Report #26

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INITIAL SITE EVALUATION STUDY FOR DISPOSAL OF URANIUM MILL TAILINGS

Prepared for
UNC MINING AND MILLING DIVISION

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January 1980

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APPENDIX

New Mexico Water Quality Control Commission Regulations as amended November 8, 1977.

Radiation Protection Programs, 40 CFR 190, Subchapter F.

Implementation of Uranium Mill Tailings; Radiation Control Act of 1978, 44 FR 47192.

Uranium Mill Tailings Licensing, 44 FR 50012.

Uranium Mill Tailings Licensing Corrections, 44 FR 54307, 44 FR 55327.

A

INTRODUCTION

With our current concern about environmental protection and specifically the long term effects of exposed uranium mill tailings, regulatory agencies are seriously considering burial of uranium mill tailings for all new uranium mills. The key factors involved in tailings disposal are remoteness from inhabited areas, prevention of erosion at the disposal site, and prevention of seepage of toxic materials from the disposal area.

UNC Mining and Milling Division and its consultants are actively studying several possibilities for disposal of uranium mill tailings.

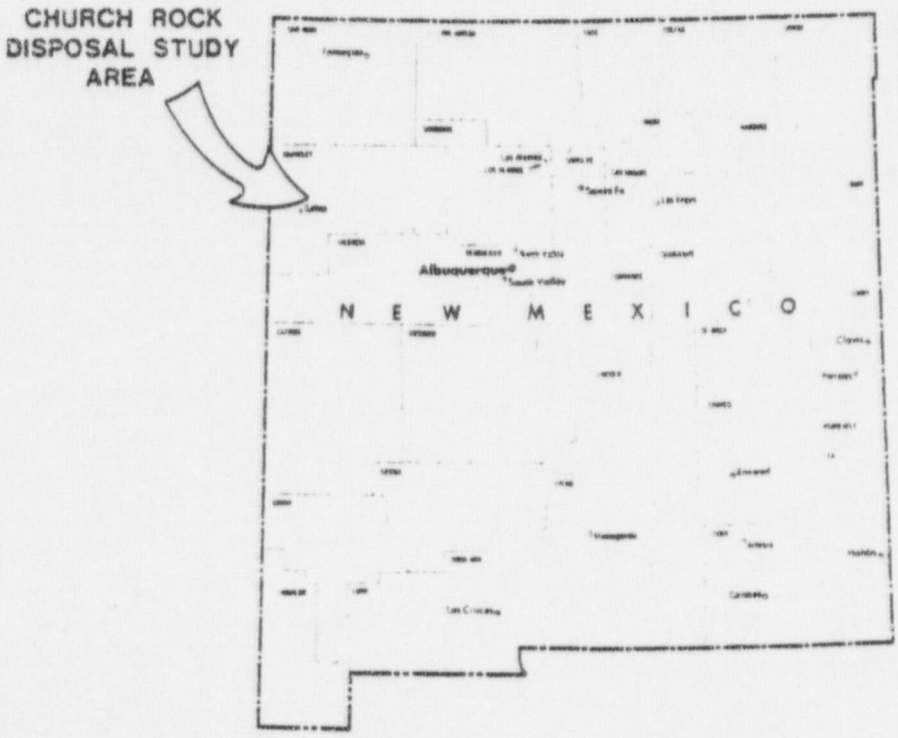
At the request of UNC Mining and Milling Division, the Rocky Mountain Division of Pace Company Consultants & Engineers, Inc. has made an initial evaluation of alternative sites for disposal of uranium mill tailings in the vicinity of the Church Rock Mill, owned and operated by UNC. Valuable assistance in preparation of this report was obtained from Jacobs Engineering Group, Inc. The location of the mill, as shown on Figure 1, is approximately 15 miles northeast of Gallup, New Mexico in Section 2, T16N, R16W.

The scope of this study does not include the use of the present tailings disposal site or modifications of the present disposal site. Nor does this study include the use of the present disposal site in combination with other sites. For example, it might be advantageous to continue use of the present site as both an area of solids disposal and raffinate evaporation for a fixed period of time. The present site may be used for evaporation for the life of the mill with other sites being used for disposal of solids.

The sites selected for evaluation represent a cross-section of available site - types within the study area. Thirteen sites were selected for evaluation after ruling out some sites using a "common sense" approach, e.g. stream bottoms, cliff areas, etc.

FIGURE 1

REGIONAL INDEX MAP



The evaluation process is based primarily on a set of thirteen environmental parameters. A secondary evaluation was made based on a set of twelve economic parameters. The parameters, detailed later in this study, were weighted on a scale of 1 to 10. Each site was then examined and rated. The sites were closely examined for severe deficiencies or flaws. Government regulations on uranium tailings disposal were studied and are discussed in Section D and the criteria specified by the New Mexico Environmental Improvement Division and the Nuclear Regulatory Commission were given high weightings in the rating process. The economic evaluation is important in actual site selection because the economic viability of the project could hinge on the location of the disposal site. However, preliminary rating is based solely on the environmental parameters.

If a tailings disposal system is implemented on an alternate site which is not owned by UNC, it will necessitate land acquisition. This involves a substantial delay in implementing a disposal system depending on the ownership status of the land. Being aware of this situation UNC is in the process of studying land ownership in the project area. Future work requirements and a time schedule have been outlined for a uranium tailings disposal system. (See Figure 2).

The report is structured to deal with each of the above items separately. Section B summarizes the site ratings. Section C deals with the implementation of a disposal system. Included in this section is a list of items which must be completed in order to attain an operating disposal system. There is also a discussion of timing involved for implementation of a disposal system. Section D outlines pertinent Federal and State statutes on uranium tailings. Section E lists the project design parameters used to determine the area required for the disposal system. Section F entitled "Regional Site Survey", discusses the characteristics which determine a favorable disposal site. It lists the sites in the study area which were evaluated and explains why each site was selected. There is also a description of the meteorology, geology and hydrology in the study area. The last part of the section specifies the geologic and hydrologic information that must be obtained at a disposal site prior to commencing

operations. Section G is the disposal site evaluation. A description of the methodology used in the evaluation is given. This portion is followed by an explanation of the weighting factors used in both the environmental and economic evaluations and finally an evaluation is made of thirteen disposal sites.

B

DISPOSAL SITE RATING

In this study the thirteen disposal sites shown on Plate 1 were rated using two sets of parameters. The analyses of the sites are shown in Tables 1 and 2 using the environmental parameters and Tables 3 and 4 using the economic parameters.

The rating system used to evaluate disposal sites is based upon higher scores reflecting favorable site characteristics, whereas lower scores indicate less desirable characteristics. Bearing in mind that this evaluation rates all sites on a relative basis, it does not provide sufficient detail to make an ultimate site recommendation. The following is a summary of the site rating for both sets of parameters:

Environmental Site Rating

Site Number	Total Score
4	383
6	376
3	268
12	252
11	235
10	225
2	214
5	209
9	206
1	197
13	196
7	184
8	146

Economic Site Rating

Site Number	Total Score
4	534
7	361
9	355
6	348
3	316
8	282
13	271
10	266
12	263
11	253
5	236
1	232
2	186

C

IMPLEMENTATION OF A TAILINGS DISPOSAL SYSTEM

Implementation of a tailings disposal system at the Church Rock Operation requires insight into the timing and tasks which must be accomplished before disposal operations begin. The necessary tasks and a time schedule for this completion are as follows:

- Regulatory agencies should be contacted and input received on site preferences. A primary and a secondary site should be selected for tailings disposal.

- In-depth feasibility studies should be conducted on sites utilizing available data to determine the most economic and environmentally acceptable method of tailings disposal. Exact land acquisition requirements should be defined.

- An option-to-purchase all land required should be acquired.

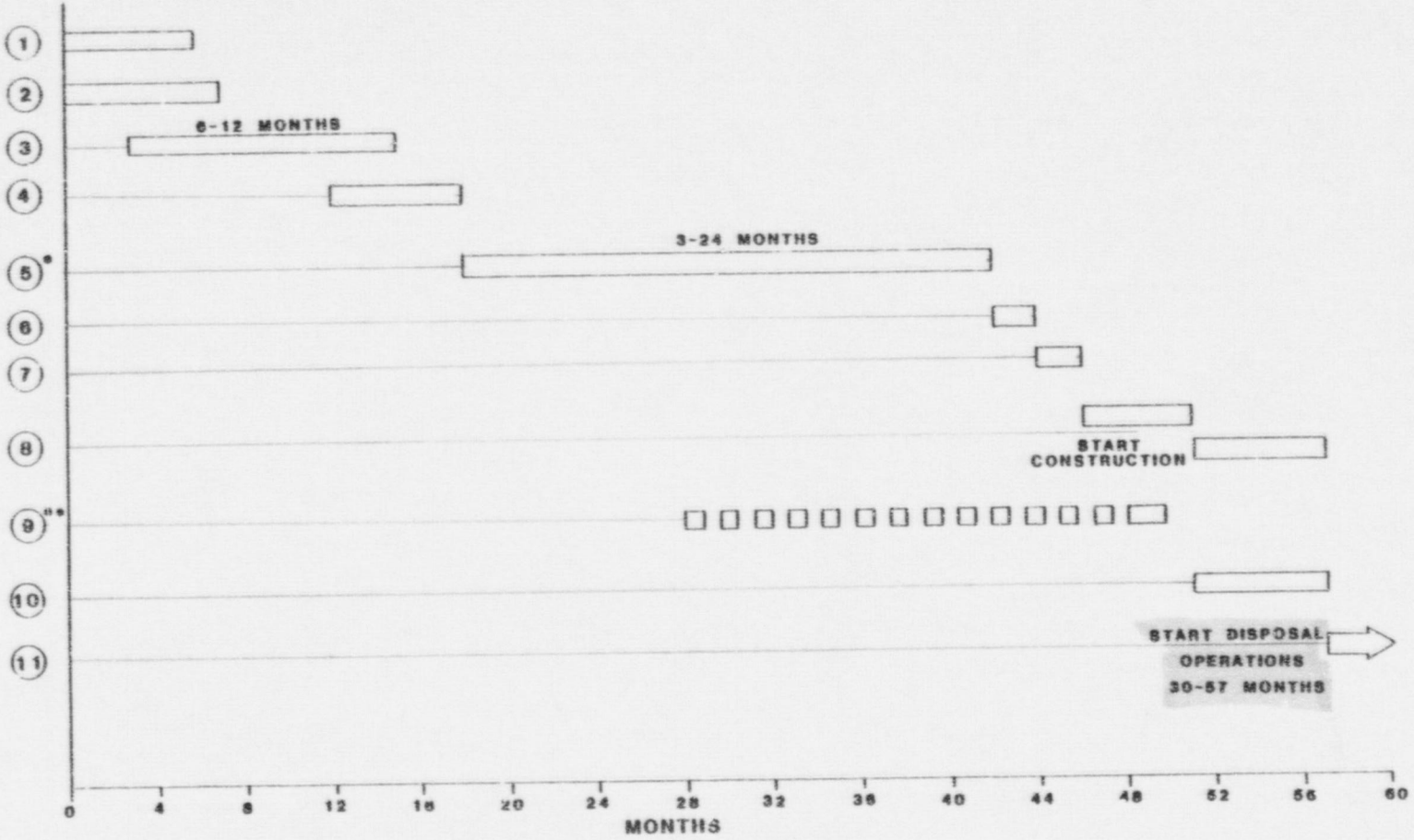
- Drilling and testing operations should be conducted to determine exact geologic and hydrologic conditions. This program is outlined in more detail later in this study.

- Based on geologic and hydrologic data a site should be selected as the tailings disposal site. At this time an option-to-purchase should be exercised. The primary consideration for land acquisition is that at the end of disposal operations the land must be owned and under the custody of a Government agency. Therefore during the operation, the land can either be leased from a government agency or owned by the company and turned over to a Government agency upon termination of operations.

- Perform detailed engineering and permitting followed by construction required prior to operation.

Figure 2 shows an estimated project time schedule for Federal, State and private land, with varying environmental requirements. Table 1 is for reference to the numbers in Figure 2. Six months will be required to accomplish an initial comparison of the environmental requirements and costs of all the sites. During this time, property acquisition alternatives can be examined and a comparison made of all sites. At the end of this time period, land purchase options can be acquired on the most promising sites. When these are obtained, applications for exploration and drilling permits can be made, if needed, and drilling, testing and geotechnical evaluation can be started. This period may vary from six to twelve months, depending on the type of land selected and the permits required. After a sufficient amount of data has been accumulated, detailed engineering and cost analysis can be performed to determine final site selection. This will take approximately six months. At this point, property may be acquired and baseline environmental monitoring started, if necessary. This time period may vary from three to twenty four months, depending on the type of land selected, ease of acquiring the land and necessary environmental data. Environmental data interpretation can be done during this period with final permit application work requiring two months after completion of the monitoring program. Equipment purchase could not be initiated until there is confidence that permit approval will eventually be received, but equipment and manpower studies will continue intermittently throughout this time. After public hearings and permit approval, construction would commence and disposal operations would begin approximately six months after construction has begun. Depending on types of land selected and environmental considerations, disposal could commence anywhere from thirty to fifty seven months after the project is initiated.

FIGURE 2 PROJECT SCHEDULE TAILINGS DISPOSAL SYSTEM



*POTENTIAL FOR SCHEDULE COMPRESSION DEPENDENT ON CONDITIONS IMPOSED BY REGULATORY AGENCY AND TYPE OF LAND ACQUIRED

**EQUIPMENT SELECTION PROCESS TO CONTINUE INTERMITTENTLY THROUGHOUT TIME PERIOD

LEGEND SEE TABLE 1

TABLE 1

PROJECT SCHEDULE LEGEND

1. Perform initial environmental and economic site evaluation.

2. Investigate property acquisition alternatives and acquire land purchase options.

3. Conduct drilling, testing and geotechnical evaluation on top two to three sites after obtaining necessary permits.

4. Perform detailed engineering and cost analysis of top two to three sites. Select site.

5. Property acquisition and environmental monitoring and analysis as required.

6. Preparation of permit application-New Mexico groundwater discharge permit and New Mexico radioactive material licensing permit.

7. Public hearings on permits.

8. Permit review and approval - 150 day minimum for discharge permit.

9. Equipment selection and design.

10. Equipment purchase.

11. Disposal operation.

D

URANIUM TAILINGS DISPOSAL PERMITTING CONSIDERATIONS

NEW MEXICO STATUTES

New Mexico radioactive materials licensing permit regulations received interim approval on November 16, 1979. These regulations have not yet been issued. Familiarity with the existing and proposed regulations is assumed and will not be repeated here.

New Mexico also requires a subsurface water discharge permit for tailings disposal under the New Mexico Water Quality Control Commission Regulations, as amended in 1977. A suit brought by industry plaintiffs contesting these regulations was settled by the New Mexico Supreme Court on November 16, 1979. The New Mexico Supreme Court upheld the regulations and they are now in effect. Major provisions of these regulations include the following requirements:

- Groundwater of 10,000 mg/l TDS concentration or less is subject to maximum concentration levels at the point of use for arsenic, barium, cadmium, chromium, cyanide, fluoride, lead, total mercury, nitrate, selenium, silver, uranium, and combined radium-226 and radium-228 radioactivity. Additional standards are applicable for irrigation and livestock use.

- A discharge plan must be approved for discharge into the groundwater. After filing, approval will take a minimum of 150 days under a given timetable.

- An applicant may be allowed to discharge while the permit approval is pending, subject to permission by the director.

- A proposed discharge plan must contain the following information:

  - Quantity, quality, and flow characteristics of the discharge.

  - Location of the discharge and of any bodies of water, watercourses, and groundwater discharge sites within one mile of the outside perimeter of the discharge site, and existing or proposed wells to be used for monitoring.

  - Depth to and TDS concentration of the groundwater most likely to be affected by the discharges.

  - Flooding potential of the site.

  - Location and design of site(s) and method(s) to be available for sampling, and for measurement or calculation of flow.

  - Depth to and lithological description of rock at base of alluvium below the discharge site if such information is available.

  - Any additional information that may be necessary to demonstrate that approval of the discharge plan will not result in either concentrations in excess of the standards or the presence of toxic pollutants at any place of withdrawal of water for present or reasonably forseeable future use. Detailed information on site geologic and hydrologic conditions may be required for a technical evaluation of the applicant's proposed discharge plan.

- The discharge plan will require a monitoring plan with the following requirements:

- The installation, use, and maintenance of effluent monitoring devices.

- The installation, use, and maintenance of monitoring devices for the groundwater most likely to be affected by the discharge.

- Monitoring in the vadose zone.

- Continuation of monitoring after cessation of operations.

- Periodic submission to the director of results obtained pursuant to any monitoring requirements in the discharge plan and the methods used to obtain these results.

- Periodic reporting to the director of any other information that may be required as set forth in the discharge plan.

- The discharger to retain for a period of at least five years any monitoring data required in the discharge plan.

- A system of monitoring and reporting to verify that the plan is achieving the expected results.

- Procedures for detecting failure of the discharge system.

- Contingency plans to cope with failure of the discharge plan or system.

- Measures to prevent groundwater contamination after the cessation of operation, including post-operational monitoring.

- Provided that the other requirements of these regulations are met, the director shall approve a proposed discharge plan if either of the following requirements are met; the discharge will

not result in standards being exceeded at the place of use in the present or reasonably forseeable future or will not exceed 0.5 acre-feet per acre per year for an industrial, mining or manufacturing operation.

FEDERAL RADIATION PROTECTION REGULATIONS

The Nuclear Regulatory Commission has prepared a two-volume Draft Generic Environmental Impact Statement on Uranium Milling which contains a review of technical considerations and mitigative measures. The Draft Generic Environmental Impact Statement (GEIS) contains a series of guidelines for disposing of uranium mill tailings. A summary of these guidelines is provided below.

There are certain basic goals which a mill tailings disposal system should accomplish. The most important element involves the reduction or elimination of radon emissions. Also of importance is the reduction or elimination of impacts on groundwater. Finally, there must be some assurance of long term stability while minimizing continued maintenance. Strategies to attain the above objectives should include:

- Preparation of tailings for disposal
- Location of disposal area
- Preparation of disposal area
- Stabilization and covering of tailings

Long-Term Stability of Isolated Tailings

The NRC prefers to examine each case on a site specific basis. As far as tailings disposal options are concerned, there are three methods to choose from; above-grade disposal, below-grade or near-surface, and far-below-the-surface disposal. To insure the long term stability of a tailings disposal system based on the three methods mentioned above, the following guidelines and procedural requirements should be followed:

General Guidelines

The tailings disposal area should be located in an area where the dispersion of tailings by natural forces is eliminated or reduced to the maximum extent reasonably achievable. In the selection of disposal sites, primary emphasis should be given to isolation of tailings, a matter having potential long-term impacts, as opposed to consideration of only short-term convenience or benefits, such as minimization of transportation or land acquisition costs.

The "prime option" for disposal of tailings is placement below grade, either in mines or specially excavated pits. The evaluation of alternative sites and disposal methods performed by mill operators in support of their proposed tailings disposal program (provided in applicant environmental reports) should reflect this. In some instances, below-grade disposal may not be the most environmentally sound approach, such as might be the case if a high quality groundwater formation is relatively close to the surface or not very well isolated by overlying soils and rock. Also, geologic and topographic conditions might make full below grade burial impracticable. For example, bedrock may be sufficiently near surface that blasting would be required to excavate a disposal pit at excessive cost, and more suitable alternate sites are not available. In these cases, it must be demonstrated that an aboveground disposal program will provide reasonably equivalent isolation of the tailings from natural erosional forces.

Aboveground Guidelines

If tailings are deposited aboveground, the following siting and design criteria should be adhered to:

- Upstream rainfall catchment areas should be minimized so as to decrease the size of the maximum possible flood which could erode or wash out sections of the tailings disposal area. This would mean, for example, that the impoundment would be near the top of a divide.

- Site topographic features provide shelter of the tailings area from wind; i.e., the face of the embankment is not exposed directly to prevailing winds.

- Embankment slopes should be relatively flat after abandonment so as to minimize erosion potential and to provide conservative factors of safety assuring long-term stability and isolation. The broad objective should be to contour final slopes to grades which are as close as possible to those which would be provided if tailings were disposed of below grade. This would, for example, lead to slopes of about 10 horizontal to 1 vertical (10h:1v) or less. In general, slopes should not be steeper than about 5h:1v. Where steeper slopes are proposed, reasons for designing a slope steeper than 5h:1v should be provided, and compensating factors and conditions which make such slopes acceptable should be identified.

- Tailings are covered with reasonably thick soil and overburden materials. The overburden is stabilized with vegetation, or rock riprap and cobbles as appropriate, to retard any wind and water erosion.

- The dam is constructed according to accepted geotechnical engineering standard practices to ensure long-term stability (principles outlined in Regulatory Guide 3.11 are followed). The impoundment should not be located near a potentially active fault where an earthquake could result in a ground acceleration exceeding that which the impoundment could reasonably be expected to withstand.

- The impoundment, where feasible, should be designed to incorporate features which will promote deposition. For example, design features which promote desposition of sediment suspended

in any run off which flows into the impoundment area might be utilized; the objective of such a design feature would be to enhance the thickness of cover over time.

- Final disposal of tailings should be such that ongoing active maintenance is not necessary to preserve isolation.

Direct and Airborne Radioactive Emissions - Tailings Disposal Covering

Sufficient cover should be placed over the tailings to result in a calculated surface exhalation of radon from the tailings of less than 2 $pCi/m^2/sec$. That is, incremental releases of radon above that resulting from radium occurring naturally in cover materials shall be less than 2 $pCi/m^2/sec$. Direct gamma exposure from the mill tailings should be reduced to background levels. Very thin plastic or other synthetic sheets should not be used to reduce radon flux, and, in any case, thickness of cover should be no less than 3 m (10 feet). Cover material must not include mine waste or rock that contain elevated levels of radium. Overburden and soils used for cover must be essentially the same, as far as radioactivity is concerned, as surrounding soüs. No member of the public may be exposed to an annual dose equivalent exceeding 25 millirems exclusive of radon and its daughter products as provided in 40 CFR 190. This requirement may necessitate a buffer zone around the disposal area.

Seepage of Toxic Materials

Steps should be taken to reduce seepage of toxic materials into groundwater to the maximum extent reasonably achievable. This could be accomplished by lining the bottom of tailings areas, and reducing the inventory of liquid in the impoundment by such means as dewatering tailings, and/or recycling water from tailings impoundments to the mill. Also, tailings treatment, such as neutralization, to promote immobilization of toxic substances should be considered. The specific method, or combination of methods, to be used must be worked out on a site-specific basis. While the primary method of protecting groundwater should be by isolation of tailings and tailings solutions, disposal

involving contact with groundwater will be considered by the staff provided supporting tests and analysis are presented demonstrating that the proposed disposal and treatment methods will preserve quality of groundwater.

Isolation of Tailings

The tailings disposal site should be located in an area remote from people to reduce population exposures to the maximum extent reasonably achievable and to reduce the likelihood of human intrusion into and possible disruption of the area.

A plan for disposing of tailings, in accordance with requirements delineated above, shall be proposed by applicants and approved by appropriate agencies before approval of license amendments. This plan must be submitted in conjunction with an environmental report, and must address the expected impacts of tailings disposal; alternatives for mitigating these impacts shall be evaluated.

Prior to the licensing of a milling operation, documented environmental analysis should be prepared, treating significant impacts and alternatives considered, and issued for review and comment by the public and interested agencies. No major construction activity should be allowed before public availability of the final document.

Opportunity for public hearings should be provided in any mill or mill tailings licensing case.

Financial surety arrangements must be established to ensure that sufficient funds will be available for disposal and reclamation of the mill tailings and decommissioning the site and buildings in accord with the approved plan.

Applicants should conduct a program of preoperational monitoring in support of their license applications and associated environmental reports. This program should be conducted for one full year prior to site disturbances and should be

designed to provide complete baseline data on the site and its environs prior to development. Throughout the construction and operation of the mill, an acceptable monitoring program should be conducted to demonstrate compliance with applicable standards and regulations, to evaluate performance of control systems and procedures, to evaluate environmental impacts of operation, and to detect potential long-term effects.

As a prudent measure of protection, continued control of tailings disposal sites should be exercised, including control of land use and periodic inspection. Such control should be provided through ownership and custody of disposal sites by a Government agency, following a determination that a license has satisfied decommissioning requirements and the license is terminated.

Proposed Final Interim Regulations

Based upon the GEIS a set of Proposed Final Interim regulations on uranium mill tailings licensing was published in the Federal Register on August 24, 1979. The comment period on these regulations closed on October 24, 1979. Final interim regulations are still pending. The proposed final interim regulations are contained in the Appendix.

The following are the major areas of importance in these regulations.

- Agreement states regulate the licensing of material by-products until November 8, 1981. At that time the permanent NRC regulations will go into effect, and State regulations may continue.

- An application for a license amendment must be filed with the New Mexico Environmental Improvement Division.

- Construction commenced before approval of such a license shall be grounds for the denial of the license.

- Tailings disposal areas shall be located at a remote site.

- The "prime option" is disposal below grade. An evaluation of alternative sites and disposal methods must be made.

- If tailings are disposed of above-ground, rainfall catchment areas will be utilized, wind protection will be provided, final slopes will not be steeper then 5h:1v, vegetation will be established and the area must not be near an active fault.

- Steps must be taken to reduce seepage of toxic materials into the groundwater.

- Not less than 3 meters of earth cover will be placed over the tailings.

- At least 1 year of pre-operational monitoring must be performed.

- Airborne effluent must be controlled.

Environmental Impact Statements and Mining Plans

If the site is located on Federally-owned land requiring a Federal permit, various environmental and mining plans are necessary.

Exploration Regulations

If the land is federally-owned, a prospecting or exploration license for drilling may be required from various Federal agencies before drilling may commence.

Environmental Protection Regulations

The Environmental Protection Agency (EPA) regulates uranium mining and milling under three separate statutes, The Clean Air Act, The Solid Waste Disposal Act, as amended and The Uranium Mill Tailings Control Act. Surface water discharges are also regulated under the National Pollutant Discharge Elimination System of the Federal Water Pollution Control Act and underground water discharges by the Underground Injection Control program under the Safe Drinking Water Standards. The EPA administers these programs in the State of New Mexico.

All three statutes have regulations which are currently in preparation. Solid waste regulations were proposed in December 1978 for waste rock and overburden due to uranium mining. Final regulations have not yet been promulgated.

A report entitled, "Potential Health and Environmental Hazards of Uranium Mine Wastes" was published by the EPA under the statutory authority of the Uranium Mill Tailings Control Act in September 1979. It is widely believed that the EPA will propose new regulations based on this report.

The newest study to be released is a background document prepared under the statutory authority of the Clean Air Act, entitled, "Radiological Impact Caused by Emissions of Radionuclides into Air in the United States: Preliminary Report." This report is also believed to be the basis for a new regulatory program.

Health and Safety Regulations

Health and Safety Regulations are administered under the Federal Mine Safety and Health Administration (MSHA). Radiation protection regulations are contained in 40 CFR 190 and 10 CFR 20 under Environmental Standards for the uranium fuel cycle by authority of the Atomic Energy Act of 1954.

OTHER APPLICABLE STATUTES

New Mexico administers and maintains the national air standards through an EPA approved air quality plan. Ambient air quality standards may be applied to tailings disposal construction and maintenance.

Appropriation of surface water, drainage diversions, etc. are handled through the State Engineer. Radiation safety regulations are enforced through the New Mexico Environmental Improvement Division under Part 4 of the Radiation regulations governing radiation releases.

E

PROJECT DESIGN PARAMETERS

TAILINGS AREA REQUIREMENTS

In order to establish a rough estimate and non-site specific area requirement for a tailings disposal site it is necessary to define the volume of tailings to be disposed of, and the average thickness of the tailings in the disposal area. The following assumptions were used in determining the disposal area requirements:

Daily mill production	4000 dry tons/day
Mill production requiring disposal	50%
Mill production schedule	365 days/year
Mill production life	15 years

Bulk density of mill tailings

Specific gravity of liquor	1.05
Specific gravity of dry ore	2.7
Solid content shortly after deposition	65%
Ultimate solid content of tailings	70%

Liquor quantity per day

$$1 - \frac{A}{A + 2000} = .65$$

A= 1077 tons per day liquor

Daily tonnage for disposal: 1077 + 2000 = 3077 tpd

Bulk density of 65% solids tailings

$$\frac{2000}{2.7 \times 62.4} + \frac{1077}{1.05 \times 62.4} = \frac{3077}{B \times 62.4}$$

$$B = 1.74$$

Bulk Density = $1.74 \times 62.4 = 108.58$ lbs/ft^3

This bulk density is used to calculate the volume of tailings for the life of the operation. It is assumed that the ultimate solids content will be 70% but the volume of the material will not change even though the percentage of solids increases from 65% to 70%.

Volumetric Requirements

$$\frac{3077 \text{ tpd} \times 365 \text{ days/yr} \times 15 \text{ yrs} \times 2000 \text{ lbs/ton}}{108.58 \text{ lbs/ft}^3 \times 43560 \text{ ft}^2\text{/acre}} = 7123 \text{ acre-ft}$$

Assuming an average tailings thickness of 40 ft.

$$\text{Area requirements} = \frac{7123}{40} = 178 \text{ acres}$$

Additional area will be required for final reclaimed slopes; however, they can only be determined on a site-specific basis.

F

REGIONAL SITE SURVEY

GENERAL

Favorable Site Characteristics

The tailings disposal site location should help the disposal pr ram attain the following objectives:

- Reduce or eliminate airborne radioactive emissions.
- Reduce or eliminate impacts on groundwater.
- Ensure long-term stability and isolation of the tailings with minimal need for continued maintenance.

The last two objectives are directly affected by site location. The site must be resistant to erosion while at the same time providing long-term stability and isolation. Shallow groundwater levels should be avoided if possible; otherwise an efficient lining procedure should be employed.

Other siting factors which may influence disposal site location include:

- The tailings disposal area should be located in an area where disruption by natural forces is minimal. In other words, the locality should largely be stabilized with respect to wind, rain, earth movements, etc.
- Bedrock materials should be as impermeable as possible to help reduce or eliminate lining costs.

- The disposal site should not be located on an active fault.

- The site should be as close to the mill site as possible to reduce transportation requirements.

- The site should be located such that the disturbance of natural or man made obstacles can be avoided as much as possible.

Potential Disposal Sites

The site locations were selected on a "common sense" approach utilizing a series of environmental and economic parameters based on the guidelines listed above.

The chosen sites represent both the physical and geological range and variation of the sites available in the study area. While they by no means portray all available sites, they do illustrate "site areas" with the best potential. "Common sense" eliminated any areas which cannot logically be considered as viable sites.

Sites shown on relatively flat terrain were selected with a possible tailings burial system in mind, whereas sites located in small valleys may be suitable for a modified tailings burial method. Other sites may require a dual or phased approach for tailings disposal.

METEOROLOGY

Data presented in this report pertaining to meteorology are a summary of the data for Gallup, New Mexico, presented in United Nuclear Corporation's "Environmental Report on The Church Rock, New Mexico, Uranium Mill and Mine: Volume 1", dated 1975.

Temperature, Precipitation and Relative Humidity

Because of the elevation, summer days are generally cool, with highs in the mid-80's. Winter temperatures are low, with minimum readings of 0°F or below for an average of 10 days/year. Rapid daytime warming to above freezing is typical during the winter.

The mean annual precipitation is 10.7 inches at Gallup, New Mexico, with 43% of the annual moisture falling during the period of July through September. Most of this summer moisture falls during brief but occasionally heavy, summer thunderstorms. Extended rains or cloudy periods are uncommon. Much of the winter precipitation falls as snow, with snowfall depths commonly 4 to 6 inches.

Relative humidity data are not available for the Gallup area. The U.S. Weather Bureau estimates that because of the lower temperatures associated with the elevation of the area, relative humidity at the proposed mill site should be higher than the relative humidity which occurs in the lower desert regions. The average annual relative humidity for the site is estimated to be 55%, based on U.S. Weather Bureau data. Diurnal variations are expected to range from 70% in early mornings to 30% later in the day.

Wind Speed and Direction

Wind speed and direction measurements for Gallup, were obtained from the National Climatic Center in Asheville, North Carolina, for January 1973 through February 1974. Figure 3 is a summary of the annual frequency distributions for these data. Wind records prior to January 1973 are not available for Gallup. The surface wind speeds in the area are generally moderate, averaging 6.9 mph. Wind speeds are greatest in the spring, averaging 9.1 mph in April and least in winter, averaging 5.3 mph in January. The maximum wind speeds reported during this period were approximately 35 mph, gusting to 43 mph. The most frequent winds are southwesterly through westerly, with a total frequency of 48%.

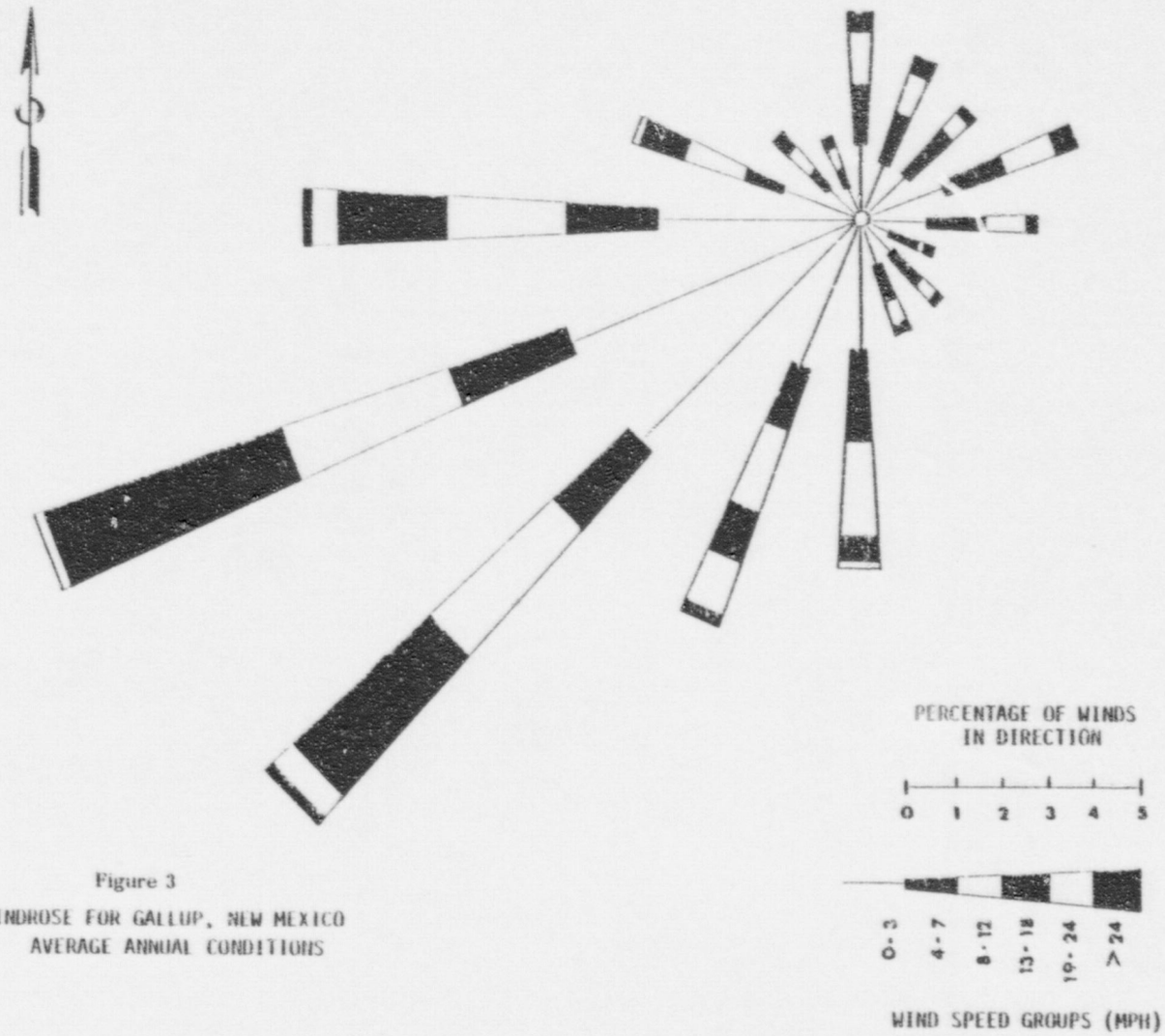


Figure 3

WINDROSE FOR GALLUP, NEW MEXICO
AVERAGE ANNUAL CONDITIONS

Severe Weather

Prolonged rains or cloudy periods are rare. However, summer cloudbursts can produce excessive runoff and local flash flooding in the rough, sparsely vegetated terrain. During the summer, hail is occasionally associated with thundershowers. No tornado has ever been reported in the Gallup area.

Most winter storms are not accompanied by excessive wind; thus, heavy drifting or blizzard conditions rarely occur.

Local Meteorology

A mechanical weather station has been installed at the Church Rock Mill site and on-site wind data indicate that prevailing winds are southwesterly through westerly and are in agreement with the Gallup data.

GEOLOGY - CHURCH ROCK MILL AREA

The UNC Church Rock Mill is located along the southwestern flank of the San Juan Basin and the northwestern flank of the Zuni Uplift as shown on Figure 4. Strata dip northerly into the basin at about 2 to 4 degrees. The topography of the area is strongly controlled by structure. Resistant sandstone beds form cuestas, generally oriented east-west, and northward facing dip slopes. Strata in the area consists of Cretaceous Dakota Formation and older sediments south of the North Fork of the Puerco River and are delineated by broad dip slopes on the Dakota Formation. The main body of the Cretaceous Mancos Shale is 900 to 1,000 feet thick and overlies the Dakota Formation. The less resistant nature of the Mancos has resulted in an east-west strike valley in which the North Fork of the Puerco River lies. The strike valley is bounded on the south by resistant Dakota Formation and on the north by overlying resistant sandstones of the Crevasse Canyon Formation of the Cretaceous Mesaverde Group. The Crevasse Canyon Formation, in ascending order, consists of the Gallup Sandstone, the Dilco Coal Member, the Dalton Sandstone Member, and the Gibson Coal Member. The Point Lookout Sandstone of the Mesaverde Group

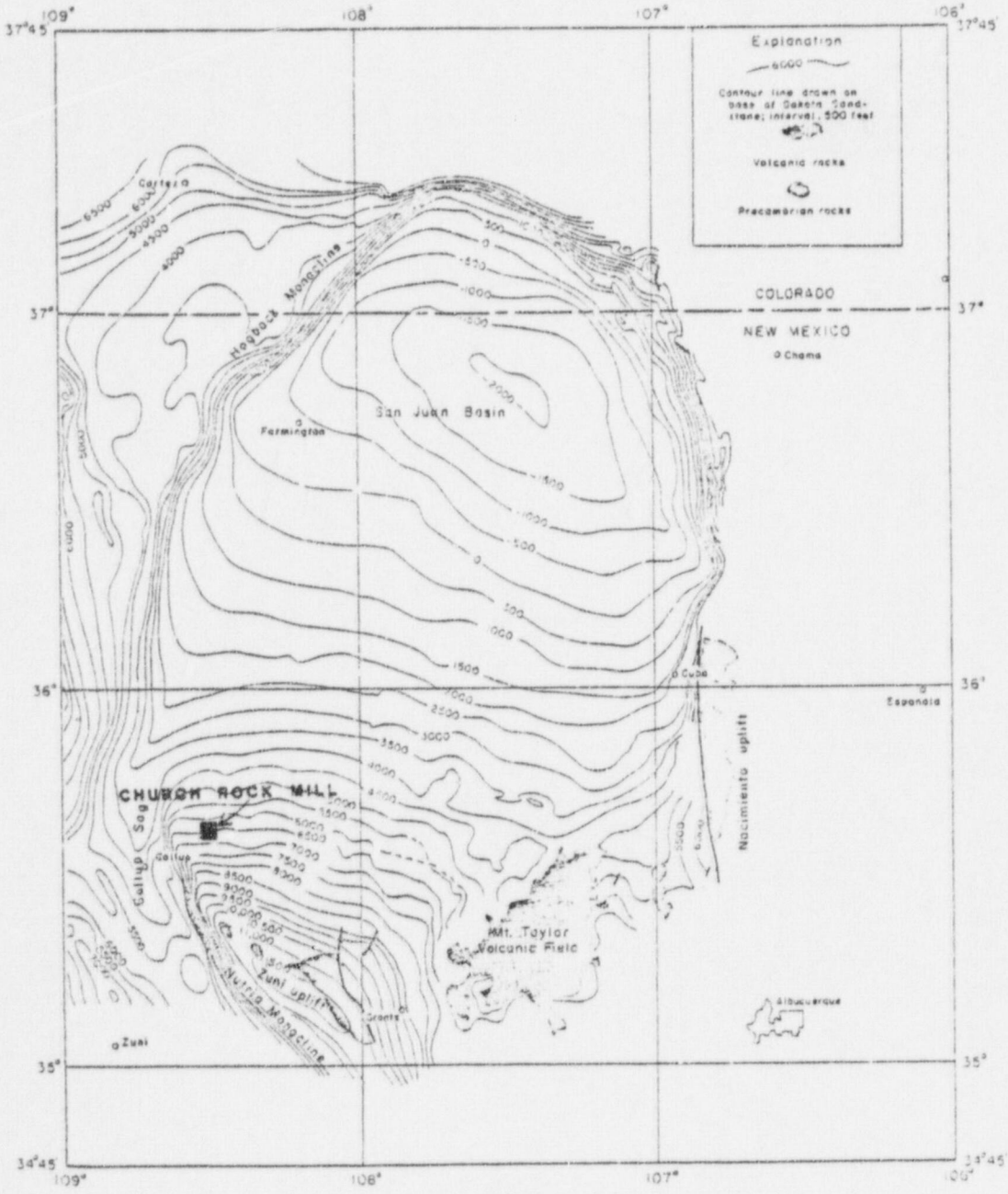


FIGURE 4

MAP SHOWING STRUCTURE OF SAN JUAN BASIN.
MODIFIED FROM SILVER (1950)

SOURCE: SHOMAKER, ET. AL., 1971, NEW MEXICO BUREAU OF MINES MEMOIR 25.

overlies the Crevasse Canyon Formation. The Mulatto Tongue of the Mancos Shale intertongues with and overlies the Dilco Coal Member and the Dalton Sandstone in the eastern portion of the project area. To the west the Mulatto Tongue pinches out and is replaced by the Dalton Sandstone Member. Figure 5 is a generalized stratigraphic section showing the stratigraphic relationship of rocks outcropping in the project area.

Lithology

Dakota Formation

The Dakota Formation consists generally of two to three sandstone units which enclose one or two non-marine coal bearing shale units. The lower sandstone of the Dakota is conglomeratic to coarse grained sandstone while the upper sandstone tends to be coarse to medium grained. The Dakota is basically a quartz sandstone with rounded to subangular grains and moderate amounts of intersitial clay. Porosity and permeability in the sandstone of the unit are relatively high, the formation being an aquifer. An upper tongue of the Dakota Formation, the Two Wells Sandstone, consists of two massive sandstones separated by a shale interval. The Two Wells Sandstone is separated from the Dakota by a lower tongue of Mancos Shale.

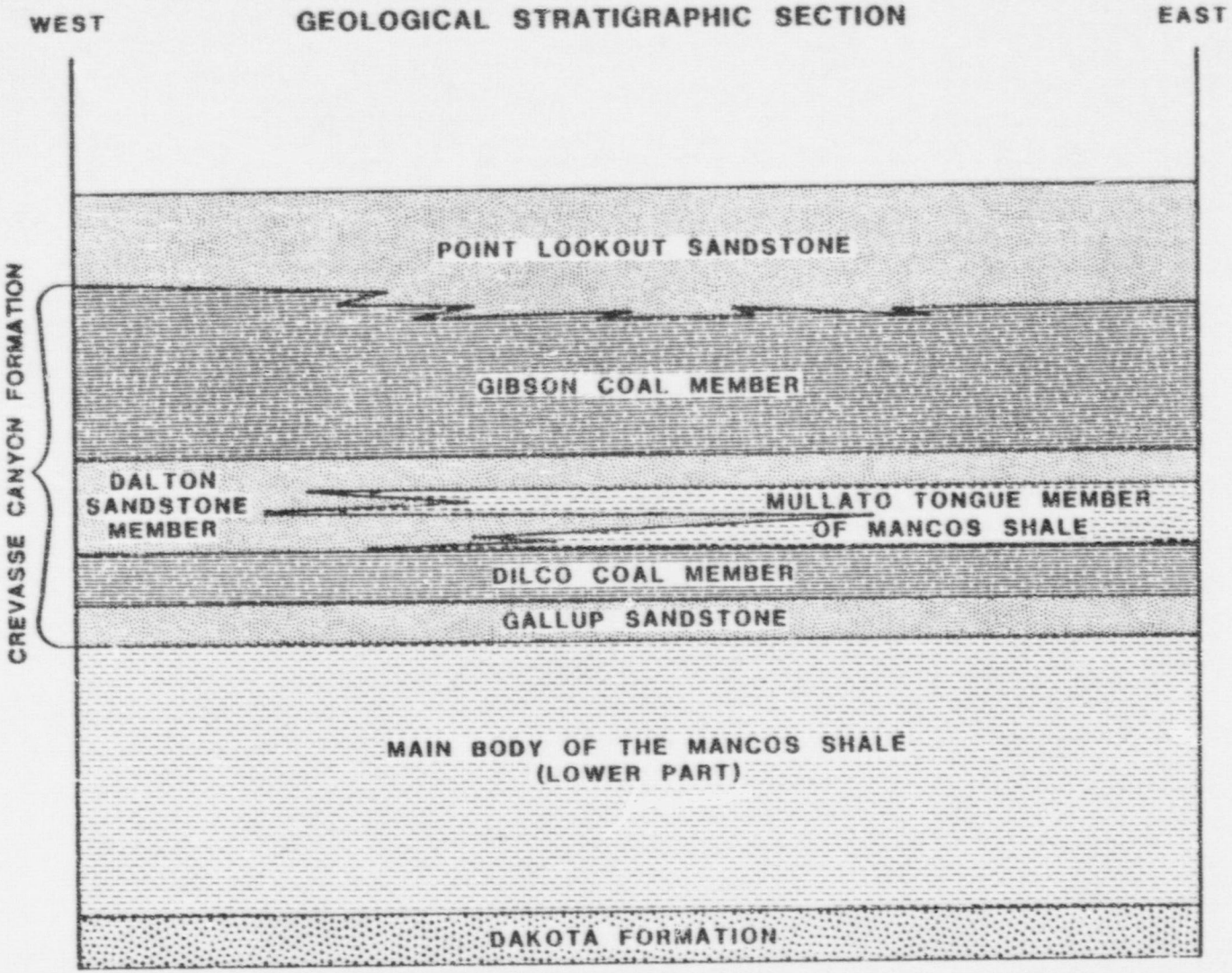
Mancos Shale

The main body of the Mancos shale is generally a dark gray, calcareous, friable, silty shale with minor, thin, light brown sandstones, platy, light gray to white limestone and gypsum, and gray, fissile shale. The Mulatto Tongue of the Mancos is generally dark gray shale, brown sandy shale, and massive yellowish brown fine grained silty sandstone. The Mancos has a low permeability and acts as an aquitard.

Gallup Sandstone Member

The Gallup sandstone is pale, reddish brown and light gray, fine and medium grained, cross-bedded, calcareous sandstone. Ripple and gouge marks indicate a

FIGURE 5


WEST
GEOLOGICAL STRATIGRAPHIC SECTION
EAST
POINT LOOKOUT SANDSTONE
GIBSON COAL MEMBER
DALTON SANDSTONE MEMBER
MULLATO TONGUE MEMBER OF MANCOS SHALE
DILCO COAL MEMBER
GALLUP SANDSTONE
CREVASSE CANYON FORMATION
MAIN BODY OF THE MANCOS SHALE (LOWER PART)
DAKOTA FORMATION

possible marine environment for some of the sandstone units. Carbonaceous shale and lenticular coal beds are noted in the upper 75 feet of the unit. In the project area an underlying tongue of the Gallup is separated from the main body by a tongue of Mancos Shale.

Dilco Coal Member

The Dilco Member consists of lenticular sandstone, shale, mudstone, siltstone, claystone, clay, and coal beds. In the project area only three coal beds have been located with any continuity. The maximum coal thickness in the area is about 3 feet. Local very friable, thin, coarse grained sandstones are noted in the project area. Some of the sandstone units (channel deposits) are relatively resistant to erosion.

Dalton Sandstone Member

The Dalton Sandstone is a light-gray, coarse, medium and fine-grained sandstone. Thickness of the unit is variable; generally greater than 100 feet. Intertongueing with the Mulatto Tongue of the Mancos thins this unit to the east. The Mulatto Tongue of the Mancos actually separates the Dalton Sandstone Member into upper and lower units west of the UNC mine and mill area.

Gibson Coal Member

The Gibson Coal Member outcrops in the project area but is barren of coal in the project area. Lithology is basically interbedded shale, sandstone, mudstone, siltstone and clay.

Point Lookout Sandstone

The Point Lookout Sandstone outcrops generally to the north of the project area. The unit is a fine to medium grained, brown to gray, friable, massive, relatively clean sandstone with apparent high porosity and permeability.

GEOLOGIC DESCRIPTION OF SELECTED SITES

Thirteen disposal sites were chosen as typical of the multitude of potential sites available. Plate 2 shows the location of these sites, and general surface geology in the project area. Brief geologic descriptions are presented for each of the sites. Figures 6, 7, and 8 are cross-sections showing the general geology in some of the site areas.

Site 1

Site 1 is located in a tributary canyon to the Puerco River. The bottom and slopes of the canyon consist of slope wash, colluvium, and a minor amount of alluvium. The canyon mouth is located near the contact of the Mancos and overlying Gallup Sandstone. The upper reaches of the canyon within the boundaries of the site are underlain by bedrock of the Gallup Sandstone, Dilco Coal Member, Mulatto Tongue of the Mancos, and in the northern-most reaches, the Dalton Sandstone Member. Excavation in this site would therefore encounter numerous lithologic types which may complicate excavation (some units may require drilling and blasting). The existence of the Dilco Coal Member at this site, which has significant quantities of clay, may provide an adequate source of clay for potential lining material.

Site 2

This site is located in a canyon tributary to the Puerco River and, because of the structural attitude of the beds, essentially identical geologic conditions as described under Site 1 also prevail at this site.

Site 3

Site three is located on the Puerco Valley slope below the Gallup Sandstone cuesta. The site is located stratigraphically below the Gallup Sandstone - Mancos Shale contact. Subgrade burial at this site would be limited to excavation in the Mancos Shale. Soil or rock debris above the Mancos shale will vary from thin to possibly over 10 feet.

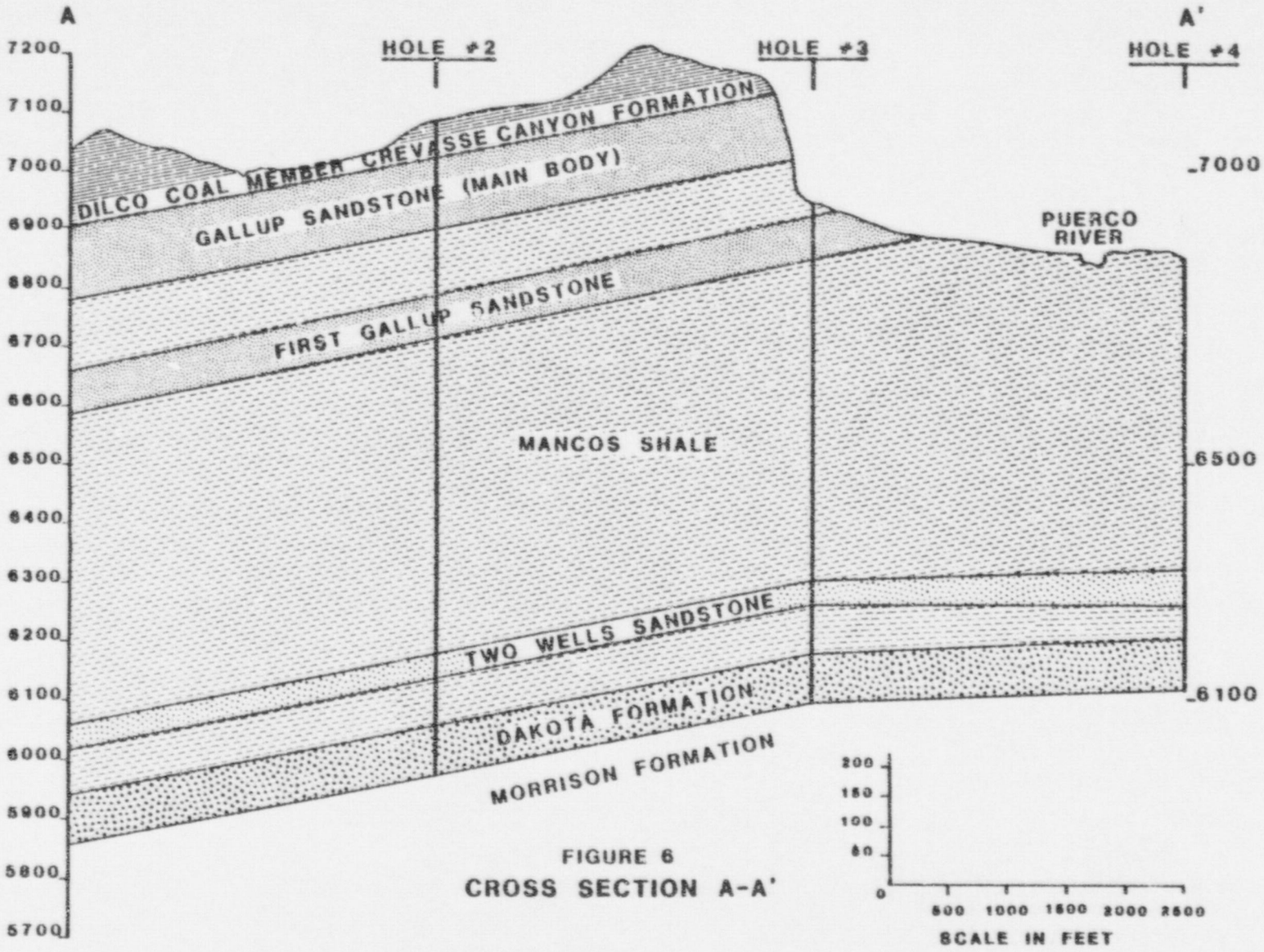


FIGURE 6
CROSS SECTION A-A'

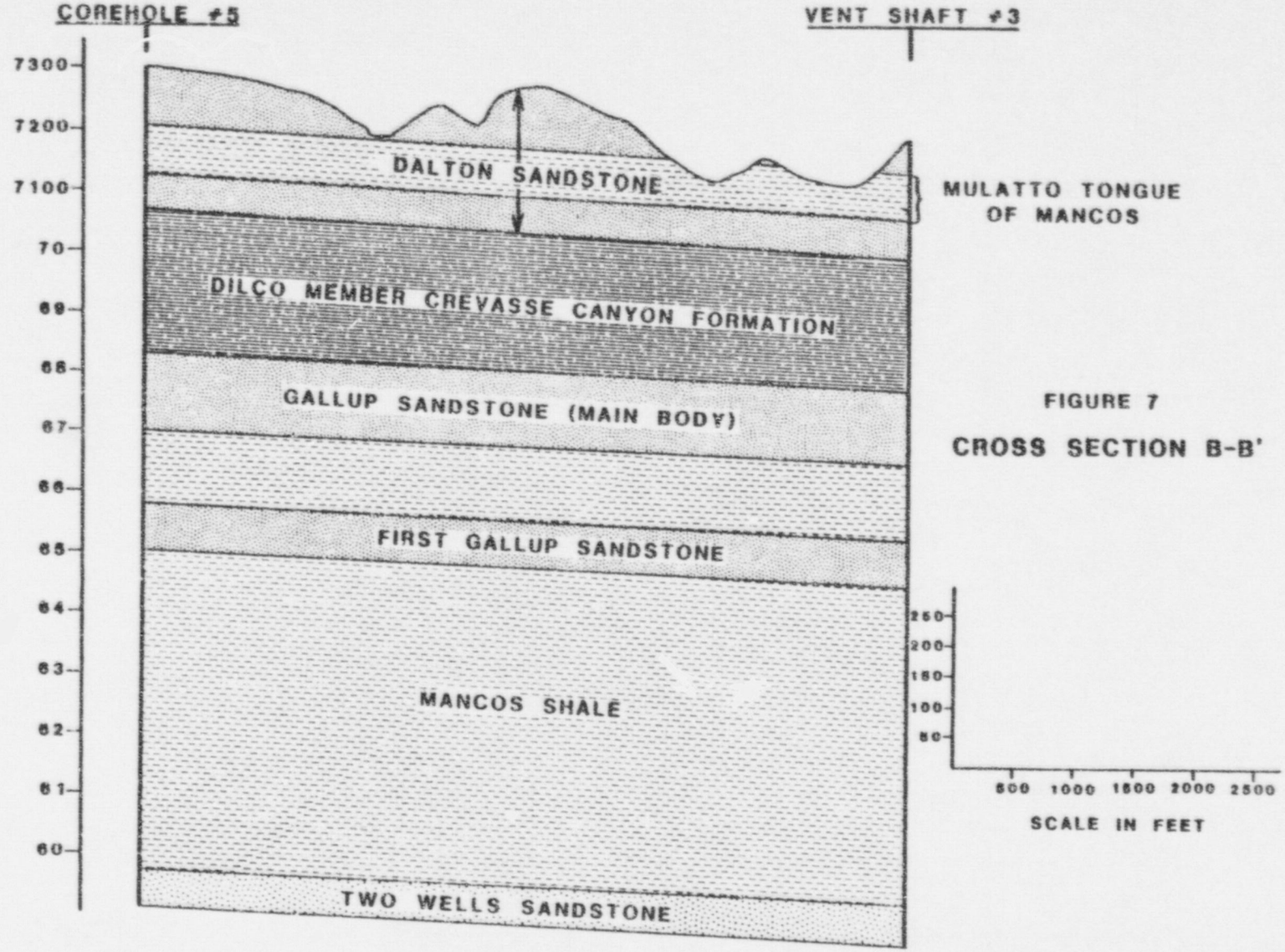


FIGURE 7

CROSS SECTION B-B'

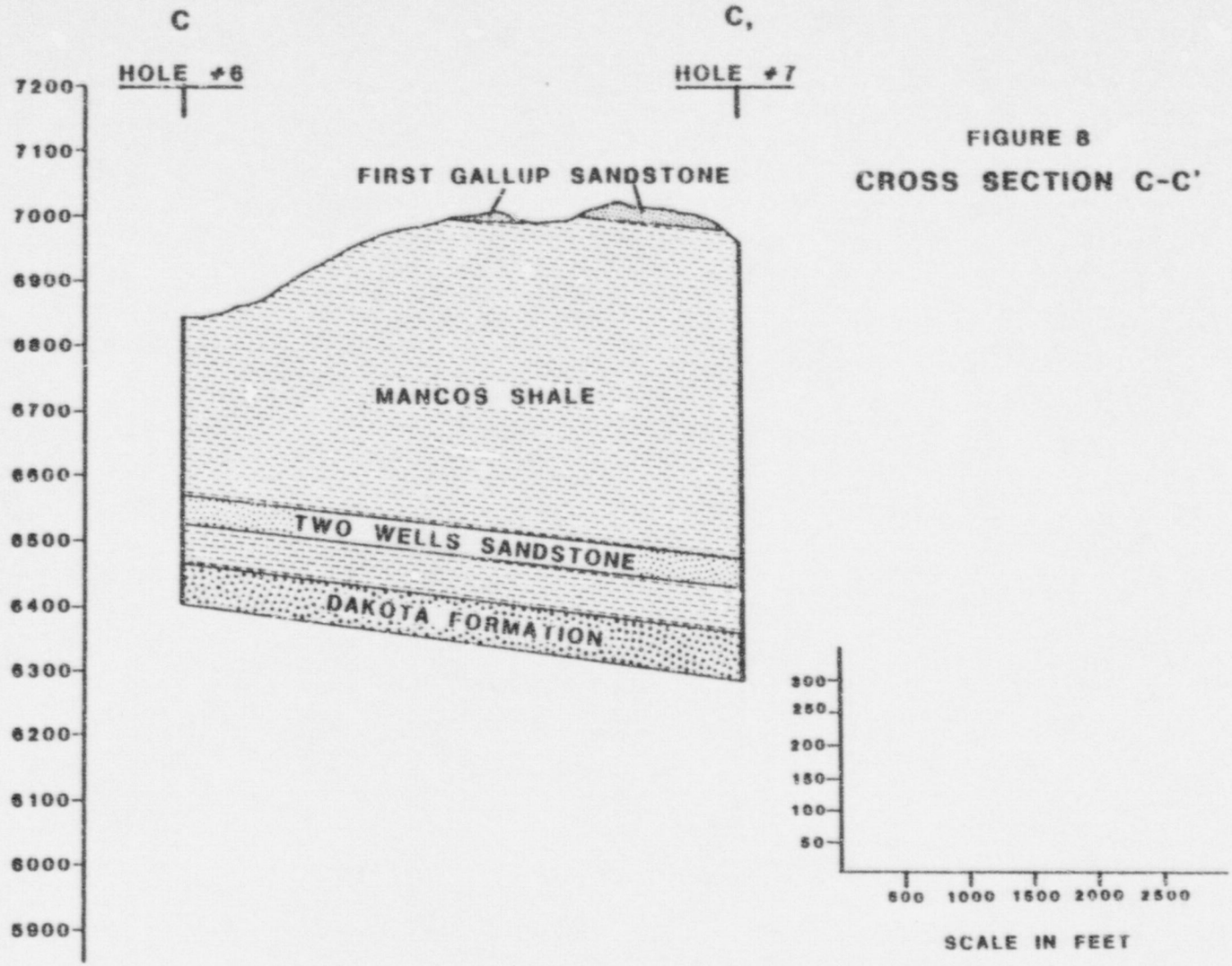


FIGURE 8

CROSS SECTION C-C'

Site 4

Bedrock units to be encountered at Site 4 would include the interbedded sandstones, shales, clays, coals, etc. of the Dilco Coal Member of the Crevasse Canyon Formation and to a lesser extent lower shales of the Mulatto Tongue of the Mancos shale. The clays in the Dilco Member could provide a source of clay for potential use as lining material.

Site 5

Site 5 is located in Pipeline Canyon, a tributary to the Puerco River, and is underlain by alluvium, colluvium, Gallup Sandstone and Mancos Shale. Data in the area indicate the presence of a northeast-southwest trending normal fault which essentially bisects this disposal area. The fault is an old feature as no surface scarps exist which would indicate it is active. Seismicity data in the area also indicate the fault is inactive.

Site 6

Site 6 is located on the dip slope of the Dalton Sandstone Member of the Crevasse Canyon Formation. Subgrade burial at this site would require excavation in predominantly sandstone material. The Dalton Sandstone Member forms steep faced cuestas (cliffs) which attests to the relatively resistive nature of the unit.

Site 7

The contact of the Gallup Sandstone and Mancos Shale is stratigraphically above this site. Excavation for subgrade burial would be entirely within the shales of the Mancos Shale Formation and possibly the lower tongue of the Gallup Sandstone.

Site 8

Site 8 is located in a canyon tributary to the main valley of the Puerco River. Stratigraphically, the disposal site would be located near and above the contact of the Mancos and the Gallup Sandstone. Strata exposed by excavation is expected to include Mancos Shale in the southern portion and Gallup Sandstone in the northern portion. Relatively large volumes of slope debris and colluvium would have to be removed to gain access to the bedrock material.

Site 9

This site is located stratigraphically similar to Site 7, in that it is below the contact between the Mancos Shale and the Gallup Sandstone. As with Site 7, all excavation for burial would be limited to Mancos Shale. Soil covering at this site should be relatively low.

Site 10

Site 10 is located entirely upon a dip slope of Dakota Formation sandstone. Excavation at this site would be predominantly in sandstone although some shale intervals may be encountered. The Dakota Formation is relatively well cemented and porous. Excavation would be costly, and significant lining material to help restrict tailings effluent seepage would be required.

Site 11

Site 11 is located primarily in the North Fork of the Morrison Formation. The site is located in a canyon tributary to the Puerco River. The walls of the canyon are relatively steep. Alluvium, colluvium, and slope debris would have to be excavated to expose bedrock. The relatively high permeability of the sandstones of the Morrison Formation would require such a disposal site to be lined with some impervious material.

Site 12

The contact between the Dakota Formation and the Mancos Shale is located just south of this site, with the result that the excavation for this site would be in the lowermost section of the Mancos Shale.

Site 13

Site 13 is located stratigraphically similar to Site 12, being located in the lowermost units of the Mancos Shale. Conditions are expected to be similar to Site 12.

HYDROLOGY - CHURCH ROCK MILL AREA

There are no perennial streams in the areas under consideration. Most, including the Puerco River which flows from east to west, are ephemeral type streams that see flow only during precipitation events. There are a few wells drilled in the alluvium of the North Fork of the Puerco. These, however, must be fairly deep as no evidence exists for base flow to the stream. Sporadic streamflow data reportedly exists for the Puerco near Springstead and for tributaries to the Puerco near Church Rock. Water quality from the alluvium is highly variable because of the intermittent type of recharge but is generally good to fair ranging from less than 200 to 1000 mg/liter of dissolved solids.

At the present time mine water discharge from the UNC and Kerr-McGee mines provide flow and recharge along the Pipeline Canyon and Puerco River. Recharge to the Cretaceous Dakota, Gallup and Dalton sandstones is primarily from infiltration of precipitation. The ephemeral streams that cross these units may contribute a small amount of recharge during those periods when flow exists.

Movement of groundwater through the bedrock units of the Crevasse Canyon Formation would likely be extremely slow. This conclusion is based on varied descriptions that suggest the sandstones have a clay matrix, contain shale layers, and tend to be fined grained. (Mercer & Cooper, 1970, Stone, 1979).

Without site specific data, the hydrogeologic conditions cannot be adequately discussed. However, some preliminary remarks can be made concerning the five rock units likely to be involved. These are: the Morrison and older rocks, the Mancos Shale, the Gallup Sandstone, the Dilco Coal Member, and the Dalton Sandstone.

Lithology

Dakota - Morrison and Older Rocks

The Dakota and Morrison may well be the more permeable units in the area. Although composed of siltstones, sandstones, claystones, and shales, most units have a calcareous cement which could allow for creation of solution channels in the shallower, more fractured zones. Groundwater movement is down dip to the north in the Dakota-Morrison.

There are a number of wells drilled into the Dakota-Morrison, indicating that a productive zone does exist. In addition water is produced from this zone in the uranium mines in the area. Water from the various wells ranges from 160 to 1600 micromhos in conductance.

Mancos Shale

The only water reportedly present in the Mancos is at the contact between the Dakota and the Mancos. This water is high in dissolved solids and of low yield. Vertically, the Mancos is essentially impermeable, except for possible shallow fractures. Hydrogeologically, this would be the best formation in which to contain tailings.

Depending on location and physical condition of the tailings, the Mancos could rate high as a disposal site for tailings.

Gallup Sandstone

Gallup Sandstone which overlies the Mancos is commonly a massive cross-bedded white, light yellow to light gray, fine to medium, poorly cemented sandstone. In many respects the Gallup and Dalton have similar characteristics, namely sandstones containing clay matrix, thin convergent laminae and thin interbedded shales.

Permeability of the Gallup can be expected to occur on the low side. Occasionally lenses may be encountered that are higher than the average permeability, but overall movement through the unit would be limited.

Dilco Coal Member

The Dilco Coal Member is comprised of interbedded sandstone, siltstone, shale and coal beds. Once again the materials that make up this unit are not regarded as "aquifer-type" materials. Permeability of this unit would likely be quite low under gravity conditions.

The coals are reportedly quite thin and not of economic importance. However, coals often develop a preferred set of fractures and can act as aquifers. This of course assumes they are capable of receiving recharge. Site specific studies would be required to further define these aspects of the Dilco.

Dalton Sandstone

The Dalton Sandstone is essentially a gray sandstone with interbedded shale layers that range from 3 - 50 feet. The sandstones that comprise the unit have a clay matrix and one invariably described as having beds of irregular, uneven and thin laminae. Given this description of materials it is highly unlikely that the Dalton Sandstone contains sufficient water to be considered an extensive aquifer. Likewise, movement of leachate through these materials would be slow and probably not far reaching. On-site drilling and permeability tests would be required to comment further on the hydrologic characteristics of this unit.

On the basis of the rock units present in the Church Rock Mill area except for the Dakota - Morrison, all could probably be adequately engineered to serve as good storage sites for uranium mill tailings. The critical factors will be location, topography, slope, and area of drainage basin above proposed facilities.

ACQUISITION OF DETAILED GEOLOGIC AND HYDROLOGIC DATA

Detailed analysis and tailings disposal engineering of specific sites will require evaluation in the form of drilling and testing. A multitude of holes has been drilled in the Church Rock Mill area for uranium exploration. However, exploration interest was directed at the Morrison Formation, and in most cases very little attention has been directed at the strata (namely the upper Mancos Shale and Crevasse Canyon Formation) that form the surface bedrock units of the majority of the potential disposal sites in the area. Strata permeability, strength characteristics, etc. will be major elements which will have to be considered in a disposal system. A drilling and evaluation program may be necessary to provide the detailed engineering information that is required.

Specifically, a drilling, evaluation, and testing program would determine:

- Depth and continuity of aquifers, unsaturated permeable zones (potential aquifers), and non-permeable zones (aquitards).

- Permeability of various lithologic types and stratigraphic units from both field testing (injection and falling head tests) and laboratory testing of core.

- Intensity and orientation of secondary permeability (fractures, joints, etc.) in relation to primary permeability.

- Thickness of unconsolidated material above bedrock.

- Physical characteristics of material to be excavated for equipment sizing, disposal embankment - burial configuration, etc.

- Availability of raw material for construction purposes, clay liners, rip rap, etc.

Vertical permeability of Mancos Shale and the overlying strata of the Crevasse Canyon Formation of the Mesaverde Group is limited by the high clay content. Zones of relatively high lateral permeability will exist in nearly all of the Crevasse Canyon strata in thin, highly porous, friable sandstones and, to a degree, coal beds. Design of a system to limit migration of fluids from a disposal embankment must then consider the lateral continuity of permeable material. A drilling program will consist of coring, hydrologic monitoring, and geophysical logging to provide adequate control for initial geologic and hydrologic evaluation. Depending on disposal embankment type (need for constructing a dam type of structure versus excavation of subgrade cells), drilling for dam foundation engineering may be required.

Data generated would then be compiled and correlated with data from existing sources (i.e. water wells and uranium exploration holes) to allow detailed geologic and hydrologic interpretations for input to mitigative engineering studies.

G

DISPOSAL SITE EVALUATION

METHODOLOGY

The basis used for selection of potential uranium tailings burial sites is a matrix evaluation system. Two independent sets of parameters have been established. The primary set of parameters involves items which affect the environment, and the secondary set of parameters involves items which have an economic effect. Each set of parameters was evaluated item by item on a scale of 1 to 10 to give a relative weighting factor to that item. Then each of the thirteen preliminary sites selected was rated on a scale of 1 to 10 with respect to each item in the sets of parameters. In all cases a low score means the item being evaluated has a possibly large potential effect at that site, and a high score mean little potential effect. The weight factors were then multipled by the site ratings and totalled. The sites were then reviewed for major or "fatal" flaws which could eliminate the site.

ENVIRONMENTAL EVALUATION - PARAMETER DESCRIPTION

Thirteen environmental factors were considered in the site selection process. These parameters were assigned relative weighting factors in their order of importance. Each of the thirteen sites was then evaluated with respect to each parameter. A description of each parameter and its weighting factor is given below.

Remote From Habitation

Remoteness from habitation was judged by the number of inhabitants in the area and the amount of traffic through the area. Site 6 rated the best in this category with Sites 4, 9, and 11 rating high. Sites 3, 7, 10, 12, and 13 rated low.

This parameter is an NRC specified requirement, designed to limit the general population radiation exposure. For that reason, the weighting factor assigned to this parameter was 7.

Resistance to Erosion

Geological formation characteristics, the size of the drainage area, and topographic features were the main factors used in the evaluation of erosion resistance. Site 6, with a small drainage area and high elevation, rated the highest in this category. Other sites with high ratings were Sites 4, 10, and 12. Sites 1, 2, 5, 8, and 11 rated low.

A weighting factor of 10 was applied to this criterion. The high rating is due to the fact that this is an NRC requirement, and highly emphasized in importance.

Strata Permeability

Strata permeability was judged on the geologic formation characteristics. Sites 3, 5, 7, and 9 rated high with this criterion. Sites 1 and 2 were rated the lowest.

Strata permeability is a highly rated NRC criterion. However, if a lining system is used, this criterion will not be as important as resistance to erosion. Therefore, this parameter was rated a 7, equal in importance to remoteness from habitation.

Remote From Groundwater

Assumptions were made on relative depths of the groundwater tables using available data. Further delineation of the groundwater table must be made to provide more than a preliminary judgement. Site 6 rated high due to its high elevation. Site 4 was also rated fairly high due to its remoteness from the Puerco River Valley. Sites 1, 9, and 10 were rated the lowest.

Remoteness from groundwater was given a weighting factor of 7, equal in importance to remoteness from habitation and strata permeability. Again, a liner system will help to mitigate this impact.

Distance From Mill

The distance from the mill was used as an environmental parameter because of the potential for environmental damage during construction, and possible pipeline ruptures. Topographic features were considered in their relationship to difficulty of pipeline construction and environmental damage. Sites 3, 4, 5, and 6 rated the highest in this area with Sites 1, 9, and 10 rating the lowest.

Distance from the mill was given a fairly high weighting factor of 8.5 because of the potential for environmental damage and possible restrictions in obtaining a pipeline right-of-way.

Use of Water Resources

Current and potential water right availability should be considered in evaluating this parameter. Until a study of surface appropriated water rights along with wells drilled in the area is done, we are unable to evaluate the sites using this criterion. It was given a weighting factor of 5 because of its limited potential for site elimination.

Impacted Archeological Sites

This is also an area where a further evaluation must be made of the sites before any judgement can be performed. This parameter is not expected to have any influence on site selection and is given a 1 for a weighting factor.

Active Geological Faulting

Active geological faulting was judged on the basis of a map provided by United Nuclear and a geologic map published by the State of New Mexico with known

faults and potential for existing faults indicated. All sites indicated no known active faulting and therefore were rated identically.

Presence of an active fault was considered a fatal flaw in the aboveground burial sites because of the probable elimination of the site under NRC regulations. Therefore, a weighting factor of 10 was applied.

Current Land Use

Current land use was judged on its agricultural and grazing potential. Site 6 was rated the highest, as having very little potential for agricultural or grazing use. Sites 11, 12, and 13 were rated the lowest, by having the most potential for agricultural or grazing use. A weighting factor of 1 was assigned to this parameter because of the fact that a relatively small area (compared to surrounding area) would be eliminated from use for agriculture or grazing.

Mineral Resources

The occurrence of economic quantities of either uranium or coal, determined by available data, was used to evaluate each site for mineral resources. The occurrence of major quantities of either of these minerals resulted in a low rating. Sites 1, 3, 4, 10, 11, and 12 were rated high. Sites 5, 6, 7, 9, and 13 were rated the lowest.

A weighting factor of 6 was given to this parameter because of the possibility that these minerals may become economically valuable in the future. If tailings were placed over minerals of potential value, these minerals may be eliminated from any future development. Development of these minerals could result in disturbance of the stabilized disposal site.

Wildlife Impact

Wildlife impact was not evaluated due to lack of data. It was given a weighting factor of 1 because it was not seen to be a limiting factor in this area. Existing flora and fauna do not appear unique to the region.

Aesthetics

Aesthetics was judged based on proximity to highly-traveled roads or well-used areas. Sites 4 and 6 rated the highest because of low visibility. Sites 3, 5, 7, 8, 9, 10, 11, 12, and 13 were all given low ratings with high visibility. Aesthetics was given a low weighting factor of 1 because of the low population density in this area, and the fact that the land forms are not unique.

Noise Pollution

Proximity to inhabited areas was used as the criterion for judging the importance of noise pollution. Sites 4 and 6 again rated high because of their remote locations. Sites 10, 12, and 13 were rated the lowest.

Noise pollution was given the lowest rating of 0.5 because very little noise other than construction equipment noise is expected from this operation. Also, the low population density contributes to its low weighting factor.

ECONOMIC EVALUATION - PARAMETER DESCRIPTION

Each of the 13 sites has also been evaluated with respect to specific economic parameters to determine the relative economic potential of the selected site locations. A description of the economic parameters used in this evaluation along with the relative importance of each parameter have been provided below.

Pipeline Crossings

An examination was performed with regard to the ease or difficulty of constructing a slurry pipeline from the tailings mill to the various site locations. Rough terrain, major highways, lakes and rivers provide unfavorable conditions for pipeline construction.

Site 1, 2, and 3 lie in areas in which pipeline access would involve crossing difficult terrain. Sites 4 and 5, in contrast, have attractive access routes, and pipeline construction would not be considered difficult.

Pipeline construction is considered to be a high cost item. However, the ease or difficulty associated with this parameter is not considered a major influence in the ultimate scheme. For this reason, a weight factor of 6 was attributed to this item.

Excavation Requirements

Two basic disposal methods are being considered. The first and most economic, considers covering tailings in a modified subgrade system. The system involves the removal and replacement of overburden in a shallow valley. Because the tailings are not being buried completely below grade, the amount of overburden to be removed is considerably less than a total burial system.

The second system to be investigated involves the total subgrade burial of tailings on relatively flat topography using a dragline. Even though the dragline is an extremely efficient way to move material, the total amount of material to be excavated is high. This increases costs and thus reduces its economic edge.

All sites were reviewed on this basis. The sites which require a total burial subgrade system, such as sites 10, 12, and 13, rate low in the evaluation due to the quantities of overburden which must be moved. Site 4, which can utilize a modified subgrade burial system illustrates a favorable condition in regard to the total excavation requirements.

The cost of any form of tailings burial scheme is directly related to the total amount of overburden to be moved. This is an important item and thus has been weighted with a factor of 8.

Drilling and Blasting

Each site has been reviewed with regard to the relative amount of drilling and blasting required to excavate the appropriate amount of overburden. Sites which utilize a total burial scheme require extensive shooting, and consequently higher drilling and blasting costs. The sites which can take advantage of a modified burial method could realize noticeably reduced overburden preparation costs.

Shooting plays an important role in the total economic picture, due to the high costs associated with drilling and explosives. This dictates a relative weight factor of 7.

Reclamation

Reclamation costs are largely dependent upon the amount of acreage to be reclaimed and the terrain involved. Total burial systems require more acreage than other methods, and thus incur higher reclamation costs. Sites with steep or rough terrain can also require extensive reclamation work. Each site was examined with these criteria in mind.

Site reclamation work will be required regardless of the disposal method and site conditions are therefore considered to be a relatively minor factor. A weighting factor of 4 was assigned.

Lining

The NRC views the question of liners on a site specific basis. However, this does not preclude the possibility of liners being required on all of the sites. For the purposes of this study we assumed strata permeability to be the deciding factor influencing the need for a pit liner. Clays, mudstones, siltstones and shales can be regarded as attractive impermeable materials which may not require a lining. Sandstones, alluvium and active fault areas can mean high

permeabilities, which will probably require a liner of some sort. Each site was examined with respect to the type of rock strata present and possible faulting.

Lining costs can be regarded as an important item of the same magnitude as drilling and blasting. This results in a weight factor of 7.

Pipeline Distance

Pipeline distance is an important factor in determining pipeline costs. Therefore, each site was evaluated simply on its distance from the mill, with partial regard to the route and terrain that would be used.

Slurry pipelines can impose large costs upon a project. This parameter is as important as any and carries a weight of 8.

Road, Powerline and Pipeline Relocation

Visual inspection of the U.S.G.S. topographic maps covering the site localities provided information regarding roads, powerlines and pipelines in the area. Each site was examined to see if any powerlines, pipelines, and/or major roads would have to be relocated in order to establish a disposal site.

Powerline and road relocations are not considered to be a major economic influence and thus carry weight factors of 3. Pipeline relocation can pose economic problems depending upon the size and importance of the line. With this in mind, the weight factor for moving a pipeline was set at 5.

Powerline Availability

Electric power availability was judged on each site's proximity to the nearest major power line or complex with suitable power capabilities.

Electric power will be required on any disposal site chosen; however, the cost of obtaining this power is not expected to be exorbitant. A weight factor of 4 was assigned.

Drainage Diversion

Based on known topography and drainage information, each disposal area was evaluated for the magnitude of drainage diversion work which might be required to provide the most erosion resistant environment possible.

Site erosion can be a serious problem for certain sites, and therefore received considerable scrutiny. However, provided a serious problem does not exist, the costs for drainage diversion are not considered to be excessive and are probably of the same magnitude as relocating a pipeline, with a weight factor of 5.

Building Relocation

Building relocation costs are considered to be minor unless large numbers of buildings are to be moved. Each site was evaluated accordingly, with an overall weight factor of 1.

SUMMARY OF FINDINGS

Thirteen disposal sites were evaluated on both an environmental and economic basis. Some of these sites represent specific areas for disposal, such as Sites 1, 2, 4 and 11. The other sites represent typical sites in general locations. The typical sites can be changed in configuration, and also can be moved short distances laterally. The purpose of evaluating typical sites was to determine the relative environmental and economic ranking of potential sites without evaluating a multitude of configurations and locations within a representative site area. The evaluation system consisted of ranking each of the thirteen potential disposal sites based on a number of factors. Each of the factors was ranked and weighted proportionally to the relative effect or impact. The ranking and rating were based on a scale of 1 to 10 with the higher values being more acceptable. Table 2 shows the environmental ranking of each of the thirteen sites based on 13 environmental factors. Table 3 shows the site rating after the specific weighting factors have been applied.

To assure the economic feasibility of the operation it is important to consider the economic aspects involved in site evaluation. Without going into actual costs associated with tailings burial at each site, an estimate was made of the relative economics using twelve parameters.

Table 4 summarizes the rank each site received using the twelve economic parameters examined. After the weight factors have been applied the rating of each site has been determined as shown in Table 5.

TABLE 2

ENVIRONMENTAL SITE RANKING

(Sites Evaluated On A Scale of 1 to 10)

	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13
Remote From Inhabitation	5	5	3	8	4	10	3	4	7	2	7	3	3
Resistance to Erosion	3	3	5	8	3	10	4	3	5	7	3	6	5
Strata Permeability	3	3	8	5	8	4	9	4	9	4	4	6	6
Remote From Groundwater	3	3	2	7	2	10	2	2	3	4	5	3	3
Distance from Mill	2	4	7	10	8	9	4	3	1	2	3	5	6
Use of Water Resources	—	—	—	—	—	—	—	—	—	—	—	—	—
Impacted Archeological	—	—	—	—	—	—	—	—	—	—	—	—	—
*Active Geological Faulting	—	—	—	—	—	—	—	—	—	—	—	—	—
Current Land Use	6	6	5	5	5	10	4	5	6	6	3	3	3
Mineral Resources	10	10	10	10	1	3	1	1	1	10	10	10	1
Wildlife Impact	—	—	—	—	—	—	—	—	—	—	—	—	—
Aesthetics	4	4	1	8	1	10	1	1	1	1	1	1	1
Noise Pollution	6	6	2	10	2	10	2	3	2	1	6	1	1

*Fatal Flaw

TABLE 3

ENVIRONMENTAL SITE RATING

(Sites Evaluated On A Scale of 1 to 10)

Item	Weighted Factors	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 17
Remote From Inhabitation	7	35	35	21	56	28	70	21	28	49	14	49	21	21
Resistance to Erosion	10	30	30	50	80	30	100	40	30	50	70	30	60	50
Strata Permeability	7	21	21	56	35	56	28	63	28	63	28	28	42	42
Remote From Groundwater	7	21	21	14	49	14	70	14	14	21	28	35	21	21
Distance from Mill	8.5	17	34	60	85	68	77	34	26	9	17	26	43	51
Use of Water Resources	5	—	—	—	—	—	—	—	—	—	—	—	—	—
Impacted Archeological	1	—	—	—	—	—	—	—	—	—	—	—	—	—
*Active Geological Faulting	10	—	—	—	—	—	—	—	—	—	—	—	—	—
Current Land Use	1	6	6	5	5	5	10	4	5	6	6	3	3	3
Mineral Resources	6	60	60	60	60	6	6	6	12	6	60	60	60	6
Wildlife Impact	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Aesthetics	1	4	4	1	8	1	10	1	1	1	1	1	1	1
Noise Pollution	0.5	3	3	1	5	1	5	1	2	1	1	3	1	1
TOTAL		197	214	268	383	209	376	184	146	206	225	235	252	196
RATING		10	7	3	1	8	2	12	13	9	6	5	4	11

*Fatal Flaw

TABLE 4

ECONOMIC SITE RANKING

(Sites Evaluated On A Scale of 1 to 10)

Economic Parameters	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13
Pipeline Crossing	1	1	3	10	10	8	10	10	10	1	1	1	1
Excavation Requirement	5	5	1	10	1	1	1	1	1	5	1	1	1
Drilling & Blasting	5	5	1	10	1	1	1	1	1	1	5	1	1
Reclamation	1	1	5	6	5	4	5	1	5	5	4	5	5
Lining	1	1	10	5	2	1	10	5	10	1	1	8	8
Pipeline Distance	2	4	7	10	8	9	4	3	1	2	3	5	6
Road Relocation	10	5	3	10	3	10	3	2	10	10	5	1	1
Powerline Relocation	10	10	10	10	1	10	10	10	10	10	10	1	1
Pipeline Relocation	10	1	10	10	1	10	10	10	10	10	10	10	10
Power Accessibility	1	1	5	10	10	5	10	8	8	8	6	10	10
Drainage Diversion	1	1	5	6	1	10	6	7	6	10	1	5	5
Building Relocation	5	3	3	5	1	10	5	1	10	10	1	5	5

TABLE 5

ECONOMIC SITE RATING

(Sites Evaluated On A Scale of 1 to 10)

Economic Parameters	Weighted Factors	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13
Pipeline Crossing	6	6	6	18	60	60	48	60	60	60	6	6	6	6
Excavation Requirement	8	40	40	8	80	8	8	8	8	8	8	40	8	8
Drilling & Blasting	7	35	35	7	70	7	7	7	7	7	7	35	7	7
Reclamation	4	4	4	20	24	20	16	20	45	20	20	16	20	20
Lining	7	7	7	70	35	14	7	70	35	70	7	7	56	56
Pipeline Distance	8	16	32	56	80	64	72	32	24	8	16	24	40	48
Road Relocation	3	30	15	9	30	9	30	9	21	30	30	15	3	3
Powerline Relocation	3	30	30	30	30	3	30	30	30	30	30	30	3	3
Pipeline Relocation	5	50	5	50	50	5	50	50	50	50	50	50	50	50
Power Accessibility	4	4	4	20	40	40	20	40	32	32	32	24	40	40
Drainage Diversion	5	5	5	25	30	5	50	30	10	30	50	55	25	25
Building Relocation	1	5	3	5	5	1	10	5	1	10	10	1	5	5
TOTAL		232	186	316	534	236	348	361	282	355	266	253	263	271
RATING		12	13	5	1	11	4	2	6	3	8	10	9	7

January 14, 1977

As amended June 14, 1977
Nov. 8, 1977

WATER QUALITY CONTROL COMMISSION
Post Office Box 968
Santa Fe, New Mexico 87503
Phone: (505) 827-5271, Ext. 318

AMENDED
WATER QUALITY CONTROL COMMISSION REGULATIONS

PART 1

General Provisions and Procedures

1-100. GENERAL PROVISIONS.

1-101. DEFINITIONS.--As used in the Water Quality Control Commission Regulations:

A. "agency" means the New Mexico environmental improvement agency;

B. "board" means the Utility Operators Certification Advisory Board;

C. "certification act" means the Utility Operators Certification Act, Chapter 394, Laws of 1973;

D. "certified operator" means a person who is certified by the commission as being qualified to supervise or operate one of the classifications of water supply systems or wastewater facilities;

E. "collection system" means pipelines or conduits, pumping stations, force mains, and all other devices, appurtenances and facilities used for collecting and conducting waste to a point of treatment and disposal;

F. "commission" means the New Mexico water quality control commission;

G. "daily composite sample" means a sample collected over any twenty-four-hour period at intervals not to exceed one hour and obtained by combining equal volumes of the effluent collected, or means a sample collected in accordance with federal permit conditions where a permit has been issued under the National Pollutant Discharge Elimination System or for those facilities which include a waste stabilization pond in the treatment process where the retention time is greater than twenty (20) days, means a sample obtained by compositing equal volumes of at least two grab samples collected within a period of not more than twenty-four (24) hours;

H. "director" means the director of the New Mexico environmental improvement agency;

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I. "discharge plan" means a description of methods and conditions, including any monitoring and sampling requirements, for the discharge of effluent or leachate which may move directly or indirectly into ground water;

J. "distribution system" means pipelines, appurtenances, devices and facilities which carry potable water under pressure to each consumer;

K. "education" means academic credit received attending any public or private primary, secondary or high school, approved vocational training courses in the water supply and wastewater field, college or university;

L. "experience" means actual work experience, full or part-time, in the fields of potable water supply or wastewater treatment. Applicable experience may be in the categories of design, construction, administration, control, surveillance, operation or maintenance. Work experience in a related field may be accepted at the discretion of the commission;

M. "ground water" means interstitial water which occurs in saturated earth material and which is capable of entering a well in sufficient amounts to be utilized as a water supply;

N. "hazard to public health" exists when water which is used or is reasonably expected to be used in the future as a human drinking water supply exceeds at the time and place of such use, one or more of the numerical standards of Subsection 3-103A. or the naturally-occurring concentrations, whichever is higher, or if a toxic pollutant affecting human health is present in the water. In determining whether a discharge would cause a hazard to public health to exist, the director shall investigate and consider the purification and dilution reasonably expected to occur from the time and place of discharge to the time and place of withdrawal for use as human drinking water;

O. "operator" means any person employed by the owner as the person responsible for the operation of all or any portion of a water supply system or wastewater facility. Not included in this definition are such persons as directors of public works, city engineers, city managers, or other officials or persons whose duties do not include actual operation or direct supervision of water supply systems or wastewater facilities;

P. "owner" means the person or persons having the responsibility of managing or maintaining a water supply system or a wastewater facility;

Q. "person" means the state or any agency, institution, commission, municipality, or other political subdivision thereof, federal agency, public or private corporation, individual, partnership, association or other entity, and includes any officer or governing or managing body of any institution, political subdivision, agency or public or private corporation;

R. "petitioner" means a person seeking a variance from a regulation of the commission pursuant to Section 75-39-4(G), N.M.S.A., 1953 Comp.;

S. "population served" means actual or estimated maximum number of persons served by the water supply system or wastewater facility;

T. "refuse" includes food, swill, carrion, slops and all substances from the preparation, cooking and consumption of food and from the handling, storage and sale of food products, the carcasses of animals, junked parts of automobiles and other machinery, paper, paper cartons, tree branches, yard trimmings, discarded furniture, cans, oil, ashes, bottles and all unwholesome material;

U. "sewer system" means pipelines, conduits, pumping stations, force mains or other structures, devices, appurtenances or facilities used for collecting or conducting wastes to an ultimate point for treatment or disposal;

V. "sewerage system" means a system for disposing of wastes, either by surface or underground methods, and includes sewer systems, treatment works, disposal wells and other systems;

W. "TDS" means total dissolved solids as determined by the "calculation method" (sum of constituents), by the "residue on evaporation method at 180°" of the "U.S. Geological Survey Techniques of Water Resource Investigations," or by conductivity, as the director may determine;

X. "toxic pollutants" means those water contaminants, or combinations of water contaminants present in concentrations which, upon exposure, ingestion, inhalation or assimilation into humans or other organisms of direct or indirect commercial, recreational or esthetic value, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the director or the commission, cause death, disease, behavioral abnormalities, genetic mutation, physiological malfunctions or physical deformations in such organisms or their offspring;

Y. "training" means the non-academic training in the field of water supply or wastewater;

Z. "training credit" means the amount of credit earned by a participant in a training program;

AA. "treatment works" means any plant or other works used for the purpose of treating, stabilizing or holding wastes;

BB. "wastes" means sewage, industrial wastes or any other liquid, gaseous or solid substance which will pollute any waters of the state;

CC. "wastewater facility" means a system of structures, equipment and processes designed to collect and treat domestic and industrial wastes and dispose of the effluents from a public system;

DD. "water" means all water including water situated wholly or partly within or bordering upon the state, whether surface or subsurface, public or private, except private waters that do not combine with other surface or subsurface water;

EE. "water contaminant" means any substance which alters the physical, chemical or biological qualities of water;

FF. "water supply system" means a system of pipes, structures and facilities through which potable water is obtained, treated and distributed to the public; and

GG. "watercourse" means any river, creek, arroyo, canyon, draw, or wash, or any other channel having definite banks and beds with visible evidence of the occasional flow of water.

1-200. PROCEDURES.

1-201. NOTICE OF INTENT TO DISCHARGE.--

A. Any person intending to make a new water contaminant discharge or to alter the character or location of an existing water contaminant discharge, unless the discharge is being made or will be made into a community sewer system, shall file a notice with the water quality division of the environmental improvement agency. However, notice regarding discharges from facilities for the production, refinement and pipeline transmission of oil and gas, or products thereof, shall be filed instead with the Oil Conservation Commission.

B. Notices shall state:

1. the name of the person making the discharge;

2. the address of the person making the discharge;

3. the location of the discharge;
4. an estimate of the concentration of water contaminants in the discharge; and
5. the quantity of the discharge.

C. The filing of a notice of intent to discharge sewage from any sewerage system which receives 2,000 gallons or less of liquid waste per day is not required.

1-202. FILING OF PLANS AND SPECIFICATIONS--SEWERAGE SYSTEMS.--

A. Any person proposing to construct a sewerage system or proposing to modify any sewerage system in a manner that will change substantially the quantity or quality of the discharge from the system shall file plans and specifications of the construction or modification with the water quality section of the environmental improvement agency. Modifications having a minor effect on the character of the discharge from sewerage systems shall be reported as of January 1st and June 30th of each year to the Water Quality Section.

B. Plans, specifications and reports required by this section, if related to facilities for the production, refinement and pipeline transmission of oil and gas, or products thereof, shall be filed instead with the Oil Conservation Commission.

C. Plans and specifications required to be filed under this section must be filed prior to the commencement of construction.

1-203. NOTIFICATION OF DISCHARGE--REMOVAL.--

A. Any person in charge of a facility, as soon as he has notice or knowledge of a discharge from the facility, of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property, shall immediately:

1. notify the chief, water quality division, environmental improvement agency, of the nature, amount and location of the discharge; provided, however, that such notification shall not be required if notification

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is required under rules, regulations or orders promulgated by the oil conservation commission; and

2. take appropriate and necessary steps to contain and remove or mitigate the damage caused by the discharge.

B. Exempt from the requirements of this section are continuous or periodic discharges which are made:

1. in conformance with water quality control commission regulations and rules, regulations or orders of other state or federal agencies; or

2. in violation of water quality control commission regulations but pursuant to an assurance of discontinuance or schedule of compliance approved by the commission or one of its duly authorized constituent agencies.

C. As used in this section:

1. "discharge" means spilling, leaking, pumping, pouring, emitting, emptying, or dumping into water or in a location and manner where there is a reasonable probability that the discharged substance will reach surface or subsurface water;

2. "facility" means any structure, installation, operation, storage tank, transmission line, motor vehicle, rolling stock, or activity of any kind, whether stationary or mobile; and

3. "oil" means oil of any kind or in any form including petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes.

D. Notification of discharge received pursuant to this regulation or information obtained by the exploitation of such notification shall not be used against any such person in any criminal case, except for perjury or for giving a false statement.

1-210. VARIANCE PETITIONS.--

A. Any person seeking a variance from a regulation of the commission pursuant to Section 75-39-4(G), N.M.S.A., 1953 Comp., shall do so by filing a written

petition with the commission. The petitioner may submit with his petition any relevant documents or material which the petitioner believes would support his petition. Petitions shall:

1. state the petitioner's name and address;
2. state the date of the petition;
3. describe the facility or activity for which the variance is sought;
4. state the address or description of the property upon which the facility is located;
5. describe the water body or water-course affected by the discharge;
6. identify the regulation of the commission from which the variance is sought;
7. state in detail the extent to which the petitioner wishes to vary from the regulation;
8. state why the petitioner believes that compliance with the regulation will impose an unreasonable burden upon his activity; and
9. state the period of time for which the variance is desired.

B. Within fifteen days after the receipt of the petition by the commission, the commission shall notify the petitioner by certified mail of the date, time and place of the public hearing.

C. At least fifteen days prior to each hearing date, the commission shall publish notice of the date, time, place and subject of the variance hearing in a newspaper of general circulation in the county in which the facility is located and in a newspaper of general circulation in the state. The notice shall also state the watercourse or water body affected. The commission shall maintain a file of persons interested in variance hearings and shall make a reasonable effort to notify them by mail of the date, time, place and subject of scheduled public hearings.

D. 1. Public hearings shall be held not less than twenty days nor more than sixty days from the date the commission mails the notice of the hearing to the petitioner.

2. Public hearings shall be held in Santa Fe unless the commission and the petitioner agree

upon another site in the state.

3. The commission may designate a hearing officer to take evidence at the hearing.

4. A record shall be made at each hearing, the cost of which shall be borne by the environmental improvement agency. Transcript costs shall be paid by those persons requesting transcripts. If the hearing is conducted by a hearing officer designated by the commission, a transcript shall be prepared and the cost of providing transcript to the commission members shall be borne by the Environmental Improvement Agency.

5. In variance hearings, the technical rules of evidence and the rules of civil procedure shall not apply, but the hearings shall be conducted so that all relevant views are amply and fairly presented without undue repetition. The commission may require reasonable substantiation of statements or records tendered and may require any view to be stated in writing when the circumstances justify.

6. The commission shall allow all persons a reasonable opportunity at a hearing to submit written and oral evidence and arguments and to introduce exhibits.

7. The commission shall allow reasonable cross-examination of persons who testify at a hearing by persons who have submitted a written request to do so. Requests must be submitted to the chairman of the commission by 4:00 p.m. on the day before each hearing.

8. The petitioner and the commission shall have the right to call and examine witnesses, introduce exhibits and cross-examine anyone who testifies.

9. A petitioner may represent himself at the hearing or be represented by any other individual.

10. The commission may grant the requested variance, in whole or in part, or may deny the variance. Any action taken by the commission shall be by written order entered within sixty days after the hearing. A copy of the order shall be mailed to the petitioner. All persons appearing or represented at the hearing shall be mailed notice of the commission's action.

11. The commission shall not grant a variance for a period of time in excess of one year.

12. Orders of the commission shall:

(a) state the petitioner's name and address;

(b) state the date the order is made;

(c) describe the facility for which the variance is sought;

(d) identify the regulation of the commission from which the variance was sought;

(e) state the decision of the commission;

(f) if a variance is granted, state the period of time for which it is granted; and

(g) state the reasons for the commission's decision.

13. The commission shall maintain a file of all orders made by the commission. The file shall be open for public inspection.

E. An order of the commission is final and bars the petitioner for petitioning for the same variance without special permission from the commission. The commission may consider, among other things, the development of new information and techniques to be sufficient justification for a second petition. If the petitioner, or his authorized representative, fails to appear at the public hearing on the variance petition, the commission shall proceed with the hearing on the basis of the petition. A variance may not be extended or renewed unless a new petition is filed and processed in accordance with the procedures established by this section.

F. When the last day for performing an act falls on Saturday, Sunday or a legal, state or national holiday, the performance of the act is timely if performed on the next succeeding day which is not a Saturday, Sunday, or a legal, state or national holiday. Except as provided in Subsection D.7., all matters required to be filed or mailed under this section are timely if deposited in the United States mail on or before the required date.

PART 2

Water Quality Control

2-100. APPLICABILITY OF REGULATIONS.--The requirements of Part 2 of these regulations shall not apply to any discharge which is subject to a permit under the National Pollutant Discharge Elimination System of P.L. 92-500; provided that any discharger who is given written notice of National Pollutant Discharge Elimination System permit violation from the administrator of the Environmental Protection Agency and who has not corrected the violation within thirty days of receipt of said notice shall be subject to Part 2 of these regulations until in compliance with the National Pollutant Discharge Elimination System permit conditions; provided further that nothing in these regulations shall be construed as a deterrent to action under Section 75-39-10 N.M.S.A., 1953 Comp.

2-101. GENERAL REQUIREMENTS.--

A. Except as otherwise provided in Part 2 of these regulations, no person shall cause or allow effluent to discharge to a watercourse if the effluent as indicated by:

1. any two consecutive daily composite samples;

2. more than one daily composite sample in any thirty-day period (in which less than ten [10] daily composite samples are examined); or

3. more than ten percent (10%) of the daily composite samples in any thirty-day period (in which ten [ten] or more daily composite samples are examined);

does not conform to the following:

Bio-chemical Oxygen Demand (BOD)	Less than 30 mg/l
Chemical Oxygen Demand (COD)	Less than 125 mg/l
Settleable Solids	Less than 0.5 mg/l
Fecal Coliform Bacteria	Less than 500 organisms/100 ml
pH	Between 6.6 and 8.6

B. Upon application, the director of the environmental improvement agency may eliminate the pH requirement for any effluent source that the director

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determines does not unreasonably degrade the water into which the effluent is discharged.

C. Subsection A of this section does not apply to the weight of constituents in the water diverted.

D. Samples shall be examined in accordance with the most current edition of Standard Methods for the Examination of Water and Wastewater published by the American Public Health Association or the most current edition of Methods for Chemical Analysis of Water and Wastes published by the Environmental Protection Agency, where applicable.

2-102. RIO GRANDE BASIN--COMMUNITY SEWERAGE SYSTEMS.--

A. No person shall cause or allow effluent from a community sewerage system to discharge to a watercourse in the Rio Grande Basin between the headwaters of Elephant Butte Reservoir and Angostura Diversion Dam as described in Subsection E of this section if the effluent, as indicated by:

1. any two consecutive daily composite samples;

2. more than one daily composite sample in any thirty-day period (in which less than ten daily composite samples are examined); or

3. more than ten percent (10%) of the daily composite samples in any thirty-day period (in which ten or more daily composite samples are examined);

does not conform to the following:

Bio-chemical Oxygen Demand (BOD)	Less than 30 mg/l
Chemical Oxygen Demand (COD)	Less than 80 mg/l
Settleable Solids	Less than 0.1 mg/l
Fecal Coliform Bacteria	Less than 500 organisms/ 100 ml
pH	Between 6.6 and 8.6

B. Upon application, the director of the environmental improvement agency may eliminate the pH requirement for any effluent source that the director

determines does not unreasonably degrade the water into which the effluent is discharged.

C. Subsection A of this section does not apply to the weight of constituents in the water diverted.

D. Samples shall be examined in accordance with the most current edition of Standard Methods for the Analysis of Water and Wastewater published by the American Public Health Association or the most current edition of Methods for Chemical Analysis of Water and Wastes published by the Environmental Protection Agency, where applicable.

E. The following is a description of the Rio Grande Basin from the headwaters of Elephant Butte Reservoir to Angostura Diversion Dam as used in this section:

Begin at San Marcial USGS gauging station, which is the headwaters of Elephant Butte Reservoir Irrigation Project, thence northwest to U.S. Highway 60, nine miles ± west of Magdalena; thence west along the northeast edge of the San Agustin Plains closed basin; thence north along the east side of the north plains closed basin to the Continental Divide; thence northerly along the Continental Divide to the community of Regina on State Highway 96; thence southeasterly along the crest of the San Pedro Mountains to Cerro Toledo Peak; thence southwesterly along the Sierra de Los Valles ridge and the Borrego Mesa to Bodega Butte; thence southerly to Angostura Diversion Dam which is the upper reach of the Rio Grande in this basin; thence southeast to the crest of the Sandia Mountains; thence south along the crest and the crest of the Manzano Mountains and the Los Pinos Mountains; thence southerly along the divide that contributes to the Rio Grande to San Marcial gauging station to the point and place of beginning; excluding all waters upstream of Jamez Pueblo which flow into the Jemez River drainage and the Bluewater Lake. Counties included in the basin are:

1. north portion of Socorro County;
2. northeast corner of Catron County;
3. east portion of Valencia County;
4. west portion of Bernalillo County;
5. east portion of McKinley County; and
6. most of Sandoval County.

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2-200. WATERCOURSE PROTECTION.--

2-201. DISPOSAL OF REFUSE.--No person shall dispose of any refuse in a natural watercourse or in a location and manner where there is a reasonable probability that the refuse will be moved into a natural watercourse by leaching or otherwise. Solids diverted from the stream and returned thereto are not subject to abatement under this section.

PART 3

Water Quality Control

3-100. REGULATIONS FOR DISCHARGES ONTO OR BELOW THE SURFACE OF THE GROUND.

3-101. PURPOSE.--

A. The purpose of these regulations controlling discharges onto or below the surface of the ground is to protect all ground water of the state of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, for present and potential future use as domestic and agricultural water supply, and to protect those segments of surface waters which are gaining because of ground water inflow, for uses designated in the New Mexico Water Quality Standards. The regulations are written so that in general:

1. if the existing concentration of any water contaminant in ground water is in conformance with the standard of Section 3-103 of these regulations, degradation of the ground water up to the limit of the standard will be allowed; and

2. if the existing concentration of any water contaminant in ground water exceeds the standard of Section 3-103, no degradation of the ground water beyond the existing concentration will be allowed.

B. Ground water standards are numbers that represent the pH range and maximum concentrations of water contaminants in the ground water which still allow for the present and future use of ground water resources.

C. The standards are not intended as maximum ranges and concentrations for use, and nothing herein contained shall be construed as limiting the use of waters containing higher ranges and concentrations.

3-102. AUTHORITY.--Standards are adopted by the commission under the authority of Section 75-39-4, N.M.S.A., 1953 Comp. (the New Mexico Water Quality Act, Chapter 326, Laws of 1973, as amended). Regulations are adopted by the commission under the authority of Section 75-39-4 and 75-39-4.1 of the New Mexico Water Quality Act.

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3-103. STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR LESS.--The following standards are the allowable pH range and the maximum allowable concentration in ground water for the contaminants specified unless the existing condition exceeds the standard or unless otherwise provided in Subsection 3-109D. or Section 3-110. When an existing pH or concentration of any water contaminant exceeds the standard specified in Subsection A, B or C, the existing pH or concentration shall be the allowable limit, provided that the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably forseeable future use in excess of the standards in this section.

These standards shall apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication "Methods for Chemical Analysis of Water and Waste of the U.S. Environmental Protection Agency," with the exception of mercury which shall be total.

A. Human Health Standards - Ground water shall meet the standards of Section A and B unless otherwise provided.

Arsenic (As)	0.1 mg/l
Barium (Ba)	1.0 mg/l
Cadmium (Cd)	0.01 mg/l
Chromium (Cr)	0.05 mg/l
Cyanide (CN)	0.2 mg/l
Fluoride (F)	1.6 mg/l
Lead (Pb)	0.05 mg/l
Total Mercury (Hg)	0.002 mg/l
Nitrate (NO_3 as N)	10.0 mg/l
Selenium (Se)	0.05 mg/l
Silver (Ag)	0.05 mg/l
Uranium (U)	5.0 mg/l
Radioactivity: Combined Radium-226 and Radium-228	30.0 pCi/l

B. Other Standards for Domestic Water Supply

Chloride (Cl)	250. mg/l
Copper (Cu)	1.0 mg/l
Iron (Fe)	1.0 mg/l
Manganese (Mn)	0.2 mg/l
Phenols	0.005 mg/l
Sulfate (SO_4)	600. mg/l
Total Dissolved Solids (TDS)	1000. mg/l
Zinc (Zn)	10.0 mg/l
pH	between 6 and 9

C. Standards for Irrigation Use - Ground water shall meet the standards of subsections A, B and C unless otherwise provided.

Aluminum (Al)	5.0 mg/l
Boron (B)	0.75 mg/l
Cobalt (Co)	0.05 mg/l
Molybdenum (Mo)	1.0 mg/l
Nickel (Ni)	0.2 mg/l

3-104. DISCHARGE PLAN REQUIRED.--Unless otherwise provided by these regulations, no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water unless he is discharging pursuant to a discharge plan approved by the director. When a plan has been approved, discharges must be consistent with the terms and conditions of the plan.

3-105. EXEMPTIONS FROM DISCHARGE PLAN REQUIREMENT.--Sections 3-104 and 3-106 of these regulations do not apply to the following:

A. effluent or leachate which conforms to all the listed numerical standards of Section 3-103, has a total nitrogen concentration of 10 mg/l or less, and does not contain toxic pollutants. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access to obtain the appropriate samples, this exemption shall not apply;

B. effluent which is discharged from a sewerage system used only for disposal of household and other domestic waste which receives 2,000 gallons or less of liquid waste per day;

C. water used for irrigated agriculture, for watering of lawns, trees, gardens or shrubs, or for irrigation for a period not to exceed five years for the revegetation of any disturbed land area, unless that water is received directly from any sewerage system;

D. discharges resulting from the transport or storage of water diverted, provided that the water

diverted has not had added to it after the point of diversion any effluent received from a sewerage system, that the source of the water diverted was not mine workings, and that the director has not determined that a hazard to public health may result;

E. effluent which is discharged to a watercourse which is naturally perennial; discharges to dry arroyos and ephemeral streams are not exempt from the discharge plan requirement, except as otherwise provided in this section;

F. those constituents which are subject to effective and enforceable effluent limitations in a National Pollutant Discharge Elimination System (NPDES) permit, where discharge onto or below the surface of the ground so that water contaminants may move directly or indirectly into ground water occurs downstream from the outfall where NPDES effluent limitations are imposed, unless the director determines that a hazard to public health may result. For purposes of this subsection, monitoring requirements alone do not constitute effluent limitations;

G. discharges resulting from flood control systems;

H. leachate which results from the direct natural infiltration of precipitation through disturbed or undisturbed materials, unless the director determines that a hazard to public health may result;

I. leachate from solids disposed of in accordance with the Solid Waste Management Regulations adopted by the New Mexico environmental improvement board on April 19, 1974;

J. natural ground water seeping or flowing into conventional mine workings which re-enters the ground by natural gravity flow prior to pumping or transporting out of the mine and without being used in any mining process; this exemption does not apply to solution mining;

K. effluent or leachate discharges resulting from activities regulated by a mining plan approved and permit issued by the New Mexico coal surface mining commission, provided that this exemption shall not be construed as limiting the application of appropriate ground water protection requirements by the New Mexico coal surface mining

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commission;

L. effluent or leachate discharges which are regulated by the oil conservation commission and the regulation of which by the water quality control commission would interfere with the exclusive authority granted under Section 65-3-11, N.M.S.A., 1953 Comp. or under other laws, to the oil conservation commission.

3-106. APPLICATION FOR DISCHARGE PLAN APPROVAL.--

A. Any person who, before or within 120 days after the effective date of these regulations, is discharging any of the water contaminants listed in Section 3-103 or toxic pollutants so that they may move directly or indirectly into ground water shall, within 120 days of receipt of written notice from the director that a discharge plan is required, or such longer time as the director shall for good cause allow, submit a discharge plan to the director for approval; such person may discharge without an approved discharge plan until 240 days after written notification by the director that a discharge plan is required or such longer time as the director shall for good cause allow.

B. Any person who intends to begin, more than 120 days after the effective date of these regulations, discharging any of the water contaminants listed in Section 3-103 or toxic pollutants so that they may move directly or indirectly into ground water shall notify the director giving the information enumerated in Subsection 1-201B.; the director shall, within 60 days, notify such person if a discharge plan is required; upon submission the director shall review the discharge plan pursuant to Sections 3-108 and 3-109; for good cause shown the director may allow such person to discharge without an approved plan for a period not to extend beyond one year after the effective date of these regulations; after one year after the effective date of these regulations, for good cause shown the director may allow such person to discharge without an approved discharge plan for a period not to exceed 120 days.

C. A proposed discharge plan shall set forth in detail the methods or techniques the discharger proposes to use or processes expected to naturally occur which will ensure compliance with these regulations. At least the following information shall be included in the plan:

1. quantity, quality and flow characteristics of the discharge;

2. location of the discharge and of any bodies of water, watercourses and ground water discharge sites within one mile of the outside perimeter of the discharge site, and existing or proposed wells to be used for monitoring;

3. depth to and TDS concentration of the ground water most likely to be affected by the discharge;

4. flooding potential of the site;

5. location and design of site(s) and method(s) to be available for sampling, and for measurement or calculation of flow;

6. depth to and lithological description of rock at base of alluvium below the discharge site if such information is available; and

7. any additional information that may be necessary to demonstrate that approval of the discharge plan will not result in either concentrations in excess of the standards of Section 3-103 or the presence of toxic pollutants at any place of withdrawal of water for present or reasonably forseeable future use. Detailed information on site geologic and hydrologic conditions may be required for a technical evaluation of the applicant's proposed discharge plan.

3-107. MONITORING, REPORTING, AND OTHER REQUIREMENTS.--

A. Each discharge plan shall provide for the following as the director may require:

1. the installation, use, and maintenance of effluent monitoring devices;

2. the installation, use, and maintenance of monitoring devices for the ground water most likely to be affected by the discharge;

3. monitoring in the vadose zone;

4. continuation of monitoring after cessation of operations;

5. periodic submission to the director of results obtained pursuant to any monitoring requirements in the discharge plan and the methods used to obtain these results;

6. periodic reporting to the director of any other information that may be required as set forth in the discharge plan;

7. the discharger to retain for a period of at least five years any monitoring data required in the discharge plan;

8. a system of monitoring and reporting to verify that the plan is achieving the expected results;

9. procedures for detecting failure of the discharge system;

10. contingency plans to cope with failure of the discharge plan or system;

11. measures to prevent ground water contamination after the cessation of operation, including post-operational monitoring.

B. Sampling and analytical techniques shall conform with the following references unless otherwise specified by the director;

1. Standard Methods for the Examination of Water and Wastewater, latest edition, American Public Health Association; or

2. Methods for Chemical Analysis of Water and Waste and other publications of the Analytical Quality Laboratory, EPA; or

3. Techniques of Water Resource Investigations of the U.S. Geological Survey.

C. The discharger shall notify the director of any facility expansion, production increase or process modifications that would result in any significant modification in the discharge of water contaminants.

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D. Any discharger of effluent or leachate shall allow any authorized representative of the director to:

1. inspect and copy records required by a discharge plan;

2. inspect any treatment works, monitoring and analytical equipment;

3. sample any effluent before and after discharge;

4. use monitoring systems and wells installed pursuant to a discharge plan requirement in order to collect samples from ground water or the vadose zone.

3-108. PUBLIC NOTICE AND PARTICIPATION.--

A. Within thirty (30) days of filing of a proposed discharge plan, the director shall notify the following persons:

1. the public, who shall be notified through publication of a notice in a newspaper of general circulation in this state;

2. those persons who have requested notification, who shall be notified by mail;

3. any local, state or federal governmental agency affected which shall be notified by certified mail.

B. The public notice shall include:

1. name and address of the proposed discharger;

2. location of the discharge;

3. brief description of the activities which produce the discharge described in the proposed discharge plan;

4. quantity, quality and flow characteristics of the discharge;

5. depth to and TDS concentration of the ground water most likely to be affected by the discharge;

6. brief description of the procedures followed by the director in making a final determination;

7. statement on the comment period; and

8. address and telephone number at which interested persons may obtain further information.

C. Following the public notice and prior to ruling on any proposed discharge plan or its modification, the director shall allow a period of at least thirty (30) days during which comments may be submitted to the director and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A public hearing shall be held if the director determines there is significan public interest. The time and place of the hearing shall be determined by the director and notice shall be given at least thirty (30) days prior to the hearing pursuant to Subsections A and B above. The director may appoint a hearing officer. A transcript of the hearing shall be made at the request of either the director or the discharger and at the expense of the person requesting the transcrip At the hearing, all interested persons shall be given a reasonable chance to submit data, views or arguments orally or in writing and to examine witnesses testifying at the hearing.

3-109. DIRECTOR APPROVAL, DISAPPROVAL, MODIFICATION OR TERMINATION OF PROPOSED DISCHARGE PLANS.--

A. If no public hearing is held pursuant to Subsection 3-108.C., then the director shall, within sixty (60) days after all required information is available to him, approve or disapprove the proposed plan based on the information available to him.

B. If a public hearing is held pursuant to Subsection 3-108.C., then the director shall, within sixty (60) days after the public hearing or after all required information is available to him, whichever is later, approve or disapprove the proposed plan based on information contained in the proposed plan and information submitted at the hearing.

C. Provided that the other requirements of these regulations are met and provided further that the discharge plan demonstrates that neither a hazard to public health nor undue risk to property will result, the director shall approve a proposed discharge plan if the following requirements are met:

1. the discharge plan demonstrates that the standard of Section 3-103 will be met except for contaminants in the water diverted as provided in Subsection 3-109.D., or

2. ground water that has a TDS concentration of 10,000 mg/l or less will not be affected by the discharge, or

3. the person proposing to discharge demonstrates that approval of the discharge plan will not result in either concentrations in excess of the standards of Section 3-103 or the presence of toxic pollutants at any place of withdrawal of water for present or reasonably foreseeable future use, or

4. the plan conforms to either Subsection a or b below and Subsection c below.

a. Municipal, Other Domestic Discharges, and Discharges from Sewerage Systems Handling Only Animal Wastes.

The effluent is entirely domestic, is from a sewerage system handling only animal wastes or is from a municipality and conforms to the following:

(1) the discharge is from an impoundment or a leach field existing on the effective date of these regulations which receives less than 10,000 gallons per day and the director has not found that the discharge may cause a hazard to public health; or

(2) the discharger has demonstrated that the total nitrogen in effluent that enters the subsurface from a leach field or surface impoundment will not exceed 200 pounds per acre per year and that the effluent will meet the standards of Section 3-103 except for nitrates and except for contaminants in the water diverted as provided in Subsection 3-109.D.; or

(3) the total nitrogen in effluent that is applied to a crop which is harvested shall not exceed by more than 25% the maximum amount of nitrogen reasonably expected to be taken up by the crop and the effluent shall meet the standards of Section 3-103 except for nitrates and except for contaminants in the water diverted as provided in Subsection 3-109.D.

b. Discharges from Industrial, Mining or Manufacturing Operations

(1) the discharger has demonstrated that the amount of effluent that enters the subsurface from

a surface impoundment will not exceed 0.5 acre-feet per acre per year; or

(2) the discharger has demonstrated that the total nitrogen in effluent that enters the subsurface from a leach field or surface impoundment shall not exceed 200 pounds per acre per year and the effluent shall meet the standards of Subsection 3-103 except for nitrate and contaminants in the water diverted as provided in Subsection 3-109D.; or

(3) the total nitrogen in effluent that is applied to a crop that is harvested shall not exceed by more than 25% the maximum amount of nitrogen reasonably expected to be taken up by the crop and the effluent shall meet the standards of Section 3-103 except for nitrate and contaminants in the water diverted as provided in Subsection 3-109D.

c. All Discharges

(1) the monitoring system proposed in the plan includes adequate provision for sampling of effluent and adequate flow monitoring so that the amount being discharged onto or below the surface of the ground can be determined.

(2) the monitoring data is reported to the director at a frequency determined by the director.

D. The director shall allow the following unless he determines that a hazard to public health may result:

1. the weight of water contaminants in water diverted from any source may be discharged provided that the discharge is to the aquifer from which the water was diverted or to an aquifer containing a greater concentration of the contaminants than contained in the water diverted; and provided further that contaminants added as a result of the means of diversion shall not be considered to be part of the weight of water contaminants in the water diverted;

2. the water contaminants leached from undisturbed natural materials may be discharged provided that:

a. the contaminants were not leached as a product or incidentally pursuant to a solution mining operation; and

b. the contaminants were not leached as a result of direct discharge into the vadose zone from municipal or industrial facilities used for the storage, disposal, or treatment of effluent;

3. the water contaminants leached from undisturbed natural materials as a result of discharge into ground water from lakes used as a source of cooling water.

E. If data submitted pursuant to any monitoring requirements specified in the approved plan or other information available to the director indicates that these regulations are being or may be violated or that the standards of 3-103 are being or will be exceeded in ground water at any place of withdrawal for present or reasonably forseeable future use due to the discharge, except as provided in Subsections 3-109D. and Section 3-110 of these regulations;

1. the director may require a discharger to modify a discharge plan within the shortest reasonable time so as to achieve compliance with these regulations and to provide that any exceeding of standards in ground water at any place of withdrawal for present or reasonably forseeable future use due to the discharge except as provided in Subsections 3-109D. and Section 3-110 will be abated or prevented.

2. the director may terminate an approved discharge plan when a discharger fails to modify the plan in accordance with Subsection E.1. of this subsection.

F. At the request of the discharger, an approved discharge plan may be modified in accordance with these regulations.

G. The director shall not approve a discharge plan for:

1. any discharge for which the discharger has not provided a site and method for flow measurement and sampling;

2. any discharge that will cause any stream standard to be violated;

3. the discharge of any water contaminant which may result in toxic pollutants being present in the ground water at any place of withdrawal for present or reasonably foreseeable future use; or

4. a period longer than five years.

3-110. APPROVAL OR DISAPPROVAL OF PROPOSED DISCHARGE PLANS THAT DO NOT MEET THE STANDARDS OF SECTION 3-103.

A. The discharger may file a written petition with the director seeking commission consideration of a discharge plan that would not meet the standards of Section 3-103 if he believes that the discharge plan demonstrates the maximum use of technology within the economic capability of the discharger or that there is no reasonable relationship between the economic and social costs and benefits (including attainment of the standards of Section 3-103) to be obtained and that discharge under the plan would not create a hazard to public health or undue risk to property.

B. The petition shall state the extent to which the plan would violate the standards of Section 3-103 and why the plan should be approved. The director may transmit the petition to the commission recommending that it be approved or refuse to transmit the petition.

C. If the director transmits the petition to the commission, the commission shall review the petition and determine to either grant or deny a public hearing on the applicability of the criteria of Subsection A above to the proposed discharge plan.

D. If the director refuses to transmit the proposed discharge plan to the commission, or if the commission refuses to grant a hearing on the applicability of the criteria of Subsection A above to the proposed discharge plan, the director shall act on the proposed discharge plan without consideration of the criteria of Subsection A.

E. If the director denies the proposed discharge plan pursuant to Subsection D, then the discharger may address the issue of whether the proposed discharge plan meets the criteria of Subsection A above upon appeal of the director's disapproval of his proposed discharge plan to the commission in accordance with the provisions of Subsection 75-39-4.1(L), N.M.S.A., 1953 Comp.

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F. If the commission grants a public hearing, the hearing shall be held in accordance with the provisions of Subsection 75-39-4.1(L), (M) and (N), N.M.S.A., 1953 Comp.

G. If the commission, after hearing held pursuant to Subsection F, denies the proposed discharge plan, the discharger may appeal pursuant to Section 75-39-4.1 (O), N.M.S.A., 1953 Comp. and on appeal may address the issue of whether the proposed discharge plan meets the criteria of Subsection A.

H. After public hearing and consideration of all facts and circumstances included in Section 75-39-4(D), N.M.S.A., 1953 Comp., the commission may authorize the director to approve a proposed discharge plan if the commission determines that the plan meets the criteria of Subsection A above.

3-111. TRANSFER OF DISCHARGE PLAN.--

A discharger shall notify by letter the succeeding owner of a facility which is operating pursuant to an approved discharge plan of the existence of the discharge plan. The notice shall be given on or before transfer of possession of the facility. A copy of the letter shall be forwarded to the director. The succeeding owner shall be responsible for compliance with the approved discharge plan upon taking possession of the facility and receiving notice of the discharge plan.

3-112. APPEALS FROM DIRECTOR'S DECISIONS.--

If the director disapproves a proposed discharge plan, approves a proposed discharge plan subject to condition, or modifies or terminates an approved plan, appeal therefrom and any action of the commission thereon shall be in accordance with the provisions of Subsection 75-39-4.1(L), (M) and (N), N.M.S.A., 1953 Comp.

3-113. APPEALS FROM COMMISSION DECISIONS.-- A discharger may appeal the decision of the commission in accordance with the provisions of Section 75-39-4.1(O), N.M.S.A., 1953 Comp.

3-114. SEVERABILITY.--If any section, subsection, individual standard or application of these standards or regulations is held invalid, the remainder shall not be affected.

PART 4

Utility Operators Certification

4-100. CLASSIFICATION OF WATER SUPPLY SYSTEMS AND WASTEWATER FACILITIES.--

4-101. GENERAL PROVISIONS.--

Water supply systems and wastewater facilities shall be classified by the commission in accordance with Section 4(A) of the Certification Act.

4-102. WATER SUPPLY SYSTEMS.--

Population Served	2,500 5,000	5,001 10,000	10,001 20,000	20,000+
Treatment Process		Classification		
Filtration (sand, gravity)	III	III	III	IV
Coagulation, Sedimentation, Filtration	III	III	IV	IV
Chemical Precipitation (Mn, Fe, Softening)	III	III	IV	IV
Aeration	II	III	III	IV
Odor and Taste Control (activated carbon)	II	III	III	IV
Chemical Addition (stabilization)	II	II	III	IV
Pressure Filtration	II	II	III	IV
Ion Exchange (softening, defluoridation)	II	III	III	IV
Chlorination	II	II	III	IV
Fluoridation	II	II	III	IV
Special, such as desalinization	IV	IV	IV	IV
Production, ground water only	I	II	III	IV
Distribution Systems		Classification		
Distribution of Treated Surface Water	II	II	II	III
Distribution of Chlorinated Ground Water	II	II	II	III
Distribution of Unchlorinated Ground Water	I	II	II	III

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4-103. WASTEWATER FACILITIES.--

Population Served	2,500 5,000	5,001 10,000	10,001 20,000	20,000+
Treatment Process		Classification		
Raw Sewage Lagoons	I	I	I	I
Aerated Lagoons	II	II	II	II
Primary Treatment	II	II	II	II
Primary Treatment and Oxidation Ponds	II	II	II	II
Secondary Treatment, Trickling Filter	II	III	III	IV
Secondary Treatment, Aeration	III	III	IV	IV
Physical-Chemical Treatment Processes	III	III	IV	IV
Advanced Waste Treatment Process	III	IV	IV	IV

Collection System

Ordinarily, collection systems are considered as a part of the treatment works; however, where the jurisdiction or responsibility for the collection system is not the same as the jurisdiction or responsibility for the treatment works, the collection system shall be classified as Grade I, if the population served is less than 15,000 persons and as Grade II, if the population served is greater than 15,000 persons.

4-200. OPERATOR CERTIFICATION.--

4-201. GENERAL PROVISIONS.--

A. After July 1, 1976, each owner of a water supply system or wastewater facility, for public or commercial use, serving 2,500 persons or more shall employ a certified operator(s).

B. Class IV is the highest classification level and Class I is the lowest. The classes of certification are ranked so that a person holding certification in a particular class may operate any facility in that particular class and any lower class.

C. The name(s) of the certified operator(s) must be on file at all times with the agency. A certified operator may be replaced with another certified operator of the required particular class at any time. The owner shall notify the agency in writing within ten days after the replacement.

4-202. REQUIREMENTS FOR CERTIFICATION.--Each applicant for certification as a water system operator or wastewater facility operator shall:

A. Make application on forms furnished by the agency. Applications shall be submitted to the agency not later than thirty (30) days prior to the date of the examination.

B. Submit evidence that the applicant has reached the age of majority.

C. Pay a fee, in advance, to the agency through the commission. The fee shall be $2.00 for each agency action such as examination for certification, re-examination for certification, issuance of a certificate, issuance of a temporary certificate, or annual renewal.

D. Successfully meet the educational, experience and training requirements stipulated in Section 4-203 of this regulation. All training programs must be approved by the commission and the commission shall assign the number of training credits for each approved training program.

E. Successfully pass the examination for the class and type of certification being applied for:

1. Examinations for certification shall be scheduled at such times and locations as the commission deems necessary.

2. Examinations shall be used in determining skill, knowledge, ability and judgment of the applicant.

3. All examinations will be graded and the applicants notified of the results. Examination papers will not be returned to the applicant, but may be reviewed by the applicant at the agency office.

4-203. REQUIREMENTS FOR THE CLASSES.--

A. Basic requirements are:

1. Class I requires one year of experience plus ten training credits;

2. Class II requires three years of experience plus thirty training credits;

3. Class III requires five years of experience plus 50 training credits; and

4. Class IV requires high school graduation, or G.E.D. equivalent, plus one year's experience as a Class III certificate holder plus 80 training credits.

B. Substitutions:

In no case shall the actual experience be less than one year for any class.

Education may be substituted for experience as follows:

1. High school graduation of G.E.D. equivalent may be substituted for one year's experience.

2. One year (30 semester hours) of successfully completed college education may be substituted for six months of the required experience.

3. One year of an approved vocational school in the water and wastewater field may be substituted for one year of the required experience.

4-204. TEMPORARY CERTIFICATION.--If, after reasonable time and effort by an owner, a qualified operator cannot be employed, temporary certification may be issued for the operator of a system or facility. Such a certificate is issued to an individual for a period not to exceed six months. A temporary certificate may be extended to a maximum of 18 months if the operator is involved in a training program that will qualify him for the required level in that period.

4-205. PRIOR CERTIFICATION.--Certificates in appropriate classification shall be issued without examination to persons who hold valid certificates of competency issued under the voluntary program co-sponsored by the New Mexico Environmental Improvement Agency, provided application is made on or before July 1, 1976.

4-206. CERTIFICATION WITHOUT EXAMINATION.--

A. Certificates shall be issued without an examination to persons who, on July 1, 1973, were operators of a system or facility. Applications for certification under this section must have been made on or before January 1, 1974.

Certificates issued under this section will be restricted to the particular system or facility for which the applicant is employed as it existed on July 1, 1973. Major modification of the type of treatment employed which would significantly affect the operation of the system or facility shall cause any certificate issued under this section to become invalid. The limitations of the certificate will be printed thereon.

An operator certified under this section may request to have his certificate transferred to another facility of the same general class and type or to another facility of lower class. Such a request will be granted if, in the opinion of the commission, such a transfer would not adversely affect the health and safety of the public or the environment.

B. The commission may issue certificates, in equivalent classification, without examination to applicants who hold valid certificates or licenses issued by any state, territory, or foreign jurisdiction, provided that the requirements for issuance of such certificates or licenses are, in the opinion of the commission, equal to or higher than those set forth in this regulation.

4-207. RENEWAL OF CERTIFICATES.--

A. Application for certificate renewal shall be made annually prior to the last working day of the holder's birth month in accordance with Section 3-202(C).

B. The agency shall mail each holder of a certificate a renewal notice at least thirty days prior to the expiration date, mailed to his last address of record. Failure to receive such notice shall not relieve the holder of his responsibility to apply for renewal prior to the expiration date.

C. Annual renewal of certificates issued under Section 4-206 shall be required.

4-208. LAPSED CERTIFICATES.--

A. Certificates which have not been renewed in accordance with Section 4-207 will be considered lapsed and invalid.

B. Lapsed certificates may be reinstated without penalty upon application within thirty days of the date of expiration. A lapsed certificate which has not been renewed within the thirty-day period may be reinstated upon reapplication and payment of a $2.00 per month penalty fee for each month or portion thereof beyond the expiration date.

If a lapsed certificate has not been reinstated within one year of its expiration date, the commission shall give notice and may hold a hearing, if the applicant so requests, as required by the Uniform Licensing Act to determine whether re-examination is required for reinstatement.

4-209. SUSPENSION AND REVOCATION.--

A. In the event of suspension or revocation of a certificate, the commission shall notify the applicant by registered mail of the reason for such action. Within 20 days after receipt of the notice, the applicant may request in writing that a hearing be held by the commission.

B. Re-issuance of a revoked certificate shall be accomplished by reapplication as provided for an original certificate. Any person whose certificate is revoked shall be ineligible for admission to any examination for certification for a period of not less than 6 months.

C. The commission may suspend a certificate for a specified period of time not to exceed 6 months.

4-210. ELIGIBILITY FOR OPERATOR TRAINING GRANT FUNDS.-- Each applicant for operator training grant funds administered by the agency shall:

A. submit evidence satisfactory to the agency that the recipient of the training;

1. is a person who is or is a candidate for employment as a "certified operator" as defined under Section 1-101 of these regulations; or

2. is a person in a supervisory role responsible for the management of a Water Supply System or Wastewater Treatment facility; or

3. is a person who is or will be involved in the instruction of operators.

B. submit evidence satisfactory to the agency that not less than ten percent (10%) of the training cost is provided by the employer of the utility operator; the cost of per diem and mileage may not be paid from grant funds but may be accounted in determining the training cost provided by the employer; and

C. supply any other pertinent information deemed necessary by the agency.

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1/11/77

Above are the complete New Mexico Water Quality Control Commission Regulations as amended on January 11, 1977. The January 11, 1977 amendments unanimously adopted by the Commission include Part 3, and Subsections 1-101A., F., H., I., M., N., Q., R., W., X, above and several changes in numbering and letter designations.

CUBIA L. CLAYTON, Chairman
Water Quality Control Commission

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SUBCHAPTER F—RADIATION PROTECTION PROGRAMS

PART 190—ENVIRONMENTAL RADIATION PROTECTION STANDARDS FOR NUCLEAR POWER OPERATIONS

Subpart A—General Provisions

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AUTHORITY: Atomic Energy Act of 1954, as amended; Reorganization Plan No. 3, of 1970.

SOURCE: 42 FR 2860, Jan. 13, 1977, unless otherwise noted.

Subpart A—General Provisions

§ 190.01 Applicability.

The provisions of this Part apply to radiation doses received by members of the public in the general environment and to radioactive materials introduced into the general environment as the result of operations which are part of a nuclear fuel cycle.

§ 190.02 Definitions.

(a) "Nuclear fuel cycle" means the operations defined to be associated with the production of electrical power for public use by any fuel cycle through utilization of nuclear energy.

(b) "Uranium fuel cycle" means the operations of milling of uranium ore, chemical conversion of uranium, isotopic enrichment of uranium, fabrication of uranium fuel, generation of electricity by a light-water-cooled nuclear power plant using uranium fuel, and reprocessing of spent uranium fuel, to the extent that these directly support the production of electrical power for public use utilizing nuclear energy, but excludes mining operations, operations at waste disposal sites, transportation of any radioactive material in support of these operations, and the reuse of recovered nonuranium special nuclear and by-product materials from the cycle.

(c) "General environment" means the total terrestrial, atmospheric and aquatic environments outside sites upon which any operation which is part of a nuclear fuel cycle is conducted.

(d) "Site" means the area contained within the boundary of a location under the control of persons possessing or using radioactive material on which is conducted one or more operations covered by this Part.

(e) "Radiation" means any or all of the following: alpha, beta, gamma, or X-rays; neutrons; and high-energy electrons, protons, or other atomic particles; but not sound or radio waves, nor visible, infrared, or ultraviolet light.

(f) "Radioactive material" means any material which spontaneously emits radiation.

(g) "Curie" (Ci) means that quantity of radioactive material producing 37 billion nuclear transformations per second. (One millicurie (mCi)=0.001 Ci.)

(h) "Dose equivalent" means the product of absorbed dose and appropriate factors to account for differences in biological effectiveness due to the quality of radiation and its spatial distribution in the body. The unit of dose equivalent is the "rem." (One millirem (mrem)= 0.001 rem.)

(i) "Organ" means any human organ exclusive of the dermis, the epidermis, or the cornea.

(j) "Gigawatt-year" refers to the quantity of electrical energy produced at the busbar of a generating station. A gigawatt is equal to one billion watts. A gigawatt-year is equivalent to the amount of energy output represented by an average electric power level of one gigawatt sustained for one year.

(k) "Member of the public" means any individual that can receive a radiation dose in the general environment, whether he may or may not also be exposed to radiation in an occupation associated with a nuclear fuel cycle. However, an individual is not considered a member of the public during any period in which he is engaged in carrying out any operation which is part of a nuclear fuel cycle.

(l) "Regulatory agency" means the government agency responsible for issuing regulations governing the use of sources of radiation or radioactive materials or emissions therefrom and carrying out inspection and enforcement activities to assure compliance with such regulations.

Subpart B—Environmental Standards for the Uranium Fuel Cycle

§ 190.10 Standards for normal operations.

Operations covered by this Subpart shall be conducted in such a manner as to provide reasonable assurance that:

(a) The annual dose equivalent does not exceed 25 millirems to the whole body, 75 millirems to the thyroid, and 25 millirems to any other organ of any member of the public as the result of exposures to planned discharges of radioactive materials, radon and its daughters excepted, to the general environment from uranium fuel cycle operations and to radiation from these operations.

(b) The total quantity of radioactive materials entering the general environment from the entire uranium fuel cycle, per gigawatt-year of electrical energy produced by the fuel cycle, contains less than 50,000 curies of krypton-85, 5 millicuries of iodine-129, and 0.5 millicuries combined of plutonium-239 and other alpha-emitting transuranic radionuclides with half-lives greater than one year.

§ 190.11 Variances for unusual operations.

The standards specified in § 190.10 may be exceeded if:

(a) The regulatory agency has granted a variance based upon its determination that a temporary and unusual operating condition exists and continued operation is in the public interest, and

(b) Information is promptly made a matter of public record delineating the nature of unusual operating conditions, the degree to which this operation is expected to result in levels in excess of the standards, the basis of the variance, and the schedule for achieving conformance with the standards.

§ 190.12 Effective date.

(a) The standards in § 190.10(a) shall be effective December 1, 1979, except that for doses arising from operations associated with the milling of uranium ore the effective date shall be December 1, 1980.

(b) The standards in § 190.10(b) shall be effective December 1, 1979, except that the standards for krypton-85 and iodine-129 shall be effective January 1, 1983, for any such radioactive materials generated by the fission process after these dates.

For the Nuclear Regulatory Commission.
Ross A. Scarano,
Chief, Uranium Recovery Licensing Branch, Division of Waste Management.
[FR Doc. 79-24856 Filed 8-9-79; 8:45 am]
BILLING CODE 7590-01-M

[Docket No. 40-8674]

Plateau Resources, Ltd.; Negative Declaration Regarding Issuance of a Source Material License for Operation of the Blanding Ore Buying Station, San Juan County, Utah

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuing a source material license for a uranium ore buying station by Plateau Resources, Limited, at their site near Blanding, Utah.

The Commission's Division of Waste Management has prepared an environmental impact appraisal for the proposed operation. On the basis of this appraisal, the Commission has concluded that an environmental impact statement for this particular action is not warranted for there will be no significant environmental impact attributable to the action. The environmental impact appraisal is available for public inspection and copying at the Commission's Public Document Room at 1717 H Street, NW., Washington, DC.

Dated at Silver Spring, Maryland, this 31st day of July, 1979.

For the Nuclear Regulatory Commission.
Ross A. Scarano,
Chief, Uranium Recovery Licensing Branch, Division of Waste Management.
[FR Doc. 79-24857 Filed 8-9-79; 8:45 am]
BILLING CODE 7590-01-M

Implementation of Uranium Mill Tailings Radiation Control Act of 1978

The purpose of this notice is to explain in specific terms what the requirements of the "Uranium Mill Tailings Radiation Control Act of 1978" mean to persons affected by and interested in uranium mill regulation.

The Mill Tailings Act amends the Atomic Energy Act and creates a new category of licensable material by expanding the definition of byproduct materials to include mill tailings. The term byproduct material is now defined as: "(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." This includes tailings from conventional milling operations as well as discrete above ground wastes from in-situ or solution extraction processes. However, underground ore bodies depleted by the extraction process are not covered.

The Mill Tailings Act gives NRC direct licensing authority over uranium mill tailings where before, control of tailings was exercised indirectly through its authority to license uranium milling operations. The Act also establishes new requirements under which tailings will be licensed by NRC Agreement States. Agreement States are those States which have, under agreements with the Commission pursuant to Section 274 of the Atomic Energy Act, assumed responsibility for licensing certain materials, which may include the source materials produced in milling operations. Under the Mill Tailings Act, the Commission's expanded licensing responsibilities are effective immediately. However, the Commission has just determined, after extensive legal analysis, that the new requirements of the Mill Tailings Act that apply to Agreement State licensing do not take effect for three years. Furthermore, the Commission has determined that the Mill Tailings Act requires NRC licensing of uranium mill tailings in Agreement States during the three-year period before these new requirements take effect. This establishes a situation in which dual or concurrent jurisdiction exists for a period of three years.

The Commission recognizes that the language in the Mill Tailings Act, which establishes the dual licensing arrangement, does not necessarily conform to the intent of the principal authors of the legislation as expressed in a letter received by the Commission following passage of the legislation. Therefore, the Commission is seeking clarifying legislation that will state expressly that the new requirements that apply to Agreement State regulation of tailings and milling operations will not take effect until three years after the date of enactment of the Mill Tailings Act; that the NRC will have no duplicative authority over tailings in Agreement States during the three-year period; and that NRC has immediate authority under the Mill Tailings Act to regulate tailings in non-Agreement States.

However, the Commission has made a determination that, until the legislation is amended, it must proceed to license tailings in all states. The Commission intends to issue a general license to all existing licensees which authorizes them to own, use and possess tailings material. Such a general license, which is issued as immediately effective subject to any necessary NRC remedial action orders, will prevent existing licensees in both Agreement and non-Agreement States from being in technical violation of the law. Persons planning to conduct new milling operations after May 17, 1979, must apply to the NRC for a license to own, use, and possess byproduct material as tailings. In addition, applicants must obtain a uranium recovery license from the appropriate state or federal authority to conduct milling operations.

All NRC uranium milling licenses that have been granted or renewed under the NEPA process, which involves preparation of an environmental impact statement addressing alternative tailings management and disposal programs, were issued with the express condition that mill tailings management practices were subject to revision in accordance with regulation changes incorporating conclusions of the GEIS and implementing provisions of the Mill Tailings Act. In the process of reevaluation of approved mill operator plans for conformance with the regulations, the NRC staff plans to incorporate into applicable specific licenses the authority to own, use, and possess byproduct material covered by the general license. This process will involve the issuance of a combined license covering both source material operations as well as the authority to possess byproduct materials.

In Agreement States, the authority to possess tailings under the general license will expire when the Agreement State license for milling operations expires or comes up for renewal. At this time, operators must submit an application to NRC to convert from a general license to a specific byproduct material license. The issuance of such a license or license renewal, in cases where no independent environmental impact statement has been previously written for the licensed operation being reviewed, constitutes a major federal action and thus is subject to a full NEPA environmental review including the evaluation of alternatives to the proposed action in accordance with 10 CFR Part 51. This would include the evaluation of alternative sites and tailings disposal programs.

With respect to licensing of the
crete wastes generated in in-situ
ning operations, the Commission does
expect as a general rule to be
paring a full environmental impact
tement but expects instead to prepare
rief written environmental appraisal.
e above-ground wastes from in-situ
erations are relatively small in
ume and NRC staff policy has been
require that they be removed from the
raction site to a conventional
nsed tailings disposal site. Therefore,
environmental impacts resulting
m the generation of these wastes will
minor.

he Commission is the process of
difying 10 CFR Part 40 to include the
anded definition of byproduct
erial; thus, requirements contained
0 CFR Part 40 pertaining to license
lications, license conditions, etc.,
apply to applicants for byproduct
erial as well as source material
nses. Furthermore, a new section has
n added that requires that all
nsee's authorized to own, use, or
sess tailings shall be subject to NRC
orting requirements. In addition,
licants for new licenses or renewals
be subject to the appropriate license
lication and inspection fees which
be established in the proposed
lation changes as an amendment to
FR Part 170, the License Fee
edule. All applications, whether for
byproduct material licenses or
wals of existing licenses, are
ect to review in accordance with
staff regulatory guidance.

accordance with an April 20, 1978,
y statement on technical assistance
Agreement States (43 FR 17879), the
has been acting as a consultant to
States in reviewing many of their
nt mill license applications. It is
cted that this involvement with
nt applications will enable the staff
t promptly in conducting its
sing reviews. Furthermore, the NRC
will coordinate with the States in
to avoid any undue delays
ciated with NRC licensing of
ing applications in Agreements
s.

rsons seeking additional
mation pertaining to NRC's
mentation of the Mill Tailings Act
d-contact: Ross A. Scarano, Chief,
um Recovery Licensing Branch,
ion of Waste Management, Office
clear Material Safety and
uards, U.S. Nuclear Regulatory
nission, Washington, D.C. 20555.

ed at Silver Spring, Maryland, this 3rd
August, 1979.

For the Nuclear Regulatory Commission.

Ross A. Scarano,

Branch Chief, Uranium Recovery Licensing Branch, Division of Waste Management.

[FR Doc. 79-24652 Filed 8-9-79; 8:45 am]

BILLING CODE 7590-01-M

[Docket No. 50-338]

Virginia Electric & Power Co.; Issuance of Amendment to Facility Operating License

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 13 to Facility Operating License No. NPF-4, issued to Virginia Electric and Power Company, which extends, on a one time basis, the surveillance frequency response time testing of systems, safety injection and containment depressurization actuation testing as specified in the Technical Specification to Appendix A of the North Anna Power Station, Unit No. 1 (the facility). The amendment also deletes two conditions (2.D.(3)d and 2.D(3)e) contained in Facility Operating License NPF-4. The Office of Inspection and Enforcement verified that these conditions had been implemented. The amendment is effective as of the date of issuance.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulation. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, it has further been concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR Section 51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

For further details with respect to this action, see (1) Virginia Electric and Power Company letters dated March 13, 1979, July 23, 1979, and July 31, 1979, (2) Amendment No. 13 to License No. NPF-4, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C. 20555 and at the Board of Supervisor's Office, Louisa County Courthouse, Louisa, Virginia 23093 and at the Alderman Library, Manuscripts Department, University of Virginia, Charlottesville, Virginia 22901. A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Divison of Project Management.

Dated at Bethesda, Maryland this 3rd day of August, 1979.

For the Nuclear Regulatory Commission.

Olan D. Parr,

Chief, Light Water Reactors Branch No. 3, Division of Project Management.

[FR Doc. 79-24654 Filed 8-9-79; 8:45 am]

BILLING CODE 7590-01-M

[Docket Nos. 50-346A, 50-440A, and 50-441A]

Toledo Edison Co. and the Cleveland Electric Illuminating Co., et al.; Order

The Acting Director, Office of Nuclear Reactor Regulation has issued an order dated August 6, 1979. The order reads as follows:

On June 25, 1979 this office issued an "Order Modifying Antitrust License Condition No. 3 of Davis-Besse Unit 1, License No. NPF-3 and Perry Units 1 and 2, CPPR-148, CPPR-149" in the captioned matter. That Order amended, effective immediately, Antitrust License Condition No. 3 contained in the above listed license and construction permits. The amendment required the Cleveland Electric Illuminating Company (CEI) to file a specific transmission tariff with the Federal Energy Regulatory Commission (FERC). On July 16, 1979 the times afforded CEI to request a hearing and to file the transmission tariff were extended for a period of fifteen days.

By letter dated August 2, 1979, CEI requested a modification of the Order insofar as it is intended to become effective immediately. In support of its modification request, CEI, in its letter, states:

"The transmission service tariff in question is currently the subject of an administrative appeal before FERC in Docket No. ER 78-194. If CEI is required to file prematurely with FERC an amended tariff pursuant to the Order here, a number of contested issues being considered in the FERC appeal will be mooted by that filing. As a consequence, CEI will be unfairly deprived of a meaningful opportunity to exercise both its appeal rights at FERC and its hearing rights before the Nuclear Regulatory Commission prior to the filing of a transmission service tariff which it legitimately believes to be objectionable in several important respects.

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 40, 150

Uranium Mill Tailings Licensing

AGENCY: Nuclear Regulatory Commission.

ACTION: Final Regulations with request for comments.

SUMMARY: The Nuclear Regulatory Commission (NRC) is amending its regulations to conform to the requirements of the Uranium Mill Tailings Radiation Control Act of 1978 and to the standards set forth in the draft Generic Environmental Impact Statement Uranium Milling. The bulk of these regulations are being published in proposed form. (See proposed rules published elsewhere in this part of the **Federal Register**.) The Commission finds it necessary, however, to issue as immediately effective a temporary general license to authorize the possession and storage of mill tailings or wastes to prevent existing milling operations in both Agreement and non-Agreement States from being in technical violation of the Atomic Energy Act of 1954, as amended by the Uranium Mill Tailings Radiation Control Act of 1978. The immediately effective regulations relating to the general license, such as amendments to the definition of "byproduct material," and to the coverage of tailings in Agreement States, serve two functions. They reflect the NRC's legal interpretation of the new Act necessitating the general license and clarify the application of the general license. Accordingly, these regulations must also be made immediately effective.

DATES: Effective date: August 24, 1979. Comments on or before October 24, 1979.

ADDRESSES: Written comments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments on these amendments may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

FOR FURTHER INFORMATION CONTACT: Don F. Harmon, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301/443-5910) or Hubert J. Miller, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301/427-4103).

SUPPLEMENTARY INFORMATION: These immediately effective regulations are closely related to the proposed rules implementing the Uranium Mill Tailings Radiation Control Act of 1978 and the draft Generic Environmental Impact Statement on Uranium Milling. Thus, the two sets of amendments should be read together. (See proposed rules published elsewhere) in this part of the **Federal Register**.

On May 17, 1979, the Commission met to determine the issue of the timing of the effectiveness of certain requirements of the Uranium Mill Tailings Radiation Control Act of 1978. At this meeting it was determined that the NRC has immediate licensing authority over mill tailings, now defined as section 11e(2) byproduct material in the Atomic Energy Act of 1954, as amended; that the new requirements for agreement state regulation of tailings and milling operations will not take effect until three years after the date of enactment of the mill tailings legislation, and that during that three-year interim, the legislation requires that NRC assume concurrent jurisdiction over tailings in both Agreement and non-Agreement States. The Commission also determined that the definition of section 11e(2) byproduct material includes the above-ground wastes from in situ extraction operations.

New § 40.26 is added to 10 CFR Part 40 to establish a temporary general license to authorize the possession and storage of mill tailings or wastes. The general license will prevent existing milling operations with valid licenses from being in technical violation of the Atomic Energy Act of 1954, as amended by the Uranium Mill Tailings Radiation Control Act of 1978. The Commission believes this general license is consistent with the Congressional intent to implement the mill tailings legislation in a manner designed to minimize unnecessary disruption. As provided in section 40.20 of 10 CFR Part 40, a general license is effective without filing of an application or the issuance of licensing documents to particular persons. This general license is applicable only to persons who possess appropriate specific licenses issued by the Commission or Agreement States to authorize uranium milling activities. The authority to possess, use, or own tailings under the general license shall expire upon the expiration or renewal of the underlying NRC or Agreement State specific milling license.

The Commission notes that all of its existing active milling licenses have been reviewed or are being reviewed under the provisions of the National Environmental Policy Act (NEPA). All NRC licenses presently contain, or will contain, requirements for tailings reclamation, mill and site cleanup, and surety arrangements to cover these costs. For the most part, present requirements and conditions are substantially the same as the requirements set forth in the proposed amendments concerning uranium milling, and most milling operations in non-Agreement States have already committed to specific plans for decommissioning and tailings disposal meeting the new requirements. NRC uranium milling licenses that have been granted under the NEPA process during the period over which the NRC's generic environmental impact statement or uranium milling was being developed were issued with the express condition that approved waste generating processes and mill tailings management practices were subject to revision in accordance with the conclusions of the final generic environmental impact statement and any related rulemaking. In the process of reevaluating approved mill operator plans upon expiration or renewal to meet the new regulatory requirements, the NRC staff plans to incorporate into applicable specific licenses the authority to possess and store byproduct material covered by this general license.

Under the provisions of this general license, Agreement State licensees will not be required to obtain a specific NRC license until such time as the licensee's Agreement State specific license expires or is renewed. The Commission notes in this regard that there presently exist Agreement State regulations and requirements governing the control of tailings in Agreement States that appear adequate to protect the public health and safety during the interim period until such licenses expire or are renewed. At such time as each Agreement State license expires or is renewed, it will be necessary at least until November 1, 1981, for the Agreement State licensee to apply for and obtain a specific NRC license covering the possession of byproduct material. The Commission intends to review each application under the NEPA process and impose any necessary requirements as may be necessary to protect the public health and safety. Given that tailings piles in Agreement States covered by this general license have been in existence for several years, the Commission does not believe that the relatively small incremental increase to such piles during the interim time until licenses expire or are renewed will foreclose available alternatives for

reducing or avoiding adverse environmental and other effects or result in irreversible or irretrievable commitments of sources. The Commission has concluded that the issuance of the general license is not a major Federal action significantly affecting the quality of the human environment and as such does not require an environmental impact statement. The Commission further notes in this regard that the authority to possess, own, or receive title to tailings now defined as byproduct material under this general license is subject to NRC remedial orders as necessary to protect the public health and safety and to correct any situations in which events might require more immediate Commission attention to insure proper control of tailings.

Section 40.4 of 10 CFR Part 40 is amended to include a new definition of "byproduct material." This amendment, which includes uranium and thorium mill tailings as byproduct material licensable by the Commission, is required by the recently enacted Uranium Mill Tailings Radiation Control Act. Discrete above-ground wastes from in situ or solution extraction are covered by this definition, although the underground ore bodies depleted by the extraction process are not covered. The Commission considered amending 10 CFR Part 30, "Rules of General Applicability to Licensing of Byproduct Material," to specify licensing requirements concerning tailings, but has concluded that it is more appropriate to amend 10 CFR Part 40. The legislative record of the mill tailings legislation makes it clear that the expanded definition of byproduct material covers only mill tailings or wastes, which are exclusively associated with 10 CFR Part 40 licensing matters.

The amendments to 10 CFR Part 150 are to conform to Part 40's new definition of byproduct material and to Part 40's coverage of such byproduct material in Agreement States for the three years following enactment of the Uranium Mill Tailings Radiation Control Act of 1978. This is in accordance with the statute's provisions requiring NRC licensing of tailings in Agreement States for the three-year interim. Pursuant to the mill tailings legislation, however, Agreement States may exercise concurrent jurisdiction over tailings and wastes for the three-year interim.

The Commission finds that because the regulations supporting the general license must be effective immediately so as to prevent existing milling operations from being in technical violation of the Atomic Energy Act, good cause exists pursuant to 5 U.S.C. 553 to waive the 30-day comment period, as impracticable and contrary to the public interest, and make the amendments to 10 CFR 40.1, 40.2a, 40.3, 40.4, 40.26, 150.3, and 150.15 immediately effective. The Commission notes in this regard that informal written comments on this matter were solicited and received from industry, environmental groups, and several states. (These comments may be found in the Commission's public document room in a memorandum dated May 9, 1979, from the Executive Legal Director to the Commission entitled "Staff Response to the Commission Request for Further Information Regarding SECY-79-68 'Timing of Certain Requirements of the Uranium Mill Tailings Radiation Control Act of 1978'.") Comments on these amendments are invited, however, and the new regulations remain subject to further modification in response to such comments.

(Secs. 11.e(2), 81, 83, 84, 161b, 174; Pub. L. No. 83-703, 68 Stat. 948 *et seq.* (42 U.S.C. 2014e.(2), 2111, 2113, 2114, 2201b, 2021)).

Dated at Washington, D.C. this 22nd day of August 1979.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.

Regulatory Changes

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Uranium Mill Tailings Radiation Control Act of 1978, and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Chapters 40 and 150, Code of Federal Regulations are published as a document subject to codification.

1. § 40.1 of 10 CFR 40 is amended by revising paragraphs (a) and (b) as follows:

§ 40.1 Purpose.

(a) The regulations in this part establish procedures and criteria for the issuance of licenses to receive title to, receive, possess, use, transfer, deliver, or import into or export from the United States source and byproduct materials, as defined in this Part, and establish and provide for the terms and conditions upon which the Commission will issue such licenses. The regulations in this Part do not establish procedures and criteria for the issuance of licenses for material covered under Title I of the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021).

(b) The regulations contained in this part are issued pursuant to the Atomic Energy Act of 1954, as amended (68 Stat. 919), Title II of the Energy Reorganization Act of 1974 (88 Stat. 1242), and Title II of the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. 7901).

2. § 40.2a of 10 CFR 40 is added to read as follows:

§ 40.2a Temporary coverage in Agreement States.

Until November 8, 1981, the regulations in this Part shall govern the Commission's licensing of byproduct material as defined in this Part in Agreement States.

3. § 40.3 of 10 CFR 40 is revised to read as follows:

§ 40.3 License requirements.

No person subject to the regulations in this Part shall receive title to, own, receive, possess, use, transfer, deliver, or import into or export from the United States byproduct material as defined in this Part or any source material after removal from its place of deposit in nature, except as authorized in a specific or general license issued by the Commission pursuant to the regulations in this Part.

4. § 40.4 of 10 CFR 40 is amended by revising paragraphs 40.4(a-1), 40.4(e), and 40.4(l) and adding new paragraphs 40.4(b-1) and 40.4(p).

§ 40.4 Definitions.

* * * * *

(a-1) "Byproduct Material" means the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute "byproduct material" within this definition.

* * * * *

(b-1) "Department of Energy" means the United States Department of Energy or its duly authorized representative.

* * * * *

(e) "Persons" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department of Energy except that the Department of Energy shall be considered a person within the meaning of the regulations in this Part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 (88 Stat.

1244)[1] and the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 21), any State or any political subdivision of, or any political entity within a State, any foreign government or nation or any subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent or agency of the foregoing.

* * * * *

(l) With the exception of "byproduct material" as defined in Section 11e. of the Act, other terms defined in Section 11 of the Act shall have the same meaning when used in the regulation in this Part.

* * * * *

(p) "Uranium Milling" means any activity that results in the production of byproduct material as defined i this Part.

5. § 40.26 of 10 CFR 40 is added to read as follows:

§ 40.26 General license for possession and storage of byproduct material as defined in this Part.

(a) A general license is hereby issued to receive title to, own, or possess byproduct material as defined in this Part without regard to form or quantity.

(b) The general license in paragraph (a) of this section applies only:

(1) In the case of licensees of the Commission, where activities that result in the production of byproduct material are authorized under a specific license issued by the Commission pursuant to this Part, to byproduct material possessed or stored at an authorized disposal containment area or transported incident to such authorized activity; Provided, that authority to receive title to, own, or possess byproduct material under this general license shall terminate when the specific license for source material expires, is renewed, or is amended to include a specific license for byproduct material as defined in this Part; or

(2) In Agreement States until November 8, 1981, where activities that result in the production of byproduct material are authorized under a specific license issued by the Agreement State on or before May 17, 1979, to byproduct material possessed, or stored at an authorized disposal containment area or transported incident to such authorized activities; Provided, that authority to receive title to, own, or possess byproduct material under such general license shall terminate when such Agreement State license expires or is renewed, whichever first occurs.

(c) The general license in paragraph (a) of this section is subject to:

(1) The provisions of Parts 19, 20, 21, and §§ 40.1, 40.2, 40.2a, 40.3, 40.4, 40.5, 40.6, 40.41, 40.46, 40.61, 40.62, 40.63, 40.65, 40.71, and 40.81 of Part 40 of this Chapter; and

(2) The documentation of daily inspections of tailings or waste retention systems and the immediate notification of the appropriate NRC regional office as indicated in Appendix D of 10 CFR Part 20, or the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, of any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas, and/or of any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected could lead to failure of the system and result in a release of tailings or waste into unrestricted areas; and any additional requirements the Commission may by order deem necessary.

6. § 150.3 of 10 CFR 150 is amended by revising § 150.3(c) to read as follows:

§ 150.3 Definitions.

* * * * *

(c) "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; or (2) the tailings or wastes produced by the extraction.

7. § 150.15 of 10 CFR 150 is amended by adding a new paragraph (a)(7), to read as follows:

§ 150.15 Persons not exempt.

(a) * * *

(7) Until November 8, 1981, the receipt of title to, ownership of, receipt of, possession of, use of, transfer of, delivery of, import or export of the byproduct material as defined in § 150.3(c)(2) of this Part; Provided, however, that during this period any State may exercise any authority under State law respecting such material in the same manner, and to the same extent, as permitted before enactment of the Uranium Mill Tailings Radiation Control Act of 1978. In case of conflict between Federal and State requirements regarding a license, the Federal license requirements shall prevail unless the State requirements are more stringent than the Federal requirements.

[FR Doc. 79-26515 Filed 8-23-79; 8:45 am]

BILLING CODE 7590-01-M

[1] The Department of Energy facilities and activities identified in section 202 are:

(1) Demonstration Liquid Metal Fast Breeder reactors when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(2) Other demonstration nuclear reactors, except those in existence on January 19, 1975, when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(3) Facilities used primarily for the receipt and storage of high-level radioactive wastes resulting from licensed activities.

(4) Retrievable Surface Storage Facilities and other facilities authorized for the express purpose of subsequent long-term storage of high-level radioactive waste generated by the Department of Energy, which are not used for, or are part of, research and development activities.

NUCLEAR REGULATORY COMMISSION

[10 CFR Parts 30, 40, 70, 150, and 170]

Criteria Relating to Uranium Mill Tailings and Constructions of Major Plants

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Proposed rules.

SUMMARY: The proposed amendments to 10 CFR Parts 40 and 150 would incorporate licensing requirements for uranium and thorium mills and their tailings and wastes into the Commission s regulations. The proposed amdnedments to Parts 40 and 150 are derived from a draft generic environmental impact statement on uranium milling and the requirements contained in the Uranium Mill Tailings Radiation Control Act of 1978. The proposed amendments to Parts 30 and 70 would require a final environmental assessment be completed by the NRC prior to construction of other types of major plants. The proposed amendments to 10 CFR 170 set forth the fees to be charged in conjunction with licenses authorizing the possession of tailings. These proposed regulation changes and the draft generic environmental impact statement referred to above will be the subjects of public hearings to be held in October at locations in western milling regions. The general purpose of these hearings will be to receive comments on these proposed regulation changes and the draft generic environmental impact statement. More specific information concerning these hearings will be made available in a forthcoming **Federal Register** notice.

Closely related to these proposed regulations are immediately effective regulations pertaining to a general license authorizing possession of tailings by existing milling operations with valid specific licenses for milling. Although the immediately effective regulations are formally published elsewhere in this part of the **Federal Register**, the[y] are shown here for purposes of cla[rity] and continuity.

DATE: Comment period expires October 24, 1979.

ADDRESSES: Written comments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments on the proposed amendment may be examined in the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C.

FOR FURTHER INFORMATION CONTACT: Don F. Harmon, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301/433-5910) or Hubert J. Miller, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301/427-4103).

SUPPLEMENTARY INFORMATION: The Nuclear Regulatory Commission is amending its regulations to conform to the requirements of the Uranium Mill Tailings Radiation Control Act of 1978 and to the standards set forth in the draft generic environmental impact statement on uranium milling. The bulk of these regulations are published here in proposed form. The Commission finds it necessary, however, to issue as immediately effective a temporary general license to authorize the possession and storage of mill tailings or wastes to prevent existing milling operations in both Agreement and non-Agreement States from being in technical violation of the Atomic Energy Act of 1954, as amended by the Uranium Mill Tailings Radiation Control Act of 1978. Although the immediately effective regulations are formally published elsewhere in this part of the **Federal Register**, they are shown here for the purposes of clarity and continuity. In a notice published in the **Federal Register** on June 3, 1976, the U.S. Nuclear Regulatory Commission announced its intention to prepare a generic environmental impact statement (GEIS) on uranium milling. The Commission was acting partly in response to a petition for rulemaking filed with the Commission by the Natural Resources Defense Council, Inc. The Commission has evaluated the environmental impacts of uranium milling and has published a draft GEIS (NUREG-0511) on this subject (See Notice of Availability, April 26, 1979, 44 FR 24963).

The GEIS concludes that there is a need for certain definitive rule changes to the Commissions's regulations to establish specific uranium mill licensing requirements, particularly with regard to the tailings or wastes generated during the milling process. The rule change proposed herein to 10 CFR 40 will incorporate into the Commission's regulations the additional needed requirements derived from the draft GEIS. These proposed additional requirements and potential alternatives are discussed in detail in the draft GEIS along with their supporting bases. It is not possible to provide here a complete summary of all the complex issues, alternatives, and supporting technical bases addressed in the draft GEIS. In formulating proposals for dealing with uranium milling problems to assure public health and safety and environment protection, the NRC staff has developed a full range of perspectives and facts. It has analyzed the problems from short- and long-term points of view. It has evaluated potential health risks to individuals living in the immediate vicinity of mills, to individuals living in mining and milling regions, to mill workers, and to large populations which can be exposed to radon. Potential impacts on land use, air quality, water quality, water use, biota and soils, and potential socieconomic effects of milling operations have been assessed. Alternatives for tailings disposal which have been examined range from the past practice of doing virtually nothing to isolate tailings, to utilizing potential advanced treatment methods such as incorporation of tailings in a solid matrix, such as cement or asphalt. The major institutional questions considered by the NRC in developing needed rule changes include: the need for land use controls and site monitoring at tailings disposal sites; methods of providing financial surety so that tailings disposal and site decommissioning are accomplished by the milling operator and the need for and methods of funding any long-term surveillance which may be necessary at tailings disposal sites. For additional information concerning these issues, the draft GEIS should be reviewed. (It is suggested that readers of the GEIS start with the Summary; the chief bases for these proposed regulations are presented there. In preparing the Summary, the staff made a special effort to refer to specific sections of the text which are pertinent to each issue discussed. This has been done to make it easy for readers to find and consider all of the information that has been developed, so that they can draw their own conclusions about the issues addressed.) The major conclusions reached in the draft GEIS relative to needed rule changes, stated here in broad terms, are

1. Tailings areas should be located at remote sites to reduce potential population exposures to the maximum extent reasonably achievable.

2. Tailing areas should be located at sites where disruption and dispersion by natural forces are eliminated or reduced to the maximum extent reasonably achievable.

3. The "prime option" for tailings disposal is placement below grade.

4. If tailings are located above ground, stringent siting and design criteria should be adhered to.

5. Sufficient cover should be placed over tailings to reduce radon exhalation

to a calculated value of less than 2pCi/m²sec above natural background levels.

6. Steps should be taken to reduce seepage of materials into groundwater to the maximum extent reasonably achievable.

7. Final disposition of tailings should be such that ongoing active maintenance is not necessary to preserve isolation.

8. Milling operations should be conducted so that all airborne effluent releases are reduced to as low as is reasonably achievable. Yellowcake drying and packaging operations should cease when effluent control devices are inoperative or not working at their reasonably expected best performance levels.

9. Financial surety arrangements should be established to ensure that sufficient funds are available to cover the costs of decontamination and decommissioning the mill and site and for the reclamation of tailings areas.

10. Sites on which tailings are stored should be controlled through ownership and custody by a government agency unless, in special cases as might occur in deep mine disposal, this is determined unnecessary.

11. Funds should be provided by each mill operator to cover the costs of long-term site surveillance.

12. Construction of a uranium mill or tailings disposal area should not commence until the NRC has completed its final environmental impact statement required by the National Environmental Policy Act (NEPA).

The rule changes proposed herein would also incorporate into the Commission's regulation 10 CFR 40 and 150 the requirements established by the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3201). This legislation, among other things, establishes 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. In the Commission's view, the legislation also requires that the NRC exercise concurrent jurisdiction over tailings in Agreement States until November 8, 1981. The UMTRCA, among other things, specifies:

1. A revised defination of "byproduct material" to include tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content;

2. Ownership and custody requirements for byproduct material;

3. Provisions for bonds, sureties, or other financial arrangements covering the decontamination, decommissioning, and reclamation of sites, structures, and equipment used in conjunction with byproduct material;

4. Provisions for Agreement State authority under Section 274 of the Atomic Energy Act; and

5. Provisions for NRC grants to States to aid in the development of State regulatory programs.

The UMTRCA further establishes certain responsibilities and authorities whereby the Environmental Protection Agency (EPA) must develop 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. Such generally applicable standards for nonradiological hazards must provide for the protection of human health and the environment consistent with the standards required under subtitle C of the Solid Waste Disposal Act, as amended. The Commission and any State permitted to exercise authority under § 274b.(2) of the Atomic Energy Act must apply these standards of general application in licensing actions involving byproduct material. In this regard, the Commission notes that the EPA has published (43 FR 58946), for comments, proposed regulations to implement the requirements of the Solid Waste Disposal Act, as amended. The Commission believes that the requirements in the amendments proposed herein, along with applicable requirements in other parts of the Commission's regulations, will be at least comparable to presently published requirements applicable to the possession, transfer, and disposal of similar material regulated by the EPA under the Solid Waste Disposal Act, as amended. Since final regulations have not been adopted by EPA to implement the mandates of the Solid Waste Disposal Act, additional amendments to the Commission's regulations may be required. The Commission intends to follow the progress of the EPA rulemaking action to implement regulations under the Solid Waste Disposal Act. Any final regulations pertaining to byproduct material adopted by the Commission will be comparable, to the maximum extent practicable, to requirements applicable to the possession, transfer, and disposal of similar hazardous material regulation by EPA under the Solid Waste Disposal Act, as amended. To ensure comparability, concurrence of final regulations will be obtained from the Administrator of EPA as required by the UMTRCA. In addition, the Administrator of EPA will be specifically requested to provide comments and recommendations concerning this matter.

The significant features of the amendments to 10 CFR 40 are:

1. Section 40.4 of Part 40 is being amended (effective immediately) to include the definition of "byproduct material." This amendment, to include uranium and thorium mill tailings as byproduct material as a licensable material in the Commission's regulations, is requird by the recently enacted UMTRCA. Discrete above ground wastes from in-situ or solution extraction are covered by this definition, although the underground ore bodies depleted by the extraction process are not covered. While the Commission has considered amending its regulation 10 CFR 30, "Rules of General Applicability to Licensing of Byproduct Material," to specify licensing requirements relative to tailings, the Commission considers it more appropriate to amend 10 CFR 40 since the legislative record of the UMTRCA makes clear that the expanded definition of byproduct material covers only mill tailings or wastes which are exclusively associated with 10 CFR 40 licensing matters.

2. A new § 40.26 is being added (effective immediately) to 10 CFR 40 to establish a temporary general license to authorize the possession and storage of mill tailings or wastes to keep existing milling operations in both Agreement and non-Agreement States from being in technical violation of the Atomic Energy Act of 1954, as amended by UMTRCA. The Commission believes this general license is consistent with the Congressional intent to implement the UMTRCA in a manner designed to minimize unnecessary disruption. As provided in § 40.20 of 10 CFR 40, a general license is effective without the filing of an application or the issuance of licensing documents to particular persons. This general license is applicable only to persons who possess appropriate specific licenses issued by the Commission or Agreement States which authorize uranium milling activities. The authority to possess, use, or own tailings under the general license shall expire concurrently with the expiration or renewal of each NRC or Agreement State specific milling license.

The Commission notes that all of its existing active milling licenses have been reviewed or are being reviewed under the provisions of the National Environmental Policy Act (NEPA). All

NRC licenses presently contain, or will contain, requirements for tailings reclamation, mill and site cleanup, and surety arrangements to cover these costs. For the most part, present requirements and conditions are substantially the same as the requirements being proposed herein, and most milling operators involved in non-Agreement States have already committed themselves to specific plans for decommissioning and tailings disposal meeting these requirements. NRC uranium milling licenses that have been granted under the NEPA process during the period over which the NRC's generic environmental impact statement on uranium milling was being developed were issued with the express condition that approved waste generating processes and mill tailings management practices were subject to revision in accordance with the conclusions of the final generic environmental impact statement and any related rulemaking. In the process of reevaluating approved mill operator plans upon expiration or renewal to meet the requirements of the rule change proposed herein, the NRC staff plans to incorporate into applicable specific licenses the authority to possess and store byproduct material covered by this general license.

Under the provisions of this general license, Agreement State licensees will not be required to obtain a specific NRC license until such time as the licensee's Agreement State specific license expires or is renewed. The Commission notes in this regard that there presently exist Agreement State regulations and requirements governing the control of tailings in Agreement States which appear adequate to protect the public health and safety during the interim period until such licenses expire or are renewed. At such time as each Agreement State license expires or is renewed, it will be necessary at least until November 1, 1981, for the Agreement State licensee to apply for and obtain a specific NRC license covering the possession of byproduct material. The Commission intends to review each application under the NEPA process and impose any necessary requirements as may be necessary to protect the public health and safety. Given that the tailings piles in Agreement States covered by this general license have been in existence for several years, the Commission does not believe that the incremental increase to such piles during the interim time until licenses expire or are renewed will foreclose available alternatives for reducing or avoiding adverse environmental and other effects or result in irreversible or irretrievable commitments of resources. Thus, the Commission has concluded that an environmental impact statement to support this interim general license is not required. The Commission further notes in this regard that the authority to possess, own, or receive title to tailings now defined as byproduct material under this general license is subject to NRC remedial orders as necessary to protect the public health and safety and to correct any situations where events might require more immediate Commission attention to insure proper control of tailings.

3. Section 40.31 of Part 40 is being amended by revising § 40.31(a) to cover applications for byproduct material and by adding a new paragraph (g) to require applicants for mill licenses to propose specifications relating to the operation of mill sand disposition of tailings or wastes so as to achieve certain requirements and objectives set forth in a new Apendix A to 10 CFR 40. These requirements and objectives are discussed in detail in the following Item #4.

Since these requirements and objectives deal primarily with presently operating and future milling activities, they do not apply to the remedial action program authorized in Title 1 of the UMTRCA.

4. A new Appendix A entitled, "Criteria Relating to the Operation of Uranium Mills and Disposition of Tailings or Wastes (i.e., byproduct material as defined in Section 11e.(2) of the Atomic Energy Act) Produced by the Extraction or Concentration of Source Material From Ores," is being added to 10 CFR 40. This appendix is divided into four major categories, technical criteria; financial criteria; site and byproduct material ownership; and long-term site surveillance. The technical criteria deal primarily with specifications for siting tailing areas, options for storing tailings below and above ground, seepage controls, minimum cover requirements for tailings at the end of milling operations, preoperational site monitoring requirements, and effluent controls during milling operations. These criteria were basically dervied from the GEIS discussed above. The guiding principles in the development of these criteria were that: tailings should be isolated from people and the environment in such a manner to reduce potential exposures to as low as is reasonably achievable; the site where tailings are stored should be returned to conditions reasonably near those of the surrounding evironment; and final disposition of tailings should be such that active maintenance is not necessary to preserve isolation. The bases for these criteria are set forth in detail in the GEIS. The Commission believes that under these criteria tailings can be disposed of at reasonable costs and in such a manner that conditions at disposal sites will be reasonably near those of surrounding environs. Thus, the need for ongoing active care and maintenance programs to redress degradation of the tailings isolation by natural weathering and erosion forces can be essentially eliminated. In that the proposed technical criteria for mill siting and tailings disposal areas preclude location of tailings or milling operations in an area that could be disrupted by natural events such as flooding, these criteria will assure that the requirements of Executive Order 11988 of May 25, 1977, concerning flood plain management are met. Therefore, as well as assuring tailings isolation, floodplains will be protected.

The ownership, surety, and long-term funding criteria delineated in the new Appendix were derived from the GEIS. They are also requirements established under the UMTRCA. The Commission believes that compliance with these criteria will ensure that milling operators, who are responsible for the generation of tailings, will bear the costs of tailing reclamation and long-term site surveillance and that government ownership of tailings and disposal sites will ensure adequate long-term control of the tailings.

With regard to long-term site surveillance, the UMTRCA requires the final disposition of tailings or wastes at milling sites to be such that the need for long-term maintenance and monitoring of such sites after license termination shall be minimized, and to the maximum extent practicable, eliminated. These requirements are delineated in the long-term surveillance criterion set forth in the new Appendix. In order to confirm the integrity of a stabilized tailings system, the Commission proposes to require annual site inspections by site owners (e.g., an appropriate government agency). Depending on the specific conditions of a particular site, as determined during the period following site reclamation and before termination of a mill operator's license, a determination may be made that more frequent inspections or more comprehensive monitoring are required. More specific guidance on long-term surveillance may be issued in the future after more experience has been gained relative to this issue. Results of such inspections would be submitted to the

Commission within 60 days following each inspection.

The criteria in the new Appendix A would become effective following completion of the rulemaking action contemplated herein by the Commission, except that criterion 11 would not become effective until November 8, 1981, under the provisions of the UMTRCA.

5. Paragraphs (b) of § 40.14 and (e) of § 40.32 of 10 CFR 40 are being amended to require the Director of the Commission's Office of Nuclear Material Safety and Safeguards or his designee to make a positive finding on an applicant's proposed plans as meeting the requirements and objectives in Appendix A prior to commencement of construction of a mill which produces byproduct material. This finding would be that made in the final environmental impact statement (or other environmental assessment) prepared pursuant to Part 51 of this chapter. These proposed amendments will delete paragraph (b) of § 40.14 so as to preclude exemptions from the requirements of §§ 40.31(f) and 40.32(e) of Part 40 and amend paragraph (e) of § 40.32 so as to require the denial of applications for licenses where construction is started before the appropriate environmental appraisals are completed and documented. The Commission notes in this regard that milling results in the production of large quantities of byproduct material as tailings per year. When construction of a mill commences, nearly irrevocable commitments are made regarding tailings disposal. Given that each mill tailings pile constitutes a low-level waste burial site containing long-lived radioactive materials, the Commission believes that prudence requires that specific methods of tailings disposal, mill decontamination, site reclamation, surety arrangements, and arrangements to allow for transfer of site and tailings ownership be worked out and approved before a license is granted.

The Commission also notes that similar irrevocable and/or irretrievable commitments are involved in the commencement of construction of plants and facilities in which source materials are possessed and used for the production of uranium hexafluoride and commercial waste disposal by land burial. Accordingly, the requirements of the revised paragraphs (b) of § 40.14 and (e) of § 40.32 would apply to these plants and facilities.

The proposed amendments to 10 CFR 30 and 70 also relate to commencement of construction of other types of plants and facilities in which byproduct and special nuclear materials are used and possessed. The Commission also believes commencement of construction of these plants and facilities may also result in irreversible and irretrievable commitments of resources. Therefore, the Commission believes that it is also desirable and necessary that a final evironmental impact statement or assessment be completed and documented before authorizing commencement of construction. Thus, 10 CFR 30.11(b), 10 CFR 30.33(a)(5), 10 CFR 70.14(b) and 10 CFR 70.23(a)(7) are being amended to conform to the foregoing amendments to 10 CFR 40.

The amendments to 10 CFR Part 150 that are to conform to Part 40's new definition of byproduct material and to Part 40's coverage of such byproduct material in Agreement States for the three years following enactment of UNTRCA are immediately effective. These amendments are in accordance with UMTRCA's provisions requiring NRC licensing of tailings in Agreement States for the three year interim. Pursuant to UMTRCA, however, Agreement States may exercise concurrent jurisdiction over tailings and wastes for the three-year interim.

A new proposed § 150.15a is added to enumerate certain authorities reserved in the Commission under UMTRCA. Paragraph (a) is drawn directly from sections 204(f) and 202(a) of UMTRCA. Paragraph (b) is extracted from § 83 of the Atomic Energy Act of 1954, as added by § 202(a) of UMTRCA. The language of UMTRCA and its legislative history indicate that the NRC is to make the determinations under and establish requirements pursuant to § 83, which minimum Federal standards and determinations must, under § 204(e) of the UMTRCA, be met by the Agreement States. New proposed § 150.31 and 150.32 outline requirements in the UMTRCA for Agreement State regulation of tailings or activities that produce such tailings or wastes. The new requirements, which become effective after November 8, 1981, are taken directly from § 274o of the Atomic Energy Act, as added by § 204(e) of the UMTRCA.

The proposed amendments to 10 CFR 170 establish fees for licensing and inspection actions involving only the management of mill tailings and associated wastes. The proposed fees are based on NRC staff experience involving the review of the environmental and public health aspects of uranium milling and related activities.

Proposed regulatory changes

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Uranium Mill Tailings Radiation Control Act of 1978, and section 553 of title 5 of the United States Code, notice is hereby given that the Commission proposes to amend 10 CFR 30, 40, 70, 150, and 170 as indicated below.

The amendments to §§ 40.1, 40.2a, 40.3, 40.4, 40.26, 150.3, and 150.15, adopted as final rules in a document printed elsewhere in this part, are included below for purposes of clarity and continuity. They are identified in the amendatory language as being effective immediately.

1. Section 40.1 of 10 CFR 40 is amended (effective immediately) by revising paragraphs (a) and (b) as follows:

§ 40.1 Purpose.

(a) The regulations in this part establish procedures and criteria for the issuance of licenses to receive title to, receive, possess, use, transfer, deliver, or import into or export from the United States source and byproduct materials, as defined in this Part, and establish and provide for the terms and conditions upon which the Commission will issue such licenses. The regulations in this Part do not establish procedures and criteria for the issuance of licenses for materials covered under Title I of the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021).

(b) The regulations contained in this part are issued pursuant to the Atomic Energy Act of 1954, as amended (68 Stat. 919), Title II of the Energy Reorganization Act of 1974 (88 Stat. 1242), and Title II of the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. 7901).

2. § 40.2a of 10 CFR 40 is added (effective immediately) to read as follows:

§ 40.2a Temporary coverage in Agreement States.

Until November 8, 1981, the regulations in this Part shall govern the Commission's licensing of byproduct material as defined in this Part in Agreement States.

3. § 40.2b of 10 CFR 40 is proposed to be read as follows:

§ 40.2b Coverage of inactive tailings sites.

(a) Prior to the completion of the remedial action, the Commission will not require a license pursuant to this Part for possession of byproduct material as defined in this Part that is located at a site where milling operations are no longer active, if such site is or is likely to be designated a processing site covered by the remedial action program of title I of the Uranium Mill Tailings Radiation Control Act of 1978. The Commission will exert its

regulatory role in remedial actions exclusively through concurrence and consultation in the execution of the remedial action pursuant to title I of the Uranium Mill Tailings Radiation Control Act of 1978.

(b) The Commission will require a license pursuant to this Part for byproduct material as defined in this Part that is located at a site where milling operations are not longer active, if such site is not and will not be covered by the remedial action program of title I of the Uranium Mill Tailings Radiation Control Act of 1978; provided, however, that the criteria in Appendix A of this Part will be applied to the maximum extent practicable, with consideration given to the unique circumstances of such inactive sites.

4. § 40.3 of 10 CFR 40 is revised (effective immediately) to read as follows:

§ 40.3 License requirements.

No person subject to the regulations in this Part shall receive title to, own, receive, possess, use, transfer, deliver, or import into or export from the United States byproduct material as defined in this Part or any source material after removal from its place of deposit in nature, except as authorized in a specific or general license issued by the Commission pursuant to the regulations in this Part.

5. § 40.4 of 10 CFR 40 is revised (effective immediately) by amending paragraphs 40.4(a–1), 40.4(e), and 40.4(1) and adding new paragraphs 40.4(b–1) and 40.4(p).

§ 40.4 Definitions.

* * * * *

(a–1) "Byproduct Material" means the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute "byproduct material" within this definition.

* * * * *

(b–1) "Department of Energy" means the United States Department of Energy or its duly authorized representative.

* * * * *

(e) "Person" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department of Energy except that the Department of Energy shall be considered a person within the meaning of the regulations in this Part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244) [*] and the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 21), any State or any political subdivision of, or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent or agency of the foregoing.

* * * * *

(1) With the exception of "byproduct material" as defined in Section 11e. of the Act, other terms defined in Section 11 of the Act shall have the same meaning when used in the regulation in this Part.

* * * * *

(p) "Uranium Milling" means any activity that results in the production of byproduct material as defined in this Part.

6. Section 40.11 of 10 CFR 40 is proposed to be amended by changing the word "Adminstration" to read "Department of Energy" and by adding the words "or the Uranium Mill Trailings Radiation Control Act of 1978" following the words "Energy Reorganization Act of 1974."

7. Section 40.13 of 10 CFR 40 is proposed to be amended by adding the following sentence at the end of Paragraph (a): "The exemption contained in this paragraph does not include byproduct material as defined in this Part."

8. Section 40.14 of 10 CFR 40 is proposed to be amended by deleting paragraph 40.14(b).

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[*] The Department of Energy facilities and activities identified in section 202 are:

(1) Demonstration Liquid Metal Fast Breeder reactors when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(2) Other demonstration nuclear reactors, except those in existence on January 19, 1975, when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(3) Facilities used primarily for the receipt and storage of high-level radioactive wastes resulting from licensed activities.

(4) Retrievable Surface Storage Facilities and other facilities authorized for the express purpose of subsequent long-term storage of high-level radioactive waste generated by the Department of Energy, which are not used for, or are part of, research and development activities.

9. Section 40.26 of 10 CFR 40 is added (effective immediately) to read as follows:

§ 40.26 General license for possession and storage of byproduct material as defined in this Part.

(a) A general license is hereby issued to receive title to, own, or possess byproduct material as defined in this Part without regard to form or quantity.

(b) The general license in paragraph (a) of this section applies only:

(1) In the case of licensees of the Commission, where activities that result in the production of byproduct material are authorized under a specific license issued by the Commission pursuant to this Part, to byproduct material possessed or stored at an authorized disposal containment area or transported incident to such authorized activity; Provided, that authority to receive title to, own, or possess byproduct material under this general license shall terminate when the specific license for source material expires, is renewed, or is amended to include a specific license for byproduct material as defined in this Part; or

(2) In Agreement States until November 8, 1981, where activities that result in the production of byproduct material are authorized under a specific license issued by the Agreement State on or before May 17, 1979, to byproduct material possessed, or stored at an authorized disposal containment area or transported incident to such authorized activities; Provided, that authority to receive title to, own, or possess byproduct material under such general license shall terminate when such Agreement State license expires or is renewed, whichever first occurs.

(c) The general license in paragraph (a) of this section is subject to:

(1) The provisions of Parts 19, 20, 21, and sections 40.1, 40.2, 40.2a, 40.3, 40.4, 40.5, 40.6, 40.41, 40.46, 40.61, 40.62, 40.63, 40.65, 40.71, and 40.81 of Part 40 of this Chapter; and

(2) The documentation of daily inspections of tailings or waste retention systems and the immediate notification of the appropriate NRC regional office as indicated in Appendix D of 10 CFR Part 20, or the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, of any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas, and/or of any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected could lead to failure of the system and result in a release of tailings or waste

into unrestricted areas; and any additional requirements the Commission may by order deem necessary.

10. Section 40.31 of 10 CFR 40 is proposed to be amended by revising § 40.31(a) and adding a new § 40.31(g) as follows:

§ 40.31 Applications for specific licenses.

(a)(1) Applications for a specific license for source material or for byproduct material produced in conjunction with the uranium milling activity for which a source material license is sought from the Commission should be filed in quadruplicate on Form NRC-2 "Application for Source Material License," with the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Applications may be filed in person at the Commission's Offices at 1717 H Street, NW., Washington, D.C., or 7920 Norfolk Avenue, Bethesda, Md. Information contained in previous applications, statements, or reports filed with the Commission may be incorporated by reference, provided such references are clear and specific.

(2) Applications for specific licenses for byproduct material as defined in this Part not sought in conjunction with a source material license from the Commission for uranium milling shall be filed with the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Such applications include, until November 8, 1981, applications for specific licenses from the Commission for such byproduct material generated by uranium milling under an Agreement State license issued or renewed after May 17, 1979.

* * * * *

(g) An application for a license to receive title to, own, receive, possess, and use source material for uranium milling or byproduct material, as defined in this Part, shall contain proposed specifications relating to milling operations and the disposition of the byproduct material to achieve the requirements and objectives set forth in Appendix A of this Part.

11. Section 40.32 of 10 CFR 40 is proposed to be amended by revising § 40.32(e) as follows:

§ 40.32 General requirements for issuance of specific licenses.

* * * * *

(e) In the case of an application for a license to possess and use source and byproduct material for uranium milling, production of uranium hexafluoride, commercial waste disposal by land burial or for the conduct of any other activity which the Commission determines will significantly affect the quality of the environment, the Director of Nuclear Material Safety and Safeguards or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to Part 51 of this chapter, has concluded, after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such a conclusion shall be grounds for denial of a license to possess and use source and byproduct material in such plant or facility.

12. Appendix A is proposed to be added to Part 40 to read as follows.

Appendix A to Part 40

Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes (i.e., byproduct material as defined in Section 11e.(2) of the Atomic Energy Act) Produced by the Extraction or Concentration of Source Material From Ores.

Introduction. Every applicant for a license to possess and use source material in conjunction with uranium or thorium milling is required by the provisions of § 40.31(g) to include in a license application proposed specifications relating to milling operations and the disposition of tailings or waste resulting from such milling activities. This appendix establishes technical, financial, ownership, and long-term site surveillance requirements relating to the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located.

I. Technical Criteria

Criterion 1—Tailings or waste disposal areas shall be located at remote sites so as to reduce potential population exposures and the likelihood of human intrusions to the maximum extent reasonably achievable. To avoid proliferation of small waste disposal sites, byproduct material from in-situ extraction operations, such as residues from solution evaporation or contaminated control processes, and wastes from small remote above ground extraction operations shall preferably be disposed of at existing large mill tailings disposal sites; consideration will be given to the nature of the wastes, such as their volume and specific activity, and to costs and environmental impacts of transporting the wastes to a large disposal site.

Criterion 2—Tailings or waste disposal areas shall be located at sites where disruption and dispersion by natural forces are eliminated or reduced to the maximum extent reasonably achievable. In the selection of mill sites, primary emphasis shall be given to isolation of tailings or wastes, a matter having long-term impacts, as opposed to consideration only of short-term convenience or benefits, such as minimization of transportation or land acquisition costs. These criteria, which preclude location of tailings or mill site in an area which could be disrupted by natural events, such as flooding, assure that the requirements of Executive Order 11988 concerning floodplain management are met.

Criterion 3—The "prime option" for disposal of tailings is placement below grade, either in mines or specially excavated pits. The evaluation of alternative sites and disposal methods performed by mill operators in support of their proposed tailings disposal program (provided in applicant environmental reports) shall reflect this. In some instances, below-grade disposal may not be the most environmentally sound approach, such as might be the case if a high quality groundwater formation is relatively close to the surface or not very well isolated by overlying soils and rock. Also, geologic and topographic conditions might make full, below-grade burial impracticable; for example, bedrock may be sufficiently near surface that blasting would be required to excavate a disposal pit at excessive cost, and more suitable alternate sites are not available. In these cases, it must be demonstrated that an above-grade disposal program will provide reasonably equivalent isolation of the tailings from natural erosional forces.

Criterion 4—If tailings or wastes are disposed of above ground, the following siting and design criteria shall be adhered to:

(a) Upstream rainfall catchment areas must be utilized to decrease the size of the maximum possible flood which could erode or wash out sections of the tailings disposal area.

(b) Topographic features shall provide good wind protection.

(c) Embankment slopes shall be relatively flat after final stabilization to minimize erosion potential and to provide conservative factors of safety assuring long-term stability. The broad objective should be to contour final slopes to grades which are as close as

possible to those which would be provided if tailings were disposed of below grade; this would, for example, lead to slopes of about 10 horizontal to 1 vertical (10h:1v) or less steep. In general, slopes should not be steeper than about 5h:1v. Where steeper slopes are proposed, reasons why a slope less steep than 5h:1v would be impracticable should be provided, and compensating factors and conditions which make such slopes acceptable should be identified.

(d) A full, self-sustaining vegetative cover shall be established or riprap employed to retard wind and water erosion. Special concern shall be given to slopes of embankments.

(e) The impoundment shall not be located near a potentially active fault that could cause a maximum credible earthquake larger than that which the impoundment could reasonably be expected to withstand.

(f) The impoundment, where feasible, should be designed to incorporate features which will promote deposition. For example, design features which promote deposition of sediment suspended in any runoff which flows into the impoundment area might be utilized; the objective of such a design feature would be to enhance the thickness of cover over time.

Criterion 5—Steps shall be taken to reduce seepage of toxic materials into groundwater to the maximum extent reasonably achievable. This could be accomplished by lining the bottom of tailings areas and reducing the inventory of liquid in the impoundment by such means as dewatering tailings and/or recycling water from tailings impoundments to the mill. Furthermore, steps shall be taken during stockpiling of ore to minimize penetration of radionuclides into underlying soils; suitable methods include lining and/or compaction of ore storage areas. Also, tailings treatment, such as neutralization to promote immobilization of toxic substances shall be considered. The specific method, or combination of methods, to be used must be worked out on a site-specific basis. While the primary method of protecting groundwater shall be isolation of tailings and tailings solutions, disposal involving contact with groundwater will be considered provided supporting tests and analysis are presented demonstrating that the proposed disposal and treatment methods will preserve quality of groundwater.

Criterion 6—Sufficient earth cover, but not less than three meters, shall be placed over tailings or wastes at the end of milling operations to result in a *calculated* reduction in surface exhalation of radon from the tailings or wastes to less than two picocuries per square meter per second above natural background levels. Direct gamma exposure from the tailings or wastes should be reduced to background levels. Plastic or other synthetic caps should not be used to reduce radon exhalation from the tailings or wastes. Cover material must not include mine waste or rock that contain elevated levels of radium; soils used for cover must be essentially the same, as far as radioactivity is concerned, as that or surrounding soils.

Criterion 7—At least one full year prior to any major site construction, a preoperational monitoring program should be conducted to provide complete baseline data on a milling site and its environs prior to development. Throughout the construction and operation phase of the mill, an operational monitoring program should be conducted to demonstrate compliance with applicable standards and regulations; to evaluate performance of control systems and procedures; to evaluate environmental impacts of operation; and to detect potential long-term effects.

Criterion 8—Milling operations shall be conducted so that all airborne effluent releases are reduced to as low as is reasonably achievable below the limits in 10 CFR Part 20. The primary means of accomplishing this should be by means of emission controls. Institutional controls, such as extending the site boundary and exclusion area, may be employed to ensure that offsite exposure limits are met, but only after efforts have been taken to control emissions at the source to the maximum extent reasonably achievable. Notwithstanding the existence of individual dose standards, strict control of emissions is necessary to assure that population exposures are reduced to the maximum extent reasonably achievable and to avoid site contamination. The greatest potential sources of offsite radiation exposure (aside from radon exposure) are dusting from dry surfaces of the tailings disposal area not covered by tailings solution and emissions from yellowcake drying and packaging operations. Yellowcake drying and packaging operations should cease when effluent control devices are inoperative or not working at their reasonably expected best performance levels. To control dusting from tailings, that portion not covered by standing liquids should be wetted or chemically stabilized to prevent or minimize blowing and dusting to the maximum extent reasonably achievable. This requirement may be relaxed if tailings are effectively sheltered from wind, such as may be the case where they are disposed of below grade and the tailings surface is not exposed to wind. Consideration should be given in planning tailings disposal programs to methods which would allow phased covering and reclamation of tailings impoundments since this will help in controlling particulate and radon emissions during operation. To control dusting from diffuse sources, such as tailings and ore pads where automatic controls do not apply, operators should develop written operating procedures specifying the methods of control which will be utilized.

Criterion 8(A)—Daily inspections of tailings or waste retention systems shall be conducted and documented. The appropriate NRC regional office as indicated in Appendix D of 10 CFR Part 20, or the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, shall be immediately notified of any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas, and/or of any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected could lead to failure of the system and result in a release of tailings or waste into unrestricted areas.

II. Financial Criteria

Criterion 9—Financial surety arrangements shall be established by each mill operator to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas. The amount of funds to be ensured by such surety arrangements shall be based on cost estimates in an approved plan for (1) decontamination and decommissioning of mill buildings and the milling site to levels which would allow unrestricted use of these areas upon decommissioning, and (2) the reclamation of tailings and/or waste disposal areas in accordance with technical criteria delineated in Section I of this Appendix. The licensee shall submit this plan in conjunction with an environmental report that addresses the expected environmental impacts of the milling operation, decommissioning and tailings reclamation, and evaluates alternatives for mitigating these impacts. The surety shall cover the payment of the charge for long-term surveillance required by Criterion 10. In establishing specific surety arrangements, the licensee's cost estimates shall take into

account total capital costs that would be incurred if an independent contractor were hired to perform the decommissioning and reclamation work. In order to avoid unnecessary duplication and expense, the Commission will accept financial sureties that have been consolidated with financial or surety arrangements established to meet requirements of other Federal or State agencies and/or local governing bodies for such decommissioning, decontamination, reclamation, and long-term site surveillance. The licensee s surety mechanism will be reviewed from time to time by the Commission (generally at the time of license renewal) to assure sufficient funds for completion of the reclamation plan if the work had to be performed by the regulatory authority. The amount of surety liability should change in accordance with the predicted cost of future reclamation. Factors affecting reclamation cost estimates include: inflation; increases in the amount of disturbed land; and decommissioning and reclamation that has been performed. This will yield a surety that is at least sufficient at all times to cover the costs of decommissioning and reclamation of the areas that are expected to be disturbed before the next license renewal. The term of the surety mechanism must be open ended. Liability under the surety mechanism shall remain in effect until the reclamation program has been completed and approved. Financial surety arrangements generally acceptable to the Commission are:

(a) Surety bonds;
(b) Cash deposits;
(c) Certificates of deposit;
(d) Deposits of government securities;
(e) Letters or lines of credit; and
(f) Combinations of the above or such other types of arrangements as may be approved by the Commission.

Criterion 10—A charge of $250,000 to cover the costs of long-term surveillance shall be paid by each mill operator to the general treasury of the United States or to an appropriate State agency prior to the termination of a uranium or thorium mill license. If site surveillance requirements at a particular site are determined, on the basis of a site-specific evaluation, to be significantly greater than those specified in Criterion 12, variance in funding requirements may be specified by the Commission. The total charge to cover the costs of long-term surveillance shall be such that, with an assumed 1 percent annual real interest rate, the collected funds will yield interest in an amount sufficient to cover the annual costs of site surveillance. The charge will be adjusted annually to recognize inflation. The inflation rate to be used is that indicated by the change in the Consumer Price Index published by the U.S. Department of Labor, Bureau of Labor Statistics.

III. Site and Byproduct Material Ownership

Criterion 11—

A. These criteria relating to ownership of tailings and their disposal sites become effective on November 8, 1981, and apply to all licenses terminated, issued, or renewed after that date.

B. Any uranium or thorium milling license or tailings license shall contain such terms and conditions as the Commission determines necessary to assure that, prior to termination of the license, the licensee will comply with ownership requirements of this criterion for sites used for tailings disposal.

C. Title to the byproduct material licensed under this Part and land, including any interests therein (other than land owned by the United States or by a State) which is used for the disposal of any such byproduct materal, shall be transferred to the United States or the State in which such land is located, at the option of such State. For licenses issued before November 8, 1981, the NRC will review an applicant's plans to effect arrangements to allow for transfer of site and tailings ownership prior to issuance of a license.

D. If the Commission determines that use of the surface or subsurface estates, or both, of the land transferred to the United States or to a State will not endanger the public health, safety, welfare, or environment, the Commission will permit the use of the surface or subsurface estates, or both, of such land in a manner consistent with the provisions provided in these criteria. If the Commission permits such use of such land, it will provide the person who transferred such land with the right of first refusal with respect to such use of such land.

E. In the case of any uranium or thorium milling license in effect on November 8, 1981, the Commission may require, before the termination of such license, transfer of land and interests therein (including tailings) to the United States or a State in which such land is located at the option of such State as may be necessary to protect the public health, welfare, and the environment from any effects associated with byproduct material defined in this Part. In exercising this requirement, the Commission will take into consideration the status of the ownership of such land and interests therein (including tailings) and the ability of the licensee to transfer title and custody thereof to the United States or a State. For licenses issued before November 8, 1981, the NRC will review an applicant's plans to effect arrangements to allow for transfer of site and tailings ownership prior to issuance of a license. Subsequent renewals shall not disqualify licensees otherwise eligible for such consideration under this criterion.

F. Material and land transferred to the United States or a State in accordance with this Criterion shall be transferred without cost to the United States or a State other than administrative and legal costs incurred in carrying out such transfer.

G. The provisions of this Part respecting transfer of title and custody to land and tailings and wastes 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 this Part, the licensee shall enter into arrangements with the Commission as may be appropriate to assure the long-term surveillance of such lands by the United States.

IV. Long-Term Site Surveillance

Criterion 12—The final disposition of tailings or wastes at milling sites should be such that the need for ongoing active maintenance is not necessary to preserve isolation. As a minimum, annual site inspections shall be conducted by site owners where tailings, or wastes are stored to confirm the integrity of the stabilized tailings or waste systems and to determine the need, if any, for maintenance and/or monitoring. Results of the inspection shall be reported to the Commission within 60 days following each inspection. The Commission may require more frequent site inspections if, on the basis of a site-specific evaluation, such a need appears necessary due to the features of a particular tailings or waste disposal system.

13. Section 70.14 of 10 CFR 70 is proposed to be amended by deleting paragraph 70.14(b).

14. Section 70.23 of 10 CFR 70 is proposed to be amended by revising paragraph (a)(7) to read as follows:

§ 70.23 Requirements for the approval of applications.

(a) * * *

(7) Where the proposed activity is processing and fuel fabrication, scrap recovery, conversion of uranium hexafluoride, commercial waste disposal by land burial, or any other

activity which the Commission determines will significantly affect the quality of the environment, the Director of Nuclear Material Safety and Safeguards or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to Part 51 of this chapter, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect enviromental values. Commencement of construction prior to such conclusions shall be grounds for denial to posses and use special nuclear material in such plant or facility.

* * * * *

15. Section 30.11 of 10 CFR 30 is proposed to be amended by deleting paragraph 30.11(b).

16. Section 30.33 of 10 CFR 30 is proposed to be amended by revising paragraph (a)(5) to read as follows:

§ 30.33 General requirements for issuance of specific licenses.

(a) * * *

(5) In the case of an application for a license to receive and possess byproduct material for commercial waste disposal by land burial or for the conduct of any other activity which the Commission determines will significantly affect the quality of the environment, the Director of Nuclear Material Safety and Safeguards or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to Part 51 of this chapter, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such conclusion shall be grounds for denial of a license to receive and possess byproduct material in such plans or facility.

17. Section 150.3 of 10 CFR 150 is amended (effective immediately) by revising paragraph 150.3(c) to read as follows:

§ 150.3. Definitions.

* * * * *

(c) "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; or (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, including discrete surface wastes resulting from solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute "byproduct material" within this definition.

18. Section 150.15 of 10 CFR 150 is amended (effective immediately) by adding a new paragraph (a)(7), to read as follows:

§ 150.15 Persons not exempt.

(a) * * *

(7) Until November 8, 1981, the receipt of title to, ownership of, receipt of, possession of, use of, transfer of, delivery of, import or export of the byproduct material as defined in § 150.3(c)(2) of this Part: Provided, however, that during this period any State may exercise any authority under State law respecting such material in the same manner, and to the same extent, as permitted before enactment of the Uranium Mill Tailings Radiation Control Act of 1978. In case of conflict between Federal and State requirements regarding a license, the Federal license requirements shall prevail unless the State requirements are more stringent than the Federal requirements.

19. 10 CFR 150 is proposed to be amended by adding a new § 150.15a to read as follows:

§ 150.15a Continued Commission authority pertaining to byproduct material.

(a) Prior to the termination of any Agreement State license for byproduct material as defined in § 150.3(c)(2) of this Part, or for any activity that results in the production of such material, the Commission shall have made a determination that all applicable standards and requirements pertaining to such material have been met.

(b) After November 8, 1981, the Commission reserves the authority to establish minimum standards regarding reclamation, long term surveillance (i.e., continued site observation, monitoring and, in some cases where necessary, maintenance), and ownership of byproduct material as defined in § 150.3(c)(2) of this Part and of land used as a disposal site for such material. Such reserved authority includes:

(1) Authority to establish such terms and conditions as the Commission determines necessary to assure that, prior to termination of any license for byproduct material as defined in § 150.3(c)(2) of this Part, or for any activity that results in the production of such material, the licensee shall comply with decontamination, decommissioning, and reclamation standards prescribed by the Commission; and with ownership requirements for such materials and its disposal site as the Commission may establish;

(2) The authority to require that prior to termination of any license for byproduct material as defined in § 150.3(c)(2) of this Part or for any activity that results in the production of such material, that title to such byproduct material and its disposal site be transferred to the United States or the State in which such material and land is located, at the option of the State (provided such option is exercised prior to termination of the license);

(3) The authority to permit use of the surface or subsurface estates, or both, of the land transferred to the United States or a State pursuant to paragraph (b)(2) of this section in a manner consistent with the provisions of the Uranium Mill Tailings Radiation Control Act of 1978, provided that the Commission determines that such use would not endanger the public health, safety, welfare, or the environment;

(4) The authority to require, in the case of a license for any activity that produces such byproduct material (which license was in effect on November 8, 1981) transfer of land and material pursuant to paragraph (b)(2), of this section, taking into consideration the status of such material and land and interests therein, and the ability of the licensee to transfer title and custody thereof to the United States or a State;

(5) The authority to require the Secretary of the Department of Energy, other Federal agency, or State, whichever has custody of such property and materials, to undertake such monitoring, maintenance, and emergency measures as are necessary to protect the public health and safety and other actions as the Commission deems necessary to comply with the standards promulgated pursuant to the Uranium Mill Tailing Radiation Control Act of 1978; and

(6) The authority to enter into arrangements as may be appropriate to assure Federal long term surveillance (i.e., continued site observation of such disposal sites on land held in trust by the United States for any Indian tribe or land owned by an Indian tribe and subject to a restriction against alienation imposed by the United States.

20. 10 CFR 150 is proposed to be amended by adding a new § 150.31 to read as follows:

§ 150.31 Requirements for Agreement State regulation of byproduct material.

After November 8, 1981, in the licensing and regulation of byproduct material, as defined in § 150.3(c)(2) of this Part, or of any activity which results in the production of such byproduct material, an Agreement State shall require—

(a) Compliance with requirements established by the Commission pertaining to ownership of such byproduct material and disposal sites for such material; and

(b) Compliance with standards which shall be adopted by the Agreement 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, including requirements and standards promulgated by the Commission and the Administrator of the Environment Protection Agency pursuant to the Uranium Mill Tailing Radiation Control Act of 1978; and

(c) Procedures which—

(1) In the case of licenses under State law include—

(i) An opportunity, after public notice, for written comments and a public hearing, with a transcript.

(ii) An opportunity for cross examination, and

(iii) A written determination which is based upon findings included in such determination and upon the evidence presented during the public comment period and which is subject to judicial review;

(2) In the case of rulemaking, provide an opportunity for public participation through written comments or a public hearing and provide for judicial review of the rule;

(3) Require for each license which has a significant impact on the human environment a written analysis (which shall be available to the public before the commencement of any such proceedings) of the impact of such license, including any activities conducted pursuant thereto, on the environment. Such analysis shall include—

(i) An assessment of the radiological and nonradiological impacts to the public health of the activities to be conducted pursuant to such license;

(ii) An assessment of any impact on any waterway and groundwater resulting from such activities;

(iii) Consideration of alternatives, including alternative sites and engineering methods, to the activities to be conducted pursuant to such license; and

(iv) Consideration of the long term impacts, including decommissioning, decontamination, and reclamation impacts associated with activities to be conducted pursuant to such license, including the management of any byproduct material, as defined in § 150.3(c)(2) of this Part; and

(4) Prohibit any major construction activity with respect to such material prior to complying with the provisions of paragraph (c)(3) of this section.

(d) No Agreement State shall be required under paragraph (c) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted by the Commission.

21. 10 CFR 150 is proposed to be amended to add § 150.32 to read as follows:

§ 150.32 Funds for reclamation or maintenance of byproduct material.

(a) The total amount of funds an Agreement State collects, pursuant to a license for byproduct material as defined in § 150.3(c)(2) of this Part or for any activity that results in the production of such material, for reclamation or long term maintenance and monitoring of such material, shall, after November 8, 1981, be transferred to the United States if title and custody of such material and its disposal site is transferred to the United States upon termination of such license. Such funds include, but are not limited to, sums collected for long term surveillance (i.e., continued site observation, monitoring and, in some cases where necessary, maintenance). Such funds do not, however, include monies held as surety where no default has occurred and the reclamation or other bonded activity has been performed.

(b) If an Agreement State requires such payments for reclamation or long term surveillance (i.e., continued site observation, monitoring and, in some cases where necessary, maintenance), they payments must, after November 8, 1981, be sufficient to ensure compliance with those standards established by the Commission pertaining to bonds, sureties, and financial arrangements to ensure adequate reclamation and long term management of such byproduct material and its disposal site.

22. § 170.2 of 10 CFR 170 is proposed to be revised to read as follows:

§ 170.2 Scope.

Except for persons who apply for or hold the permits, licenses, or approvals exempted in § 170.11, the regulations in this part apply to a person who is an applicant for, or holder of, a specific byproduct material license issued pursuant to Part 40 of this chapter, a specific special nuclear material license issued pursuant to Part 70 of this chapter, a specific approval of spent fuel casks and shipping containers issued pursuant to Part 71 of this chapter, a specific request for approval of sealed sources and devices containing byproduct material, source material, or special nuclear material, or a production or utilization facility construction permit and operating license issued pursuant to Part 50 of this chapter, to routine safety and safeguards inspections of a licensed person, to a person who applies for approval of a reference standardized design of a nuclear steam supply system or balance of plant, for review of a facility site prior to the submission of an application for a construction permit, for review of a standardized spent fuel facility design, and for a special project review which the Commission completes or makes whether or not in conjunction with a license application on file or which may be filed.

23. § 170.3 of 10 CFR 170 is proposed to be amended by revising paragraphs 170.3 (a) and (c) to read as follows:

§ 170.3 Definitions.

As used in this part:

(a) "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; or (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, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute "byproduct material" within this definition.

* * * * *

(c) "Materials license" means a byproduct material license issued pursuant to Part 30 of this chapter, or a source or byproduct material license issued pursuant to Part 40 of this chapter, or a special nuclear material license issued pursuant to Part 70 of this chapter.

* * * * *

24. §170.31 of 10 CFR 170 is proposed to be amended by adding a new category 4.D to read as follows:

§ 170.31 Schedule of fees for materials licenses and other regulatory services.

* * * * *

4.D (1) Licenses specifically authorizing the receipt, possession, use, or ownership of tailings or wastes (i.e., byproduct material) produced in conjunction with heap-leaching operations.

Application	10,000
New License*	83,800
Renewal*	33,800
Amendment*	
Major*	20,800
Minor*	3,500
Administrative	150

(2) Licenses specifically authorizing the receipt, possession, use, or ownership of tailings or wastes (i.e., byproduct material) produced in conjunction with milling operations.

Production scale activity	
Application	7,000
New License*	52,500
Research and development scale activity	
Application	2,000
New License*	14,800
Renewal*	*13,800
Amendment*	
Major*	*4,200
Minor*	*760
Administrative	*150

(3) Licenses specifically authorizing the receipt, possession, use, or ownership of tailings or wastes (i.e., byproduct material) produced in conjunction with in situ leaching operations.

Production scale activity	
Application	2,500
New License*	16,900
Research and development scale activity	
Application	850
New License*	5,000
Renewal*	*14,800
Amendment*	
Major*	*1,400
Minor	*250
Administrative	*150

* * * * *

25. § 170.32 of 10 CFR 170 is proposed to be amended by adding a new category 4.D to read as follows:

§ 170.32 Schedule of fees for health and safety, and safeguards inspections for materials licenses.

* * * * *

4.D. Licenses specifically authorizing the receipt, possession, use, or ownership of tailings or wastes (i.e., byproduct material) produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

Health and Safety	1,800 One Per Year

* * * * *

The Commission finds that because the regulations supporting the general license must be effective immediately so as to prevent existing milling operations from being in technical violation of the Atomic Energy Act, good cause exists pursuant to 5 U.S.C. 553 to waive the 30-day comment period, as impracticable and contrary to the public interest, and make the amendments to 10 CFR 40.1, 40.2a, 40.3, 40.4, 40.26, 150.3, and 150.15 immediately effective. The Commission notes in this regard that informal written comments on this matter were solicited and received from industry, environmental groups, and several States (these comments may be found in the Commission's public document room in a memorandum dated May 9, 1979, from the Executive Legal Director to the Commission entitled "Staff Response to the Commission Request for Further Information Regarding SECY-79-88 'Timing of Certain Requirements of the Uranium Mill Tailings Radiation Control Act of 1978' "). Comments on these amendments are invited, however, and the new regulations remain subject to further modifications in response to such comments.

(Secs. 11e.(2), 81, 83, 84, 161b, 161x, 274, Pub. L. No. 83-703, 68 Stat. 948 et seq. (42 U.S.C. 2014e.(2), 2111, 2113, 2114, 2201b, 2201x, 2021))

Dated at Washington, D.C. this 22nd day of August 1979.

for the Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.

[FR Doc. 79-26516 Filed 8-23-79; 8:45 am]

BILLING CODE 7590-01-M

CFR Part 1135]

Docket No. AO-380]

Milk in the Southwestern Idaho-Eastern Oregon Marketing Area; Extension of Time for Filing Exceptions to the Recommended Decision on Proposed Marketing Agreement and Order

AGENCY: Agricultural Marketing Service, USDA.

ACTION: Extension of time for filing exceptions to proposed rule.

SUMMARY: This notice extends the time for filing exceptions to a recommended decision concerning a proposed order for the Southwestern Idaho-Eastern Oregon marketing area. Proponents requested additional time to complete their analysis of the decision.

DATE: Exceptions now are due on or before October 31, 1979.

ADDRESS: Exceptions (4 copies) should be filed with the Hearing Clerk, Room 1077, South Building, U.S. Department of Agriculture, Washington, D.C. 20250.

FOR FURTHER INFORMATION CONTACT: Maurice M. Martin, Marketing Specialist, Dairy Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250, (202-447-7183).

SUPPLEMENTARY INFORMATION: Prior documents in this proceeding:

Notice of hearing: Issued October 19, 1978; published October 24, 1978 (43 FR 49704).

Correction: Published October 27, 1978 (43 FR 50187).

Correction: Published November 13, 1978 (43 FR 52496).

Extension of time for filing briefs: Issued February 23, 1979; published February 28, 1979 (44 FR 11236).

Recommended decision: Issued August 13, 1979; published August 16, 1979 (44 FR 48128).

Notice is hereby given that the time for filing exceptions to the above listed recommended decision is hereby extended to October 31, 1979.

This notice is issued pursuant to the provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 301 *et seq.*), and the applicable rules of practice and procedure governing the formulation of marketing agreements and marketing orders (7 CFR Part 900).

Signed at Washington, D.C., on: September 14, 1979.

William T. Manley,

Deputy Administrator, Marketing Program Operations.

[FR Doc. 79-29088 Filed 9-18-79; 8:45 am]

BILLING CODE 3410-02-M

NUCLEAR REGULATORY COMMISSION

[10 CFR Parts 30, 40, 70, 150, and 170]

Criteria Relating to Uranium Mill Tailings and Construction of Major Plants; Correction

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Proposed rules; Corrections.

SUMMARY: On August 24, 1979, the U.S. Nuclear Regulatory Commission published for comments in the Federal Register (44 FR 50015) proposed amendments to its regulations 10 CFR Parts 30, 40, 70, 150, and 170 entitled, "Criteria Relating to Uranium Mill Tailings and Construction of Major Plants." Inadvertent and typographical errors in the published proposed amendments are identified and corrected herein.

ADDRESSES: Written comments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments on the proposed amendment may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

FOR FURTHER INFORMATION CONTACT: Don E. Harmon, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301/443-5910) or Hubert J. Miller, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301/427-4103).

SUPPLEMENTARY INFORMATION: On August 24, 1979, the U.S. Nuclear Regulatory Commission published for comments in the Federal Register (44 FR 50015) proposed amendments to its regulations 10 CFR Parts 30, 40, 70, 150, and 170 entitled, "Criteria Relating to Uranium Mill Tailings and Construction of Major Plants." Inadvertent and typographical errors in the published proposed amendments are identified and corrected as follows.

1. Page 50015, column 1, line 16 is corrected to read, "amendments to Parts 40 and 150 are".

2. Page 50015, column 1, line 62 is corrected to read, "proposed amendments may be examined".

3. Page 50015, column 2, line 50 is corrected to read, "to the Commission's regulations to".

4. Page 50016, column 1, line 45 is corrected to read, "Act of 1978 (92 Stat. 3021). This".

5. Page 50016, column 2, line 66 is corrected to read, "of similar hazardous material regulated".

6. Page 50016, column 3, line 32 is corrected to read, "UMTRCA makes it clear that the".

7. Page 50017, column 1, line 50 is corrected to read, "until November 8, 1981, for the".

8. Page 50017, column 2, line 23 is corrected to read, "operation of mills and disposition of".

9. Page 50017, column 2, line 57 is corrected to read, "These criteria were basically derived".

10. Page 50017, column 2, penultimate line is corrected to read, "surrounding environment; and final".

11. Page 50018, column 2, line 7 is corrected to read, "environmental impact statement or".

12. Page 50018, column 3, line 41 is corrected to read, "(92 Stat. 3021)".

13. Page 50018, column 3, line 53 is corrected to read, "be added to read as follows:"

14. Page 50019, column 1, line 11 is corrected to read, "milling operations are no longer active,".

15. Page 50019, column 1, line 38 is corrected to read, "Paragraphs 40.4(a-1), 40.4(e), and 40.4(l)".

16. Page 50019, column 2, line 9 is corrected to read, "30(1), any State or any political".

17. Page 50019, column 2, line 17 is corrected to read, "(1) With the exception of "byproduct".

18. Page 50019, column 2, line 21 is corrected to read, "meaning when used in the regulations in".

19. Page 50019, column 2, line 32 is corrected to read, "Tailings Radiation Control Act of 1978".

20. Page 50021, column 1, last line is corrected to read, "exhalation of radon from the tailings or".

21. Page 50021, column 2, line 7 is corrected to read, "not be used to reduce radon exhalation".

22. Page 50023, column 3, line 57 is corrected to read, "Mill Tailings Radiation Control Act of".

23. Page 50023, column 3, line 62 is corrected to read, "(i.e., continued site observation, monitoring and, in some cases where necessary, maintenance) of such".

24. Page 50024, column 2, line 56 is corrected to read, "the payments must, after November 8,".

25. Page 50024, column 3, line 8 is corrected to read, "pursuant to Parts 30 and 32–35 of this chapter, a specific source or byproduct material license issued pursuant to Part 40 of this chapter, a".

26. Page 50025, column 1, line 9 is corrected to read, "produced in conjunction with milling".

27. Page 50025, column 1, line 21 is corrected to read, "produced in conjunction with heap-leaching".

28. Page 50025, column 1, line 32 is corrected to read, "Minor . . . $760".

29. Page 50025, column 1, line 45 is corrected to read, "Renewal [4] . . . $4,300".

30. Page 50025, column 1, line 47 is corrected to read, "Major [4] . . . $1,200".

31. Page 50025, column 1, line 48 is corrected to read, "Minor . . . $250".

32. Page 50025, column 2, line 2 is corrected to read, "make the amendments to 10 CFR §§ 40.1,".

(Secs. 11e.(2), 81, 83, 84, 161b, 161o, 161x, 274; Pub. L. No. 83–703, 68 Stat. 940 et seq. (42 U.S.C. 2014e.(2), 2111, 2113, 2114, 2201b, 2201x, 2021)).

Dated at Washington, D.C., this 13th day of September 1979.

For the Nuclear Regulatory Commission.

Lee V. Gossick,

Executive Director for Operations.

[FR Doc. 79-29046 Filed 9-18-79; 8:45 am]

BILLING CODE 7590-01-M

[10 CFR Parts 50 and 70]

Production and Utilization Facility Licensees; Emergency Planning

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission is proposing to amend its regulations in order to require that all production and utilization facility licensees shall, as a condition of their license, submit emergency plans for NRC review and approval and maintain the emergency plans up to date. The Commission is also proposing to amend its regulations in order to require certain Special Nuclear Material Facility licensees (for processing and fuel fabrication, scrap recovery or conversion of uranium hexafluoride) to maintain the emergency plans up to date.

DATES: Comments should be submitted on or before November 19, 1979.

ADDRESSES: Interested persons are invited to submit written comments and suggestions on the proposed rule change and/or the supporting value/impact analysis to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Single copies of the value/impact analysis may be obtained on request from Michael T. Jamgochian, 301–443–5981. Copies of the value/impact analysis and of comments received by the Commission may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

FOR FURTHER INFORMATION CONTACT: Mr. Michael T. Jamgochian, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone: 301–443–5981)

SUPPLEMENTARY INFORMATION: The Nuclear Regulatory Commission is considering the adoption of amendments to its regulation, "Licensing of Production and Utilization Facilities," 10 CFR Part 50, which would require each holder of a license to submit for NRC review and approval the licensees emergency plans which meet the requirements of Appendix E to 10 CFR Part 50 and to require that these plans be maintained up to date.

In addition, the Nuclear Regulatory Commission is considering the adoption of an amendment to its regulation, "Special Nuclear Material," 10 CFR Part 70, which would require certain licensees to maintain up-to-date emergency plans which contain the elements of Section IV of Appendix E of 10 CFR Part 50.

The Commission is also considering, in a much broader perspective, a number of rule changes relating to planning for emergencies. To that end, an Advance Notice of Rulemaking was published in the Federal Register on July 17, 1979, 44 FR 41483 to request comments on a number of issues. The issue addressed in this Notice of Proposed Rulemaking is merely one aspect of the broader general issues set forth in that Advance Notice.

Paragraph 50.34(a)(10) of 10 CFR Part 50 requires that an applicant provide in the Preliminary Safety Analysis Report "a discussion of the applicant's preliminary plans for coping with emergencies." Appendix E sets forth items which shall be included in these plans. Paragraph 50.34(b)(6)(v) of 10 CFR Part 50 requires that an applicant provide in the Final Safety Analysis Report "plans for coping with emergencies, which shall include the items specified in Appendix E."

These paragraphs in 10 CFR Part 50 became effective in January 1971; therefore, they were not applicable to production and utilization facilities licensed prior to January 1971.

Discussion for Part 50: The Commission's interest in emergency planning is focused primarily on situations that may cause or may threaten to cause radiological risks affecting the health and safety of workers or the public or that may result in damage to property. The Commission and the public have recognized the increasing importance of emergency planning. Emergency plans should be directed toward mitigating the consequences of emergencies and should provide reasonable assurance that appropriate measures can and will be taken to protect health and safety and prevent damage to property in the event of an emergency. Although it is not practicable to develop a completely detailed plan encompassing every conceivable type of emergency situation, advance planning can create a high order of preparedness, including provisions of necessary equipment, supplies, and services, and ensure an orderly and timely decisionmaking process at times of stress.

Specifically, in January 1971, § 50.34 to 10 CFR Part 50 was modified to require submittal of the licensees emergency plans with Construction Permit and Operating License applications. Appendix E to Part 50 specifies items to be included in the emergency plans. This revision to our regulations has been implemented by the NRC staff for all power and test reactor licensees. While Appendix E did not, strictly speaking, apply to facilities licensed prior to January 1971, the staff, nevertheless, requested the older power and test reactor licensees to meet the terms of Appendix E. All power and test reactor licensees have emergency plans which conform to 10 CFR Part 50, Appendix E. For research reactors, however, the NRC staff is presently requesting that licensees comply with Appendix E when they apply for a renewal of their operating license. While § 50.90 would likely provide a regulatory basis for requiring compliance with Appendix E at the time of a license renewal, this proposed rule change would accelerate that process. It is the staff's intention to use Regulatory Guide 2.6 ("Emergency Planning for Research Reactors") to aid licensees in complying with the proposed rule change.

After careful consideration of the above, the Commission believes that a rule change should be promulgated which would specifically require

Rules and Regulations

Federal Register
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Wednesday, September 26, 1979

This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.
The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each month.

DEPARTMENT OF AGRICULTURE

Office of Environmental Quality

7 CFR Part 3100

Cultural and Environmental Quality; Change of Chapter and Part Names

AGENCY: Office of Environmental Quality, United States Department of Agriculture.

ACTION: Change of chapter and part names.

SUMMARY: On July 30, 1979, the Office of the Secretary, Department of Agriculture, published at 44 FR 44802–44803 final regulations setting forth policies and procedures for compliance with the National Environmental Policy Act. Pursuant to Secretary's Memorandum No. 1890 (Revised) (July 3, 1979), responsibility to administer those regulations is given to the Office of Environmental Quality (OEQ). Additionally OEQ will administer regulations for the enhancement, protection, and management of cultural resources with regard to Department of Agriculture activities, for which proposed regulations were published on July 9, 1979, at 44 FR 40258–40259.

In these previous publications Chapter XXXI was designated as "CULTURAL AND ENVIRONMENTAL QUALITY" and Part 3100 as "ENVIRONMENTAL MATTERS." As the two sets of regulations mentioned above are separate Subparts of Part 3100, Chapter XXXI and Part 3100 of Title 7 are changed to read as follows:

CHAPTER XXXI—OFFICE OF ENVIRONMENTAL QUALITY

PART 3100—CULTURAL AND ENVIRONMENTAL QUALITY

EFFECTIVE DATE: September 26, 1979.

FOR FURTHER INFORMATION CONTACT: Barry R. Flamm, Director, Office of Environmental Quality, USDA, Washington, D.C. 20250, Phone (202) 447–3965.

Dated: September 20, 1979.

Barry R. Flamm,
Director, Office of Environmental Quality.

[FR Doc. 79-29600 Filed 9-25-79; 8:45 am]
BILLING CODE 3410-01-M

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 40 and 150

Uranium Mill Tailings Licensing

AGENCY: Nuclear Regulatory Commission.

ACTION: Final regulations with request for comments: corrections.

SUMMARY: On August 24, 1979, the U.S. Nuclear Regulatory Commission published in the Federal Register (44 FR 50012) final regulations entitled, "Uranium Mill Tailings Licensing," along with a request for comments. Inadvertent and typographical errors in the published regulations are identified and corrected herein.

ADDRESSES: Written comments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments on these amendments may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

FOR FURTHER INFORMATION CONTACT: Don F. Harmon, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301/443–5910) or Hubert J. Miller, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301/427–4103).

SUPPLEMENTARY INFORMATION: On August 24, 1979, the U.S. Nuclear Regulatory Commission published in the Federal Register (44 FR 50012) final regulations entitled, "Uranium Mill Tailings Licensing," along with a request for comments. Inadvertent and typographical errors in the published regulations are identified and corrected as follows.

1. Page 50012, column 3 line 52 is corrected to read, "until November 8, 1981, for the".

2. Page 50013, column 1, line 4 is corrected to read, "commitments of resources. The".

3. Page 50013, column 2, line 5 is corrected to read, "make the amendments to 10 CFR §§ 40.1".

4. Page 50013, column 2, penultimate line is corrected to read, "Part are issued pursuant to the Atomic".

5. Page 50014, column 1, lines 2 and 3 are corrected to read, "Radiation Control Act of 1978 (92 Stat. 3021), any State or any political".

6. Page 50014, column 1, line 11 is corrected to read, "(1) With the exception of "byproduct."

7. Page 50014, column 1, line 15 is corrected to read, "meaning when used in the regulations in".

8. Page 50014, column 1, line 19 is corrected to read, "byproduct material as defined in this".

9. Page 50014, column 2, § 150.3(c) is corrected to read, "§ 150.3(c) "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; or (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, including discrete surface wastes resulting from solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute "byproduct material" within the definition."

(Secs. 11e.(2), 81, 83, 84, 161b, 161o, 174; Publ. L. No. 83-703, 68 Stat. 948 et seq. (42 U.S.C. 2014e. (2), 2111, 2113, 2114, 2201b, 2021))

Dated at Washington, D.C. this 13th day of September.

For the Nuclear Regulatory Commission.

Lee V. Gossick,
Executive Director for Operations.

[FR Doc. 79-29794 Filed 9-25-79; 8:45 am]
BILLING CODE 7590-01-M