservative" in using reference plants to assess the risks for source categories where the number of facilities make site-by-site assessment impractical. With upwards of 55,000 coal-fired boilers and their location in both rural and urban areas it is likely that there are individuals residing in the predominate wind direction, that some individuals do obtain a considerable fraction of their food locally, and that there are individuals who reside in the locations of maximum environmental concentration for their entire lives.

#### 4.6.3 Control Technology

No Significant Comments.

#### 4.6.4 Level of Proposed Standards

No significant comments

#### 4.6.5 Compliance and Implementation Procedures

4.6.5.1 The EPA is proposing to mandate a legal impossibility by requiring the installation the needed retrofit equipment required for compliance in a two year time span.

Response: No NESHAP is promulgated for this source category.

#### 4.6.6 Costs of Compliance

4.6.6.1 Most coal-fired boiler owners would have to spend a considerable amount of money to replace control equipment in order to achieve the proposed emission standard. The radionuclide reduction achieved in lower particulate emission rates would not justify the considerable expense that would be incurred. Public utilities in particular indicated that they would have to retrofit fossil fuel plants to a baghouse technology for particulate/radio-nuclide control or install electrostatic precipitators.

Response: No NESHAP is promulgated for coal-fired boilers.

#### 4.7 INACTIVE AND LICENSED URANIUM MILL TAILINGS

It is expeditious and seems reasonable to combine the response to comments for these two source categories because: 1) most commentors provided comments on both active and inactive mill tailings piles; 2) comments often pertained to both categories of tailings piles; 3) the piles are similar in many respects; and 4) both categories of piles are included within one industry.

##### 4.7.1 Basis for the Standards (legal/procedural issues)

4.7.1.1 The change from a design standard to a performance standard is inconsistent with the codified rules and was rejected by both the EPA and the NRC when the UMTRCA rules were promulgated.

Response: The final NESHAP for disposal is an emission standard, as required by the Clean Air Act.

4.7.1.2 There is no justification as to why the Clean Air Act standard requires a synthetic liner under the tailings ponds.

Response: The requirement for a synthetic liner comes from the UMTRCA rulemaking. Since the requirements of UMTRCA must be met for future impoundments, this approach is reasonable. In addition, EPA has a responsibility to make sure that the rules it promulgates under one statute do not result in unnecessary transfer of pollution into another medium, in this case groundwater.

##### 4.7.2 Dose and Risk Calculations and Analysis

4.7.2.1 Radon concentration and risk should be directly proportional to the source term. However, while the source term at the Bluewater mill increased by 1.3 (28.3 to 37.4 KCi/y) the radon concentration at the nearest residence increased by a factor of 1.8 (1.8 to 3.3 pCi/L). These discrepancies should be resolved before the final rule-making.

Response: The assessment in the FEIS has been amended to reflect the new or revised information obtained and developed since the DEIS was published. The EPA appreciates the efforts of the industry and DOE to provide additional information. Where the validity of the information could be confirmed, it has been incorporated into the FEIS. For example, the FEIS has been revised to reflect the anticipated relocation of piles.

4.7.2.2 The relationship, 1 pCi/m<sup>2</sup>-s of radon per pCi/g of Ra-226, is inaccurate, varies by an order of magnitude, and results in an overestimate of the flux. Flux from mill tailings piles should be based on flux measurements.

Response: The EPA recognizes that the 1 to 1 radium to radon correlation is an approximation. However, there is no scientific consensus on what the value should be. EPA believes that this is a reasonable estimate for situations where mill-specific data are unavailable.

4.7.2.3 The assessment was performed at the Panna Maria tailings pile assuming that all tailings were dry and exposed, while much of the tailings pond is covered by one foot of a water deposited clay.

Response: The assessment in the FEIS reflects the information provided by the commentor. EPA has determined that the evaluation of all dry conditions contained in the draft EIS does not provide, given the disposal activities under UMTRCA, a particularly realistic estimate of future exposures and risks.

4.7.2.4 The height of the Panna Maria tailings dam is 15 m, not the 1 m assumed in the assessment.

Response: The 1 meter release height is appropriate for estimating emissions from a volume source.

4.7.2.5 The EPA has grossly overestimated radon emissions by assuming that the radium is evenly distributed throughout the tailings pile.

Response: Lacking mill-specific data, the EPA assumed the even distribution of radium throughout the tailings. This assumption only affects that estimate of the source term during operating and standby periods. For the disposal period, the assumption of uniformity is roughly correct since the entire pile will be drying and exposed. The assumption is irrelevant to the estimation of the post-disposal source terms.

4.7.2.6 The heading on the table indicating required cover depth in meters appears to be incorrect. It should indicate depth in feet. The DOE requests further information regarding the calculational methodology used to construct this table. For example, was RAECOM used to project cover thicknesses?

Response: The column heading is correct. The depths of cover were calculated using the methodology set forth in Appendix B of the EIS. The RAECOM model was not used to project needed depth of cover. Depending on local conditions, the absolute cover depths for any individual pile may be over- or under-estimated. However, the EPA feels that the aggregate costs are sufficiently accurate for decision making.

### 4.7.3 Control Technology

4.7.3.1 The EPA has not derived the tailings pond size limit based on a thorough study of the emissions, but instead the 40-acre size seems quite arbitrary.

Response: The 40-acre limit was chosen to reflect best current practice, as exemplified by the Sweetwater impoundment.

4.7.3.2 Studies at the Shirley Basin site indicate much greater reduction in radon emissions vs. soil cover thickness than estimated by EPA in Table 9.12 of the BID. For example, 1.5 m of random fill reduced the radon emanation to levels indistinguishable from background (about 1 pCi/m<sup>2</sup>-s). Thus, it appears that EPA's cover thickness calculations are grossly in error.

Response: In assessing the costs of various alternative disposal fluxes the absolute depths of cover and costs are not as important as the incremental changes. As stated in the FEIS, the depths of cover for all sites are based on the assumption of sandy soil and other parameters such as moisture content set forth in Appendix B. Facilities with access to clay soils will be able to meet the disposal flux requirements using thinner covers than estimated. Also as required under the UMTRCA rules, the cover must be designed to meet the flux limit for 1,000 years.

4.7.3.3 Continuous disposal of mill tailings has not been used by the uranium industry; it would present serious operational problems and excessive costs. Immediate disposal of tailings under the continuous disposal method may not always be practical given the limited construction seasons and the size of the impoundments.

Response: The Agency is aware that continuous disposal has not been used at existing mills. However, it believes that the technology is applicable, as demonstrated by its proposed use at the San Miguel mill that was licensed but not constructed. This lack of practical experience is part of the reason why mill owners can choose between continuous and phased disposal.

### 4.7.4 Level of Proposed Standard

4.7.4.1 The proposed EPA radionuclide NESHAPS will cause the closure of the domestic uranium milling industry. The shut down of the mills would cause strict reliance on foreign-source uranium which could be devastating to our energy and defense independence. In addition, the dismantling of the industry will violate Congressional findings in the Atomic Energy Act that a viable uranium industry is essential to our national security,

result in a further reliance on fossil fuels which create significant health hazards by their use, result in further loss of employment to industry workers and workers in service industries related to the producing industry, and create more social and economic upheaval in the mining communities that have already suffered greatly from the industries' demise.

Response: The NESHAPS will not result in the closure of the domestic uranium milling industry. The uranium industry is not economically viable due to large uranium inventories, a non-increasing demand for uranium, and the ability of foreign suppliers to produce uranium at lower cost. Recognizing these facts, the Administrator is required by the Act to establish NESHAPS that protect the public health without considering the possible closure of the plants in the affected industry. Closure considerations may only be addressed in the second step of the process when the ample margin of safety is determined.

4.7.4.2 The EPA has failed to demonstrate that there is a significant risk due to radionuclide emissions from uranium mill tailings piles. Many industries posing greater risks are ignored, e.g. soil tillage, water supplies, building materials, natural gas and background.

Response: EPA risk assessment demonstrates the significance of the risks presented by uranium mill tailings piles. The EPA's on-going programs will determine whether or not regulation of other activities, including those mentioned by the commentor, require regulation.

4.7.4.3 The public health is protected from radon emissions from uranium mill tailings piles with an ample margin of safety under the existing regulatory requirements of UMTRCA. New EPA regulatory requirements under the Clean Air Act are duplicative, unnecessary, and would serve no useful purpose. The UMTRCA standard has not been shown to be unsatisfactory.

Response: The Administrator has determined not to defer to other regulatory authorities. The NESHAP for tailings disposal establishes both a time frame for disposal, citizen suit provisions and monitoring requirements that are not provided by UMTRCA.

4.7.4.4 The most stringent of the proposed standards is unrealistic because the soil used to cover the pile would exceed the limit of  $0.02 \text{ pCi/m}^2\text{-s}$ . The background flux in the area is about  $0.5 \text{ pCi/m}^2\text{-s}$ . In addition the proposed standards of  $6 \text{ pCi/m}^2\text{-s}$  to  $0.02 \text{ pCi/m}^2\text{-s}$  for disposal of uranium mill tailings are not enforceable because the natural variability is greater than the proposed standard, thus rendering the model for predicting compliance unreliable.



Response: The final NESHAPS establishes a design flux through the cover of 20 pCi/m<sup>2</sup>-s.

4.7.4.5 There is no need for a new standard since EPA has not demonstrated that 0.12 fatal cancers per year that would result from the current radon emission standard is not a acceptable risk.

Response: The fatal cancers per year is just one of the risk indicators that the Administrator considers. Individual lifetime fatal cancer risks must also be found to be acceptable with an ample margin of safety.

4.7.4.6 A standard of 2 pCi/m<sup>2</sup> is both feasible and reasonably achieved. The EDF believes that the standard must be set at 2 pCi/m<sup>2</sup>-s even under Approach A because of the requirements to establish an ample margin of safety based on "feasible" technologies capable of diminishing the risk.

Response: EPA selected an emission limit of 20 pCi/m<sup>2</sup>-s as the NESHAP since it protects public health with an ample margin of safety. The lower limit of 6 pCi/m<sup>2</sup>-s was considered for the standard but was not selected because it would result in little reduction of either individual risk or population effects when compared to the relatively large costs of implementation.

#### 4.7.5 Compliance and Implementation Procedures

4.7.5.1 The proposed standard is not written as an average, but as an instantaneous rate. This is patently unfair and punitive. The standard may be exceeded for short periods of time during severe climatic conditions, while the annual average may be an order of magnitude less than the standard allows. This forces the cover to be designed for the most severe conditions.

Response: The final NESHAP establishes a long-term average flux. Monitoring is required to provide assurance that the installed cover meets the emission limit. The EPA's experience with radon flux measurements establishes the fact that the average obtained from a single monitoring period is sufficient to account for variations over time when the number of samples approaches 100.

4.7.5.2 If promulgated, the requirement for covering mill tailings to reduce releases of radon would in fact create a greater risk for the workers from accidents than the risk radon emissions are believed to pose for the general public.

Response: While covering the piles might result in risks to the workers, the DOE's experience with disposal under the UMTRCA standard has been that accidents are experienced far less

frequently than estimated. Further, while there will be some construction related risks, the benefits of covering the piles will be accrued over time periods of 1,000 years or longer.

4.7.5.3 Several troubling aspects of this regulation are (1) how is the term "cease to be operational" defined, and (2) what action will the EPA take if an operator reports noncompliance.

Response: The definition of operational has been clarified in the final rule. The EPA will, as required by the Act, take appropriate enforcement action in the case of non-compliance.

4.7.5.4 The EPA should recognize and accept alternative work practices which are capable of meeting the standards.

Response: The work practices for operating and standby impoundments are based on what the Agency believes are least-cost alternatives.

4.7.5.5 The limitations of Method 115 are unduly restrictive and skew the results to periods of high emanation rates rather than indicating average rates.

Response: Monitoring radon flux during or immediately after periods of rainfall or during periods of freezing temperatures are known to produce unreliable estimates of the average emission rate. Furthermore, an operator may select a multi-period measurement approach to demonstrate compliance.

4.7.5.6 Consideration must be given to the fact that some tailings piles have already been stabilized; there will be substantial health, safety and environmental costs if these have to be modified.

Response: The Administrator did consider the fact that some piles have been stabilized in determining the ample margin of safety in the final rule.

4.7.5.7 Flexibility must be built into any of the proposed regulations: 2 years is a very short time for the design, review and approval by agencies, and construction of new impoundments required under Approaches A and B; mills not already meeting the new technology under C would have to shut down; under Approach D, time would be required to develop new technology for tailings disposal.

Response: The final NESHAPS for operating and standby periods are believed to give operators sufficient time to plan and gain regulatory approval of future impoundments. The two year limit for completing disposal of tailings at inactive and inoperable mills is compelled by the Act and is not within the Administrator's discretion to change or negate.

#### 4.7.6 Compliance Costs

4.7.6.1 The EPA estimates that the proposed regulations would cost up to \$37 million additional capital costs for operating mill tailings piles and \$200 to \$300 million additional capital costs for the disposal of uranium mill tailings. The EPA fails to include the cost of reclamation of the 12 piles it classifies as active. Imposing these capital costs on this industry could serve to close down an industry that the Congress has stated is vital to the national security.

Response: The FEIS shows the appropriate capital costs for disposal of all piles, work practices at all operable impoundments, and single cell, phased, and continuous disposal technologies at future impoundments. These costs including reclamation were included in the DEIS as well.

4.7.6.2 Compliance costs would have the effect of shutting down the uranium milling industry which would be an adverse effect requiring the EPA to deem the proposed regulations to be a "major rule".

Response: The EPA disagrees that the final rules will serve to shut down the industry. The compliance costs for the NESHAP will only slightly increase costs over the already existing regulations.

4.7.6.3 Given the small incremental reduction in health risks associated with the EPA's regulatory requirements for existing piles and the critical state of the uranium production industry, the costs are too high.

Response: The EPA estimates that the NESHAP for operating and standby mills will have a total annual cost of approximately \$1.25 million. The Administrator found these costs to be reasonable in the second step of the rulemaking process.

4.7.6.4 The DOE, which has experience in stabilizing tailings piles, has testified that the costs to stabilize existing tailings piles may be on the order of \$1-2 billion.

Response: The DOE's cost estimates include monies for research activities, technology development, and community participation. These costs will be incurred by DOE regardless of the standard promulgated by the Agency. The EPA's estimates, as noted above, are for disposal only, and are based on a single soil type and assumed moisture content. Thus, while the explicit costs for a given mill might be over- or under-estimated, the EPA believes that the aggregate costs are reasonably accurate and provide sufficient basis for decision making.

4.7.6.5 EPA does not address the question of long term funding for testing, reporting, and possible remediation of the piles after closure.

Response: The final rule requires one-time monitoring to establish compliance with the design flux, thus there are no long-term monitoring and reporting costs. If additional remediation is required, based on test results, the EPA expects that the costs will be borne by the responsible firms, in the case of Title II sites, and by DOE and the states in the case of Title I sites.

#### 4.7.7 Other Comments

4.7.7.1 The EPA's basic research into and comprehension of fundamental issues in uranium milling appear inadequate. The EPA gives a confusing and incomplete account of the milling process for uranium ore.

Response: The EPA disagrees. The process description referred to is merely a summary of the extensive descriptions that have been published by the Agency and the NRC.

4.7.7.2 If the proposed regulations are promulgated without modification, the uranium industry will require the exemption provided in Section 112 (c) (2) of the CAA.

Response: The EPA does not believe that the effect of the standard would require such action. However, application for an exemption is available to such facilities who determine that they cannot meet the requirements of the NESHAP.

4.7.7.3 The survey of the U.S. uranium industry is incomplete; many major operators are omitted.

Response: The Agency believes that it has identified and listed all licensed and inactive tailing impoundments that have resulted from the recovery of uranium by conventional acid- and alkaline-leach methods.

4.7.7.4 If the uranium mills are unable to operate, this will effectively end domestic uranium production. Both underground and surface uranium mining are dependent on mills to process their ore.

Response: The EPA agrees that if all mills close that mines will not be able to find domestic sources of milling. However the minimal costs associated with the NESHAP for operating and standby mills should not force closure of the industry.

## 4.8 DOE RADON SITES

### 4.8.1 Basis for the Standards (legal/procedural issues)

4.8.1.1 A DOE memorandum indicates that the EPA may have chosen not to regulate DOE radon emissions in its previous rulemaking due to its belief that the silos at Fernald (FMPC) were not vented. However, the constant seepage of radon from the silo cracks and the purposeful 1986 venting of radon demonstrate the necessity of such regulation.

Response: The final rules establish a NESHAP for DOE Radon sites including FMPC.

### 4.8.2 Dose and Risk Calculations and Analysis

4.8.2.1 The EPA should look at the combined health impact caused by radon and uranium from the FMPC. The level of control should result in an estimated risk no greater than the risk tolerated in the 1983 proposed rulemaking.

Response: The final NESHAPS for DOE Facilities and DOE Radon Sites establish limits to assure protection of public health with an ample margin of safety. The two standards cannot be properly compared or combined. The DOE Radon standard covers the disposal of waste material, the DOE facilities standard covers emission from operational emissions. While the disposal standard is designed as a limit to be used by DOE in its CERCLA cleanup of a waste problem, the other standard is designed around monitoring of operation and annual reporting. Any attempt to combine the two would cause confusion in implementing standards applicable to disposal for operations and visa versa.

4.8.2.2 The radon emissions from the K-65 silos at the FMPC in Fernald have not been routinely measured. How were these emissions estimated given the deteriorated state of the containment and the variation of emissions due to the heating of the silos? How were accidental releases included in the emission estimates? What other radon emissions occur at the FMPC site? Have radon emissions been estimated from radioactive materials deposited in the soil within the confines of the DOE facilities?

Response: The emissions from the K-65 silos were estimated, as discussed in Chapter 10 of Volume 2 of the FEIS, on the basis of the Ra-226 content, the area of the silos, and theoretical equations for diffusion through concrete. The Agency is aware that its estimate is only a rough approximation. The EPA is not aware of any other major radon sources at the FMPC site.

### 4.8.3 Control Technology

No Significant Comments

#### 4.8.4 Level of Proposed Standard

4.8.4.1 The radon emissions rules are expressed in curies released per unit area per unit time. These units are adequate for mill tailings but not for manufacturing or experimental work that involves uranium, thorium or radium. Dose limits such as those employed in the DOE operations rules should be used, if EPA intends to regulate emissions of radon from such operations.

Response: The NESHAP for DOE Radon sites applies only to radon emissions from storage and disposal facilities. A flux standard per unit area per unit time is appropriate for such sites which are area sources.

#### 4.8.5 Compliance and Implementation Procedures

No Significant Comments.

#### 4.8.6 Costs of Compliance

No Significant Comments.

## 4.9 UNDERGROUND URANIUM MINES

### 4.9.1 Basis for the Standards (Legal/procedural Issues)

No Significant Comments

### 4.9.2 Dose and Risk Calculations and Analysis

4.9.2.1 Although EPA's modeling incorporates either the buoyancy effect or momentum of the air discharged from a mine vent, it does not include both effects when the air being discharged is hot.

Response: The AIRDOS code will not assimilate both buoyancy and momentum factors in the same calculation. Since buoyancy will predominate over momentum, it was used in the underground mine dose and risk calculations.

4.9.2.2 The use of 1980 census data taken during the boom period will overestimate the exposure to the nearby individual at Sheep Mountain No. 1 mine.

Response: Demography data that were obtained during a site visit to Sheep Mountain No. 1 show that the nearest individual is at a distance of 5,200 m, similar to the 6 km distance reported by U.S. Energy Corp.

4.9.2.3 AIRDOS predicts Ra-222 exposures and risks assuming the receptors in each sector were always at the center line at the plume. Proper modeling would use sector averaging which disperses the plume uniformly in each downwind sector.

Response: AIRDOS has the capability of using either the plume center line concentration or sector averaging. The latter was used in these analyses.

4.9.2.4 No effective dose equivalents are presented in the draft BID. The EPA needs to clearly state the methodology used to determine radiation dose and risk from the radon concentrations at the location of the maximum exposed individual, and allow review of the regulation to verify the calculated dose and associated risk.

Response: The methodology that the EPA used to develop the exposure and risk estimates is exhaustively described in Volume I of the EIS. The Court imposed deadline under which this rulemaking was conducted does not allow for extending the period for review and public comment. However, the Agency made every effort to provide interested parties the background information as quickly as possible.

4.9.2.5 The environmental transport of radionuclides under the CAP-88 program assumes a flat plain with no variations. Thus, the assessment is inadequate when the mine is located in mountainous areas or when the mine exhaust vent is at a different elevation than the 80 km population.

Response: The AIRDOS (CAP-88) computer code used in this assessment does assume a flat terrain and has no provisions for accommodating the conditions stated in the comment. However, this situation does not consistently over- or under-estimate the risks.

4.9.2.6 Radon emissions from uranium mine sites do not present a significant risk because radon daughters disappear into the background within short distances from the sources and few, if any, people live within the critical area of the exposure.

Response: The data provided purporting to substantiate the assertion that the daughters are indistinguishable from background within a few feet of the vent ignore the plume rise; i.e., the measurements are meaningless since they were taken at the wrong environmental location. The Agency does not ignore risks to persons simply because they live in remote locations with few other individuals subject to the risks.

4.9.2.7 Errors or omissions in characterizations of specific facilities which could affect the dose and risk calculations and assessments were pointed out; additional site-specific information was provided for use in the analyses.

Response: The EPA appreciates the additional information and has incorporated as much of it as possible into its FEIS.

4.9.2.8 The ICRP 1987 values used in the risk analysis in the EPA's proposal have not been proven to be scientifically correct and therefore are inappropriate as a basis for regulations.

Response: The Act recognizes the range of scientific opinion and uncertainty, and explicitly requires the Administrator to establish NESHAPS even when scientific certainty is not possible. The ICRP values are within the range of scientifically credible estimates, and the Administrator considers that they, along with the other estimates of radon risk provide an adequate basis for regulation.

#### 4.9.3 Control Technology

4.9.3.1 The underground uranium mine standard requiring 30 m stacks is unreasonable. Stack height is not a significant factor in release when the air is directed vertically. The air is usually discharged at a substantial velocity and often possesses



buoyancy due to its temperature and humidity which gives an effective release height substantially above stack height.

Response: The final NESHAP establishes a dose standard. Operators are provided full discretion in the method or combination of methods chosen to assure compliance with the standard.

4.9.3.2 EPA should identify the design practices or technologies (alluded to in Sections 2.3.3.2 and 2.4.2) by which new mines can meet the proposed standards.

Response: Techniques such as retreat mining and careful placement and orientation of mine vents are just two of the design practices that could be employed. The final NESHAP permits the greatest possible operational flexibility in meeting the exposure limits.

4.9.3.3 Stacks attached to fans would have to be designed to withstand the environment, particularly the wind. These stacks will create additional air resistance which will increase the fans operating pressure and decrease the fans operating quantity. This decrease in air quantity will increase the miners' exposure to airborne radiation.

Response: If stacks are used to meet the NESHAP limits, careful design and sizing will be necessary to assure that they are suited to the environmental conditions and do not result in unacceptable exposures of miners. If mines find stacks to be unacceptable then they can use other methods to meet the standard.

#### 4.9.4 Level of Proposed Standards

4.9.4.1 The proposed regulations will either severely limit the production of existing underground uranium mines or will shut them down. The elimination of domestic uranium production will force total reliance by the U.S. on uranium from other countries that could effect national security (nuclear powered naval fleet) and the commercial production of electricity by nuclear power plants.

Response: The final NESHAP will not cause a shutdown of the uranium industry. While the closure of some mines is possible, the final standard provides full flexibility in the method or methods selected to achieve compliance. In addition several mines are already in compliance with the standard.

4.9.4.3 The 5,000 Ci limit is not justified or proper. Most mines will not be able to comply with such a limit and most which comply will do so by dividing an ore body into separate mines instead of a single mine.

Response: The final NESHAP establishes a dose standard, with choice of compliance strategy left to the discretion of the operator.

4.9.4.4 The EPA should conduct a very careful and thorough study to determine the total impact the proposed laws will have on the uranium mining industry, and especially the adverse effects it will have on the regional economy when a mine is forced to shut down.

Response: Under the requirements of the Act and the instructions of the Court, the Administrator can only consider the impacts of the limits required to assure protection of public health in the second step of the decision making process. The NESHAP for underground mines is established at the level required to protect public health, and more stringent standards were rejected during the ample margin of safety step, in part, due to consideration of the adverse impacts of closure on local communities.

#### 4.9.5 Compliance and Implementation Procedures

4.9.5.1 The EPA should consider continuous monitoring using a "track-Etch" type detector with quarterly exchange to determine annual emission rates. As an alternate method, grab samples (Lucas cells) on a quarterly basis should be allowed with a record of mine operating conditions at time of sampling. Another method of sampling would be to take 24-hour measurements every 3rd or 4th day. This would give about 90 days of radon values per year and enough data to average the exhausted radionuclides.

Response: Section 1.2 of Method 115 provides for the use of alternative methods upon prior approval of the Administrator. Information should be submitted demonstrating that the alternative method will provide emission data equivalent to the approved method.

4.9.5.2 When radon gas is emitted from a mine or tailings pile, it dissipates into an unmeasurable quantity above background within a few feet. Thus, the building of 30 m stacks or exhaust vent holes will not have any measurable effect on public exposure after a few feet.

Response: Radon emissions at locations near mine vents significantly exceed background levels. While concentrations at the levels required to protect public health may be below measurement levels given the ambient concentrations of radon, this in no way negates the fact the standards that are lower than background levels are required to protect public health with an ample margin of safety.

4.9.5.3 The EPA should recognize and accept alternative work practices which are capable of meeting the standards.

Response: The final rule provides the maximum degree of operating flexibility in meeting the standard by establishing a dose standard for radon emissions from underground uranium mines.

4.9.5.4 The monitoring specified in method 115 is inapplicable to situations found at some underground uranium mines, e.g., sporadic or intermittent vent fan operation, high humidity, etc.

Response: Method 115 provides flexibility for mine operators by establishing methods for both periodic and continuous operations.

4.9.5.5 EPA's definition of an active mine does not take into account the temporary ventilation of idle mines when workers enter them for inspections or maintenance purposes.

Response: EPA rule regulates all emissions from the ventilation systems of a underground uranium mines. Ventilation for inspections and maintenance is included in the standard, because the radon emitted by these operations add to the health risk to the public.

4.9.5.6 With respect to mines, the Rule is not feasible. To protect miners, MSHA requires extensive ventilation to exhaust radon from active mineworking areas in order to provide fresh, clean air. The rule would reduce the fresh air-exhaust flow through bulkhead areas resulting in higher exposure levels for underground mine workers.

Response: The rule provides sufficient flexibility to the mine operators to allow for the protection of both workers and the public.

#### 4.9.6 Compliance Costs:

4.9.6.1 The EPA should consider the large costs of adding 30 m stacks to exhaust vents at mines that are competing in a very depressed market. This will force some mines to close.

Response: The final NESHAP allows the operator to select the most cost-effective compliance strategy.

4.9.6.2 The assessment of costs ignores higher prices in long-term contracts, maintenance costs during shutdowns, and higher unit costs of lowered production rates.

Response: The FEIS attempts to evaluate these additional costs. However, such costs vary widely since there are significant differences in the emissions and operations of the different mines.

#### 4.9.7 Other Comments:

4.9.7.1 The EPA failed to consider mines under development, particularly in the Arizona strip.

Response: The EPA's assessment is of currently operating mines. The Agency is not aware of any changes in mining methods that will cause the emissions from mines developed in the future to be significantly different than from currently operating mines. In any event these mines will be covered by this standard.

4.9.7.2 No individuals live at the locations designated by EPA for the maximum exposed individuals at Pigeon and Kanab North mines.

Response: EPA has changed the distances to the maximum exposed individuals at Kanab North and Pigeon mines to 30,000 m and 24,000 m, respectively, reflecting the distances to Fredonia, AZ.

4.9.7.3 The attached is a report on radon measurements of actual vent holes. The point of maximum exposure here is the center of the vent hole. After a few feet, the radon daughter concentration falls off to negligible levels.

Response: The measurements were taken between 4 feet and 10 feet from the ground within 8 feet of the vent, which extended 4 to 5 feet above the ground. It is obvious that the radon from the vent was passing well over the point of measurement due to plume rise.

#### 4.10 SURFACE URANIUM MINES

##### 4.10.1 Basis for the Standards (legal/procedural issues)

4.10.1.1 The mining of uranium ore is conducted under general license from the Texas Department of Health and regulated under Texas rules for the control of radiation. The statement to the contrary in 12.1.2.2.3 of the BID is incorrect. There are regulations for mine reclamation by the Texas Railroad Commission which specify the radiation levels on the surface of the mine at the time of bond release.

Response: According to cognizant state government personnel the statement in the FEIS is correct.

##### 4.10.2 Dose and Risk Calculations and Analysis

No Significant Comments.

##### 4.10.3 Control Technology

No Significant Comments.

#### 4.10.4 Level of Proposed Standards

4.10.4.1 The Nuclear Regulatory Commission and the Agency have funded several studies to monitor radon concentrations near open pit uranium mines over the last decade. These reports show that anything lower than the existing standard will be extremely difficult to control without increasing the health risks to the very people who are required to control the problem.

Response: No NESHAP is promulgated for surface uranium mines.

#### 4.10.5 Compliance and Implementation Procedures

4.10.5.1 The monitoring specified in method 115 is inapplicable to situations found at some surface uranium mines.

Response: No NESHAPS is promulgated for surface uranium mines.

#### 4.10.6 Control Technology and Compliance Costs

No Significant Comments.

#### 4.10.7 Other Comments

4.10.7.1 There are only two open-pit uranium mines in production in the United States. These mines are required to help produce the nation's uranium requirements to fulfill nuclear power needs for industry and the country's defense establishment.

Response: The Agency is aware that currently only two conventional open-pit uranium mines are in operation.

#### 4.11 PHOSPHOGYPSUM STACKS

##### 4.11.1 Basis For the Standards (Legal/procedural issues)

4.11.1.1 The ORP's plan to propose a standard for phosphogypsum stacks was not based on a determination that such a regulation is necessary and appropriate for protection of public health. We understand that the ORP agreed to propose a standard solely in order to obtain an unopposed extension of time to the court-imposed schedule in Environmental Defense Fund, Inc. vs. Lee M. Thomas.

Response: Although the commentor is correct that EPA agreed to propose a standard for phosphogypsum, it is not true that it was done "solely" to get an extension. The Agency was already working on this source category and was considering it for regulation. EPA is under no court order to promulgate a final standard for this category. The decision to do so is based solely on the risks presented by phosphogypsum stacks to public health.

##### 4.11.2 Dose and Risk Calculations and Analysis

4.11.2.1 The risk estimate source term should include a recognition of the radon not emitted from the stack area due to the natural radon the stacks and associated ponds seal off.

Response: Correcting the source term for background radon flux (0.2 to 0.3 pCi/m<sup>2</sup>-s) from the area beneath the stack would result in an insignificantly small reduction in risk estimates.

4.11.2.2 The BID states, "For one section of Florida, it is estimated that the number of persons exposed is overestimated by a factor of seven, while the risks are understated by a factor of three." A similar but less severe problem exists in the assessment for the multiple stacks in southeastern Idaho. Better models that would resolve this overlap problem should be used.

Response: New modelling approaches are needed to estimate the risk from multiple sources. However, until they become available, the existing models provide the best estimates of risks. The case study of over-lap in the central Florida area was conducted to place an upper-limit on the degree of underestimation of individual risks. As pointed out, multiple sources do not affect the estimate of committed fatal cancers, as the effects are simply additive. The only effect of this treatment of multiple sources is on the estimate of maximum individual risk. Since the phosphogypsum stack with the maximum individual risk is in Louisiana, any error this might have caused is insignificant.

4.11.2.3 The EPA has performed the assessment analysis assuming a release height of one meter while phosphogypsum stack heights range from 10-60 m. We believe an appropriate and easy-to-use adjustment would be to assume the height of release is one-half of the physical stack height. This would result in a more realistic assessment.

Response: The correct modeling of a non-uniform volume source is uncertain. The 1 meter release height was chosen to assure that the risks to nearby individuals are not significantly underestimated. Moreover, as explained in the EIS, the sensitivity study that was made shows that even if the commentor is right, the estimated risk to nearby individuals would only be significantly overstated for one stack.

4.11.2.4 The EPA must use site-specific data in its analysis of radionuclide emissions from phosphogypsum stacks.

Response: The EPA used site-specific data at all phosphogypsum stacks where such data was available. This included stack size and shapes, flux measurements, radionuclide content, stack conditions, etc., made available by on-site visits, company replies, and The Fertilizer Institute (TFI). In some case information provided during the comment period resulted in changes to the inputs to the risk assessment.

4.11.2.5 The EPA's assumptions concerning stack geometry are all no more than approximations. It is doubtful whether any one actual stack exhibits the EPA's assumed geometry.

Response: The EPA exerted considerable effort to obtain site-specific information to use in computing the source terms for the phosphogypsum stacks and information obtained from discussions with company employees. From our observations and input from the company officials, we developed a generic stack with length (not height as TFI states) twice the width and a 1:3 slope to the sides. Most stacks we have seen do approximate a rectangular configuration. We made many inquiries to companies, as well as to TFI, for specific stack data, including stack dimensions and slope of the sides. We received an excellent response to our inquiries from some companies, and either poor or no response from others. It is not easy to obtain this information from most companies, as indicated by TFI's efforts to get the slope of the sides of stacks as reported in their comments. Apparently they were able to obtain the slopes for only 27 of the 63 existing stacks. When we had specific stack data it was used in the assessment. For those stacks that specific information had not been made available, we had no choice but to use generic parameters.

### 4.11.3 Control Technology

4.11.3.1 Allow maximum flexibility in determining how much reduction is required at any given facility and how it is achieved. For example, it may not be necessary to cover the entire stack to meet the standard.

Response: The standard does allow such flexibility.

4.11.3.2 The radon flux from soil cover will affect the depth of cover necessary to attain a radon flux goal, and would increase the costs over that estimated by the EPA. This will require site-specific consideration.

Response: Site specific considerations will be necessary in all cases to assure compliance with the standard. Soil cover should contain approximately background levels of radium and add insignificantly to the radon flux.

4.11.3.3 The soil moisture assumed in the cover by the EPA is about 3 times greater than that seen in Florida soils, which would double the thickness to achieve the same emanation rate increasing the soil cover cost by 100%.

Response: The estimated soil moisture used by the EPA is based on an empirical correlation that uses annual average rainfall and evaporation rates.

4.11.3.4 The haulage distance for dirt to cover the stacks cannot be based on a generic evaluation (10-mile round trip), but must be determined on a case-by-case basis.

Response: EPA did not attempt to estimate costs for each pile. Rather a generic pile was developed based on average conditions. This approach is adequate for rulemaking since it is the incremental costs that are important in considering progressively more stringent controls. These incremental costs are much less sensitive to errors in the generic pile than total costs.

4.11.3.5 The rule should allow consideration of alternative risk control methods other than covering the stack with dirt.

Response: The operator is free to use any method that will permanently meet the radon flux standard from the stacks.

4.11.3.9 The EPA should recognize that 1) phosphogypsum in north Florida has 50 - 75% less radium than assumed by EPA based on the radium content of rock from other Florida areas; 2) a soil density of 1000 to 1200 kg/m<sup>3</sup> would be more appropriate than the 220 used; and 3) environmental weathering is commonly represented by a 14-day half-life rather than the 35 years used.



Response: The FEIS has been amended to reflect the lower radium content of north Florida rock. The soil density used is appropriate for phosphogypsum stacks. The 1000 to 1200 kg/m<sup>3</sup> cited reflects the specific gravity of typical soils while the 200 kg/m<sup>3</sup> used by the EPA reflects the bulk density of typical soils.

#### 4.11.4 Level of Proposed Standards

4.11.4.1 The EPA should allow an alternative standard of 0.5 pCi/L radon at the stack's edge.

Response: This standard would be very difficult to measure on an average annual radon concentration basis considering that background concentrations in central Florida range from 0.14-5 pCi/L and the uncertainties associated with measuring ambient airborne radon concentrations. For example, consider the case of Seminole Fertilizer Corporation's south stack which is surrounded by reclaimed land that resulted in a measured base perimeter radon concentration of 0.7 pCi/L (see EPA 520/5-88-021).

#### 4.11.5 Compliance and Implementation Procedures

4.11.5.1 The EPA failed to consider the radiation exposure to an individual caused by the soil which would be placed on top of the stack. This is important in evaluating Approach D (I-60).

Response: Because there is very little radium in soil that should be used for cover it would not have a significant effect on health and it will have little effect on compliance with the standard since Approach D was not selected.

4.11.5.2 We do not believe more than 20 samples for each category (sides, beaches, roadways, etc.) are warranted. It would be better to require more than one set of measurements since the flux is affected by meteorological conditions. Alternatively, the number of measurements should be based on the stack area. For example, on a 9 ha stack this would amount to one measurement per 300 sq m, while the EPA's long-term study (EPA 520/5-88-021) made one measurement per 78,000 sq m. We recommend making one measurement per 10,000 sq m.

Response: The number of samples required for each category is based on EPA's report 520/5-88-021.

4.11.5.3 Section 3.1.2 requires a minimum of 300 measurements to characterize the radon flux from the phosphogypsum stack. This is contrary to the conclusion in the EPA's background document, A Long-Term Study of Radon and Airborne Particulates at Phosphogypsum Stacks in Central Florida.

Response: The cited EPA document considered only the loose, dry area of the top surface. The rule considers the total stack consisting of 5 regions. The conclusion was made that 100 measurements adequately defines a mean flux over a large area with large flux variability, while fewer measurements will adequately define a smaller area with less variability.

4.11.5.4 The EPA should make it clear that emissions limits are applied to closed stacks and not to operating stacks.

Response: The final rule clarifies this point.

4.11.5.5 Retesting should be required on a non-regular basis to better provide for testing over all seasons of the year. Also, if initial testing indicates non-compliance, the operator should be allowed to conduct three additional tests at three-month intervals and report the results of each test as well as the average radon flux for all four tests. Compliance should be based on the four-test average.

Response: The final rule provides flexibility by allowing for either periodic or continuous measurement.

4.11.5.6 The proposed rule does not specifically identify what would constitute a stack no longer in use and therefore subject to the standard. However, the language of proposed Section 61.203(d) indicates that EPA may view the discontinuation of the actual placement of phosphogypsum on the stack with the cessation of the use of that stack. This view is not correct. The rule should not restrict a company's ability to use the surface area of a phosphogypsum stack for water management purposes even though the stack or a portion of the stack is no longer regularly used for the placement of phosphogypsum.

Response: The definition of when a stack is subject to the NESHAP has been clarified in the final rule. The rule specifies that stacks used for water management are still in operation and do not need to be tested.

4.11.6 Compliance Costs:

No significant Comments

4.11.7 Other Comments

4.11.7.1 No 1987 flux measurement results were used in the assessment. The EPA used only measurements made in 1988.

Response: The 1987 data were not used because EPA was uncertain where the measurements were made, what procedure was used, and they were few in number.

4.11.7.2 The EPA assumed a stack side slope of 1 to 3, whereas the side slopes of the Swift Creek and Swanee River stacks are 1.2 to 1 and 1.5 to 1, respectively.

Response: EPA regrets that this information was not received in time for the final risk assessment.

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: Volume 2 Risk Assessment submitted to the Docket; please send me the other documents  
**Date:** Monday, January 09, 2017 11:12:22 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:37 PM  
**To:** Collections.SubW  
**Subject:** FW: Volume 2 Risk Assessment submitted to the Docket; please send me the other documents

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, November 22, 2016 4:48 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** RE: Volume 2 Risk Assessment submitted to the Docket; please send me the other documents

Thanks! Perfect timing.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Schultheisz, Daniel  
**Sent:** Tuesday, November 22, 2016 4:46 PM  
**To:** Nesky, Anthony <[Nesky.Tony@epa.gov](mailto:Nesky.Tony@epa.gov)>  
**Subject:** RE: Volume 2 Risk Assessment submitted to the Docket; please send me the other documents

Attached. I decided to save it.

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, November 22, 2016 4:31 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** RE: Volume 2 Risk Assessment submitted to the Docket; please send me the other documents

I have already uploaded Volume 2. Could I trouble you for the link to the 1989 RTC?

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Schultheisz, Daniel

**Sent:** Tuesday, November 22, 2016 4:29 PM

**To:** Nesky, Anthony <[Nesky.Tony@epa.gov](mailto:Nesky.Tony@epa.gov)>

**Subject:** RE: Volume 2 Risk Assessment submitted to the Docket; please send me the other documents

Here are the response to comments document and the BID from the 1986 rulemaking. I guess I don't have the 1989 RTC saved, but did have it open online. It's in NEPIS. I can find it along with the 1989 risk assessment (BID Volume 2) if you don't want to look.

The link to the White Mesa reports on the State of Utah website is <http://www.deq.utah.gov/businesses/E/energyfuels/whitemesamill.htm>. Look under "Reports" and select "Annual Tailings Wastewater Sampling Report." The 2014 and 2015 reports are the ones to put in the docket.

---

**From:** Nesky, Anthony

**Sent:** Tuesday, November 22, 2016 3:51 PM

**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>

**Subject:** Volume 2 Risk Assessment submitted to the Docket; please send me the other documents

This is a good time for me to maintain the Docket. Please send me the other two documents that you wanted posted there.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: Subpart W comments doc  
**Date:** Monday, January 09, 2017 11:12:11 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:38 PM  
**To:** Collections.SubW  
**Subject:** FW: Subpart W comments doc

---

**From:** Shogren, Angela  
**Sent:** Tuesday, November 22, 2016 7:23 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** Re: Subpart W comments doc

Thanks, Dan. I'll start tackling this tomorrow and reach out if I have questions.

**Angela Shogren**  
Public Affairs Specialist  
Radiation Protection Division  
U.S. Environmental Protection Agency Tel (202) 343-9761  
[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)

On Nov 22, 2016, at 5:41 PM, Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)> wrote:

Angela:

Here are the first eleven sections. Just got 12 and 13 back from OGC and will work those tomorrow (probably). They are not terribly large files.

What I would like is to have them combined into one document. Each section has its own listing of contents, but the overall document should have a similar listing of the main sections. There is also a table of commenters (attached) that should be included at the end (maybe with a list of acronyms/abbreviations that are taken from the rule). I have to check it to make sure it is comprehensive.

I don't know what kind of requirements we have for including any type of disclaimers or introductory material for documents. This will be posted on the web, but not published/printed, so I believe (from Tony) that we do not need a document number.

I don't know how that sounds as far as how difficult it should be and how much else you have to do. I could do the basic parts, but some of the formatting (like table of

contents) would probably be done through brute force.

Let me know what you think. I will probably not be in the office tomorrow, but you can get me at (202) 236-8264. Thanks.

Dan

---

**From:** Shogren, Angela  
**Sent:** Monday, November 21, 2016 12:19 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** Subpart W comments doc

Hi Dan,  
Can you please send me all of the sections for the Subpart W comments document that you referenced last week? I'd like to get started on a draft for you to look at...

Thanks!

**Angela Shogren**  
Public Affairs Specialist  
Radiation Protection Division  
U.S. Environmental Protection Agency Tel (202) 343-9761  
[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)

<1 Legal Comments Final.docx>  
<2-Definition of 11e2 Byproduct Material Final.docx>  
<3-GACT vs MACT Final.docx>  
<4-Considering All Radionuclides Final.docx>  
<5-Eliminating Distinction with Existing Impoundments Final.docx>  
<6-Evaporation Pond Issues Final.docx>  
<7-Limits on Number of Allowable Ponds Final.docx>  
<8-Regulation of Heap Leach Piles Final.docx>  
<9-Definition of Operation Closure Final.docx>  
<10-Eliminate as determined by NRC Final.docx>  
<11-Cost and Economic Impact Analysis Issues Final.docx>  
<Index of Commenters.docx>

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: Subpart W comments doc  
**Date:** Monday, January 09, 2017 11:11:42 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:38 PM  
**To:** Collections.SubW  
**Subject:** FW: Subpart W comments doc

---

**From:** Shogren, Angela  
**Sent:** Wednesday, November 23, 2016 2:08 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** Re: Subpart W comments doc

This all sounds great. I am working Monday and Tuesday (AM only) of next week (remote) and then I am in training Wednesday-Thursday. I spoke with Ray and even though we don't HAVE to get a document number, I see no reason not to. It takes a day or two and it's a simple process. I just think that it might be easier to make it part of record if we have a document number to refer to. I guess I mostly just think it feels like the right thing to do.

I'll work on page numbers, create a cover page and a page to add in the introduction and the acronyms. I'll get it back to you on Monday, hopefully. Does that work?

**Angela Shogren**  
Public Affairs Specialist  
Radiation Protection Division  
U.S. Environmental Protection Agency Tel (202) 343-9761  
[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)

On Nov 23, 2016, at 2:00 PM, Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)> wrote:

Angela:

This looks pretty good, although page numbers are off a bit. Would it be better to number by section (e.g., 1-1, 2-1, 3-1)? I've attached the last two sections.

I think we need to have a cover page, which doesn't need to be very elaborate, but something like this:

National Emission Standards for Hazardous Air Pollutants (NESHAPs) for



Radionuclides  
National Emission Standards for Radon from Operating Mill Tailings  
40 CFR Part 61, Subpart W

Background Information for Final Rule  
Summary of Public Comments and Responses

Date

I have looked at a few recent RTC documents for NESHAPs, and they do not have document numbers (the one I am looking at now also numbers the pages sequentially, not by section). They do have the EPA seal on the cover. The older ones you referenced below (I was looking at the 2001 Yucca RTC for the format on what I sent you) were all printed. I think it would be nice to have a document number, but Tony has told me that a web-only document does not need a document number. I know you are checking with Ray, but if you want to pursue one, that is fine with me.

There probably also needs to be an inside page that identifies ORIA/RPD as the preparer of the document. I will prepare a short introduction to the rulemaking, probably taking from the preamble, as well as a list of acronyms and abbreviations.

Can you remind me of your schedule? I'm assuming, since we have not heard anything about the rule package moving out of OAR, that signature would not take place until the middle of next week at the earliest.

Thanks for your help on this. Let me know if something here doesn't make sense.

Dan

---

**From:** Shogren, Angela  
**Sent:** Wednesday, November 23, 2016 11:12 AM  
**To:** Schultheisz, Daniel  
**Subject:** RE: Subpart W comments doc

Dan,

Here is what I have so far (attached). All of these documents have a brief (2-3 pages) introduction and overview of the rule and a description of how the comments were solicited and the process in reviewing and responding. I am not aware of a formal requirement, but I think that it is generally a good idea with documents like this.

Some documents also have an acronym list (as an Appendix). I think that for this document, that is a good idea as well.

I looked online at our previous Response to Comment documents and it looks like typically they are given document numbers:

<https://www.epa.gov/sites/production/files/2015-05/documents/402-r-01-009.pdf>  
(Yucca Final Rule - Response to Comments)

## [Public Health and Environmental Radiation Protection](#)

...

[www.epa.gov](http://www.epa.gov)

United States Environmental Protection Agency Air and Radiation (6608J) EPA  
402-R-01-009 June 2001 Public Health and Environmental Radiation Protection  
Standards for

<https://www.epa.gov/sites/production/files/2015-07/documents/00000c7e.pdf>  
(Subpart R - Response to Comments)

[www.epa.gov](http://www.epa.gov)

[www.epa.gov](http://www.epa.gov)

Created Date: 2/19/2012 1:47:28  
PM

<https://www.epa.gov/sites/production/files/2015-05/documents/final194r2c.pdf> (40  
CFR Part 194 – Response to Comments)

## [Response to Comments Document for 40 CFR Part 194](#)

[www.epa.gov](http://www.epa.gov)

v INTRODUCTION The Waste Isolation Pilot Plant (WIPP) is a deep geologic  
repository proposed for the disposal of transuranic radioactive waste. The  
facility, operated ...

I have a call in to Ray about whether we need a document number, so stay tuned.

Let me know what other formatting needs you have on this document...or, if I am  
on the wrong track altogether!

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency |  
Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

---

**From:** Schultheisz, Daniel  
**Sent:** Tuesday, November 22, 2016 5:41 PM  
**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>  
**Subject:** RE: Subpart W comments doc

Angela:

Here are the first eleven sections. Just got 12 and 13 back from OGC and will work those tomorrow (probably). They are not terribly large files.

What I would like is to have them combined into one document. Each section has its own listing of contents, but the overall document should have a similar listing of the main sections. There is also a table of commenters (attached) that should be included at the end (maybe with a list of acronyms/abbreviations that are taken from the rule). I have to check it to make sure it is comprehensive.

I don't know what kind of requirements we have for including any type of disclaimers or introductory material for documents. This will be posted on the web, but not published/printed, so I believe (from Tony) that we do not need a document number.

I don't know how that sounds as far as how difficult it should be and how much else you have to do. I could do the basic parts, but some of the formatting (like table of contents) would probably be done through brute force.

Let me know what you think. I will probably not be in the office tomorrow, but you can get me at (202) 236-8264. Thanks.

Dan

---

**From:** Shogren, Angela  
**Sent:** Monday, November 21, 2016 12:19 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** Subpart W comments doc

Hi Dan,  
Can you please send me all of the sections for the Subpart W comments document that you referenced last week? I'd like to get started on a draft for you to look at...

Thanks!

**Angela Shogren**

Public Affairs Specialist

Radiation Protection Division

U.S. Environmental Protection Agency Tel (202) 343-9761

[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)

<12-General Comments Final.docx>

<13-Out of Scope of Rulemaking Final.docx>

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: Subpart W comments doc  
**Date:** Monday, January 09, 2017 11:11:26 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:38 PM  
**To:** Collections.SubW  
**Subject:** FW: Subpart W comments doc

---

**From:** Schultheisz, Daniel  
**Sent:** Wednesday, November 23, 2016 2:41 PM  
**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>  
**Subject:** Re: Subpart W comments doc

I think that should be okay. It shouldn't take too long to generate the document on short notice if we need to, but we are not expecting the final technical support document until Monday anyway. I also feel better about getting a document number, if only for tracking purposes (and it makes the document look more official). I will send you the introduction and the list of acronyms and abbreviations.

---

**From:** Shogren, Angela  
**Sent:** Wednesday, November 23, 2016 2:07 PM  
**To:** Schultheisz, Daniel  
**Subject:** Re: Subpart W comments doc

This all sounds great. I am working Monday and Tuesday (AM only) of next week (remote) and then I am in training Wednesday-Thursday. I spoke with Ray and even though we don't HAVE to get a document number, I see no reason not to. It takes a day or two and it's a simple process. I just think that it might be easier to make it part of record if we have a document number to refer to. I guess I mostly just think it feels like the right thing to do.

I'll work on page numbers, create a cover page and a page to add in the introduction and the acronyms. I'll get it back to you on Monday, hopefully. Does that work?

**Angela Shogren**

Public Affairs Specialist  
Radiation Protection Division

U.S. Environmental Protection Agency Tel (202) 343-9761

[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)

On Nov 23, 2016, at 2:00 PM, Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)> wrote:

Angela:

This looks pretty good, although page numbers are off a bit. Would it be better to number by section (e.g., 1-1, 2-1, 3-1)? I've attached the last two sections.

I think we need to have a cover page, which doesn't need to be very elaborate, but something like this:

National Emission Standards for Hazardous Air Pollutants (NESHAPs) for  
Radionuclides

National Emission Standards for Radon from Operating Mill Tailings  
40 CFR Part 61, Subpart W

Background Information for Final Rule  
Summary of Public Comments and Responses

Date

I have looked at a few recent RTC documents for NESHAPs, and they do not have document numbers (the one I am looking at now also numbers the pages sequentially, not by section). They do have the EPA seal on the cover. The older ones you referenced below (I was looking at the 2001 Yucca RTC for the format on what I sent you) were all printed. I think it would be nice to have a document number, but Tony has told me that a web-only document does not need a document number. I know you are checking with Ray, but if you want to pursue one, that is fine with me.

There probably also needs to be an inside page that identifies ORIA/RPD as the preparer of the document. I will prepare a short introduction to the rulemaking, probably taking from the preamble, as well as a list of acronyms and abbreviations.

Can you remind me of your schedule? I'm assuming, since we have not heard anything about the rule package moving out of OAR, that signature would not take place until the middle of next week at the earliest.

Thanks for your help on this. Let me know if something here doesn't make sense.

Dan

---

**From:** Shogren, Angela  
**Sent:** Wednesday, November 23, 2016 11:12 AM  
**To:** Schultheisz, Daniel  
**Subject:** RE: Subpart W comments doc

Dan,

Here is what I have so far (attached). All of these documents have a brief (2-3 pages) introduction and overview of the rule and a description of how the comments were solicited and the process in reviewing and responding. I am not aware of a formal requirement, but I think that it is generally a good idea with documents like this.

Some documents also have an acronym list (as an Appendix). I think that for this document, that is a good idea as well.

I looked online at our previous Response to Comment documents and it looks like typically they are given document numbers:

<https://www.epa.gov/sites/production/files/2015-05/documents/402-r-01-009.pdf>  
(Yucca Final Rule - Response to Comments)

[Public Health and Environmental Radiation Protection](#)

...

[www.epa.gov](http://www.epa.gov)

United States Environmental Protection Agency Air and Radiation (6608J) EPA  
402-R-01-009 June 2001 Public Health and Environmental Radiation Protection  
Standards for

<https://www.epa.gov/sites/production/files/2015-07/documents/00000c7e.pdf>  
(Subpart R - Response to Comments)

[www.epa.gov](http://www.epa.gov)

[www.epa.gov](http://www.epa.gov)

Created Date: 2/19/2012 1:47:28  
PM

<https://www.epa.gov/sites/production/files/2015-05/documents/final194r2c.pdf> (40  
CFR Part 194 – Response to Comments)

[Response to Comments Document for 40 CFR Part  
194](#)

[www.epa.gov](http://www.epa.gov)

INTRODUCTION The Waste Isolation Pilot Plant (WIPP) is a deep geologic repository proposed for the disposal of transuranic radioactive waste. The facility, operated ...

I have a call in to Ray about whether we need a document number, so stay tuned.

Let me know what other formatting needs you have on this document...or, if I am on the wrong track altogether!

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency |  
Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

---

**From:** Schultheisz, Daniel

**Sent:** Tuesday, November 22, 2016 5:41 PM

**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>

**Subject:** RE: Subpart W comments doc

Angela:

Here are the first eleven sections. Just got 12 and 13 back from OGC and will work those tomorrow (probably). They are not terribly large files.

What I would like is to have them combined into one document. Each section has its own listing of contents, but the overall document should have a similar listing of the main sections. There is also a table of commenters (attached) that should be included at the end (maybe with a list of acronyms/abbreviations that are taken from the rule). I have to check it to make sure it is comprehensive.

I don't know what kind of requirements we have for including any type of disclaimers or introductory material for documents. This will be posted on the web, but not published/printed, so I believe (from Tony) that we do not need a document number.

I don't know how that sounds as far as how difficult it should be and how much else you have to do. I could do the basic parts, but some of the formatting (like table of contents) would probably be done through brute force.

Let me know what you think. I will probably not be in the office tomorrow, but you can get me at (202) 236-8264. Thanks.

Dan



---

**From:** Shogren, Angela  
**Sent:** Monday, November 21, 2016 12:19 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** Subpart W comments doc

Hi Dan,

Can you please send me all of the sections for the Subpart W comments document that you referenced last week? I'd like to get started on a draft for you to look at...

Thanks!

**Angela Shogren**

Public Affairs Specialist

Radiation Protection Division

U.S. Environmental Protection Agency Tel (202) 343-9761

[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)

<12-General Comments Final.docx>

<13-Out of Scope of Rulemaking Final.docx>

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: One More White Mesa Report for Docket  
**Date:** Monday, January 09, 2017 11:11:14 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:39 PM  
**To:** Collections.SubW  
**Subject:** FW: One More White Mesa Report for Docket

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, November 24, 2016 8:55 PM  
**To:** Nesky, Anthony <[Nesky.Tony@epa.gov](mailto:Nesky.Tony@epa.gov)>  
**Subject:** One More White Mesa Report for Docket

Tony:

There is one other report I forgot about. If you go back to that link, under "Reports" you will see "Semi-Annual Effluent Monitoring Reports." The 2015 July-December report is the one we want. Thanks. More to come.

Dan

## Thornton, Marisa

---

**Subject:** FW: More Docket References

---

**From:** Thornton, Marisa **On Behalf Of** Collections.SubW

**Sent:** Wednesday, January 11, 2017 8:54 AM

**To:** Thornton, Marisa <Thornton.Marisa@epa.gov>

**Subject:** Fw: More Docket References

---

**From:** Schultheisz, Daniel

**Sent:** Thursday, December 22, 2016 3:39 PM

**To:** Collections.SubW

**Subject:** FW: More Docket References

---

**From:** Schultheisz, Daniel

**Sent:** Thursday, November 24, 2016 9:42 PM

**To:** Nesky, Anthony <[Nesky.Tony@epa.gov](mailto:Nesky.Tony@epa.gov)>

**Subject:** More Docket References

Tony:

Here are a few more:

Senate Report Number 101-228, December 20, 1989

<http://www.csb.gov/UserFiles/file/legal/CSBLegislativeHistory.pdf>

NRC Staff Requirements Memorandum - SECY-99-013, July 26, 2000

<http://www.nrc.gov/reading-rm/doc-collections/commission/srm/1999/1999-013srm.pdf>

Prescribed Procedures for Measurement of Radioactivity in Drinking Water

<https://nepis.epa.gov/>

There's one other that I think OGC will have to provide. And that should be it. Thanks.

Dan

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: Please look at this  
**Date:** Monday, January 09, 2017 11:10:51 AM  
**Attachments:** [Comment.pdf](#)

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:39 PM  
**To:** Collections.SubW  
**Subject:** FW: Please look at this

---

**From:** Schultheisz, Daniel  
**Sent:** Friday, November 25, 2016 3:58 PM  
**To:** Seidman, Emily <[seidman.emily@epa.gov](mailto:seidman.emily@epa.gov)>  
**Subject:** Please look at this

Emily:

Take a look at this and let me know what you think. Thanks.

Dan

# Uranium Watch

76 South Main Street, # 7 | P.O. Box 344  
Moab, Utah 84532  
435-260-8384

January 15, 2015

via electronic mail

Air and Radiation Docket  
Environmental Protection Agency  
Mailcode: 2822T  
1200 Pennsylvania Ave., NW  
Washington, D.C. 20460  
[a-and-r-docket@epa.gov](mailto:a-and-r-docket@epa.gov)

Re: Docket ID No. EPA-HQ- OAR-2008-0218. Supplement No. 3 to Comments on Proposed Rule: Revisions to National Emission Standards for Radon Emissions From Operating Mill Tailings (40 C.F.R. Part 61 Subpart W). 79 Fed. Reg. 25388, May 2, 2014.

Dear Sir or Madam:

Below please find Supplement 3 to the October 29, 2014, comments on Environmental Protection Agency (EPA) Proposed Revisions to National Emission Standards for Radon Emissions From Operating Mill Tailings, 49 C.F.R. Part 61 Subpart W, Docket ID No. EPA-HQ- OAR-2008-0218; 79 Fed. Reg. 25388, May 2, 2014. These comments are submitted by Uranium Watch and on behalf of Living Rivers and Information Network on Responsible Mining.

These comments, though submitted after the October 29, 2014, close of the Subpart W Revision comment period, are based on additional information regarding the relationship between the Clean Air Act and 40 C.F.R. Part 61, Subpart W. and consideration of an important legal issue that the EPA failed to address in the EPA Proposed Revisions to National Emission Standards for Radon Emissions From Operating Mill Tailings (Proposed Rules). Considering the long time for the EPA to develop the Proposed Rules and the numerous May 2, 2014, *Federal Register* Notice inadequacies, the expectation of over a year to develop the Final Rule, Uranium Watch requests that the EPA give full consideration to the following comments.

THE CLEAN AIR ACT AND 40 C.F.R. PART 61 SUBPART W

1. Commenters provided comments in the applicability of Section 112(h) of the Clean Air Act (CAA), as amended in 1990, in the October 29, 2014, Comments on Proposed Rule: Revisions to National Emission Standards for Radon Emissions From Operating Mill Tailing. Section II.1. of the comments asserted that under the provisions of Section 112(h) of the CAA, the EPA cannot establish a design, equipment, work practice, or operational standard, or combination thereof (whether through the application of maximum available technologies or generally available technologies) **in lieu of an** emission standard unless the Administrator makes certain findings. If the EPA proposes to establish a design, equipment, work practice, or operational standard, or combination thereof, the Administrator must find that it is not feasible to prescribe or enforce an emission standard, meaning that the the application of a measurement methodology is not technologically and economically practicable. The Proposed Rules made no mention of such a provision and did not make such findings.

2. The Clean Air Act of 1977. Public Law 95-95 - August 7, 1977. 91 STAT. 703. Emission Standards for Hazardous Air Pollutants (Design or equipment standards, 42 U.S.C. 7412.). The Clean Air Act (CAA)of 1977 has language similar to the provisions in Section 112(h) of the CAA as amended in 1990. Section 110 of the CAA of 1977 states:

Section 112 of the Clean Air Act is amended by adding the following new subsection at the end thereof:

(e)(1) **For purposes of this section, if in the judgment of the Administrator, it is not feasible to prescribe or enforce an emission standard for control of a hazardous air pollutant or pollutants, he may instead promulgate a design, equipment, work practice, or operational standard, or combination thereof, which in his judgment is adequate to protect the public health from such pollutant or pollutants with an ample margin of safety.** In the event the Administrator promulgates a design or equipment standard under this subsection, he shall include as part of such standard such requirements as will assure the proper operation and maintenance of any such element of design or equipment.

(2) **For the purpose of this subsection, the phrase ‘not feasible to prescribe or enforce an emission standard’ means any situation in which the Administrator determines that (A) a hazardous pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State, or local law, or (B) the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations.**

(3) If after notice and opportunity for public hearing, and person establishes to the satisfaction of the Administrator that an alternative

means of emission limitation will achieve a reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such air pollutant achieved under the requirements of paragraph (1), the Administrator shall permit the use of such alternative by the source for purposes of compliance with this section with respect to such pollutant.

**(4) Any standard promulgated under paragraph (1) shall be promulgated in terms of an emission standard whenever it becomes feasible to promulgate and enforce such a standard in such terms.**

[Emphasis added.]

These provisions of the CAA of 1977 were applicable to the promulgation, or lack of promulgation, of National Emission Standards for Radon Emissions From Operating Mill Tailings in the 1980s. What is clear is that the EPA invoked Section 112(e) when making a determination that the promulgation of an emission standard was not “feasible.” However, in 1989, when the EPA promulgated a radon-222 emission standard for “existing” impoundments and did not promulgate an radon-222 emission standard for similar “new” impoundments, there was no mention of a finding that it was “not feasible to prescribe or enforce an emission standard” for “new” impoundments (i.e., constructed after December 1989).

3. There are statements made by the EPA in previous *Federal Register* Notices that support the assertion above. Below are those statements:

3.1. Part 192: Environmental Standards for Uranium and Thorium Mill Tailings at Licensed Commercial Processing Sites, 40 C.F.R. Part 192, 48 Fed. Reg. 45926; October 14, 1983.<sup>1</sup> Part 192 in 1983 contains statements the show that the EPA was aware of the provisions in the CAA with respect the promulgation of Standard for Radon-222 Emissions From Licensed Uranium Mills.

The October 1983 Part 192 *Federal Register* Notice contains a discussion of the Relationship to the Clean Air Act Emission Standard Requirements. This section, page 45938, col. 3, at 3., to page 35939, states:

The Clean Air Act also requires that EPA provide public health protection from air emissions from tailings piles. Further, EPA is publishing an ANPR to consider additional control of radon emissions during the operational phase of mills. This discussion relates to the disposal phase.

The Clean Air Act requires that the Administrator establish a standard at the level which in his judgment provides an ample margin of safety to protect the public health from hazardous air pollutants. The Agency published proposed rules for radionuclides as National Emission Standards for Hazardous Air Pollutants [NESHAPS] on April 6, 1983 (48 FR 15076). The proposed rule addressed all of the sources of emissions of

---

<sup>1</sup> <https://blog.epa.gov/milltailingsblog/wp-content/uploads/2009/12/48fr45926.pdf>

radionuclides that EPA had identified. The proposed rule either provided standards for various source categories or proposed not to regulate them and provided reasons for that decision.

In the proposed NESHAPS for radionuclides EPA did not propose additional standards for uranium mill tailings, because the Agency believed the EPA standards to be established under UMTRCA would provide the same degree of protection as required by Section 112 of the Clean Air Act.

\*\*\*

**The Clean Air Act specifies that the Administrator promulgate emissions standards to protect the public health. The Administrator is also authorized to promulgate design, equipment, work practice, or operational standards, or a combination, if it is not feasible to prescribe or enforce emission standards. The Administrator can conclude that “it is not feasible” if a hazardous pollutant cannot be emitted through a conveyance or the use of the conveyance would be contrary to laws, or if measurement methodologies are not practicable due to technological or economic limitations. As noted above, we will consider the need for such standards for the operational phase of mills.** [Emphasis added.] [Page 35939, col. 2 to col. 3.]

3.2. Environmental Protection Agency, 40 C.F.R. Part 61. National Emission Standards for Hazardous Air Pollutants (NESHAPS): Regulations of Radionuclides; Withdrawal of Proposed Standards. Standard for Radon-222 Emissions From Licensed Uranium Mills; Proposed Rule and Announcement of Public Hearing; 51 Fed. Reg. 6382, February 21, 1986. This Proposed Rule states, in part:

V. Summary of Proposed Standard.

Based on currently available information, EPA has determined that it is not feasible to prescribe an emission standard for radon-222 emissions from uranium mills. Therefore, the Agency is proposing a work practice standard to limit radon-222 emissions from license uranium mills.

Therefore, the EPA recognized that, if they did not prescribe an emission standard for radon-222 emissions from uranium mills, it was necessary to determine that it was not feasible to promulgate such a standard, as required under Section 1123(e) of the CAA.

3.3. Environmental Protection Agency, 40 C.F.R. Part 61. National Emission Standards for Hazardous Air Pollutants (NESHAPS): Regulations of Radionuclides; Withdrawal of Proposed Standards. Standard for Radon-222 Emissions From Licensed Uranium Mills; Final Rule; 51 Fed. Reg. 34056 September 24, 1986. This Final Rule states, in part:

IV. Summary of Proposed Standards. As noted earlier, EPA published a proposed rulemaking regarding control of radon-222



emissions from tailings piles at licensed sites on February 21 1986 (51 FR 6382). **That notice announced that EPA was considering various work practice standards for limiting such emissions based on its preliminary conclusions that it is not feasible to set an emissions standard,** and that the nature of the risk involved warrants a regulatory response. [Emphasis added.] [Page 34058, col. 2.]

\*\*\*

**The NRC questioned why EPA did not issue an emission standard, such as already exists in NRC and State regulations, instead of proposing a work practice standard. The Agency judges that it is not feasible to prescribe an emission standard since most of the radon emitted by a uranium mill comes from the surface of mill tailings piles.** A typical pile may be from a few to hundreds of acres in area, and emissions from its surface cannot be controlled through conveyance designed and constructed to emit or capture radon. It is also not practical to accurately and consistently measure emissions because of the large size of the tailings pile and the continued modifications of the pile that take place during operations. For these and others reasons, a work practice standard is being promulgated. [Emphasis added.] [Page 34059, col. 2.]

\*\*\*

VI. Summary and Rationale of Final Rule. A. Summary  
**Based on currently available information, EPA has determined that it is not feasible to prescribe an emission standard for radon emissions from uranium mills.** [Emphasis added.] [Page 34060, col. 3.]

Therefore, with the 1986 Final Rule, the EPA did not issue an emission standard and made a determination that it was not “feasible” to do so. Clearly, this determination was responsive to the 1977 CAA Section 112(e) requirements.

3.4. Environmental Protection Agency, 40 C.F.R. Part 61. National Emission Standards for Hazardous Air Pollutants: Regulations of Radionuclides; Proposed Rule and Announcement of Public Hearing; 54 Fed. Reg. 9612, March 7, 1989.

This Proposed Rule proposed National Emission Standards for Radon Emissions From Operating Mill Tailings at Subpart W. The EPA proposed 4 approaches to work practice and design standards for operating mills. However, these approaches were not accompanied by a finding that it was not feasible to prescribe an emission standard for radon emissions from uranium mills. Somehow, the EPA forgot about the requirements in Section 112(e) of the CAA.

3.5. Environmental Protection Agency, 40 C.F.R. Part 61. National Emission Standards for Hazardous Air Pollutants: Regulations of Radionuclides; Proposed Rule and Announcement of Public Hearing; 54 Fed. Reg. 9612, March 7, 1989.

This Proposed Rule proposed National Emission Standards for Radon Emissions From Operating Mill Tailings at Subpart W. The EPA proposed 4 approaches to work practice and design standards for operating mills. However, these approaches were not

accompanied by a finding that it was not feasible to prescribe an emission standard for radon emissions from uranium mills. Somehow the EPA forgot about the requirement in Section 112(e) of the CAA.

3.6. Environmental Protection Agency, 40 C.F.R. Part 61. National Emission Standards for Hazardous Air Pollutants: Regulations of Radionuclides; Final Rule and Notice of Reconsideration; 54 Fed. Reg. 51654, December 15, 1989.

This Final Rule established National Emission Standards for Radon Emissions From Operating Mill Tailings at Subpart W, along with standards for other Radionuclide emission sources. The final rule established an emission standard for “existing” tailings impoundments (constructed prior to December 1989). And, the EPA established work practice and design standards for “new” tailings impoundments (constructed after December 1989). The EPA did not make a finding that it was not feasible to prescribe an emission standard for radon emissions from “new” impoundments. Somehow the EPA forgot about the requirement in Section 112(e) of the CAA for such a finding. And, the reality was that the EPA could not make such a finding after establishing an emission standard for “existing” impoundments.

4. In sum:

4.1. The EPA made it clear in the October 1983 Part 192 Rulemaking and the 1986 Proposed and Final Rules that Section 112(e) of the 1977 CAA required that any EPA decision not to promulgate a radon-222 emission standard for uranium mills needed to be accompanied by a determination that such an emission standard was not feasible. (However erroneous that determination may have been.)

4.2. With the 1989 Subpart W Rulemaking, the EPA failed to, and, in fact, could not, make the determination required by Section 112(e) of the CAA of 1977 that it was not feasible to promulgate an emission standard when they promulgated a design and work practice standard for “new” tailings impoundments.

4.3. With the 2014 Subpart W Rulemaking, when the EPA proposed design and work practice standards in lieu of emission standards for all tailings impoundments, in-situ leach operations, and heap leach operations, the EPA failed to make the determination required by Section 112(h) of the CAA of 1990 that it was not feasible to promulgate an emission standard.

4.4. Therefore, it appears that the 1989 design and work practice standards for “new” impoundments were promulgated contrary to the requirements of Section 112(e) 1977 CAA. It also appears that the 2014 Subpart W Proposed Rules are contrary to the requirements of the Section 112(h) CAA of 1990, because the EPA proposed design and work practice standards without making a determination that emission standards were not feasible.

Thank you for your consideration of these comments.

Respectfully submitted,

Sarah Fields  
Program Director

And on behalf of:

Jennifer Thurston  
Director  
Information Network for Responsible Mining  
P.O. Box 27  
Norwood, Colorado 81423

John Weisheit  
Conservation Director  
Living Rivers  
P.O. Box 466  
Moab, Utah 84532

cc: Rusty Lundberg, Utah DRC  
Bryce Bird, Utah DAQ  
Angilique Diaz, EPA Region 8  
Reid Rosnick, EPA  
Caryn Mullerieile, EPA  
Andera Cherepy, EPA  
Tom Peake, EPA  
Daniel Schultheisz, EPA  
Susan Stahle, EPA  
Jonathan Edwards, EPA  
Mike Flynn, EPA  
Elliott Zenick, EPA  
Wendy Blake, EPA  
Davis Zhen, EPA  
Lena Ferris, EPA  
Tim Brenner, EPA  
Charlie Garlow, EPA  
Stuart Walker, EPA  
Steve Hoffman, EPA  
Marilyn Ginsburg, EPA  
Bob Dye, EPA  
Gina McCarthy, EPA  
Janet McCabe, EPA  
Avi Garbow, EPA

Cynthis Giles, EPA  
Michael Goo, EPA  
Mathy Stanislaus

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: H. Rep. No. 1480  
**Date:** Monday, January 09, 2017 11:10:36 AM  
**Attachments:** [H. Rep. No. 1480.pdf](#)

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:39 PM  
**To:** Collections.SubW  
**Subject:** FW: H. Rep. No. 1480

---

**From:** Seidman, Emily  
**Sent:** Monday, November 28, 2016 11:54 AM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** H. Rep. No. 1480

Dan,

H. Rep. 1480 is attached and the quote on page 56 of the preamble is on page 21 of the attached report. You can use this in the docket and delete the phrase “reprinted in, 1978 U.S. Code Cong. & Admin. News 7433, 7444” from the preamble language.

Emily Seidman | US EPA | Office of General Counsel | Air and Radiation Law Office | Mail Code 2344A | WJCN 7502A | phone: (202) 564-0906

CONFIDENTIAL communication for internal deliberations only; may contain deliberative, attorney-client, attorney work product, or otherwise privileged material; do not distribute outside EPA or DOJ.

AUTHORIZING THE SECRETARY OF ENERGY TO ENTER INTO COOPERATIVE AGREEMENTS WITH CERTAIN STATES RESPECTING RESIDUAL RADIOACTIVE MATERIAL AT EXISTING SITES, PROVIDING FOR THE REGULATION OF URANIUM MILL TAILINGS UNDER THE ATOMIC ENERGY ACT OF 1954, AND FOR OTHER PURPOSES

---

AUGUST 11, 1978.—Ordered to be printed

---

Mr. UDALL, from the Committee on Interior and Insular Affairs, submitted the following

## REPORT

[To accompany H.R. 13650 which on July 28, 1978 was referred jointly to the Committees on Interior and Insular Affairs and Interstate and Foreign Commerce]

The Committee on Interior and Insular Affairs to whom was referred the bill (H.R. 13650) to authorize the Secretary of Energy to enter into cooperative agreements with certain States respecting residual radioactive material at existing sites, to provide for the regulation of uranium mill tailings under the Atomic Energy Act of 1954, and for other purposes, having considered the same, reports favorably thereon with an amendment and recommends that the bill as amended do pass.

The amendment is as follows:

Page 1, beginning on line 3, strike out all after the enacting clause and insert in lieu thereof the following:

That this Act may be cited as the "Uranium Mill Tailings Control Act of 1978".

### SECTION 1. Short title and table of contents.

#### TITLE I—RESIDUAL RADIOACTIVE MATERIAL AT CERTAIN EXISTING SITES

- Sec. 101. Definitions.
- Sec. 102. Designation of processing sites.
- Sec. 103. Cooperative arrangements with States.
- Sec. 104. Cooperative arrangements with Indian tribes.
- Sec. 105. Reimbursement for prior expenditures.
- Sec. 106. Tailings research program.
- Sec. 107. Rules and regulations.
- Sec. 108. Authority of Environmental Protection Agency.
- Sec. 109. Authority of Commission.
- Sec. 110. Authorization.
- Sec. 111. Advance authority.

## TITLE II—URANIUM MILL TAILINGS LICENSING AND REGULATION

- Sec. 201. Definition.  
 Sec. 202. Custody of disposal site.  
 Sec. 203. Authority to establish certain requirements.  
 Sec. 204. Cooperation with States.  
 Sec. 205. Authorities of Commission respecting certain byproduct material.  
 Sec. 206. Authority of Environmental Protection Agency respecting certain byproduct material.  
 Sec. 207. Authorization of appropriations for grants.  
 Sec. 208. Effective date.  
 Sec. 209. Consolidation of licenses and procedures.  
 Sec. 210. Relationship to title I authorities.

## TITLE I—RESIDUAL RADIOACTIVE MATERIAL AT CERTAIN EXISTING SITES

## DEFINITIONS

SEC. 101. For purposes of this title—

(1) The term "processing site" means any site which is designated by the Secretary under section 102 as a processing site for purposes of this title.

(2) The term "residual radioactive material" means—

(A) radioactive material in the form of tailings or waste resulting from the processing of ores for the extraction from such ores of uranium, other valuable constituents, or both;

(B) other radioactive materials at the processing site which are related to such processing, including any residual stock of unprocessed ores or low-grade materials; and

(C) any ground or structure which (i) is in the vicinity of the site where such ores were processed, and (ii) is contaminated with radioactive material derived from such site.

(3) The term "Secretary" means the Secretary of Energy unless otherwise expressly provided.

(4) The term "Commission" means the Nuclear Regulatory Commission.

(5) The term "Administrator" means the Administrator of the Environmental Protection Agency.

## DESIGNATION OF PROCESSING SITES

SEC. 102. (a) As soon as practicable after the date of the enactment of this Act, the Secretary shall designate as processing sites for purposes of this title 22 sites at the following locations at which uranium was produced before the date of the enactment of this Act:

Salt Lake City, Utah,  
 Green River, Utah,  
 Mexican Hat, Utah,  
 Durango, Colorado,  
 Grand Junction, Colorado,  
 Rifle, Colorado (two sites),  
 Gunnison, Colorado,  
 Naturita, Colorado,  
 Maybell, Colorado,  
 Slick Rock, Colorado (two sites),  
 Shiprock, New Mexico,  
 Ambrosia Lake, New Mexico,  
 Riverton, Wyoming,  
 Converse County, Wyoming,  
 Lakeview, Oregon,  
 Falls City, Texas,  
 Tuba City, Arizona,  
 Monument Valley, Arizona,  
 Lowman, Idaho,  
 Canonsburg, Pennsylvania.

(b) (1) The Commission, in consultation with the attorney general of the State of New Mexico, shall conduct a study to determine the extent of the authority of the State of New Mexico to require the owners of the following sites to undertake appropriate remedial action to limit the exposure of the public to radiation associated with residual radioactive materials at such sites: the Homestake-New Mexico Partners site near Milan, New Mexico, and the Anaconda carbonate process tailings site near Bluewater, New Mexico. Not later than one year after the date of the enactment of this Act, the Commission shall issue a report containing the results of the study.

(2) As soon as practicable after reviewing the report and recommendations of the Commission under paragraph (1), the Secretary shall designate either or both of the sites studied under paragraph (1) as a processing site for purposes of this title if he determines that the State does not have adequate authority to require that appropriate remedial action be undertaken with respect to any such site.

(c) Within five years after the date of the enactment of this Act, the Secretary may designate as a processing site for purposes of this title any site which is not referred to in subsection (a) or (b) and at which uranium was produced under contract for sale to the United States if he determines that such designation is necessary and desirable to protect public health, safety, and the environment. No such site may be designated under this subsection if—

(1) such site was owned by the United States on January 1, 1978, or

(2) a license, issued under the Atomic Energy Act of 1954, or by a State under State authority as permitted under section 274 of such Act, for any activity (other than an activity described in section 103(c)(7) or section 104(c)(4)) which results in the production at such site of any uranium product derived from ores, is in effect on the date of the enactment of this Act, or is issued after such date.

(d) The Secretary shall publish notice in the Federal Register of any designation made under this section and shall specify in such notice the boundaries of each processing site so designated.

#### COOPERATIVE ARRANGEMENTS WITH STATES

SEC. 103. (a) (1) The Secretary is authorized to enter into cooperative arrangements with each of the States in which a processing site is located to assess radiation levels, and to carry out appropriate remedial action to limit the exposure of the public to radiation associated with residual radioactive materials.

(2) No cooperative arrangement shall be entered into under this section with respect to any processing site located on the Indian lands described in section 104(a)(2).

(b) (1) The United States shall pay 90 per centum of the costs of carrying out any cooperative arrangement with any State under this section. The remaining costs of such arrangement shall be paid by the State from non-Federal funds.

(2) For purposes of determining the State and Federal shares of the costs of carrying out any cooperative arrangement under this section, any costs incurred by the State in acquiring any processing site, disposal site, or residual radioactive materials shall not be taken into account.

(3) Notwithstanding paragraph (1), if the State share of the costs of carrying out all cooperative arrangements entered into by any State exceeds 0.25 per centum of the available general revenue of the State (as determined by the Secretary) during the last fiscal year of the State ending before the date of the enactment of this Act, the United States shall pay (in addition to any amount paid by the United States under paragraph (1)) the amount by which the State's share of the costs exceeds such percentage. For purposes of determining available general revenues of any State, no Federal funds made available to the State by the United States shall be taken into account.

(c) Each cooperative arrangement entered into with a State under this section shall contain such terms and conditions as are appropriate and consistent with the provisions of this title. Each such arrangement shall provide for the following:

(1) Upon the concurrence of such State and the Commission, and after consultation with the Administrator, the Secretary shall—

(A) select any appropriate remedial action, and

(B) designate identify an appropriate location (at the processing site or at another location) for the disposal of residual radioactive materials.

If the Secretary identifies a location outside of such State as an appropriate location for the disposal of such materials, the Secretary may designate that location as a disposal site under subparagraph (B) only with the concurrence of the State within which such proposed disposal site is located.

(2) Unless the Secretary otherwise determines, before remedial action is undertaken with respect to any processing site, the State shall acquire—

(A) the processing site (including both the surface estate and the subsurface estate at the site),

(B) any residual radioactive materials on such site, and

(C) any disposal site selected for the residual radioactive materials.



A State may comply with the requirement of the preceding sentence with respect to acquisition of the processing site by the execution of a purchase option for such site which shall be exercised at any time within two years after the completion of remedial work at the processing site. No State shall be required to acquire any ground or structure contaminated with radioactive material derived from the processing site if such ground or structure is located outside the processing site or disposal site.

(3) When the Commission determines that remedial work at the processing site is completed in accordance with the requirements imposed pursuant to this title, the State shall transfer to the United States ownership and custody of—

- (A) the residual radioactive materials, and
- (B) any disposal site acquired by the State under paragraph (2).

The United States shall not transfer title to property acquired under this subsection to any other person. No payment shall be made in connection with such transfer from funds appropriated under subsection (b) other than payments for administrative and legal costs incurred in carrying out such transfer. Custody of any property transferred to the United States under this paragraph shall be assumed by the Secretary, and the Secretary shall maintain such property in such manner as will protect the public health and safety and the environment.

(4)(A) When the Commission determines that remedial work at the processing site is completed in accordance with the requirements imposed pursuant to this title, the State may sell to any other person any processing site owned by the State other than a processing site used for the disposal of residual radioactive materials. Whenever a State sells a processing site acquired as provided in paragraph (2), before offering the site for sale to any other person, the State shall offer to sell such site at its fair market value to the person from whom the State acquired the site.

(B) Before any State transfers title to any processing site offered for sale under subparagraph (A), the State shall execute and record, pursuant to applicable State law, a document giving notice that—

- (i) such site had been contaminated with residual radioactive materials; and
- (ii) measures have been taken under this Act to limit any hazard associated with such materials to acceptable levels.

(5) If the State sells any processing site acquired under paragraph (2) within two years after acquiring the site or within two years after remedial action is completed at the site, whichever occurs last, the State shall pay to the United States an amount determined by multiplying the Federal contribution percentage by an amount equal to the excess of the net proceeds of the sale over the cost incurred by the State in acquiring the site. If the State does not sell the processing site within such period, the State shall pay to the Secretary at the end of such period an amount determined by multiplying the Federal contribution percentage by an amount equal to the excess of the fair market value of the site at the end of such period over the cost incurred by the State in acquiring such site. For purposes of this paragraph, the term "Federal contribution percentage" means, with respect to any site, the percentage of the costs of the cooperative arrangement with respect to such which is paid by the United States.

(6) Any remedial action undertaken under a cooperative arrangement shall be performed by the Secretary or by a contractor authorized by the Secretary, unless otherwise determined by the Secretary.

(7) The State may, with the approval of the Secretary, enter into contracts with any person under which such person may recover minerals from residual radioactive materials at any processing site upon payment to the State of—

- (A) all or part of the cost of remedial action to be undertaken at such site after the removal of the minerals,
- (B) an amount of the profits generated from such recovery activity as the Secretary considers appropriate, or
- (C) a combination of the amounts described in subparagraphs (A) and (B).

Any person carrying out mineral recovery activities under [this paragraph shall be required to obtain any license required under the Atomic Energy Act of 1954 or under State authority as permitted under section 274 of such Act, except that the State shall not be required to obtain any such license solely by reason of entering into a contract under this paragraph.

(8) If the State enters into contract with any person to recover minerals from residual radioactive materials as provided under paragraph (7), the State shall pay to the United States an amount determined by multiplying the Federal contribution percentage (as determined under paragraph (5)) by an amount equal to the payment to the State as determined under paragraph (7).

#### COOPERATIVE ARRANGEMENTS WITH INDIAN TRIBES

SEC. 104. (a) (1) The Secretary is authorized to enter into cooperative arrangements with the Secretary of the Interior and with each Indian tribe residing on lands described in paragraph (2) to assess radiation levels and to carry out appropriate remedial action to limit the exposure of the public to radiation emanating from residual radioactive materials.

(2) The lands referred to in paragraph (1) are any lands—

(A) held in trust by the United States for any Indian or for any Indian tribe, or

(B) owned by any Indian or Indian tribe subject to a restriction against alienation imposed by the United States.

(3) For purposes of this section, the term "Indian tribe" means any Indian tribe, band, group, pueblo, or other organized community of Indians recognized as eligible for services provided by the Secretary to the Interior to Indians.

(b) The Secretary shall provide 100 per centum of the costs of carrying out any cooperative arrangement with the Secretary of the Interior and any Indian tribe under this section.

(c) Each cooperative arrangement entered into with the Secretary of the Interior and with an Indian tribe under this section shall contain such terms and conditions as are appropriate and consistent with the provisions of this title. Each such arrangement shall provide for the following:

(1) Upon the concurrence of the Secretary of the Interior and the Commission, and after consultation with the Indian tribe and the Administrator, the Secretary shall—

(A) select any appropriate remedial action, and

(B) designate an appropriate location (at the processing site or at another location) for the disposal of residual radioactive materials.

(2) The Secretary of the Interior shall have the responsibility for the continued custody of any residual radioactive materials from any processing site restored under the cooperative arrangement unless the President determines that another arrangement is appropriate.

(3) Unless otherwise determined by the Secretary, any remedial action undertaken under any cooperative arrangement shall be performed by the Secretary or by a contractor authorized by the Secretary.

(4) With the approval of the Indian tribe and the Secretary, the Secretary of the Interior may enter into contracts with any person, under which such person may recover minerals from residual radioactive materials at any processing site upon payment to the United States of—

(A) all or part of the cost of the remedial action to be undertaken at such site after the removal of the minerals,

(B) an amount of the profits generated from such recovery activity as the Secretary of the Interior considers appropriate, or

(C) a combination of the amounts described in subparagraphs (A) and (B).

Any person carrying out mineral recovery activities under this paragraph shall be required to obtain any license required under the Atomic Energy Act of 1954 or under State authority as permitted under section 274 of such Act, except that the Secretary of the Interior shall not be required to obtain any such license solely by reason of entering into a contract under this paragraph.

#### REIMBURSEMENT FOR PRIOR EXPENDITURES

SEC. 105. Any cooperative arrangement entered into under this title may provide for the reimbursement of any person for expenditures incurred by such person in carrying out remedial action on property outside the boundaries of any processing site, before the date of the enactment of this Act, to protect public health, safety and the environment from radiation associated with residual radioactive materials at such site.

## TAILINGS RESEARCH PROGRAM

SEC. 106. The Secretary shall conduct a research program, and make available information, concerning ways in which residual radioactive materials at processing sites may be neutralized in order to reduce the level of hazardous radioactive and nonradioactive substances contained in such materials to acceptable levels, as determined by the Administrator in accordance with standards and criteria promulgated under section 108.

## RULES AND REGULATIONS.

SEC. 107. The Secretary may prescribe such rules and regulations as he deems necessary and appropriate to carry out the provisions of this title, including rules and regulations respecting reports, accounting, and rights of inspection.

## AUTHORITY OF ENVIRONMENTAL PROTECTION AGENCY

SEC. 108. (a) Within one hundred and eighty days after the date of the enactment of this Act, the Administrator shall, by rule, promulgate generally applicable standards and criteria for the protection of the general environment outside the boundaries of—

- (1) processing sites, and
- (2) sites used for the disposal of residual radioactive materials.

Such criteria shall apply to radiological and nonradiological environmental hazards associated with the processing, and with the possession and transfer, of residual radioactive material, and shall be consistent to the maximum extent practicable with the requirements of the Solid Waste Disposal Act.

(b) Before the promulgation of any rule pursuant to subsection (a), the Administrator shall—

- (1) consult with the Commission; and
- (2) provide adequate notice of any rulemaking proceeding and provide opportunity for public hearing.

(c) Any interested person may obtain judicial review of any rule promulgated under subsection (a) of this section in the United States court of appeals for the Federal judicial circuit in which such person resides or transacts business only upon petition for review by such person filed within ninety days from the date of such promulgation, or after such date only if such petition is based solely on grounds which arose after such ninetieth day.

(d) No remedial action shall be commenced under this title before the date ninety days following the promulgation of standards and criteria under subsection (a).

(e) Nothing in this section shall be construed to limit or enlarge the functions of the Administrator of the Environmental Protection Agency under the Federal Water Pollution Control Act or under the Clean Air Act.

## AUTHORITY OF COMMISSION

SEC. 109. (a) The Commission shall insure that any cooperative arrangement entered into under this title is carried out in such manner as—

- (1) conforms to the requirements established by the Secretary and concurred in by the Commission under sections 103(c)(1) and 104(c)(1), and
- (2) conforms with the applicable standards and criteria promulgated by the Administrator under section 108.

(b) In carrying out its authority under this section the Commission is authorized—

- (1) by rule, regulation, or order, to require persons, officers, or instrumentalities exempted—

- (A) under section 208(b) or 210 of this Act, or
- (B) under section 81 of the Atomic Energy Act of 1951.

from the requirement of obtaining a license for the ownership or possession of byproduct material as defined in section 11e. (2) to conduct monitoring, perform remedial work, and to comply with such other measures as it considers necessary or desirable to protect the public health and safety and the environment; and

- (2) to make such studies and inspections and conduct such monitoring as may be necessary.

(c) Any violation by any person other than the United States of any rule or order of the Commission under this section shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 234 of the Atomic Energy Act of 1954. Nothing in this section shall be construed to affect any other authority of the Commission under such Act.

#### AUTHORIZATION

Sec. 110. Effective October 1, 1979, there is authorized to be appropriated \$180,000,000 to carry out, the purposes of this title which shall remain available until expended.

#### ADVANCE AUTHORITY

Sec. 111. Notwithstanding any other provision of this Act, authority to enter into cooperative arrangements and to enter into contracts or make payments under this Act shall be effective only to the extent or in such amounts as are provided in advance in appropriation Acts.

## TITLE II—URANIUM MILL TAILINGS LICENSING AND REGULATION

#### DEFINITION

Sec. 201. Section 11 e. of the Atomic Energy Act of 1954 is amended to read as follows:

"e. The term 'byproduct materials' means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content."

#### CUSTODY OF DISPOSAL SITE

Sec. 202. (a) Chapter 8 of the Atomic Energy Act of 1954 is amended by adding the following new section at the end thereof:

SEC. 83. OWNERSHIP AND CUSTODY OF CERTAIN BYPRODUCT MATERIAL AND DISPOSAL SITES.—

"a. Any license under section 62 or section 81 for any activity which results in the production of any byproduct material as defined in section 11 e. (2) shall contain such terms and conditions as may be necessary to assure that, prior to termination of such license—

"(1) the license will comply with such requirements as the Commission may establish respecting such termination, and

"(2) ownership of—

"(A) any byproduct material defined in section 11 e. (2) which resulted from such licensed activity, and

"(B) any land (other than land owned by the United States), including both the surface and subsurface estates, which is used for the disposal of such byproduct material.

shall be transferred to the United States.

Such material and land shall be transferred to the United States without cost to the United States (other than administrative and legal costs incurred in carrying out such transfer). The United States shall not transfer title to property acquired under this subsection to any other person.

"b. (1) As soon as practicable after the date of the enactment of this section, the President shall designate the Secretary of Energy or any other appropriate officer or instrumentality of the United States (other than the Commission) to have custody of byproduct material and land transferred to the United States under subsection a. (2). No officer or instrumentality may be designated under the preceding sentence unless such officer or instrumentality has adequate authority to provide for the safe treatment, management, storage, and disposal of such byproduct material and to provide for the sound management of such plan, consistent with the requirements of subsection d.

"(2) The officer or instrumentality designated under this subsection may accept donations of any byproduct material and land described in subsection a. (2) which is not required to be transferred to such officer or instrumentality (by reason of the effective date of this section or for any other reason). Such

material and land may be accepted under this paragraph upon a determination by such officer or instrumentality that such acceptance is necessary or desirable in order to protect the public health, safety, and the environment.

"c. Upon termination of any license to which this section applies, the Commission shall determine whether or not the licensee has complied with all applicable standards and requirements under such license.

"d. Following the Commission's determination of compliance under subsection c., the officer or instrumentality designated by the President under subsection b. shall assume custody of the byproduct material and land referred to in subsection a. Such officer or instrumentality shall maintain such material and land in such manner as will protect the public health and safety and the environment. Such custody may be transferred to another officer or instrumentality of the United States only upon approval of the President upon his determination that such officer or instrumentality meets the requirements of subsection b."

(b) The table of contents for chapter 8 of the Atomic Energy Act of 1954 is amended by inserting the following new item after the item relating to section 82: "Sec. 83. Ownership and custody of certain by product material and disposal sites."

#### AUTHORITY TO ESTABLISH CERTAIN REQUIREMENTS

SEC. 203. Section 161 of the Atomic Energy Act of 1954 is amended by adding the following new subsection at the end thereof:

"x. Establish by rule, regulation, or order (in accordance with the provisions of the Administrative Procedure Act as required under section 181) such standards and instructions as the Commission may deem necessary or desirable to insure, before termination of any license for byproduct material as defined in section 11e.(2) and before the transfer under section 83 of land used for the disposal of such material, that the licensee will make available such bonding or other financial arrangements as may be required to assure the reclamation of sites structures and equipment used in conjunction with such byproduct material and that—

"(1) in the case of any such license issued or renewed after the date of the enactment of this subsection, to the maximum extent practicable, no long-term maintenance and monitoring of such sites, structures, and equipment will be required; and

"(2) in the case of each license for such material (including any license referred to in paragraph (1) and any license in effect on the date of the enactment of this subsection), if the Commission determines that any such long-term maintenance and monitoring is necessary, the licensee will make available such bonding or other financial arrangements as may be required to assure such long-term maintenance and monitoring."

#### COOPERATION WITH STATES

SEC. 204. (a) Section 274 b. of the Atomic Energy Act of 1954 is amended by adding "as defined in section 11 e. (1)" after the words "byproduct materials" in paragraph (1); by renumbering paragraphs (2) and (3) as paragraphs (3) and (4); and by inserting the following new paragraph immediately after paragraph (1): "(2) by product materials as defined in section 11 e. (2);"

(b) Section 274 d. (2) of such Act is amended by inserting the following before the word "compatible": "in accordance with the requirements of subsection o. and in all other respects".

(c) Section 274 n. of such Act is amended by adding the following new sentence at the end thereof: "As used in this section, the term agreement includes any amendment to any agreement."

(d) Section 274 j. of such Act is amended by adding "(1)" after "may", and by adding before the period at the end thereof "and (2), terminate or suspend that part of its agreement with the State relating to State licensing and regulation of any activity which results in the production of byproduct material as defined by section 11 e. (2), and reassert the licensing and regulatory authority vested in it under this Act over such activities, if the Commission finds that such termination or suspension is required to assure compliance with subsection o."

(e) (1) Section 274 of such Act is amended by adding the following new subsection at the end thereof:

"o. In the licensing and regulation of any activity which results in the production of byproduct material as defined in section 11 e. (2) under an agreement entered into pursuant to subsection b., a State shall require compliance with the requirements of section 83 a. (2) (respecting ownership by the United States of byproduct material and land), and the State shall adopt and enforce—

“(1) substantive standards for the protection of the public health, safety, and the environment from hazards associated with such material which are equivalent to the extent practicable, or more stringent than, standards adopted and enforced by the Commission for the same purpose, and

“(2) procedures which—

“(A) in the case of licenses, provide for advance public notice, an opportunity for a public hearing with rights to present direct and rebuttal evidence and conduct cross-examination, and a written decision which is based only on evidence in the record and which is subject to judicial review,

“(B) in the case of rulemaking, provide opportunity for public participation in the form of written comments or a public hearing and which provide for judicial review of the rulemaking decision,

“(C) require the preparation of a written independent environmental analysis or review which is available to the public before the commencement of any such proceedings, and

“(D) prohibit, in the case of any construction activity which is proposed with respect to such material, any major activity from being undertaken before completion and public availability of the analysis or review referred to in subparagraph (C).

No State shall be required under paragraph (2) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted in such State by the Commission.

If any State, under an agreement for the licensing and regulation of byproduct material as defined in section 11 e. (2), imposes upon the license any requirement for the payment of funds which are collected by the State for the reclamation or long-term maintenance and monitoring of such byproduct material, such State shall transfer to the United States, upon termination of the license in connection with which such payment was made, any amounts collected by the State for such purposes. Any such agreement in effect on the date of the enactment of this subsection shall be amended as promptly as practicable following such date to comply with the requirements of the preceding sentence with respect to amounts collected before, on, and after such date of enactment.

(f) Section 274 c. of such Act is amended by inserting the following new sentence after paragraph (4) thereof: “The Commission shall also retain authority under any such agreement to make a determination that all applicable standards and requirements have been met prior to termination of a license for byproduct material as defined in section 11 e. (2).”

(g) As soon as practicable after the date 3 years after the date of the enactment of this Act, the Nuclear Regulatory Commission shall review each agreement under section 274 of the Atomic Energy Act of 1954 to determine whether or not such agreement complies with the requirements contained in amendments made by this section. If the Commission determines that any such agreement does not comply with such requirements, it shall exercise the authority of section 274 j. (2) of the Atomic Energy Act of 1954 (as amended by subsection (d) of this section).

#### AUTHORITIES OF COMMISSION RESPECTING CERTAIN BYPRODUCT MATERIAL

SEC. 205. (a) Chapter 8 of the Atomic Energy Act of 1954 is amended by adding the following new section at the end thereof:

“SEC. 84. AUTHORITIES OF COMMISSION RESPECTING CERTAIN BYPRODUCT MATERIAL.—

“a. The Commission shall insure that the management of any byproduct material as defined in section 11 3. (2) is carried out in such manner as—

“(1) the Commission deems appropriate to protect the public health and safety and the environment, and

“(2) conforms with applicable standards and criteria promulgated by the Administrator of the Environmental Protection Agency under section 275.

“b. In carrying out its authority under this section, the Commission is authorized to:

“(1) by rule, regulation, or order require persons, officers, or instrumentalities exempted from licensing—

“(A) under section 208(b) or 210 of the Uranium Mill Tailings Control Act of 1978, or

“(B) under section 81 of this Act

to conduct monitoring; perform remedial work, and to comply with such other measures as it may deem necessary or desirable to protect the public health and safety and the environment, and

“(2) make such studies and inspections and to conduct such monitoring as may be necessary.

Any violation by any person other than the United States of any rule or order of the Commission established under this section shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 234. Nothing in this section affects any authority of the Commission under any other provision of this Act.”

(b) The table of contents for such chapter 8, is amended by inserting the following new item after the item relating to section 83:

“Sec. 84. Authorities of Commission respecting certain byproduct material.”

AUTHORITY OF ENVIRONMENTAL PROTECTION AGENCY RESPECTING CERTAIN BY-PRODUCT MATERIAL

SEC. 206. (a) Chapter 19 of the Atomic Energy Act of 1954 is amended by inserting after section 274 the following new section:

“SEC. 275. AUTHORITY OF THE ENVIRONMENTAL PROTECTION AGENCY.—

“a. The Administrator of the Environmental Protection Agency (hereinafter in this section referred to as the ‘Administrator’) shall, by rule, promulgate, and from time to time revise, generally applicable standards and criteria for the protection of the general environment outside the boundaries of—

“(1) sites at which ores are processed primarily for their source material content, and

“(2) sites used for the disposal of byproduct material as defined in section 11 e. (2).

Such criteria shall apply to radiological and nonradiological environmental hazards associated with the processing, and with the possession and transfer, of byproduct material as defined in section 11e. (2), and shall be consistent to the maximum extent practicable with the requirements of the Solid Waste Disposal Act.

“b. Before the promulgation of any rule pursuant to subsection a., the Administrator shall—

“(1) consult with the Commission, and

“(2) provide adequate notice of any rulemaking proceeding and provide opportunity for public hearing.

“c. Any interested person may obtain judicial review of any rule promulgated under subsection a. of this section in the United States court of appeals for the Federal judicial circuit in which such person resides or transacts business only upon petition for review by such person filed within ninety days from the date of such promulgation, or after such date only if such petition is based solely on grounds which arose after such ninetieth day.

“d. Nothing in this section shall be construed to limit or enlarge the functions of the Administrator of the Environmental Protection Agency under the Federal Water Pollution Control Act or under the Clean Air Act.”

(b) The table of contents for chapter 19 of the Atomic Energy Act is amended by inserting the following new item after the item relating to section 274:

“Sec. 275. Authority of the Environmental Protection Agency.”

AUTHORIZATION OF APPROPRIATION FOR GRANTS

SEC. 207. Effective October 1, 1979, there is hereby authorized to be appropriated to the Nuclear Regulatory Commission the sum of \$500,000 to be used for making grants to States which have entered into agreements with the Commission under section 274 of the Atomic Energy Act of 1954 to aid in the development of State regulatory programs under such section which implement the provisions of this Act.

EFFECTIVE DATE

SEC. 208. (a) Except as otherwise provided in this section, the amendments made by this title shall take effect on the date of the enactment of this Act and any such amendments applicable to licenses issued under the Atomic Energy Act of 1954 or under State authority (as permitted under section 274 of such Act) shall apply without regard to whether such licenses are issued before, on, or after the date of the enactment of this Act.

(b) Before the date 3 years after the date of the enactment of this Act no license under section 81 of the Atomic Energy Act of 1954 or under State authority (as permitted under section 274 of such Act) shall be required for the transfer, receipt, production, manufacture, acquisition, ownership, possession, import or export of byproduct material as defined in section 11e. (2) of the Atomic Energy Act of 1954 (as added by section 201 of this Act).

(c) In the case of any license issued before the date of the enactment of this Act by a State under State authority (as permitted under section 274 of the Atomic Energy Act of 1954), the requirements of section 274 o. of the Atomic Energy Act of 1954 (as added by section 204 of this Act) shall apply only to the extent practicable during—

(1) the three year period beginning on the date of the enactment of this Act, or

(2) the period (ending not later than the date five years after the date of the enactment of this Act) before the renewal of such license, which ever period is longer.

(d) Nothing in any amendment made by this title shall preclude any State from exercising any authority (including the authority permitted under section 274) respecting byproduct material as defined in section 11e. (2) of the Atomic Energy Act of 1954 during the 3 year period beginning on the date of the enactment of this Act.

(e) In the case of any license issued before the date of the enactment of this Act under the Atomic Energy Act of 1954 (or under State authority as permitted under section 274 of such Act), the requirements of section 83 a. (2) of the Atomic Energy Act of 1954 (as added by section 202 of this Act) shall apply only to the extent practicable.

## BACKGROUND AND NEED

Uranium mill tailings are the sandy waste produced by the uranium ore milling process. Because only 1 to 5 pounds of useable uranium is extracted from each 2,000 pounds of ore, tremendous quantities of waste are produced as a result of milling operations. These tailings contain many naturally-occurring hazardous substances, both radioactive and nonradioactive. The greatest threat to public health and safety is presented by the long radioactive decay process of radium into radon-222, an inert gas which may cause cancer or genetic mutations. This decay process, and the dangers which accompany it, will continue for a billion years. As a result of being for all practical purposes, a perpetual hazard, uranium mill tailings present the major threat of the nuclear fuel cycle.

In its early years, the uranium milling industry was under the dominant control of the Federal Government. At that time, uranium was being produced under Federal contracts for the Government's Manhattan Engineering District and Atomic Energy Commission program. Under these contracts, uranium tailings piled up so that now nearly 90 million tons of such waste are attributable to Federally-induced production. Of this amount, about 27 million tons of tailings have been left at sites where no commercial milling has taken place and which are not the responsibility of any active milling company.

From the early 1940's through the early 1970's there was little official recognition of the hazards presented by these tailings. Federal regulation of the industry was minimal. As a consequence, mill tailings were left at sites, mostly in the Southwest, in an unstabilized and unprotected condition. Some of these tailings were used for construction purposes in the foundations and walls of private and public buildings. There, through the concentrated emission of radon gas, the hazard of the tailings and public exposure increased substantially.

In 1971 the Subcommittee on Raw Materials of the Joint Committee on Atomic Energy began to investigate the dangers presented by the use of uranium mill tailings for construction purposes. Testimony at



those hearings lead to the passage of legislation in 1972 authorizing the Federal Government to enter into a cooperative program with the State of Colorado to provide a program of remedial action to remove the tailings from sites and structures in Grand Junction, Colo., where they constituted a threat to public health. Under that program, 75 percent of the costs of the remedial action, were paid by the Federal Government and the State of Colorado paid the remainder.

Concurrently, public and Federal attention began to focus on regulation of the active commercial uranium milling industry. With the advent of the National Environmental Policy Act, more scrutiny was applied to licensing standards and requirements for the control and disposal of uranium mill tailings. The Atomic Energy Commission, and its successor, the Nuclear Regulatory Commission, have retained authority for licensing uranium mills under the Atomic Energy Act since 1954. States may license uranium milling under their own authorities through agreement with the Commission. Five of the twenty-five "Agreement States" now have such licensing programs.

The States and the Commission have continued, since the early 1970's, to upgrade their standards for uranium mill licensing, in response to a growing awareness of the threat to public health presented by these materials. In May 1975, the Nuclear Resources Defense Council petitioned the Commission to prepare a generic environmental impact statement to evaluate the regulatory programs for uranium milling at both the Federal and State levels, and to adopt improved regulations for milling operations. Subsequently, the Commission began the evaluation. The draft generic environmental impact statement on uranium milling regulation, and proposed new milling regulations, are expected to be completed by NRC this year. But the steps which have been taken to control future uranium milling operations do not remedy existing public health hazards resulting from the unstabilized piles of wastes produced in prior decades.

In 1974 Congress requested the Energy Research and Development Administration to survey and assess the problem presented by the tailings located at 22 sites throughout the Southwest. On the basis of the resulting studies, the administration proposed legislation this year to authorize a remedial program similar to that implemented at Grand Junction, Colo., to clean up existing inactive sites. The cost of the program to the Federal Government is expected to be \$180 million. To prevent any future occurrence of a situation of this kind the Nuclear Regulatory Commission was asked by the chairman of the Committee on Interior and Insular Affairs, Representative Morris K. Udall, to submit draft legislation providing it with necessary authority to comprehensively regulate the uranium mill operations and activities. This draft legislation was introduced and considered by the committee in developing its recommendations.

Without the authorities included in H.R. 13650, the conditions addressed by the remedial program would be left without remedy, and the authority of the Commission to establish uniform rational standards for waste disposal from uranium mills would not be clear.

## PURPOSE AND SUMMARY

The Uranium Mill Tailings Control Act, as proposed, is intended to protect the public health and safety and the environment from hazards associated with wastes from the uranium ore milling process. If enacted, the legislation will require every reasonable effort to be made by the States, the Federal Government, and private industry to provide for the disposal, stabilization and control in a safe and environmentally sound manner of such tailings to prevent or minimize the diffusion of radon or the entry of other hazards into the environment.

Title I of H.R. 13650, in cooperation with interested States, Indian tribes, and persons who own or control inactive mill tailings sites, provides a program of assessment and remedial action at such sites. Such actions may include, where appropriate, the reprocessing of tailings to extract residual uranium and other valuable minerals.

Title II clarifies and reinforces the authority of the Nuclear Regulatory Commission to regulate the production and disposal of uranium mill tailings at active sites, and provides for the application of minimum Federal standards to such activities in States which regulate them under authority permitted by the Atomic Energy Act.

H.R. 13650 also provides that all final disposal areas for uranium mill tailings be treated in accordance with Federal policy regarding other nuclear wastes, in that such disposal sites would be transferred to the Federal Government for permanent custody and protection.

## INCLUSION OF SITES

As reported by the committee, H.R. 13650 authorizes Federal participation in the reduction of hazards from the 22 inactive uranium mill tailings sites. These sites, which are found at 20 different locations, have been studied by the Department of Energy in an effort to assess the need for remedial action. All of them consist of tailings resulting from operations under Federal contracts. None are now under active license by the Nuclear Regulatory Commission. While it is believed that these sites are the only ones which possess all such characteristics, the bill permits the inclusion of any other sites meeting those characteristics. Two other sites which contain tailings resulting entirely from Federal contracts, but which are now owned by companies operating under active uranium milling licenses are to be studied to determine whether the State of New Mexico, which licenses the mills, has the authority to require the companies to reduce or eliminate any hazardous conditions which may exist as a result of the condition of the sites.

The committee questioned the expenditure of Federal funds to clean up uranium mill tailings in cases where the commercial uranium milling industry can be required through regulatory authorities to assume those costs. It would seem therefore, that the Secretary of Energy need not designate any sites to be included in the authorized program which are currently under active license, or which contain tailings from commercial production, unless it can be shown that the tailings hazards could in no way be remedied without such designation.

## DIVISION OF COSTS

H.R. 13650 requires States and the Federal Government to share the costs of remedial action for inactive tailings sites. The costs to be shared include expenses for removing or reducing hazards both at the processing site and at locations and structures contaminated with tailings from the site. Environmental impact statements to be prepared for determining remedies for each site will be paid for by the Department of Energy. Costs of long-term maintenance and monitoring of final disposal sites will also be borne by the Department. States are required to assume all costs of purchasing the inactive processing sites and any necessary new disposal sites (in cases where tailings will be removed from the original processing sites).

A ceiling is placed on any State's share of remedial costs. The ceiling equals one-fourth of 1 percent of the State's general revenues, not including Federal funds, in the State's last fiscal year ending before enactment of the act. The committee bases figures for States' general revenues on those used by the Department of Commerce for its determinations.

The committee believes that no State's participation in the remedial program should be precluded by the State's inability to obligate funds to meet its share of program costs. The committee considered in its deliberations the effect of existing State laws prohibiting deficit spending or limiting the extent to which States may be indebted by their legislatures.

The funding formula arrived at by the committee both insures that each State may participate in the program, and distributes the burden of payments according to States' ability to pay. It also takes into account the tremendous financial burden placed on Utah and Colorado where the number and size of inactive processing sites are substantial.

The committee formula would allow each State to provide its share of program costs through a one-time appropriation from its legislative body. This protects the Federal Government from having to supplement the Federal share due to the failure of some future legislature to appropriate funds committed by a previous legislature.

The following chart shows estimated share of program costs based on the committee formula for each affected State. Shares are shown under the ceiling only when a State's share of program costs would meet or exceed the ceiling.

State	Total remedial action cost	10-percent State share	Ceiling of 0.25 percent of available general revenue <sup>1</sup>
Arizona	\$4,069,000	(2)	
Colorado	64,450,000	\$6,445,000	2.7
Idaho	590,000	59,000	
New Mexico	14,730,000	223,000	
Oregon	290,000	29,000	
Pennsylvania	NA	NA	14.0
Texas	2,450,000	245,000	
Utah	44,716,000	4,032,600	2.1
Wyoming	1,282,000	128,200	

<sup>1</sup> For purposes of determining available general revenues of any State, no Federal funds made available to the State by the United States shall be taken into account.

<sup>2</sup> All sites on Indian lands.

Note: All figures are based on high-option estimates of the Department of Energy as found in individual engineering assessments for inactive uranium mill tailings sites.

All costs for remedial activities undertaken on Indian lands are the responsibility of the Federal Government.

#### DETERMINATION AND PRIORITY OF REMEDY

It is the primary responsibility of the Department of Energy to determine the appropriate remedy for each inactive uranium mill tailings site included under the legislation. The Department is required to consult with Administrator of the Environmental Protection Agency in making such determinations. The Department must have the concurrence of the State where the site is located, and the Nuclear Regulatory Commission, in its determination of remedies before any remedial action is undertaken. In cases where sites are located on Indian lands, however, the State does not have a concurrence role. There, the Department must consult with the appropriate tribe and the Administrator and gain the concurrence of the Secretary of the Interior and the Commission.

The public is to have a strong role in the selection of any remedy through procedures provided by the National Environmental Policy Act. It is expected that the Secretary will give full consideration to the wishes of the public as expressed through those processes.

The committee also expects the Secretary to proceed with implementation of remedies in accord with necessity for reducing the most threatening hazards first. In setting priorities for implementation of remedial programs, the Secretary should give special consideration to sites at Salt Lake City, Utah, and Riverton and Converse, Wyo.

#### CAVEAT EMPTOR

In some cases where the Department will remedy inactive tailings hazards, tailings will be removed from the original processing sites and disposed of at more suitable locations. In such cases, the State where the site is located may sell the original, cleaned-up processing site on the public market. H.R. 13650 requires that when a State sells any processing site, it must execute and record a document giving all future prospective buyers notice that the site was once used for the disposal of radioactive materials. The record is also required to note that the site was cleaned up under the remedial program so that hazards were eliminated or reduced to acceptable levels.

It is the intent of the committee that such notice be implemented through the simplest mechanism possible pursuant to State law, as long as it provides a fair opportunity for notice to prospective buyers. The committee does not intend that such notice imply that the land as a result of having been used as a disposal site would constitute a hazard to public health.

#### AUTHORITY OF THE NUCLEAR REGULATORY COMMISSION

The Commission, in keeping with its responsibilities and authorities under the Atomic Energy Act and the National Environmental Policy Act, is the lead agency in regulation, oversight and management of uranium mill tailings-related activities. It is one of the major purposes of H.R. 13650 to clarify and reinforce these Commission responsibilities, with respect to uranium mill tailings at both active and inactive sites.

In establishing requirements or promulgating regulations for licensing or for oversight of the Department's remedial activities, the Commission must set all standards and requirements relating to management concepts, specific technology, engineering methods, and procedures to be employed to achieve desired levels of control for limiting public exposure, and for protecting the general environment. The Commission's standards and requirements should be of such nature as to specify, for example, exclusion area restrictions on site boundaries, surveillance requirements, detailed engineering requirements, including lining for tailings ponds, depth, and types of tailings covers, population limitations, or institutional arrangements such as financial surety requirements or site security measures. The Commission should issue all necessary permits or licenses for uranium mill tailings sites.

The NRC is also responsible for implementing general standards and criteria promulgated by the Administrator of the Environmental Protection Agency. NRC must assure that the technology, engineering methods, operational controls, surveillance requirements and institutional arrangements employed at the sites provide the necessary barriers and levels of control to limit public exposure, and protect the environment from radiological and toxic nonradiological substances associated with uranium mill tailings materials, as specified by the EPA standards and criteria.

With respect to nonradiological matters, the NRC, through its environmental review under the NEPA mandate, would impose controls consistent with those imposed by EPA on similar materials contained in other solid wastes subject to EPA authority.

The committee received testimony regarding authorities of the EPA under the Solid Waste Disposal Act which could be beneficially applied to the management of uranium mill tailings. While it is in no way the intent of the committee to imply that the EPA or the Solid Waste Disposal Act should govern the regulatory activities of the Commission, it is the committee's desire that the Commission examine the management concepts being developed for the EPA solid waste disposal program, and assess them for possible incorporation into NRC regulations where such concepts could improve regulation of tailings.

It also the desire of the committee that the NRC and the States, in implementing new standards and regulations for mill tailings control, consider possible differences in applicability of such requirements to existing tailings disposal sites versus new sites. Specifications for tailings site selection and impoundment design, in particular, once implemented by a licensee, may be reversible only at great cost. In all cases such considerations must, of course, be weighed against the committee's requirement in section 161(x) of the Atomic Energy Act, as amended by section 203 of H.R. 13650, that the Commission regulate to the maximum extent practicable in such a way that disposal sites for tailings will be stabilized sufficiently by the licensee to preclude any necessity for long-term maintenance and monitoring.

#### AUTHORITY OF THE ENVIRONMENTAL PROTECTION AGENCY

It is the responsibility of the Environmental Production Agency to establish generally applicable standards and criteria for the protection of the general environment, considering radiological and nonradiological aspects of tailings. The EPA standards and criteria should be developed to limit the exposure (or potential exposure) of the public

and to protect the general environment from either radiological or nonradiological substances to acceptable levels through such means as allowable concentrations in air or water, quantities of the substances released over a period of time, or by specifying maximum allowable doses or levels to individuals in the general population. The EPA standards and criteria should not interject any detailed or site-specific requirements for management, technology or engineering methods on licensees or on the Department of Energy. Nor should EPA incorporate any requirements for permits or licenses for activities concerning uranium mill tailings which would duplicate NRC regulatory authority over the tailings sites.

### ENVIRONMENTAL REVIEWS

Title II requires that States which license uranium milling or mill tailings disposal activities prepare a written, independent environmental analysis or review as part of its licensing process. The committee considers the independent preparation and public distribution of such an analysis essential to competent licensing of uranium milling activities. The committee also recognizes that the resources of a State are not equivalent to those of a Federal agency. Direct application of all the procedures and requirements embodied in the National Environmental Policy Act, and implemented by the Commission in its licensing process, may not be appropriate to require of the States. Some latitude should be given to allow States to prepare environmental reviews appropriate to their needs and means. The Commission must not, however, allow States to license uranium milling activities with less than thorough and comprehensive environmental assessments due to a lack of financial means in the State to meet Federal environmental impact review standards.

### FEDERAL CUSTODY OF TAILINGS STATES

It is the intent of H.R. 13650 that all final disposal sites for uranium mill tailings be placed ultimately under Federal custody. The President is given the responsibility for designating an appropriate agency to act as custodian for the sites. It is expected that the designated agency should be the Department of Energy, or an agency with similar responsibilities in the area of nuclear waste managements.

The committee believes that uranium mill tailings should be treated by the custodian in accordance with the substantial hazard they will present until long after our existing institutions can be expected to last in their present forms. Any decision by a custodian whether to allow any use by the public of tailings disposal sites must take into consideration the fragile nature of disposal techniques when they are measured against the test of a billion years of erosive influence.

The Nuclear Regulatory Commission should consider its responsibilities for oversight of the custodian in a similar light.

### LICENSE TERMINATION AND LONG-TERM MAINTENANCE

Uranium mill tailings disposal sites should in all cases be controlled and regulated by States and the Commission, to the maximum extent allowed by the state of the art, to insure that the public and the

environment will be protected from the hazards of the tailings for as long as they may remain a hazard. It is the intent of the committee that the costs of such protection shall be internalized wherever possible by the commercial uranium milling industry.

H.R. 13650 requires that before the transfer of custody of any disposal sites to the Federal Government, the Commission shall have made arrangements to insure that such piles are stabilized to provide long-term protection. Prior to determination of licenses for commercial tailings, the Commission shall have collected from licensees funds adequate to cover costs of long-term maintenance and monitoring, if any such measures will be necessary.

### SECTION-BY-SECTION ANALYSIS

#### TITLE I—RESIDUAL RADIOACTIVE MATERIAL AT CERTAIN EXISTING SITES

Title I authorizes the Secretary of Energy to enter into agreements with States to remedy radioactive hazards associated with uranium mill tailings created under contract to the Federal Government.

Section 101 sets out definitions of terms used to describe sites and materials covered by the legislation, and those designating agencies and officials participating in the program.

Section 102 specifies and defines sites where abandoned uranium mill tailings piles are located which would be covered under the Act. These include sites in three categories: (1) 22 sites which have been surveyed by the Department of Energy and which have been determined by the Secretary to be in need of remedial action and qualified for Federal financial assistance; (2) two sites which meet the criteria for assistance except that they are under active license by the State of New Mexico (the Commission is required to make a study to determine whether States have the authority to compel the owners of the piles to clean them up; if the study concludes such authority does not exist, the Secretary is required to include the sites under the Act); and (3) any other uranium tailings sites which the Secretary may determine within 5 years to have been created under Federal contract and not to be under active NRC license.

Section 103 authorizes the Secretary of Energy to enter into cooperative arrangements with States to clean up mill tailings piles, and describes conditions which would apply to the agreements. The conditions include:

Section 103(b). A split of program costs such that the Federal Government pays 90 percent, and each States pays 10 percent, of the costs of remedial action within each State. A ceiling is placed on any State's share of costs. The ceiling equals 0.25 percent of the State's general revenue in the State's fiscal year ending the year before the enactment of the act. The difference between the State's ceiling and total costs would be paid by the Federal Government. Program costs do not include any costs of environmental impact statements, land acquisition or long-term care of disposal sites.

Section 103(c)(1). Selection of the appropriate remedial action for each site by the Secretary of Energy, with the concurrence of the State and the Nuclear Regulatory Commission, and in consultation with the Environmental Protection Agency.

Section 103(c)(2). State acquisition of all designated sites and any required new final disposal sites for tailings.

Section 103(c)(3). Transfer of title, without cost, to the U.S. Government of any final disposal sites for tailings, to be maintained in perpetuity by a designated custodian.

Section 103(c)(4)-(5). States may sell any cleanup sites not used as final disposal sites. Profits resulting from increased value of property after remedial action is completed would be split between State and Federal Governments in proportion to total program costs.

Section 103(c)(6). Actions taken to remedy hazardous mill tailings sites must be performed by the Secretary of Energy or by a contractor authorized by the Secretary, unless otherwise determined by the Secretary.

Section 103(c)(7)-(8). States may contract with private companies for recovery of any valuable minerals in tailings piles. The Government's share of any profits from such recovery are to be split between State and Federal Government in proportion to total program costs.

Section 104 authorizes the Secretary to enter into arrangements with Indian tribes to clean up mill tailings piles on tribal property. The conditions applied to agreements with Indian tribes are the same as those for States, except that:

(1) The Federal Government pays 100 percent of program costs.

(2) Appropriate remedial action is determined by the Secretary in consultation with the Indian tribe and with the concurrence of the Secretary of the Interior.

(3) Mineral recovery operations would be conducted under contract with the Secretary of the Interior, and 100 percent of any Government profits would be paid to the Federal Government.

Section 105 authorizes the Secretary to include in total program costs funds for the reimbursement of individuals who have undertaken remedial action at their own cost on sites or structures which would have been remedied under the act. The sites or structures must be at locations other than the original processing site, and the actions must have been undertaken prior to enactment of the act.

Section 106 requires the Secretary to conduct research to determine whether the hazards of mill tailings piles could be remedied by extracting the dangerous materials in the piles.

Section 107 authorizes the Secretary to promulgate rules and regulations necessary to carry out the act.

Section 108 requires the Administrator of the Environmental Protection Agency to promulgate within 180 days general standards and criteria for protection of the environment against hazards of the uranium mill tailings. Such standards would be applicable to the activities of the Department of Energy in remedying the mill tailings hazards under the act.

Section 109 authorizes the Commission to promulgate, implement and enforce regulations governing permanent Federal custody of uranium mill tailings disposal sites and governing the activities of the Department of Energy under title I of the act. In addition, the section insures that no regulatory gap will exist during the 3-year grace period when licenses are not required for the type of byproduct material newly defined in title II.



Section 110 authorizes \$180 million effective October 1, 1979, for the Department of Energy to carry out the purposes of title I of the act. The funds are to remain available until expended.

Section 111 brings the authorization into compliance with the Budget Act.

#### TITLE II—URANIUM MILL TAILINGS LICENSING AND REGULATION

Title II reinforces the authority of the Nuclear Regulatory Commission to regulate the uranium mill process and mill tailings disposal. The "Agreement States" program, under which certain States license uranium milling activities, is modified to require that State licensing standards be equivalent to the extent practicable to those of the Commission, and to require public participation and environmental review as part of the State licensing procedures. Title II also reinforces the NRC's authority to make financial arrangements with uranium milling companies to insure proper stabilization and care of uranium mill tailings.

Section 201 amends the definition of "byproduct material" in the Atomic Energy Act to include uranium mill tailings. Previously, tailings have been controlled through the licensing process for uranium mills. This amendment would subject tailings to specific licensing authority. (Section 209 requires that the milling and mill tailings licensing process be consolidated.)

Section 202 requires that all final disposal sites for uranium mill tailings be transferred, upon termination of licenses, to the Federal Government for permanent Federal custody. The President is required to designate an appropriate agency to act as custodian for the tailings. The designated custodian is authorized to accept donations of sites which have been used for licensed tailings disposal but which may not be required to be transferred by the Commission. This provision insures that no owner of disposal sites would be compelled to remain under perpetual Commission license as a result of possessing byproduct material. Title to all tailings sites is required to be transferred to the United States without cost.

Section 203 authorizes the Commission to require secure financial arrangements from licensees for mill tailings stabilization and, if necessary, for long-term care costs. Such financial arrangements may be in the form of bonds, sureties, fees or other collateral to insure that flexibility may be exercised in requirements to prevent unnecessary hardship for firms of differing size or financial background.

Subparagraph (1) requires the Commission to regulate uranium milling and mill tailings disposal in such a way that when licenses are terminated reclamation and stabilization has been implemented by the licensee in such way as to insure, to the maximum extent allowable by the state of technical art, that the disposal sites will not require any long-term maintenance and monitoring to protect the public and the environment.

Subparagraph (2) requires that, in any case where long-term maintenance and monitoring is determined to be necessary by the Commission, the appropriate licensee will pay such costs. The Commission is required to have obtained any such funds from the licensee prior to termination of the license.

Section 204 amends the Atomic Energy Act to provide for adherence by Agreement States to minimum Federal standards for uranium mill tailings control. Subsections (a) through (d) allow States to discontinue licensing of uranium milling and mill tailings control, while retaining authority to license other materials licensable under the Agreement States program. Under current law, States which did not want to regulate uranium milling would have to terminate their complete agreements with the Commission.

Subsection (e) requires that, following 3 years after enactment of the act, State licensing standards for uranium mill tailings and uranium milling must to the extent practicable be equivalent to, or exceed, those of the Commission. In addition, licenses issued by States must require that upon termination of such licenses mill tailings disposal sites will be transferred without cost to permanent Federal custody. State licensing procedures are required to include provisions for public participation and environmental review.

The subsection also provides for States to transfer fees they may collect for long-term care of uranium mill tailings disposal sites to the Federal Government when the sites become inactive. All uranium mill tailings disposal sites will be transferred for permanent custody under the act to the Federal Government, which will implement any necessary long-term care requirements.

States may impose and collect long-term care fees under their own authorities, when States license uranium milling and mill tailings disposal activities. Several States already collect long-term care fees from licensees. This subsection provides that collected maintenance fees will be transferred to the Federal Government along with the sites which will require the maintenance.

Subsection (f) reserves the right of the Commission to determine that mill tailings piles created under Agreement State licensing have met applicable requirements before they are turned over to Federal custody.

Subsection (g) requires the Commission to review the regulatory programs of each Agreement States, as soon as practicable 3 years after the date of enactment of the act, to determine whether the standards applied by the State are at least equivalent to those of the Commission. If the Commission determines that the State's program does not comply, it may suspend or terminate that part of its agreement with the State under which the State is permitted to license and regulate uranium milling and mill tailings activities. Regulatory authority would then revert to the Commission.

Section 205 authorizes the Commission to promulgate, implement and enforce regulations governing permanent Federal custody of uranium mill tailings disposal sites and governing the activities of the Department of Energy under title I of the act. In addition, the section insures that no regulatory gap will exist during the 3-year grace period when licenses are not required for the type of byproduct material, newly defined in title II.

Section 206 requires the Environmental Protection Agency to set general standards and criteria for the protection of the environment outside the boundaries of mill tailings disposal sites. The standards and criteria would be applicable to both radiological and nonradiological hazards in the piles. Authorities of the EPA under other laws would not be abridged by the new requirements.

Section 207 authorizes \$500,000 for grants to Agreement States to assist them in revision of current regulatory programs to implement provisions of the act.

Section 208 provides effective dates for the provisions of the act such that:

(1) No licenses would be required under the new definition of byproduct material until 3 years following enactment.

(2) Upgraded requirements under Agreement States licensing programs would be applied retroactively only to the extent practicable for a grade period following enactment of the act. For each licensee, such period would be for 3 years following enactment, or until the time at which the licensee's license would first be required to be renewed, whichever is the longer period for a specific licensee. In no case may such grace period be longer than 5 years following enactment of the act.

(3) Requirements for transfer of title to final disposal sites under either NRC or State licensing are applicable only to the extent practicable to licenses issued before the date of enactment of the act.

(4) Authority to require secure financial arrangements would take effect immediately.

The authority of Agreement States to continue licensing uranium milling and tailings disposal activities under their own authorities during the period preceding requirement of licenses for byproduct material as newly defined is made clear.

Section 209 requires the Commission to consolidate, to the extent practicable, licenses and licensing procedures for the uranium milling process and for uranium mill tailings control.

Section 210 prohibits the Commission from requiring licenses for any activities undertaken under title I of the act, except that any mineral recovery operations on abandoned mill tailings piles would be subject to licensing.

#### LEGISLATIVE HISTORY, HEARINGS AND COMMITTEE ACTION AND RECOMMENDATION

H.R. 13650 is an amalgam of four bills introduced during the 2d session of the 95th Congress. To facilitate consideration of the recommendations of the Subcommittee on Energy and the Environment, it was introduced as a clean bill.

The four initial proposals represented two basic purposes: three<sup>1</sup> proposed a remedy for hazards at inactive sites which resulted from the production of radioactive materials for the Atomic Energy Commission under Federal contract and the fourth<sup>2</sup> provided for improved regulation of uranium mill tailings at active uranium milling sites.

Hearings were held by the Subcommittee on Energy and the Environment on the problem at inactive sites on June 26 and 27, 1978. Testimony was presented on H.R. 13382 July 10 and 17.

Witnesses at these hearings agreed on the necessity for reducing or eliminating hazards presented by uranium mill tailings. Substantial disagreement arose regarding the appropriate share States and the Federal Government should pay of the costs of any remedial program

<sup>1</sup> H.R. 12535, introduced by Mr. Udall (for the administration), H.R. 12938, introduced by Mr. Marriott, and H.R. 13049, introduced by Mr. Johnson of Colorado.

<sup>2</sup> H.R. 13382 by Mr. Udall.

for tailings at inactive sites, with a significant number of witnesses and members, arguing that the remedial program costs should be completely assumed by the Federal Government.

On August 3, 5, and 9 of 1978, the committee reviewed the recommendations of the Subcommittee on Energy and the Environment with respect to H.R. 13650, and on August 9 by unanimous voice vote recommended that the bill be enacted, with an amendment.

#### OVERSIGHT STATEMENT

Since the legislation, if enacted, would affect laws governing the disposal of nuclear waste and the regulation of the domestic nuclear industry, the Committee on Interior and Insular Affairs, pursuant to rule X, clauses 2(b)(1) and 3(e), would have oversight responsibility over any action of the Secretary of Energy or the Nuclear Regulatory Commission to comply with the mandate of the legislation. No recommendations were submitted to the committee pursuant to rule X, clause (2)(b)(2).

#### COST ESTIMATE AND BUDGET ACT COMPLIANCE

In accordance with rule XIII, clause 7(a) of the House of Representatives, the committee has made an estimate of the budget authority which would be required to carry out H.R. 9203 for the fiscal year beginning on October 1, 1979.

Effective October 1, 1978, the bill authorizes \$180 million to be appropriated for the Department of Energy to carry out the remedial program under title I. This amount is in addition to \$3 million authorized by H.R. 11392 for the Department to carry out activities under title I during fiscal year 1979, which authorization is subject to enactment of this act.

Another \$500,000 is authorized for fiscal year 1980 for the Nuclear Regulatory Commission to make grants to States to aid them in implementing the requirements of title II.

No cost estimate from the Congressional Budget Office was timely submitted to the committee for inclusion in this report.

#### INFLATIONARY IMPACT

In accordance with rule XI, clause 2(1)(4) of the Rules of the House of Representatives, the committee has determined that this legislation will have no significant impact on prices or costs affecting the national economy.

#### DEPARTMENTAL REPORTS

The committee received reports from two administration agencies expressing concerns with certain aspects of H.R. 13650. On July 13, a communication from the Environmental Protection agency suggested amendments to what became title II of H.R. 13650. (The EPA letter expressed support for legislation in title I of the bill.) On August 3, 1978, the Department of Energy sent a letter expressing objections to three actions of the Subcommittee on Energy and the Environment with respect to title I of the bill. Both communications are printed below:

U.S. ENVIRONMENTAL PROTECTION AGENCY,  
*Washington, D.C., July 13, 1978.*

HON. MORRIS UDALL,  
*Chairman, subcommittee on Energy and the Environment,  
 Committee on Interior and Insular Affairs,  
 House of Representatives,  
 Washington, D.C.*

DEAR MR. CHAIRMAN: It has come to my attention that your subcommittee is planning to proceed on July 17 with marking up two bills dealing with the problem of uranium mill tailings. One of the bills, H.R. 12535, is the administration bill for remedial action for inactive uranium mill tailings sites. We have testified on this bill before Congressman Dingell's Subcommittee on Energy and Power, and we support it. The other bill is H.R. 13382, the Uranium Mill Tailings Licensing Act of 1978, which was introduced by you on June 29, 1978, and we have not had an opportunity to comment or testify on this bill before your Subcommittee prior to markup. Based on our review of the bill, we do have some substantive problems which could easily be solved by amending the bill as described below.

H.R. 13382 has several purposes:

1. to authorize the Commission to exercise direct licensing and regulation of the naturally occurring daughter products of uranium and thorium found in uranium mill tailings;
2. to reinforce the Commission's authority to require secure financial arrangements to insure the proper decommissioning, decontamination, reclamation, and long-term care if necessary, of radioactively contaminated sites, structures, and equipment;
3. to facilitate State ownership and authorize Federal ownership of mill tailings disposal areas; and
4. to authorize State regulation of uranium mill tailings under section 274 of the act and to require Agreement States to regulate uranium mill tailings within their jurisdiction to at least the same substantive standards required by the Commission for its licensees.

Our concerns deal mainly with the first point, which would be accomplished by including uranium mill tailings under the definition of "byproduct materials" under the Atomic Energy Act of 1954, as amended, thereby removing uranium mill tailings from the scope of the Resource Conservation and Recovery Act of 1976 (RCRA).

EPA is concerned about consistency between regulatory approaches to the uranium mill tailings problem. The NRC legislation is applicable only to uranium mill tailings, but other wastes, notably those from the phosphate industry, pose similar hazards due to quantity, configuration and radionuclide content and will be regulated under RCRA. Like uranium tailings, these wastes are generated in large quantities; they contain radium, the principal radionuclide of concern; they are dispersed throughout a nonradioactive medium in relatively low concentrations; and they create a health hazard to members of the public chronically exposed to such material. It would be duplicative and inconsistent to have different regulations for similar

wastes rendered hazardous by identical radioactive constituents. Complications may arise especially in connection with the regulation of disposal by the phosphate industry. For example, some phosphate mining wastes are being reprocessed to extract uranium.

EPA is also concerned about the nonradioactive hazardous characteristics of the waste. Under section 6001 of RCRA, all departments, agencies and instrumentalities of the Federal Government are subject to substantive and procedural RCRA requirements. If the uranium mill tailings also have toxic characteristics, their management should be compatible with RCRA provisions.

To address these concerns, several amendments should be made to the bill. First, it should specify that for the purposes of 40 CFR 190, the Uranium Fuel Cycle standards, and for all other purposes, the bill is not intended to affect EPA's generally applicable authority under the Atomic Energy Act, as amended, and Reorganization plan No. 3 of 1970, or any EPA authority under the Clean Air Act.

The bill should also require EPA to set environmental standards and criteria for management of uranium mill tailings and specify that the licensing by NRC under the amended Atomic Energy Act implement these standards and criteria. The bill should further provide that the license conditions required by NRC contain substantive requirements comparable to those of RCPA. The following language could incorporate these suggestions into the bill:

"The Environmental Protection Agency shall, after notice of proposed rulemaking and opportunity for oral presentation of views, data and arguments, prescribe standards and criteria to assure that public health and the environment are adequately protected in connection with the management of uranium mill tailings. The standards and criteria shall be applicable to hazardous radioactive and nonradioactive characteristics of the uranium mill tailings.

"In developing criteria and standards under this Act, EPA will avoid duplication of efforts and ensure consistency to the maximum extent practicable with the requirements of RCRA of 1976, the Clean Air Act of 1970, as amended, and any other Federal law relating to protection of the environment.

"NRC shall implement these standards and criteria in its licensing activities under the Atomic Energy Act of 1954, as amended. NRC shall also adopt and enforce requirements governing uranium mill tailings providing for the use by licensees of additional measures comparable to those required for hazardous materials under subtitle C of RCRA."

The approach this language takes to setting standards and criteria has the additional benefit of basic consistency with the approach taken in the administration's bill, H.R. 12535, dealing with remedial action at inactive sites.

I hope these comments will be helpful to the Subcommittee in its continued work on the uranium mill tailings problem.

Sincerely yours,

DOUGLAS M. COSTLE.

DEPARTMENT OF ENERGY,  
Washington, D.C., August 3, 1978.

HON. MORRIS K. UDALL,  
Chairman, Committee on Interior and Insular Affairs,  
Washington, D.C.

DEAR MR. CHAIRMAN: On July 20 and 27, 1978, the Subcommittee on Energy and Environment conducted a markup of the Residual Radioactive Materials Act of 1978 (the administration bill). During the markup the subcommittee agreed to the following changes in the administration bill with respect to which the Department of Energy (DOE) wishes to express its concern:

1. A 90-percent Federal/10-percent State share of the costs of the remedial action with an absolute ceiling on any State's cumulative share equal to one-quarter of 1 percent of the State's general revenue in the year of enactment;
2. A concurrence role, as opposed to a consultation role, for the States in the determination of the remedial action; and
3. Deletion of the subsections of the administration bill relating to the release of the United States from liability in connection with the performance of the remedial action.

#### COST SHARING FORMULA

For reasons made clear in the subcommittee record, DOE is opposed to the funding formula agreed to by the subcommittee. Of particular concern is the ceiling imposed on a State's contribution to the remedial action program. In practice, imposition of such a ceiling could create serious problems once the remedial action program is underway.

One of DOE's primary objectives with respect to this program is the accomplishment of the cleanup of the 22 specified sites within the estimated budget of between \$80 million and \$125 million. In order to achieve this goal it is imperative that the States have more than a minimal, preliminary financial involvement in the remedial program. Should changes in the program become necessary after its commencement, the States should have an ongoing concern with the relative costs associated with these changes. Additionally, the Secretary has been provided discretionary authority to designate within 5 years of enactment of the legislation additional sites for the purpose of remedial action. It is reasonable to expect that a significant amount of pressure will be exerted upon the Secretary by States and private parties to designate additional sites within this 5-year period. At a minimum additional sites, if designated, should be exempted from application of the ceiling in order to minimize such pressure.

#### STATE ROLE

Under the administration bill, the appropriate remedial action would be determined by the Secretary after consultation with the State; the State would then designate the disposal site or long-term stabilization of the tailings. In proposing this type of State role, it was DOE's intention to afford the States full participation at every level of the decisionmaking process. Therefore, the philosophy underlying the subcommittee's decision to provide concurrence authority to the

States is not dissimilar to DOE's objectives. We are concerned, however, as to how States could obtain authority to grant this concurrence under State law. Such authority, if required to be secured through new State legislation, could cause significant delays in the remedial action program and create unnecessary problems within the States. The language in the administration bill achieves the same objectives without creating such potential legislative hurdles.

#### RELEASE OF LIABILITY

The question of limiting the liability of the United States in connection with the performance of the remedial action is a sensitive and complex one, and warrants a more thorough study than is contained in the one paragraph summary in the issue paper presented to the subcommittee on July 20, 1978.

The language proposed by the administration effects only a limited release of liability dating from enactment of the legislation through the completion of the remedial action. Such a release would not affect the U.S. liability, if any, either prior to or after completion of the remedial action. Since the basis upon which the remedial action program is being undertaken is one of compassionate rather than legal responsibility, DOE considers the inclusion of a limited release of liability to be reasonable and proper.

While we recognize and understand the motivations which have prompted the subcommittee's actions with respect to the administration bill, the modifications adopted are contrary to DOE's objectives as expressed above. With respect to the three major issues of funding, State role, and liability, DOE is concerned that the subcommittee's changes could result in delays in implementation of and cost overruns for the remedial actions.

We appreciate the time and effort that the subcommittee has spent in marking up this legislation. My staff and I will be happy to provide any assistance the full committee may require during its markup.

Sincerely,

JOHN F. O'LEARY,  
*Deputy Secretary.*

#### CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in *italic*, existing law in which no change is proposed is shown in *roman*):

#### ATOMIC ENERGY ACT OF 1954

\* \* \* \* \*

#### CHAPTER S. BYPRODUCT MATERIAL

Sec. 81. Domestic Distribution.

Sec. 82. Foreign Distribution of Byproduct Material.

Sec. 83. *Ownership and custody of certain byproduct material and disposal sites.*

Sec. 84. *Authorities of Commission respecting certain byproduct material.*

\* \* \* \* \*



## CHAPTER 19. MISCELLANEOUS

- Sec. 241. Transfer of Property.  
 Sec. 251. Report to Congress.  
 Sec. 261. Appropriations.  
 Sec. 271. Agency Jurisdiction.  
 Sec. 272. Applicability of Federal Power Act.  
 Sec. 273. Licensing of Government Agencies.  
 Sec. 274. Cooperation with States.  
 Sec. 275. *Authority of the Environmental Protection Agency.*  
 Sec. 281. Separability.  
 Sec. 291. Short Title.

\* \* \* \* \*

## CHAPTER 2. DEFINITIONS

SEC. 11. DEFINITIONS.—The intent of Congress in the definitions as given in this section should be construed from the words or phrases used in the definitions. As used in this Act:

a. The term “agency of the United States” means the executive branch of the United States, or any Government agency, or the legislative branch of the United States, or any agency, committee, commission, office, or other establishment in the legislative branch, or the judicial branch of the United States, or any office, agency, committee, commission, or other establishment in the judicial branch.

b. The term “agreement for cooperation” means any agreement with another nation or regional defense organization authorized or permitted by sections 54, 57, 64, 82, 91c., 103, 104, or 144, and made pursuant to section 123.

c. The term “atomic energy” means all forms of energy released in the course of nuclear fission or nuclear transformation.

d. The term “atomic weapon” means any device utilizing atomic energy, exclusive of the means for transporting or propelling the device (where such means is a separable and divisible part of the device), the principal purpose of which is for use as, or for development of, a weapon, a weapon prototype, or a weapon test device.

e. The term “byproduct material” means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material[.], and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

## CHAPTER 8. BYPRODUCT MATERIAL

\* \* \* \* \*

SEC. 83. OWNERSHIP AND CUSTODY OF CERTAIN BYPRODUCT MATERIAL AND DISPOSAL SITES.—

a. Any license under section 62 or section 81 for any activity which results in the production of any byproduct material as defined in section 11 e. (2) shall contain such terms and conditions as may be necessary to assure that, prior to termination of such license—

- (1) the license will comply with such requirements as the Commission may establish respecting such termination, and
- (2) ownership of—

(A) any byproduct material defined in section 11 e. (2) which resulted from such licensed activity, and

(B) any land (other than land owned by the United States), including both the surface and subsurface estates, which is used for the disposal of such byproduct material.

shall be transferred to the United States.

Such material and land shall be transferred to the United States without cost to the United States (other than administrative and legal costs incurred in carrying out such transfer). The United States shall not transfer title to property acquired under this subsection to any other person.

b. (1) As soon as practicable after the date of the enactment of this section, the President shall designate the Secretary of Energy or any other appropriate officer or instrumentality of the United States (other than the Commission) to have custody of byproduct material and land transferred to the United States under subsection a. (2). No officer or instrumentality may be designated under the preceding sentence unless such officer or instrumentality has adequate authority to provide for the safe treatment, management, storage, and disposal of such byproduct material and to provide for the sound management of such plan, consistent with the requirements of subsection d.

(2) The officer or instrumentality designated under this subsection may accept donations of any byproduct material and land described in subsection a. (2) which is not required to be transferred to such officer or instrumentality (by reason of the effective date of this section or for any other reason). Such material and land may be accepted under this paragraph upon a determination by such officer or instrumentality that such acceptance is necessary or desirable in order to protect the public health, safety, and the environment.

c. Upon termination of any license to which this section applies, the Commission shall determine whether or not the licensee has complied with all applicable standards and requirements under such license.

d. Following the Commission's determination of compliance under subsection c., the officer or instrumentality designated by the President under subsection b. shall assume custody of the byproduct material and land referred to in subsection a. Such officer or instrumentality shall maintain such material and land in such manner as will protect the public health and safety and the environment. Such custody may be transferred to another officer or instrumentality of the United States only upon approval of the President upon his determination that such officer or instrumentality meets the requirements of subsection b.

Sec. 84. AUTHORITIES OF COMMISSION RESPECTING CERTAIN BY-PRODUCT MATERIAL.—

a. The Commission shall insure that the management of any byproduct material as defined in section 11 e. (2) is carried out in such manner as—

(1) the Commission deems appropriate to protect the public health and safety and the environment, and

(2) conforms with applicable standards and criteria promulgated by the Administrator of the Environmental Protection Agency under section 275.

b. In carrying out its authority under this section, the Commission is authorized to:

(1) by rule, regulation, or order require persons, officers, or instrumentalities exempted from licensing—

(A) under section 208(b) or 210 of the Uranium Mill Tailings Control Act of 1978, or

(B) under section 81 of this Act to conduct monitoring, perform remedial work, and to comply with such other measures as it may deem necessary or desirable to protect the public health and safety and the environment, and

(2) make such studies and inspections and to conduct such monitoring as may be necessary.

Any violation by any person other than the United States of any rule or order of the Commission established under this section shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 234. Nothing in this section affects any authority of the Commission under any other provision of this Act.

#### CHAPTER 14. GENERAL AUTHORITY

SEC. 161. GENERAL PROVISIONS.—In the performance of its functions the Commission is authorized to—

a. \* \* \*

\* \* \* \* \*

x. Establish by rule, regulation, or order (in accordance with the provisions of the Administrative Procedure Act as required under section 181) such standards and instructions as the Commission may deem necessary or desirable to insure, before termination of any license for byproduct material as defined in section 11 e. (2) and before the transfer under section 83 of land used for the disposal of such material, that the licensee will make available such bonding or other financial arrangements as may be required to assure the reclamation of sites, structures and equipment used in conjunction with such byproduct material and that—

(1) in the case of any such license issued or renewed after the date of the enactment of this subsection, to the maximum extent practicable, no long-term maintenance and monitoring of such sites, structures, and equipment will be required; and

(2) in the case of each license for such material (including any license referred to in paragraph (1) and any license in effect on the date of the enactment of this subsection), if the Commission determines that any such long-term maintenance and monitoring is necessary, the licensee will make available such bonding or other financial arrangements as may be required to assure such long-term maintenance and monitoring.

\* \* \* \* \*

#### CHAPTER 19 MISCELLANEOUS

\* \* \* \* \*

SEC. 274. COOPERATION WITH STATES.—

a. It is the purpose of this section—

(1) to recognize the interests of the States in the peaceful uses of atomic energy, and to clarify the respective responsibilities under this Act of the States and the Commission with respect to the regulation of byproduct, source, and special nuclear materials;

(2) to recognize the need, and establish programs for, cooperation between the States and the Commission with respect to control of radiation hazards associated with use of such materials;

(3) to promote an orderly regulatory pattern between the Commission and State governments with respect to nuclear development and use and regulation of byproduct, source, and special nuclear materials;

(4) to establish procedures and criteria for discontinuance of certain of the Commissions's regulatory responsibilities with respect to byproduct, source, and special nuclear materials, and the assumption thereof by the States;

(5) to provide for coordination of the development of radiation standards for the guidance of Federal agencies and cooperation with the States; and

(6) to recognize that, as the States improve their capabilities to regulate effectively such materials, additional legislation may be desirable.

b. Except as provided in subsection c., the Commission is authorized to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority of the Commission under chapters 6, 7, and 8, and section 161 of this Act, with respect to any one or more of the following materials within the State—

(1) byproduct materials as defined in section 11e.(1);

(2) *byproduct materials as defined in section 11e.(2)*;

~~[(2)]~~ (3) source materials;

~~[(3)]~~ (4) special nuclear materials in quantities not sufficient to form a critical mass.

During the duration of such an agreement it is recognized that the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards.

c. No agreement entered into pursuant to subsection b. shall provide for discontinuance of any authority and the Commission shall retain authority and responsibility with respect to regulation of—

(1) the construction and operation of any production or utilization facility;

(2) the export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility;

(3) the disposal into the ocean or sea of byproduct, source, or special nuclear waste materials as defined in regulations or orders of the Commission;

(4) the disposal of such other byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.

*The Commission shall also retain authority under any such agreement to make a determination that all applicable standards and requirements have been met prior to termination of a license for byproduct material as defined in section 11 e. (2). Notwithstanding any agreement between the Commission and any State pursuant to subsection b., the Commission is authorized by rule, regulation, or order to require that the manufacturer, processor, or producer or any equipment, device, commodity, or other product containing source, byproduct, or special*

nuclear material shall not transfer possession or control of such product except pursuant to a license issued by the Commission.

d. The Commission shall enter into an agreement under subsection b. of this section with any State if—

(1) The Governor of that State certifies that the State has a program for the control of radiation hazards adequate to protect the public health and safety with respect to the materials within the State covered by the proposed agreement, and that the State desires to assume regulatory responsibility for such materials; and

(2) the Commission finds that the State program is *in accordance with the requirements of subsection o. and in all other respects compatible with the Commission's program for the regulation of such materials*, and that the State program is adequate to protect the public health and safety with respect to the materials covered by the proposed agreement.

\* \* \* \* \*

j. The Commission, upon its own initiative after reasonable notice and opportunity for hearing to the State with which an agreement under subsection b, has become effective, or upon request of the Governor of such State, may (1) terminate or suspend its agreement with the State and reassert the licensing and regulatory authority vested in it under this Act, if the Commission finds that such termination or suspension is required to protect the public health and safety and (2), *terminate or suspend that part of its agreement with the State relating to State licensing and regulation of any activity which results in the production of byproduct material as defined by section 11e.(2), and reassert the licensing and regulatory authority vested in it under this Act over such activities, if the Commission finds that such termination or suspension is required to assure compliance with subsection o.*

\* \* \* \* \*

n. As used in this section, the term "State" means any State, Territory, or possession of the United States, the Canal Zone, Puerto Rico, and the District of Columbia. *As used in this section, the term agreement includes any amendment to any agreement.*

o. *In the licensing and regulation of any activity which results in the production of byproduct material as defined in section 11e.(2) under an agreement entered into pursuant to subsection b., a State shall require compliance with the requirements of section 83 a. (2) (respecting ownership by the United States of byproduct material and land), and the State shall adopt and enforce—*

(1) *substantive standards for the protection of the public health, safety, and the environment from hazards associated with such material which are equivalent, to the extent practicable, or more stringent than, standards adopted and enforced by the Commission for the same purpose, and*

(2) *procedures which—*

(A) *in the case of licenses, provide for advance public notice, an opportunity for a public hearing with rights to present direct and rebuttal evidence and conduct cross-examination, and a written decision which is based only on evidence in the record and which is subject to judicial review,*

(B) in the case of rulemaking, provide opportunity for public participation in the form of written comments or a public hearing and which provide for judicial review of the rulemaking decision,

(C) require the preparation of a written independent-environmental analysis or review which is available to the public before the commencement of any such proceedings, and

(D) prohibit, in the case of any construction activity which is proposed with respect to such material, any major activity from being undertaken before completion and public availability of the analysis or review referred to in subparagraph (C).

No State shall be required under paragraph (2) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted in such State by the Commission. —

p. If any State, under an agreement for the licensing and regulation of byproduct material as defined in section 11 e. (2), imposes upon the licensee any requirement for the payment of funds which are collected by the State for the reclamation or longterm maintenance and monitoring of such byproduct material, such State shall transfer to the United States, upon termination of the license in connection with which such payment was made, any amounts collected by the State for such purposes. Any such agreement in effect on the date of the enactment of this subsection shall be amended as promptly as practicable following such date to comply with the requirements of the proceeding sentence with respect to amounts collected before, on, and after such date of enactment.

SEC. 275. AUTHORITY OF THE ENVIRONMENTAL PROTECTION AGENCY.—

a. The Administrator of the Environmental Protection Agency (hereinafter in this section referred to as to the "Administrator") shall, by rule, promulgate, and from time to time revise, generally applicable standards and criteria for the protection of the general environment outside the boundaries of—

(1) sites at which ores are processed primarily for their source material content, and

(2) sites used for the disposal of byproduct material as defined in section 11 e. (12).

Such criteria shall apply to radiological and nonradiological environmental hazards associated with the processing, and with the possession and transfer, of by product material as defined in section 11 e. (2), and shall be consistent to the maximum extent practicable with the requirements of the Solid Waste Disposal Act.

b. Before the promulgation of any rule pursuant to subsection a., the Administrator shall—

(1) consult with the Commission; and

(2) provide adequate notice of any rulemaking proceeding and provide opportunity for public hearing.

c. Any interested person may obtain judicial review of any rule promulgated under subsection a. of this section in the United States court of appeals for the Federal judicial circuit in which such person resides or transacts business only upon petition for review by such person filed

*within ninety days from the date of such promulgation, or after such date only if such petition is based solely on grounds which arose after such ninetieth day.*

*d. Nothing in this section shall be construed to limit or enlarge the functions of the Administrator of the Environmental Protection Agency under the Federal Water Pollution Control Act or under the Clean Air Act.*

\* \* \* \* \*



URANIUM MILL TAILINGS RADIATION CONTROL ACT  
OF 1978

SEPTEMBER 30, 1978.—Committed to the Committee of the Whole House on the  
State of the Union and ordered to be printed

Mr. STAGGERS, from the Committee on Interstate and Foreign  
Commerce, submitted the following

**REPORT**

together with

**SUPPLEMENTAL VIEWS**

[To accompany H.R. 13650 which, on July 28, 1978, was referred jointly to the  
Committee on Interior and Insular Affairs and the Committee on Interstate  
and Foreign Commerce]

The Committee on Interstate and Foreign Commerce, to whom was  
referred the bill (H.R. 13650) to authorize the Secretary of Energy  
to enter into cooperative agreements with certain States respecting  
residual radioactive material at existing sites, to provide for the regu-  
lation of uranium mill tailings under the Atomic Energy Act of 1954,  
and for other purposes, having considered the same, report favorably  
thereon with an amendment and recommend that the bill as amended  
do pass.

The amendment is as follows:

**SHORT TITLE AND TABLE OF CONTENTS**

SECTION 1. This Act may be cited as the "Uranium Mill  
Tailings Radiation Control Act of 1978".

**TABLE OF CONTENTS**

- Sec. 1. Short title and table of contents.
- Sec. 2. Findings and purposes.



### TITLE I—REMEDIAL ACTION PROGRAM

- Sec. 101. Definitions.
- Sec. 102. Designation of processing sites.
- Sec. 103. State cooperative agreements.
- Sec. 104. Acquisition and disposition of land and materials.
- Sec. 105. Indian tribe cooperative agreements.
- Sec. 106. Acquisition of lands by Secretary.
- Sec. 107. Financial assistance.
- Sec. 108. Remedial action.
- Sec. 109. Rules.
- Sec. 110. Enforcement.
- Sec. 111. Public participation.
- Sec. 112. Termination; authorization.
- Sec. 113. Limitation.
- Sec. 114. Reports to Congress.
- Sec. 115. Active operations; liability for remedial action.

### TITLE II—URANIUM MILL TAILINGS LICENSING AND REGULATION

- Sec. 201. Definition.
- Sec. 202. Custody of disposal site.
- Sec. 203. Authority to establish certain requirements.
- Sec. 204. Cooperation with States.
- Sec. 205. Authorities of Commission respecting certain byproduct material.
- Sec. 206. Authority of Environmental Protection Agency respecting certain byproduct material.
- Sec. 207. Authorization of appropriations for grants.
- Sec. 208. Effective date.
- Sec. 209. Consolidation of licenses and procedures.

### TITLE III—STUDY AND DESIGNATION OF TWO MILL TAILINGS SITES IN NEW MEXICO

- Sec. 301. Study.
- Sec. 302. Designation by Secretary.

### FINDINGS AND PURPOSES

#### SEC. 2. (a) The Congress finds that—

(1) uranium mill tailings located at active and inactive mill operations may pose a potential and significant radiation health hazard to the public, and that the protection of the public health, safety, and welfare and the regulation of interstate commerce require that every reasonable effort be made to provide for the stabilization, disposal, and control in a safe and environmentally sound manner of such tailings in order to prevent or minimize radon diffusion into the environment and to prevent or minimize other environmental hazards from such tailings.

(2) uranium mill tailings at certain inactive sites resulted in whole or in part from the production of uranium for sale under contract to the United States during a period when the potential radiation health hazard to the public was apparently not adequately recognized, although environmental hazards to water and air from such tailings were recognized by several Federal agencies and the States as early as 1960;

(3) all milling operations at such sites have terminated prior to 1973;

(4) in 1972 Congress authorized some remedial action for property and structures in Grand Junction, Colorado, found to be contaminated by such tailings; and

(5) it is in the public interest to provide financial assistance to the States and Indian tribes to undertake remedial actions concerning such inactive sites in order to eliminate or minimize such hazard.

(b) The purposes of this Act are to provide—

(1) in cooperation with the interest States, Indian tribes, and the persons who own or control inactive mill tailings sites, a program of assessment and remedial action at such sites, including, where appropriate, the reprocessing of tailings to extract residual uranium and other mineral values where practicable, in order to stabilize and control such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public, and

(2) a program to regulate mill tailings during uranium or thorium ore processing at active mill operations and after termination of such operations in order to stabilize and control such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public.

## TITLE I—REMEDIAL ACTION PROGRAM

### DEFINITIONS

Sec. 101. For purpose of this title—

(1) The term "Secretary" means the Secretary of Energy.

(2) The term "Commission" means the Nuclear Regulatory Commission.

(3) The term "Administrator" means the Administrator of the Environmental Protection Agency.

(4) The term "Indian tribe" means any tribe, band, clan, group, pueblo, or community of Indians recognized as eligible for services provided by the Secretary of the Interior to Indians.

(5) The term "person" means any individual, association, partnership, corporation, firm, joint venture, trust, government entity, and any other entity, except that such term does not include any Indian or Indian tribe.

(6) The term "processing site" means—

(A) any site, including the mill, containing residual radioactive materials at which all or substantially all of the uranium was produced for sale to any Federal agency prior to January 1, 1971 under a contract with any Federal agency, unless—

(i) such site was owned or controlled as of January 1, 1978, or is thereafter owned or controlled, by any Federal agency, or

(ii) a license (issued by the Commission or its predecessor agency under the Atomic

Energy Act of 1954 or by a State as permitted under section 274 of such Act) for the production at such site of any uranium or thorium product derived from ores is in effect on January 1, 1978, or is issued or renewed after such date; and

(B) any other real property or improvement thereon which—

- (i) is in the vicinity of such site, and
- (ii) is determined by the Secretary, in consultation with the Commission, to be contaminated with residual radioactive materials derived from such site.

Any ownership or control of an area by a Federal agency which is acquired pursuant to a cooperative agreement under this title shall not be treated as ownership or control by such agency for purposes of subparagraph (A)(i). A license for the production of any uranium product from residual radioactive materials shall not be treated as a license for production from ores within the meaning of subparagraph (A)(ii) if such production is in accordance with section 108(b).

(7) The term "residual radioactive material" means—

- (A) waste (which the Secretary determines to be radioactive) in the form of tailings resulting from the processing of ores for the extraction of uranium and other valuable constituents of the ores; and
- (B) other waste (which the Secretary determines to be radioactive) at a processing site which relate to such processing, including any residual stock of unprocessed ores or low-grade materials.

(8) The term "tailings" means the remaining portion of a metal-bearing ore after some or all of such metal, such as uranium, has been extracted.

(9) The term "Federal agency" includes any executive agency as defined in section 105 of title 5 of the United States Code.

(10) The term "United States" means the 48 contiguous States and Alaska, Hawaii, Puerto Rico, the District of Columbia, and the territories and possessions of the United States.

#### DESIGNATION OF PROCESSING SITES

SEC. 102.(a)(1) Within one year after enactment of this Act, the Secretary shall designate all processing sites within the United States which he determines require remedial action to carry out the purposes of this Act. In making each such designation, the Secretary shall consult with the Administrator, the Commission, and the affected States, and in the case of Indian lands, the appropriate Indian tribe and the Secretary of the Interior.

(2) As part of his designation under this subsection, the Secretary, in consultation with the Commission, shall determine the boundaries of each such site.

(3) No site or structure with respect to which remedial action is authorized under Public Law 92-314 in Grand Junction, Colorado, may be designated by the Secretary as a processing site under this section.

(b) Within one year from the date of the enactment of this Act, the Secretary shall assess the potential health hazard to the public from the residual radioactive materials at designated processing sites. Based upon such assessment, the Secretary shall, within such one year period, establish priorities for carrying out remedial action at each such site. In establishing such priorities, the Secretary shall rely primarily on the advice of the Administrator.

(c) Within thirty days after making designations of processing sites and establishing the priorities for such sites under this section, the Secretary shall notify the Governor of each affected State, and, where appropriate, the Indian tribes and the Secretary of the Interior.

(d) The designations made, and priorities established, by the Secretary under this section shall be final and not be subject to judicial review.

(e)(1) The designation of processing sites within one year after enactment under this section shall include, to the maximum extent practicable, the areas referred to in section 101(6)(B).

(2) Notwithstanding the one year limitation contained in this section, the Secretary may, after such one year period, include any area described in section 101(6)(B) as part of a processing site designated under this section if he determines such inclusion to be appropriate to carry out the purposes of this title.

#### STATE COOPERATIVE AGREEMENTS

SEC. 103. (a) After notifying a State of the designation referred to in section 102 of this title, the Secretary, subject to section 113, is authorized to enter into cooperative agreements with such State to perform remedial actions at each designated processing site in such State (other than a site located on Indian lands referred to in section 105). The Secretary shall, to the greatest extent practicable, enter into such agreements and carry out such remedial actions in accordance with the priorities established by him under section 102.

(b) Each cooperative agreement under this section shall contain such terms and conditions as the Secretary deems appropriate and consistent with the purposes of this Act.

(c)(1) Except where the State is required to acquire the processing site as provided in subsection (a) of section 104, each cooperative agreement with a State under section 103 shall provide that the State shall obtain, in a form prescribed by the Secretary, written consent from any person holding any record interest in the designated processing site for the Secretary or any person designated by him to perform remedial action at such site.

(2) Such written consent shall include a waiver by each such person on behalf of himself, his heirs, successors, and assigns—

(A) releasing the United States of any liability or claim thereof by such person, his heirs, successors, and assigns concerning such remedial action, and

(B) holding the United States harmless against any claim by such person on behalf of himself, his heirs, successors, or assigns arising out of the performance of any such remedial action.

(d) Each cooperative agreement under this section shall require the State to assure that the Secretary, the Commission, and the Administrator and their authorized representatives have a permanent right of entry at any time to inspect the processing site and the site provided pursuant to section 104(b)(1) in furtherance of the provisions of this title and to carry out such agreement and enforce this Act and any rules prescribed under this Act. Such right of entry under this section or section 106 into an area described in section 101(6)(B) shall terminate on completion of the remedial action, as determined by the Secretary.

(e) Each agreement under this section shall take effect only upon the concurrence of the Commission with the terms and conditions thereof.

(f) The Secretary may, in any cooperative agreement entered into under this section or section 105, provide for reimbursement of the actual costs, as determined by the Secretary, of any remedial action performed with respect to so much of a designated processing site as is described in section 101(6)(B). Such reimbursement shall be made only to a property owner of record at the time such remedial action was undertaken and only with respect to costs incurred by such property owner. No such reimbursement may be made unless—

(1) such remedial action was completed prior to enactment of this Act, and unless the application for such reimbursement was filed by such owner within one year after an agreement under this section or section 105 is approved by the Secretary and the Commission, and

(2) the Secretary is satisfied that such action adequately achieves the purposes of this Act with respect to the site concerned and is consistent with the standards established by the Administrator pursuant to section 275(a)(1) of the Atomic Energy Act of 1954.

#### ACQUISITION AND DISPOSITION OF LANDS AND MATERIALS

SEC. 104. (a) Each cooperative agreement under section 103 shall require the State, where determined appropriate by the Secretary with the concurrence of the Commission, to acquire any designated processing site, including where appropriate any interest therein.

(b)(1) If the Secretary with the concurrence of the Commission determines that removal of residual radioactive material from a processing site is appropriate, the coopera-

tive agreement shall provide that the State shall acquire land (including, where appropriate, any interest therein) to be used as a site for the permanent disposition and stabilization of such residual radioactive materials in a safe and environmentally sound manner.

(2) Acquisition by the State shall not be required under this subsection if a site located on land controlled by the Secretary or made available by the Secretary of the Interior pursuant to section 106(a)(2) is designated by the Secretary with the concurrence of the Commission, for such disposition and stabilization.

(c) No State shall be required under subsection (a) or (b) to acquire any real property or improvement outside the boundaries of—

(1) that portion of the processing site which is described in section 101(6)(A), and

(2) the site used for disposition of the residual radioactive materials.

(d) In the case of each processing site designated under this title other than a site designated on Indian land, the State shall take such action as may be necessary, and pursuant to regulations of the Secretary under this subsection, to assure that any person who purchases such a processing site after the removal of radioactive materials from such site shall be notified in an appropriate manner prior to such purchase, of the nature and extent of residual radioactive materials removed from the site, including notice of the date when such action took place, and the condition of such site after such action. If the State is the owner of such site, the State shall so notify any prospective purchaser before entering into a contract, option, or other arrangement to sell or otherwise dispose of such site. The Secretary shall issue appropriate rules and regulations to require notice in the local land records of the residual radioactive materials which were located at any processing site and notice of the nature and extent of residual radioactive materials removed from the site, including notice of the date when such action took place.

(e)(1) The terms and conditions of any cooperative agreement with a State under section 103 shall provide that in the case of any lands or interests therein acquired by the State pursuant to subsection (a), the State with the concurrence of the Secretary and the Commission, may—

(A) sell such lands and interests,

(B) permanently retain such land and interests in lands (or donate such lands and interests therein to another governmental entity within such State) for permanent use by such State or entity solely for park, recreational, or other public purposes, or

(C) transfer such lands and interests to the United States as provided in subsection (f).

No lands may be sold under subparagraph (A) without the consent of the Secretary and the Commission. No site may be sold under subparagraph (A) or retained under subparagraph (B) if such site is used for the disposition of residual radioactive materials.

(2) Before offering for sale any lands and interests therein which comprise a processing site, the State shall offer to sell such lands and interests at their fair market value to the person from whom the State acquired them.

(f)(1) Each agreement under section 103 shall provide that title to—

(A) the residual radioactive materials subject to the agreement, and

(B) any lands and interests therein which have been acquired by the State, under subsection (a) or (b), for the disposition of such materials,

shall be transferred by the State to the Secretary when the Secretary (with the concurrence of the Commission) determines that remedial action is completed in accordance with the requirements imposed pursuant to this title. No payment shall be made in connection with the transfer of such property from funds appropriated for purposes of this act other than payments for any administrative and legal costs incurred in carrying out such transfer.

(2) Custody of any property transferred to the United States under this subsection shall be assumed by the Secretary or such Federal agency as the President may designate. Notwithstanding any other provision of law, such property and minerals shall be maintained pursuant to a license issued by the Commission in such manner as will protect the public health, safety, and the environment. The United States shall not transfer title to property or interest therein acquired under this subsection to any person or State, except as provided in subsection (h).

(g) Each agreement under section 103 which permits any sale described in subsection (e)(1)(A) shall provide for the prompt reimbursement to the Secretary from the proceeds of such sale. Such reimbursement shall be in an amount equal to the lesser of—

(1) that portion of the fair market value of the lands or interests therein which bears the same ratio to such fair market value as the Federal share of the costs of acquisition by the State to such lands or interest therein bears to the total cost of such acquisition, or

(2) the total amount paid by the Secretary with respect to such acquisition.

The fair market value of such lands or interest shall be determined by the Secretary as of the date of the sale by the State. Any amounts received by the Secretary under this title shall be deposited in the Treasury of the United States as miscellaneous receipts.

(h) No provision of any agreement under section 103 shall prohibit the United States from disposing of any subsurface mineral rights by sale or lease (in accordance with laws of the United States applicable to the sale, lease, or other disposal of such rights) which are associated with land on which residual radioactive materials are disposed and which are transferred to the United States as required under this section if the

Secretary takes such action as the Commission deems necessary pursuant to a license issued by the Commission to assure that the residual radioactive materials will not be disturbed by reason of any activity carried on following such disposition. If any such materials are disturbed by any such activity, the Secretary shall insure, prior to disposition of the minerals, that such materials will be restored to a safe and environmentally sound condition as determined by the Commission, and that the costs of such restoration will be borne by the person acquiring such rights from the Secretary or from his successor or assign.

#### INDIAN TRIBE COOPERATIVE AGREEMENTS

SEC. 105. (a) After notifying the Indian tribe of the designation pursuant to section 102 of this title, the Secretary, in consultation with the Secretary of the Interior, is authorized to enter into a cooperative agreement, subject to section 113, with any Indian tribe to perform remedial action at a designated processing site located on land of such Indian tribe. The Secretary shall, to the greatest extent practicable, enter into such agreements and carry out such remedial actions in accordance with the priorities established by him under section 102. Each such agreement, shall contain such terms and conditions as the Secretary deems appropriate and consistent with the purposes of this Act. Such terms and conditions shall require the following:

(1) The Indian tribe and any person holding any interest in such land shall execute a waiver (A) releasing the United States of any liability or claim thereof by such tribe or person concerning such remedial action and (B) holding the United States harmless against any claim arising out of the performance of any such remedial action.

(2) The remedial action shall be selected and performed in accordance with section 108 by the Secretary or such person as he may designate.

(3) The Secretary, the Commission, and the Administrator and their authorized representatives shall have a permanent right of entry at any time to inspect such processing site in furtherance of the provisions of this title, to carry out such agreement, and to enforce any rules prescribed under this Act.

Each agreement under this section shall take effect only upon concurrence of the Commission with the terms and conditions thereof.

(b) When the Secretary with the concurrence of the Commission determines removal of residual radioactive materials from a processing site on lands described in subsection (a) to be appropriate, he shall provide, consistent with other applicable provisions of law, a site or sites for the permanent disposition and stabilization in a safe and environmentally sound manner of such residual radioactive materials. Such materials shall be transferred to the Secretary (without pay-



ment therefor by the Secretary) and permanently retained and maintained by the Secretary under the conditions established in a license issued by the Commission, subject to section 104(f)(2) and (h).

#### ACQUISITION OF LAND BY SECRETARY

SEC. 106. (a) Where necessary or appropriate in order to consolidate in a safe and environmentally sound manner the location of residual radioactive materials which are removed from processing sites under cooperative agreements under this title, or where otherwise necessary for the permanent disposition and stabilization of such materials in such manner—

(1) the Secretary may acquire land and interests in land for such purposes by purchase, donation, or exchange, or under any other authority of law or

(2) the Secretary of the Interior may make available public lands administered by him for such purposes in accordance with other applicable provisions of law. Prior to acquisition of land under paragraph (1) or (2) of this subsection in any State, the Secretary shall consult with the Governor of such State. No lands may be acquired under such paragraph (1) or (2) in any State in which there is no (1) processing site designated under this title or (2) active uranium mill operation, unless the Secretary has obtained the consent of the Governor of such State. No lands controlled by any Federal agency may be transferred to the Secretary to carry out the purposes of this Act without the concurrence of the chief administrative officer of such agency.

(b) The value of any lands exchanged by the Secretary under this section shall be equal or if they are not equal, the values shall be equalized by the payment of money to the grantor or to the Secretary concerned as the circumstances require so long as payment does not exceed 25 per centum of the total value of the lands or interests transferred out of Federal ownership. The Secretary shall try to reduce the amount of the payment of money to as small an amount as possible.

#### FINANCIAL ASSISTANCE

SEC. 107. (a) In the case of any designated processing site for which an agreement is executed with any State for remedial action at such site, the Secretary shall pay not to exceed 90 per centum of the actual cost of such remedial action, including the actual costs of acquiring such site (and any interest therein) or any disposition site (and any interest therein) pursuant to section 103 of this title, and the State shall pay the remainder of such costs from non-Federal funds. The Secretary shall not pay the administrative costs incurred by any State to develop, prepare, and carry out any cooperative agreement executed with such State under this title, except the proportionate share of the administrative costs

associated with the acquisition of lands and interests therein acquired by the State pursuant to this title.

(b) In the case of any designated processing site located on Indian lands, the Secretary shall pay the entire cost of such remedial action.

#### REMEDIAL ACTION

SEC. 108. (a)(1) The Secretary or such person as he may designate shall select and perform remedial actions at designated processing sites and disposal sites in accordance with the general standards prescribed by the Administrator pursuant to section 275 a. (1) of the Atomic Energy Act of 1954. Since the State must share in the costs of such remedial action, the State shall participate fully in the selection and performance thereof. Such remedial action shall be selected and performed with the concurrence of the Commission and in consultation, as appropriate, with the Indian tribe and the Secretary of the Interior.

(2) The Secretary shall use such technology in performing such remedial action as will insure compliance with the general standards promulgated by the Administrator under section 275 a. (1) of the Atomic Energy Act of 1954 and will insure the safe and environmentally sound stabilization of residual radioactive materials. No such remedial action may be undertaken under this section before the promulgation of such standards.

(b) Prior to undertaking any remedial action under this title, the Secretary shall evaluate the mineral concentration of the residual radioactive materials at each designated processing site to determine whether, as a part of any remedial action program, recovery of such minerals is practicable. The Secretary, with the concurrence of the Commission, may permit the recovery of such minerals, under such terms and conditions as he may prescribe to carry out the purposes of this Act. Any person permitted by the Secretary to recover such mineral shall pay to the Secretary a share of the net profits derived from such recovery, as determined by the Secretary. Such share shall not exceed the total amount paid by the Secretary for carrying out remedial action at such designated site. After payment of such share to the United States under this subsection, such person shall pay to the State in which the residual radioactive materials are located a share of the net profits derived from such recovery, as determined by the Secretary. Such share shall not exceed the total amount paid by the State for carrying out remedial action at such designated site. The person recovering such minerals shall bear all the costs of such recovery. Any person carrying out mineral recovery activities under this paragraph shall be required to obtain any necessary license under the Atomic Energy Act of 1954 or under State law as permitted under section 274 of such Act.

## RULES

SEC. 109. The Secretary may prescribe such rules consistent with the purposes of this Act as he deems appropriate pursuant to title V of the Department of Energy Organization Act.

## ENFORCEMENT

SEC. 110. (a)(1) Any person who violates any provision of this or any cooperative agreement entered into pursuant to this title or any rule prescribed under this Act concerning any designated processing site, disposition site, or remedial action shall be subject to an assessment by the Secretary of a civil penalty of not more than \$1,000 per day per violation. Such assessment shall be made by order after notice and an opportunity for a public hearing, pursuant to section 554 of title 5, United States Code.

(2) Any person against whom a penalty is assessed under this section may, within sixty calendar days after the date of the order of the Secretary assessing such penalty, institute an action in the United States court of appeals for the appropriate judicial circuit for judicial review of such order in accordance with chapter 7 of title 5, United States Code. The court shall have jurisdiction to enter a judgment affirming, modifying, or setting aside in whole or in part, the order of the Secretary, or the court may remand the proceeding to the Secretary for such further action as the court may direct.

(3) If any person fails to pay an assessment of a civil penalty after it has become a final and unappealable order, the Secretary shall institute an action to recover the amount of such penalty in any appropriate district court of the United States. In such action, the validity and appropriateness of such final assessment order or judgment shall not be subject to review. Section 402(d) of the Department of Energy Organization Act shall not apply with respect to the functions of the Secretary under this section.

(4) No civil penalty may be assessed against the United States or any State or political subdivision of a State or any official or employee of the foregoing.

(5) Nothing in this section shall prevent the Secretary from enforcing any provision of this title or any cooperative agreement or any such rule by injunction or other equitable remedy.

(b) Subsection (a) shall not apply to any licensing requirement under the Atomic Energy Act of 1954. Such licensing requirements shall be enforced by the Commission as provided in such Act.

## PUBLIC PARTICIPATION

SEC. 111. In carrying out the provisions of this title, including the designation of processing sites, establishing priorities for such sites, the selection of remedial actions, and the execution of cooperative agreements, the Secretary, the Ad-

ministrator, and the Commission shall encourage public participation and, where appropriate, the Secretary shall hold public hearings relative to such matters in the States where processing sites and disposal sites are located.

#### TERMINATION; AUTHORIZATION

SEC. 112. (a) The authority of the Secretary to perform remedial action under this title shall terminate on the date seven years after the date of promulgation by the Administrator of general standards applicable to such remedial action unless such termination date is specifically extended by an Act of Congress enacted after the date of enactment of this Act.

(b) The amounts authorized to be appropriated to carry out the purposes of this title by the Secretary, the Administrator, the Commission, and the Secretary of the Interior shall not exceed such amounts as are established in annual authorization Acts for fiscal year 1979 and each fiscal year thereafter applicable to the Department of Energy. Any sums appropriated for the purposes of this title shall be available until expended.

#### LIMITATION

SEC. 113. The authority under this title to enter into or contracts or other obligations requiring the United States to make outlays may be exercised only to the extent provided in advance in annual authorization and appropriation Acts.

#### REPORTS TO CONGRESS

SEC. 114. (a) Beginning on June 1, 1980, and each year thereafter until June 1, 1986, the Secretary shall submit a report to the Congress with respect to the status of the actions required to be taken by the Secretary, the Commission, the Secretary of the Interior, the Administrator, and the States and Indian tribes under this Act and any amendments to other laws made by this Act. Each report shall—

- (1) include data on the actual and estimated costs of the program authorized by this title;
- (2) describe the extent of participation by the States and Indian tribes in this program;
- (3) evaluate the effectiveness of remedial actions, and describe any problems associated with the performance of such actions; and
- (4) contain such other information as may be appropriate.

Such report shall be prepared in consultation with the Commission, the Secretary of the Interior, and the Administrator and shall contain their separate views, comments, and recommendations, if any. The Commission shall submit to the Secretary and Congress such portion of the report under this subsection as relates to the authorities of the Commission under title II of this Act.

(b) Not later than July 1, 1979, the Secretary shall provide a report to the Congress which identifies all sites located on public or acquired lands of the United States containing residual radioactive materials and other radioactive waste (other than waste resulting from the production of electric energy) and specifics which Federal agency has jurisdiction over such sites. The report shall include the identity of property and other structures in the vicinity of such site that are contaminated or may be contaminated by such materials and the actions planned or taken to remove such materials. The report shall describe in what manner such sites are adequately stabilized and otherwise controlled to prevent radon diffusion from such sites into the environment and other environmental harm. If any site is not so stabilized or controlled, the report shall describe the remedial actions planned for such site and the timetable for performing such actions.

(c) Copies of the reports required by this section to be submitted to the Congress shall be separately submitted to the Committees on Interior and Insular Affairs and on Interstate and Foreign Commerce of the House of Representatives and the Committee on Energy and Natural Resources of the Senate.

#### ACTIVE OPERATIONS; LIABILITY FOR REMEDIAL ACTION

SEC. 115. (a) No amount may be expended under this title with respect to any site licensed by the Commission under the Atomic Energy Act of 1954 or by a State as permitted under section 274 of such Act at which production of any uranium product from ores (other than from residual radioactive materials) takes place.

(b) In the case of each processing site designated under this title, the Attorney General shall conduct a study to determine the identity and legal responsibility which any person (other than the United States, a State, or Indian tribe) who owned or operated or controlled (as determined by the Attorney General) such site before the date of the enactment of this Act may have under any law or rule of law for reclamation or other remedial action with respect to such site. The Attorney General shall publish the results of such study, and provide copies thereof to the Congress, as promptly as practicable following the date of the enactment of this Act. The Attorney General, based on such study, shall, to the extent he deems it appropriate and in the public interest, take such action under any provision of this title or under any provision of law in effect when uranium was produced at such site to require payment by such person of all or any part of the costs incurred by the United States for such remedial action for which he determines such person is liable.

**TITLE II—URANIUM MILL TAILINGS LICENSING  
AND REGULATION****DEFINITION**

SEC. 201. Section 11 e. of the Atomic Energy Act of 1954 is amended to read as follows:

“e. The term ‘byproduct material’ means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.”.

**CUSTODY OF DISPOSAL SITE**

SEC. 202. (a) Chapter S of the Atomic Energy Act of 1954 is amended by adding the following new section at the end thereof:

“SEC. S3. OWNERSHIP AND CUSTODY OF CERTAIN BY-PRODUCT MATERIAL AND DISPOSAL SITES.—

“a. Any license issued or renewed after the effective date of this section under section 62 or section 81 for any activity which results in the production of any byproduct material as defined in section 11 e. (2) shall contain such terms and conditions as the Commission determines to be necessary to assure that, prior to termination of such license—

“(1) the licensee will comply with decontamination, decommissioning, and reclamation standards prescribed by the Commission for sites (A) at which ores were processed primarily for their source material content and (B) at which such byproduct material is deposited, and

“(2) ownership of any byproduct material defined in section 11 e. (2) which resulted from such licensed activity shall be transferred to the United States.

Any license in effect on the date of the enactment of this section shall either contain such terms and conditions on renewal thereof after the effective date of this section, or shall comply with paragraphs (1) and (2) upon the termination of such license, whichever first occurs.

“b. (1) Any such license which is issued after the effective date of this section shall also contain such terms and conditions as the Commission determines to be necessary to assure that, prior to termination of such license and after the licensee has complied with the requirements of subsection a., any land (other than land owned by the United States) which is used for the disposal of such byproduct material shall be transferred to the United States, including both the surface estate and any interest in the subsurface estate which may be necessary to protect the public health, welfare, and the envi-

ronment. Following the Commission's determination of compliance under subsection d., the Secretary of Energy or the Federal agency designated by the President under subsection c. shall assume title and custody of the byproduct material and land transferred as provided in this subsection. Such officer or instrumentality shall maintain such material and land in such manner as will protect the public health and safety and the environment. Such custody may be transferred to another officer or instrumentality of the United States only upon approval of the President upon his determination that such officer or instrumentality meets the requirements of subsection c. Notwithstanding any other provision of law, such property and materials shall be maintained pursuant to a license issued by the Commission in such manner as will protect the public health, safety, and the environment.

"(2) In the case of any such license under section 62 which was in effect on the effective date of this section, the Commission may require, before the termination of such license, such transfer of land (as described in paragraph (1)) as may be necessary to protect the public health, welfare, and the environment from any effects associated with such byproduct material.

"(3) Material and land transferred to the United States as required under this subsection shall be transferred without cost to the United States (other than administrative and legal costs incurred in carrying out such transfer). The United States shall not transfer title to material or property acquired under this subsection to any person, unless such transfer is in the same manner as provided under section 104(b) of the Uranium Mill Tailings Radiation Control Act of 1978.

"(4) The provisions of this subsection respecting transfer of title and custody to land to the United States shall not apply in the case of lands held in trust by the United States for any Indian tribe or lands owned by such Indian tribe subject to a restriction against alienation imposed by the United States. In the case of such lands which are used for the disposal of byproduct material as defined in section 11 e. (2), the licensee shall be required to enter into such arrangements with the Commission as may be appropriate to assure the long-term maintenance and monitoring of such lands by the United States.

"c. The Secretary of Energy or such Federal agency as the President shall designate shall have custody of such property or material. The President shall not designate the Commission for such purposes.

"d. Upon termination of any license to which this section applies, the Commission shall determine whether or not the licensee has complied with all applicable standards and requirements under such license."

"(b) This section shall be effective three years after the enactment of this Act.

(c) The table of contents for chapter 8 of the Atomic Energy Act of 1954 is amended by inserting the following new item after the item relating to section 82:

"Sec. 83. Ownership and custody of certain byproduct material and disposal sites."

**AUTHORITY TO ESTABLISH CERTAIN REQUIREMENTS**

SEC. 203. Section 161 of the Atomic Energy Act of 1954 is amended by adding the following new subsection at the end thereof:

"x. establish by rule, regulation, or order, after public notice, such standards and instructions as the Commission may deem necessary or desirable to ensure—

"(1) that any adequate bond, surety, or other financial arrangement (as determined by the Commission) will be provided, before termination of any license for byproduct material as defined in section 11 e. (2), by a licensee to permit the completion of all requirements established by the Commission for the decontamination, decommissioning, and reclamation of sites, structures, and equipment used in conjunction with byproduct material as so defined, and

"(2) that—

— "(A) in the case of any such license issued or renewed after the date of the enactment of this subsection, to the maximum extent practicable, after termination of such license, no long-term maintenance and monitoring of such sites, structures, and equipment will be necessary; and

"(B) in the case of each license for such material (whether in effect on the date of the enactment of this section or issued or renewed thereafter), if the Commission determines that any such long-term maintenance and monitoring is necessary, the licensee, before termination of any license for byproduct material as defined in section 11 e. (2), will make available such bonding, surety, or other financial arrangements as may be necessary to assure such long-term maintenance and monitoring."

**COOPERATION WITH STATES**

SEC. 204. (a) Section 274 b. of the Atomic Energy Act of 1954 is amended by adding "as defined in section 11 e. (1)" after the words "byproduct materials" in paragraph (1); by renumbering paragraphs (2) and (3) as paragraphs (3) and (4); and by inserting the following new paragraph immediately after paragraph (1):

"(2) byproduct materials as defined in section 11 e. (2)."

(b) Section 274 d. (2) of such Act is amended by inserting the following before the word "compatible": "in accordance with the requirements of subsection o. and in all other respects".



**HeinOnline was unable to locate the following content for digitization**

**Title: Legislative History of the Uranium Mill Tailings Radiation Control Act of 1978 : P.L. 95-604 : 92 Stat. 3021 : Nov. 8, 1978.**

**Doc. No. 3**

**Missing: Pages 18-19**

**If your library is in possession of this material and is willing to donate and/or lend to use for digitization, please contact us by phone: 1-800-277-6995 or email: [holsupport@wshein.com](mailto:holsupport@wshein.com)**

**HEINONLINE**

"(2) conforms with applicable general standards promulgated by the Administrator of the Environmental Protection Agency under section 275, and

"(3) conforms to general requirements established by the Commission, with the concurrence of the Administrator, which are to the maximum extent practicable, comparable to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulated by the Administrator under the Solid Waste Disposal Act.

"b. In carrying out its authority under this section, the Commission is authorized to—

"(1) by rule, regulation, or order require persons, officers, or instrumentalities exempted from licensing under section 81 of this Act to conduct monitoring, perform remedial work, and to comply with such other measures as it may deem necessary or desirable to protect health or to minimize danger to life or property, and

"(2) make such studies and inspections and to conduct such monitoring as may be necessary.

Any violation by any person other than the United States or any officer or employee of the United States of any rule or order of the Commission established under this section or section 83 shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 234. Nothing in this section affects any authority of the Commission under any other provision of this Act."

(b) The table of contents for such chapter 8 is amended by inserting the following new item after the item relating to section 83:

"Sec. 84. Authorities of Commission respecting certain byproduct materials."

AUTHORITY OF ENVIRONMENTAL PROTECTION AGENCY  
RESPECTING CERTAIN BYPRODUCT MATERIAL

SEC. 206. Chapter 19 of the Atomic Energy Act of 1954 is amended by inserting after section 274 the following new section:

"SEC. 275. HEALTH AND ENVIRONMENTAL STANDARDS FOR URANIUM MILL TAILINGS.—

"a. (1) As soon as practicable, but not later than one year after the date of enactment of this section, the Administrator of the Environmental Protection Agency (hereinafter referred to in this section as the 'Administrator') shall, by rule, promulgate standards of general application (including standards applicable to licenses under section 104(h)) for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with residual radioactive materials (as defined in section 101 of the Uranium Mill Tailings Radiation Control Act of 1978) located at inactive uranium mill tailings sites

and depository sites for such materials selected by the Secretary of Energy, pursuant to title I of the Uranium Mill Tailings Radiation Control Act of 1978. Standards promulgated pursuant to this subsection shall, to the maximum extent practicable, be consistent with the requirements of the Solid Waste Disposal Act.

"(2) As soon as practicable, but not later than eighteen months after the enactment of this section, the Administrator shall, by rule, promulgate standards of general application for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with the processing and with the possession, transfer, and disposal of byproduct material, as defined in section 11 e. (2) of this Act at sites at which ores are processed primarily for their source material content, or which are used for the disposal of such byproduct material.

"(3) Standards promulgated pursuant to this section for nonradiological hazards shall, notwithstanding any other provision of this Act or any other law, be consistent with, to the greatest extent possible, the standards of the Solid Waste Disposal Act applicable to such hazards.

"(4) The Administrator may from time to time amend, modify, or change any standard promulgated under this section.

"(b)(1) Before the promulgation of any rule pursuant to this section, the Administrator shall publish the proposed rule in the Federal Register, together with a statement of the research, analysis, and other available information in support of such proposed rule, and provide a period of public comment of at least thirty days for written comments thereon and an opportunity, after such comment period and after public notice, for any interested person to present oral data, views, and arguments at a public hearing. There shall be a transcript of any such hearing. The Administrator shall consult with the Commission and the Secretary of Energy before promulgation of any such rule.

"(2) Judicial review of any rule promulgated under this section may be obtained by any interested person only upon such person filing a petition for review within sixty days after such promulgation in the United States court of appeals for the Federal judicial circuit in which such person resides or has his principal place of business. A copy of the petition shall be forthwith transmitted by the clerk of court to the Administrator. The Administrator thereupon shall file in the court the written submissions to, and transcript of, the written or oral proceedings on which such rule was based as provided in section 2112 of title 28, United States Code. The court shall have jurisdiction to review the rule in accordance with chapter 7 of title 5, United States Code, and to grant appropriate relief as provided in such chapter. The judgment of the court affirming, modifying, or setting aside, in whole or in part, any such rule shall be final, subject to judicial review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28, United States Code.

"(3) Any rule promulgated under this section shall not take effect earlier than sixty calendar days after such promulgation.

(c) The table of contents for chapter 19 of the Atomic Energy Act is amended by inserting the following new item after the item relating to section 274:

"Sec. 275. Health and environmental standards for uranium mill tailings."

#### AUTHORIZATION OF APPROPRIATION FOR GRANTS

SEC. 207. There is hereby authorized to be appropriated for fiscal year 1980 to the Nuclear Regulatory Commission not to exceed \$500,000 to be used for making grants to States which have entered into agreements with the Commission under section 274 of the Atomic Energy Act of 1954 to aid in the development of State regulatory programs under such section which implement the provisions of this Act.

#### EFFECTIVE DATE

SEC. 208. Except as otherwise provided in this title the amendments made by this title shall take effect on the date of the enactment of this Act.

#### CONSOLIDATION OF LICENSES AND PROCEDURES

SEC. 209. The Nuclear Regulatory Commission shall consolidate, to the maximum extent practicable, licenses and licensing procedures under amendments made by this title with licenses and licensing procedures under other authorities contained in the Atomic Energy Act of 1954.

### TITLE III—STUDY AND DESIGNATION OF TWO MILL TAILINGS SITES IN NEW MEXICO

#### STUDY

SEC. 301. The Commission, in consultation with the Attorney General and the Attorney General of the State of New Mexico, shall conduct a study to determine the extent and adequacy of the authority of the Commission and the State of New Mexico to require, under the Atomic Energy Act of 1954 (as amended by title II of this Act) or under State authority as permitted under section 274 of such Act or under other provision of law, the owners of the following active uranium mill sites to undertake appropriate action to regulate and control all residual radioactive materials at such sites to protect public health, safety, and the environment: the former Homestake-New Mexico Partners site near Milan, New Mexico, and the Anaconda carbonate process tailings site near Bluewater, New Mexico. Such study shall be completed and a report thereof submitted to the Congress and to the Secretary within one year after enactment of this Act, together with such recommendations as may be appropriate. If the Commission determines that such authority is

not adequate to regulate and control such materials at such sites in the manner provided in the first sentence of this section, the Commission shall include in the report a statement of the basis for such determination. Nothing in this Act shall be construed to prevent or delay action by a State as permitted under section 274 of the Atomic Energy Act of 1954 or under any other provision of law or by the Commission to regulate such residual radioactive materials at such sites prior to completion of such study.

#### DESIGNATION BY SECRETARY

SEC. 302. (a) Within 90 days from the date of his receipt of the report and recommendations submitted by the Commission under section 301, notwithstanding the limitations contained in section 101(6)(A) and in section 115(a), if the Commission determines, based on such study, that such sites cannot be regulated and controlled by the State or the Commission in the manner described in section 301, the Secretary may designate either or both of the sites referred to in section 301 as a processing site for purposes of title I. Following such designation, the Secretary may enter into cooperative agreements with the New Mexico to perform remedial action pursuant to such title concerning only the residual radioactive materials at such site resulting from uranium produced for sale to a Federal agency prior to January 1, 1971 under contract with such agency. Any such designation shall be submitted by the Secretary, together with his estimate of the cost of carrying out such remedial action at the designated site, to the Committee on Interior and Insular Affairs and the Committee on Interstate and Foreign Commerce of the House of Representatives and to the Committee on Energy and Natural Resources of the Senate.

(b) (1) No designation under subsection (a) shall take effect before the expiration of 120 calendar days (not including any day in which either House of Congress is not in session because of an adjournment of more than 3 calendar days to a day certain or an adjournment *sine die*) after receipt by such Committees of such designation.

(c) Except as otherwise specifically provided in subsection (a), any remedial action under title I with respect to any sites designated under this title shall be subject to the provisions of title I (including the authorization of appropriations referred to in section 112(b)).

#### PURPOSE OF THE BILL

H.R. 13650, as reported by the committee, established a remedial action program at certain inactive uranium mill tailings sites for the purpose of protecting the public from possible radiation health hazards resulting from such tailings, amends the Atomic Energy Act of 1954 to regulate control, and license certain byproduct material at existing and future active mill tailings operations, and provides a study of certain sites, and, in addition, possible limited remedial action at such sites if regulatory authority under the 1954 act, as amended by this bill, proves inadequate.

## LEGISLATIVE BACKGROUND

On April 27, 1978 the Department of Energy, on behalf of the administration, submitted to the Congress legislation to establish a remedial action program at inactive mill tailings sites through cooperative arrangements between the Secretary of Energy and the States and Indian Tribes. On May 3, 1978, the chairman of the Committee on Interior and Insular Affairs, Congressman Morris K. Udall, and the chairman of the committee, Congressman Harley O. Staggers, introduced the administration proposal as H.R. 12535.

On June 29, 1978, Congressman Udall also introduced H.R. 13382 which provided for the regulation of active uranium mill tailings sites. That bill was based on a proposal developed by the Nuclear Regulatory Commission.

Three bills, similar to H.R. 12535, were introduced by Congressman Marriott. They are:

H.R. 11698, introduced on March 21, 1978.

H.R. 12229, introduced on April 19, 1978 and co-sponsored by Congressmen Armstrong, Bauman, Edwards of Oklahoma, Hansen, Johnson of Colorado, Kazen, Lujan, Murphy of Pennsylvania, Rhodes, Roncalio, Rudd, Runnels, Skubitz, Symms, and Weaver.

H.R. 12938, introduced on June 1, 1978, was also co-sponsored by these Congressmen and Congressmen McDade, Ruppe, and Stump.

All of these bills were referred jointly to the Committee on Interior and Insular Affairs and this committee. Hearings were held on the bill in June 1978 by the Subcommittee on Energy and the Environment of the Interior and Insular Affairs Committee. On July 28, 1978, Chairman Udall introduced H.R. 13650 which is cosponsored by Congressmen Lujan, Sharp, Marriott, Johnson of Colorado, McKay, Vento, Kazen, Roncalio, Bauman, and Rhodes. H.R. 13650 which was also jointly referred to our committee and the Interior Affairs Committee, combined many of the provisions of H.R. 12535 and H.R. 13382, as well as some features of the other bills.

The Subcommittee on Energy and Power, chaired by Congressman John D. Dingell, held hearings on all of these bills on June 19 and 20 and on August 2, 1978. Testimony was received from representatives of industry, the National Governors Association, the Environmental Policy Center, the Department of Energy, the Nuclear Regulatory Commission, and the Environmental Protection Agency.

On August 11, 1978, the Committee on Interior and Insular Affairs reported H.R. 13650 in amended form (H. Rept. 95-1480, Part I). On that same day, the Subcommittee on Energy and Power reported a similar version of the bill. Thereafter, Subcommittee Chairman Dingell and Chairman Udall, together with representatives of the minority on both committees, developed amendments to the Energy and Power version in order to reconcile the two versions and have the amended bill considered by the full House. The committee reported H.R. 13650 with an amendment that includes the provisions suggested by the Committee on Interior and Insular Affairs. Chairman Udall has indicated that he supports this amended version.

## BACKGROUND AND NEED FOR LEGISLATION

### A. NEED FOR A REMEDIAL ACTION PROGRAM

Uranium mills are a part of the nuclear fuel cycle. They extract uranium from ore for eventual use in nuclear weapons and powerplants, leaving radioactive sand-like waste—commonly called uranium mill tailings—in generally unattended piles. As a result of many years of uranium ore processing, about 140 million tons have now accumulated at active and inactive milling sites, according to the Nuclear Regulatory Commission.

NRC Chairman, Dr. Joseph M. Hendrie, describes how these piles are a hazard to the public health:

The NRC believes that long-term release from tailings piles may pose a radiation health hazard if the piles are not effectively stabilized to minimize radon releases and prevent unauthorized use of the tailings.

•           •           •           •           •

Unlike high-level radioactive waste from the back end of the nuclear fuel cycle, which contains products of the fission reaction, mill tailings contain only naturally occurring radioactive elements, in small quantities. The radioactive decay of these elements leads to production of radon, a radioactive gas with a half-life of about four days, which can diffuse from a tailings pile into the atmosphere and subsequently expose persons to radiation far away from the pile. The increased exposure compared to exposure from radon already in the atmosphere from other sources is exceedingly slight, but this increase is in effect permanent. This is because radon production in mill tailings continues for times of the order of a hundred thousand years, so the tailings pile becomes a perpetual source injecting a small amount of radon into the atmosphere, unless some action is taken to keep the radon from escaping.

The health effects of this radon production are tiny as applied to any one generation, but the sum of these exposures can be made large by counting far into the future, large enough in fact to be the dominant radiation exposure from the nuclear fuel cycle. Whether it is meaningful to attach significance to radiation exposures thousands of years in the future, or conversely, whether it is justifiable to ignore them, are questions without easy answers. The most satisfactory approach is to require every reasonable effort to dispose of tailings in a way that minimizes radon diffusion into the atmosphere.

The Assistant Administrator for Air and Waste Management of the Environmental Protection Agency, Mr. David G. Hawkins, testified concerning the health problems at these sites as follows:

A summary table is given below which lists each site and an estimate of the 25-year cumulative potential lung cancers from inhalation of radon daughters if the site were left as it is.

The people in the area are not necessarily "threatened" by these tailings. The risk of potential lung cancer is increased due to radon emanating from the tailings pile. The calculations given in the table reflect a statistical increase in effects based on the number of people estimated to be exposed. Therefore highly populated areas show greater total effects than low population areas. In all cases the individual risk is less than  $1 \times 10^4$  per year.

*Summary of phase II reports—Health effects*

<i>Site</i>	<i>25-yr. potential lung cancers</i>
Vitro (Salt Lake City, Utah).....	24
Durango, Colo.....	6
Shiprock, N. Mex.....	5
Grand Junction, Colo.....	3
Riverton, Wyo.....	2
Gunnison, Colo.....	1
Rifle, Colo. (old and new).....	1
Mexican Hat, Utah.....	.2
Lakeview, Oreg.....	.2
Falls City, Tex.....	.1
Tuba City, Ariz.....	.1
Naturita, Colo.....	.1
Ambrosia Lake, N. Mex.....	.1
Green River, Utah.....	.02
Slick Rock, Colo. (2 sites).....	.02
Maybell, Colo.....	.02
Monument Valley, Ariz.....	.02
Lowman, Idaho.....	.002
Converse County, Wyo.....	.001

The potential health effects from radon daughters were calculated by DOE's contractor on an absolute risk basis. This is the numerical increase in the number of cancers per unit of exposure. Another basis for the risk estimates is the relative risk approach, which may give risk values higher by an order of magnitude. The relative risk estimate, is the estimated percent increase in cancer per unit of exposure. Unfortunately, existing information does not allow one to make an unequivocal choice, and thus it must be kept in mind that these projections of health impact are somewhat uncertain and based on extrapolations from a select population, namely underground uranium miners.

The DOE and others contend that at these inactive sites, tailings "resulted from the operations of private companies which processed uranium ore under procurement contracts" for the Atomic Energy Commission from the mid-1940's to 1970 and that stabilization of the piles "was not included in these contracts, largely because these tailings were not believed to be a problem."

In May 1966, an official of the former AEC testified before a Senate Committee, saying:

The Commission recognizes that, like tailings piles from other ore milling operations, tailings close to communities may involve dusting or erosion, or may be considered unsightly. Some of these tailings accumulations started before World War I when Colorado ores were processed for radium recovery. Other use of the same ores for vanadium recovery



at a later time added more tailings. Since 1948 uranium and vanadium recovery operations made further additions. Because most of the tailings have resulted from operations under AEC uranium procurement contracts, the Commission is especially interested in appropriate remedial actions. Through its Division of Raw Materials, the Commission has taken action and will continue to take action that involves the cooperative efforts of both the milling industry and State agencies. This includes the encouragement of voluntary control by the milling companies and support for the development of adequate and effective State regulations compatible with Executive Order 11258 on abatement of water pollution by Federal activities. The Commission plans to continue its cooperative effort with Federal, State, and local authorities and with the milling industry to achieve adequate pollution control. The Commission will continue to participate in special studies, special surveillance, or other technical assistance that may be appropriate.

Late in 1966, three Federal agencies, including AEC, issued a "Joint Federal Agency Position Regarding Control of Uranium Mill Tailings" which states:

The Federal Water Pollution Control Administration, the Public Health Service, and the Atomic Energy Commission agree that inactive tailings piles resulting from uranium milling operations should be structurally stabilized and contained to prevent water and wind erosion. Active tailings piles should be managed to minimize such erosion during use.

Planning, management, stabilization and containment of tailings piles are viewed as being the responsibility of the individual mill owners. Mill owners should develop, without undue delay, specific plans for accomplishing such management, stabilization and containment, and submit such plans through the appropriate state regulatory agencies for approval. The staffs of the Federal Water Pollution Control Administration, the Public Health Service, and the Atomic Energy Commission will be available to the state regulatory agencies, upon request, to provide advice and assistance regarding the development of pile stabilization and containment objectives and measures for achieving them.

Compliance by mill owners with approved plans for stabilization and containment should be recognized as constituting fulfillment of mill owner responsibility with regard to such tailings piles. Obtaining and enforcement of tailings piles stabilization and containment plans should rest initially with the states concerned.

The DOE said that results of the efforts made under the 1966 agreement were "far from satisfactory".

Prior to that agreement, the Public Health Service recommended that "measures should be taken to prevent the erosion and spread of uranium mill tailings", although stating that there "is currently no significant immediate hazard associated with uranium mill tailings activities anywhere in the Colorado River Basin." Also, in 1960, a water pollution conference for the Colorado River Basin was held and, as a result, mill discharges were reportedly reduced.

Thus, it is clear that in the 1960's, the Federal Government and some States recognized a health problem with these tailings, but apparently they did not recognize the magnitude of it until the early 1970's, when an investigation began into the use of these tailings for construction purposes.

Regulatory authority over tailings presently is exerted by the NRC and the so-called agreement States indirectly as part of the licensing of active milling operations under the Atomic Energy Act of 1954. Once these operations cease, however, the NRC and the States generally have no further role. As already noted, the former Atomic Energy Commission which regulated these mills did not consider the tailings a significant health problem until the late 1960's.

In 1972, Congress enacted Public Law 92-314 which provides financial assistance to the State of Colorado to limit radiation exposure resulting from the use of these tailings for construction purposes in Grand Junction, Colo. That law was amended on February 21, 1978, by Public Law 95-236 which was also considered by this committee.

In 1974, Congress directed that the then Energy Research and Development Administration study all inactive uranium mill tailing sites. A two-phased study was conducted of a total of 22 inactive mill sites. Most of these produced uranium under contracts with the AEC during the period 1947 through 1970. These studies were all completed in January 1978. On the basis of these studies the Department of Energy developed H.R. 12535 to authorize a remedial action program to clean up these inactive sites and to reduce, to the extent practicable, possible public exposure to radiation from these unstabilized tailings piles.

In a commentary on the administration's proposal, the General Accounting Office, in a June 20, 1978 report entitled, "The Uranium Mill Tailings Cleanup: Federal Leadership at Last", expressed support for the enactment of legislation to deal with this health problem, but pointed out several disadvantages as follows:

The proposed program is estimated to cost up to \$126 million, with the Federal Government bearing the heaviest burden, while receiving the least direct benefits. More important, the cleanup program could be considered as a precedent for the Federal Government to pay for cleaning up other nuclear facilities—a far more costly endeavor than the mill tailings cleanup. This is extremely important because the question of who should pay for cleaning up nuclear facilities has not yet been answered, primarily because very little decommissioning of these facilities has been done to date.

Finally, while not as serious as the above, the technology to stabilize the mill tailings has not been fully developed, possibly preventing a truly satisfactory resolution of the problem at this time.

#### B. NEED FOR A REGULATORY PROGRAM

As already noted, the NRC now regulates these tailings at active mills indirectly through its licensing of source material milling under the Atomic Energy Act of 1954, largely as a result of the enactment of the National Environmental Policy Act of 1969. States are permitted

under the 1954 Act to license uranium milling under their own authorities through agreement with the NRC. Five of the 25 "Agreement States" now have such licensing programs. However, tailings are not now source material licensable by the NRC. Thus, once the underlying source material license for the mill terminates, there is no longer a "clear legal basis for further Commission regulatory control of the mill tailings", according to Dr. Hendrie. He added:

The Environmental Protection Agency can exert regulatory authority over uranium mill tailings under the Resource Conservation and Recovery Act of 1976. However, EPA has no authority over the generation of the tailings (the source material milling licensed by the Commission or an Agreement State) and so far they have not developed any regulation to implement their authority over the disposal of tailings. I should perhaps point out that the RCRA does not give any authority whatever to the NRC, and consequently the Commission has not been able to base any plans for tailings regulations on the provisions of that Act. Finally, to complete the complicated regulatory picture, in Agreement States it is the State in most cases, rather than the Commission, that exercises regulatory control over the uranium milling and tailings.

This situation was discussed at the Energy and Power Subcommittee hearings on H.R. 12535 and related bills on June 20, 1978. Chairman Dingell urged the NRC to submit quickly to Congress legislation to deal with this problem in order to prevent a repeat of the situation that led to the need for, and the development of, remedial legislation. Chairman Udall made a similar request. H.R. 13382 was the result of those requests.

#### COMMITTEE ACTION

The Committee on Interstate and Foreign Commerce met to consider H.R. 13650 on September 26, 1978. The committee approved the bill with an amendment in the nature of a substitute on that day and ordered it reported to the House by a unanimous vote, a quorum being present.

The committee is convinced that all tailings pose a potential and significant radiation health hazard to the public. Legislation is needed now to stabilize and control all such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public. This remedial action program will affect 26 million of the 140 million tons of tailings now located at various mill sites.

The committee, however, is also convinced that it would be a grievous and costly mistake to authorize a remedial program for inactive mill sites without also enacting regulatory legislation to control the even more serious problem at active mill sites. This portion of the bill will control about 120 million tons of the tailings at active operations.

The committee's amendment joins the two programs in one bill.

In authorizing a remedial action program, the committee does not recognize any Federal responsibility or liability for these tailings. The committee realizes that they were largely derived from milling operations conducted under Federal contract. However, that is not the compelling reason for recommending a remedial action program. The

significant factor is the lack of adequate authority under the Atomic Energy Act of 1954 to regulate these tailings. As the NRC testified:

Historically, the NRC and its predecessor agency have not had regulatory jurisdiction over uranium mill tailings after mill operations are terminated because the tailings are not themselves licensable material. Regulatory control over tailings is exerted indirectly as part of the Commission's licensing of ongoing milling operations pursuant to licensing authority over source materials. Therefore, after operations had ceased at the 22 inactive sites being considered and all licensable quantities of source material removed, the regulatory staff had no further role.

The lack of any control over these inactive sites under the 1954 act and other laws to require clean up of these sites is the principal basis for committee action to authorize this remedial program. This situation does not exist at active mill tailings sites. Those sites, even those with tailings derived from Federal contracts, are subject to NRC regulation as a result of the enactment of NEPA in 1970. The NRC can require these operators, as a condition to the granting of a license, to take steps to stabilize these piles, although the control is not adequate. Indeed, the NRC testified that it has obtained commitments from some licensees to cope with the problem to some degree. This bill will provide additional authority to effectively control tailings at these active and all future sites.

The existence of Federal contracts in the 1950's and 1960's provides an additional basis for establishing this program, as does the fact that some sites are no longer owned by persons who operated the mills prior to closing, but we stress that the lack of any specific statutory authority requiring the effective stabilization of these mills by the NRC or the States after operations ceased and licenses terminated is the principal reason for recommending this program. X

It is for this and other reasons that the committee also stresses that it does not consider this bill a precedent to be followed in the case of other waste management problems, such as the one noted by the GAO earlier in this report. The situation at these inactive sites is quite unique in that there was once Federal licensing of the operations, but, due to a loophole in the law, the sites escaped control after operations ceased. Moreover, in each case, most, if not all, of the production was for Federal purposes.

#### SITES INCLUDED

Title I of the bill provides for the designation of the sites by the Secretary of Energy to be eligible for remedial action. The bill, as reported by the committee, does not specifically identify the sites as did the version reported by the Committee on Interior and Insular Affairs, because the committee was informed by the DOE in a September 5, 1978, response to an inquiry by Subcommittee Chairman Dingell, that the 22 sites studied by the DOE are not all located within the 20 named locations referenced in that committee's version of H.R. 13650. The DOE said:

It is correct that not all of the sites are located within the boundaries of the communities listed in the bill. Further, some

of these communities are probably not incorporated, and thus do not have well defined boundaries. Several of the designations do not refer to communities \* \* \* The sites which are clearly outside of the communities listed in the [Interior Committee] bill are:

Utah—Mexican Hat.

Colorado—Rifle (new), Gunnison, Naturita, Maybell, Slick Rock (2 sites).

New Mexico—Ambrosia Lake (not as community).

Wyoming—Riverton, Converse County (not a community).

Texas—Falls City.

Arizona—Tuba City, Monument Valley (not a community).

Idaho—Lowman.

There is an active mill operated by Conoco-Pioneer near Falls City, Texas, and two active mills in the Ambrosia Lake area in McKinley County, New Mexico, owned by Kerr-McGee Corp., and United Nuclear-Homestake Partners.

The following table shows each of the inactive sites studied at which tailings exist, the name of the contractor that provided processed uranium to the United States, and other relevant data:

TABLE I

Location (A)	Contractor to the United States (B)	Dates of operation (C)	Contract dates (where less than C) (D)	Part of production sold to United States in contract period (E)
<b>Arizona:</b>				
Monument <sup>1</sup>	Vanadium Corp. of America	1955-67		All.
Tuba City <sup>1</sup>	El Paso Natural Gas	1956-66		All.
<b>Colorado:</b>				
Durango <sup>2</sup>	Vanadium Corp. of America	1943-63		All.
Grand Junction	Climax Uranium Co. and Amax Uranium Co.	1951-70	1951-65	All.
Gunnison	Gunnison Mining Co. and successors	1958-62		All.
Maybell	Union Carbide Corp. (UCC)	1957-64		All.
Naturita	Vanadium Corp. of America <sup>3</sup>	1939-63		All.
New Rifle	Union Carbide Corp.	1958-72	1958-70	All.
Old Rifle	do.	1924-58	1946-58	All.
Slick Rock (NC)	Became Government property in 1949	1931-43	None	
Slick Rock (UCC)	Union Carbide Corp.	1957-61		All.
Idaho: Lowman	Porter Bros.	1955-60		All.
<b>New Mexico:</b>				
Ambrosia Lake	Phillips Petroleum Co.	1958-63		All.
Shiprock	Kerr-McGee 1954-63, Vanadium Corp. of America, 1963-58	1954-68		All.
Oregon: Lakeview	Lakeview Mining Co. <sup>3</sup>	1958-60		All.
<b>Texas:</b>				
Falls City	Susquehanna Western, Inc.	1961-73	1961-70	All.
Ray Point	do.	1970-73	None	
<b>Utah:</b>				
Green River	Union Carbide Corp.	1958-61		All.
Mexican Hat	Texas Zinc Minerals	1957-65		All.
Salt Lake City	Vitro Chemical Co.	1951-68		All.
<b>Wyoming:</b>				
Riverton	Susquehanna Western, Inc.	1958-63		All.
Converse County	Western Nuclear	1962-65		All.
<b>Pennsylvania: Canonsburg:</b>				
	Standard Chemical Co.	1911-22	None	
	Vitro Manufacturing Co.	1930-42	None	
	do.	1943-57	1943-57	All.

<sup>1</sup> Navajo Reservation.

<sup>2</sup> Being evaluated for tailings processing or residual values.

<sup>3</sup> And successor.

Of the sites named in table I the following, according to the DOE, would be considered as eligible for designation under title I of the bill as reported by the committee:

1. Salt Lake City, Utah.
2. Green River, Utah.
3. Mexican Hat, Utah.
4. Durango, Colo.
5. Grand Junction, Colo.
6. Rifle, Colo. (2 locations).
7. Gunnison, Colo.
8. Naturita, Colo.
9. Maybell, Colo.
10. Slick Rock, Colo. (2 locations).
11. Shiprock, N. Mex.
12. Ambrosia Lake, N. Mex.
13. Riverton, Wyo.
14. Converse County, Wyo.
15. Lakeview, Oreg.
16. Falls City, Ariz.
17. Tuba City, Ariz.
18. Monument Valley, Ariz.
19. Lowman, Idaho.
20. Canonsburg, Pa.

The following table provides some additional data about these inactive sites and other Government-owned and active sites that are not covered by title I of this bill:

TABLE II. URANIUM MILL TAILINGS

The following tabulation was developed by the Department of Energy to show the following:

Column 1. Tailings were accumulated as a result of total concentrated production ( $U_3O_8$ ) purchased by the AEC.

Column 2. Tailings accumulated as a result of concentrate production ( $U_3O_8$ ) partially purchased by AEC and partially purchased on the open market—tailings comingled.

Column 3. Tailings accumulated as a result of concentrate production ( $U_3O_8$ ) supplied to the open market—none purchased by the AEC.

	Col 1	Col. 2	Col. 3
<b>A. Inactive millsites included in phase II reports:</b>			
<b>Arizona:</b>			
Monument.....	All.....		Navajo Tribe.
Tuba City.....	All.....		Do.
<b>Colorado:</b>			
Durango.....	All.....		Ranchers exploration and development.
Grand Junction.....		Comingled.....	Bob Shumway & Castings, Inc.
Gunnison.....	All.....		Decker, Bishop & McEachern.
Maybell.....	All.....		Union Carbide Corp.
Naturita.....	All.....		Foot Mineral Corp. and Ranchers Exploration.
New Rifle.....		Comingled.....	Union Carbide Corp.
Old Rifle.....	All.....		Do.
Slick Rock (NC).....	All.....		Do.
Slick Rock (UCC).....	All.....		Rocky Mountain Gas (5A), Union Carbide Corp.
Idaho: Lowman.....	All.....		Velsicol Chemical Corp.

	Col 1	Col. 2	Col. 3
<b>A. Inactive missiles included in phase II reports—Continued</b>			
New Mexico:			
Ambrosia Lake (Phillips).....	All.....		United Nuclear Corp.
Shiprock.....	All.....		Navajo Tribe.
Oregon: Lakeview.....	All.....		Precision Pine.
Texas:			
Falls City—SWI.....		Comingled.....	Solution Engineering.
Ray Point.....		None.....	Exxon.
Utah:			
Green River.....	All.....		Union Carbide Corp.
Mexican Hat.....	All.....		Navajo Tribe.
Salt Lake City.....	All.....		Moench, Richards (29A), Salt Lake County Suburban Sanitation District (99A).
Wyoming:			
Riverton.....	All.....		Solution Engineering.
Converse County.....	All.....		Western Nuclear.
Pennsylvania: Canonsburg.....		Comingled.....	Canon Development Co.
<b>B. Government owned:</b>			
South Dakota: Edgemont.....		do.....	
Utah: Monticello.....	All.....		
<b>C. Currently active:</b>			
Colorado:			
Canon City.....		Comingled.....	Cotter Corp.
Uravan.....		do.....	Union Carbide Corp.
New Mexico:			
Anaconda:			
Old Carbonate.....	All.....		Anaconda Corp.
New.....		Comingled.....	
Kerr-McGee.....		do.....	Kerr-McGee Corp.
Sohio.....		None.....	Sohio.
United Nuclear:			
Church Rock.....		do.....	United Nuclear Corp.
New Mexico Partners—Old.....	All.....		Do.
Homestake Partners—New.....		Comingled.....	United Nuclear—Homestake Partners.
Texas: Falls City.....		None.....	Conoco & Pioneer Nuclear.
Utah:			
Atlas.....		Comingled.....	Atlas Corp.
Rio Algom.....		None.....	Rio Algom Corp.
Washington: Ford.....		Comingled.....	Dawn Mining Co.
Wyoming:			
Exxon—PRB.....		None.....	Exxon.
Federal-American:			
Partners.....			
Gas Hills.....		Comingled.....	Federal-American Partners.
Lucky-Mc:			
Gas Hills.....		do.....	Utah International, Inc.
Shirley Basin.....		None.....	Do.
Rocky Mountain Energy—Powder River Basin.....		do.....	Rocky Mountain Energy.
Union Carbide—Gas Hills.....		Comingled.....	Union Carbide Corp.
Western Nuclear—Jeffrey City.....		do.....	Phelps Dodge.
Petrotomics—Shirley Basin.....		do.....	Petrotomics Co.

### COST OF REMEDIAL ACTION AT INACTIVE SITES

As proposed by the administration and the committee on Interior and Insular Affairs, DOE would pay 100 percent of the costs of remedial action at inactive sites involving Indian lands. The committee has not altered that proposal. The estimated cost of remedial action at Indian lands is between \$10 and \$21 million, according to the Department of Energy.

In addition, the administration proposed that the remedial action involving non-Indian lands would be cost-shared with the States. The Federal share proposed would be a maximum of 75 percent. The States would pay the remainder.

Various other approaches were suggested to limit the State share significantly. The committee, in reporting this bill, increased the maximum Federal share to 90 percent.

The committee rejected suggestions that this program be funded entirely by the Federal Government or that the share of the States be limited to less than 10 percent of the costs, and, at the same time, provide all manner of State approvals or concurrences in the remedial

action program. The committee is concerned about the precedent of such proposals and about their effect on the Federal budget.

The committee is particularly concerned about the cost of this program. The range of the estimated cost of the part of the program subject to cost sharing under the administration proposal of a maximum of 75 percent is between \$80 million and \$120 million depending on the extent of remedial action required. This estimate includes no escalation figure. It is based on cost estimates prepared at the time the reports were prepared during 1976 and early 1977. In an August 15, 1978, letter to Subcommittee Chairman Dingell, the DOE said:

For the purpose of adjusting for escalation, a starting date of July 1, 1977, is reasonable. Recently, escalation has been around 10 percent per year. In a remedial program estimated to require 8 years to conduct, escalation becomes a major factor. It is a compelling reason for starting and completing the work on each site at the earliest possible date. Assuming remedial legislation were to be enacted by October 1978, and the EPA standards and criteria were promulgated in 6 months, DOE could begin remedial work by July 1979. At 10 percent escalation, the estimated program cost by then would become \$97 to \$152 million. The effect of escalation thereafter will depend on the schedule on which the work is performed.

The States received some benefits from the Federal contracts when the mills were operating. They will clearly benefit substantially from this program through the improvement of these sites so that they can be put to beneficial use again. The DOE estimates that the market value of many of these sites will be enhanced significantly after the remedial action. For example, the DOE estimates that the Durango, Colo., site will have a market value of \$10,000 per acre and that the Grand Junction and Garrison sites will have a value of \$8,000 per acre. The Salt Lake City, Utah, site is estimated to have a \$13,000 per acre market value after decontamination. The present value of these sites is far less.

Given these considerations, plus the additional factor that the committee, like the DOE, does not believe that the Federal Government is responsible for these tailings, the committee believes that the 90 percent maximum Federal share is more than generous. At the 90 percent level, the Department of Energy estimates that the range for the Federal share is between \$98 million and \$180 million. The committee also believes that since the bulk of the costs will be paid by the Nation's taxpayers, the States should not have "concurrence" or "veto" authority over the remedial action program, although the committee intends that DOE clearly consult with the States.

## SECTION-BY-SECTION ANALYSIS AND COMMITTEE COMMENTS

### *Section 1—Short title*

This section provides that the short title for the Act is the "Uranium Mill Tailings Radiation Control Act of 1978".

### *Section 2—Findings and purposes*

Subsection (a) sets forth several congressional findings. There is a general finding that uranium mill tailings pose a potential and sig-



nificant radiation health hazard to the public and that the protection of the public health, safety, and welfare and the regulation of interstate commerce require a Federal effort to provide for the stabilization, disposal, and control, in a safe and environmentally sound manner, of the tailings in order to prevent and minimize health and environmental hazards. In addition, there are findings that at certain inactive sites such tailings resulted from Federal contracts for the purchase of uranium at a time when the health hazards were not apparently fully recognized by Federal agencies, although some environmental hazards were recognized as early as 1960 by governmental agencies; that such sites are not now subject to regulation under the Atomic Energy Act of 1954; that milling operations at these sites terminated prior to 1973; that in 1972, Congress authorized a similar remedial action program in Grand Junction, Colo., concerning such tailings; and that the public interest requires financial assistance to undertake remedial actions concerning these inactive sites.

Subsection (b) sets forth the purposes of this act. The first purpose is to provide a program to assess the tailings at inactive sites and to provide remedial action at such sites, including the reprocessing, as appropriate, of tailings to extract the minerals that have a significant value from such tailings, where practicable, in order to stabilize and control such tailings. The second purpose is to provide for the regulation of such tailings at during active operations and after termination of those mill operations in order to stabilize and control such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public.

#### TITLE I—REMEDIAL ACTION PROGRAM

##### *Section 101—Definitions*

This section defines several terms used in the act. Of particular importance are the terms "processing site" and "residual radioactive materials". The former is composed of the sites, including the mill, where there are residual radioactive materials and at which all or substantially all the uranium was produced for sale to a Federal agency prior to January 1971 under a contract with that agency. It does not include a site owned or controlled by a Federal agency prior to January 1, 1978, or one that is owned or controlled by a Federal agency after that date. Also, it does not include a site that is licensed under the Atomic Energy Act of 1954, which license is in effect on January 1, 1978, or is licensed after such date. The term also includes structures and buildings located in the vicinity of such site which are contaminated with residual radioactive materials derived from such site. The Secretary of Energy, in consultation with the NRC, will determine which structures and buildings are eligible to be included as part of the designated processing site. It is expected that the Secretary and the Nuclear Regulatory Commission will use sound judgment in this regard and be concerned about costs, as well as health.

The term "residual radioactive material" is the tailings wastes that the Secretary of Energy determines to be radioactive. It also includes other wastes which the Secretary determines to be radioactive.

##### *Section 102—Designations of processing sites*

This section provides for the designation by the DOE of processing sites and the establishment of priorities for remedial action at those

sites. In designating sites, the Secretary of Energy must consult with the Environmental Protection Agency, the Nuclear Regulatory Commission, and the States. In the case of Indian lands, he would consult with the tribal officials and the Interior Department, as well as the EPA and NRC. The designations will also establish the boundaries of the processing site.

The committee is concerned that the DOE expend funds on a priority basis in order to correct the most serious problems first. Thus, the bill requires the DOE to assess the health hazard to the public at each site with the help of the EPA and establish priorities for remedial action. It is intended that DOE rely heavily on the EPA advice in establishing these priorities.

Both the designations and priorities must be completed within 1 year after enactment. Within 30 days thereafter, the DOE must notify the States and Indian tribes of the designations and priorities. The bill does not authorize designation or the establishment of priorities after the one year deadline. However, the committee does recognize that designation of all structures and buildings "in the vicinity" of a processing site may not be practicable within this timeframe and allows some flexibility. The committee expects the DOE to act expeditiously on these designations as well. At the same time, the DOE should be assured that serious contamination that poses a health hazard of the structures and buildings actually exists.

The bill precludes jurisdictional review of the designations and priorities.

#### *Section 103—State Cooperative Agreements*

Once the designations are made and all priorities are established, the DOE may negotiate and enter into cooperative agreements with the affected States pursuant to this section for the purpose of carrying out remedial action on non-Indian lands. Again the bill stresses that agreements should be developed in accordance with the priorities established so that the sites that pose the greatest danger to the population centers will be addressed first. The bill, however, does not preclude the DOE from proceeding to a lower priority sites in those cases, for example, where agreement does not appear certain or where the best type of remedial action is not fully known. The provision recognizes that there are a limited amount of funds and time available and that the seriousness of the health danger to population centers should be the principal criterion for action.

Subsection (b) requires that the DOE include terms and conditions necessary to implement remedial action and insure effective completion of such action.

Subsection (c) places a duty on the State, not on the DOE, to obtain written consent from the owner of the site authorizing the remedial action, unless the site is acquired. This consent must also be obtained for the buildings and structures in the vicinity of the site. The remedial action is in essence a voluntary program. The DOE cannot acquire the processing site. Only the State can do so. If the State does not, consent is required.

The consent must include a waiver releasing the United States of any liability or claim concerning the remedial action and holding the Government harmless against any claim arising out of the performance of the remedial action. The waiver would apply to the property owner,

his heirs, successors, and assigns. This provision is similar to section 202(d) of Public Law 92-314. It is not a total release of liability. It would not affect those not covered by the release who might file a claim against the United States, although the committee stresses that nothing in this bill should be construed to recognize any liability on the part of the United States for any occurrence prior to enactment or after enactment. Further, the act does not affect other responsibilities or requirements under other provisions of law, including workman's compensation laws.

The committee notes that the property owner will benefit from the voluntary remedial action provided by this act. Clearly, the committee does not want to find that at some later date the United States is faced with a claim from such owner, his heirs, successors or assigns concerning such remedial action or arising from such action.

This section also requires that each cooperative agreement provide effective assurance that the DOE, NRC, and EPA have a permanent right of entry at any time to inspect the processing sites covered by the agreements, to carry out the agreement, and to enforce the act and any rules prescribed under this act. In the case of structures and buildings in the vicinity of the site, this right of entry can be terminated when the Secretary determines that the remedial action is completed.

No cooperative agreement may be effective until it is concurred in by the NRC. It is the intention of the committee that the Secretary and the NRC will work out a procedure where representatives of both will participate in the development of the agreement so that concurrence will not be delayed. However, it is also important to stress that the NRC, as an independent agency, is not expected to rubber stamp these agreements, but to approve only those that clearly meet the requirements and purposes of this act.

Subsection (f) authorizes the DOE in any cooperative agreement entered into with a State or an Indian tribe to provide for the reimbursement of the actual costs incurred for remedial action performed on structures or buildings in the vicinity of a processing site. The Secretary will determine the costs for reimbursement. The reimbursement can only be made to the property owner of record at the time of the remedial action and only for costs incurred by such owner. The remedial action must have been completed prior to enactment of this legislation and the application must have been filed by the owner with the Secretary and the affected State or Indian tribe within one year after a cooperative agreement is approved by the Secretary and the NRC. The remedial action must achieve the purposes of the act and be consistent with EPA standards. Quite clearly unless the remedial action was properly done, reimbursement would not be appropriate. The reimbursement is, of course subject to the finding and percentage limitations of this act.

#### *Section 104—Acquisition and disposition of lands and materials*

The cooperative agreement will require that the affected State acquire the processing site before remedial action is initiated if such acquisition is determined appropriate by the Secretary and the NRC. The acquisition is to include subsurface interests, as well as subsurface interests if the Secretary and the NRC determine that such interests be acquired. Such acquisition is to be accomplished pursuant to State law. It is not intended that the DOE acquire this site.

Provision is also made for removal of the residual radioactive materials from the processing site to another site, if the DOE and NRC agree that such removal is appropriate. The agreement will specify that the depository site to be acquired by the State. Such acquisition will include subsurface interests if the Secretary and the NRC believe such acquisition appropriate.

The committee is concerned about the cost of acquisition under section and expect that it be utilized only when necessary and that care be taken to acquire the lands and interests at the lowest cost. The committee intends that if the materials are to be removed from a processing site, the DOE and NRC will probably not need to acquire that site but merely provide that State enter into an agreement with the property owner for such removal. The committee believes that the acquisition must include subsurface interests to prevent the creation of future hazards to the public through disruption of the tailings in an attempt to recover underlying minerals.

No acquisition is required in the case of structures and buildings outside the processing and depository site.

Once the materials are removed from a processing site, the committee is concerned that future purchasers are given notice that the site containing these materials has been cleaned up. The Secretary is required to issue regulations for such notice that the States must follow, including provision for notice in local land records. Of particular concern, is that the person purchasing the site immediately after the materials are removed or otherwise cleaned up is given adequate and effective notice by the seller. Other than the use of notice in the land records, it is not intended that subsequent sellers provide future purchasers such data. Presumably, the land records can be flagged so that a title searcher will automatically notify future purchasers.

The State may dispose of the processing site acquired by it after completion of the remedial action or the State may retain the site or donate it for public purposes or transfer it, without cost, to the United States. Such disposal must be approved by the DOE and the NRC. Before offering to sell the lands, the State must give the person who sold the property to the State an opportunity to acquire it back at the fair market value determined as of the date of the sale to such person.

The cooperative agreements shall provide that title to the residual radioactive materials or the entire tailings, plus the lands and interests therein, acquired by a State for their final disposition shall be transferred to the Secretary of Energy at no cost to the United States, except possible administrative and legal costs incurred as a result of the transfer. This provision is not to be construed to prevent the Secretary from sharing the costs of acquisition by the State as provided in this act. Once transferred, the materials and land and interests therein cannot be disposed of except as provided in this section.

If the States sells a processing site, it must reimburse the United States from the proceeds of the sale. The State must also sell the site at fair market value as determined by the DOE. Proceeds from such sale, plus any other monies received by the DOE under this act must be deposited as miscellaneous receipts. The annual report of the Secretary should indicate the sums so deposited.

Subsection (h) authorizes the DOE to dispose of subsurface minerals underlying the site on which such materials are located after such site

has been transferred to the DOE. The minerals must be disposed of by sale or lease and in accordance with applicable laws of the United States concerning the sale or lease of minerals. However, the Secretary may only do so if there is adequate assurance that mineral development does not disturb the depository site. There must also be an NRC license. If the depository site is disturbed, the DOE must provide for termination or suspension of mineral development and require the mineral developer to restore the site at no cost to the United States.

*Section 105—Indian tribe cooperative agreements*

This section provides for cooperative agreements between the DOE and Indian tribes. The provisions are nearly identical to the provisions of section 103.

The committee does not intend by this act to affect the responsibilities of the Secretary of the Interior as trustee for any Indian tribe. However, the committee intends that any release executed under section 105 shall be fully binding on the Indian tribe and that the Secretary of the Interior, in exercising such responsibilities, is also fully bound by such waiver and may not recognize any claim covered by it.

*Section 106—Acquisition of land by Secretary*

This section authorizes the DOE to acquire lands for the purpose of consolidating in a safe and environmentally sound manner residual radioactive materials which are removed from processing sites or where otherwise necessary to carry out the purposes of this act. The committee recognizes that it may not be safe or environmentally sound or practicable to have a series of depository sites scattered among several States. Consolidation of these materials into a few sites may be a better solution. This section provides that option.

The section authorizes acquisition by purchase, including condemnation, donation, or exchange. It also provides for the transfer of public lands administered by Interior and available for this purpose. Surplus lands could also be used.

In each acquisition, the DOE is required to consult with the State where the acquisition will occur. In the case of a proposed acquisition, in a State where there is no designated processing site and no active uranium mill operating, the Secretary must obtain the concurrence of the Governor before acquiring the land. The committee believes that concurrence is appropriate where a State does not have tailings. But it does not appear reasonable to give a State such concurrence authority over a Federal program if that State already has active or inactive mill tailings.

Before Federal lands may be transferred to the Secretary, the agency administering those lands must concur. Moreover, the transfer must be consistent with the laws applicable to those lands. The committee does not intend by this section to encourage the use of Federal lands, particularly those that are part of the National Park, Fish and Wildlife, and Forest Systems.

*Section 107—Financial assistance*

This section authorizes the DOE to pay up to 90 percent of the actual costs of remedial action at the designated processing site, including the buildings and structures in the vicinity of such site. Land acquisition is also to be cost shared, including any preparatory or other work at a depository site. The State must pay the remaining

share of the costs. However, the State cannot use Federal funds to pay this share. The Federal share will not cover any State costs incurred in the development, preparation, or execution of cooperative agreement, other than land acquisition costs.

In the case of Indians, the DOE will pay all the costs.

#### *Section 108—Remedial action*

This section provides that the DOE or a person designated by the DOE shall select and perform the remedial action in accordance with EPA general standards. The NRC must concur in both the selection and performance. Provision is also made for consultation with the Indian tribe and the Secretary of Interior. In the case of sites in non-Indian lands, the States are intended to have a significant role in the selection because they are sharing in the costs. It is intended that the DOE have complete flexibility in selecting contractors so long as the NRC concurs.

The DOE is also directed to use technology in performing remedial action that will insure compliance with the EPA standards and insure the safe and environmentally sound stabilization of the materials. The committee is concerned about the adequacy of the technology to deal with this problem. It is intended that the DOE not rush headlong into using technology that may be effective for a short period of time. The committee does not want to visit this problem again with additional aid. The remedial action must be done right the first time.

No provision for R and D was included because it is believed that the DOE has adequate R and D authority now. The committee urges that the DOE and EPA move rapidly to improve the technology for remedial action.

This section precludes undertaking any remedial action before EPA finally promulgates general standards. Clearly, this is essential. The DOE should not proceed until these standards are developed. Even the selection of depository sites could be affected by such standards.

It should be noted that nothing in this title should be construed as affecting any existing responsibility of NRC, DOE, and EPA to comply with NEPA concerning this remedial action program.

Subsection (b) requires the DOE to evaluate the mineral content of these materials and to determine if recovery is practicable. The DOE is then authorized, with NRC concurrence, to enter into contracts for recovery of the minerals, consistent with the EPA standards and the purposes of this act. This recovery may take place as part of the remedial action effort. The cost of recovery, including related work, to insure compliance with such standards and purposes will be paid by the person recovering the minerals. The States and the Secretary will participate in the net profits. The amount of the profit to be shared will be determined by the DOE as part of the agreement. The committee's intention is that the person recovering the minerals be able to make a reasonable profit. Clearly, such recovery should only be undertaken if it is consistent with the purposes of this Act and will not impede effective and prompt remedial action.

#### *Section 109—Rules*

This section provides for DOE rules and regulations in accordance with section 501 of the DOE Organization Act.

*Section 110—Enforcement*

This section provides for enforcement through the use of civil penalties and equitable remedies as appropriate. Section 502(c) of the DOE Organization Act applies to this section.

*Section 111—Public participation*

This section directs the DOE, EPA, and NRC to allow the public an opportunity to participate, particularly at the local level, in the designation of processing sites and the establishment of priorities, and in the selection of depository sites, the execution of cooperative agreements, and other matters. Hearings at the local level are required, where requested. The objective is to give the people and officials affected an opportunity to learn what is planned for their area and its impact on them. It is not intended that hearings be held at all sites, however. Moreover, it is expected that this provision will not delay the program, but should be helped in gaining public support.

*Section 112—Termination; authorization*

This section requires that the remedial action program terminate 7 years after the EPA standards are finally promulgated, unless Congress extends the program by late authorization. This termination is limited to the remedial action program only. It is not intended to terminate the enforcement or other authorities under the Act for maintaining and monitoring depository sites once remedial action is completed.

This section also provides that appropriation for title I shall be established in annual authorization and appropriation acts for the DOE. Funds for fiscal year 1979 are included in the DOE authorization bill for fiscal year 1979 (H.R. 11392) which is pending House Floor action.

*Section 113—Limitation*

This section is intended to insure compliance with Budget Act requirements.

*Section 114—Reports to Congress*

Subsection (a) provides for an annual report to Congress concerning actions under title I and title II of the bill.

Subsection (b) directs the DOE to report by July 1979 to Congress concerning various locations under the jurisdictions of the DOE and other Federal agencies where residual radioactive materials or other radioactive wastes are located. These wastes do not include spent fuel from nuclear power reactors. The report must identify the site and the agency with jurisdiction. It will also identify structures, buildings, or other improvements in the vicinity of the sites which are contaminated or may be contaminated by such materials or tailings. The report must describe the condition of the sites and materials and tailings and what has been done or is planned to stabilize the sites and make them safe, including a timetable for action, if needed. The committee expects that the EPA and the NRC will participate in the study and report.

The committee understands there that are a number of federally owned or controlled sites with such materials or tailings, such as the TVA site mentioned earlier and a DOE site in Lewiston, N. Y., and some in New Jersey. The committee wants to have these sites identified by the DOE and have data concerning the health or environmental problems associated with the sites and on what, if anything, is being done to eliminate such problems and when.

*Section 115—Active operations; liability for remedial action*

This section prohibits DOE from expending funds for remedial action at active mill tailing sites. The committee is aware that at some mills, tailings were accumulated years ago under Federal contract. But, as noted earlier in this report, the tailings are commingled with tailings derived from commercial operations. Also, they are subject to regulation by the NRC or the States. Consistent with the views of the committee as to the basis for title I, the committee does not believe it appropriate to finance the stabilization of any part of these tailings which are subject to regulation under the 1954 act. However, Subcommittee Chairman Dingell has recently written to the DOE concerning these mills to obtain more data. The committee expects NRC to exercise all its responsibility concerning these sites under the 1954 law.

This section also directs the Justice Department to study each site eligible for remedial action under title I in order to determine the identity of those who owned or controlled the site before enactment of this act, including past owners. The study must also determine the legal responsibility, if any, of such persons under any law or rule of law in effect at the time the mill was producing uranium for Federal purposes for the reclamation or remedial action at the site. Justice must provide a report of its findings to Congress. Based on the study, the Attorney General is directed, to the extent he deems appropriate and in the public interest, to take action under Federal or State law, in effect at the time of the Federal contract for the purchase of uranium from the mill, to require reimbursement from such person of all or part of remedial action costs of the United States for which he determines such person is liable.

During hearings concerning this legislation, the DOE contended that it was difficult to "fix legal responsibility for the tailings problem". The DOE said:

The Federal Government and States do not appear to be legally responsible since they exerted neither operational control or regulatory jurisdiction over the tailings. The Federal Government was a mere purchaser of product from a number of privately-owned companies.

Insofar as the companies that operated the mills are concerned, we have a rather mixed bag of circumstances. Some companies have acted responsibly and endeavored to establish and maintain a cover of vegetation on the tailings to stop wind and water erosion. Others sold the properties or simply allowed the lease on the land to expire. Some of the corporations no longer exist. There were no requirements in the Government contracts for tailings stabilization and the companies were not aware of the potential health and safety risks resulting from exposure to the tailings. It therefore is questionable whether any companies are legally responsible.

In response to questions, the DOE provided two memoranda prepared by the AEC which purport to be "legal opinions" concerning AEC's regulation of the tailings. Neither opinion appears to deal with the question at issue. Indeed, one opinion deals with the question of transferring wastes from the mills to other persons and not with the question of stabilization and control at the mills.

T  
t  
a  
is  
ti  
a  
w  
ci  
J  
o  
  
a  
u  
S  
a  
e  
t  
c  
a  
i  
S  
  
A  
w  
p  
s  
n  
S  
  
A  
  
o  
d  
b  
c  
c  
o  
n  
s  
i  
r  
d  
r  
e  
e  
e  
v  
  
o  
f



The committee is not persuaded that liability exists or does not exist. The objective of this provision is to require a careful study by the Justice Department to resolve the issue and, if appropriate, to require action to recover costs from the responsible persons. Clearly, if a site is not currently owned or controlled by the person who contracted with the United States to sell the uranium, such action to recover remedial action costs is inappropriate. But it is the intention of the committee that we find out. The committee stresses that this section is not intended to create new or additional law under which Justice could recover costs. Justice must look to the law as it was at or prior to termination of mill operations.

#### TITLE II—URANIUM MILL TAILINGS LICENSING AND REGULATION

This title amends the Atomic Energy Act of 1954. It reinforces the authority of the Nuclear Regulatory Commission to regulate the uranium mill process and mill tailings disposal. The "Agreement States" program, under which certain States license uranium milling activities, is modified to require that State licensing standards be equivalent to those of the Commission, and it requires public participation and environmental review as part of the State licensing procedures. Title II also reinforces the NRC's authority to make financial arrangements with uranium milling companies to insure proper stabilization and care of uranium mill tailings.

##### *Section 201—Definition*

This section amends the definition of "byproduct material" in the Atomic Energy Act of 1954 to include uranium mill tailings and other wastes. Previously, tailings have been controlled through the licensing process for uranium mills. This amendment would subject tailings to specific licensing authority. (Section 209 requires that the milling and mill tailings licensing process be consolidated.)

##### *Section 202—Custody of disposal site*

This section adds a new section 83 to Chapter 8 of the Atomic Energy Act of 1954.

Subsection (a) of the the new section requires that any license issued or renewed under sections 62 or 81 of the 1954 act, after the effective date of the section, for an activity resulting in the production of any byproduct material as defined in section 11e.(2) of the 1954 act must contain terms and conditions prescribed by the NRC. These terms and conditions are primarily designed to assure that, prior to termination of any license, the licensee will comply with decontamination, decommissioning, and reclamation standards prescribed by the NRC pursuant to the new section 161x of the 1954 act for the mill sites, including any depositories of the byproduct material. Such terms and conditions will also provide that title and control of such byproduct material shall be transferred to the United States. Licenses in effect on enactment of this act must, depending on which event just occurs, either contain such terms and conditions when next renewed after the effective date of the section or shall comply with these statutory provisions upon termination of the license.

Subsection (b) requires that licenses issued after the effective date of the new section 83 must include terms and conditions for the transfer of land used to dispose of tailings from active operations to the

United States. This will occur before termination of the license, but after the land has met the requirements of subsection (a). This transfer will include surface and subsurface interests. Similar provision is made for the transfer of such interest to the United States in the case of a license in effect before the effective date of this section. However, in such case, the NRC has some discretion because such licenses may not own the subsurface or even the surface interests and thus could not transfer the land to the United States.

Once title to the land and interests therein are transferred to the United States they cannot be disposed of. However, the underlying minerals may be sold or leased as provided in section 104(h) of this act.

The above provisions concerning transfer of title do not apply to Indian lands. In the case of those lands, provision is made for agreements between the NRC and the Indians to assure proper maintenance and monitoring by the United States.

The NRC is required to make a determination at the time of termination of a license that these requirements and standards have been met. The determination must be in writing.

*Section 203—Authority to establish certain requirements*

This section amends section 161 of the 1954 act by adding a new section to that section providing for the issuance by rule, regulation, or order of standards and instructions concerning financial arrangements which must be made by licensees for the cost of stabilization and, if necessary, the long-term cost of maintenance and monitoring. Such arrangements must be made before a license is terminated, and may be by bond, surety, or other means to insure that the NRC has the flexibility to effectively implement this provision fully.

Subparagraph (1) requires the Commission to regulate the disposal of uranium milling and mill tailings in such a way that, when each license is terminated, reclamation and stabilization already has been implemented by the licensee and so that no long-term maintenance and monitoring is required to protect the public and the environment.

This section is effective on the date of enactment.

The committee intends that the NRC comply with the applicable provisions of the so-called Administrative Procedures Act in issuing the rules, regulations, or issuing orders authorized by this section. This is not intended to mean that such rulemaking, etc., is subject to the adjudication provisions of that law. But, as a minimum, the rule-making provisions of this law (5 U.S.C. 553) shall apply.

The committee notes that many of the provisions of title II of the 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 and provide a means to alleviate or mitigate those problems where appropriate while assuring that the purposes of this act are fully met. The committee believes and expects that these purposes should be met without causing mill closings and putting people out of work. At the same time, the committee recognizes that, despite past efforts by a licensee, the control and stabilization may not be adequate to meet the requirements of these amendments to the 1954 act.

*Section 204—Cooperation with States*

This section amends section 274 of the Atomic Energy Act to provide for adherence by Agreement States to minimum Federal standards for uranium mill tailings control, stabilization and disposal.

It allows States to discontinue licensing or uranium milling and mill tailings, while retaining authority to continue licensing other radioactive materials licensable under the Agreement States' program. Under current law, States which did not want to regulate uranium milling would have to terminate their entire agreement program with the Commission. It also amends current provisions of law concerning the review of these agreements.

Subsection (e) adds a new subsection to section 274. It requires that State standards for licensing uranium mill tailings and uranium milling must to the extent practicable be equivalent to, or exceed, those of the Commission. In addition, licenses issued by States must require that, upon termination of such licenses, mill tailings disposal sites will be transferred without cost to permanent Federal custody. State licensing procedures are required to include provisions for public participation and environmental reviews. This new subsection includes the preparation of a written analysis "consistent with" the provisions of NEPA. The committee stresses the words "consistent with". It is not the intention that a State enact NEPA laws or adopt guidelines such as are now in effect under NEPA. The intent is to insure that any analysis (by a State) is carried out in a manner that is consistent with NEPA, so that mills located in a non-agreement State are not subject to different requirements than their competitors which are located in an agreement State. Indeed, that is an objective of the entire subsection. X

Subsection (f) reserves the right of the Commission to determine that mill tailings piles created under Agreement State licensing have met applicable requirements before they are turned over to Federal custody.

Subsection (g) requires the Commission to review the regulatory programs of each Agreement States, as soon as practicable 3 years after the date of enactment of the act, to determine whether the standards applied by the State are at least equivalent to those of the Commission. If the Commission determines that the State's program does not comply, it may suspend or terminate that part of its agreement with the State under which the State is permitted to license and regulate uranium milling and mill tailings activities. Regulatory authority would then revert to the Commission.

Provision is also made for amending such agreements to insure that fees collected by States for reclamation or long-term maintenance and monitoring are transferred to the United States upon termination of a license. Also, if such fees are collected, they must be adequate. The committee does not want to have this provision construed as requiring or discouraging such fees. That is a State decision.

Similarly, the committee intends that State laws and procedures govern the licensing, but this act establishes minimum procedures for this purpose.

Subsection (h) continues for 3 years State control over these tailings. After that period, if a State has not entered into an agreement, the NRC will license the mills.

*Section 205—Authorities of Commission respecting certain byproduct material*

Section 205 authorizes the Commission to promulgate, implement and enforce regulations governing permanent Federal custody of uranium mill tailings disposal sites and governing the activities of the Department of Energy under title I of the act.

*Section 206—Authority of Environmental Protection Agency respecting certain byproduct material*

Subsection (a)(1) requires EPA to set standards of general applicability for sites covered by title I of this bill. The standards must be consistent with the Solid Waste Disposal Act.

The committee observes that EPA testified that it could set such standards in 6 months. The committee was skeptical and allowed more time. However, EPA is encouraged to act within the 6 months goal EPA established for itself.

Subsection (a)(2) provides for such general standards for the title II program.

These provisions differ from those in the version of H.R. 13650 as reported by the Committee on Interior and Insular Affairs. Since reporting, both committees held considerable discussions with the EPA and NRC and developed these provisions. In an August 9, 1978, letter to Subcommittee Chairman Dingell, Administrator Costle said:

Title II would prospectively grant the uranium mill tailings licensing function to the NRC. We agreed that NRC would establish management requirements for the uranium mill tailings; that such requirements would be comparable, to the maximum extent practicable, to requirements applicable to the possession, transfer, and disposal of similar hazardous material under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976; and that in establishing general management requirements, the NRC would obtain the concurrence of EPA.

Under both titles, EPA would retain its generally applicable standards-setting authority under the Atomic Energy Act of 1954, as amended.

I believe this formulation for agency responsibility will best contribute to an effective program for the control of uranium mill tailings. Both EPA and NRC believe it is necessary to implement such a program as soon as possible.

The committee is satisfied with this resolution of a very difficult problem. The committee stresses that the EPA standards are not to be site-specific.

The committee bill does not contain a disclaimer concerning the Clean Air Act and the Federal Water Pollution Control Act. It is unnecessary. The bill does not affect those laws specifically, nor is it intended to do so by implication or otherwise. The committee did not think it wise to mention some environmental laws since failure to mention some would preclude the applicability of those not mentioned. The committee merely stresses that this Act does not change those laws.

*Section 207—Authorization of appropriation for grants*

This section authorizes \$500,000 in fiscal year 1980 for grants to those States with agreements with the NRC.

*Section 208—Effective Date*

The bill is effective on enactment unless otherwise stated.

*Section 209—Consolidation of licenses and procedures*

This section directs the NRC to consolidate all license and licensing procedures under amendments made by this title with other such license and licensing procedures under the 1954 act, to the greatest extent practicable.

**TITLE III—STUDY AND DESIGNATION OF TWO MILL TAILING SITES IN  
NEW MEXICO**

This title provides for a study by the NRC of two actual mill sites in New Mexico which purportedly have segregated those tailings piles that were derived from production for uranium for Federal purposes. From those derived from production of uranium for commercial purposes the NRC must determine if the 1954 law, as amended by this bill, provides effective regulation and control of these sites. If the study concludes that such law is not adequate, then the DOE may, within 90 days after completion of the study, designate the sites as eligible for assistance under title I of the bill. This designation will enable the DOE to enter into agreements with New Mexico for remedial action at such sites. Before the designation becomes final, the designation, together with cost and other data, must be reported to Congress, and wait for the lapse of 120 calendar days before initiating agreement with the State and remedial action.

**ECONOMIC IMPACT**

This legislation is not expected to have any significant inflationary impact. Over the next 7 years, 22 tailing sites will be treated at a total cost ranging anywhere from \$15 million to \$200 million, depending largely upon whether tailings will be treated and stored at their present location or, instead, moved to newly prepared disposal sites. Little of this cost is expected to be incurred during the next 3 years because of the time required to identify and prepare disposal sites. Additional costs may be borne by individual states if new disposal sites are required. But even taking these additional costs into account, the impact of the legislation on inflation and overly economic performance is expected to be immeasurable.

**COST OF LEGISLATION**

The committee requested a report from the Congressional Budget Office when H.R. 13650 was ordered reported on September 26, 1978. However, the CBO was unable to respond by the time of filing of this report.

The bill does not authorize any appropriations in fiscal year 1979.

**OVERSIGHT STATEMENT—COMMITTEE ON GOVERNMENT OPERATIONS**

No findings or recommendations on oversight activities pursuant to clause 2(b)(2) rule X and clause 2(1)(2)(D) under rule XI of the rules of the House of Representatives have been submitted by the Committee on Government Operations for inclusion in this report.

**DEPARTMENTAL REPORTS**

The committee received the following reports:

DEPARTMENT OF ENERGY,  
Washington, D.C., September 14, 1978.

HON. JOHN D. DINGELL,  
Chairman, Subcommittee on Energy and Power, Committee on Interstate  
and Foreign Commerce, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your request for the views of the Department of Energy (DOE) on the August 14, 1978, Committee Print, cited as the "Uranium Mill Tailings Radiation Control Act of 1978."

A number of changes agreed to by the Subcommittee in its markup of the "Residual Radioactive Materials Act of 1978" (the Administration bill) cause us some concern. As you know, the Administration bill provided for a cooperative Federal/State program in which the Federal Government would pay 75 percent of the direct costs of remedial action, while the State would pay 25 percent. The justifications for this financing formula were clearly set forth in our testimony before the Subcommittee. DOE considers the reasons for the 75/25 percent split to be compelling and persuasive; however, we understand the motivations which influenced the Subcommittee to limit the States' share to 10 percent of the costs of the program. While DOE prefers the funding formula of the Administration bill, we nevertheless are pleased with the Subcommittee's decision not to impose a ceiling upon the States' contribution to the remedial action program.

With respect to the question of limiting the liability of the United States in connection with the performance of the remedial action, DOE continues to support the language proposed in the Administration bill, which provided for a release of liability dating from enactment of the legislation through the completion of the remedial action. Such a release would not have affected the United States' liability, if any, for actions taken either prior to or after completion of the remedial action, but would merely have protected the United States during the time specified. In any event, although we would prefer a broader waiver, DOE is pleased that the concept of a limited release of liability has been accepted by the Subcommittee as reflected in Section 102(c) of the Committee Print.

As we understand it, the licensing and regulation portion of the Committee Print provides that the Environmental Protection Agency (EPA) will promulgate performance standards for the remedial action while the Nuclear Regulatory Commission is to have exclusive jurisdiction over the licensing of uranium mill tailings and enforcement of the performance standards set by EPA. We trust that the report language will clearly define the respective roles of these two agencies in order to avoid any possible conflict or inconsistency.

My staff and I appreciate the time and effort your Subcommittee has spent in marking up this legislation. We will be happy to provide the full Committee with any further information or assistance it may require during its markup.

The Office of Management and Budget has advised that there is no objection to the submission of this report from the standpoint of the Administration's program.

Sincerely,

JOHN F. O'LEARY,  
Deputy Secretary.

U.S. DEPARTMENT OF THE INTERIOR,  
OFFICE OF THE SECRETARY,  
Washington, D.C., September 15, 1978.

Hon. HARLEY O. STAGGERS,  
Chairman,  
Committee on Interstate and Foreign Commerce,  
U.S. House of Representatives,  
Washington, D.C.

DEAR MR. CHAIRMAN: This responds to your request for our view on H.R. 13650 as reported by the Subcommittee on Energy and Power of the House Interstate and Foreign Commerce Committee, the proposed "Uranium Mill Tailings Radiation Control Act of 1978."

We do not object to enactment of H.R. 13650 as reported by the Subcommittee on Energy and Power of the House Interstate and Foreign Commerce Committee if the bill is amended as suggested herein.

Title I of H.R. 13650 would authorize the Secretary of Energy to enter into cooperative agreements with States to perform remedial action at inactive uranium processing sites. Title II would amend the Atomic Energy Act of 1954 to include uranium mill tailings within the definition of "byproduct material" and would require that Nuclear Regulatory Commission licenses and renewals require that prior to termination of a license, the licensee comply with NRC-established decontamination, decommissioning and reclamation standards and requirements, and that ownership of the byproduct material be transferred to the United States on termination.

We have the following comments on the provisions of H.R. 13650 as reported by the Subcommittee on Energy and Power of the House Interstate and Foreign Commerce Committee. Section 104(b)(2) provides that State acquisition of a site for disposition and stabilization of residual radioactive materials shall not be required if the Secretary of Energy, with the concurrence of the Nuclear Regulatory Commission, designates a site owned by a Federal agency for such disposition and stabilization. We believe that section 104(b)(2) should incorporate the provision in section 106(a), governing acquisition of land by the Secretary of Energy, which permits the Secretary of the Interior to make public lands available to the Secretary of Energy for disposition of residual radioactive materials in accordance with other applicable provisions of law. We also suggest that section 106(a)(2) be amended to read: "the Secretary of the Interior may make available public lands administered by him for such purposes. . . ."

Section 105(a)(1) of the bill provides that cooperative agreements entered into between the Secretary of Energy and Indian tribes shall require that Indian tribes execute a waiver releasing the United States from any liability concerning the remedial action performed by the Secretary of Energy or his designee. This provision should be amended to include the statement that the provision does not affect the responsibilities of the Secretary of the Interior as trustee for any Indian tribe.

In order to consolidate residual radioactive materials for storage in a safe manner, section 106 of the bill authorizes the Secretary of Energy to acquire land, and provides, in addition, that the Secretary of the Interior may "make available public lands for such pur-

poses in accordance with other applicable provisions of law." We believe that section 106(a)(2) should apply to all managers of federally owned land, not just the Secretary of the Interior.

Section 108(a)(1) authorizes the Secretary of Energy to select and perform remedial action. The selection and performance of remedial action is to be done with the concurrence of the Nuclear Regulatory Commission and in consultation, as appropriate, with the Indian tribe and the Secretary of the Interior. The last sentence of section 108(a)(1) provides that since a State "must share in the costs of such remedial action, the State shall participate fully in the selection thereof." The word "such" appears to imply that States pay part of the costs of remedial action pursuant to agreements between the Secretary of Energy and Indian tribes. Since this is not the case, we recommend that the last sentence of section 108(a)(1) be amended to say, "Since a State must, pursuant to an agreement between the Secretary of Energy and the State, share in the costs of remedial action, the State shall participate fully in the selection of the type of remedial action to be performed."

The Office of Management and Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely,

GUY R. MARTIN,  
*Assistant Secretary.*

#### CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

#### ATOMIC ENERGY ACT OF 1954

##### CHAPTER 8. BYPRODUCT MATERIAL

- Sec. 81. Domestic Distribution.
- Sec. 82. Foreign Distribution of Byproduct Material.
- Sec. 83. Ownership and custody of certain byproduct material and disposal sites.*
- Sec. 84. Authorities of Commission respecting certain byproduct material.*

##### CHAPTER 19. MISCELLANEOUS

- Sec. 241. Transfer of Property.
- Sec. 251. Report to Congress.
- Sec. 261. Appropriations.
- Sec. 271. Agency Jurisdiction.
- Sec. 272. Applicability of Federal Power Act.
- Sec. 273. Licensing of Government Agencies.
- Sec. 274. Cooperation with States.
- Sec. 275. Health and environmental standards for uranium mill tailings.*
- Sec. 281. Separability.
- Sec. 291. Short Title.



## CHAPTER 2. DEFINITIONS

SEC. 11. DEFINITIONS.—The intent of Congress in the definitions as given in this section should be construed from the words or phrases used in the definitions. As used in this Act:

a. \* \* \*

\* \* \* \* \*

e. The term "byproduct material" means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

\* \* \* \* \*

SEC. 8. OWNERSHIP AND CUSTODY OF CERTAIN BYPRODUCT MATERIAL AND DISPOSAL SITES.—

a. Any license issued or renewed after the effective date of this section under section 62 or section 81 for any activity which results in the production of any byproduct material as defined in section 11e.(2) shall contain such terms and conditions as the Commission determines to be necessary to assure that, prior to termination of such license—

(1) the licensee will comply with decontamination, decommissioning, and reclamation standards prescribed by the Commission for sites (A) at which ores were processed primarily for their source material content and (B) at which such byproduct material is deposited, and

(2) ownership of any byproduct material defined in section 11e.(2) which resulted from such licensed activity shall be transferred to the United States.

Any license in effect on the date of the enactment of this section shall either contain such terms and conditions on renewal thereof after the effective date of this section, or shall comply with paragraphs (1) and (2) upon the termination of such license, whichever first occurs.

b. (1) Any such license which is issued after the effective date of this section shall also contain such terms and conditions as the Commission determines to be necessary to assure that, prior to termination of such license and after the licensee has complied with the requirements of subsection a., any land (other than land owned by the United States) which is used for the disposal of such byproduct material shall be transferred to the United States, including both the surface estate and any interest in the subsurface estate which may be necessary to protect the public health, welfare, and the environment. Following the Commission's determination of compliance under subsection d., the Secretary of Energy or the Federal agency designated by the President under subsection c. shall assume title and custody of the byproduct material and land transferred as provided in this subsection. Such officer or instrumentality shall maintain such material and land in such manner as will protect the public health and safety and the environment. Such custody may be transferred to another officer or instrumentality of the United States only upon approval of the President upon his determination that such officer or instrumentality meets the requirements of subsection c. Notwithstanding any other provision of law, such property and materials shall be maintained pursuant to a license issued by the Commission in such manner as will protect the public health, safety, and the environment.

(2) In the case of any such license under section 62 which was in effect on the effective date of this section, the Commission may require, before the termination of such license, such transfer of land (as described in paragraph (1) as may be necessary to protect the public health, welfare, and the environment from any effects associated with such byproduct material.

(3) Material and land transferred to the United States as required under this subsection shall be transferred without cost to the United States (other than administrative and legal costs incurred in carrying out such transfer). The United States shall not transfer title to material or property acquired under this subsection to any person, unless such transfer is in the same manner as provided under section 104(h) of the Uranium Mill Tailings Radiation Control Act of 1978.

(4) The provisions of this subsection respecting transfer of title and custody to land to the United States shall not apply in the case of lands held in trust by the United States for any Indian tribe or lands owned by such Indian tribe subject to a restriction against alienation imposed by the United States. In the case of such lands which are used for the disposal of byproduct material as defined in section 11e.(2), the licensee shall be required to enter into such arrangements with the Commission as may be appropriate to assure the long-term maintenance and monitoring of such lands by the United States.

c. The Secretary of Energy or such Federal agency as the President shall designate shall have custody of such property or material. The President shall not designate the Commission for such purposes.

d. Upon termination of any license to which this section applies, the Commission shall determine whether or not the licensee has complied with all applicable standards and requirements under such license.

#### SEC. 84. AUTHORITIES OF COMMISSION RESPECTING CERTAIN BYPRODUCT MATERIAL—

a. The Commission shall insure that the management of any byproduct material as defined in section 11e.(2) is carried out in such manner as—

(1) the Commission deems appropriate to protect the public health and safety and the environment,

(2) conforms with applicable general standards promulgated by the Administrator of the Environmental Protection Agency under section 275, and

(3) conforms to general requirements established by the Commission, with the concurrence of the Administrator, which are to the maximum extent practicable, comparable to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulated by the Administrator under the Solid Waste Disposal Act.

b. In carrying out its authority under this section, the Commission is authorized to—

(1) by rule, regulation, or order require persons, officers, or instrumentalities exempted from licensing under section 81 of this Act to conduct monitoring, perform remedial work, and to comply with such other measures as it may deem necessary or desirable to protect health or to minimize danger to life or property, and

(2) make such studies and inspections and to conduct such monitoring as may be necessary.

*Any violation by any person other than the United States or any officer or employee of the United States of any rule or order of the Commission established under this section or section 83 shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 234. Nothing in this section affects any authority of the Commission under any other provision of this Act.*

\* \* \* \* \*

#### CHAPTER 14. GENERAL AUTHORITY

SEC. 161. GENERAL PROVISIONS.—In the performance of its functions the Commission is authorized to—

a. \* \* \*

\* \* \* \* \*

*x. establish by rule, regulation, or order, after public notice, such standards and instructions as the Commission may deem necessary or desirable to ensure—*

*(1) that an adequate bond, surety, or other financial arrangement (as determined by the Commission) will be provided, before termination of any license for byproduct material as defined in section 11e.(2), by a licensee to permit the completion of all requirements established by the Commission for the decontamination, decommissioning, and reclamation of sites, structures, and equipment used in conjunction with byproduct material as so defined, and*

*(2) that—*

*(A) in the case of any such license issued or renewed after the date of the enactment of this subsection, to the maximum extent practicable, after termination of such license, no long-term maintenance and monitoring of such sites, structures, and equipment will be necessary; and*

*(B) in the case of each license for such material (whether in effect on the date of the enactment of this section or issued or renewed thereafter), if the Commission determines that any such long-term maintenance and monitoring is necessary, the licensee, before termination of any license for byproduct material as defined in section 11e.(2), will make available such bonding, surety, or other financial arrangements as may be necessary to assure such long-term maintenance and monitoring.*

\* \* \* \* \*

#### CHAPTER 19. MISCELLANEOUS

SEC. 274. COOPERATION WITH STATES.—

a. \* \* \*

b. Except as provided in subsection c., the Commission is authorized to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority of the Commission under chapters 6, 7, and 8, and section 161 of this Act, with respect to any one or more of the following materials within the State—

*(1) byproduct materials as defined in section 11e.(1);*

*(2) byproduct materials as defined in section 11e.(2);*

[2] (3) source materials;

[3] (4) special nuclear materials in quantities not sufficient to form a critical mass.

During the duration of such an agreement it is recognized that the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards.

c. No agreement entered into pursuant to subsection b. shall provide for discontinuance of any authority and the Commission shall retain authority and responsibility with respect to regulation of—

(1) the construction and operation of any production or utilization facility;

(2) the export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility;

(3) the disposal into the ocean or sea of byproduct, source, or special nuclear waste materials as defined in regulations or orders of the Commission;

(4) the disposal of such other byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.

*The Commission shall also retain authority under any such agreement to make a determination that all applicable standards and requirements have been met prior to termination of a license for byproduct material as defined in section 11e(2).* Notwithstanding any agreement between the Commission and any State pursuant to subsection b., the Commission is authorized by rule, regulation, or order to require that the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source, byproduct, or special nuclear material shall not transfer possession or control of such product except pursuant to a license issued by the Commission.

d. The Commission shall enter into an agreement under subsection b. of this section with any State if—

(1) The Governor of that State certifies that the State has a program for the control of radiation hazards adequate to protect the public health and safety with respect to the materials within the State covered by the proposed agreement, and that the State desires to assume regulatory responsibility for such materials; and

(2) the Commission finds that the State program is *in accordance with the requirements of subsection o. and in all other respects compatible with the Commission's program for the regulation of such materials*, and that the State program is adequate to protect the public health and safety with respect to the materials covered by the proposed agreement.

\* \* \* \* \*

j. The Commission, upon its own initiative after reasonable notice and opportunity for hearing to the State with which an agreement under subsection b. has become effective, or upon request of the Governor of such State, may terminate or suspend *all or part of its agreement with the State and reassert the licensing and regulatory authority vested in it under this Act*, if the Commission finds that

(1) such termination or suspension is required to protect the public health and safety, or (2) the State has not complied with one or more of the requirements of this section. The Commission shall periodically review such agreements and actions taken by the States under the agreements to ensure compliance with the provisions of this section.

\* \* \* \* \*

n. As used in this section, the term "State" means any State, Territory, or possession of the United States, the Canal Zone, Puerto Rico, and the District of Columbia. As used in this section, the term "agreement" includes any amendment to any agreement.

o. In the licensing and regulation of any activity which results in the production of byproduct material as defined in section 11e.(2) under an agreement entered into pursuant to subsection b., a State shall require—

(1) compliance with the requirements of subsections a.(2), b.(1), and b.(2) of section 83 (respecting ownership by the United States of byproduct material and land), and

(2) compliance with standards which shall be adopted by the State for the protection of the public health, safety and the environment from hazards associated with such material which are equivalent, to the extent practicable, or more stringent than, standards adopted and enforced by the Commission for the same purpose pursuant to sections 83a.(1) and 84a. and 275, and

(3) procedures which—

(A) in the case of licenses, provide for advance public notice, an opportunity for a public hearing with rights to present direct and rebuttal evidence and conduct cross-examination, and a written decision which is based only on evidence in the record and which is subject to judicial review;

(B) in the case of rulemaking, provide opportunity for public participation in the form of written comments or a public hearing and which provide for judicial review of the rulemaking decision;

(C) require the preparation for each license of a written analysis consistent with the policy and provisions of the National Environmental Policy Act of 1969 of the impact of the operations under such license on the environment, which shall be available to the public before the commencement of any such proceedings; and

(D) prohibit any major construction activity with respect to such material, prior to complying with the provisions of subparagraph (C).

If any State under such agreement imposes upon any licensee any requirement for the payment of funds to such State for the reclamation or long-term maintenance and monitoring of such material, such agreement shall be amended by the Commission to provide that such State shall transfer to the United States upon termination of the license issued to such licensee the total amount collected by such State from such licensee for such purpose. If such payments are required, they must be sufficient to insure compliance with the standards referred to in paragraph (2). No State shall be required under paragraph (2) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted in such State by the Commission.

**SEC. 275. HEALTH AND ENVIRONMENTAL STANDARDS FOR URANIUM MILL TAILINGS—**

a. (1) As soon as practicable, but not later than one year after the date of enactment of this section, the Administrator of the Environmental Protection Agency (hereinafter referred to in this section as the "Administrator") shall, by rule, promulgate standards of general application (including standards applicable to licenses under section 104(h)) for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with residual radioactive materials (as defined in section 101 of the Uranium Mill Tailings Radiation Control Act of 1978) located at inactive uranium mill tailings sites and depository sites for such materials selected by the Secretary of Energy, pursuant to title I of the Uranium Mill Tailings Radiation Control Act of 1978. Standards promulgated pursuant to this subsection shall, to the maximum extent practicable, be consistent with the requirements of the Solid Waste Disposal Act.

(2) As soon as practicable, but not later than eighteen months after the enactment of this section, the Administrator shall, by rule, promulgate standards of general application for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with the processing and with the possession, transfer, and disposal of byproduct material, as defined in section 11e.(2) of this Act at sites at which ores are processed primarily for their source material content, or which are used for the disposal of such byproduct material.

(3) Standards promulgated pursuant to this section for nonradiological hazards shall, notwithstanding any other provision of this Act or any other law be consistent with, to the greatest extent possible, the standards of the Solid Waste Disposal Act applicable to such hazards.

(4) The Administrator may from time to time amend, modify, or change any standard promulgated under this section.

b. (1) Before the promulgation of any rule pursuant to this section, the Administrator shall publish the proposed rule in the Federal Register, together with a statement of the research, analysis, and other available information in support of such proposed rule, and provide a period of public comment of at least thirty days for written comments thereon and an opportunity, after such comment period and after public notice, for any interested person to present oral data, views, and arguments at a public hearing. There shall be a transcript of any such hearing. The Administrator shall consult with the Commission and the Secretary of Energy before promulgation of any such rule.

(2) Judicial review of any rule promulgated under this section may be obtained by any interested person only upon such person filing a petition for review within sixty days after such promulgation in the United States court of appeals for the Federal judicial circuit in which such person resides or has his principal place of business. A copy of the petition shall be forthwith transmitted by the clerk of court to the Administrator. The Administrator thereupon shall file in the court the written submissions to, and transcript of, the written or oral proceedings on which such rule was based as provided in section 2112 of title 28, United States Code. The court shall have jurisdiction to review the rule in accordance with chapter 7 of title 5, United States Code, and to grant appropriate relief as provided in such chapter. The judgment of the court affirming, modifying, or setting aside, in whole or in part, any such rule shall be final, subject to judicial review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28, United States Code.

*(3) Any rule promulgated under this section shall not take effect earlier than sixty calendar days after such promulgation.*

*c. Nothing in this Act applicable to byproduct materials, as defined in section 11e.(2) of this Act, shall be construed to affect the authority of the Administrator under section 402 of the Federal Water Pollution Control Act or under the Clean Air Act.*

\* \* \* \* \*

**SUPPLEMENTAL VIEWS ON H.R. 13650—URANIUM MILL  
TAILINGS RADIATION CONTROL ACT OF 1978**

We concur with the majority on the need to take remedial action to safely dispose of residual uranium mill tailings. These tailings are an unavoidable by-product of the first stage of the nuclear fuel cycle. When uranium is extracted from raw ore, a radioactive, sand-like waste remains. This waste—called uranium mill tailings—can constitute a health hazard unless proper disposal methods are utilized. By sharing costs on a 90/10 basis with the affected states, the Federal government can effectively do its part to safely dispose of these tailings, which were once thought to be harmless.

We remain concerned, however, about the Attorney General's authority to study the liability (for remedial action costs), if any, of former owners or operators of these processing sites. After all, when these former owners or operators negotiated their cost-plus contracts with the Federal government, a very small amount was set aside for tailings disposal because the tailings were not believed to be health hazards. The cost of remedial action now contemplated to safely dispose of these tailings far exceeds that prior bargained-for amount, and will negate bargained-for profits.

After the study is completed, the Attorney General is authorized to take action under any appropriate law to require payment by a person found to be liable. We do not believe that the Attorney General should be empowered to enforce state laws in taking action against these former owners or operators. However, the majority has assured us that the Attorney General must exercise discretion in instituting any civil actions to recover remedial costs. Specifically, the majority has agreed that if the site is not currently owned or controlled by the persons who contracted with the United States, such civil action may be inappropriate. It is also our understanding with the majority that no new Federal authority is being conferred on the Attorney General by this provision of this bill.

With these understandings, we support H.R. 13650 and urge bipartisan support for this measure.

CLARENCE J. BROWN.  
JAMES M. COLLINS.  
NORMAN F. LENT.  
CARLOS J. MOORHEAD.  
MATTHEW J. RINALDO.



**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: H. Rep. No. 1480  
**Date:** Monday, January 09, 2017 11:10:20 AM  
**Attachments:** [H. Rep. No. 1480.pdf](#)

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:39 PM  
**To:** Collections.SubW  
**Subject:** FW: H. Rep. No. 1480

---

**From:** Schultheisz, Daniel  
**Sent:** Monday, November 28, 2016 12:05 PM  
**To:** Nesky, Anthony <[Nesky.Tony@epa.gov](mailto:Nesky.Tony@epa.gov)>  
**Subject:** FW: H. Rep. No. 1480

This is the last docket reference I was trying to get. It's House Report No. 1480, August 11, 1978.  
Thanks.

---

**From:** Seidman, Emily  
**Sent:** Monday, November 28, 2016 11:54 AM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** H. Rep. No. 1480

Dan,

H. Rep. 1480 is attached and the quote on page 56 of the preamble is on page 21 of the attached report. You can use this in the docket and delete the phrase "reprinted in, 1978 U.S. Code Cong. & Admin. News 7433, 7444" from the preamble language.

Emily Seidman | US EPA | Office of General Counsel | Air and Radiation Law Office | Mail Code 2344A | WJCN 7502A | phone: (202) 564-0906

CONFIDENTIAL communication for internal deliberations only; may contain deliberative, attorney-client, attorney work product, or otherwise privileged material; do not distribute outside EPA or DOJ.

AUTHORIZING THE SECRETARY OF ENERGY TO ENTER INTO COOPERATIVE AGREEMENTS WITH CERTAIN STATES RESPECTING RESIDUAL RADIOACTIVE MATERIAL AT EXISTING SITES, PROVIDING FOR THE REGULATION OF URANIUM MILL TAILINGS UNDER THE ATOMIC ENERGY ACT OF 1954, AND FOR OTHER PURPOSES

---

AUGUST 11, 1978.—Ordered to be printed

---

Mr. UDALL, from the Committee on Interior and Insular Affairs, submitted the following

## REPORT

[To accompany H.R. 13650 which on July 28, 1978 was referred jointly to the Committees on Interior and Insular Affairs and Interstate and Foreign Commerce]

The Committee on Interior and Insular Affairs to whom was referred the bill (H.R. 13650) to authorize the Secretary of Energy to enter into cooperative agreements with certain States respecting residual radioactive material at existing sites, to provide for the regulation of uranium mill tailings under the Atomic Energy Act of 1954, and for other purposes, having considered the same, reports favorably thereon with an amendment and recommends that the bill as amended do pass.

The amendment is as follows:

Page 1, beginning on line 3, strike out all after the enacting clause and insert in lieu thereof the following:

That this Act may be cited as the "Uranium Mill Tailings Control Act of 1978".

### SECTION 1. Short title and table of contents.

#### TITLE I—RESIDUAL RADIOACTIVE MATERIAL AT CERTAIN EXISTING SITES

- Sec. 101. Definitions.
- Sec. 102. Designation of processing sites.
- Sec. 103. Cooperative arrangements with States.
- Sec. 104. Cooperative arrangements with Indian tribes.
- Sec. 105. Reimbursement for prior expenditures.
- Sec. 106. Tailings research program.
- Sec. 107. Rules and regulations.
- Sec. 108. Authority of Environmental Protection Agency.
- Sec. 109. Authority of Commission.
- Sec. 110. Authorization.
- Sec. 111. Advance authority.

## TITLE II—URANIUM MILL TAILINGS LICENSING AND REGULATION

- Sec. 201. Definition.  
 Sec. 202. Custody of disposal site.  
 Sec. 203. Authority to establish certain requirements.  
 Sec. 204. Cooperation with States.  
 Sec. 205. Authorities of Commission respecting certain byproduct material.  
 Sec. 206. Authority of Environmental Protection Agency respecting certain byproduct material.  
 Sec. 207. Authorization of appropriations for grants.  
 Sec. 208. Effective date.  
 Sec. 209. Consolidation of licenses and procedures.  
 Sec. 210. Relationship to title I authorities.

## TITLE I—RESIDUAL RADIOACTIVE MATERIAL AT CERTAIN EXISTING SITES

## DEFINITIONS

SEC. 101. For purposes of this title—

(1) The term "processing site" means any site which is designated by the Secretary under section 102 as a processing site for purposes of this title.

(2) The term "residual radioactive material" means—

(A) radioactive material in the form of tailings or waste resulting from the processing of ores for the extraction from such ores of uranium, other valuable constituents, or both;

(B) other radioactive materials at the processing site which are related to such processing, including any residual stock of unprocessed ores or low-grade materials; and

(C) any ground or structure which (i) is in the vicinity of the site where such ores were processed, and (ii) is contaminated with radioactive material derived from such site.

(3) The term "Secretary" means the Secretary of Energy unless otherwise expressly provided.

(4) The term "Commission" means the Nuclear Regulatory Commission.

(5) The term "Administrator" means the Administrator of the Environmental Protection Agency.

## DESIGNATION OF PROCESSING SITES

SEC. 102. (a) As soon as practicable after the date of the enactment of this Act, the Secretary shall designate as processing sites for purposes of this title 22 sites at the following locations at which uranium was produced before the date of the enactment of this Act:

Salt Lake City, Utah,  
 Green River, Utah,  
 Mexican Hat, Utah,  
 Durango, Colorado,  
 Grand Junction, Colorado,  
 Rifle, Colorado (two sites),  
 Gunnison, Colorado,  
 Naturita, Colorado,  
 Maybell, Colorado,  
 Slick Rock, Colorado (two sites),  
 Shiprock, New Mexico,  
 Ambrosia Lake, New Mexico,  
 Riverton, Wyoming,  
 Converse County, Wyoming,  
 Lakeview, Oregon,  
 Falls City, Texas,  
 Tuba City, Arizona,  
 Monument Valley, Arizona,  
 Lowman, Idaho,  
 Canonsburg, Pennsylvania.

(b) (1) The Commission, in consultation with the attorney general of the State of New Mexico, shall conduct a study to determine the extent of the authority of the State of New Mexico to require the owners of the following sites to undertake appropriate remedial action to limit the exposure of the public to radiation associated with residual radioactive materials at such sites: the Homestake-New Mexico Partners site near Milan, New Mexico, and the Anaconda carbonate process tailings site near Bluewater, New Mexico. Not later than one year after the date of the enactment of this Act, the Commission shall issue a report containing the results of the study.

(2) As soon as practicable after reviewing the report and recommendations of the Commission under paragraph (1), the Secretary shall designate either or both of the sites studied under paragraph (1) as a processing site for purposes of this title if he determines that the State does not have adequate authority to require that appropriate remedial action be undertaken with respect to any such site.

(c) Within five years after the date of the enactment of this Act, the Secretary may designate as a processing site for purposes of this title any site which is not referred to in subsection (a) or (b) and at which uranium was produced under contract for sale to the United States if he determines that such designation is necessary and desirable to protect public health, safety, and the environment. No such site may be designated under this subsection if—

(1) such site was owned by the United States on January 1, 1978, or

(2) a license, issued under the Atomic Energy Act of 1954, or by a State under State authority as permitted under section 274 of such Act, for any activity (other than an activity described in section 103(c)(7) or section 104(c)(4)) which results in the production at such site of any uranium product derived from ores, is in effect on the date of the enactment of this Act, or is issued after such date.

(d) The Secretary shall publish notice in the Federal Register of any designation made under this section and shall specify in such notice the boundaries of each processing site so designated.

#### COOPERATIVE ARRANGEMENTS WITH STATES

SEC. 103. (a) (1) The Secretary is authorized to enter into cooperative arrangements with each of the States in which a processing site is located to assess radiation levels, and to carry out appropriate remedial action to limit the exposure of the public to radiation associated with residual radioactive materials.

(2) No cooperative arrangement shall be entered into under this section with respect to any processing site located on the Indian lands described in section 104(a)(2).

(b) (1) The United States shall pay 90 per centum of the costs of carrying out any cooperative arrangement with any State under this section. The remaining costs of such arrangement shall be paid by the State from non-Federal funds.

(2) For purposes of determining the State and Federal shares of the costs of carrying out any cooperative arrangement under this section, any costs incurred by the State in acquiring any processing site, disposal site, or residual radioactive materials shall not be taken into account.

(3) Notwithstanding paragraph (1), if the State share of the costs of carrying out all cooperative arrangements entered into by any State exceeds 0.25 per centum of the available general revenue of the State (as determined by the Secretary) during the last fiscal year of the State ending before the date of the enactment of this Act, the United States shall pay (in addition to any amount paid by the United States under paragraph (1)) the amount by which the State's share of the costs exceeds such percentage. For purposes of determining available general revenues of any State, no Federal funds made available to the State by the United States shall be taken into account.

(c) Each cooperative arrangement entered into with a State under this section shall contain such terms and conditions as are appropriate and consistent with the provisions of this title. Each such arrangement shall provide for the following:

(1) Upon the concurrence of such State and the Commission, and after consultation with the Administrator, the Secretary shall—

(A) select any appropriate remedial action, and

(B) designate identify an appropriate location (at the processing site or at another location) for the disposal of residual radioactive materials. If the Secretary identifies a location outside of such State as an appropriate location for the disposal of such materials, the Secretary may designate that location as a disposal site under subparagraph (B) only with the concurrence of the State within which such proposed disposal site is located.

(2) Unless the Secretary otherwise determines, before remedial action is undertaken with respect to any processing site, the State shall acquire—

(A) the processing site (including both the surface estate and the subsurface estate at the site),

(B) any residual radioactive materials on such site, and

(C) any disposal site selected for the residual radioactive materials.

A State may comply with the requirement of the preceding sentence with respect to acquisition of the processing site by the execution of a purchase option for such site which shall be exercised at any time within two years after the completion of remedial work at the processing site. No State shall be required to acquire any ground or structure contaminated with radioactive material derived from the processing site if such ground or structure is located outside the processing site or disposal site.

(3) When the Commission determines that remedial work at the processing site is completed in accordance with the requirements imposed pursuant to this title, the State shall transfer to the United States ownership and custody of—

- (A) the residual radioactive materials, and
- (B) any disposal site acquired by the State under paragraph (2).

The United States shall not transfer title to property acquired under this subsection to any other person. No payment shall be made in connection with such transfer from funds appropriated under subsection (b) other than payments for administrative and legal costs incurred in carrying out such transfer. Custody of any property transferred to the United States under this paragraph shall be assumed by the Secretary, and the Secretary shall maintain such property in such manner as will protect the public health and safety and the environment.

(4)(A) When the Commission determines that remedial work at the processing site is completed in accordance with the requirements imposed pursuant to this title, the State may sell to any other person any processing site owned by the State other than a processing site used for the disposal of residual radioactive materials. Whenever a State sells a processing site acquired as provided in paragraph (2), before offering the site for sale to any other person, the State shall offer to sell such site at its fair market value to the person from whom the State acquired the site.

(B) Before any State transfers title to any processing site offered for sale under subparagraph (A), the State shall execute and record, pursuant to applicable State law, a document giving notice that—

- (i) such site had been contaminated with residual radioactive materials; and
- (ii) measures have been taken under this Act to limit any hazard associated with such materials to acceptable levels.

(5) If the State sells any processing site acquired under paragraph (2) within two years after acquiring the site or within two years after remedial action is completed at the site, whichever occurs last, the State shall pay to the United States an amount determined by multiplying the Federal contribution percentage by an amount equal to the excess of the net proceeds of the sale over the cost incurred by the State in acquiring the site. If the State does not sell the processing site within such period, the State shall pay to the Secretary at the end of such period an amount determined by multiplying the Federal contribution percentage by an amount equal to the excess of the fair market value of the site at the end of such period over the cost incurred by the State in acquiring such site. For purposes of this paragraph, the term "Federal contribution percentage" means, with respect to any site, the percentage of the costs of the cooperative arrangement with respect to such which is paid by the United States.

(6) Any remedial action undertaken under a cooperative arrangement shall be performed by the Secretary or by a contractor authorized by the Secretary, unless otherwise determined by the Secretary.

(7) The State may, with the approval of the Secretary, enter into contracts with any person under which such person may recover minerals from residual radioactive materials at any processing site upon payment to the State of—

- (A) all or part of the cost of remedial action to be undertaken at such site after the removal of the minerals,
- (B) an amount of the profits generated from such recovery activity as the Secretary considers appropriate, or
- (C) a combination of the amounts described in subparagraphs (A) and (B).

Any person carrying out mineral recovery activities under [this paragraph shall be required to obtain any license required under the Atomic Energy Act of 1954 or under State authority as permitted under section 274 of such Act, except that the State shall not be required to obtain any such license solely by reason of entering into a contract under this paragraph.

(8) If the State enters into contract with any person to recover minerals from residual radioactive materials as provided under paragraph (7), the State shall pay to the United States an amount determined by multiplying the Federal contribution percentage (as determined under paragraph (5)) by an amount equal to the payment to the State as determined under paragraph (7).

#### COOPERATIVE ARRANGEMENTS WITH INDIAN TRIBES

SEC. 104. (a) (1) The Secretary is authorized to enter into cooperative arrangements with the Secretary of the Interior and with each Indian tribe residing on lands described in paragraph (2) to assess radiation levels and to carry out appropriate remedial action to limit the exposure of the public to radiation emanating from residual radioactive materials.

(2) The lands referred to in paragraph (1) are any lands—

(A) held in trust by the United States for any Indian or for any Indian tribe, or

(B) owned by any Indian or Indian tribe subject to a restriction against alienation imposed by the United States.

(3) For purposes of this section, the term "Indian tribe" means any Indian tribe, band, group, pueblo, or other organized community of Indians recognized as eligible for services provided by the Secretary to the Interior to Indians.

(b) The Secretary shall provide 100 per centum of the costs of carrying out any cooperative arrangement with the Secretary of the Interior and any Indian tribe under this section.

(c) Each cooperative arrangement entered into with the Secretary of the Interior and with an Indian tribe under this section shall contain such terms and conditions as are appropriate and consistent with the provisions of this title. Each such arrangement shall provide for the following:

(1) Upon the concurrence of the Secretary of the Interior and the Commission, and after consultation with the Indian tribe and the Administrator, the Secretary shall—

(A) select any appropriate remedial action, and

(B) designate an appropriate location (at the processing site or at another location) for the disposal of residual radioactive materials.

(2) The Secretary of the Interior shall have the responsibility for the continued custody of any residual radioactive materials from any processing site restored under the cooperative arrangement unless the President determines that another arrangement is appropriate.

(3) Unless otherwise determined by the Secretary, any remedial action undertaken under any cooperative arrangement shall be performed by the Secretary or by a contractor authorized by the Secretary.

(4) With the approval of the Indian tribe and the Secretary, the Secretary of the Interior may enter into contracts with any person, under which such person may recover minerals from residual radioactive materials at any processing site upon payment to the United States of—

(A) all or part of the cost of the remedial action to be undertaken at such site after the removal of the minerals,

(B) an amount of the profits generated from such recovery activity as the Secretary of the Interior considers appropriate, or

(C) a combination of the amounts described in subparagraphs (A) and (B).

Any person carrying out mineral recovery activities under this paragraph shall be required to obtain any license required under the Atomic Energy Act of 1954 or under State authority as permitted under section 274 of such Act, except that the Secretary of the Interior shall not be required to obtain any such license solely by reason of entering into a contract under this paragraph.

#### REIMBURSEMENT FOR PRIOR EXPENDITURES

SEC. 105. Any cooperative arrangement entered into under this title may provide for the reimbursement of any person for expenditures incurred by such person in carrying out remedial action on property outside the boundaries of any processing site, before the date of the enactment of this Act, to protect public health, safety and the environment from radiation associated with residual radioactive materials at such site.

## TAILINGS RESEARCH PROGRAM

SEC. 106. The Secretary shall conduct a research program, and make available information, concerning ways in which residual radioactive materials at processing sites may be neutralized in order to reduce the level of hazardous radioactive and nonradioactive substances contained in such materials to acceptable levels, as determined by the Administrator in accordance with standards and criteria promulgated under section 108.

## RULES AND REGULATIONS.

SEC. 107. The Secretary may prescribe such rules and regulations as he deems necessary and appropriate to carry out the provisions of this title, including rules and regulations respecting reports, accounting, and rights of inspection.

## AUTHORITY OF ENVIRONMENTAL PROTECTION AGENCY

SEC. 108. (a) Within one hundred and eighty days after the date of the enactment of this Act, the Administrator shall, by rule, promulgate generally applicable standards and criteria for the protection of the general environment outside the boundaries of—

- (1) processing sites, and
- (2) sites used for the disposal of residual radioactive materials.

Such criteria shall apply to radiological and nonradiological environmental hazards associated with the processing, and with the possession and transfer, of residual radioactive material, and shall be consistent to the maximum extent practicable with the requirements of the Solid Waste Disposal Act.

(b) Before the promulgation of any rule pursuant to subsection (a), the Administrator shall—

- (1) consult with the Commission; and
- (2) provide adequate notice of any rulemaking proceeding and provide opportunity for public hearing.

(c) Any interested person may obtain judicial review of any rule promulgated under subsection (a) of this section in the United States court of appeals for the Federal judicial circuit in which such person resides or transacts business only upon petition for review by such person filed within ninety days from the date of such promulgation, or after such date only if such petition is based solely on grounds which arose after such ninetieth day.

(d) No remedial action shall be commenced under this title before the date ninety days following the promulgation of standards and criteria under subsection (a).

(e) Nothing in this section shall be construed to limit or enlarge the functions of the Administrator of the Environmental Protection Agency under the Federal Water Pollution Control Act or under the Clean Air Act.

## AUTHORITY OF COMMISSION

SEC. 109. (a) The Commission shall insure that any cooperative arrangement entered into under this title is carried out in such manner as—

- (1) conforms to the requirements established by the Secretary and concurred in by the Commission under sections 103(c)(1) and 104(c)(1), and
- (2) conforms with the applicable standards and criteria promulgated by the Administrator under section 108.

(b) In carrying out its authority under this section the Commission is authorized—

- (1) by rule, regulation, or order, to require persons, officers, or instrumentalities exempted—

- (A) under section 208(b) or 210 of this Act, or
- (B) under section 81 of the Atomic Energy Act of 1951.

from the requirement of obtaining a license for the ownership or possession of byproduct material as defined in section 11e. (2) to conduct monitoring, perform remedial work, and to comply with such other measures as it considers necessary or desirable to protect the public health and safety and the environment; and

- (2) to make such studies and inspections and conduct such monitoring as may be necessary.

(c) Any violation by any person other than the United States of any rule or order of the Commission under this section shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 234 of the Atomic Energy Act of 1954. Nothing in this section shall be construed to affect any other authority of the Commission under such Act.

#### AUTHORIZATION

Sec. 110. Effective October 1, 1979, there is authorized to be appropriated \$180,000,000 to carry out, the purposes of this title which shall remain available until expended.

#### ADVANCE AUTHORITY

Sec. 111. Notwithstanding any other provision of this Act, authority to enter into cooperative arrangements and to enter into contracts or make payments under this Act shall be effective only to the extent or in such amounts as are provided in advance in appropriation Acts.

## TITLE II—URANIUM MILL TAILINGS LICENSING AND REGULATION

#### DEFINITION

Sec. 201. Section 11 e. of the Atomic Energy Act of 1954 is amended to read as follows:

"e. The term 'byproduct materials' means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content."

#### CUSTODY OF DISPOSAL SITE

Sec. 202. (a) Chapter 8 of the Atomic Energy Act of 1954 is amended by adding the following new section at the end thereof:

SEC. 83. OWNERSHIP AND CUSTODY OF CERTAIN BYPRODUCT MATERIAL AND DISPOSAL SITES.—

"a. Any license under section 62 or section 81 for any activity which results in the production of any byproduct material as defined in section 11 e. (2) shall contain such terms and conditions as may be necessary to assure that, prior to termination of such license—

"(1) the license will comply with such requirements as the Commission may establish respecting such termination, and

"(2) ownership of—

"(A) any byproduct material defined in section 11 e. (2) which resulted from such licensed activity, and

"(B) any land (other than land owned by the United States), including both the surface and subsurface estates, which is used for the disposal of such byproduct material.

shall be transferred to the United States.

Such material and land shall be transferred to the United States without cost to the United States (other than administrative and legal costs incurred in carrying out such transfer). The United States shall not transfer title to property acquired under this subsection to any other person.

"b. (1) As soon as practicable after the date of the enactment of this section, the President shall designate the Secretary of Energy or any other appropriate officer or instrumentality of the United States (other than the Commission) to have custody of byproduct material and land transferred to the United States under subsection a. (2). No officer or instrumentality may be designated under the preceding sentence unless such officer or instrumentality has adequate authority to provide for the safe treatment, management, storage, and disposal of such byproduct material and to provide for the sound management of such plan, consistent with the requirements of subsection d.

"(2) The officer or instrumentality designated under this subsection may accept donations of any byproduct material and land described in subsection a. (2) which is not required to be transferred to such officer or instrumentality (by reason of the effective date of this section or for any other reason). Such



material and land may be accepted under this paragraph upon a determination by such officer or instrumentality that such acceptance is necessary or desirable in order to protect the public health, safety, and the environment.

"c. Upon termination of any license to which this section applies, the Commission shall determine whether or not the licensee has complied with all applicable standards and requirements under such license.

"d. Following the Commission's determination of compliance under subsection c., the officer or instrumentality designated by the President under subsection b. shall assume custody of the byproduct material and land referred to in subsection a. Such officer or instrumentality shall maintain such material and land in such manner as will protect the public health and safety and the environment. Such custody may be transferred to another officer or instrumentality of the United States only upon approval of the President upon his determination that such officer or instrumentality meets the requirements of subsection b."

(b) The table of contents for chapter 8 of the Atomic Energy Act of 1954 is amended by inserting the following new item after the item relating to section 82: "Sec. 83. Ownership and custody of certain by product material and disposal sites."

#### AUTHORITY TO ESTABLISH CERTAIN REQUIREMENTS

SEC. 203. Section 161 of the Atomic Energy Act of 1954 is amended by adding the following new subsection at the end thereof:

"x. Establish by rule, regulation, or order (in accordance with the provisions of the Administrative Procedure Act as required under section 181) such standards and instructions as the Commission may deem necessary or desirable to insure, before termination of any license for byproduct material as defined in section 11e.(2) and before the transfer under section 83 of land used for the disposal of such material, that the licensee will make available such bonding or other financial arrangements as may be required to assure the reclamation of sites structures and equipment used in conjunction with such byproduct material and that—

"(1) in the case of any such license issued or renewed after the date of the enactment of this subsection, to the maximum extent practicable, no long-term maintenance and monitoring of such sites, structures, and equipment will be required; and

"(2) in the case of each license for such material (including any license referred to in paragraph (1) and any license in effect on the date of the enactment of this subsection), if the Commission determines that any such long-term maintenance and monitoring is necessary, the licensee will make available such bonding or other financial arrangements as may be required to assure such long-term maintenance and monitoring."

#### COOPERATION WITH STATES

SEC. 204. (a) Section 274 b. of the Atomic Energy Act of 1954 is amended by adding "as defined in section 11 e. (1)" after the words "byproduct materials" in paragraph (1); by renumbering paragraphs (2) and (3) as paragraphs (3) and (4); and by inserting the following new paragraph immediately after paragraph (1): "(2) by product materials as defined in section 11 e. (2);"

(b) Section 274 d. (2) of such Act is amended by inserting the following before the word "compatible": "in accordance with the requirements of subsection o. and in all other respects".

(c) Section 274 n. of such Act is amended by adding the following new sentence at the end thereof: "As used in this section, the term agreement includes any amendment to any agreement."

(d) Section 274 j. of such Act is amended by adding "(1)" after "may", and by adding before the period at the end thereof "and (2), terminate or suspend that part of its agreement with the State relating to State licensing and regulation of any activity which results in the production of byproduct material as defined by section 11 e. (2), and reassert the licensing and regulatory authority vested in it under this Act over such activities, if the Commission finds that such termination or suspension is required to assure compliance with subsection o."

(e) (1) Section 274 of such Act is amended by adding the following new subsection at the end thereof:

"o. In the licensing and regulation of any activity which results in the production of byproduct material as defined in section 11 e. (2) under an agreement entered into pursuant to subsection b., a State shall require compliance with the requirements of section 83 a. (2) (respecting ownership by the United States of byproduct material and land), and the State shall adopt and enforce—

“(1) substantive standards for the protection of the public health, safety, and the environment from hazards associated with such material which are equivalent to the extent practicable, or more stringent than, standards adopted and enforced by the Commission for the same purpose, and

“(2) procedures which—

“(A) in the case of licenses, provide for advance public notice, an opportunity for a public hearing with rights to present direct and rebuttal evidence and conduct cross-examination, and a written decision which is based only on evidence in the record and which is subject to judicial review,

“(B) in the case of rulemaking, provide opportunity for public participation in the form of written comments or a public hearing and which provide for judicial review of the rulemaking decision,

“(C) require the preparation of a written independent environmental analysis or review which is available to the public before the commencement of any such proceedings, and

“(D) prohibit, in the case of any construction activity which is proposed with respect to such material, any major activity from being undertaken before completion and public availability of the analysis or review referred to in subparagraph (C).

No State shall be required under paragraph (2) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted in such State by the Commission.

If any State, under an agreement for the licensing and regulation of byproduct material as defined in section 11 e. (2), imposes upon the license any requirement for the payment of funds which are collected by the State for the reclamation or long-term maintenance and monitoring of such byproduct material, such State shall transfer to the United States, upon termination of the license in connection with which such payment was made, any amounts collected by the State for such purposes. Any such agreement in effect on the date of the enactment of this subsection shall be amended as promptly as practicable following such date to comply with the requirements of the preceding sentence with respect to amounts collected before, on, and after such date of enactment.

(f) Section 274 c. of such Act is amended by inserting the following new sentence after paragraph (4) thereof: “The Commission shall also retain authority under any such agreement to make a determination that all applicable standards and requirements have been met prior to termination of a license for byproduct material as defined in section 11 e. (2).”

(g) As soon as practicable after the date 3 years after the date of the enactment of this Act, the Nuclear Regulatory Commission shall review each agreement under section 274 of the Atomic Energy Act of 1954 to determine whether or not such agreement complies with the requirements contained in amendments made by this section. If the Commission determines that any such agreement does not comply with such requirements, it shall exercise the authority of section 274 j. (2) of the Atomic Energy Act of 1954 (as amended by subsection (d) of this section).

#### AUTHORITIES OF COMMISSION RESPECTING CERTAIN BYPRODUCT MATERIAL

SEC. 205. (a) Chapter 8 of the Atomic Energy Act of 1954 is amended by adding the following new section at the end thereof:

“SEC. 84. AUTHORITIES OF COMMISSION RESPECTING CERTAIN BYPRODUCT MATERIAL.—

“a. The Commission shall insure that the management of any byproduct material as defined in section 11 3. (2) is carried out in such manner as—

“(1) the Commission deems appropriate to protect the public health and safety and the environment, and

“(2) conforms with applicable standards and criteria promulgated by the Administrator of the Environmental Protection Agency under section 275.

“b. In carrying out its authority under this section, the Commission is authorized to:

“(1) by rule, regulation, or order require persons, officers, or instrumentalities exempted from licensing—

“(A) under section 208(b) or 210 of the Uranium Mill Tailings Control Act of 1978, or

“(B) under section 81 of this Act

to conduct monitoring; perform remedial work, and to comply with such other measures as it may deem necessary or desirable to protect the public health and safety and the environment, and

“(2) make such studies and inspections and to conduct such monitoring as may be necessary.

Any violation by any person other than the United States of any rule or order of the Commission established under this section shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 234. Nothing in this section affects any authority of the Commission under any other provision of this Act.”

(b) The table of contents for such chapter 8, is amended by inserting the following new item after the item relating to section 83:

“Sec. 84. Authorities of Commission respecting certain byproduct material.”

AUTHORITY OF ENVIRONMENTAL PROTECTION AGENCY RESPECTING CERTAIN BY-PRODUCT MATERIAL

SEC. 206. (a) Chapter 19 of the Atomic Energy Act of 1954 is amended by inserting after section 274 the following new section:

“SEC. 275. AUTHORITY OF THE ENVIRONMENTAL PROTECTION AGENCY.—

“a. The Administrator of the Environmental Protection Agency (hereinafter in this section referred to as the ‘Administrator’) shall, by rule, promulgate, and from time to time revise, generally applicable standards and criteria for the protection of the general environment outside the boundaries of—

“(1) sites at which ores are processed primarily for their source material content, and

“(2) sites used for the disposal of byproduct material as defined in section 11 e. (2).

Such criteria shall apply to radiological and nonradiological environmental hazards associated with the processing, and with the possession and transfer, of byproduct material as defined in section 11e. (2), and shall be consistent to the maximum extent practicable with the requirements of the Solid Waste Disposal Act.

“b. Before the promulgation of any rule pursuant to subsection a., the Administrator shall—

“(1) consult with the Commission, and

“(2) provide adequate notice of any rulemaking proceeding and provide opportunity for public hearing.

“c. Any interested person may obtain judicial review of any rule promulgated under subsection a. of this section in the United States court of appeals for the Federal judicial circuit in which such person resides or transacts business only upon petition for review by such person filed within ninety days from the date of such promulgation, or after such date only if such petition is based solely on grounds which arose after such ninetieth day.

“d. Nothing in this section shall be construed to limit or enlarge the functions of the Administrator of the Environmental Protection Agency under the Federal Water Pollution Control Act or under the Clean Air Act.”

(b) The table of contents for chapter 19 of the Atomic Energy Act is amended by inserting the following new item after the item relating to section 274:

“Sec. 275. Authority of the Environmental Protection Agency.”

AUTHORIZATION OF APPROPRIATION FOR GRANTS

SEC. 207. Effective October 1, 1979, there is hereby authorized to be appropriated to the Nuclear Regulatory Commission the sum of \$500,000 to be used for making grants to States which have entered into agreements with the Commission under section 274 of the Atomic Energy Act of 1954 to aid in the development of State regulatory programs under such section which implement the provisions of this Act.

EFFECTIVE DATE

SEC. 208. (a) Except as otherwise provided in this section, the amendments made by this title shall take effect on the date of the enactment of this Act and any such amendments applicable to licenses issued under the Atomic Energy Act of 1954 or under State authority (as permitted under section 274 of such Act) shall apply without regard to whether such licenses are issued before, on, or after the date of the enactment of this Act.

(b) Before the date 3 years after the date of the enactment of this Act no license under section 81 of the Atomic Energy Act of 1954 or under State authority (as permitted under section 274 of such Act) shall be required for the transfer, receipt, production, manufacture, acquisition, ownership, possession, import or export of byproduct material as defined in section 11e. (2) of the Atomic Energy Act of 1954 (as added by section 201 of this Act).

(c) In the case of any license issued before the date of the enactment of this Act by a State under State authority (as permitted under section 274 of the Atomic Energy Act of 1954), the requirements of section 274 o. of the Atomic Energy Act of 1954 (as added by section 204 of this Act) shall apply only to the extent practicable during—

(1) the three year period beginning on the date of the enactment of this Act, or

(2) the period (ending not later than the date five years after the date of the enactment of this Act) before the renewal of such license, which ever period is longer.

(d) Nothing in any amendment made by this title shall preclude any State from exercising any authority (including the authority permitted under section 274) respecting byproduct material as defined in section 11e. (2) of the Atomic Energy Act of 1954 during the 3 year period beginning on the date of the enactment of this Act.

(e) In the case of any license issued before the date of the enactment of this Act under the Atomic Energy Act of 1954 (or under State authority as permitted under section 274 of such Act), the requirements of section 83 a. (2) of the Atomic Energy Act of 1954 (as added by section 202 of this Act) shall apply only to the extent practicable.

## BACKGROUND AND NEED

Uranium mill tailings are the sandy waste produced by the uranium ore milling process. Because only 1 to 5 pounds of useable uranium is extracted from each 2,000 pounds of ore, tremendous quantities of waste are produced as a result of milling operations. These tailings contain many naturally-occurring hazardous substances, both radioactive and nonradioactive. The greatest threat to public health and safety is presented by the long radioactive decay process of radium into radon-222, an inert gas which may cause cancer or genetic mutations. This decay process, and the dangers which accompany it, will continue for a billion years. As a result of being for all practical purposes, a perpetual hazard, uranium mill tailings present the major threat of the nuclear fuel cycle.

In its early years, the uranium milling industry was under the dominant control of the Federal Government. At that time, uranium was being produced under Federal contracts for the Government's Manhattan Engineering District and Atomic Energy Commission program. Under these contracts, uranium tailings piled up so that now nearly 90 million tons of such waste are attributable to Federally-induced production. Of this amount, about 27 million tons of tailings have been left at sites where no commercial milling has taken place and which are not the responsibility of any active milling company.

From the early 1940's through the early 1970's there was little official recognition of the hazards presented by these tailings. Federal regulation of the industry was minimal. As a consequence, mill tailings were left at sites, mostly in the Southwest, in an unstabilized and unprotected condition. Some of these tailings were used for construction purposes in the foundations and walls of private and public buildings. There, through the concentrated emission of radon gas, the hazard of the tailings and public exposure increased substantially.

In 1971 the Subcommittee on Raw Materials of the Joint Committee on Atomic Energy began to investigate the dangers presented by the use of uranium mill tailings for construction purposes. Testimony at

those hearings lead to the passage of legislation in 1972 authorizing the Federal Government to enter into a cooperative program with the State of Colorado to provide a program of remedial action to remove the tailings from sites and structures in Grand Junction, Colo., where they constituted a threat to public health. Under that program, 75 percent of the costs of the remedial action, were paid by the Federal Government and the State of Colorado paid the remainder.

Concurrently, public and Federal attention began to focus on regulation of the active commercial uranium milling industry. With the advent of the National Environmental Policy Act, more scrutiny was applied to licensing standards and requirements for the control and disposal of uranium mill tailings. The Atomic Energy Commission, and its successor, the Nuclear Regulatory Commission, have retained authority for licensing uranium mills under the Atomic Energy Act since 1954. States may license uranium milling under their own authorities through agreement with the Commission. Five of the twenty-five "Agreement States" now have such licensing programs.

The States and the Commission have continued, since the early 1970's, to upgrade their standards for uranium mill licensing, in response to a growing awareness of the threat to public health presented by these materials. In May 1975, the Nuclear Resources Defense Council petitioned the Commission to prepare a generic environmental impact statement to evaluate the regulatory programs for uranium milling at both the Federal and State levels, and to adopt improved regulations for milling operations. Subsequently, the Commission began the evaluation. The draft generic environmental impact statement on uranium milling regulation, and proposed new milling regulations, are expected to be completed by NRC this year. But the steps which have been taken to control future uranium milling operations do not remedy existing public health hazards resulting from the unstabilized piles of wastes produced in prior decades.

In 1974 Congress requested the Energy Research and Development Administration to survey and assess the problem presented by the tailings located at 22 sites throughout the Southwest. On the basis of the resulting studies, the administration proposed legislation this year to authorize a remedial program similar to that implemented at Grand Junction, Colo., to clean up existing inactive sites. The cost of the program to the Federal Government is expected to be \$180 million. To prevent any future occurrence of a situation of this kind the Nuclear Regulatory Commission was asked by the chairman of the Committee on Interior and Insular Affairs, Representative Morris K. Udall, to submit draft legislation providing it with necessary authority to comprehensively regulate the uranium mill operations and activities. This draft legislation was introduced and considered by the committee in developing its recommendations.

Without the authorities included in H.R. 13650, the conditions addressed by the remedial program would be left without remedy, and the authority of the Commission to establish uniform rational standards for waste disposal from uranium mills would not be clear.

## PURPOSE AND SUMMARY

The Uranium Mill Tailings Control Act, as proposed, is intended to protect the public health and safety and the environment from hazards associated with wastes from the uranium ore milling process. If enacted, the legislation will require every reasonable effort to be made by the States, the Federal Government, and private industry to provide for the disposal, stabilization and control in a safe and environmentally sound manner of such tailings to prevent or minimize the diffusion of radon or the entry of other hazards into the environment.

Title I of H.R. 13650, in cooperation with interested States, Indian tribes, and persons who own or control inactive mill tailings sites, provides a program of assessment and remedial action at such sites. Such actions may include, where appropriate, the reprocessing of tailings to extract residual uranium and other valuable minerals.

Title II clarifies and reinforces the authority of the Nuclear Regulatory Commission to regulate the production and disposal of uranium mill tailings at active sites, and provides for the application of minimum Federal standards to such activities in States which regulate them under authority permitted by the Atomic Energy Act.

H.R. 13650 also provides that all final disposal areas for uranium mill tailings be treated in accordance with Federal policy regarding other nuclear wastes, in that such disposal sites would be transferred to the Federal Government for permanent custody and protection.

## INCLUSION OF SITES

As reported by the committee, H.R. 13650 authorizes Federal participation in the reduction of hazards from the 22 inactive uranium mill tailings sites. These sites, which are found at 20 different locations, have been studied by the Department of Energy in an effort to assess the need for remedial action. All of them consist of tailings resulting from operations under Federal contracts. None are now under active license by the Nuclear Regulatory Commission. While it is believed that these sites are the only ones which possess all such characteristics, the bill permits the inclusion of any other sites meeting those characteristics. Two other sites which contain tailings resulting entirely from Federal contracts, but which are now owned by companies operating under active uranium milling licenses are to be studied to determine whether the State of New Mexico, which licenses the mills, has the authority to require the companies to reduce or eliminate any hazardous conditions which may exist as a result of the condition of the sites.

The committee questioned the expenditure of Federal funds to clean up uranium mill tailings in cases where the commercial uranium milling industry can be required through regulatory authorities to assume those costs. It would seem therefore, that the Secretary of Energy need not designate any sites to be included in the authorized program which are currently under active license, or which contain tailings from commercial production, unless it can be shown that the tailings hazards could in no way be remedied without such designation.

## DIVISION OF COSTS

H.R. 13650 requires States and the Federal Government to share the costs of remedial action for inactive tailings sites. The costs to be shared include expenses for removing or reducing hazards both at the processing site and at locations and structures contaminated with tailings from the site. Environmental impact statements to be prepared for determining remedies for each site will be paid for by the Department of Energy. Costs of long-term maintenance and monitoring of final disposal sites will also be borne by the Department. States are required to assume all costs of purchasing the inactive processing sites and any necessary new disposal sites (in cases where tailings will be removed from the original processing sites).

A ceiling is placed on any State's share of remedial costs. The ceiling equals one-fourth of 1 percent of the State's general revenues, not including Federal funds, in the State's last fiscal year ending before enactment of the act. The committee bases figures for States' general revenues on those used by the Department of Commerce for its determinations.

The committee believes that no State's participation in the remedial program should be precluded by the State's inability to obligate funds to meet its share of program costs. The committee considered in its deliberations the effect of existing State laws prohibiting deficit spending or limiting the extent to which States may be indebted by their legislatures.

The funding formula arrived at by the committee both insures that each State may participate in the program, and distributes the burden of payments according to States' ability to pay. It also takes into account the tremendous financial burden placed on Utah and Colorado where the number and size of inactive processing sites are substantial.

The committee formula would allow each State to provide its share of program costs through a one-time appropriation from its legislative body. This protects the Federal Government from having to supplement the Federal share due to the failure of some future legislature to appropriate funds committed by a previous legislature.

The following chart shows estimated share of program costs based on the committee formula for each affected State. Shares are shown under the ceiling only when a State's share of program costs would meet or exceed the ceiling.

State	Total remedial action cost	10-percent State share	Ceiling of 0.25 percent of available general revenue <sup>1</sup>
Arizona	\$4,069,000	(2)	
Colorado	64,450,000	\$6,445,000	2.7
Idaho	590,000	59,000	
New Mexico	14,730,000	223,000	
Oregon	290,000	29,000	
Pennsylvania	NA	NA	14.0
Texas	2,450,000	245,000	
Utah	44,716,000	4,032,600	2.1
Wyoming	1,282,000	128,200	

<sup>1</sup> For purposes of determining available general revenues of any State, no Federal funds made available to the State by the United States shall be taken into account.

<sup>2</sup> All sites on Indian lands.

Note: All figures are based on high-option estimates of the Department of Energy as found in individual engineering assessments for inactive uranium mill tailings sites.

All costs for remedial activities undertaken on Indian lands are the responsibility of the Federal Government.

#### DETERMINATION AND PRIORITY OF REMEDY

It is the primary responsibility of the Department of Energy to determine the appropriate remedy for each inactive uranium mill tailings site included under the legislation. The Department is required to consult with Administrator of the Environmental Protection Agency in making such determinations. The Department must have the concurrence of the State where the site is located, and the Nuclear Regulatory Commission, in its determination of remedies before any remedial action is undertaken. In cases where sites are located on Indian lands, however, the State does not have a concurrence role. There, the Department must consult with the appropriate tribe and the Administrator and gain the concurrence of the Secretary of the Interior and the Commission.

The public is to have a strong role in the selection of any remedy through procedures provided by the National Environmental Policy Act. It is expected that the Secretary will give full consideration to the wishes of the public as expressed through those processes.

The committee also expects the Secretary to proceed with implementation of remedies in accord with necessity for reducing the most threatening hazards first. In setting priorities for implementation of remedial programs, the Secretary should give special consideration to sites at Salt Lake City, Utah, and Riverton and Converse, Wyo.

#### CAVEAT EMPTOR

In some cases where the Department will remedy inactive tailings hazards, tailings will be removed from the original processing sites and disposed of at more suitable locations. In such cases, the State where the site is located may sell the original, cleaned-up processing site on the public market. H.R. 13650 requires that when a State sells any processing site, it must execute and record a document giving all future prospective buyers notice that the site was once used for the disposal of radioactive materials. The record is also required to note that the site was cleaned up under the remedial program so that hazards were eliminated or reduced to acceptable levels.

It is the intent of the committee that such notice be implemented through the simplest mechanism possible pursuant to State law, as long as it provides a fair opportunity for notice to prospective buyers. The committee does not intend that such notice imply that the land as a result of having been used as a disposal site would constitute a hazard to public health.

#### AUTHORITY OF THE NUCLEAR REGULATORY COMMISSION

The Commission, in keeping with its responsibilities and authorities under the Atomic Energy Act and the National Environmental Policy Act, is the lead agency in regulation, oversight and management of uranium mill tailings-related activities. It is one of the major purposes of H.R. 13650 to clarify and reinforce these Commission responsibilities, with respect to uranium mill tailings at both active and inactive sites.



In establishing requirements or promulgating regulations for licensing or for oversight of the Department's remedial activities, the Commission must set all standards and requirements relating to management concepts, specific technology, engineering methods, and procedures to be employed to achieve desired levels of control for limiting public exposure, and for protecting the general environment. The Commission's standards and requirements should be of such nature as to specify, for example, exclusion area restrictions on site boundaries, surveillance requirements, detailed engineering requirements, including lining for tailings ponds, depth, and types of tailings covers, population limitations, or institutional arrangements such as financial surety requirements or site security measures. The Commission should issue all necessary permits or licenses for uranium mill tailings sites.

The NRC is also responsible for implementing general standards and criteria promulgated by the Administrator of the Environmental Protection Agency. NRC must assure that the technology, engineering methods, operational controls, surveillance requirements and institutional arrangements employed at the sites provide the necessary barriers and levels of control to limit public exposure, and protect the environment from radiological and toxic nonradiological substances associated with uranium mill tailings materials, as specified by the EPA standards and criteria.

With respect to nonradiological matters, the NRC, through its environmental review under the NEPA mandate, would impose controls consistent with those imposed by EPA on similar materials contained in other solid wastes subject to EPA authority.

The committee received testimony regarding authorities of the EPA under the Solid Waste Disposal Act which could be beneficially applied to the management of uranium mill tailings. While it is in no way the intent of the committee to imply that the EPA or the Solid Waste Disposal Act should govern the regulatory activities of the Commission, it is the committee's desire that the Commission examine the management concepts being developed for the EPA solid waste disposal program, and assess them for possible incorporation into NRC regulations where such concepts could improve regulation of tailings.

It also the desire of the committee that the NRC and the States, in implementing new standards and regulations for mill tailings control, consider possible differences in applicability of such requirements to existing tailings disposal sites versus new sites. Specifications for tailings site selection and impoundment design, in particular, once implemented by a licensee, may be reversible only at great cost. In all cases such considerations must, of course, be weighed against the committee's requirement in section 161(x) of the Atomic Energy Act, as amended by section 203 of H.R. 13650, that the Commission regulate to the maximum extent practicable in such a way that disposal sites for tailings will be stabilized sufficiently by the licensee to preclude any necessity for long-term maintenance and monitoring.

#### AUTHORITY OF THE ENVIRONMENTAL PROTECTION AGENCY

It is the responsibility of the Environmental Production Agency to establish generally applicable standards and criteria for the protection of the general environment, considering radiological and nonradiological aspects of tailings. The EPA standards and criteria should be developed to limit the exposure (or potential exposure) of the public

and to protect the general environment from either radiological or nonradiological substances to acceptable levels through such means as allowable concentrations in air or water, quantities of the substances released over a period of time, or by specifying maximum allowable doses or levels to individuals in the general population. The EPA standards and criteria should not interject any detailed or site-specific requirements for management, technology or engineering methods on licensees or on the Department of Energy. Nor should EPA incorporate any requirements for permits or licenses for activities concerning uranium mill tailings which would duplicate NRC regulatory authority over the tailings sites.

### ENVIRONMENTAL REVIEWS

Title II requires that States which license uranium milling or mill tailings disposal activities prepare a written, independent environmental analysis or review as part of its licensing process. The committee considers the independent preparation and public distribution of such an analysis essential to competent licensing of uranium milling activities. The committee also recognizes that the resources of a State are not equivalent to those of a Federal agency. Direct application of all the procedures and requirements embodied in the National Environmental Policy Act, and implemented by the Commission in its licensing process, may not be appropriate to require of the States. Some latitude should be given to allow States to prepare environmental reviews appropriate to their needs and means. The Commission must not, however, allow States to license uranium milling activities with less than thorough and comprehensive environmental assessments due to a lack of financial means in the State to meet Federal environmental impact review standards.

### FEDERAL CUSTODY OF TAILINGS STATES

It is the intent of H.R. 13650 that all final disposal sites for uranium mill tailings be placed ultimately under Federal custody. The President is given the responsibility for designating an appropriate agency to act as custodian for the sites. It is expected that the designated agency should be the Department of Energy, or an agency with similar responsibilities in the area of nuclear waste managements.

The committee believes that uranium mill tailings should be treated by the custodian in accordance with the substantial hazard they will present until long after our existing institutions can be expected to last in their present forms. Any decision by a custodian whether to allow any use by the public of tailings disposal sites must take into consideration the fragile nature of disposal techniques when they are measured against the test of a billion years of erosive influence.

The Nuclear Regulatory Commission should consider its responsibilities for oversight of the custodian in a similar light.

### LICENSE TERMINATION AND LONG-TERM MAINTENANCE

Uranium mill tailings disposal sites should in all cases be controlled and regulated by States and the Commission, to the maximum extent allowed by the state of the art, to insure that the public and the

environment will be protected from the hazards of the tailings for as long as they may remain a hazard. It is the intent of the committee that the costs of such protection shall be internalized wherever possible by the commercial uranium milling industry.

H.R. 13650 requires that before the transfer of custody of any disposal sites to the Federal Government, the Commission shall have made arrangements to insure that such piles are stabilized to provide long-term protection. Prior to determination of licenses for commercial tailings, the Commission shall have collected from licensees funds adequate to cover costs of long-term maintenance and monitoring, if any such measures will be necessary.

### SECTION-BY-SECTION ANALYSIS

#### TITLE I—RESIDUAL RADIOACTIVE MATERIAL AT CERTAIN EXISTING SITES

Title I authorizes the Secretary of Energy to enter into agreements with States to remedy radioactive hazards associated with uranium mill tailings created under contract to the Federal Government.

Section 101 sets out definitions of terms used to describe sites and materials covered by the legislation, and those designating agencies and officials participating in the program.

Section 102 specifies and defines sites where abandoned uranium mill tailings piles are located which would be covered under the Act. These include sites in three categories: (1) 22 sites which have been surveyed by the Department of Energy and which have been determined by the Secretary to be in need of remedial action and qualified for Federal financial assistance; (2) two sites which meet the criteria for assistance except that they are under active license by the State of New Mexico (the Commission is required to make a study to determine whether States have the authority to compel the owners of the piles to clean them up; if the study concludes such authority does not exist, the Secretary is required to include the sites under the Act); and (3) any other uranium tailings sites which the Secretary may determine within 5 years to have been created under Federal contract and not to be under active NRC license.

Section 103 authorizes the Secretary of Energy to enter into cooperative arrangements with States to clean up mill tailings piles, and describes conditions which would apply to the agreements. The conditions include:

Section 103(b). A split of program costs such that the Federal Government pays 90 percent, and each States pays 10 percent, of the costs of remedial action within each State. A ceiling is placed on any State's share of costs. The ceiling equals 0.25 percent of the State's general revenue in the State's fiscal year ending the year before the enactment of the act. The difference between the State's ceiling and total costs would be paid by the Federal Government. Program costs do not include any costs of environmental impact statements, land acquisition or long-term care of disposal sites.

Section 103(c)(1). Selection of the appropriate remedial action for each site by the Secretary of Energy, with the concurrence of the State and the Nuclear Regulatory Commission, and in consultation with the Environmental Protection Agency.

Section 103(c)(2). State acquisition of all designated sites and any required new final disposal sites for tailings.

Section 103(c)(3). Transfer of title, without cost, to the U.S. Government of any final disposal sites for tailings, to be maintained in perpetuity by a designated custodian.

Section 103(c)(4)-(5). States may sell any cleanup sites not used as final disposal sites. Profits resulting from increased value of property after remedial action is completed would be split between State and Federal Governments in proportion to total program costs.

Section 103(c)(6). Actions taken to remedy hazardous mill tailings sites must be performed by the Secretary of Energy or by a contractor authorized by the Secretary, unless otherwise determined by the Secretary.

Section 103(c)(7)-(8). States may contract with private companies for recovery of any valuable minerals in tailings piles. The Government's share of any profits from such recovery are to be split between State and Federal Government in proportion to total program costs.

Section 104 authorizes the Secretary to enter into arrangements with Indian tribes to clean up mill tailings piles on tribal property. The conditions applied to agreements with Indian tribes are the same as those for States, except that:

- (1) The Federal Government pays 100 percent of program costs.
- (2) Appropriate remedial action is determined by the Secretary in consultation with the Indian tribe and with the concurrence of the Secretary of the Interior.
- (3) Mineral recovery operations would be conducted under contract with the Secretary of the Interior, and 100 percent of any Government profits would be paid to the Federal Government.

Section 105 authorizes the Secretary to include in total program costs funds for the reimbursement of individuals who have undertaken remedial action at their own cost on sites or structures which would have been remedied under the act. The sites or structures must be at locations other than the original processing site, and the actions must have been undertaken prior to enactment of the act.

Section 106 requires the Secretary to conduct research to determine whether the hazards of mill tailings piles could be remedied by extracting the dangerous materials in the piles.

Section 107 authorizes the Secretary to promulgate rules and regulations necessary to carry out the act.

Section 108 requires the Administrator of the Environmental Protection Agency to promulgate within 180 days general standards and criteria for protection of the environment against hazards of the uranium mill tailings. Such standards would be applicable to the activities of the Department of Energy in remedying the mill tailings hazards under the act.

Section 109 authorizes the Commission to promulgate, implement and enforce regulations governing permanent Federal custody of uranium mill tailings disposal sites and governing the activities of the Department of Energy under title I of the act. In addition, the section insures that no regulatory gap will exist during the 3-year grace period when licenses are not required for the type of byproduct material newly defined in title II.

Section 110 authorizes \$180 million effective October 1, 1979, for the Department of Energy to carry out the purposes of title I of the act. The funds are to remain available until expended.

Section 111 brings the authorization into compliance with the Budget Act.

#### TITLE II—URANIUM MILL TAILINGS LICENSING AND REGULATION

Title II reinforces the authority of the Nuclear Regulatory Commission to regulate the uranium mill process and mill tailings disposal. The "Agreement States" program, under which certain States license uranium milling activities, is modified to require that State licensing standards be equivalent to the extent practicable to those of the Commission, and to require public participation and environmental review as part of the State licensing procedures. Title II also reinforces the NRC's authority to make financial arrangements with uranium milling companies to insure proper stabilization and care of uranium mill tailings.

Section 201 amends the definition of "byproduct material" in the Atomic Energy Act to include uranium mill tailings. Previously, tailings have been controlled through the licensing process for uranium mills. This amendment would subject tailings to specific licensing authority. (Section 209 requires that the milling and mill tailings licensing process be consolidated.)

Section 202 requires that all final disposal sites for uranium mill tailings be transferred, upon termination of licenses, to the Federal Government for permanent Federal custody. The President is required to designate an appropriate agency to act as custodian for the tailings. The designated custodian is authorized to accept donations of sites which have been used for licensed tailings disposal but which may not be required to be transferred by the Commission. This provision insures that no owner of disposal sites would be compelled to remain under perpetual Commission license as a result of possessing byproduct material. Title to all tailings sites is required to be transferred to the United States without cost.

Section 203 authorizes the Commission to require secure financial arrangements from licensees for mill tailings stabilization and, if necessary, for long-term care costs. Such financial arrangements may be in the form of bonds, sureties, fees or other collateral to insure that flexibility may be exercised in requirements to prevent unnecessary hardship for firms of differing size or financial background.

Subparagraph (1) requires the Commission to regulate uranium milling and mill tailings disposal in such a way that when licenses are terminated reclamation and stabilization has been implemented by the licensee in such way as to insure, to the maximum extent allowable by the state of technical art, that the disposal sites will not require any long-term maintenance and monitoring to protect the public and the environment.

Subparagraph (2) requires that, in any case where long-term maintenance and monitoring is determined to be necessary by the Commission, the appropriate licensee will pay such costs. The Commission is required to have obtained any such funds from the licensee prior to termination of the license.

Section 204 amends the Atomic Energy Act to provide for adherence by Agreement States to minimum Federal standards for uranium mill tailings control. Subsections (a) through (d) allow States to discontinue licensing of uranium milling and mill tailings control, while retaining authority to license other materials licensable under the Agreement States program. Under current law, States which did not want to regulate uranium milling would have to terminate their complete agreements with the Commission.

Subsection (e) requires that, following 3 years after enactment of the act, State licensing standards for uranium mill tailings and uranium milling must to the extent practicable be equivalent to, or exceed, those of the Commission. In addition, licenses issued by States must require that upon termination of such licenses mill tailings disposal sites will be transferred without cost to permanent Federal custody. State licensing procedures are required to include provisions for public participation and environmental review.

The subsection also provides for States to transfer fees they may collect for long-term care of uranium mill tailings disposal sites to the Federal Government when the sites become inactive. All uranium mill tailings disposal sites will be transferred for permanent custody under the act to the Federal Government, which will implement any necessary long-term care requirements.

States may impose and collect long-term care fees under their own authorities, when States license uranium milling and mill tailings disposal activities. Several States already collect long-term care fees from licensees. This subsection provides that collected maintenance fees will be transferred to the Federal Government along with the sites which will require the maintenance.

Subsection (f) reserves the right of the Commission to determine that mill tailings piles created under Agreement State licensing have met applicable requirements before they are turned over to Federal custody.

Subsection (g) requires the Commission to review the regulatory programs of each Agreement States, as soon as practicable 3 years after the date of enactment of the act, to determine whether the standards applied by the State are at least equivalent to those of the Commission. If the Commission determines that the State's program does not comply, it may suspend or terminate that part of its agreement with the State under which the State is permitted to license and regulate uranium milling and mill tailings activities. Regulatory authority would then revert to the Commission.

Section 205 authorizes the Commission to promulgate, implement and enforce regulations governing permanent Federal custody of uranium mill tailings disposal sites and governing the activities of the Department of Energy under title I of the act. In addition, the section insures that no regulatory gap will exist during the 3-year grace period when licenses are not required for the type of byproduct material, newly defined in title II.

Section 206 requires the Environmental Protection Agency to set general standards and criteria for the protection of the environment outside the boundaries of mill tailings disposal sites. The standards and criteria would be applicable to both radiological and nonradiological hazards in the piles. Authorities of the EPA under other laws would not be abridged by the new requirements.

Section 207 authorizes \$500,000 for grants to Agreement States to assist them in revision of current regulatory programs to implement provisions of the act.

Section 208 provides effective dates for the provisions of the act such that:

(1) No licenses would be required under the new definition of byproduct material until 3 years following enactment.

(2) Upgraded requirements under Agreement States licensing programs would be applied retroactively only to the extent practicable for a grade period following enactment of the act. For each licensee, such period would be for 3 years following enactment, or until the time at which the licensee's license would first be required to be renewed, whichever is the longer period for a specific licensee. In no case may such grace period be longer than 5 years following enactment of the act.

(3) Requirements for transfer of title to final disposal sites under either NRC or State licensing are applicable only to the extent practicable to licenses issued before the date of enactment of the act.

(4) Authority to require secure financial arrangements would take effect immediately.

The authority of Agreement States to continue licensing uranium milling and tailings disposal activities under their own authorities during the period preceding requirement of licenses for byproduct material as newly defined is made clear.

Section 209 requires the Commission to consolidate, to the extent practicable, licenses and licensing procedures for the uranium milling process and for uranium mill tailings control.

Section 210 prohibits the Commission from requiring licenses for any activities undertaken under title I of the act, except that any mineral recovery operations on abandoned mill tailings piles would be subject to licensing.

#### LEGISLATIVE HISTORY, HEARINGS AND COMMITTEE ACTION AND RECOMMENDATION

H.R. 13650 is an amalgam of four bills introduced during the 2d session of the 95th Congress. To facilitate consideration of the recommendations of the Subcommittee on Energy and the Environment, it was introduced as a clean bill.

The four initial proposals represented two basic purposes: three<sup>1</sup> proposed a remedy for hazards at inactive sites which resulted from the production of radioactive materials for the Atomic Energy Commission under Federal contract and the fourth<sup>2</sup> provided for improved regulation of uranium mill tailings at active uranium milling sites.

Hearings were held by the Subcommittee on Energy and the Environment on the problem at inactive sites on June 26 and 27, 1978. Testimony was presented on H.R. 13382 July 10 and 17.

Witnesses at these hearings agreed on the necessity for reducing or eliminating hazards presented by uranium mill tailings. Substantial disagreement arose regarding the appropriate share States and the Federal Government should pay of the costs of any remedial program

<sup>1</sup> H.R. 12535, introduced by Mr. Udall (for the administration), H.R. 12938, introduced by Mr. Marriott, and H.R. 13049, introduced by Mr. Johnson of Colorado.

<sup>2</sup> H.R. 13382 by Mr. Udall.

for tailings at inactive sites, with a significant number of witnesses and members, arguing that the remedial program costs should be completely assumed by the Federal Government.

On August 3, 5, and 9 of 1978, the committee reviewed the recommendations of the Subcommittee on Energy and the Environment with respect to H.R. 13650, and on August 9 by unanimous voice vote recommended that the bill be enacted, with an amendment.

#### OVERSIGHT STATEMENT

Since the legislation, if enacted, would affect laws governing the disposal of nuclear waste and the regulation of the domestic nuclear industry, the Committee on Interior and Insular Affairs, pursuant to rule X, clauses 2(b)(1) and 3(e), would have oversight responsibility over any action of the Secretary of Energy or the Nuclear Regulatory Commission to comply with the mandate of the legislation. No recommendations were submitted to the committee pursuant to rule X, clause (2)(b)(2).

#### COST ESTIMATE AND BUDGET ACT COMPLIANCE

In accordance with rule XIII, clause 7(a) of the House of Representatives, the committee has made an estimate of the budget authority which would be required to carry out H.R. 9203 for the fiscal year beginning on October 1, 1979.

Effective October 1, 1978, the bill authorizes \$180 million to be appropriated for the Department of Energy to carry out the remedial program under title I. This amount is in addition to \$3 million authorized by H.R. 11392 for the Department to carry out activities under title I during fiscal year 1979, which authorization is subject to enactment of this act.

Another \$500,000 is authorized for fiscal year 1980 for the Nuclear Regulatory Commission to make grants to States to aid them in implementing the requirements of title II.

No cost estimate from the Congressional Budget Office was timely submitted to the committee for inclusion in this report.

#### INFLATIONARY IMPACT

In accordance with rule XI, clause 2(1)(4) of the Rules of the House of Representatives, the committee has determined that this legislation will have no significant impact on prices or costs affecting the national economy.

#### DEPARTMENTAL REPORTS

The committee received reports from two administration agencies expressing concerns with certain aspects of H.R. 13650. On July 13, a communication from the Environmental Protection agency suggested amendments to what became title II of H.R. 13650. (The EPA letter expressed support for legislation in title I of the bill.) On August 3, 1978, the Department of Energy sent a letter expressing objections to three actions of the Subcommittee on Energy and the Environment with respect to title I of the bill. Both communications are printed below:



U.S. ENVIRONMENTAL PROTECTION AGENCY,  
*Washington, D.C., July 13, 1978.*

HON. MORRIS UDALL,  
*Chairman, subcommittee on Energy and the Environment,  
 Committee on Interior and Insular Affairs,  
 House of Representatives,  
 Washington, D.C.*

DEAR MR. CHAIRMAN: It has come to my attention that your subcommittee is planning to proceed on July 17 with marking up two bills dealing with the problem of uranium mill tailings. One of the bills, H.R. 12535, is the administration bill for remedial action for inactive uranium mill tailings sites. We have testified on this bill before Congressman Dingell's Subcommittee on Energy and Power, and we support it. The other bill is H.R. 13382, the Uranium Mill Tailings Licensing Act of 1978, which was introduced by you on June 29, 1978, and we have not had an opportunity to comment or testify on this bill before your Subcommittee prior to markup. Based on our review of the bill, we do have some substantive problems which could easily be solved by amending the bill as described below.

H.R. 13382 has several purposes:

1. to authorize the Commission to exercise direct licensing and regulation of the naturally occurring daughter products of uranium and thorium found in uranium mill tailings;
2. to reinforce the Commission's authority to require secure financial arrangements to insure the proper decommissioning, decontamination, reclamation, and long-term care if necessary, of radioactively contaminated sites, structures, and equipment;
3. to facilitate State ownership and authorize Federal ownership of mill tailings disposal areas; and
4. to authorize State regulation of uranium mill tailings under section 274 of the act and to require Agreement States to regulate uranium mill tailings within their jurisdiction to at least the same substantive standards required by the Commission for its licensees.

Our concerns deal mainly with the first point, which would be accomplished by including uranium mill tailings under the definition of "byproduct materials" under the Atomic Energy Act of 1954, as amended, thereby removing uranium mill tailings from the scope of the Resource Conservation and Recovery Act of 1976 (RCRA).

EPA is concerned about consistency between regulatory approaches to the uranium mill tailings problem. The NRC legislation is applicable only to uranium mill tailings, but other wastes, notably those from the phosphate industry, pose similar hazards due to quantity, configuration and radionuclide content and will be regulated under RCRA. Like uranium tailings, these wastes are generated in large quantities; they contain radium, the principal radionuclide of concern; they are dispersed throughout a nonradioactive medium in relatively low concentrations; and they create a health hazard to members of the public chronically exposed to such material. It would be duplicative and inconsistent to have different regulations for similar

wastes rendered hazardous by identical radioactive constituents. Complications may arise especially in connection with the regulation of disposal by the phosphate industry. For example, some phosphate mining wastes are being reprocessed to extract uranium.

EPA is also concerned about the nonradioactive hazardous characteristics of the waste. Under section 6001 of RCRA, all departments, agencies and instrumentalities of the Federal Government are subject to substantive and procedural RCRA requirements. If the uranium mill tailings also have toxic characteristics, their management should be compatible with RCRA provisions.

To address these concerns, several amendments should be made to the bill. First, it should specify that for the purposes of 40 CFR 190, the Uranium Fuel Cycle standards, and for all other purposes, the bill is not intended to affect EPA's generally applicable authority under the Atomic Energy Act, as amended, and Reorganization plan No. 3 of 1970, or any EPA authority under the Clean Air Act.

The bill should also require EPA to set environmental standards and criteria for management of uranium mill tailings and specify that the licensing by NRC under the amended Atomic Energy Act implement these standards and criteria. The bill should further provide that the license conditions required by NRC contain substantive requirements comparable to those of RCPA. The following language could incorporate these suggestions into the bill:

"The Environmental Protection Agency shall, after notice of proposed rulemaking and opportunity for oral presentation of views, data and arguments, prescribe standards and criteria to assure that public health and the environment are adequately protected in connection with the management of uranium mill tailings. The standards and criteria shall be applicable to hazardous radioactive and nonradioactive characteristics of the uranium mill tailings.

"In developing criteria and standards under this Act, EPA will avoid duplication of efforts and ensure consistency to the maximum extent practicable with the requirements of RCRA of 1976, the Clean Air Act of 1970, as amended, and any other Federal law relating to protection of the environment.

"NRC shall implement these standards and criteria in its licensing activities under the Atomic Energy Act of 1954, as amended. NRC shall also adopt and enforce requirements governing uranium mill tailings providing for the use by licensees of additional measures comparable to those required for hazardous materials under subtitle C of RCRA."

The approach this language takes to setting standards and criteria has the additional benefit of basic consistency with the approach taken in the administration's bill, H.R. 12535, dealing with remedial action at inactive sites.

I hope these comments will be helpful to the Subcommittee in its continued work on the uranium mill tailings problem.

Sincerely yours,

DOUGLAS M. COSTLE.

DEPARTMENT OF ENERGY,  
Washington, D.C., August 3, 1978.

HON. MORRIS K. UDALL,  
Chairman, Committee on Interior and Insular Affairs,  
Washington, D.C.

DEAR MR. CHAIRMAN: On July 20 and 27, 1978, the Subcommittee on Energy and Environment conducted a markup of the Residual Radioactive Materials Act of 1978 (the administration bill). During the markup the subcommittee agreed to the following changes in the administration bill with respect to which the Department of Energy (DOE) wishes to express its concern:

1. A 90-percent Federal/10-percent State share of the costs of the remedial action with an absolute ceiling on any State's cumulative share equal to one-quarter of 1 percent of the State's general revenue in the year of enactment;
2. A concurrence role, as opposed to a consultation role, for the States in the determination of the remedial action; and
3. Deletion of the subsections of the administration bill relating to the release of the United States from liability in connection with the performance of the remedial action.

#### COST SHARING FORMULA

For reasons made clear in the subcommittee record, DOE is opposed to the funding formula agreed to by the subcommittee. Of particular concern is the ceiling imposed on a State's contribution to the remedial action program. In practice, imposition of such a ceiling could create serious problems once the remedial action program is underway.

One of DOE's primary objectives with respect to this program is the accomplishment of the cleanup of the 22 specified sites within the estimated budget of between \$80 million and \$125 million. In order to achieve this goal it is imperative that the States have more than a minimal, preliminary financial involvement in the remedial program. Should changes in the program become necessary after its commencement, the States should have an ongoing concern with the relative costs associated with these changes. Additionally, the Secretary has been provided discretionary authority to designate within 5 years of enactment of the legislation additional sites for the purpose of remedial action. It is reasonable to expect that a significant amount of pressure will be exerted upon the Secretary by States and private parties to designate additional sites within this 5-year period. At a minimum additional sites, if designated, should be exempted from application of the ceiling in order to minimize such pressure.

#### STATE ROLE

Under the administration bill, the appropriate remedial action would be determined by the Secretary after consultation with the State; the State would then designate the disposal site or long-term stabilization of the tailings. In proposing this type of State role, it was DOE's intention to afford the States full participation at every level of the decisionmaking process. Therefore, the philosophy underlying the subcommittee's decision to provide concurrence authority to the

States is not dissimilar to DOE's objectives. We are concerned, however, as to how States could obtain authority to grant this concurrence under State law. Such authority, if required to be secured through new State legislation, could cause significant delays in the remedial action program and create unnecessary problems within the States. The language in the administration bill achieves the same objectives without creating such potential legislative hurdles.

#### RELEASE OF LIABILITY

The question of limiting the liability of the United States in connection with the performance of the remedial action is a sensitive and complex one, and warrants a more thorough study than is contained in the one paragraph summary in the issue paper presented to the subcommittee on July 20, 1978.

The language proposed by the administration effects only a limited release of liability dating from enactment of the legislation through the completion of the remedial action. Such a release would not affect the U.S. liability, if any, either prior to or after completion of the remedial action. Since the basis upon which the remedial action program is being undertaken is one of compassionate rather than legal responsibility, DOE considers the inclusion of a limited release of liability to be reasonable and proper.

While we recognize and understand the motivations which have prompted the subcommittee's actions with respect to the administration bill, the modifications adopted are contrary to DOE's objectives as expressed above. With respect to the three major issues of funding, State role, and liability, DOE is concerned that the subcommittee's changes could result in delays in implementation of and cost overruns for the remedial actions.

We appreciate the time and effort that the subcommittee has spent in marking up this legislation. My staff and I will be happy to provide any assistance the full committee may require during its markup.

Sincerely,

JOHN F. O'LEARY,  
*Deputy Secretary.*

#### CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

#### ATOMIC ENERGY ACT OF 1954

\* \* \* \* \*

#### CHAPTER S. BYPRODUCT MATERIAL

Sec. 81. Domestic Distribution.

Sec. 82. Foreign Distribution of Byproduct Material.

Sec. 83. Ownership and custody of certain byproduct material and disposal sites.

Sec. 84. Authorities of Commission respecting certain byproduct material.

\* \* \* \* \*

## CHAPTER 19. MISCELLANEOUS

- Sec. 241. Transfer of Property.  
 Sec. 251. Report to Congress.  
 Sec. 261. Appropriations.  
 Sec. 271. Agency Jurisdiction.  
 Sec. 272. Applicability of Federal Power Act.  
 Sec. 273. Licensing of Government Agencies.  
 Sec. 274. Cooperation with States.  
 Sec. 275. *Authority of the Environmental Protection Agency.*  
 Sec. 281. Separability.  
 Sec. 291. Short Title.

\* \* \* \* \*

## CHAPTER 2. DEFINITIONS

SEC. 11. DEFINITIONS.—The intent of Congress in the definitions as given in this section should be construed from the words or phrases used in the definitions. As used in this Act:

a. The term “agency of the United States” means the executive branch of the United States, or any Government agency, or the legislative branch of the United States, or any agency, committee, commission, office, or other establishment in the legislative branch, or the judicial branch of the United States, or any office, agency, committee, commission, or other establishment in the judicial branch.

b. The term “agreement for cooperation” means any agreement with another nation or regional defense organization authorized or permitted by sections 54, 57, 64, 82, 91c., 103, 104, or 144, and made pursuant to section 123.

c. The term “atomic energy” means all forms of energy released in the course of nuclear fission or nuclear transformation.

d. The term “atomic weapon” means any device utilizing atomic energy, exclusive of the means for transporting or propelling the device (where such means is a separable and divisible part of the device), the principal purpose of which is for use as, or for development of, a weapon, a weapon prototype, or a weapon test device.

e. The term “byproduct material” means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material[.], and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

## CHAPTER 8. BYPRODUCT MATERIAL

\* \* \* \* \*

SEC. 83. OWNERSHIP AND CUSTODY OF CERTAIN BYPRODUCT MATERIAL AND DISPOSAL SITES.—

a. Any license under section 62 or section 81 for any activity which results in the production of any byproduct material as defined in section 11 e. (2) shall contain such terms and conditions as may be necessary to assure that, prior to termination of such license—

- (1) the license will comply with such requirements as the Commission may establish respecting such termination, and
- (2) ownership of—

(A) any byproduct material defined in section 11 e. (2) which resulted from such licensed activity, and

(B) any land (other than land owned by the United States), including both the surface and subsurface estates, which is used for the disposal of such byproduct material.

shall be transferred to the United States.

Such material and land shall be transferred to the United States without cost to the United States (other than administrative and legal costs incurred in carrying out such transfer). The United States shall not transfer title to property acquired under this subsection to any other person.

b. (1) As soon as practicable after the date of the enactment of this section, the President shall designate the Secretary of Energy or any other appropriate officer or instrumentality of the United States (other than the Commission) to have custody of byproduct material and land transferred to the United States under subsection a. (2). No officer or instrumentality may be designated under the preceding sentence unless such officer or instrumentality has adequate authority to provide for the safe treatment, management, storage, and disposal of such byproduct material and to provide for the sound management of such plan, consistent with the requirements of subsection d.

(2) The officer or instrumentality designated under this subsection may accept donations of any byproduct material and land described in subsection a. (2) which is not required to be transferred to such officer or instrumentality (by reason of the effective date of this section or for any other reason). Such material and land may be accepted under this paragraph upon a determination by such officer or instrumentality that such acceptance is necessary or desirable in order to protect the public health, safety, and the environment.

c. Upon termination of any license to which this section applies, the Commission shall determine whether or not the licensee has complied with all applicable standards and requirements under such license.

d. Following the Commission's determination of compliance under subsection c., the officer or instrumentality designated by the President under subsection b. shall assume custody of the byproduct material and land referred to in subsection a. Such officer or instrumentality shall maintain such material and land in such manner as will protect the public health and safety and the environment. Such custody may be transferred to another officer or instrumentality of the United States only upon approval of the President upon his determination that such officer or instrumentality meets the requirements of subsection b.

Sec. 84. AUTHORITIES OF COMMISSION RESPECTING CERTAIN BY-PRODUCT MATERIAL.—

a. The Commission shall insure that the management of any byproduct material as defined in section 11 e. (2) is carried out in such manner as—

(1) the Commission deems appropriate to protect the public health and safety and the environment, and

(2) conforms with applicable standards and criteria promulgated by the Administrator of the Environmental Protection Agency under section 275.

b. In carrying out its authority under this section, the Commission is authorized to:

(1) by rule, regulation, or order require persons, officers, or instrumentalities exempted from licensing—

(A) under section 208(b) or 210 of the Uranium Mill Tailings Control Act of 1978, or

(B) under section 81 of this Act to conduct monitoring, perform remedial work, and to comply with such other measures as it may deem necessary or desirable to protect the public health and safety and the environment, and

(2) make such studies and inspections and to conduct such monitoring as may be necessary.

Any violation by any person other than the United States of any rule or order of the Commission established under this section shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 234. Nothing in this section affects any authority of the Commission under any other provision of this Act.

#### CHAPTER 14. GENERAL AUTHORITY

SEC. 161. GENERAL PROVISIONS.—In the performance of its functions the Commission is authorized to—

a. \* \* \*

\* \* \* \* \*

x. Establish by rule, regulation, or order (in accordance with the provisions of the Administrative Procedure Act as required under section 181) such standards and instructions as the Commission may deem necessary or desirable to insure, before termination of any license for byproduct material as defined in section 11 e. (2) and before the transfer under section 83 of land used for the disposal of such material, that the licensee will make available such bonding or other financial arrangements as may be required to assure the reclamation of sites, structures and equipment used in conjunction with such byproduct material and that—

(1) in the case of any such license issued or renewed after the date of the enactment of this subsection, to the maximum extent practicable, no long-term maintenance and monitoring of such sites, structures, and equipment will be required; and

(2) in the case of each license for such material (including any license referred to in paragraph (1) and any license in effect on the date of the enactment of this subsection), if the Commission determines that any such long-term maintenance and monitoring is necessary, the licensee will make available such bonding or other financial arrangements as may be required to assure such long-term maintenance and monitoring.

\* \* \* \* \*

#### CHAPTER 19 MISCELLANEOUS

\* \* \* \* \*

SEC. 274. COOPERATION WITH STATES.—

a. It is the purpose of this section—

(1) to recognize the interests of the States in the peaceful uses of atomic energy, and to clarify the respective responsibilities under this Act of the States and the Commission with respect to the regulation of byproduct, source, and special nuclear materials;

(2) to recognize the need, and establish programs for, cooperation between the States and the Commission with respect to control of radiation hazards associated with use of such materials;

(3) to promote an orderly regulatory pattern between the Commission and State governments with respect to nuclear development and use and regulation of byproduct, source, and special nuclear materials;

(4) to establish procedures and criteria for discontinuance of certain of the Commissions's regulatory responsibilities with respect to byproduct, source, and special nuclear materials, and the assumption thereof by the States;

(5) to provide for coordination of the development of radiation standards for the guidance of Federal agencies and cooperation with the States; and

(6) to recognize that, as the States improve their capabilities to regulate effectively such materials, additional legislation may be desirable.

b. Except as provided in subsection c., the Commission is authorized to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority of the Commission under chapters 6, 7, and 8, and section 161 of this Act, with respect to any one or more of the following materials within the State—

(1) byproduct materials as defined in section 11e.(1);

(2) byproduct materials as defined in section 11e.(2);

~~[(2)]~~ (3) source materials;

~~[(3)]~~ (4) special nuclear materials in quantities not sufficient to form a critical mass.

During the duration of such an agreement it is recognized that the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards.

c. No agreement entered into pursuant to subsection b. shall provide for discontinuance of any authority and the Commission shall retain authority and responsibility with respect to regulation of—

(1) the construction and operation of any production or utilization facility;

(2) the export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility;

(3) the disposal into the ocean or sea of byproduct, source, or special nuclear waste materials as defined in regulations or orders of the Commission;

(4) the disposal of such other byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.

*The Commission shall also retain authority under any such agreement to make a determination that all applicable standards and requirements have been met prior to termination of a license for byproduct material as defined in section 11 e. (2). Notwithstanding any agreement between the Commission and any State pursuant to subsection b., the Commission is authorized by rule, regulation, or order to require that the manufacturer, processor, or producer or any equipment, device, commodity, or other product containing source, byproduct, or special*



nuclear material shall not transfer possession or control of such product except pursuant to a license issued by the Commission.

d. The Commission shall enter into an agreement under subsection b. of this section with any State if—

(1) The Governor of that State certifies that the State has a program for the control of radiation hazards adequate to protect the public health and safety with respect to the materials within the State covered by the proposed agreement, and that the State desires to assume regulatory responsibility for such materials; and

(2) the Commission finds that the State program is *in accordance with the requirements of subsection o. and in all other respects compatible with the Commission's program for the regulation of such materials*, and that the State program is adequate to protect the public health and safety with respect to the materials covered by the proposed agreement.

\* \* \* \* \*

j. The Commission, upon its own initiative after reasonable notice and opportunity for hearing to the State with which an agreement under subsection b, has become effective, or upon request of the Governor of such State, may (1) terminate or suspend its agreement with the State and reassert the licensing and regulatory authority vested in it under this Act, if the Commission finds that such termination or suspension is required to protect the public health and safety and (2), *terminate or suspend that part of its agreement with the State relating to State licensing and regulation of any activity which results in the production of byproduct material as defined by section 11e.(2), and reassert the licensing and regulatory authority vested in it under this Act over such activities, if the Commission finds that such termination or suspension is required to assure compliance with subsection o.*

\* \* \* \* \*

n. As used in this section, the term "State" means any State, Territory, or possession of the United States, the Canal Zone, Puerto Rico, and the District of Columbia. *As used in this section, the term agreement includes any amendment to any agreement.*

o. *In the licensing and regulation of any activity which results in the production of byproduct material as defined in section 11e.(2) under an agreement entered into pursuant to subsection b., a State shall require compliance with the requirements of section 83 a. (2) (respecting ownership by the United States of byproduct material and land), and the State shall adopt and enforce—*

(1) *substantive standards for the protection of the public health, safety, and the environment from hazards associated with such material which are equivalent, to the extent practicable, or more stringent than, standards adopted and enforced by the Commission for the same purpose, and*

(2) *procedures which—*

(A) *in the case of licenses, provide for advance public notice, an opportunity for a public hearing with rights to present direct and rebuttal evidence and conduct cross-examination, and a written decision which is based only on evidence in the record and which is subject to judicial review,*

(B) in the case of rulemaking, provide opportunity for public participation in the form of written comments or a public hearing and which provide for judicial review of the rulemaking decision,

(C) require the preparation of a written independent-environmental analysis or review which is available to the public before the commencement of any such proceedings, and

(D) prohibit, in the case of any construction activity which is proposed with respect to such material, any major activity from being undertaken before completion and public availability of the analysis or review referred to in subparagraph (C).

No State shall be required under paragraph (2) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted in such State by the Commission. —

p. If any State, under an agreement for the licensing and regulation of byproduct material as defined in section 11 e. (2), imposes upon the licensee any requirement for the payment of funds which are collected by the State for the reclamation or longterm maintenance and monitoring of such byproduct material, such State shall transfer to the United States, upon termination of the license in connection with which such payment was made, any amounts collected by the State for such purposes. Any such agreement in effect on the date of the enactment of this subsection shall be amended as promptly as practicable following such date to comply with the requirements of the proceeding sentence with respect to amounts collected before, on, and after such date of enactment.

SEC. 275. AUTHORITY OF THE ENVIRONMENTAL PROTECTION AGENCY.—

a. The Administrator of the Environmental Protection Agency (hereinafter in this section referred to as to the "Administrator") shall, by rule, promulgate, and from time to time revise, generally applicable standards and criteria for the protection of the general environment outside the boundaries of—

(1) sites at which ores are processed primarily for their source material content, and

(2) sites used for the disposal of byproduct material as defined in section 11 e. (12).

Such criteria shall apply to radiological and nonradiological environmental hazards associated with the processing, and with the possession and transfer, of by product material as defined in section 11 e. (2), and shall be consistent to the maximum extent practicable with the requirements of the Solid Waste Disposal Act.

b. Before the promulgation of any rule pursuant to subsection a., the Administrator shall—

(1) consult with the Commission; and

(2) provide adequate notice of any rulemaking proceeding and provide opportunity for public hearing.

c. Any interested person may obtain judicial review of any rule promulgated under subsection a. of this section in the United States court of appeals for the Federal judicial circuit in which such person resides or transacts business only upon petition for review by such person filed

*within ninety days from the date of such promulgation, or after such date only if such petition is based solely on grounds which arose after such ninetieth day.*

*d. Nothing in this section shall be construed to limit or enlarge the functions of the Administrator of the Environmental Protection Agency under the Federal Water Pollution Control Act or under the Clean Air Act.*

\* \* \* \* \*



URANIUM MILL TAILINGS RADIATION CONTROL ACT  
OF 1978

SEPTEMBER 30, 1978.—Committed to the Committee of the Whole House on the  
State of the Union and ordered to be printed

Mr. STAGGERS, from the Committee on Interstate and Foreign  
Commerce, submitted the following

**REPORT**

together with

**SUPPLEMENTAL VIEWS**

[To accompany H.R. 13650 which, on July 28, 1978, was referred jointly to the  
Committee on Interior and Insular Affairs and the Committee on Interstate  
and Foreign Commerce]

The Committee on Interstate and Foreign Commerce, to whom was  
referred the bill (H.R. 13650) to authorize the Secretary of Energy  
to enter into cooperative agreements with certain States respecting  
residual radioactive material at existing sites, to provide for the regu-  
lation of uranium mill tailings under the Atomic Energy Act of 1954,  
and for other purposes, having considered the same, report favorably  
thereon with an amendment and recommend that the bill as amended  
do pass.

The amendment is as follows:

**SHORT TITLE AND TABLE OF CONTENTS**

SECTION 1. This Act may be cited as the "Uranium Mill  
Tailings Radiation Control Act of 1978".

**TABLE OF CONTENTS**

- Sec. 1. Short title and table of contents.  
Sec. 2. Findings and purposes.

### TITLE I—REMEDIAL ACTION PROGRAM

- Sec. 101. Definitions.
- Sec. 102. Designation of processing sites.
- Sec. 103. State cooperative agreements.
- Sec. 104. Acquisition and disposition of land and materials.
- Sec. 105. Indian tribe cooperative agreements.
- Sec. 106. Acquisition of lands by Secretary.
- Sec. 107. Financial assistance.
- Sec. 108. Remedial action.
- Sec. 109. Rules.
- Sec. 110. Enforcement.
- Sec. 111. Public participation.
- Sec. 112. Termination; authorization.
- Sec. 113. Limitation.
- Sec. 114. Reports to Congress.
- Sec. 115. Active operations; liability for remedial action.

### TITLE II—URANIUM MILL TAILINGS LICENSING AND REGULATION

- Sec. 201. Definition.
- Sec. 202. Custody of disposal site.
- Sec. 203. Authority to establish certain requirements.
- Sec. 204. Cooperation with States.
- Sec. 205. Authorities of Commission respecting certain byproduct material.
- Sec. 206. Authority of Environmental Protection Agency respecting certain byproduct material.
- Sec. 207. Authorization of appropriations for grants.
- Sec. 208. Effective date.
- Sec. 209. Consolidation of licenses and procedures.

### TITLE III—STUDY AND DESIGNATION OF TWO MILL TAILINGS SITES IN NEW MEXICO

- Sec. 301. Study.
- Sec. 302. Designation by Secretary.

### FINDINGS AND PURPOSES

#### SEC. 2. (a) The Congress finds that—

(1) uranium mill tailings located at active and inactive mill operations may pose a potential and significant radiation health hazard to the public, and that the protection of the public health, safety, and welfare and the regulation of interstate commerce require that every reasonable effort be made to provide for the stabilization, disposal, and control in a safe and environmentally sound manner of such tailings in order to prevent or minimize radon diffusion into the environment and to prevent or minimize other environmental hazards from such tailings.

(2) uranium mill tailings at certain inactive sites resulted in whole or in part from the production of uranium for sale under contract to the United States during a period when the potential radiation health hazard to the public was apparently not adequately recognized, although environmental hazards to water and air from such tailings were recognized by several Federal agencies and the States as early as 1960;

(3) all milling operations at such sites have terminated prior to 1973;

(4) in 1972 Congress authorized some remedial action for property and structures in Grand Junction, Colorado, found to be contaminated by such tailings; and

(5) it is in the public interest to provide financial assistance to the States and Indian tribes to undertake remedial actions concerning such inactive sites in order to eliminate or minimize such hazard.

(b) The purposes of this Act are to provide—

(1) in cooperation with the interest States, Indian tribes, and the persons who own or control inactive mill tailings sites, a program of assessment and remedial action at such sites, including, where appropriate, the reprocessing of tailings to extract residual uranium and other mineral values where practicable, in order to stabilize and control such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public, and

(2) a program to regulate mill tailings during uranium or thorium ore processing at active mill operations and after termination of such operations in order to stabilize and control such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public.

## TITLE I—REMEDIAL ACTION PROGRAM

### DEFINITIONS

Sec. 101. For purpose of this title—

(1) The term "Secretary" means the Secretary of Energy.

(2) The term "Commission" means the Nuclear Regulatory Commission.

(3) The term "Administrator" means the Administrator of the Environmental Protection Agency.

(4) The term "Indian tribe" means any tribe, band, clan, group, pueblo, or community of Indians recognized as eligible for services provided by the Secretary of the Interior to Indians.

(5) The term "person" means any individual, association, partnership, corporation, firm, joint venture, trust, government entity, and any other entity, except that such term does not include any Indian or Indian tribe.

(6) The term "processing site" means—

(A) any site, including the mill, containing residual radioactive materials at which all or substantially all of the uranium was produced for sale to any Federal agency prior to January 1, 1971 under a contract with any Federal agency, unless—

(i) such site was owned or controlled as of January 1, 1978, or is thereafter owned or controlled, by any Federal agency, or

(ii) a license (issued by the Commission or its predecessor agency under the Atomic

Energy Act of 1954 or by a State as permitted under section 274 of such Act) for the production at such site of any uranium or thorium product derived from ores is in effect on January 1, 1978, or is issued or renewed after such date; and

(B) any other real property or improvement thereon which—

- (i) is in the vicinity of such site, and
- (ii) is determined by the Secretary, in consultation with the Commission, to be contaminated with residual radioactive materials derived from such site.

Any ownership or control of an area by a Federal agency which is acquired pursuant to a cooperative agreement under this title shall not be treated as ownership or control by such agency for purposes of subparagraph (A)(i). A license for the production of any uranium product from residual radioactive materials shall not be treated as a license for production from ores within the meaning of subparagraph (A)(ii) if such production is in accordance with section 108(b).

(7) The term "residual radioactive material" means—

- (A) waste (which the Secretary determines to be radioactive) in the form of tailings resulting from the processing of ores for the extraction of uranium and other valuable constituents of the ores; and
- (B) other waste (which the Secretary determines to be radioactive) at a processing site which relate to such processing, including any residual stock of unprocessed ores or low-grade materials.

(8) The term "tailings" means the remaining portion of a metal-bearing ore after some or all of such metal, such as uranium, has been extracted.

(9) The term "Federal agency" includes any executive agency as defined in section 105 of title 5 of the United States Code.

(10) The term "United States" means the 48 contiguous States and Alaska, Hawaii, Puerto Rico, the District of Columbia, and the territories and possessions of the United States.

#### DESIGNATION OF PROCESSING SITES

SEC. 102.(a)(1) Within one year after enactment of this Act, the Secretary shall designate all processing sites within the United States which he determines require remedial action to carry out the purposes of this Act. In making each such designation, the Secretary shall consult with the Administrator, the Commission, and the affected States, and in the case of Indian lands, the appropriate Indian tribe and the Secretary of the Interior.

(2) As part of his designation under this subsection, the Secretary, in consultation with the Commission, shall determine the boundaries of each such site.

(3) No site or structure with respect to which remedial action is authorized under Public Law 92-314 in Grand Junction, Colorado, may be designated by the Secretary as a processing site under this section.

(b) Within one year from the date of the enactment of this Act, the Secretary shall assess the potential health hazard to the public from the residual radioactive materials at designated processing sites. Based upon such assessment, the Secretary shall, within such one year period, establish priorities for carrying out remedial action at each such site. In establishing such priorities, the Secretary shall rely primarily on the advice of the Administrator.

(c) Within thirty days after making designations of processing sites and establishing the priorities for such sites under this section, the Secretary shall notify the Governor of each affected State, and, where appropriate, the Indian tribes and the Secretary of the Interior.

(d) The designations made, and priorities established, by the Secretary under this section shall be final and not be subject to judicial review.

(e)(1) The designation of processing sites within one year after enactment under this section shall include, to the maximum extent practicable, the areas referred to in section 101(6)(B).

(2) Notwithstanding the one year limitation contained in this section, the Secretary may, after such one year period, include any area described in section 101(6)(B) as part of a processing site designated under this section if he determines such inclusion to be appropriate to carry out the purposes of this title.

#### STATE COOPERATIVE AGREEMENTS

SEC. 103. (a) After notifying a State of the designation referred to in section 102 of this title, the Secretary, subject to section 113, is authorized to enter into cooperative agreements with such State to perform remedial actions at each designated processing site in such State (other than a site located on Indian lands referred to in section 105). The Secretary shall, to the greatest extent practicable, enter into such agreements and carry out such remedial actions in accordance with the priorities established by him under section 102.

(b) Each cooperative agreement under this section shall contain such terms and conditions as the Secretary deems appropriate and consistent with the purposes of this Act.

(c)(1) Except where the State is required to acquire the processing site as provided in subsection (a) of section 104, each cooperative agreement with a State under section 103 shall provide that the State shall obtain, in a form prescribed by the Secretary, written consent from any person holding any record interest in the designated processing site for the Secretary or any person designated by him to perform remedial action at such site.



(2) Such written consent shall include a waiver by each such person on behalf of himself, his heirs, successors, and assigns—

(A) releasing the United States of any liability or claim thereof by such person, his heirs, successors, and assigns concerning such remedial action, and

(B) holding the United States harmless against any claim by such person on behalf of himself, his heirs, successors, or assigns arising out of the performance of any such remedial action.

(d) Each cooperative agreement under this section shall require the State to assure that the Secretary, the Commission, and the Administrator and their authorized representatives have a permanent right of entry at any time to inspect the processing site and the site provided pursuant to section 104(b)(1) in furtherance of the provisions of this title and to carry out such agreement and enforce this Act and any rules prescribed under this Act. Such right of entry under this section or section 106 into an area described in section 101(6)(B) shall terminate on completion of the remedial action, as determined by the Secretary.

(e) Each agreement under this section shall take effect only upon the concurrence of the Commission with the terms and conditions thereof.

(f) The Secretary may, in any cooperative agreement entered into under this section or section 105, provide for reimbursement of the actual costs, as determined by the Secretary, of any remedial action performed with respect to so much of a designated processing site as is described in section 101(6)(B). Such reimbursement shall be made only to a property owner of record at the time such remedial action was undertaken and only with respect to costs incurred by such property owner. No such reimbursement may be made unless—

(1) such remedial action was completed prior to enactment of this Act, and unless the application for such reimbursement was filed by such owner within one year after an agreement under this section or section 105 is approved by the Secretary and the Commission, and

(2) the Secretary is satisfied that such action adequately achieves the purposes of this Act with respect to the site concerned and is consistent with the standards established by the Administrator pursuant to section 275(a)(1) of the Atomic Energy Act of 1954.

#### ACQUISITION AND DISPOSITION OF LANDS AND MATERIALS

SEC. 104. (a) Each cooperative agreement under section 103 shall require the State, where determined appropriate by the Secretary with the concurrence of the Commission, to acquire any designated processing site, including where appropriate any interest therein.

(b)(1) If the Secretary with the concurrence of the Commission determines that removal of residual radioactive material from a processing site is appropriate, the coopera-

tive agreement shall provide that the State shall acquire land (including, where appropriate, any interest therein) to be used as a site for the permanent disposition and stabilization of such residual radioactive materials in a safe and environmentally sound manner.

(2) Acquisition by the State shall not be required under this subsection if a site located on land controlled by the Secretary or made available by the Secretary of the Interior pursuant to section 106(a)(2) is designated by the Secretary with the concurrence of the Commission, for such disposition and stabilization.

(c) No State shall be required under subsection (a) or (b) to acquire any real property or improvement outside the boundaries of—

(1) that portion of the processing site which is described in section 101(6)(A), and

(2) the site used for disposition of the residual radioactive materials.

(d) In the case of each processing site designated under this title other than a site designated on Indian land, the State shall take such action as may be necessary, and pursuant to regulations of the Secretary under this subsection, to assure that any person who purchases such a processing site after the removal of radioactive materials from such site shall be notified in an appropriate manner prior to such purchase, of the nature and extent of residual radioactive materials removed from the site, including notice of the date when such action took place, and the condition of such site after such action. If the State is the owner of such site, the State shall so notify any prospective purchaser before entering into a contract, option, or other arrangement to sell or otherwise dispose of such site. The Secretary shall issue appropriate rules and regulations to require notice in the local land records of the residual radioactive materials which were located at any processing site and notice of the nature and extent of residual radioactive materials removed from the site, including notice of the date when such action took place.

(e)(1) The terms and conditions of any cooperative agreement with a State under section 103 shall provide that in the case of any lands or interests therein acquired by the State pursuant to subsection (a), the State with the concurrence of the Secretary and the Commission, may—

(A) sell such lands and interests,

(B) permanently retain such land and interests in lands (or donate such lands and interests therein to another governmental entity within such State) for permanent use by such State or entity solely for park, recreational, or other public purposes, or

(C) transfer such lands and interests to the United States as provided in subsection (f).

No lands may be sold under subparagraph (A) without the consent of the Secretary and the Commission. No site may be sold under subparagraph (A) or retained under subparagraph (B) if such site is used for the disposition of residual radioactive materials.

(2) Before offering for sale any lands and interests therein which comprise a processing site, the State shall offer to sell such lands and interests at their fair market value to the person from whom the State acquired them.

(f)(1) Each agreement under section 103 shall provide that title to—

(A) the residual radioactive materials subject to the agreement, and

(B) any lands and interests therein which have been acquired by the State, under subsection (a) or (b), for the disposition of such materials,

shall be transferred by the State to the Secretary when the Secretary (with the concurrence of the Commission) determines that remedial action is completed in accordance with the requirements imposed pursuant to this title. No payment shall be made in connection with the transfer of such property from funds appropriated for purposes of this act other than payments for any administrative and legal costs incurred in carrying out such transfer.

(2) Custody of any property transferred to the United States under this subsection shall be assumed by the Secretary or such Federal agency as the President may designate. Notwithstanding any other provision of law, such property and minerals shall be maintained pursuant to a license issued by the Commission in such manner as will protect the public health, safety, and the environment. The United States shall not transfer title to property or interest therein acquired under this subsection to any person or State, except as provided in subsection (h).

(g) Each agreement under section 103 which permits any sale described in subsection (e)(1)(A) shall provide for the prompt reimbursement to the Secretary from the proceeds of such sale. Such reimbursement shall be in an amount equal to the lesser of—

(1) that portion of the fair market value of the lands or interests therein which bears the same ratio to such fair market value as the Federal share of the costs of acquisition by the State to such lands or interest therein bears to the total cost of such acquisition, or

(2) the total amount paid by the Secretary with respect to such acquisition.

The fair market value of such lands or interest shall be determined by the Secretary as of the date of the sale by the State. Any amounts received by the Secretary under this title shall be deposited in the Treasury of the United States as miscellaneous receipts.

(h) No provision of any agreement under section 103 shall prohibit the United States from disposing of any subsurface mineral rights by sale or lease (in accordance with laws of the United States applicable to the sale, lease, or other disposal of such rights) which are associated with land on which residual radioactive materials are disposed and which are transferred to the United States as required under this section if the

Secretary takes such action as the Commission deems necessary pursuant to a license issued by the Commission to assure that the residual radioactive materials will not be disturbed by reason of any activity carried on following such disposition. If any such materials are disturbed by any such activity, the Secretary shall insure, prior to disposition of the minerals, that such materials will be restored to a safe and environmentally sound condition as determined by the Commission, and that the costs of such restoration will be borne by the person acquiring such rights from the Secretary or from his successor or assign.

#### INDIAN TRIBE COOPERATIVE AGREEMENTS

SEC. 105. (a) After notifying the Indian tribe of the designation pursuant to section 102 of this title, the Secretary, in consultation with the Secretary of the Interior, is authorized to enter into a cooperative agreement, subject to section 113, with any Indian tribe to perform remedial action at a designated processing site located on land of such Indian tribe. The Secretary shall, to the greatest extent practicable, enter into such agreements and carry out such remedial actions in accordance with the priorities established by him under section 102. Each such agreement, shall contain such terms and conditions as the Secretary deems appropriate and consistent with the purposes of this Act. Such terms and conditions shall require the following:

(1) The Indian tribe and any person holding any interest in such land shall execute a waiver (A) releasing the United States of any liability or claim thereof by such tribe or person concerning such remedial action and (B) holding the United States harmless against any claim arising out of the performance of any such remedial action.

(2) The remedial action shall be selected and performed in accordance with section 108 by the Secretary or such person as he may designate.

(3) The Secretary, the Commission, and the Administrator and their authorized representatives shall have a permanent right of entry at any time to inspect such processing site in furtherance of the provisions of this title, to carry out such agreement, and to enforce any rules prescribed under this Act.

Each agreement under this section shall take effect only upon concurrence of the Commission with the terms and conditions thereof.

(b) When the Secretary with the concurrence of the Commission determines removal of residual radioactive materials from a processing site on lands described in subsection (a) to be appropriate, he shall provide, consistent with other applicable provisions of law, a site or sites for the permanent disposition and stabilization in a safe and environmentally sound manner of such residual radioactive materials. Such materials shall be transferred to the Secretary (without pay-

ment therefor by the Secretary) and permanently retained and maintained by the Secretary under the conditions established in a license issued by the Commission, subject to section 104(f)(2) and (h).

#### ACQUISITION OF LAND BY SECRETARY

SEC. 106. (a) Where necessary or appropriate in order to consolidate in a safe and environmentally sound manner the location of residual radioactive materials which are removed from processing sites under cooperative agreements under this title, or where otherwise necessary for the permanent disposition and stabilization of such materials in such manner—

(1) the Secretary may acquire land and interests in land for such purposes by purchase, donation, or exchange, or under any other authority of law or

(2) the Secretary of the Interior may make available public lands administered by him for such purposes in accordance with other applicable provisions of law. Prior to acquisition of land under paragraph (1) or (2) of this subsection in any State, the Secretary shall consult with the Governor of such State. No lands may be acquired under such paragraph (1) or (2) in any State in which there is no (1) processing site designated under this title or (2) active uranium mill operation, unless the Secretary has obtained the consent of the Governor of such State. No lands controlled by any Federal agency may be transferred to the Secretary to carry out the purposes of this Act without the concurrence of the chief administrative officer of such agency.

(b) The value of any lands exchanged by the Secretary under this section shall be equal or if they are not equal, the values shall be equalized by the payment of money to the grantor or to the Secretary concerned as the circumstances require so long as payment does not exceed 25 per centum of the total value of the lands or interests transferred out of Federal ownership. The Secretary shall try to reduce the amount of the payment of money to as small an amount as possible.

#### FINANCIAL ASSISTANCE

SEC. 107. (a) In the case of any designated processing site for which an agreement is executed with any State for remedial action at such site, the Secretary shall pay not to exceed 90 per centum of the actual cost of such remedial action, including the actual costs of acquiring such site (and any interest therein) or any disposition site (and any interest therein) pursuant to section 103 of this title, and the State shall pay the remainder of such costs from non-Federal funds. The Secretary shall not pay the administrative costs incurred by any State to develop, prepare, and carry out any cooperative agreement executed with such State under this title, except the proportionate share of the administrative costs

associated with the acquisition of lands and interests therein acquired by the State pursuant to this title.

(b) In the case of any designated processing site located on Indian lands, the Secretary shall pay the entire cost of such remedial action.

#### REMEDIAL ACTION

SEC. 108. (a)(1) The Secretary or such person as he may designate shall select and perform remedial actions at designated processing sites and disposal sites in accordance with the general standards prescribed by the Administrator pursuant to section 275 a. (1) of the Atomic Energy Act of 1954. Since the State must share in the costs of such remedial action, the State shall participate fully in the selection and performance thereof. Such remedial action shall be selected and performed with the concurrence of the Commission and in consultation, as appropriate, with the Indian tribe and the Secretary of the Interior.

(2) The Secretary shall use such technology in performing such remedial action as will insure compliance with the general standards promulgated by the Administrator under section 275 a. (1) of the Atomic Energy Act of 1954 and will insure the safe and environmentally sound stabilization of residual radioactive materials. No such remedial action may be undertaken under this section before the promulgation of such standards.

(b) Prior to undertaking any remedial action under this title, the Secretary shall evaluate the mineral concentration of the residual radioactive materials at each designated processing site to determine whether, as a part of any remedial action program, recovery of such minerals is practicable. The Secretary, with the concurrence of the Commission, may permit the recovery of such minerals, under such terms and conditions as he may prescribe to carry out the purposes of this Act. Any person permitted by the Secretary to recover such mineral shall pay to the Secretary a share of the net profits derived from such recovery, as determined by the Secretary. Such share shall not exceed the total amount paid by the Secretary for carrying out remedial action at such designated site. After payment of such share to the United States under this subsection, such person shall pay to the State in which the residual radioactive materials are located a share of the net profits derived from such recovery, as determined by the Secretary. Such share shall not exceed the total amount paid by the State for carrying out remedial action at such designated site. The person recovering such minerals shall bear all the costs of such recovery. Any person carrying out mineral recovery activities under this paragraph shall be required to obtain any necessary license under the Atomic Energy Act of 1954 or under State law as permitted under section 274 of such Act.

## RULES

SEC. 109. The Secretary may prescribe such rules consistent with the purposes of this Act as he deems appropriate pursuant to title V of the Department of Energy Organization Act.

## ENFORCEMENT

SEC. 110. (a)(1) Any person who violates any provision of this or any cooperative agreement entered into pursuant to this title or any rule prescribed under this Act concerning any designated processing site, disposition site, or remedial action shall be subject to an assessment by the Secretary of a civil penalty of not more than \$1,000 per day per violation. Such assessment shall be made by order after notice and an opportunity for a public hearing, pursuant to section 554 of title 5, United States Code.

(2) Any person against whom a penalty is assessed under this section may, within sixty calendar days after the date of the order of the Secretary assessing such penalty, institute an action in the United States court of appeals for the appropriate judicial circuit for judicial review of such order in accordance with chapter 7 of title 5, United States Code. The court shall have jurisdiction to enter a judgment affirming, modifying, or setting aside in whole or in part, the order of the Secretary, or the court may remand the proceeding to the Secretary for such further action as the court may direct.

(3) If any person fails to pay an assessment of a civil penalty after it has become a final and unappealable order, the Secretary shall institute an action to recover the amount of such penalty in any appropriate district court of the United States. In such action, the validity and appropriateness of such final assessment order or judgment shall not be subject to review. Section 402(d) of the Department of Energy Organization Act shall not apply with respect to the functions of the Secretary under this section.

(4) No civil penalty may be assessed against the United States or any State or political subdivision of a State or any official or employee of the foregoing.

(5) Nothing in this section shall prevent the Secretary from enforcing any provision of this title or any cooperative agreement or any such rule by injunction or other equitable remedy.

(b) Subsection (a) shall not apply to any licensing requirement under the Atomic Energy Act of 1954. Such licensing requirements shall be enforced by the Commission as provided in such Act.

## PUBLIC PARTICIPATION

SEC. 111. In carrying out the provisions of this title, including the designation of processing sites, establishing priorities for such sites, the selection of remedial actions, and the execution of cooperative agreements, the Secretary, the Ad-

ministrator, and the Commission shall encourage public participation and, where appropriate, the Secretary shall hold public hearings relative to such matters in the States where processing sites and disposal sites are located.

#### TERMINATION; AUTHORIZATION

SEC. 112. (a) The authority of the Secretary to perform remedial action under this title shall terminate on the date seven years after the date of promulgation by the Administrator of general standards applicable to such remedial action unless such termination date is specifically extended by an Act of Congress enacted after the date of enactment of this Act.

(b) The amounts authorized to be appropriated to carry out the purposes of this title by the Secretary, the Administrator, the Commission, and the Secretary of the Interior shall not exceed such amounts as are established in annual authorization Acts for fiscal year 1979 and each fiscal year thereafter applicable to the Department of Energy. Any sums appropriated for the purposes of this title shall be available until expended.

#### LIMITATION

SEC. 113. The authority under this title to enter into or contracts or other obligations requiring the United States to make outlays may be exercised only to the extent provided in advance in annual authorization and appropriation Acts.

#### REPORTS TO CONGRESS

SEC. 114. (a) Beginning on June 1, 1980, and each year thereafter until June 1, 1986, the Secretary shall submit a report to the Congress with respect to the status of the actions required to be taken by the Secretary, the Commission, the Secretary of the Interior, the Administrator, and the States and Indian tribes under this Act and any amendments to other laws made by this Act. Each report shall—

- (1) include data on the actual and estimated costs of the program authorized by this title;
- (2) describe the extent of participation by the States and Indian tribes in this program;
- (3) evaluate the effectiveness of remedial actions, and describe any problems associated with the performance of such actions; and
- (4) contain such other information as may be appropriate.

Such report shall be prepared in consultation with the Commission, the Secretary of the Interior, and the Administrator and shall contain their separate views, comments, and recommendations, if any. The Commission shall submit to the Secretary and Congress such portion of the report under this subsection as relates to the authorities of the Commission under title II of this Act.



(b) Not later than July 1, 1979, the Secretary shall provide a report to the Congress which identifies all sites located on public or acquired lands of the United States containing residual radioactive materials and other radioactive waste (other than waste resulting from the production of electric energy) and specifics which Federal agency has jurisdiction over such sites. The report shall include the identity of property and other structures in the vicinity of such site that are contaminated or may be contaminated by such materials and the actions planned or taken to remove such materials. The report shall describe in what manner such sites are adequately stabilized and otherwise controlled to prevent radon diffusion from such sites into the environment and other environmental harm. If any site is not so stabilized or controlled, the report shall describe the remedial actions planned for such site and the timetable for performing such actions.

(c) Copies of the reports required by this section to be submitted to the Congress shall be separately submitted to the Committees on Interior and Insular Affairs and on Interstate and Foreign Commerce of the House of Representatives and the Committee on Energy and Natural Resources of the Senate.

#### ACTIVE OPERATIONS; LIABILITY FOR REMEDIAL ACTION

SEC. 115. (a) No amount may be expended under this title with respect to any site licensed by the Commission under the Atomic Energy Act of 1954 or by a State as permitted under section 274 of such Act at which production of any uranium product from ores (other than from residual radioactive materials) takes place.

(b) In the case of each processing site designated under this title, the Attorney General shall conduct a study to determine the identity and legal responsibility which any person (other than the United States, a State, or Indian tribe) who owned or operated or controlled (as determined by the Attorney General) such site before the date of the enactment of this Act may have under any law or rule of law for reclamation or other remedial action with respect to such site. The Attorney General shall publish the results of such study, and provide copies thereof to the Congress, as promptly as practicable following the date of the enactment of this Act. The Attorney General, based on such study, shall, to the extent he deems it appropriate and in the public interest, take such action under any provision of this title or under any provision of law in effect when uranium was produced at such site to require payment by such person of all or any part of the costs incurred by the United States for such remedial action for which he determines such person is liable.

**TITLE II—URANIUM MILL TAILINGS LICENSING  
AND REGULATION****DEFINITION**

SEC. 201. Section 11 e. of the Atomic Energy Act of 1954 is amended to read as follows:

“e. The term ‘byproduct material’ means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.”.

**CUSTODY OF DISPOSAL SITE**

SEC. 202. (a) Chapter S of the Atomic Energy Act of 1954 is amended by adding the following new section at the end thereof:

“SEC. S3. OWNERSHIP AND CUSTODY OF CERTAIN BY-PRODUCT MATERIAL AND DISPOSAL SITES.—

“a. Any license issued or renewed after the effective date of this section under section 62 or section 81 for any activity which results in the production of any byproduct material as defined in section 11 e. (2) shall contain such terms and conditions as the Commission determines to be necessary to assure that, prior to termination of such license—

“(1) the licensee will comply with decontamination, decommissioning, and reclamation standards prescribed by the Commission for sites (A) at which ores were processed primarily for their source material content and (B) at which such byproduct material is deposited, and

“(2) ownership of any byproduct material defined in section 11 e. (2) which resulted from such licensed activity shall be transferred to the United States.

Any license in effect on the date of the enactment of this section shall either contain such terms and conditions on renewal thereof after the effective date of this section, or shall comply with paragraphs (1) and (2) upon the termination of such license, whichever first occurs.

“b. (1) Any such license which is issued after the effective date of this section shall also contain such terms and conditions as the Commission determines to be necessary to assure that, prior to termination of such license and after the licensee has complied with the requirements of subsection a., any land (other than land owned by the United States) which is used for the disposal of such byproduct material shall be transferred to the United States, including both the surface estate and any interest in the subsurface estate which may be necessary to protect the public health, welfare, and the envi-

ronment. Following the Commission's determination of compliance under subsection d., the Secretary of Energy or the Federal agency designated by the President under subsection c. shall assume title and custody of the byproduct material and land transferred as provided in this subsection. Such officer or instrumentality shall maintain such material and land in such manner as will protect the public health and safety and the environment. Such custody may be transferred to another officer or instrumentality of the United States only upon approval of the President upon his determination that such officer or instrumentality meets the requirements of subsection c. Notwithstanding any other provision of law, such property and materials shall be maintained pursuant to a license issued by the Commission in such manner as will protect the public health, safety, and the environment.

"(2) In the case of any such license under section 62 which was in effect on the effective date of this section, the Commission may require, before the termination of such license, such transfer of land (as described in paragraph (1)) as may be necessary to protect the public health, welfare, and the environment from any effects associated with such byproduct material.

"(3) Material and land transferred to the United States as required under this subsection shall be transferred without cost to the United States (other than administrative and legal costs incurred in carrying out such transfer). The United States shall not transfer title to material or property acquired under this subsection to any person, unless such transfer is in the same manner as provided under section 104(b) of the Uranium Mill Tailings Radiation Control Act of 1978.

"(4) The provisions of this subsection respecting transfer of title and custody to land to the United States shall not apply in the case of lands held in trust by the United States for any Indian tribe or lands owned by such Indian tribe subject to a restriction against alienation imposed by the United States. In the case of such lands which are used for the disposal of byproduct material as defined in section 11 e. (2), the licensee shall be required to enter into such arrangements with the Commission as may be appropriate to assure the long-term maintenance and monitoring of such lands by the United States.

"c. The Secretary of Energy or such Federal agency as the President shall designate shall have custody of such property or material. The President shall not designate the Commission for such purposes.

"d. Upon termination of any license to which this section applies, the Commission shall determine whether or not the licensee has complied with all applicable standards and requirements under such license."

"(b) This section shall be effective three years after the enactment of this Act.

(c) The table of contents for chapter 8 of the Atomic Energy Act of 1954 is amended by inserting the following new item after the item relating to section 82:

"Sec. 83. Ownership and custody of certain byproduct material and disposal sites."

**AUTHORITY TO ESTABLISH CERTAIN REQUIREMENTS**

SEC. 203. Section 161 of the Atomic Energy Act of 1954 is amended by adding the following new subsection at the end thereof:

"x. establish by rule, regulation, or order, after public notice, such standards and instructions as the Commission may deem necessary or desirable to ensure—

"(1) that any adequate bond, surety, or other financial arrangement (as determined by the Commission) will be provided, before termination of any license for byproduct material as defined in section 11 e. (2), by a licensee to permit the completion of all requirements established by the Commission for the decontamination, decommissioning, and reclamation of sites, structures, and equipment used in conjunction with byproduct material as so defined, and

"(2) that—

— "(A) in the case of any such license issued or renewed after the date of the enactment of this subsection, to the maximum extent practicable, after termination of such license, no long-term maintenance and monitoring of such sites, structures, and equipment will be necessary; and

"(B) in the case of each license for such material (whether in effect on the date of the enactment of this section or issued or renewed thereafter), if the Commission determines that any such long-term maintenance and monitoring is necessary, the licensee, before termination of any license for byproduct material as defined in section 11 e. (2), will make available such bonding, surety, or other financial arrangements as may be necessary to assure such long-term maintenance and monitoring."

**COOPERATION WITH STATES**

SEC. 204. (a) Section 274 b. of the Atomic Energy Act of 1954 is amended by adding "as defined in section 11 e. (1)" after the words "byproduct materials" in paragraph (1); by renumbering paragraphs (2) and (3) as paragraphs (3) and (4); and by inserting the following new paragraph immediately after paragraph (1):

"(2) byproduct materials as defined in section 11 e. (2)."

(b) Section 274 d. (2) of such Act is amended by inserting the following before the word "compatible": "in accordance with the requirements of subsection o. and in all other respects".

**HeinOnline was unable to locate the following content for digitization**

**Title: Legislative History of the Uranium Mill Tailings Radiation Control Act of 1978 : P.L. 95-604 : 92 Stat. 3021 : Nov. 8, 1978.**

**Doc. No. 3**

**Missing: Pages 18-19**

**If your library is in possession of this material and is willing to donate and/or lend to use for digitization, please contact us by phone: 1-800-277-6995 or email: [holsupport@wshein.com](mailto:holsupport@wshein.com)**

**HEINONLINE**

"(2) conforms with applicable general standards promulgated by the Administrator of the Environmental Protection Agency under section 275, and

"(3) conforms to general requirements established by the Commission, with the concurrence of the Administrator, which are to the maximum extent practicable, comparable to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulated by the Administrator under the Solid Waste Disposal Act.

"b. In carrying out its authority under this section, the Commission is authorized to—

"(1) by rule, regulation, or order require persons, officers, or instrumentalities exempted from licensing under section 81 of this Act to conduct monitoring, perform remedial work, and to comply with such other measures as it may deem necessary or desirable to protect health or to minimize danger to life or property, and

"(2) make such studies and inspections and to conduct such monitoring as may be necessary.

Any violation by any person other than the United States or any officer or employee of the United States of any rule or order of the Commission established under this section or section 83 shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 234. Nothing in this section affects any authority of the Commission under any other provision of this Act."

(b) The table of contents for such chapter 8 is amended by inserting the following new item after the item relating to section 83:

"Sec. 84. Authorities of Commission respecting certain byproduct materials."

AUTHORITY OF ENVIRONMENTAL PROTECTION AGENCY  
RESPECTING CERTAIN BYPRODUCT MATERIAL

SEC. 206. Chapter 19 of the Atomic Energy Act of 1954 is amended by inserting after section 274 the following new section:

"SEC. 275. HEALTH AND ENVIRONMENTAL STANDARDS FOR URANIUM MILL TAILINGS.—

"a. (1) As soon as practicable, but not later than one year after the date of enactment of this section, the Administrator of the Environmental Protection Agency (hereinafter referred to in this section as the 'Administrator') shall, by rule, promulgate standards of general application (including standards applicable to licenses under section 104(h)) for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with residual radioactive materials (as defined in section 101 of the Uranium Mill Tailings Radiation Control Act of 1978) located at inactive uranium mill tailings sites

and depository sites for such materials selected by the Secretary of Energy, pursuant to title I of the Uranium Mill Tailings Radiation Control Act of 1978. Standards promulgated pursuant to this subsection shall, to the maximum extent practicable, be consistent with the requirements of the Solid Waste Disposal Act.

"(2) As soon as practicable, but not later than eighteen months after the enactment of this section, the Administrator shall, by rule, promulgate standards of general application for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with the processing and with the possession, transfer, and disposal of byproduct material, as defined in section 11 e. (2) of this Act at sites at which ores are processed primarily for their source material content, or which are used for the disposal of such byproduct material.

"(3) Standards promulgated pursuant to this section for nonradiological hazards shall, notwithstanding any other provision of this Act or any other law, be consistent with, to the greatest extent possible, the standards of the Solid Waste Disposal Act applicable to such hazards.

"(4) The Administrator may from time to time amend, modify, or change any standard promulgated under this section.

"(b)(1) Before the promulgation of any rule pursuant to this section, the Administrator shall publish the proposed rule in the Federal Register, together with a statement of the research, analysis, and other available information in support of such proposed rule, and provide a period of public comment of at least thirty days for written comments thereon and an opportunity, after such comment period and after public notice, for any interested person to present oral data, views, and arguments at a public hearing. There shall be a transcript of any such hearing. The Administrator shall consult with the Commission and the Secretary of Energy before promulgation of any such rule.

"(2) Judicial review of any rule promulgated under this section may be obtained by any interested person only upon such person filing a petition for review within sixty days after such promulgation in the United States court of appeals for the Federal judicial circuit in which such person resides or has his principal place of business. A copy of the petition shall be forthwith transmitted by the clerk of court to the Administrator. The Administrator thereupon shall file in the court the written submissions to, and transcript of, the written or oral proceedings on which such rule was based as provided in section 2112 of title 28, United States Code. The court shall have jurisdiction to review the rule in accordance with chapter 7 of title 5, United States Code, and to grant appropriate relief as provided in such chapter. The judgment of the court affirming, modifying, or setting aside, in whole or in part, any such rule shall be final, subject to judicial review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28, United States Code.

"(3) Any rule promulgated under this section shall not take effect earlier than sixty calendar days after such promulgation.

(c) The table of contents for chapter 19 of the Atomic Energy Act is amended by inserting the following new item after the item relating to section 274:

"Sec. 275. Health and environmental standards for uranium mill tailings."

#### AUTHORIZATION OF APPROPRIATION FOR GRANTS

SEC. 207. There is hereby authorized to be appropriated for fiscal year 1980 to the Nuclear Regulatory Commission not to exceed \$500,000 to be used for making grants to States which have entered into agreements with the Commission under section 274 of the Atomic Energy Act of 1954 to aid in the development of State regulatory programs under such section which implement the provisions of this Act.

#### EFFECTIVE DATE

SEC. 208. Except as otherwise provided in this title the amendments made by this title shall take effect on the date of the enactment of this Act.

#### CONSOLIDATION OF LICENSES AND PROCEDURES

SEC. 209. The Nuclear Regulatory Commission shall consolidate, to the maximum extent practicable, licenses and licensing procedures under amendments made by this title with licenses and licensing procedures under other authorities contained in the Atomic Energy Act of 1954.

### TITLE III—STUDY AND DESIGNATION OF TWO MILL TAILINGS SITES IN NEW MEXICO

#### STUDY

SEC. 301. The Commission, in consultation with the Attorney General and the Attorney General of the State of New Mexico, shall conduct a study to determine the extent and adequacy of the authority of the Commission and the State of New Mexico to require, under the Atomic Energy Act of 1954 (as amended by title II of this Act) or under State authority as permitted under section 274 of such Act or under other provision of law, the owners of the following active uranium mill sites to undertake appropriate action to regulate and control all residual radioactive materials at such sites to protect public health, safety, and the environment: the former Homestake-New Mexico Partners site near Milan, New Mexico, and the Anaconda carbonate process tailings site near Bluewater, New Mexico. Such study shall be completed and a report thereof submitted to the Congress and to the Secretary within one year after enactment of this Act, together with such recommendations as may be appropriate. If the Commission determines that such authority is



not adequate to regulate and control such materials at such sites in the manner provided in the first sentence of this section, the Commission shall include in the report a statement of the basis for such determination. Nothing in this Act shall be construed to prevent or delay action by a State as permitted under section 274 of the Atomic Energy Act of 1954 or under any other provision of law or by the Commission to regulate such residual radioactive materials at such sites prior to completion of such study.

#### DESIGNATION BY SECRETARY

SEC. 302. (a) Within 90 days from the date of his receipt of the report and recommendations submitted by the Commission under section 301, notwithstanding the limitations contained in section 101(6)(A) and in section 115(a), if the Commission determines, based on such study, that such sites cannot be regulated and controlled by the State or the Commission in the manner described in section 301, the Secretary may designate either or both of the sites referred to in section 301 as a processing site for purposes of title I. Following such designation, the Secretary may enter into cooperative agreements with the New Mexico to perform remedial action pursuant to such title concerning only the residual radioactive materials at such site resulting from uranium produced for sale to a Federal agency prior to January 1, 1971 under contract with such agency. Any such designation shall be submitted by the Secretary, together with his estimate of the cost of carrying out such remedial action at the designated site, to the Committee on Interior and Insular Affairs and the Committee on Interstate and Foreign Commerce of the House of Representatives and to the Committee on Energy and Natural Resources of the Senate.

(b) (1) No designation under subsection (a) shall take effect before the expiration of 120 calendar days (not including any day in which either House of Congress is not in session because of an adjournment of more than 3 calendar days to a day certain or an adjournment *sine die*) after receipt by such Committees of such designation.

(c) Except as otherwise specifically provided in subsection (a), any remedial action under title I with respect to any sites designated under this title shall be subject to the provisions of title I (including the authorization of appropriations referred to in section 112(b)).

#### PURPOSE OF THE BILL

H.R. 13650, as reported by the committee, established a remedial action program at certain inactive uranium mill tailings sites for the purpose of protecting the public from possible radiation health hazards resulting from such tailings, amends the Atomic Energy Act of 1954 to regulate control, and license certain byproduct material at existing and future active mill tailings operations, and provides a study of certain sites, and, in addition, possible limited remedial action at such sites if regulatory authority under the 1954 act, as amended by this bill, proves inadequate.

## LEGISLATIVE BACKGROUND

On April 27, 1978 the Department of Energy, on behalf of the administration, submitted to the Congress legislation to establish a remedial action program at inactive mill tailings sites through cooperative arrangements between the Secretary of Energy and the States and Indian Tribes. On May 3, 1978, the chairman of the Committee on Interior and Insular Affairs, Congressman Morris K. Udall, and the chairman of the committee, Congressman Harley O. Staggers, introduced the administration proposal as H.R. 12535.

On June 29, 1978, Congressman Udall also introduced H.R. 13382 which provided for the regulation of active uranium mill tailings sites. That bill was based on a proposal developed by the Nuclear Regulatory Commission.

Three bills, similar to H.R. 12535, were introduced by Congressman Marriott. They are:

H.R. 11698, introduced on March 21, 1978.

H.R. 12229, introduced on April 19, 1978 and co-sponsored by Congressmen Armstrong, Bauman, Edwards of Oklahoma, Hansen, Johnson of Colorado, Kazen, Lujan, Murphy of Pennsylvania, Rhodes, Roncalio, Rudd, Runnels, Skubitz, Symms, and Weaver.

H.R. 12938, introduced on June 1, 1978, was also co-sponsored by these Congressmen and Congressmen McDade, Ruppe, and Stump.

All of these bills were referred jointly to the Committee on Interior and Insular Affairs and this committee. Hearings were held on the bill in June 1978 by the Subcommittee on Energy and the Environment of the Interior and Insular Affairs Committee. On July 28, 1978, Chairman Udall introduced H.R. 13650 which is cosponsored by Congressmen Lujan, Sharp, Marriott, Johnson of Colorado, McKay, Vento, Kazen, Roncalio, Bauman, and Rhodes. H.R. 13650 which was also jointly referred to our committee and the Interior Affairs Committee, combined many of the provisions of H.R. 12535 and H.R. 13382, as well as some features of the other bills.

The Subcommittee on Energy and Power, chaired by Congressman John D. Dingell, held hearings on all of these bills on June 19 and 20 and on August 2, 1978. Testimony was received from representatives of industry, the National Governors Association, the Environmental Policy Center, the Department of Energy, the Nuclear Regulatory Commission, and the Environmental Protection Agency.

On August 11, 1978, the Committee on Interior and Insular Affairs reported H.R. 13650 in amended form (H. Rept. 95-1480, Part I). On that same day, the Subcommittee on Energy and Power reported a similar version of the bill. Thereafter, Subcommittee Chairman Dingell and Chairman Udall, together with representatives of the minority on both committees, developed amendments to the Energy and Power version in order to reconcile the two versions and have the amended bill considered by the full House. The committee reported H.R. 13650 with an amendment that includes the provisions suggested by the Committee on Interior and Insular Affairs. Chairman Udall has indicated that he supports this amended version.

## BACKGROUND AND NEED FOR LEGISLATION

### A. NEED FOR A REMEDIAL ACTION PROGRAM

Uranium mills are a part of the nuclear fuel cycle. They extract uranium from ore for eventual use in nuclear weapons and powerplants, leaving radioactive sand-like waste—commonly called uranium mill tailings—in generally unattended piles. As a result of many years of uranium ore processing, about 140 million tons have now accumulated at active and inactive milling sites, according to the Nuclear Regulatory Commission.

NRC Chairman, Dr. Joseph M. Hendrie, describes how these piles are a hazard to the public health:

The NRC believes that long-term release from tailings piles may pose a radiation health hazard if the piles are not effectively stabilized to minimize radon releases and prevent unauthorized use of the tailings.

Unlike high-level radioactive waste from the back end of the nuclear fuel cycle, which contains products of the fission reaction, mill tailings contain only naturally occurring radioactive elements, in small quantities. The radioactive decay of these elements leads to production of radon, a radioactive gas with a half-life of about four days, which can diffuse from a tailings pile into the atmosphere and subsequently expose persons to radiation far away from the pile. The increased exposure compared to exposure from radon already in the atmosphere from other sources is exceedingly slight, but this increase is in effect permanent. This is because radon production in mill tailings continues for times of the order of a hundred thousand years, so the tailings pile becomes a perpetual source injecting a small amount of radon into the atmosphere, unless some action is taken to keep the radon from escaping.

The health effects of this radon production are tiny as applied to any one generation, but the sum of these exposures can be made large by counting far into the future, large enough in fact to be the dominant radiation exposure from the nuclear fuel cycle. Whether it is meaningful to attach significance to radiation exposures thousands of years in the future, or conversely, whether it is justifiable to ignore them, are questions without easy answers. The most satisfactory approach is to require every reasonable effort to dispose of tailings in a way that minimizes radon diffusion into the atmosphere.

The Assistant Administrator for Air and Waste Management of the Environmental Protection Agency, Mr. David G. Hawkins, testified concerning the health problems at these sites as follows:

A summary table is given below which lists each site and an estimate of the 25-year cumulative potential lung cancers from inhalation of radon daughters if the site were left as it is.

The people in the area are not necessarily "threatened" by these tailings. The risk of potential lung cancer is increased due to radon emanating from the tailings pile. The calculations given in the table reflect a statistical increase in effects based on the number of people estimated to be exposed. Therefore highly populated areas show greater total effects than low population areas. In all cases the individual risk is less than  $1 \times 10^4$  per year.

*Summary of phase II reports—Health effects*

<i>Site</i>	<i>25-yr. potential lung cancers</i>
Vitro (Salt Lake City, Utah).....	24
Durango, Colo.....	6
Shiprock, N. Mex.....	5
Grand Junction, Colo.....	3
Riverton, Wyo.....	2
Gunnison, Colo.....	1
Rifle, Colo. (old and new).....	1
Mexican Hat, Utah.....	.2
Lakeview, Oreg.....	.2
Falls City, Tex.....	.1
Tuba City, Ariz.....	.1
Naturita, Colo.....	.1
Ambrosia Lake, N. Mex.....	.1
Green River, Utah.....	.02
Slick Rock, Colo. (2 sites).....	.02
Maybell, Colo.....	.02
Monument Valley, Ariz.....	.02
Lowman, Idaho.....	.002
Converse County, Wyo.....	.001

The potential health effects from radon daughters were calculated by DOE's contractor on an absolute risk basis. This is the numerical increase in the number of cancers per unit of exposure. Another basis for the risk estimates is the relative risk approach, which may give risk values higher by an order of magnitude. The relative risk estimate, is the estimated percent increase in cancer per unit of exposure. Unfortunately, existing information does not allow one to make an unequivocal choice, and thus it must be kept in mind that these projections of health impact are somewhat uncertain and based on extrapolations from a select population, namely underground uranium miners.

The DOE and others contend that at these inactive sites, tailings "resulted from the operations of private companies which processed uranium ore under procurement contracts" for the Atomic Energy Commission from the mid-1940's to 1970 and that stabilization of the piles "was not included in these contracts, largely because these tailings were not believed to be a problem."

In May 1966, an official of the former AEC testified before a Senate Committee, saying:

The Commission recognizes that, like tailings piles from other ore milling operations, tailings close to communities may involve dusting or erosion, or may be considered unsightly. Some of these tailings accumulations started before World War I when Colorado ores were processed for radium recovery. Other use of the same ores for vanadium recovery

at a later time added more tailings. Since 1948 uranium and vanadium recovery operations made further additions. Because most of the tailings have resulted from operations under AEC uranium procurement contracts, the Commission is especially interested in appropriate remedial actions. Through its Division of Raw Materials, the Commission has taken action and will continue to take action that involves the cooperative efforts of both the milling industry and State agencies. This includes the encouragement of voluntary control by the milling companies and support for the development of adequate and effective State regulations compatible with Executive Order 11258 on abatement of water pollution by Federal activities. The Commission plans to continue its cooperative effort with Federal, State, and local authorities and with the milling industry to achieve adequate pollution control. The Commission will continue to participate in special studies, special surveillance, or other technical assistance that may be appropriate.

Late in 1966, three Federal agencies, including AEC, issued a "Joint Federal Agency Position Regarding Control of Uranium Mill Tailings" which states:

The Federal Water Pollution Control Administration, the Public Health Service, and the Atomic Energy Commission agree that inactive tailings piles resulting from uranium milling operations should be structurally stabilized and contained to prevent water and wind erosion. Active tailings piles should be managed to minimize such erosion during use.

Planning, management, stabilization and containment of tailings piles are viewed as being the responsibility of the individual mill owners. Mill owners should develop, without undue delay, specific plans for accomplishing such management, stabilization and containment, and submit such plans through the appropriate state regulatory agencies for approval. The staffs of the Federal Water Pollution Control Administration, the Public Health Service, and the Atomic Energy Commission will be available to the state regulatory agencies, upon request, to provide advice and assistance regarding the development of pile stabilization and containment objectives and measures for achieving them.

Compliance by mill owners with approved plans for stabilization and containment should be recognized as constituting fulfillment of mill owner responsibility with regard to such tailings piles. Obtaining and enforcement of tailings piles stabilization and containment plans should rest initially with the states concerned.

The DOE said that results of the efforts made under the 1966 agreement were "far from satisfactory".

Prior to that agreement, the Public Health Service recommended that "measures should be taken to prevent the erosion and spread of uranium mill tailings", although stating that there "is currently no significant immediate hazard associated with uranium mill tailings activities anywhere in the Colorado River Basin." Also, in 1960, a water pollution conference for the Colorado River Basin was held and, as a result, mill discharges were reportedly reduced.

Thus, it is clear that in the 1960's, the Federal Government and some States recognized a health problem with these tailings, but apparently they did not recognize the magnitude of it until the early 1970's, when an investigation began into the use of these tailings for construction purposes.

Regulatory authority over tailings presently is exerted by the NRC and the so-called agreement States indirectly as part of the licensing of active milling operations under the Atomic Energy Act of 1954. Once these operations cease, however, the NRC and the States generally have no further role. As already noted, the former Atomic Energy Commission which regulated these mills did not consider the tailings a significant health problem until the late 1960's.

In 1972, Congress enacted Public Law 92-314 which provides financial assistance to the State of Colorado to limit radiation exposure resulting from the use of these tailings for construction purposes in Grand Junction, Colo. That law was amended on February 21, 1978, by Public Law 95-236 which was also considered by this committee.

In 1974, Congress directed that the then Energy Research and Development Administration study all inactive uranium mill tailing sites. A two-phased study was conducted of a total of 22 inactive mill sites. Most of these produced uranium under contracts with the AEC during the period 1947 through 1970. These studies were all completed in January 1978. On the basis of these studies the Department of Energy developed H.R. 12535 to authorize a remedial action program to clean up these inactive sites and to reduce, to the extent practicable, possible public exposure to radiation from these unstabilized tailings piles.

In a commentary on the administration's proposal, the General Accounting Office, in a June 20, 1978 report entitled, "The Uranium Mill Tailings Cleanup: Federal Leadership at Last", expressed support for the enactment of legislation to deal with this health problem, but pointed out several disadvantages as follows:

The proposed program is estimated to cost up to \$126 million, with the Federal Government bearing the heaviest burden, while receiving the least direct benefits. More important, the cleanup program could be considered as a precedent for the Federal Government to pay for cleaning up other nuclear facilities—a far more costly endeavor than the mill tailings cleanup. This is extremely important because the question of who should pay for cleaning up nuclear facilities has not yet been answered, primarily because very little decommissioning of these facilities has been done to date.

Finally, while not as serious as the above, the technology to stabilize the mill tailings has not been fully developed, possibly preventing a truly satisfactory resolution of the problem at this time.

#### B. NEED FOR A REGULATORY PROGRAM

As already noted, the NRC now regulates these tailings at active mills indirectly through its licensing of source material milling under the Atomic Energy Act of 1954, largely as a result of the enactment of the National Environmental Policy Act of 1969. States are permitted

under the 1954 Act to license uranium milling under their own authorities through agreement with the NRC. Five of the 25 "Agreement States" now have such licensing programs. However, tailings are not now source material licensable by the NRC. Thus, once the underlying source material license for the mill terminates, there is no longer a "clear legal basis for further Commission regulatory control of the mill tailings", according to Dr. Hendrie. He added:

The Environmental Protection Agency can exert regulatory authority over uranium mill tailings under the Resource Conservation and Recovery Act of 1976. However, EPA has no authority over the generation of the tailings (the source material milling licensed by the Commission or an Agreement State) and so far they have not developed any regulation to implement their authority over the disposal of tailings. I should perhaps point out that the RCRA does not give any authority whatever to the NRC, and consequently the Commission has not been able to base any plans for tailings regulations on the provisions of that Act. Finally, to complete the complicated regulatory picture, in Agreement States it is the State in most cases, rather than the Commission, that exercises regulatory control over the uranium milling and tailings.

This situation was discussed at the Energy and Power Subcommittee hearings on H.R. 12535 and related bills on June 20, 1978. Chairman Dingell urged the NRC to submit quickly to Congress legislation to deal with this problem in order to prevent a repeat of the situation that led to the need for, and the development of, remedial legislation. Chairman Udall made a similar request. H.R. 13382 was the result of those requests.

#### COMMITTEE ACTION

The Committee on Interstate and Foreign Commerce met to consider H.R. 13650 on September 26, 1978. The committee approved the bill with an amendment in the nature of a substitute on that day and ordered it reported to the House by a unanimous vote, a quorum being present.

The committee is convinced that all tailings pose a potential and significant radiation health hazard to the public. Legislation is needed now to stabilize and control all such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public. This remedial action program will affect 26 million of the 140 million tons of tailings now located at various mill sites.

The committee, however, is also convinced that it would be a grievous and costly mistake to authorize a remedial program for inactive mill sites without also enacting regulatory legislation to control the even more serious problem at active mill sites. This portion of the bill will control about 120 million tons of the tailings at active operations.

The committee's amendment joins the two programs in one bill.

In authorizing a remedial action program, the committee does not recognize any Federal responsibility or liability for these tailings. The committee realizes that they were largely derived from milling operations conducted under Federal contract. However, that is not the compelling reason for recommending a remedial action program. The

significant factor is the lack of adequate authority under the Atomic Energy Act of 1954 to regulate these tailings. As the NRC testified:

Historically, the NRC and its predecessor agency have not had regulatory jurisdiction over uranium mill tailings after mill operations are terminated because the tailings are not themselves licensable material. Regulatory control over tailings is exerted indirectly as part of the Commission's licensing of ongoing milling operations pursuant to licensing authority over source materials. Therefore, after operations had ceased at the 22 inactive sites being considered and all licensable quantities of source material removed, the regulatory staff had no further role.

The lack of any control over these inactive sites under the 1954 act and other laws to require clean up of these sites is the principal basis for committee action to authorize this remedial program. This situation does not exist at active mill tailings sites. Those sites, even those with tailings derived from Federal contracts, are subject to NRC regulation as a result of the enactment of NEPA in 1970. The NRC can require these operators, as a condition to the granting of a license, to take steps to stabilize these piles, although the control is not adequate. Indeed, the NRC testified that it has obtained commitments from some licensees to cope with the problem to some degree. This bill will provide additional authority to effectively control tailings at these active and all future sites.

The existence of Federal contracts in the 1950's and 1960's provides an additional basis for establishing this program, as does the fact that some sites are no longer owned by persons who operated the mills prior to closing, but we stress that the lack of any specific statutory authority requiring the effective stabilization of these mills by the NRC or the States after operations ceased and licenses terminated is the principal reason for recommending this program. X

It is for this and other reasons that the committee also stresses that it does not consider this bill a precedent to be followed in the case of other waste management problems, such as the one noted by the GAO earlier in this report. The situation at these inactive sites is quite unique in that there was once Federal licensing of the operations, but, due to a loophole in the law, the sites escaped control after operations ceased. Moreover, in each case, most, if not all, of the production was for Federal purposes.

#### SITES INCLUDED

Title I of the bill provides for the designation of the sites by the Secretary of Energy to be eligible for remedial action. The bill, as reported by the committee, does not specifically identify the sites as did the version reported by the Committee on Interior and Insular Affairs, because the committee was informed by the DOE in a September 5, 1978, response to an inquiry by Subcommittee Chairman Dingell, that the 22 sites studied by the DOE are not all located within the 20 named locations referenced in that committee's version of H.R. 13650. The DOE said:

It is correct that not all of the sites are located within the boundaries of the communities listed in the bill. Further, some



of these communities are probably not incorporated, and thus do not have well defined boundaries. Several of the designations do not refer to communities \* \* \* The sites which are clearly outside of the communities listed in the [Interior Committee] bill are:

Utah—Mexican Hat.

Colorado—Rifle (new), Gunnison, Naturita, Maybell, Slick Rock (2 sites).

New Mexico—Ambrosia Lake (not as community).

Wyoming—Riverton, Converse County (not a community).

Texas—Falls City.

Arizona—Tuba City, Monument Valley (not a community).

Idaho—Lowman.

There is an active mill operated by Conoco-Pioneer near Falls City, Texas, and two active mills in the Ambrosia Lake area in McKinley County, New Mexico, owned by Kerr-McGee Corp., and United Nuclear-Homestake Partners.

The following table shows each of the inactive sites studied at which tailings exist, the name of the contractor that provided processed uranium to the United States, and other relevant data:

TABLE I

Location (A)	Contractor to the United States (B)	Dates of operation (C)	Contract dates (where less than C) (D)	Part of production sold to United States in contract period (E)
<b>Arizona:</b>				
Monument <sup>1</sup>	Vanadium Corp. of America	1955-67		All.
Tuba City <sup>1</sup>	El Paso Natural Gas	1956-66		All.
<b>Colorado:</b>				
Durango <sup>2</sup>	Vanadium Corp. of America	1943-63		All.
Grand Junction	Climax Uranium Co. and Amax Uranium Co.	1951-70	1951-65	All.
Gunnison	Gunnison Mining Co. and successors	1958-62		All.
Maybell	Union Carbide Corp. (UCC)	1957-64		All.
Naturita	Vanadium Corp. of America <sup>3</sup>	1939-63		All.
New Rifle	Union Carbide Corp.	1958-72	1958-70	All.
Old Rifle	do.	1924-58	1946-58	All.
Slick Rock (NC)	Became Government property in 1949	1931-43	None	
Slick Rock (UCC)	Union Carbide Corp.	1957-61		All.
Idaho: Lowman	Porter Bros.	1955-60		All.
<b>New Mexico:</b>				
Ambrosia Lake	Phillips Petroleum Co.	1958-63		All.
Shiprock	Kerr-McGee 1954-63, Vanadium Corp. of America, 1963-58	1954-68		All.
Oregon: Lakeview	Lakeview Mining Co. <sup>3</sup>	1958-60		All.
<b>Texas:</b>				
Falls City	Susquehanna Western, Inc.	1961-73	1961-70	All.
Ray Point	do.	1970-73	None	
<b>Utah:</b>				
Green River	Union Carbide Corp.	1958-61		All.
Mexican Hat	Texas Zinc Minerals	1957-65		All.
Salt Lake City	Vitro Chemical Co.	1951-68		All.
<b>Wyoming:</b>				
Riverton	Susquehanna Western, Inc.	1958-63		All.
Converse County	Western Nuclear	1962-65		All.
<b>Pennsylvania: Canonsburg:</b>				
	Standard Chemical Co.	1911-22	None	
	Vitro Manufacturing Co.	1930-42	None	
	do.	1943-57	1943-57	All.

<sup>1</sup> Navajo Reservation.

<sup>2</sup> Being evaluated for tailings processing or residual values.

<sup>3</sup> And successor.

Of the sites named in table I the following, according to the DOE, would be considered as eligible for designation under title I of the bill as reported by the committee:

1. Salt Lake City, Utah.
2. Green River, Utah.
3. Mexican Hat, Utah.
4. Durango, Colo.
5. Grand Junction, Colo.
6. Rifle, Colo. (2 locations).
7. Gunnison, Colo.
8. Naturita, Colo.
9. Maybell, Colo.
10. Slick Rock, Colo. (2 locations).
11. Shiprock, N. Mex.
12. Ambrosia Lake, N. Mex.
13. Riverton, Wyo.
14. Converse County, Wyo.
15. Lakeview, Oreg.
16. Falls City, Ariz.
17. Tuba City, Ariz.
18. Monument Valley, Ariz.
19. Lowman, Idaho.
20. Canonsburg, Pa.

The following table provides some additional data about these inactive sites and other Government-owned and active sites that are not covered by title I of this bill:

TABLE II. URANIUM MILL TAILINGS

The following tabulation was developed by the Department of Energy to show the following:

Column 1. Tailings were accumulated as a result of total concentrated production ( $U_3O_8$ ) purchased by the AEC.

Column 2. Tailings accumulated as a result of concentrate production ( $U_3O_8$ ) partially purchased by AEC and partially purchased on the open market—tailings comingled.

Column 3. Tailings accumulated as a result of concentrate production ( $U_3O_8$ ) supplied to the open market—none purchased by the AEC.

	Col 1	Col. 2	Col. 3
<b>A. Inactive millsites included in phase II reports:</b>			
<b>Arizona:</b>			
Monument.....	All.....		Navajo Tribe.
Tuba City.....	All.....		Do.
<b>Colorado:</b>			
Durango.....	All.....		Ranchers exploration and development.
Grand Junction.....		Comingled.....	Bob Shumway & Castings, Inc.
Gunnison.....	All.....		Decker, Bishop & McEachern.
Maybell.....	All.....		Union Carbide Corp.
Naturita.....	All.....		Foot Mineral Corp. and Ranchers Exploration.
New Rifle.....		Comingled.....	Union Carbide Corp.
Old Rifle.....	All.....		Do.
Slick Rock (NC).....	All.....		Do.
Slick Rock (UCC).....	All.....		Rocky Mountain Gas (5A), Union Carbide Corp.
Idaho: Lowman.....	All.....		Velsicol Chemical Corp.

	Col 1	Col. 2	Col. 3
<b>A. Inactive missiles included in phase II reports—Continued</b>			
New Mexico:			
Ambrosia Lake (Phillips).....	All.....		United Nuclear Corp.
Shiprock.....	All.....		Navajo Tribe.
Oregon: Lakeview.....	All.....		Precision Pine.
Texas:			
Falls City—SWI.....		Comingled.....	Solution Engineering.
Ray Point.....		None.....	Exxon.
Utah:			
Green River.....	All.....		Union Carbide Corp.
Mexican Hat.....	All.....		Navajo Tribe.
Salt Lake City.....	All.....		Moench, Richards (29A), Salt Lake County Suburban Sanitation District (99A).
Wyoming:			
Riverton.....	All.....		Solution Engineering.
Converse County.....	All.....		Western Nuclear.
Pennsylvania: Canonsburg.....		Comingled.....	Canon Development Co.
<b>B. Government owned:</b>			
South Dakota: Edgemont.....		do.....	
Utah: Monticello.....	All.....		
<b>C. Currently active:</b>			
Colorado:			
Canon City.....		Comingled.....	Cotter Corp.
Uravan.....		do.....	Union Carbide Corp.
New Mexico:			
Anaconda:			
Old Carbonate.....	All.....		Anaconda Corp.
New.....		Comingled.....	
Kerr-McGee.....		do.....	Kerr-McGee Corp.
Sohio.....		None.....	Sohio.
United Nuclear:			
Church Rock.....		do.....	United Nuclear Corp.
New Mexico Partners—Old.....	All.....		Do.
Homestake Partners—New.....		Comingled.....	United Nuclear—Homestake Partners.
Texas: Falls City.....		None.....	Conoco & Pioneer Nuclear.
Utah:			
Atlas.....		Comingled.....	Atlas Corp.
Rio Algom.....		None.....	Rio Algom Corp.
Washington: Ford.....		Comingled.....	Dawn Mining Co.
Wyoming:			
Exxon—PRB.....		None.....	Exxon.
Federal-American:			
Partners.....			
Gas Hills.....		Comingled.....	Federal-American Partners.
Lucky-Mc:			
Gas Hills.....		do.....	Utah International, Inc.
Shirley Basin.....		None.....	Do.
Rocky Mountain Energy—Powder River Basin.....		do.....	Rocky Mountain Energy.
Union Carbide—Gas Hills.....		Comingled.....	Union Carbide Corp.
Western Nuclear—Jeffrey City.....		do.....	Phelps Dodge.
Petrotomics—Shirley Basin.....		do.....	Petrotomics Co.

### COST OF REMEDIAL ACTION AT INACTIVE SITES

As proposed by the administration and the committee on Interior and Insular Affairs, DOE would pay 100 percent of the costs of remedial action at inactive sites involving Indian lands. The committee has not altered that proposal. The estimated cost of remedial action at Indian lands is between \$10 and \$21 million, according to the Department of Energy.

In addition, the administration proposed that the remedial action involving non-Indian lands would be cost-shared with the States. The Federal share proposed would be a maximum of 75 percent. The States would pay the remainder.

Various other approaches were suggested to limit the State share significantly. The committee, in reporting this bill, increased the maximum Federal share to 90 percent.

The committee rejected suggestions that this program be funded entirely by the Federal Government or that the share of the States be limited to less than 10 percent of the costs, and, at the same time, provide all manner of State approvals or concurrences in the remedial

action program. The committee is concerned about the precedent of such proposals and about their effect on the Federal budget.

The committee is particularly concerned about the cost of this program. The range of the estimated cost of the part of the program subject to cost sharing under the administration proposal of a maximum of 75 percent is between \$80 million and \$120 million depending on the extent of remedial action required. This estimate includes no escalation figure. It is based on cost estimates prepared at the time the reports were prepared during 1976 and early 1977. In an August 15, 1978, letter to Subcommittee Chairman Dingell, the DOE said:

For the purpose of adjusting for escalation, a starting date of July 1, 1977, is reasonable. Recently, escalation has been around 10 percent per year. In a remedial program estimated to require 8 years to conduct, escalation becomes a major factor. It is a compelling reason for starting and completing the work on each site at the earliest possible date. Assuming remedial legislation were to be enacted by October 1978, and the EPA standards and criteria were promulgated in 6 months. DOE could begin remedial work by July 1979. At 10 percent escalation, the estimated program cost by then would become \$97 to \$152 million. The effect of escalation thereafter will depend on the schedule on which the work is performed.

The States received some benefits from the Federal contracts when the mills were operating. They will clearly benefit substantially from this program through the improvement of these sites so that they can be put to beneficial use again. The DOE estimates that the market value of many of these sites will be enhanced significantly after the remedial action. For example, the DOE estimates that the Durango, Colo., site will have a market value of \$10,000 per acre and that the Grand Junction and Garrison sites will have a value of \$8,000 per acre. The Salt Lake City, Utah, site is estimated to have a \$13,000 per acre market value after decontamination. The present value of these sites is far less.

Given these considerations, plus the additional factor that the committee, like the DOE, does not believe that the Federal Government is responsible for these tailings, the committee believes that the 90 percent maximum Federal share is more than generous. At the 90 percent level, the Department of Energy estimates that the range for the Federal share is between \$98 million and \$180 million. The committee also believes that since the bulk of the costs will be paid by the Nation's taxpayers, the States should not have "concurrence" or "veto" authority over the remedial action program, although the committee intends that DOE clearly consult with the States.

## SECTION-BY-SECTION ANALYSIS AND COMMITTEE COMMENTS

### *Section 1—Short title*

This section provides that the short title for the Act is the "Uranium Mill Tailings Radiation Control Act of 1978".

### *Section 2—Findings and purposes*

Subsection (a) sets forth several congressional findings. There is a general finding that uranium mill tailings pose a potential and sig-

nificant radiation health hazard to the public and that the protection of the public health, safety, and welfare and the regulation of interstate commerce require a Federal effort to provide for the stabilization, disposal, and control, in a safe and environmentally sound manner, of the tailings in order to prevent and minimize health and environmental hazards. In addition, there are findings that at certain inactive sites such tailings resulted from Federal contracts for the purchase of uranium at a time when the health hazards were not apparently fully recognized by Federal agencies, although some environmental hazards were recognized as early as 1960 by governmental agencies; that such sites are not now subject to regulation under the Atomic Energy Act of 1954; that milling operations at these sites terminated prior to 1973; that in 1972, Congress authorized a similar remedial action program in Grand Junction, Colo., concerning such tailings; and that the public interest requires financial assistance to undertake remedial actions concerning these inactive sites.

Subsection (b) sets forth the purposes of this act. The first purpose is to provide a program to assess the tailings at inactive sites and to provide remedial action at such sites, including the reprocessing, as appropriate, of tailings to extract the minerals that have a significant value from such tailings, where practicable, in order to stabilize and control such tailings. The second purpose is to provide for the regulation of such tailings at during active operations and after termination of those mill operations in order to stabilize and control such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public.

#### TITLE I—REMEDIAL ACTION PROGRAM

##### *Section 101—Definitions*

This section defines several terms used in the act. Of particular importance are the terms "processing site" and "residual radioactive materials". The former is composed of the sites, including the mill, where there are residual radioactive materials and at which all or substantially all the uranium was produced for sale to a Federal agency prior to January 1971 under a contract with that agency. It does not include a site owned or controlled by a Federal agency prior to January 1, 1978, or one that is owned or controlled by a Federal agency after that date. Also, it does not include a site that is licensed under the Atomic Energy Act of 1954, which license is in effect on January 1, 1978, or is licensed after such date. The term also includes structures and buildings located in the vicinity of such site which are contaminated with residual radioactive materials derived from such site. The Secretary of Energy, in consultation with the NRC, will determine which structures and buildings are eligible to be included as part of the designated processing site. It is expected that the Secretary and the Nuclear Regulatory Commission will use sound judgment in this regard and be concerned about costs, as well as health.

The term "residual radioactive material" is the tailings wastes that the Secretary of Energy determines to be radioactive. It also includes other wastes which the Secretary determines to be radioactive.

##### *Section 102—Designations of processing sites*

This section provides for the designation by the DOE of processing sites and the establishment of priorities for remedial action at those

sites. In designating sites, the Secretary of Energy must consult with the Environmental Protection Agency, the Nuclear Regulatory Commission, and the States. In the case of Indian lands, he would consult with the tribal officials and the Interior Department, as well as the EPA and NRC. The designations will also establish the boundaries of the processing site.

The committee is concerned that the DOE expend funds on a priority basis in order to correct the most serious problems first. Thus, the bill requires the DOE to assess the health hazard to the public at each site with the help of the EPA and establish priorities for remedial action. It is intended that DOE rely heavily on the EPA advice in establishing these priorities.

Both the designations and priorities must be completed within 1 year after enactment. Within 30 days thereafter, the DOE must notify the States and Indian tribes of the designations and priorities. The bill does not authorize designation or the establishment of priorities after the one year deadline. However, the committee does recognize that designation of all structures and buildings "in the vicinity" of a processing site may not be practicable within this timeframe and allows some flexibility. The committee expects the DOE to act expeditiously on these designations as well. At the same time, the DOE should be assured that serious contamination that poses a health hazard of the structures and buildings actually exists.

The bill precludes jurisdictional review of the designations and priorities.

#### *Section 103—State Cooperative Agreements*

Once the designations are made and all priorities are established, the DOE may negotiate and enter into cooperative agreements with the affected States pursuant to this section for the purpose of carrying out remedial action on non-Indian lands. Again the bill stresses that agreements should be developed in accordance with the priorities established so that the sites that pose the greatest danger to the population centers will be addressed first. The bill, however, does not preclude the DOE from proceeding to a lower priority sites in those cases, for example, where agreement does not appear certain or where the best type of remedial action is not fully known. The provision recognizes that there are a limited amount of funds and time available and that the seriousness of the health danger to population centers should be the principal criterion for action.

Subsection (b) requires that the DOE include terms and conditions necessary to implement remedial action and insure effective completion of such action.

Subsection (c) places a duty on the State, not on the DOE, to obtain written consent from the owner of the site authorizing the remedial action, unless the site is acquired. This consent must also be obtained for the buildings and structures in the vicinity of the site. The remedial action is in essence a voluntary program. The DOE cannot acquire the processing site. Only the State can do so. If the State does not, consent is required.

The consent must include a waiver releasing the United States of any liability or claim concerning the remedial action and holding the Government harmless against any claim arising out of the performance of the remedial action. The waiver would apply to the property owner,

his heirs, successors, and assigns. This provision is similar to section 202(d) of Public Law 92-314. It is not a total release of liability. It would not affect those not covered by the release who might file a claim against the United States, although the committee stresses that nothing in this bill should be construed to recognize any liability on the part of the United States for any occurrence prior to enactment or after enactment. Further, the act does not affect other responsibilities or requirements under other provisions of law, including workman's compensation laws.

The committee notes that the property owner will benefit from the voluntary remedial action provided by this act. Clearly, the committee does not want to find that at some later date the United States is faced with a claim from such owner, his heirs, successors or assigns concerning such remedial action or arising from such action.

This section also requires that each cooperative agreement provide effective assurance that the DOE, NRC, and EPA have a permanent right of entry at any time to inspect the processing sites covered by the agreements, to carry out the agreement, and to enforce the act and any rules prescribed under this act. In the case of structures and buildings in the vicinity of the site, this right of entry can be terminated when the Secretary determines that the remedial action is completed.

No cooperative agreement may be effective until it is concurred in by the NRC. It is the intention of the committee that the Secretary and the NRC will work out a procedure where representatives of both will participate in the development of the agreement so that concurrence will not be delayed. However, it is also important to stress that the NRC, as an independent agency, is not expected to rubber stamp these agreements, but to approve only those that clearly meet the requirements and purposes of this act.

Subsection (f) authorizes the DOE in any cooperative agreement entered into with a State or an Indian tribe to provide for the reimbursement of the actual costs incurred for remedial action performed on structures or buildings in the vicinity of a processing site. The Secretary will determine the costs for reimbursement. The reimbursement can only be made to the property owner of record at the time of the remedial action and only for costs incurred by such owner. The remedial action must have been completed prior to enactment of this legislation and the application must have been filed by the owner with the Secretary and the affected State or Indian tribe within one year after a cooperative agreement is approved by the Secretary and the NRC. The remedial action must achieve the purposes of the act and be consistent with EPA standards. Quite clearly unless the remedial action was properly done, reimbursement would not be appropriate. The reimbursement is, of course subject to the finding and percentage limitations of this act.

#### *Section 104—Acquisition and disposition of lands and materials*

The cooperative agreement will require that the affected State acquire the processing site before remedial action is initiated if such acquisition is determined appropriate by the Secretary and the NRC. The acquisition is to include subsurface interests, as well as subsurface interests if the Secretary and the NRC determine that such interests be acquired. Such acquisition is to be accomplished pursuant to State law. It is not intended that the DOE acquire this site.

Provision is also made for removal of the residual radioactive materials from the processing site to another site, if the DOE and NRC agree that such removal is appropriate. The agreement will specify that the depository site to be acquired by the State. Such acquisition will include subsurface interests if the Secretary and the NRC believe such acquisition appropriate.

The committee is concerned about the cost of acquisition under section and expect that it be utilized only when necessary and that care be taken to acquire the lands and interests at the lowest cost. The committee intends that if the materials are to be removed from a processing site, the DOE and NRC will probably not need to acquire that site but merely provide that State enter into an agreement with the property owner for such removal. The committee believes that the acquisition must include subsurface interests to prevent the creation of future hazards to the public through disruption of the tailings in an attempt to recover underlying minerals.

No acquisition is required in the case of structures and buildings outside the processing and depository site.

Once the materials are removed from a processing site, the committee is concerned that future purchasers are given notice that the site containing these materials has been cleaned up. The Secretary is required to issue regulations for such notice that the States must follow, including provision for notice in local land records. Of particular concern, is that the person purchasing the site immediately after the materials are removed or otherwise cleaned up is given adequate and effective notice by the seller. Other than the use of notice in the land records, it is not intended that subsequent sellers provide future purchasers such data. Presumably, the land records can be flagged so that a title searcher will automatically notify future purchasers.

The State may dispose of the processing site acquired by it after completion of the remedial action or the State may retain the site or donate it for public purposes or transfer it, without cost, to the United States. Such disposal must be approved by the DOE and the NRC. Before offering to sell the lands, the State must give the person who sold the property to the State an opportunity to acquire it back at the fair market value determined as of the date of the sale to such person.

The cooperative agreements shall provide that title to the residual radioactive materials or the entire tailings, plus the lands and interests therein, acquired by a State for their final disposition shall be transferred to the Secretary of Energy at no cost to the United States, except possible administrative and legal costs incurred as a result of the transfer. This provision is not to be construed to prevent the Secretary from sharing the costs of acquisition by the State as provided in this act. Once transferred, the materials and land and interests therein cannot be disposed of except as provided in this section.

If the States sells a processing site, it must reimburse the United States from the proceeds of the sale. The State must also sell the site at fair market value as determined by the DOE. Proceeds from such sale, plus any other monies received by the DOE under this act must be deposited as miscellaneous receipts. The annual report of the Secretary should indicate the sums so deposited.

Subsection (h) authorizes the DOE to dispose of subsurface minerals underlying the site on which such materials are located after such site



has been transferred to the DOE. The minerals must be disposed of by sale or lease and in accordance with applicable laws of the United States concerning the sale or lease of minerals. However, the Secretary may only do so if there is adequate assurance that mineral development does not disturb the depository site. There must also be an NRC license. If the depository site is disturbed, the DOE must provide for termination or suspension of mineral development and require the mineral developer to restore the site at no cost to the United States.

*Section 105—Indian tribe cooperative agreements*

This section provides for cooperative agreements between the DOE and Indian tribes. The provisions are nearly identical to the provisions of section 103.

The committee does not intend by this act to affect the responsibilities of the Secretary of the Interior as trustee for any Indian tribe. However, the committee intends that any release executed under section 105 shall be fully binding on the Indian tribe and that the Secretary of the Interior, in exercising such responsibilities, is also fully bound by such waiver and may not recognize any claim covered by it.

*Section 106—Acquisition of land by Secretary*

This section authorizes the DOE to acquire lands for the purpose of consolidating in a safe and environmentally sound manner residual radioactive materials which are removed from processing sites or where otherwise necessary to carry out the purposes of this act. The committee recognizes that it may not be safe or environmentally sound or practicable to have a series of depository sites scattered among several States. Consolidation of these materials into a few sites may be a better solution. This section provides that option.

The section authorizes acquisition by purchase, including condemnation, donation, or exchange. It also provides for the transfer of public lands administered by Interior and available for this purpose. Surplus lands could also be used.

In each acquisition, the DOE is required to consult with the State where the acquisition will occur. In the case of a proposed acquisition, in a State where there is no designated processing site and no active uranium mill operating, the Secretary must obtain the concurrence of the Governor before acquiring the land. The committee believes that concurrence is appropriate where a State does not have tailings. But it does not appear reasonable to give a State such concurrence authority over a Federal program if that State already has active or inactive mill tailings.

Before Federal lands may be transferred to the Secretary, the agency administering those lands must concur. Moreover, the transfer must be consistent with the laws applicable to those lands. The committee does not intend by this section to encourage the use of Federal lands, particularly those that are part of the National Park, Fish and Wildlife, and Forest Systems.

*Section 107—Financial assistance*

This section authorizes the DOE to pay up to 90 percent of the actual costs of remedial action at the designated processing site, including the buildings and structures in the vicinity of such site. Land acquisition is also to be cost shared, including any preparatory or other work at a depository site. The State must pay the remaining

share of the costs. However, the State cannot use Federal funds to pay this share. The Federal share will not cover any State costs incurred in the development, preparation, or execution of cooperative agreement, other than land acquisition costs.

In the case of Indians, the DOE will pay all the costs.

#### *Section 108—Remedial action*

This section provides that the DOE or a person designated by the DOE shall select and perform the remedial action in accordance with EPA general standards. The NRC must concur in both the selection and performance. Provision is also made for consultation with the Indian tribe and the Secretary of Interior. In the case of sites in non-Indian lands, the States are intended to have a significant role in the selection because they are sharing in the costs. It is intended that the DOE have complete flexibility in selecting contractors so long as the NRC concurs.

The DOE is also directed to use technology in performing remedial action that will insure compliance with the EPA standards and insure the safe and environmentally sound stabilization of the materials. The committee is concerned about the adequacy of the technology to deal with this problem. It is intended that the DOE not rush headlong into using technology that may be effective for a short period of time. The committee does not want to visit this problem again with additional aid. The remedial action must be done right the first time.

No provision for R and D was included because it is believed that the DOE has adequate R and D authority now. The committee urges that the DOE and EPA move rapidly to improve the technology for remedial action.

This section precludes undertaking any remedial action before EPA finally promulgates general standards. Clearly, this is essential. The DOE should not proceed until these standards are developed. Even the selection of depository sites could be affected by such standards.

It should be noted that nothing in this title should be construed as affecting any existing responsibility of NRC, DOE, and EPA to comply with NEPA concerning this remedial action program.

Subsection (b) requires the DOE to evaluate the mineral content of these materials and to determine if recovery is practicable. The DOE is then authorized, with NRC concurrence, to enter into contracts for recovery of the minerals, consistent with the EPA standards and the purposes of this act. This recovery may take place as part of the remedial action effort. The cost of recovery, including related work, to insure compliance with such standards and purposes will be paid by the person recovering the minerals. The States and the Secretary will participate in the net profits. The amount of the profit to be shared will be determined by the DOE as part of the agreement. The committee's intention is that the person recovering the minerals be able to make a reasonable profit. Clearly, such recovery should only be undertaken if it is consistent with the purposes of this Act and will not impede effective and prompt remedial action.

#### *Section 109—Rules*

This section provides for DOE rules and regulations in accordance with section 501 of the DOE Organization Act.

*Section 110—Enforcement*

This section provides for enforcement through the use of civil penalties and equitable remedies as appropriate. Section 502(c) of the DOE Organization Act applies to this section.

*Section 111—Public participation*

This section directs the DOE, EPA, and NRC to allow the public an opportunity to participate, particularly at the local level, in the designation of processing sites and the establishment of priorities, and in the selection of depository sites, the execution of cooperative agreements, and other matters. Hearings at the local level are required, where requested. The objective is to give the people and officials affected an opportunity to learn what is planned for their area and its impact on them. It is not intended that hearings be held at all sites, however. Moreover, it is expected that this provision will not delay the program, but should be helped in gaining public support.

*Section 112—Termination; authorization*

This section requires that the remedial action program terminate 7 years after the EPA standards are finally promulgated, unless Congress extends the program by late authorization. This termination is limited to the remedial action program only. It is not intended to terminate the enforcement or other authorities under the Act for maintaining and monitoring depository sites once remedial action is completed.

This section also provides that appropriation for title I shall be established in annual authorization and appropriation acts for the DOE. Funds for fiscal year 1979 are included in the DOE authorization bill for fiscal year 1979 (H.R. 11392) which is pending House Floor action.

*Section 113—Limitation*

This section is intended to insure compliance with Budget Act requirements.

*Section 114—Reports to Congress*

Subsection (a) provides for an annual report to Congress concerning actions under title I and title II of the bill.

Subsection (b) directs the DOE to report by July 1979 to Congress concerning various locations under the jurisdictions of the DOE and other Federal agencies where residual radioactive materials or other radioactive wastes are located. These wastes do not include spent fuel from nuclear power reactors. The report must identify the site and the agency with jurisdiction. It will also identify structures, buildings, or other improvements in the vicinity of the sites which are contaminated or may be contaminated by such materials or tailings. The report must describe the condition of the sites and materials and tailings and what has been done or is planned to stabilize the sites and make them safe, including a timetable for action, if needed. The committee expects that the EPA and the NRC will participate in the study and report.

The committee understands there that are a number of federally owned or controlled sites with such materials or tailings, such as the TVA site mentioned earlier and a DOE site in Lewiston, N. Y., and some in New Jersey. The committee wants to have these sites identified by the DOE and have data concerning the health or environmental problems associated with the sites and on what, if anything, is being done to eliminate such problems and when.

*Section 115—Active operations; liability for remedial action*

This section prohibits DOE from expending funds for remedial action at active mill tailing sites. The committee is aware that at some mills, tailings were accumulated years ago under Federal contract. But, as noted earlier in this report, the tailings are commingled with tailings derived from commercial operations. Also, they are subject to regulation by the NRC or the States. Consistent with the views of the committee as to the basis for title I, the committee does not believe it appropriate to finance the stabilization of any part of these tailings which are subject to regulation under the 1954 act. However, Subcommittee Chairman Dingell has recently written to the DOE concerning these mills to obtain more data. The committee expects NRC to exercise all its responsibility concerning these sites under the 1954 law.

This section also directs the Justice Department to study each site eligible for remedial action under title I in order to determine the identity of those who owned or controlled the site before enactment of this act, including past owners. The study must also determine the legal responsibility, if any, of such persons under any law or rule of law in effect at the time the mill was producing uranium for Federal purposes for the reclamation or remedial action at the site. Justice must provide a report of its findings to Congress. Based on the study, the Attorney General is directed, to the extent he deems appropriate and in the public interest, to take action under Federal or State law, in effect at the time of the Federal contract for the purchase of uranium from the mill, to require reimbursement from such person of all or part of remedial action costs of the United States for which he determines such person is liable.

During hearings concerning this legislation, the DOE contended that it was difficult to "fix legal responsibility for the tailings problem". The DOE said:

The Federal Government and States do not appear to be legally responsible since they exerted neither operational control or regulatory jurisdiction over the tailings. The Federal Government was a mere purchaser of product from a number of privately-owned companies.

Insofar as the companies that operated the mills are concerned, we have a rather mixed bag of circumstances. Some companies have acted responsibly and endeavored to establish and maintain a cover of vegetation on the tailings to stop wind and water erosion. Others sold the properties or simply allowed the lease on the land to expire. Some of the corporations no longer exist. There were no requirements in the Government contracts for tailings stabilization and the companies were not aware of the potential health and safety risks resulting from exposure to the tailings. It therefore is questionable whether any companies are legally responsible.

In response to questions, the DOE provided two memoranda prepared by the AEC which purport to be "legal opinions" concerning AEC's regulation of the tailings. Neither opinion appears to deal with the question at issue. Indeed, one opinion deals with the question of transferring wastes from the mills to other persons and not with the question of stabilization and control at the mills.

T  
t  
a  
is  
ti  
a  
w  
ci  
J  
o  
  
a  
u  
S  
a  
e  
t  
c  
a  
i  
S  
  
A  
w  
p  
s  
n  
S  
  
A  
  
o  
d  
b  
c  
c  
o  
n  
s  
i  
r  
d  
r  
e  
e  
e  
v  
  
o  
fi

The committee is not persuaded that liability exists or does not exist. The objective of this provision is to require a careful study by the Justice Department to resolve the issue and, if appropriate, to require action to recover costs from the responsible persons. Clearly, if a site is not currently owned or controlled by the person who contracted with the United States to sell the uranium, such action to recover remedial action costs is inappropriate. But it is the intention of the committee that we find out. The committee stresses that this section is not intended to create new or additional law under which Justice could recover costs. Justice must look to the law as it was at or prior to termination of mill operations.

#### TITLE II—URANIUM MILL TAILINGS LICENSING AND REGULATION

This title amends the Atomic Energy Act of 1954. It reinforces the authority of the Nuclear Regulatory Commission to regulate the uranium mill process and mill tailings disposal. The "Agreement States" program, under which certain States license uranium milling activities, is modified to require that State licensing standards be equivalent to those of the Commission, and it requires public participation and environmental review as part of the State licensing procedures. Title II also reinforces the NRC's authority to make financial arrangements with uranium milling companies to insure proper stabilization and care of uranium mill tailings.

##### *Section 201—Definition*

This section amends the definition of "byproduct material" in the Atomic Energy Act of 1954 to include uranium mill tailings and other wastes. Previously, tailings have been controlled through the licensing process for uranium mills. This amendment would subject tailings to specific licensing authority. (Section 209 requires that the milling and mill tailings licensing process be consolidated.)

##### *Section 202—Custody of disposal site*

This section adds a new section 83 to Chapter 8 of the Atomic Energy Act of 1954.

Subsection (a) of the the new section requires that any license issued or renewed under sections 62 or 81 of the 1954 act, after the effective date of the section, for an activity resulting in the production of any byproduct material as defined in section 11e.(2) of the 1954 act must contain terms and conditions prescribed by the NRC. These terms and conditions are primarily designed to assure that, prior to termination of any license, the licensee will comply with decontamination, decommissioning, and reclamation standards prescribed by the NRC pursuant to the new section 161x of the 1954 act for the mill sites, including any depositories of the byproduct material. Such terms and conditions will also provide that title and control of such byproduct material shall be transferred to the United States. Licenses in effect on enactment of this act must, depending on which event just occurs, either contain such terms and conditions when next renewed after the effective date of the section or shall comply with these statutory provisions upon termination of the license.

Subsection (b) requires that licenses issued after the effective date of the new section 83 must include terms and conditions for the transfer of land used to dispose of tailings from active operations to the

United States. This will occur before termination of the license, but after the land has met the requirements of subsection (a). This transfer will include surface and subsurface interests. Similar provision is made for the transfer of such interest to the United States in the case of a license in effect before the effective date of this section. However, in such case, the NRC has some discretion because such licenses may not own the subsurface or even the surface interests and thus could not transfer the land to the United States.

Once title to the land and interests therein are transferred to the United States they cannot be disposed of. However, the underlying minerals may be sold or leased as provided in section 104(h) of this act.

The above provisions concerning transfer of title do not apply to Indian lands. In the case of those lands, provision is made for agreements between the NRC and the Indians to assure proper maintenance and monitoring by the United States.

The NRC is required to make a determination at the time of termination of a license that these requirements and standards have been met. The determination must be in writing.

*Section 203—Authority to establish certain requirements*

This section amends section 161 of the 1954 act by adding a new section to that section providing for the issuance by rule, regulation, or order of standards and instructions concerning financial arrangements which must be made by licensees for the cost of stabilization and, if necessary, the long-term cost of maintenance and monitoring. Such arrangements must be made before a license is terminated, and may be by bond, surety, or other means to insure that the NRC has the flexibility to effectively implement this provision fully.

Subparagraph (1) requires the Commission to regulate the disposal of uranium milling and mill tailings in such a way that, when each license is terminated, reclamation and stabilization already has been implemented by the licensee and so that no long-term maintenance and monitoring is required to protect the public and the environment.

This section is effective on the date of enactment.

The committee intends that the NRC comply with the applicable provisions of the so-called Administrative Procedures Act in issuing the rules, regulations, or issuing orders authorized by this section. This is not intended to mean that such rulemaking, etc., is subject to the adjudication provisions of that law. But, as a minimum, the rule-making provisions of this law (5 U.S.C. 553) shall apply.

The committee notes that many of the provisions of title II of the 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 and provide a means to alleviate or mitigate those problems where appropriate while assuring that the purposes of this act are fully met. The committee believes and expects that these purposes should be met without causing mill closings and putting people out of work. At the same time, the committee recognizes that, despite past efforts by a licensee, the control and stabilization may not be adequate to meet the requirements of these amendments to the 1954 act.

*Section 204—Cooperation with States*

This section amends section 274 of the Atomic Energy Act to provide for adherence by Agreement States to minimum Federal standards for uranium mill tailings control, stabilization and disposal.

It allows States to discontinue licensing or uranium milling and mill tailings, while retaining authority to continue licensing other radioactive materials licensable under the Agreement States' program. Under current law, States which did not want to regulate uranium milling would have to terminate their entire agreement program with the Commission. It also amends current provisions of law concerning the review of these agreements.

Subsection (e) adds a new subsection to section 274. It requires that State standards for licensing uranium mill tailings and uranium milling must to the extent practicable be equivalent to, or exceed, those of the Commission. In addition, licenses issued by States must require that, upon termination of such licenses, mill tailings disposal sites will be transferred without cost to permanent Federal custody. State licensing procedures are required to include provisions for public participation and environmental reviews. This new subsection includes the preparation of a written analysis "consistent with" the provisions of NEPA. The committee stresses the words "consistent with". It is not the intention that a State enact NEPA laws or adopt guidelines such as are now in effect under NEPA. The intent is to insure that any analysis (by a State) is carried out in a manner that is consistent with NEPA, so that mills located in a non-agreement State are not subject to different requirements than their competitors which are located in an agreement State. Indeed, that is an objective of the entire subsection. X

Subsection (f) reserves the right of the Commission to determine that mill tailings piles created under Agreement State licensing have met applicable requirements before they are turned over to Federal custody.

Subsection (g) requires the Commission to review the regulatory programs of each Agreement States, as soon as practicable 3 years after the date of enactment of the act, to determine whether the standards applied by the State are at least equivalent to those of the Commission. If the Commission determines that the State's program does not comply, it may suspend or terminate that part of its agreement with the State under which the State is permitted to license and regulate uranium milling and mill tailings activities. Regulatory authority would then revert to the Commission.

Provision is also made for amending such agreements to insure that fees collected by States for reclamation or long-term maintenance and monitoring are transferred to the United States upon termination of a license. Also, if such fees are collected, they must be adequate. The committee does not want to have this provision construed as requiring or discouraging such fees. That is a State decision.

Similarly, the committee intends that State laws and procedures govern the licensing, but this act establishes minimum procedures for this purpose.

Subsection (h) continues for 3 years State control over these tailings. After that period, if a State has not entered into an agreement, the NRC will license the mills.

*Section 205—Authorities of Commission respecting certain byproduct material*

Section 205 authorizes the Commission to promulgate, implement and enforce regulations governing permanent Federal custody of uranium mill tailings disposal sites and governing the activities of the Department of Energy under title I of the act.

*Section 206—Authority of Environmental Protection Agency respecting certain byproduct material*

Subsection (a)(1) requires EPA to set standards of general applicability for sites covered by title I of this bill. The standards must be consistent with the Solid Waste Disposal Act.

The committee observes that EPA testified that it could set such standards in 6 months. The committee was skeptical and allowed more time. However, EPA is encouraged to act within the 6 months goal EPA established for itself.

Subsection (a)(2) provides for such general standards for the title II program.

These provisions differ from those in the version of H.R. 13650 as reported by the Committee on Interior and Insular Affairs. Since reporting, both committees held considerable discussions with the EPA and NRC and developed these provisions. In an August 9, 1978, letter to Subcommittee Chairman Dingell, Administrator Costle said:

Title II would prospectively grant the uranium mill tailings licensing function to the NRC. We agreed that NRC would establish management requirements for the uranium mill tailings; that such requirements would be comparable, to the maximum extent practicable, to requirements applicable to the possession, transfer, and disposal of similar hazardous material under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976; and that in establishing general management requirements, the NRC would obtain the concurrence of EPA.

Under both titles, EPA would retain its generally applicable standards-setting authority under the Atomic Energy Act of 1954, as amended.

I believe this formulation for agency responsibility will best contribute to an effective program for the control of uranium mill tailings. Both EPA and NRC believe it is necessary to implement such a program as soon as possible.

The committee is satisfied with this resolution of a very difficult problem. The committee stresses that the EPA standards are not to be site-specific.

The committee bill does not contain a disclaimer concerning the Clean Air Act and the Federal Water Pollution Control Act. It is unnecessary. The bill does not affect those laws specifically, nor is it intended to do so by implication or otherwise. The committee did not think it wise to mention some environmental laws since failure to mention some would preclude the applicability of those not mentioned. The committee merely stresses that this Act does not change those laws.

*Section 207—Authorization of appropriation for grants*

This section authorizes \$500,000 in fiscal year 1980 for grants to those States with agreements with the NRC.

*Section 208—Effective Date*

The bill is effective on enactment unless otherwise stated.



*Section 209—Consolidation of licenses and procedures*

This section directs the NRC to consolidate all license and licensing procedures under amendments made by this title with other such license and licensing procedures under the 1954 act, to the greatest extent practicable.

**TITLE III—STUDY AND DESIGNATION OF TWO MILL TAILING SITES IN  
NEW MEXICO**

This title provides for a study by the NRC of two actual mill sites in New Mexico which purportedly have segregated those tailings piles that were derived from production for uranium for Federal purposes. From those derived from production of uranium for commercial purposes the NRC must determine if the 1954 law, as amended by this bill, provides effective regulation and control of these sites. If the study concludes that such law is not adequate, then the DOE may, within 90 days after completion of the study, designate the sites as eligible for assistance under title I of the bill. This designation will enable the DOE to enter into agreements with New Mexico for remedial action at such sites. Before the designation becomes final, the designation, together with cost and other data, must be reported to Congress, and wait for the lapse of 120 calendar days before initiating agreement with the State and remedial action.

**ECONOMIC IMPACT**

This legislation is not expected to have any significant inflationary impact. Over the next 7 years, 22 tailing sites will be treated at a total cost ranging anywhere from \$15 million to \$200 million, depending largely upon whether tailings will be treated and stored at their present location or, instead, moved to newly prepared disposal sites. Little of this cost is expected to be incurred during the next 3 years because of the time required to identify and prepare disposal sites. Additional costs may be borne by individual states if new disposal sites are required. But even taking these additional costs into account, the impact of the legislation on inflation and overly economic performance is expected to be immeasurable.

**COST OF LEGISLATION**

The committee requested a report from the Congressional Budget Office when H.R. 13650 was ordered reported on September 26, 1978. However, the CBO was unable to respond by the time of filing of this report.

The bill does not authorize any appropriations in fiscal year 1979.

**OVERSIGHT STATEMENT—COMMITTEE ON GOVERNMENT OPERATIONS**

No findings or recommendations on oversight activities pursuant to clause 2(b)(2) rule X and clause 2(1)(2)(D) under rule XI of the rules of the House of Representatives have been submitted by the Committee on Government Operations for inclusion in this report.

**DEPARTMENTAL REPORTS**

The committee received the following reports:

DEPARTMENT OF ENERGY,  
Washington, D.C., September 14, 1978.

HON. JOHN D. DINGELL,  
Chairman, Subcommittee on Energy and Power, Committee on Interstate  
and Foreign Commerce, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your request for the views of the Department of Energy (DOE) on the August 14, 1978, Committee Print, cited as the "Uranium Mill Tailings Radiation Control Act of 1978."

A number of changes agreed to by the Subcommittee in its markup of the "Residual Radioactive Materials Act of 1978" (the Administration bill) cause us some concern. As you know, the Administration bill provided for a cooperative Federal/State program in which the Federal Government would pay 75 percent of the direct costs of remedial action, while the State would pay 25 percent. The justifications for this financing formula were clearly set forth in our testimony before the Subcommittee. DOE considers the reasons for the 75/25 percent split to be compelling and persuasive; however, we understand the motivations which influenced the Subcommittee to limit the States' share to 10 percent of the costs of the program. While DOE prefers the funding formula of the Administration bill, we nevertheless are pleased with the Subcommittee's decision not to impose a ceiling upon the States' contribution to the remedial action program.

With respect to the question of limiting the liability of the United States in connection with the performance of the remedial action, DOE continues to support the language proposed in the Administration bill, which provided for a release of liability dating from enactment of the legislation through the completion of the remedial action. Such a release would not have affected the United States' liability, if any, for actions taken either prior to or after completion of the remedial action, but would merely have protected the United States during the time specified. In any event, although we would prefer a broader waiver, DOE is pleased that the concept of a limited release of liability has been accepted by the Subcommittee as reflected in Section 102(c) of the Committee Print.

As we understand it, the licensing and regulation portion of the Committee Print provides that the Environmental Protection Agency (EPA) will promulgate performance standards for the remedial action while the Nuclear Regulatory Commission is to have exclusive jurisdiction over the licensing of uranium mill tailings and enforcement of the performance standards set by EPA. We trust that the report language will clearly define the respective roles of these two agencies in order to avoid any possible conflict or inconsistency.

My staff and I appreciate the time and effort your Subcommittee has spent in marking up this legislation. We will be happy to provide the full Committee with any further information or assistance it may require during its markup.

The Office of Management and Budget has advised that there is no objection to the submission of this report from the standpoint of the Administration's program.

Sincerely,

JOHN F. O'LEARY,  
Deputy Secretary.

U.S. DEPARTMENT OF THE INTERIOR,  
OFFICE OF THE SECRETARY,  
Washington, D.C., September 15, 1978.

Hon. HARLEY O. STAGGERS,  
Chairman,  
Committee on Interstate and Foreign Commerce,  
U.S. House of Representatives,  
Washington, D.C.

DEAR MR. CHAIRMAN: This responds to your request for our view on H.R. 13650 as reported by the Subcommittee on Energy and Power of the House Interstate and Foreign Commerce Committee, the proposed "Uranium Mill Tailings Radiation Control Act of 1978."

We do not object to enactment of H.R. 13650 as reported by the Subcommittee on Energy and Power of the House Interstate and Foreign Commerce Committee if the bill is amended as suggested herein.

Title I of H.R. 13650 would authorize the Secretary of Energy to enter into cooperative agreements with States to perform remedial action at inactive uranium processing sites. Title II would amend the Atomic Energy Act of 1954 to include uranium mill tailings within the definition of "byproduct material" and would require that Nuclear Regulatory Commission licenses and renewals require that prior to termination of a license, the licensee comply with NRC-established decontamination, decommissioning and reclamation standards and requirements, and that ownership of the byproduct material be transferred to the United States on termination.

We have the following comments on the provisions of H.R. 13650 as reported by the Subcommittee on Energy and Power of the House Interstate and Foreign Commerce Committee. Section 104(b)(2) provides that State acquisition of a site for disposition and stabilization of residual radioactive materials shall not be required if the Secretary of Energy, with the concurrence of the Nuclear Regulatory Commission, designates a site owned by a Federal agency for such disposition and stabilization. We believe that section 104(b)(2) should incorporate the provision in section 106(a), governing acquisition of land by the Secretary of Energy, which permits the Secretary of the Interior to make public lands available to the Secretary of Energy for disposition of residual radioactive materials in accordance with other applicable provisions of law. We also suggest that section 106(a)(2) be amended to read: "the Secretary of the Interior may make available public lands administered by him for such purposes. . . ."

Section 105(a)(1) of the bill provides that cooperative agreements entered into between the Secretary of Energy and Indian tribes shall require that Indian tribes execute a waiver releasing the United States from any liability concerning the remedial action performed by the Secretary of Energy or his designee. This provision should be amended to include the statement that the provision does not affect the responsibilities of the Secretary of the Interior as trustee for any Indian tribe.

In order to consolidate residual radioactive materials for storage in a safe manner, section 106 of the bill authorizes the Secretary of Energy to acquire land, and provides, in addition, that the Secretary of the Interior may "make available public lands for such pur-

poses in accordance with other applicable provisions of law." We believe that section 106(a)(2) should apply to all managers of federally owned land, not just the Secretary of the Interior.

Section 108(a)(1) authorizes the Secretary of Energy to select and perform remedial action. The selection and performance of remedial action is to be done with the concurrence of the Nuclear Regulatory Commission and in consultation, as appropriate, with the Indian tribe and the Secretary of the Interior. The last sentence of section 108(a)(1) provides that since a State "must share in the costs of such remedial action, the State shall participate fully in the selection thereof." The word "such" appears to imply that States pay part of the costs of remedial action pursuant to agreements between the Secretary of Energy and Indian tribes. Since this is not the case, we recommend that the last sentence of section 108(a)(1) be amended to say, "Since a State must, pursuant to an agreement between the Secretary of Energy and the State, share in the costs of remedial action, the State shall participate fully in the selection of the type of remedial action to be performed."

The Office of Management and Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely,

GUY R. MARTIN,  
*Assistant Secretary.*

#### CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

#### ATOMIC ENERGY ACT OF 1954

##### CHAPTER 8. BYPRODUCT MATERIAL

- Sec. 81. Domestic Distribution.
- Sec. 82. Foreign Distribution of Byproduct Material.
- Sec. 83. Ownership and custody of certain byproduct material and disposal sites.*
- Sec. 84. Authorities of Commission respecting certain byproduct material.*

##### CHAPTER 19. MISCELLANEOUS

- Sec. 241. Transfer of Property.
- Sec. 251. Report to Congress.
- Sec. 261. Appropriations.
- Sec. 271. Agency Jurisdiction.
- Sec. 272. Applicability of Federal Power Act.
- Sec. 273. Licensing of Government Agencies.
- Sec. 274. Cooperation with States.
- Sec. 275. Health and environmental standards for uranium mill tailings.*
- Sec. 281. Separability.
- Sec. 291. Short Title.

## CHAPTER 2. DEFINITIONS

SEC. 11. DEFINITIONS.—The intent of Congress in the definitions as given in this section should be construed from the words or phrases used in the definitions. As used in this Act:

a. \* \* \*

\* \* \* \* \*

e. The term "byproduct material" means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

\* \* \* \* \*

SEC. 8. OWNERSHIP AND CUSTODY OF CERTAIN BYPRODUCT MATERIAL AND DISPOSAL SITES.—

a. Any license issued or renewed after the effective date of this section under section 62 or section 81 for any activity which results in the production of any byproduct material as defined in section 11e.(2) shall contain such terms and conditions as the Commission determines to be necessary to assure that, prior to termination of such license—

(1) the licensee will comply with decontamination, decommissioning, and reclamation standards prescribed by the Commission for sites (A) at which ores were processed primarily for their source material content and (B) at which such byproduct material is deposited, and

(2) ownership of any byproduct material defined in section 11e.(2) which resulted from such licensed activity shall be transferred to the United States.

Any license in effect on the date of the enactment of this section shall either contain such terms and conditions on renewal thereof after the effective date of this section, or shall comply with paragraphs (1) and (2) upon the termination of such license, whichever first occurs.

b. (1) Any such license which is issued after the effective date of this section shall also contain such terms and conditions as the Commission determines to be necessary to assure that, prior to termination of such license and after the licensee has complied with the requirements of subsection a., any land (other than land owned by the United States) which is used for the disposal of such byproduct material shall be transferred to the United States, including both the surface estate and any interest in the subsurface estate which may be necessary to protect the public health, welfare, and the environment. Following the Commission's determination of compliance under subsection d., the Secretary of Energy or the Federal agency designated by the President under subsection c. shall assume title and custody of the byproduct material and land transferred as provided in this subsection. Such officer or instrumentality shall maintain such material and land in such manner as will protect the public health and safety and the environment. Such custody may be transferred to another officer or instrumentality of the United States only upon approval of the President upon his determination that such officer or instrumentality meets the requirements of subsection c. Notwithstanding any other provision of law, such property and materials shall be maintained pursuant to a license issued by the Commission in such manner as will protect the public health, safety, and the environment.

(2) In the case of any such license under section 62 which was in effect on the effective date of this section, the Commission may require, before the termination of such license, such transfer of land (as described in paragraph (1) as may be necessary to protect the public health, welfare, and the environment from any effects associated with such byproduct material.

(3) Material and land transferred to the United States as required under this subsection shall be transferred without cost to the United States (other than administrative and legal costs incurred in carrying out such transfer). The United States shall not transfer title to material or property acquired under this subsection to any person, unless such transfer is in the same manner as provided under section 104(h) of the Uranium Mill Tailings Radiation Control Act of 1978.

(4) The provisions of this subsection respecting transfer of title and custody to land to the United States shall not apply in the case of lands held in trust by the United States for any Indian tribe or lands owned by such Indian tribe subject to a restriction against alienation imposed by the United States. In the case of such lands which are used for the disposal of byproduct material as defined in section 11e.(2), the licensee shall be required to enter into such arrangements with the Commission as may be appropriate to assure the long-term maintenance and monitoring of such lands by the United States.

c. The Secretary of Energy or such Federal agency as the President shall designate shall have custody of such property or material. The President shall not designate the Commission for such purposes.

d. Upon termination of any license to which this section applies, the Commission shall determine whether or not the licensee has complied with all applicable standards and requirements under such license.

#### SEC. 84. AUTHORITIES OF COMMISSION RESPECTING CERTAIN BYPRODUCT MATERIAL—

a. The Commission shall insure that the management of any byproduct material as defined in section 11e.(2) is carried out in such manner as—

(1) the Commission deems appropriate to protect the public health and safety and the environment,

(2) conforms with applicable general standards promulgated by the Administrator of the Environmental Protection Agency under section 275, and

(3) conforms to general requirements established by the Commission, with the concurrence of the Administrator, which are to the maximum extent practicable, comparable to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulated by the Administrator under the Solid Waste Disposal Act.

b. In carrying out its authority under this section, the Commission is authorized to—

(1) by rule, regulation, or order require persons, officers, or instrumentalities exempted from licensing under section 81 of this Act to conduct monitoring, perform remedial work, and to comply with such other measures as it may deem necessary or desirable to protect health or to minimize danger to life or property, and

(2) make such studies and inspections and to conduct such monitoring as may be necessary.

*Any violation by any person other than the United States or any officer or employee of the United States of any rule or order of the Commission established under this section or section 83 shall be subject to a civil penalty in the same manner and in the same amount as violations subject to a civil penalty under section 234. Nothing in this section affects any authority of the Commission under any other provision of this Act.*

\* \* \* \* \*

#### CHAPTER 14. GENERAL AUTHORITY

SEC. 161. GENERAL PROVISIONS.—In the performance of its functions the Commission is authorized to—

a. \* \* \*

\* \* \* \* \*

*x. establish by rule, regulation, or order, after public notice, such standards and instructions as the Commission may deem necessary or desirable to ensure—*

*(1) that an adequate bond, surety, or other financial arrangement (as determined by the Commission) will be provided, before termination of any license for byproduct material as defined in section 11e.(2), by a licensee to permit the completion of all requirements established by the Commission for the decontamination, decommissioning, and reclamation of sites, structures, and equipment used in conjunction with byproduct material as so defined, and*

*(2) that—*

*(A) in the case of any such license issued or renewed after the date of the enactment of this subsection, to the maximum extent practicable, after termination of such license, no long-term maintenance and monitoring of such sites, structures, and equipment will be necessary; and*

*(B) in the case of each license for such material (whether in effect on the date of the enactment of this section or issued or renewed thereafter), if the Commission determines that any such long-term maintenance and monitoring is necessary, the licensee, before termination of any license for byproduct material as defined in section 11e.(2), will make available such bonding, surety, or other financial arrangements as may be necessary to assure such long-term maintenance and monitoring.*

\* \* \* \* \*

#### CHAPTER 19. MISCELLANEOUS

\* \* \* \* \*

SEC. 274. COOPERATION WITH STATES.—

a. \* \* \*

b. Except as provided in subsection c., the Commission is authorized to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority of the Commission under chapters 6, 7, and 8, and section 161 of this Act, with respect to any one or more of the following materials within the State—

*(1) byproduct materials as defined in section 11e.(1);*

*(2) byproduct materials as defined in section 11e.(2);*

[2] (3) source materials;

[3] (4) special nuclear materials in quantities not sufficient to form a critical mass.

During the duration of such an agreement it is recognized that the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards.

c. No agreement entered into pursuant to subsection b. shall provide for discontinuance of any authority and the Commission shall retain authority and responsibility with respect to regulation of—

(1) the construction and operation of any production or utilization facility;

(2) the export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility;

(3) the disposal into the ocean or sea of byproduct, source, or special nuclear waste materials as defined in regulations or orders of the Commission;

(4) the disposal of such other byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.

*The Commission shall also retain authority under any such agreement to make a determination that all applicable standards and requirements have been met prior to termination of a license for byproduct material as defined in section 11e(2).* Notwithstanding any agreement between the Commission and any State pursuant to subsection b., the Commission is authorized by rule, regulation, or order to require that the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source, byproduct, or special nuclear material shall not transfer possession or control of such product except pursuant to a license issued by the Commission.

d. The Commission shall enter into an agreement under subsection b. of this section with any State if—

(1) The Governor of that State certifies that the State has a program for the control of radiation hazards adequate to protect the public health and safety with respect to the materials within the State covered by the proposed agreement, and that the State desires to assume regulatory responsibility for such materials; and

(2) the Commission finds that the State program is *in accordance with the requirements of subsection o. and in all other respects compatible with the Commission's program for the regulation of such materials*, and that the State program is adequate to protect the public health and safety with respect to the materials covered by the proposed agreement.

\* \* \* \* \*

j. The Commission, upon its own initiative after reasonable notice and opportunity for hearing to the State with which an agreement under subsection b. has become effective, or upon request of the Governor of such State, may terminate or suspend *all or part of its agreement with the State and reassert the licensing and regulatory authority vested in it under this Act*, if the Commission finds that



(1) such termination or suspension is required to protect the public health and safety, or (2) the State has not complied with one or more of the requirements of this section. The Commission shall periodically review such agreements and actions taken by the States under the agreements to ensure compliance with the provisions of this section.

\* \* \* \* \*

n. As used in this section, the term "State" means any State, Territory, or possession of the United States, the Canal Zone, Puerto Rico, and the District of Columbia. As used in this section, the term "agreement" includes any amendment to any agreement.

o. In the licensing and regulation of any activity which results in the production of byproduct material as defined in section 11e.(2) under an agreement entered into pursuant to subsection b., a State shall require—

(1) compliance with the requirements of subsections a.(2), b.(1), and b.(2) of section 83 (respecting ownership by the United States of byproduct material and land), and

(2) compliance with standards which shall be adopted by the State for the protection of the public health, safety and the environment from hazards associated with such material which are equivalent, to the extent practicable, or more stringent than, standards adopted and enforced by the Commission for the same purpose pursuant to sections 83a.(1) and 84a. and 275, and

(3) procedures which—

(A) in the case of licenses, provide for advance public notice, an opportunity for a public hearing with rights to present direct and rebuttal evidence and conduct cross-examination, and a written decision which is based only on evidence in the record and which is subject to judicial review;

(B) in the case of rulemaking, provide opportunity for public participation in the form of written comments or a public hearing and which provide for judicial review of the rulemaking decision;

(C) require the preparation for each license of a written analysis consistent with the policy and provisions of the National Environmental Policy Act of 1969 of the impact of the operations under such license on the environment, which shall be available to the public before the commencement of any such proceedings; and

(D) prohibit any major construction activity with respect to such material, prior to complying with the provisions of subparagraph (C).

If any State under such agreement imposes upon any licensee any requirement for the payment of funds to such State for the reclamation or long-term maintenance and monitoring of such material, such agreement shall be amended by the Commission to provide that such State shall transfer to the United States upon termination of the license issued to such licensee the total amount collected by such State from such licensee for such purpose. If such payments are required, they must be sufficient to insure compliance with the standards referred to in paragraph (2). No State shall be required under paragraph (2) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted in such State by the Commission.

**SEC. 275. HEALTH AND ENVIRONMENTAL STANDARDS FOR URANIUM MILL TAILINGS—**

a. (1) As soon as practicable, but not later than one year after the date of enactment of this section, the Administrator of the Environmental Protection Agency (hereinafter referred to in this section as the "Administrator") shall, by rule, promulgate standards of general application (including standards applicable to licenses under section 104(h)) for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with residual radioactive materials (as defined in section 101 of the Uranium Mill Tailings Radiation Control Act of 1978) located at inactive uranium mill tailings sites and depository sites for such materials selected by the Secretary of Energy, pursuant to title I of the Uranium Mill Tailings Radiation Control Act of 1978. Standards promulgated pursuant to this subsection shall, to the maximum extent practicable, be consistent with the requirements of the Solid Waste Disposal Act.

(2) As soon as practicable, but not later than eighteen months after the enactment of this section, the Administrator shall, by rule, promulgate standards of general application for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with the processing and with the possession, transfer, and disposal of byproduct material, as defined in section 11e.(2) of this Act at sites at which ores are processed primarily for their source material content, or which are used for the disposal of such byproduct material.

(3) Standards promulgated pursuant to this section for nonradiological hazards shall, notwithstanding any other provision of this Act or any other law be consistent with, to the greatest extent possible, the standards of the Solid Waste Disposal Act applicable to such hazards.

(4) The Administrator may from time to time amend, modify, or change any standard promulgated under this section.

b. (1) Before the promulgation of any rule pursuant to this section, the Administrator shall publish the proposed rule in the Federal Register, together with a statement of the research, analysis, and other available information in support of such proposed rule, and provide a period of public comment of at least thirty days for written comments thereon and an opportunity, after such comment period and after public notice, for any interested person to present oral data, views, and arguments at a public hearing. There shall be a transcript of any such hearing. The Administrator shall consult with the Commission and the Secretary of Energy before promulgation of any such rule.

(2) Judicial review of any rule promulgated under this section may be obtained by any interested person only upon such person filing a petition for review within sixty days after such promulgation in the United States court of appeals for the Federal judicial circuit in which such person resides or has his principal place of business. A copy of the petition shall be forthwith transmitted by the clerk of court to the Administrator. The Administrator thereupon shall file in the court the written submissions to, and transcript of, the written or oral proceedings on which such rule was based as provided in section 2112 of title 28, United States Code. The court shall have jurisdiction to review the rule in accordance with chapter 7 of title 5, United States Code, and to grant appropriate relief as provided in such chapter. The judgment of the court affirming, modifying, or setting aside, in whole or in part, any such rule shall be final, subject to judicial review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28, United States Code.

*(3) Any rule promulgated under this section shall not take effect earlier than sixty calendar days after such promulgation.*

*c. Nothing in this Act applicable to byproduct materials, as defined in section 11e.(2) of this Act, shall be construed to affect the authority of the Administrator under section 402 of the Federal Water Pollution Control Act or under the Clean Air Act.*

\* \* \* \* \*

**SUPPLEMENTAL VIEWS ON H.R. 13650—URANIUM MILL  
TAILINGS RADIATION CONTROL ACT OF 1978**

We concur with the majority on the need to take remedial action to safely dispose of residual uranium mill tailings. These tailings are an unavoidable by-product of the first stage of the nuclear fuel cycle. When uranium is extracted from raw ore, a radioactive, sand-like waste remains. This waste—called uranium mill tailings—can constitute a health hazard unless proper disposal methods are utilized. By sharing costs on a 90/10 basis with the affected states, the Federal government can effectively do its part to safely dispose of these tailings, which were once thought to be harmless.

We remain concerned, however, about the Attorney General's authority to study the liability (for remedial action costs), if any, of former owners or operators of these processing sites. After all, when these former owners or operators negotiated their cost-plus contracts with the Federal government, a very small amount was set aside for tailings disposal because the tailings were not believed to be health hazards. The cost of remedial action now contemplated to safely dispose of these tailings far exceeds that prior bargained-for amount, and will negate bargained-for profits.

After the study is completed, the Attorney General is authorized to take action under any appropriate law to require payment by a person found to be liable. We do not believe that the Attorney General should be empowered to enforce state laws in taking action against these former owners or operators. However, the majority has assured us that the Attorney General must exercise discretion in instituting any civil actions to recover remedial costs. Specifically, the majority has agreed that if the site is not currently owned or controlled by the persons who contracted with the United States, such civil action may be inappropriate. It is also our understanding with the majority that no new Federal authority is being conferred on the Attorney General by this provision of this bill.

With these understandings, we support H.R. 13650 and urge bipartisan support for this measure.

CLARENCE J. BROWN.  
JAMES M. COLLINS.  
NORMAN F. LENT.  
CARLOS J. MOORHEAD.  
MATTHEW J. RINALDO.

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: How about this version?  
**Date:** Monday, January 09, 2017 11:10:04 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:40 PM  
**To:** Collections.SubW  
**Subject:** FW: How about this version?

---

**From:** Schultheisz, Daniel  
**Sent:** Monday, November 28, 2016 2:58 PM  
**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>  
**Subject:** RE: How about this version?

Yes, R.

Title: Radionuclide NESHAPs: 40 CFR Part 61, Subpart W – Summary of Public Comments and Responses

Is there some reason we would not want it in NSCEP?

---

**From:** Shogren, Angela  
**Sent:** Monday, November 28, 2016 2:43 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** RE: How about this version?

This should be better.

This page is how we request a document number -  
[http://cincinnati.epa.gov/services/nscep/nscep\\_form.asp](http://cincinnati.epa.gov/services/nscep/nscep_form.asp)

I think that what I need from you is:

Publication Type (R, I think?)

Title

Do you want this available from NSCEP?

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

---

**From:** Schultheisz, Daniel  
**Sent:** Monday, November 28, 2016 12:18 PM  
**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>  
**Subject:** RE: How about this version?

Looks very nice. Still have some issues with page numbers. I randomly checked Section 11 in the table of contents and in that section, and the numbers are off by one. It looks like the listing in the main TOC is correct.

Attached is a file with an introduction and list of acronyms/abbreviations, which I have labeled Appendix B.

I expect to be making some relatively minor edits, so let me know when you feel pretty settled with it. Thanks.

---

**From:** Shogren, Angela  
**Sent:** Monday, November 28, 2016 11:40 AM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** How about this version?

Please let me know any additional changes that you need me to make!

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: How about this version?  
**Date:** Monday, January 09, 2017 11:09:50 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:40 PM  
**To:** Collections.SubW  
**Subject:** FW: How about this version?

---

**From:** Shogren, Angela  
**Sent:** Monday, November 28, 2016 3:01 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** RE: How about this version?

I can't imagine a reason that we wouldn't want it in NSCEP.

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

---

**From:** Schultheisz, Daniel  
**Sent:** Monday, November 28, 2016 2:58 PM  
**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>  
**Subject:** RE: How about this version?

Yes, R.

Title: Radionuclide NESHAPs: 40 CFR Part 61, Subpart W – Summary of Public Comments and Responses

Is there some reason we would not want it in NSCEP?

---

**From:** Shogren, Angela  
**Sent:** Monday, November 28, 2016 2:43 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** RE: How about this version?

This should be better.

This page is how we request a document number -  
[http://cincinnati.epa.gov/services/nscep/nscep\\_form.asp](http://cincinnati.epa.gov/services/nscep/nscep_form.asp)

I think that what I need from you is:

Publication Type (R, I think?)

Title

Do you want this available from NSCEP?

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

---

**From:** Schultheisz, Daniel  
**Sent:** Monday, November 28, 2016 12:18 PM  
**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>  
**Subject:** RE: How about this version?

Looks very nice. Still have some issues with page numbers. I randomly checked Section 11 in the table of contents and in that section, and the numbers are off by one. It looks like the listing in the main TOC is correct.

Attached is a file with an introduction and list of acronyms/abbreviations, which I have labeled Appendix B.

I expect to be making some relatively minor edits, so let me know when you feel pretty settled with it. Thanks.

---

**From:** Shogren, Angela  
**Sent:** Monday, November 28, 2016 11:40 AM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** How about this version?

Please let me know any additional changes that you need me to make!

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)



**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: How about this version?  
**Date:** Monday, January 09, 2017 11:09:40 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:40 PM  
**To:** Collections.SubW  
**Subject:** FW: How about this version?

---

**From:** Schultheisz, Daniel  
**Sent:** Monday, November 28, 2016 3:03 PM  
**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>  
**Subject:** RE: How about this version?

Then let's do it. Thanks.

---

**From:** Shogren, Angela  
**Sent:** Monday, November 28, 2016 3:01 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** RE: How about this version?

I can't imagine a reason that we wouldn't want it in NSCEP.

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

---

**From:** Schultheisz, Daniel  
**Sent:** Monday, November 28, 2016 2:58 PM  
**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>  
**Subject:** RE: How about this version?

Yes, R.

Title: Radionuclide NESHAPs: 40 CFR Part 61, Subpart W – Summary of Public Comments and Responses

Is there some reason we would not want it in NSCEP?

---

**From:** Shogren, Angela  
**Sent:** Monday, November 28, 2016 2:43 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** RE: How about this version?

This should be better.

This page is how we request a document number -  
[http://cincinnati.epa.gov/services/nscep/nscep\\_form.asp](http://cincinnati.epa.gov/services/nscep/nscep_form.asp)

I think that what I need from you is:

Publication Type (R, I think?)  
Title  
Do you want this available from NSCEP?

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

---

**From:** Schultheisz, Daniel  
**Sent:** Monday, November 28, 2016 12:18 PM  
**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>  
**Subject:** RE: How about this version?

Looks very nice. Still have some issues with page numbers. I randomly checked Section 11 in the table of contents and in that section, and the numbers are off by one. It looks like the listing in the main TOC is correct.

Attached is a file with an introduction and list of acronyms/abbreviations, which I have labeled Appendix B.

I expect to be making some relatively minor edits, so let me know when you feel pretty settled with it. Thanks.

---

**From:** Shogren, Angela  
**Sent:** Monday, November 28, 2016 11:40 AM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** How about this version?

Please let me know any additional changes that you need me to make!

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: How about this version?  
**Date:** Monday, January 09, 2017 11:09:28 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:41 PM  
**To:** Collections.SubW  
**Subject:** FW: How about this version?

---

**From:** Shogren, Angela  
**Sent:** Monday, November 28, 2016 3:14 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** RE: How about this version?

Done! I'll let you know when I get a number.

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

---

**From:** Schultheisz, Daniel  
**Sent:** Monday, November 28, 2016 3:03 PM  
**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>  
**Subject:** RE: How about this version?

Then let's do it. Thanks.

---

**From:** Shogren, Angela  
**Sent:** Monday, November 28, 2016 3:01 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** RE: How about this version?

I can't imagine a reason that we wouldn't want it in NSCEP.

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

---

**From:** Schultheisz, Daniel  
**Sent:** Monday, November 28, 2016 2:58 PM

**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>

**Subject:** RE: How about this version?

Yes, R.

Title: Radionuclide NESHAPs: 40 CFR Part 61, Subpart W – Summary of Public Comments and Responses

Is there some reason we would not want it in NSCEP?

---

**From:** Shogren, Angela

**Sent:** Monday, November 28, 2016 2:43 PM

**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>

**Subject:** RE: How about this version?

This should be better.

This page is how we request a document number -  
[http://cincinnati.epa.gov/services/nscep/nscep\\_form.asp](http://cincinnati.epa.gov/services/nscep/nscep_form.asp)

I think that what I need from you is:

Publication Type (R, I think?)

Title

Do you want this available from NSCEP?

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

---

**From:** Schultheisz, Daniel

**Sent:** Monday, November 28, 2016 12:18 PM

**To:** Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>

**Subject:** RE: How about this version?

Looks very nice. Still have some issues with page numbers. I randomly checked Section 11 in the table of contents and in that section, and the numbers are off by one. It looks like the listing in the main TOC is correct.

Attached is a file with an introduction and list of acronyms/abbreviations, which I have labeled Appendix B.

I expect to be making some relatively minor edits, so let me know when you feel pretty settled with it. Thanks.

---

**From:** Shogren, Angela  
**Sent:** Monday, November 28, 2016 11:40 AM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** How about this version?

Please let me know any additional changes that you need me to make!

**Angela Shogren** | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: Technical direction 1, WA 5-18  
**Date:** Monday, January 09, 2017 11:09:16 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:41 PM  
**To:** Collections.SubW  
**Subject:** FW: Technical direction 1, WA 5-18

---

**From:** Egidi, Philip  
**Sent:** Monday, November 28, 2016 4:16 PM  
**To:** Stephen Marschke <[smarschke@scainc.com](mailto:smarschke@scainc.com)>; Miller, Beth <[Miller.Beth@epa.gov](mailto:Miller.Beth@epa.gov)>; Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Cc:** Abe Zeitoun <[azeitoun@scainc.com](mailto:azeitoun@scainc.com)>; Stephen Ostrow <[sostrow@scainc.com](mailto:sostrow@scainc.com)>; Joanne Stover (<[joannestovereditor@gmail.com](mailto:joannestovereditor@gmail.com)>) <[joannestovereditor@gmail.com](mailto:joannestovereditor@gmail.com)>  
**Subject:** RE: Technical direction 1, WA 5-18

Received.  
Thank you ,  
PVE

Philip Egidi  
Environmental Scientist  
U.S. Environmental Protection Agency  
Radiation Protection Division  
Washington, DC  
(202) 343-9186 (work)  
(970) 209-2885 (Cell)

“The health of the people is the highest law.”  
Cicero (106 - 43 BC)

---

**From:** Stephen Marschke [<mailto:smarschke@scainc.com>]  
**Sent:** Monday, November 28, 2016 2:39 PM  
**To:** Egidi, Philip <[Egidi.Philip@epa.gov](mailto:Egidi.Philip@epa.gov)>; Miller, Beth <[Miller.Beth@epa.gov](mailto:Miller.Beth@epa.gov)>; Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Cc:** Abe Zeitoun <[azeitoun@scainc.com](mailto:azeitoun@scainc.com)>; Stephen Ostrow <[sostrow@scainc.com](mailto:sostrow@scainc.com)>; Joanne Stover (<[joannestovereditor@gmail.com](mailto:joannestovereditor@gmail.com)>) <[joannestovereditor@gmail.com](mailto:joannestovereditor@gmail.com)>  
**Subject:** RE: Technical direction 1, WA 5-18

Phil,

The attached Word file contains the revised Subpart W BID/EIA report, modified as you requested in the November 17<sup>th</sup> Technical Directive. Also, attached is a pdf file that contains the QAPP required SC&A Signature Sheet (this sheet is also in the BID/EIA report with the notation [Signature on File] instead of the actual signatures). The 3<sup>rd</sup> file is a listing of the 5 items specified in the TD, and an explanation of how SC&A addressed each.

Let me know if you have any questions or comments on any of the attached material.

Steve

---

**From:** Egidi, Philip [<mailto:Egidi.Philip@epa.gov>]

**Sent:** Thursday, November 17, 2016 9:46 AM

**To:** Stephen Marschke <[smarschke@scainc.com](mailto:smarschke@scainc.com)>; Miller, Beth <[Miller.Beth@epa.gov](mailto:Miller.Beth@epa.gov)>; Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>

**Cc:** Abe Zeitoun <[azeitoun@scainc.com](mailto:azeitoun@scainc.com)>

**Subject:** Technical direction 1, WA 5-18

Steve,

As discussed, attached is the technical direction for the BID report for Subpart W along with an attachment.

Thank you,

PVE

Philip Egidi  
Environmental Scientist  
U.S. Environmental Protection Agency  
Radiation Protection Division  
Washington, DC  
(202) 343-9186 (work)  
(970) 209-2885 (Cell)

“The health of the people is the highest law.”  
Cicero (106 - 43 BC)

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: Links to draft webpages upon signing  
**Date:** Monday, January 09, 2017 11:09:02 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:41 PM  
**To:** Collections.SubW  
**Subject:** FW: Links to draft webpages upon signing

---

**From:** Nesky, Anthony  
**Sent:** Monday, November 28, 2016 7:17 PM  
**To:** Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>; Peake, Tom <[Peake.Tom@epa.gov](mailto:Peake.Tom@epa.gov)>  
**Cc:** White, Rick <[White.Rick@epa.gov](mailto:White.Rick@epa.gov)>  
**Subject:** Links to draft webpages upon signing

Dear Dan

I added those documents to the Docket. Here are links to the draft webpages. Dates will be filled in and documents added when this is signed. Here is the Rulemaking Activity page:

<https://wcms.epa.gov/node/78045/revisions/454869/view>

When you click on the link, you get a page not found message and be prompted for your password and LAN ID. Then page should then load.

Here is the Subpart W page. I have similar information on it. We can update with more details after the rule appears in the Federal Register.

<https://wcms.epa.gov/node/74035/revisions/454877/view>

Please let me know if you have any changes.

Tony



**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: Discuss status of Subpart W Impoundment Photographic Reporting (SWIPR) Tool  
**Date:** Monday, January 09, 2017 11:08:52 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:41 PM  
**To:** Collections.SubW  
**Subject:** FW: Discuss status of Subpart W Impoundment Photographic Reporting (SWIPR) Tool

-----Original Appointment-----

**From:** Schultheisz, Daniel  
**Sent:** Tuesday, November 29, 2016 10:52 AM  
**To:** Shogren, Angela  
**Subject:** Accepted: Discuss status of Subpart W Impoundment Photographic Reporting (SWIPR) Tool  
**When:** Wednesday, December 07, 2016 9:00 AM-9:30 AM (UTC-05:00) Eastern Time (US & Canada).  
**Where:** DCRoomWest1424/OPEI

**From:** [Thornton, Marisa](#) on behalf of [Collections.SubW](#)  
**To:** [Thornton, Marisa](#)  
**Subject:** Fw: NSCEP Pub# Request  
**Date:** Wednesday, January 11, 2017 8:24:23 AM

---

---

**From:** Schultheisz, Daniel  
**Sent:** Thursday, December 22, 2016 3:41 PM  
**To:** Collections.SubW  
**Subject:** FW: NSCEP Pub# Request

-----Original Message-----

From: Shogren, Angela  
Sent: Tuesday, November 29, 2016 11:48 AM  
To: Schultheisz, Daniel <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
Subject: FW: NSCEP Pub# Request

We got our document number - see below.

I can insert in the document, or you can. Just let me know what else you need from me to finalize!

Angela Shogren | Public Affairs Specialist | U.S. Environmental Protection Agency | Tel 202 343 9761 | [shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)

-----Original Message-----

From: nscep-priority [<mailto:nscep-priority@lmsolas.com>]  
Sent: Tuesday, November 29, 2016 11:26 AM  
To: Shogren, Angela <[Shogren.Angela@epa.gov](mailto:Shogren.Angela@epa.gov)>  
Subject: RE: NSCEP Pub# Request

Thank you for your recent request. The publication number assigned to the requested title is 402-R-16-004

If you have any questions or concerns please feel free to respond directly to this email or contact our office at 301-240-7455.

Thank you,

NSCEP Customer Service

-----Original Message-----

From: Angela Shogren [<mailto:shogren.angela@epa.gov>]  
Sent: Monday, November 28, 2016 3:13 PM  
Cc: Angela Shogren <[shogren.angela@epa.gov](mailto:shogren.angela@epa.gov)>

Subject: NSCEP Pub# Request

\_\_\_DOC\_TYPE: NEW

00\_DATE: 11/28/2016

01\_INTERNAL\_DISTRIBUTION: NO

13\_COMPLETE\_PROTRAC:

02\_REQ\_EMAIL: shogren.angela@epa.gov

03\_REQ\_LAST\_NAME: Shogren

04\_REQ\_FIRST\_NAME: Angela

05\_REQ\_OFFICE: OAR

06\_REQ\_MAIL\_CODE: 6608-J

07\_REQ\_PHONE: (202)343-9761

08\_REQ\_FAX:

09\_REQ\_ADDRESS: 1200 Pennsylvania Ave NW, MC-6608J

10\_REQ\_CITY: Washington

11\_REQ\_STATE: District Of Columbia

12\_REQ\_ZIP: 20460

13\_PUB\_PRINTED: NO

15\_PUB\_ORIGINAL\_OR\_REVISION: ORIGINAL

17\_PUB\_DUE\_DATE: 11/16

18\_NS\_PUB\_RESPONS\_CODE: 40x-45x

19\_PUB\_TYPE: R.

20\_PUB\_TITLE: Radionuclide NESHAPs: 40 CFR Part 61, Subpart

W & #226; & #8364; & #8220; Summary of Public Comments and Responses

21\_PUB\_URL:

<https://www.epa.gov/radiation/subpart-w-rulemaking-activity>

22\_PUB\_URL\_DIGITAL\_ONLY:

23\_DIS\_NSCEP\_OR\_OTHER:

25\_DIS\_ORG:

26\_DIS\_MAIL\_CODE:

27\_DIS\_PHONE:

28\_DIS\_ADDRESS:

27\_DIS\_CITY:

28\_DIS\_STATE:

29\_DIS\_ZIP:

30\_DIS\_URL:

30\_DIS\_URL\_DIGITAL\_ONLY:

31\_COMMENTS:

03\_REQ\_LAST\_NAME: Shogren

04\_REQ\_FIRST\_NAME: Angela