



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 10 1992

Mr. Richard V. Sinding
Assistant Commissioner
Policy and Planning
New Jersey Department of Environmental
Protection and Energy
CN 402
Trenton, New Jersey 08625-0402

Dear Mr. Sinding:

This letter responds to your letter, dated May 13, 1992, to Mr. Thomas T. Martin, Regional Administrator for the U. S. Nuclear Regulatory Commission Region I Office, concerning jurisdiction over the waste areas and release criteria for the Heritage Minerals site in Manchester Township, New Jersey. I am responding personally to your concerns, because I want to assure you that the decisions concerning NRC jurisdiction over the Heritage site have received senior NRC headquarters management review and concurrence, and I would like to assist in bringing these issues to closure. Our review of the issues concerning jurisdiction over the waste areas included careful consideration of the decision not to assert NRC authority over the combined tailings area (also known as the recycled tailings area) as well as the salvage storage area.

The dialogue between the New Jersey Department of Environmental Protection and Energy (NJDEPE) and the NRC staff on this matter has been open and straight forward. We agree that the material in these areas is less than 0.05 percent thorium and uranium by weight and, therefore, does not meet the definition of source material. As such, in accordance with 10 CFR 40.13, we consider this material to be exempt from NRC requirements. We also agree that the combined tailings pile is the result of combining a portion of plant output (a waste stream), which may have met the definition of source material, with other outputs or waste streams. (It should be noted that the NRC has licensed Heritage Minerals to possess 15,000 kilograms of thorium and 300 kilograms of uranium in the form of monazite, and that this is unquestionably source material.)

Our positions diverge regarding the NRC decision that NRC authority does not extend to the approximately 102,500 cubic yards of combined tailings produced as described above. Since the NRC did not license any onsite process, there is no requirement to license the combined tailings pile. The decision not to license the combined tailings pile is adequately supported by the facts and the regulations. We did not attempt to refute each point raised by Dr. Stern's September 20, 1991, letter because they were adequately discussed in our previous correspondence to Dr. Stern, dated March 13, 1991, June 6, 1991, and December 19, 1991 (Enclosures 1, 2, and 3).

D-4

Another matter raised in your letter, and during conversations with NRC and NJDEPE staff, involves the concern that the decision by NRC not to license the combined tailings pile will prohibit federal government funding to clean-up this material. The NRC approves the licensee's decommissioning plan and oversees its implementation, but the NRC does not provide funding for remediation at NRC-licensed facilities. NRC regulations, however, require certain categories of licensees to provide financial assurance for decommissioning. Heritage has submitted a decommissioning funding plan as part of its application for a license. The licensee appears capable of funding clean-up at the Heritage site.

Your letter recommends that a more appropriate release criterion for contaminated material similar to that found at Heritage would be five picocuries per gram. You state that this recommendation is based on your experience with the cleanup of a ²²⁶Radium contaminated Superfund site in Montclair, New Jersey, so as to provide protection against elevated ²²²Radon levels. The Heritage site, on the other hand, involves thorium contamination. The NRC license issued to Heritage Minerals, Inc., is conditioned to require that, prior to license termination and before the area is released for unrestricted use, all areas in the plant buildings and at the monazite pile identified as having radiation levels above natural background be decontaminated to meet the criteria for release for unrestricted use shown in Enclosures 4 and 5. These criteria are based partly on assessments which would indicate a person in an unrestricted area would not be subjected to a significant radiation hazard. Specifically, the 10 picocuries per gram criterion for natural thorium (five pCi/g ²³²Th plus five pCi/g ²²⁸Th) if all daughters are present in equilibrium, is sufficiently low that no individual would receive an external dose in excess of about 10 microroentgens per hour above background. In our view, this external dose will be greater than any dose received from ²²⁰Radon inhalation.

On a related issue, the NRC staff is nearing a decision on the licensee's proposal to mix the monazite-rich waste stream with the combined tailings pile. We expect this decision by Fall 1992. We will inform Dr. Lipoti of your staff when that decision is made.

In summary, I reaffirm the NRC staff decision not to assert NRC authority over the combined tailings and salvage storage areas at Heritage Minerals, Inc. Although you may not agree with our decision, we appreciate your bringing your concerns to our attention.

AUG 10 1992

Mr. Richard V. Sinding

- 3 -

If you have any questions or if we can provide any technical assistance, please contact Mr. John Kinneman, Region I, or Dr. John E. Glenn, of this staff, at (215) 337-5252 or (301) 504-3418, respectively.

Sincerely,

Original signed by
Robert M. Bernero

Robert M. Bernero, Director
Office of Nuclear Materials Safety
and Safeguards

cc w/encl: J. Lipoti, NJDEPE

Enclosures:

1. NRC ltr dtd 03/13/91
2. NRC ltr dtd 06/6/91
3. NRC ltr dtd 12/19/91
4. 46 FR 52061
5. "Guidelines for Decontamination..."

DISTRIBUTION IMAB-926 *w/o Encls*

NMSS r/f	NRC File Center	JEGlenn	RBellamy, RI
RECunningham	JGreeves	IMNS Central File	JKinneman, RI
PSantiago	MLamastra	MMiller, RI	MBanerjee, RI
JAustin, w/inc	DRathbun, CA, w/inc	NMSS Dir. r/f	JHickey, w/inc
RFonner, w/inc	RBangart, w/inc	TMartin, RI, w/inc	STreby, w/inc
*See previous concurrence		<i>VMiller, OSP</i>	

OFC :IMAB *AS* :*IMAB :*IMAB :*IMSB :*LLWM :*LLWM :*OGC :*OGC

NAME:PSantiago:MLamastra:JEGlenn:JHickey:JAustin:RBangart:RFonner:STreby

DATE:07/30/92:07/09/92:07/09/92:07/10/92:07/09/92:07/22/92:07/13/92:0716/92

OFC :*D/IMNS :*D/IMNS :*RI :DD/NMSS :D/NMSS

NAME :JGreeves:RCunningham:TMartin :GARiccto :RBernero

DATE :07/24/92:07/28/92 :07/ /92 :07/ /92 :08/10/92

*J. Malero for Shelly Schwartz
OSP verbal Concur*

8/4/92

OFFICIAL RECORD COPY G:\santiago

*File # 1
7/28/92*

DCS

MAR 13 1991

Docket No. 040-08780

License No. SMB-1541

State of New Jersey
ATTN: Robert Stern, Chief
Bureau of Environmental Radiation
Department of Environmental Protection
Division of Environmental Quality
CN 415
Trenton, New Jersey 08625-0415

Gentlemen:

Subject: Heritage Minerals, Lakehurst, New Jersey

This refers to your letter dated September 28, 1990 and to various telephone conversations between Duncan White of your staff and Betsy Ullrich of this office regarding Heritage Minerals, Inc. (Heritage). This facility applied for a license from the NRC after an inspection determined that source material in the form of a concentrated monazite sand is produced as a result of separating local sand to recover certain mineral-rich components.

Heritage has since discontinued the processing of ore sand. They were licensed on December 13, 1990 to possess source material in the existing monazite sand pile for storage and transfer, and to perform decontamination and decommissioning of (1) the plant facilities where the source material was generated and (2) the monazite sand pile where source material is currently stored. A copy of NRC License No. SMB-1541 is enclosed. The NRC's jurisdiction does not extend to the ore (sand) storage sites designated by the licensee as the "original new feed area", "recycled tailings area" and the "salvage storage area". However, samples analyzed by the NRC and radiation level surveys performed by the licensee indicate that these areas may require remediation in accordance with the New Jersey Environmental Cleanup Responsibility Act (ECRA). Licensee representatives are aware of their responsibility for this material and are exploring disposal options.

We appreciate your cooperation in this matter. If you have any questions concerning NRC actions at this site, please contact me.

Sincerely,

Original Signed By:
John D. Kinneman

9104010063 910313
PDR ADOCK 04008780
C PDR

John D. Kinneman, Chief
Nuclear Materials Safety Section B
Division of Radiation Safety
and Safeguards

Enclosure: License No. SMB-1541

OFFICIAL RECORD COPY

LTR STATE OF NJ - 0001.0.0
03/12/91

296.053

RETURN ORIGINAL TO
REGION I

IE:07

cc:
Public Document Room (PDR)
Nuclear Safety Information Center (NSIC)
State of New Jersey
Duncan White, State of New Jersey

Heritage Minerals, Inc.
ATTN: John F. Lord
Manager
P.O. Box 12
Lakehurst, New Jersey 08733

Heritage Minerals, Inc.
ATTN: Max El Tawil
P.O. Box 12
Lakehurst, New Jersey 08733

bcc:
Region I Docket Room w/concurrences
M. Miller, RI
J. Kinneman, RI
E. Ullrich, RI

RI: *BR/S*
Ullrich/gcb
03/12/91

Kinneman
Kinneman

03/12/91
OFFICIAL RECORD COPY

LTR STATE OF NJ - 0002.0.0
03/12/91

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 39, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		
1. Heritage Minerals, Incorporated 2. Route 70, Mile Marker 41 P. O. Box 12 Lakehurst, New Jersey 08733	3. License number	SMB-1541
	4. Expiration date	December 31, 1995
	5. Docket or Reference No	040-08980
6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Natural thorium	A. Monazite	A. 15,000 kilograms
B. Natural uranium	B. Monazite	B. 300 kilograms
9. Authorized use		
A and B. 1. Decontamination of land and facilities. 2. For possession, packaging, storage, and transfer to authorized recipients of monazite-rich product.		

CONDITIONS

10. Licensed material may be used only at the licensee's facilities at Heritage Minerals, Incorporated, Route 70, Lakehurst, New Jersey.
11. A. Licensed material shall be used by, or under the supervision of, Tony V. Cuculic.
B. The Radiation Safety Officer for this license is Tony V. Cuculic.
12. This license does not authorize the production of source material in the form of monazite-rich sand during the processing of ore to extract titanium and zircon mineral sands.
13. This license does not authorize the processing of monazite-rich sand to extract or concentrate the monazite.
14. Plant buildings and equipment shall be cleaned so that fixed surface contamination does not exceed 3,000 disintegrations per minute (dpm) when measured over an area of 100 square centimeters (100 cm²) or 1,000 dpm/100 cm² averaged over an area not to exceed one square meter; and removable contamination does not exceed 200 dpm/100 cm² before releasing them for unrestricted use. For measurement purposes all contamination may be assumed to be natural thorium in equilibrium with its daughters.

9703140103

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

SMB-1541

Docket or Reference number

040-08980

(continued)

CONDITIONS

15. All areas in the plant buildings and at the monazite pile identified as having radiation levels above natural background on a map of the licensee's site attached to the letter dated September 27, 1990, shall be decontaminated to meet the criteria for release for unrestricted use described in Option 1 of the Branch Technical Position "Disposal or Onsite Storage of Thorium or Uranium Wastes from Past Operations," 46 Federal Register 52061 (October 23, 1981), before the area is released for unrestricted use. The licensee shall not release any of these areas for unrestricted use without specific, written authorization from the NRC. This license condition does not prohibit the licensee from making specific application to the NRC for approval of other limits or methods of disposal.
16. The licensee may transport licensed material in accordance with the provisions of 10 CFR 71, "Packaging and Transportation of Radioactive Material."
17. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Application dated March 6, 1989
 - B. Letter dated April 27, 1989
 - C. Letter dated August 21, 1989
 - D. Letter dated March 13, 1990
 - E. Letter dated July 25, 1990 with attachments
 - F. Letter dated August 23, 1990

Date

JAN 02 1991

For the U.S. Nuclear Regulatory Commission

Original Signed By:

By John D. Kinneman

Nuclear Materials Safety Branch
Region I

King of Prussia, Pennsylvania 19406

JUN 06 1991

Docket No. 040-08980

License No. SMB-1541

State of New Jersey
ATTN: Robert Stern, Ph.D., Chief
Bureau of Environmental Radiation
Department of Environmental Protection
Division of Environmental Quality
CN 415
Trenton, New Jersey 08625-0415

Dear Dr. Stern:

Subject: Heritage Minerals, Lakehurst, New Jersey

This refers to your letters dated February 9, 1991, March 20, 1991 and May 28, 1991 regarding Heritage Minerals, Inc. I provided some of the information requested in my letter dated March 13, 1991. Thank you for informing us of the results of your inspection at the site. We inspected the site on April 10, 1991 and a copy of the results of the inspection are enclosed for your information.

The following information is provided in response to the specific concerns expressed in your letters.

With regard to your concern about the controls on the monazite pile, the fence was standing and posted correctly during the April 10, 1991 inspection. The Radiation Safety Officer and the Manager are the only employees currently at the Heritage Minerals site and the gate to the site is locked when neither employee is present. This represents adequate control of access to the monazite pile at this time. If long-term on-site storage of the monazite is necessary, we may require the licensee to further contain the monazite to prevent erosion by wind or rain. We are currently considering the licensee's proposal to dispose of the monazite pile by dilution with clean sand as described in their letter dated February 28, 1991. We will keep you informed of our progress on this request.

With regard to your concern about the area between the dry mill and the wet mill, our inspector performed surveys during the inspection using a Ludlum Model 19 micro R meter. The highest radiation levels measured were 400 microrentgen per hour near the kiln outside the dry mill. The licensee is aware that soil outside the wet and dry mills is contaminated from spillage of feed sand and monazite, and plans to clean these areas following disposition of the monazite. Cleaning of equipment inside the mills is complete, but final surveys are not planned until remedial activities outside the mills and disposal of the monazite is complete.

110027

OFFICIAL RECORD COPY

LTR NEW JERSEY - 0001.0.0
06/06/91

9106120106 910606
REG1 LIC40
SMB-1541 PDR

IE 07

JUN. 06 1991

State of New Jersey

2

You asked for NRC's legal rationale for not licensing various areas and materials on the Heritage property. As part of the licensing process, the NRC staff concluded, based on the advice of the Office of General Counsel (OGC), that the NRC does not have jurisdiction over the areas on the Heritage Mineral property known as the "original new feed area", "recycled tailings area" (the blue area on the Perkins/Cole analysis) and the "salvage storage area". The sand in these areas contains less than 0.05% source material by weight, a concentration which does not meet the definition of source material in 10 CFR 40.4 and is defined in 10 CFR 40.13 as exempt from NRC regulations and the requirement for an NRC license. These areas were generated as a result of the primary activity of Heritage Minerals, Inc. which is the separation of minerals such as rutile and ilmenite from the sand, an activity which is not regulated by the NRC. The waste streams resulting from an unregulated activity are not within the jurisdiction of the NRC unless they meet the definition of source material. Since these areas are not source material and were not generated by an NRC licensed or licensable operation, they cannot be regulated by NRC. In fact, many of these areas were generated at a time when Heritage was using a process which did not produce a monazite-rich waste stream. Furthermore, because the primary activity does not require an NRC license, the staff concluded that the NRC cannot use the authority in the National Environmental Policy Act (NEPA) to regulate these areas of the site. Therefore, the staff concluded it can regulate only the monazite-rich waste stream since it contains 0.05% source material by weight and the areas in and around the plant which are contaminated by this material.

We understand that there are plans to review the Branch Technical Position, but no revision is yet available. The other documents you requested are enclosed.

Thank you for your cooperation in this matter. Please contact me if you have any other questions.

Sincerely,

Original Signed By:
John D. Kinneman

John D. Kinneman, Chief
Nuclear Materials Safety Section B
Division of Radiation Safety
and Safeguards

Enclosures:

1. Letter dated February 21, 1989, including Inspection Report No. 99990001/89-001 and Notice of Violation.
2. Letter dated July 25, 1990 from Heritage Minerals, Inc. to NRC, including Map A.
3. Letter from NRC to Heritage dated January 2, 1991
4. License No. SMB-1541
5. Letter from NRC to Heritage dated March 22, 1991.
6. Letter from NRC to Heritage dated May 22, 1991.

OFFICIAL RECORD COPY

LTR NEW JERSEY - 0001.0.1
06/06/91



ENCLOSURE 2

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION 1
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

DEC 10 1991

License No. SMB-1541

Docket No. 040-08980

State of New Jersey
ATTN: Robert Stern, Ph.D., Chief
Bureau of Environmental Radiation
CN 415
Trenton, New Jersey 08625-6390

Dear Dr. Stern:

SUBJECT: Heritage Minerals, Inc.

This refers to your letter dated September 20, 1991, regarding the Heritage Minerals, Inc. facility in Lakeland, New Jersey. As you requested, we have reviewed our decisions concerning NRC jurisdiction over the various areas at the Heritage Minerals, Inc. site known as the "original new feed area", the "recycled tailings area", and the "salvage storage area".

Based on this review, we have concluded that our decisions in this area were based on both policy and legal considerations and that our previous decision is still the proper course. The NRC is not extending license authority at Heritage Minerals to any site areas beyond the operational plant and the monazite pile.

We appreciate your interest in this matter.

Sincerely,


John D. Kinneman, Chief
Research, Development &
Decommissioning Section
Division of Radiation Safety
and Safeguards

The Assistant Secretary finds that good cause exists for not publishing the supplement to the Puerto Rico State Plan as a proposed change and making the Regional Administrator's approval effective upon publication for the following reasons:

1. The standards are identical to the Federal standards which were promulgated in accordance with Federal law meeting requirements for public participation.

2. The standards were adopted in accordance with the procedural requirement of State Law and further participation would be unnecessary.

The decision is effective October 23, 1981.

(Sec. 18 Pub. L. 91-596, 84 Stat. 1608 (29 U.S.C. 667))

Signed at New York City, New York, this 15th day of June 1981.

Roger A. Clark,
Regional Administrator.

(FR Doc. 81-25743 Filed 10-23-81; 8:45 am)
BILLING CODE 4810-35-M

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards, Subcommittee on Callaway Plant; Location Change

The ACRS Subcommittee on Callaway Plant will hold a meeting on November 4 and 5, 1981, at the HOLIDAY INN-WEST, 1900 I-70 Drive Southwest, Columbia, MO instead of the Hilton Inn.

Notice of this meeting was published in the Federal Register on October 19, 1981 (46 FR 51329), and all other items remain the same except for the location change as indicated above.

Dated: October 19, 1981.

John C. Hoyle,
Advisory Committee, Management Officer,

(FR Doc. 81-25723 Filed 10-23-81; 8:45 am)
BILLING CODE 7880-01-M

Disposal or Onsite Storage of Thorium or Uranium Wastes From Past Operations

AGENCY: Nuclear Regulatory Commission (NRC).

ACTION: Discussion of options for NRC approval of applications for disposal or onsite storage of thorium or uranium wastes; interim use and public comment.

SUMMARY: This notice discusses five options for NRC approval of disposal or onsite storage of thorium or uranium wastes from past nuclear operations. The options are contained in a Branch

Technical Position for administration by the Uranium Fuel Licensing Branch, Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety and Safeguards.

DATES: Comments on the options for disposal or onsite storage of thorium or uranium are encouraged. Such comments will be considered in any subsequent revision of the Branch Technical Position. Comments are due December 22, 1981.

Note.—Comments received after the expiration date will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments filed on or before that date.

FOR FURTHER INFORMATION CONTACT: Ralph G. Page, Chief, Uranium Fuel Licensing Branch, Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety and Safeguards, Washington, D.C. 20535, telephone 301-427-4308.

SUPPLEMENTARY INFORMATION:

I. Introduction

Some of the sites formerly used for processing thorium and uranium are known today to be contaminated with residual radioactive materials. Some are currently covered by NRC licenses. Others were once licensed, but the licenses to possess and use material have expired. In many cases, the total amount of contaminated soil is large, but the activity concentrations of radioactive materials are believed sufficiently low to justify their disposal on privately owned lands or storage onsite rather than their transport to a licensed radioactive materials disposal (commercial) site. In many instances packaging and transporting these wastes to a licensed disposal site would be too costly and not justified from the standpoints of risk to the public health or cost-benefit. Furthermore, because of the total volume of these wastes, limited commercial waste disposal capacity, and restrictions placed on receipt of long-lived wastes at commercial sites, it is not presently feasible to dispose of these wastes at commercial low-level waste disposal sites.

Effective January 28, 1981, NRC regulations in 10 CFR 20, "Standards for Protection Against Radiation", were amended (45 FR 71761-71762) to delete § 20.304 which provided general authority for disposal of radioactive materials by burial in soil. Under the amended regulations, licensees must apply for and obtain specific NRC approval to dispose of radioactive materials in this manner under the provisions of 10 CFR 20.302. A case-by-case review was believed needed to

assure that burial of radioactive wastes would not present an unreasonable health hazard at some future date.

The deleted provisions of § 20.304 previously permitted burial of up to 100 millicuries of thorium or natural uranium at any one time, with a yearly limitation of 12 burials for each type of material at each site. The only disposal standards specified were (1) burial at a minimum depth of four feet, and (2) successive burials separated by at least six feet. Thus a total of 1.2 curies of these materials were permitted to be disposed of each year by burial in a 12 foot by 18 foot or larger plot of ground.

Under the amended regulations, it is incumbent on an applicant who wants to bury radioactive wastes to demonstrate that local land burial is preferable to other disposal alternatives. The evaluation of the application takes into account the following information:

Types and quantities of material to be buried

Packaging of waste

Burial location

Characteristics of burial site

Depth of burial

Access restrictions to disposal site

Radiation safety procedures during disposal operations

Recordkeeping

Local burial restrictions, if any

For applications involving disposal of soils contaminated with low level concentrations of thorium and uranium (other than concentrations not exceeding EPA cleanup standards), the matters of principal importance are:

Concentrations of thorium and uranium (either in secular equilibrium with their daughters or without daughters present)

Volume of contaminated soil

Costs for offsite and onsite disposal

Availability of offsite burial space

Disposal site characteristics

Depth of burial and accessibility of buried wastes

State and local government views

II. Branch Technical Position

There are five acceptable options for disposal or onsite storage of thorium and uranium contaminated wastes. Applications for disposal or storage will be approved if the guidelines discussed under any option are met. Applications for other methods of disposal may be submitted and these will be evaluated on their own merits.

1. Disposal of acceptably low concentrations (which meet EPA cleanup standards) of natural thorium with daughters in secular equilibrium, depleted or enriched uranium, and

uranium ores with daughters in secular equilibrium with no restriction on burial method.

Under this option, the concentrations of natural thorium and depleted or enriched uranium wastes are set sufficiently low that no member of the public is expected to receive a radiation dose commitment from the disposed materials in excess of 1 millirad per year to the lung or 3 millirads per year to the bone from inhalation and ingestion, under any foreseeable use of the material or property. These radiation dose guidelines were recommended by the Environmental Protection Agency (EPA) for protection against transuranium elements present in the environment as a result of unplanned contamination (42 FR 60956-60959). In addition, the concentrations are sufficiently low so that no individual may receive an external dose in excess of 10 microcentigrays per hour above background. This is compatible with guidelines EPA proposed as cleanup standards for inactive uranium processing sites (46 FR 2556-2563).

For natural uranium ores having daughters in equilibrium, the concentration limit is equal to that set by the EPA (46 FR 2556-2563) for radium-226 (i.e., 5 pCi/gm, including background) and its decay products.

The concentrations specified below are believed appropriate to apply. It is expected, however, that currently licensed operations will be conducted in such a manner as to minimize the possibility of soil contamination and when such occurs the contamination will be reduced to levels as low as reasonably achievable.

have back ground

Kind of material	Concentration (pCi/gm)
Natural Thorium (Th-232 plus Th-230) if all daughters are present and in equilibrium	10
Depleted Uranium	20
Enriched Uranium	20
Natural Uranium Ores (U-238 plus U-235) if all daughters are present and in equilibrium	10

The analysis upon which the Branch Technical Position is based is available for inspection at the Commission's Public Document Room at 1717 H St., N.W., Washington, D.C.

The concentrations specified under this option may be compared with naturally occurring thorium and uranium ore concentrations of 1.5 pCi/gm in igneous rock and uranium concentrations of 120 pCi/gm in Florida phosphate rock and 50-80 pCi/gm in Tennessee bituminous shale. Concentration limits for natural thorium

and natural uranium ore wastes containing daughters not at secular equilibrium can be calculated on a case-by-case basis using the applicable isotopic activities data.

2. Disposal of certain low concentrations of natural thorium with daughters in secular equilibrium and depleted or enriched uranium with no daughters present when buried under prescribed conditions with no subsequent land use restrictions and no continuing NRC licensing of the material.

Under this option the concentrations of natural thorium and uranium are set sufficiently low so that no member of the public will receive a radiation dose exceeding those discussed under option 1 when the wastes are buried in an approved manner absent intrusion into the burial grounds. This option will require establishing prescribed conditions for disposal in the license, such as depth and distribution of material, to minimize the likelihood of intrusion. Burial will be permitted only if it can be demonstrated that the buried materials will be stabilized in place and not be transported away from the site.

Acceptability of the site for disposal will depend on topographical, geological, hydrological and meteorological characteristics of the site. At a minimum, burial depth will be at least four feet below the surface. In the event that there is an intrusion into the burial ground, no member of the public will likely receive a dose in excess of 170 millirems to a critical organ. An average dose not exceeding 170 millirems to the whole body for all members of a general population is recommended by international and national radiation expert bodies to limit population doses. With respect to limiting doses to individual body organs, the concentrations are sufficiently low that no individual will receive a dose in excess of 170 millirems to any organ from exposure to natural thorium, depleted uranium or enriched uranium.

The average activity concentration of radioactive material that may be buried under this option in the case of natural thorium (Th-232 plus Th-230) is 50 pCi/gm, if all daughters are present and in equilibrium; for enriched uranium it is 100 pCi/gm if the uranium is soluble and 250 pCi/gm if insoluble; for depleted uranium it is 100 pCi/gm if the uranium is soluble and 300 pCi/gm if insoluble. Natural uranium ores containing radium-226 and its daughters are not included under this option, because of possible radon 222 emanations and resultant higher than acceptable exposure of individuals in private residences if houses were built over buried materials.

3. Disposal of low concentrations of natural uranium ores, with all daughters in equilibrium, when buried under prescribed conditions in areas zoned for industrial use and the recorded title documents are amended to state that the specified land contains buried radioactive materials and are conditioned in a manner acceptable under state law to impose a covenant running with the land that the specified land may not be used for residential building. (There is no continuing NRC licensing of the material.)

Disposal will be approved if the burial criteria outlined in option 2 (including burial at a minimum of 4 feet) are met. Depending upon local soil characteristics, burials at depths greater than 4 feet may be required. In order to assure protection against radon 222 releases (daughter in decay chain of uranium 238 and uranium 234), it is necessary that the recorded title documents be amended to state in the permanent land records that no residential building should be permitted over specified areas of land where natural uranium ore residues (U-238 plus U-234) in concentrations exceeding 10 pCi/gm has been buried. Industrial building is acceptable so long as the concentration of buried material does not exceed 40 pCi/gm of uranium (i.e., Ra-226 shall not exceed 20 pCi/gm).

4. Disposal of land-use-limited concentrations of natural thorium or natural uranium with daughters in secular equilibrium and depleted or enriched uranium without daughters present when buried under prescribed conditions in areas zoned for industrial use and the recorded title documents are amended to state that the land contains buried radioactive material and are conditioned in a manner acceptable under state law to impose a covenant running with land that the land (1) may not be excavated below stated depths in specified areas of land unless cleared by appropriate health authorities, (2) may not be used for residential or industrial structures over specified areas where radioactive materials in concentrations higher than specified in options 2 and 3 are buried, and (3) may not be used for agricultural purposes in the specified areas. (There is no continuing NRC licensing of the disposal site.)

Under this option, conditions of burial will be such that no member of the public will receive radiation doses in excess of those discussed under option 1 absent intrusion into the burial ground. Criteria for disposal under these conditions is predicated upon the assumption that intentional intrusion is less likely to occur if a warning is given

in land documents of record not to excavate below burial depths in specified areas of land without clearance by health authorities; not to construct residential or industrial building on the site; and not to use specified areas of land for agricultural purposes. Because of this, we believe it appropriate to apply a maximum critical organ exposure limit of 500 millirems per year to thorium and uranium buried under this restriction instead of 170 millirems as used in options 2 and 3. In addition, any exposure to such materials is likely to be more transient than assumed (essentially continual exposure) under those options. These two factors combine to increase the activity concentration limits calculated under option 2 by about 10. Thus, the average concentration that may be buried under this option for thorium (Th-232 plus Th-232) is 500 pCi/gm if all daughters are present and in equilibrium; for enriched uranium it is 1000 pCi/gm if the uranium is soluble and 2500 pCi/gm if insoluble; and for depleted uranium it is 1000 pCi/gm if the uranium is soluble and 3000 pCi/gm if insoluble.

With respect to natural uranium with daughters present and in equilibrium, the concentration that may be buried under this option is 200 pCi/gm of U-238 plus U-234, i.e., 100 pCi/gm Ra-226. This concentration is based on a limited exposure of 2.4 hours per day to limit the radon dose to less than 0.5 working level month (WLM) which is equivalent to continuous exposure to 0.02 working level (WL). Depending upon local soil characteristics, burials at depths greater than 4 feet may be required.

SUMMARY OF MAXIMUM CONCENTRATIONS PERMITTED UNDER DISPOSAL OPTIONS

Kind of Material	Disposal Criteria			
	1 ¹	2 ²	3 ³	4 ⁴
Natural Thorium (Th-232 + Th-232) with daughters present and in equilibrium	10	90		900
Natural Uranium (U-238 + U-234) with daughters present and in equilibrium	10		40	300
Depleted Uranium				
Soluble	30	100		1,000
Insoluble	30	300		3,000
Enriched Uranium				
Soluble	30	100		1,000
Insoluble	30	300		3,000

¹ Based on EPA clearance standards.
² Concentrations based on limiting individual doses to 170 mrem/yr.
³ Concentration based on limiting equivalent exposure to 0.02 working level of WLM.
⁴ Concentrations based on limiting individual doses to 500 mrem/yr and, in case of natural uranium, limiting exposure to 0.02 working level of WLM.

5. Storage of licensed concentrations of thorium and uranium onsite pending

the availability of an appropriate disposal site.

When concentrations exceed those specified in option 4, long term disposal other than at a licensed disposal site will not normally be a viable option under the provisions of 10 CFR 20.302. In such cases, the thorium and uranium may be permitted to be stored onsite under an NRC license until a suitable method of disposal is found. License conditions will require that radiation doses not exceed those specified in 10 CFR Part 20 and be maintained as low as reasonably achievable.

Before approving an application to dispose of thorium or uranium under options 2, 3, or 4, NRC will solicit the view of appropriate State health officials within the State in which the disposal would be made.

Dated at Silver Spring, Maryland this 19th day of October, 1981.

Richard E. Cunningham,

Director, Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety and Safeguards.

(FR Doc. 81-30730 Filed 10-23-81; 8:45 am) BILLING CODE 7550-01-01

OFFICE OF PERSONNEL MANAGEMENT

Postponement of Application Deadline for Fund-Raising Privileges Among Federal Employees by Private Voluntary Organizations

Section 5.43 of the "Manual on Fund-Raising Within the Federal Service for Voluntary Health and Welfare Agencies" sets December 1 of each year as the deadline by which national voluntary agencies must submit applications for participation in the Combined Federal Campaign (CFC) to be conducted in the fall of the following year. This year's deadline is being postponed from December 1, 1981, to February 1, 1982. In June 1981, the U.S. Office of Personnel Management (OPM) announced that the eligibility criteria for participation in the 1982-83 CFC are being reviewed. The deadline date is being postponed to avoid national voluntary agencies having to revise their applications to meet eligibility criteria which may be changed.

Donald J. Devine,
 Director.

(FR Doc. 81-30730 Filed 10-23-81; 8:45 am) BILLING CODE 4325-01-01

OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE

Resolution of Complaint of Price-Undercutting of Subsidized Cheese Imports

On October 1, 1981, the United States Trade Representative received a letter from the Secretary of Agriculture informing him of the Secretary's finding that imported Grade A Swiss type cheese produced in Finland has been offered for sale in the United States at duty-paid wholesale prices which are five cents per pound less than the domestic wholesale market price of similar cheese produced in the United States.

In accordance with Section 702(c)(2) of the Trade Agreements Act of 1979 (the Act) (19 U.S.C. 1202 note), the Office of the United States Trade Representative notified Finland of the price undercutting determination made by the Secretary of Agriculture, requested that corrective action be taken, and asked for appropriate assurances concerning the commitments made in the Arrangement Between the United States and Finland Concerning Cheese.

On October 14, 1981, Finland notified the United States Trade Representative that measures have been taken to ensure that the duty-paid wholesale price of imported Grade A Swiss type cheese produced in Finland will not be less than the domestic wholesale market price of similar cheese produced in the United States. In addition, Finland gave assurance that it will respect the price commitments in the Arrangement. Since the above notification by Finland has occurred within the 15-day period provided in Section 702(c)(3) of the Act, the United States Trade Representative has notified the Secretary of Agriculture of his belief that no further action is required.

William E. Brock,
 United States Trade Representative.

(FR Doc. 81-30730 Filed 10-23-81; 8:45 am) BILLING CODE 3150-01-01

SECURITIES AND EXCHANGE COMMISSION

(Release No. 22239; 70-6650)

Arkansas Power & Light Co.; Proposed Issuance and Sale of First Mortgage Bonds

October 19, 1981.
 Arkansas Power & Light Company

**GUIDELINES FOR DECONTAMINATION OF FACILITIES AND EQUIPMENT
PRIOR TO RELEASE FOR UNRESTRICTED USE
OR TERMINATION OF LICENSES FOR BYPRODUCT, SOURCE,
OR SPECIAL NUCLEAR MATERIAL**

**U.S. Nuclear Regulatory Commission
Division of Industrial and
Medical Nuclear Safety
Washington, DC 20555**

August 1987

The instructions in this guide, in conjunction with Table 1, specify the radionuclides and radiation exposure rate limits which should be used in decontamination and survey of surfaces or premises and equipment prior to abandonment or release for unrestricted use. The limits in Table 1 do not apply to premises, equipment, or scrap containing induced radioactivity for which the radiological considerations pertinent to their use may be different. The release of such facilities or items from regulatory control is considered on a case-by-case basis.

1. The licensee shall make a reasonable effort to eliminate residual contamination.
2. Radioactivity on equipment or surfaces shall not be covered by paint, plating, or other covering material unless contamination levels, as determined by a survey and documented, are below the limits specified in Table 1 prior to the application of the covering. A reasonable effort must be made to minimize the contamination prior to use of any covering.
3. The radioactivity on the interior surfaces of pipes, drain lines, or ductwork shall be determined by making measurements at all traps, and other appropriate access points, provided that contamination at these locations is likely to be representative of contamination on the interior of the pipes, drain lines, or ductwork. Surfaces of premises, equipment, or scrap which are likely to be contaminated but are of such size, construction, or location as to make the surface inaccessible for purposes of measurement shall be presumed to be contaminated in excess of the limits.
4. Upon request, the Commission may authorize a licensee to relinquish possession or control of premises, equipment, or scrap having surfaces contaminated with materials in excess of the limits specified. This may include, but would not be limited to, special circumstances such as razing of buildings, transfer of premises to another organization continuing work with radioactive materials, or conversion of facilities to a long-term storage or standby status. Such requests must:
 - a. Provide detailed, specific information describing the premises, equipment or scrap, radioactive contaminants, and the nature, extent, and degree of residual surface contamination.
 - b. Provide a detailed health and safety analysis which reflects that the residual amounts of materials on surface areas, together with other considerations such as prospective use of the premises, equipment, or scrap, are unlikely to result in an unreasonable risk to the health and safety of the public.

5. Prior to release of premises for unrestricted use, the licensee shall make a comprehensive radiation survey which establishes that contamination is within the limits specified in Table 1. A copy of the survey report shall be filed with the Division of Industrial and Medical Nuclear Safety, U. S. Nuclear Regulatory Commission, Washington, DC 20555, and also the Administrator of the NRC Regional Office having jurisdiction. The report should be filed at least 30 days prior to the planned date of abandonment. The survey report shall:

- a. Identify the premises.
- b. Show that reasonable effort has been made to eliminate residual contamination.
- c. Describe the scope of the survey and general procedures followed.
- d. State the findings of the survey in units specified in the instruction.

Following review of the report, the NRC will consider visiting the facilities to confirm the survey.

TABLE 1
ACCEPTABLE SURFACE CONTAMINATION LEVELS

NUCLIDES ^a	AVERAGE ^{b c f}	MAXIMUM ^{b d f}	REMOVABLE ^{b e f}
U-nat, U-235, U-238, and associated decay products	5,000 dpm α /100 cm ²	15,000 dpm α /100 cm ²	1,000 dpm α /100 cm ²
Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129	100 dpm/100 cm ²	300 dpm/100 cm ²	20 dpm/100 cm ²
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100 cm ²	3000 dpm/100 cm ²	200 dpm/100 cm ²
Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above.	5000 dpm $\beta\gamma$ /100 cm ²	15,000 dpm $\beta\gamma$ /100 cm ²	1000 dpm $\beta\gamma$ /100 cm ²

^aWhere surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.

^bAs used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

^cMeasurements of average contaminant should not be averaged over more than 1 square meter. For objects of less surface area, the average should be derived for each such object.

^dThe maximum contamination level applies to an area of not more than 100 cm².

^eThe amount of removable radioactive material per 100 cm² of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.

^fThe average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/hr at 1 cm and 1.0 mrad/hr at 1 cm, respectively, measured through not more than 7 milligrams per square centimeter of total absorber.