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

October 19, 1999

Docket No. 040-08980 License No. SMB-1541

Anthony J. Thompson, Esquire
ShawPittman
2300 N Street, NW
Washington, DC 20037-1128

SUBJECT: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT - HERITAGE MINERALS, INC. (HMI)

Dear Mr. Thompson:

Enclosed are copies of the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) prepared to support renewal and amendment of License No. SMB-1541, issued for HMI's Lakehurst, New Jersey site. The EA and FONSI were publicly noticed in the September 1, 1999 Federal Register Notice (64 Federal Register 47872-47877), and contained a Notice of Opportunity for Hearing in accordance with Subpart L of 10 CFR Part 2.

We have not received a request for hearing within 30 days of publication in the Federal Register as prescribed by 10 CFR 2.1205(d)(1). Accordingly, remediation activities described in the Final Status Survey Plan should be implemented so that decommissioning of the site will be completed within the 24 month period allotted by 10 CFR 40.42(h)(1).

If you have any questions regarding this action, please contact me at (610) 337-5216. Thank you for your cooperation.

Sincerely,

Craig Z. Gordon, Senior Health Physicist
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety

Enclosures: As stated

cc:
John F. Lord, P.E.
Pat Gardner, NJDEP

NUCLEAR REGULATORY COMMISSION

Docket No. 40-08980

ENVIRONMENTAL ASSESSMENT, FINDING OF NO SIGNIFICANT IMPACT, AND NOTICE OF OPPORTUNITY FOR A HEARING

AGENCY: NUCLEAR REGULATORY COMMISSION

ACTION: Environmental Assessment, Finding of No Significant Impact, and Notice of Opportunity for a Hearing for Remediation of the Lakehurst, New Jersey Site

SUMMARY AND CONCLUSIONS

The environmental assessment (EA) reviews the environmental impacts of the decommissioning actions proposed by Heritage Minerals, Incorporated (HMI) of their Lakehurst, New Jersey facility. Based upon the NRC staff evaluation of the HMI Final Status Survey Plan (FSSP), dated November 3, 1997, it was determined that the proposed decommissioning can be accomplished in compliance with the NRC public and occupational dose limits, effluent release limits, and residual radioactive material limits. In addition, the approval of the proposed action, i.e., decommissioning of HMI's Lakehurst, New Jersey facility in accordance with the commitments in NRC license SMB–1541 and the FSSP (decommissioning plan), will not result in significant adverse impact on the environment.

1.0 INTRODUCTION

1.1 Background

Heritage Minerals, Inc. is the current holder of NRC radioactive source materials license SMB–1541 (NRC Docket 40-08980) for the possession of radioactive material resulting from operations at their facility located in Lakehurst, New Jersey. The license authorizes HMI to possess at any one time a maximum of 300 kg of uranium in the form of natural uranium as monazite and 15,000 kg of thorium in the form of natural thorium as monazite. Processing of licensed material is not authorized except incident to facility decommissioning activities and packaging materials for shipment.

In December 1996, HMI informed the NRC staff that it intended to decommission the Lakehurst, New Jersey facility. The licensee submitted the Final Status Survey Plan (FSSP or decommissioning plan) to the NRC for review on November 3, 1997. The license was renewed on May 26, 1998 to authorize possession, packaging, storage, and decommissioning in accordance with the FSSP and transfer of products and waste to authorized recipients. Prior to the renewal, a safety evaluation report (SER), which evaluated conformance of the proposed action with NRC regulations and regulatory guidance was prepared and the opportunity for a hearing was publicly noticed in the March 12, 1998, Federal Register Notice (63 Federal Register 12114). In response to NRC requests, in 1998-99, HMI provided additional information to clarify certain planned remediation activities. The NRC is considering a license amendment which include additional HMI commitments during facility decommissioning.

1.2 Purpose and Need for Proposed Action

NRC is considering approval of the FSSP to allow Heritage Minerals, Inc. to remove radioactive material attributable to licensed operations at the site, to levels that permit release of the property for unrestricted use and termination of radioactive source materials license SMB–1541.

1.3 Description of Proposed Action

The objective of HMI is to decontaminate and decommission the Lakehurst, NJ facility to permit release for unrestricted use and termination of NRC license SMB–1541. Decommissioning will involve remediation of buildings and other above-grade structures, decontamination of process equipment and sumps, excavation of soil containing monazite sands, and restoration of excavated areas. Soil and other radioactively contaminated materials will be transported to either a licensed disposal facility or recipient authorized to receive such material.

NRC staff reviewed the information provided by HMI in the FSSP describing the proposed decommissioning actions and, by letter dated March 16, 1999, requested additional information regarding specific areas that needed clarification. NRC staff concluded that the decommissioning plan (FSSP) and supplemental information (letters dated November 30, 1998, June 24, 1999, July 13, 1999 and August 17, 1999) from A.J. Thompson, Attorney for HMI, Inc., responding to NRC comments provided an adequate information base for assessing potential environmental impacts from the proposed action.

2.0 FACILITY DESCRIPTION/OPERATING HISTORY

2.1 Site Locale and Physical Description

The Heritage Minerals, Inc. site is located on Route 70 in Lakehurst, Manchester Township (Ocean County), New Jersey, in the Atlantic Coastal Plain. It encompasses an area of approximately 7000 acres, of which 1000-1200 acres were used for mining operations involving monazite. Other areas remained undisturbed. The plant and production areas including mill tailings containing monazite (produced as a result of previous operations) occupied an estimated 500 acres. The monazite pile is located within a security fence and occupies approximately 700 cubic meters. Areas adjacent to the site are predominantly rural, with bands of existing or recently developed residential communities within Manchester Township.

In the Hydrogeologic Investigation Report prepared for HMI, Fellows, Read, & Associates, Inc. (1989) characterized the geology and hydrogeology of the facility. Geologic deposit formations consist of underlying sediments of stratified clay, silt, sand, and gravel on well-indurated bedrock. The topography is relatively flat, recontoured by surface mining of ilmenite surface deposits. Wetlands form the drainage of adjacent Wrangel Brook, which has an easterly streamflow. Two lakes were created along the Green Branch of Wrangel Brook as a result of mine dredging operations.

Groundwater flow occurs from areas located north and west of the site to east and northeast towards the tributaries of the Toms River. The Toms River and its tributaries represent the major groundwater discharge zones for the region. Local groundwater flow is from upland areas

to lower areas where groundwater discharges to streams and wetlands. Site groundwater is recharged by precipitation and flows unconfined through underlying sands. The Green Branch, Michaels Branch, and Davenport Branch of Wrangel Brook serve as local discharge zones for shallow ground water, with subsequent discharge to the Toms River or Barnegat Bay.

2.2 Descriptions of Facility Operations

Between 1973 and 1982 the site was operated by ASARCO, Inc., for dredging and processing sand deposits to extract heavy minerals. The titanium mineral, ilmenite, was the primary mineral recovered by various physical separation methods. There was no chemical separation involved in the extraction and concentration processes. Heavy minerals, including monazite were pumped as slurry to a Wet Mill. At the Wet Mill, the heavy minerals were separated from the slurry, then stockpiled for dewatering, while the lighter fraction was returned to the dredge pond. The heavy mineral concentrate was heated in a Dry Mill, then screened to remove coarse material. The high conductivity of the titanium dioxide bearing minerals allowed electrical separation from other heavy minerals. Further magnetic refinement produced the final ilmenite product. The dry mill tailings containing essentially all the monazite from the heavy minerals concentrate were mixed with water and pumped to an area east of the dry mill building.

ASARCO ceased operations in 1982. Evaluation of residual materials by private companies for commercial use continued until the property was purchased by HMI in 1986. Plant facilities were leased to Mineral Recovery, Inc. (MRI), who performed operational testing for titanium recovery until 1987.

HMI assumed property control, conducting site operations under NRC license until 1990 when all production stopped. Operations were comparable to the ASARCO process, utilizing dry mill tailings as feed material. The tailings were mixed with water, pumped to the wet mill for mineral separation according to their conductive properties, proceeding through a dewatering and drying process. Minerals were recovered and sold as leucoxene and rutile (titanium dioxide products) and zircon. Licensable amounts of monazite were present throughout the electrical and magnetic separation processes. In early 1990, processing of feed materials continued followed by recycle of tailings from the MRI operations. Mill tailings containing monazite were deposited in a stockpile east of the dry mill,. Due to economic conditions, HMI terminated all operations In August 1990. Approximately 700 cubic meters of stockpiled tailings remain licensed to HMI.

3.0 RADIOLOGICAL STATUS OF THE FACILITY

3.1 Structures and Equipment

HMI performed decontamination of building surfaces and disposed of contaminated equipment in 1990-1991. Subsequent radiation (screening) surveys were conducted of the interiors of the wet mill and dry mill. Process trains within each building were characterized according to their monazite content and operating history as affected or unaffected areas using NUREG/CR-5849, "Manual for Conducting Radiological Surveys in Support of License Termination" criteria. The methods used to dismantle and decontaminate process equipment in affected areas and for disposition of resultant materials are described in the FSSP. The same methods will be used for

decontamination of building interiors prior to the final radiological survey and will serve as the basis for termination of NRC Source Material License SMB–1541.

The final release status surveys described in the FSSP will be performed in accordance with NUREG/CR–5849 criteria. Residual radioactive materials that exist in affected areas will meet current guidelines described in "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use for Termination of Byproduct, Source, and Special Nuclear Material Licenses," (U.S. Nuclear Regulatory Commission, Policy and Guidance Directive FC 83-23, 1983). Details regarding the radiological status of affected areas within the Wet and Dry Mill buildings are described in the next sections. At present, contaminated material containing monazite is being stored in the outdoor tailings pile. A final survey of affected areas will be required by NRC after residual material is removed and decontamination is complete.

Following review of the Heritage Minerals, Inc. site radiological characterization of structures and equipment, the NRC staff finds characterization was performed in accordance with NUREG/CR–5849. The NRC staff review of the FSSP also finds it adequate for remediating structures and equipment to radiological levels below the NRC guidelines for unrestricted release (Nuclear Regulatory Commission, 1983). The staff concludes no adverse environmental impacts will result from planned remediation of the site structures and equipment.

3.1.1 Wet Mill Building

The Wet Mill Building process equipment used to extract product materials from raw feed was grouped into affected and unaffected survey units. The majority of survey units including floors, lower walls, and western mill areas are unaffected. Mechanical separation units and feed sumps involving transfer or processing of product material containing monazite were identified in the FSSP as affected areas. Final radiological surveys of interior surfaces will be within allowable release limits for natural thorium, the primary contaminant of concern. Prior to release of equipment in affected areas for unrestricted use, the NRC release limit of 1,000 dpm/100 cm^2 for average surface contamination and maximum release limit of 3,000 dpm/100 cm^2 will be met.

3.1.2 Dry Mill Building

Equipment in the Dry Mill Building was used to extract product materials from the Wet Mill process feed. Consistent with Wet Mill Building survey units, Dry Mill Building equipment was also grouped into affected and unaffected areas. Most areas of the Dry Mill involving monazite including floors, ceiling, and lower walls (up to two meters above floor level) are affected. These include dryers, high tension separators, and sumps. NRC surface contamination release limits are the same as those used for Wet Mill equipment.

3.2 Surface and Subsurface Soils

Radionuclide concentrations and direct radiation levels for surface and subsurface soils at the facility have been measured in the Wet Mill, Dry Mill, dust collectors, tailings (monazite) pile, and at various outdoor locations.

Direct radiation levels inside buildings and outdoor areas were routinely measured by HMI personnel since 1990. Direct gamma exposure rates at ground level and 1 meter above the surface were reported for the monazite pile and areas in and around the Wet and Dry Mills. Average monazite pile perimeter readings ranged between 300-1700 µR/hr up to 2000 µR/hr on the pile. Readings at outdoor locations around buildings were at or near background levels. The highest exposure rates were measured on storage drums located inside the security fence surrounding the pile, at levels up to 3000 µR/hr. Small amounts of residual material (unlicensed) exists from recycled ASARCO tailings deposits in adjoining owner controlled property locations. These areas showed direct gamma radiation readings ranging between 10-150 µR/hr and will not be included in the remediation. Normal background radiation levels for other facility production areas is 7-20 µR/hr.

In July 1996, Radiation Science, Inc. issued a Report of Site Background for HMI which included soil samples at a depth of six inches from undisturbed environment, representative of natural site conditions. Background levels were established by performing gamma spectral analysis for U-238 and Th-232 on 32 samples. Mean values reported for background samples was 0.31 pCi/gm for U-238 concentration and 0.25 pCi/gm for Th-232 concentration. Average dose rates measurements from areas where samples were taken was 3.0 µR/hr.

Sample analysis of soils taken from recycled tailings, an unused settling pond, plant tailings, and new feed materials did not exceed NRC limits for total uranium and thorium (i.e., 10 pCi/g above background) for unrestricted release. Only soil in the monazite pile was measured above licensable source material quantities, and showed total concentrations of Ra-226 and Ra-228 up to 1376 pCi/gm. The FSSP identifies these soils as the material to be considered for remediation activities.

Following review of the HMI site radiological characterization studies for soils, the NRC staff finds the characterization effort and FSSP adequate for determining areas of elevated radioactivity in soils that require remediation to limit concentrations to the NRC limits for unrestricted release (46 Federal Register 52061–52063).

3.3 Surface Water and Groundwater

Analyses for radioactivity of surface water samples collected from existing site monitoring wells and offsite streams were reported by Camp Dresser & McKee, Inc. in 1997 as part of the Mine Tailings Radiological Assessment Plan prepared for the New Jersey Department of Environmental Protection. Concentrations measured for groundwater samples were 2.0-7.0 pCi/l for gross alpha and under 2.0-5.0 pCi/l for gross beta. Results of surface water samples were 2.0-3.9 pCi/l gross alpha and 2.0-4.2 pCi/l gross beta. Due to the insoluble properties of monazite and generally low levels of radiological contamination identified in samples, no concern was found regarding dissolution of radioactivity into groundwater and surface water.

Following staff review of the characterization of surface waters and groundwater around the HMI site, the NRC staff concludes the characterization is adequate and radiological contamination of surface waters and groundwater is below levels that would be a concern for environmental impacts.

3.4 Air

HMI reported results from 1990 air sampling measurements in three locations of the Dry Mill taken by their contractor, Teledyne Isotopes. Air filters were analyzed for gross alpha activity using an alpha scintillation counter. Activity detected was assumed to be Th-232, with reported concentrations less than 1.6×10^{-12} µCi/ml. These concentrations were less than effluent concentrations limits allowed in 10 CFR Part 20, Appendix B, and are therefore found by NRC to be below levels that could lead to adverse environmental impacts. Dust and security control measures provide confidence that air quality will not be degraded during decommissioning activities to levels that exceed NRC limits in 10 CFR Part 20.

4.0 EVALUATION OF PROPOSED METHODS FOR DECONTAMINATION AND DISMANTLEMENT OF STRUCTURES, BUILDINGS, AND EQUIPMENT

4.1 Decontamination of Buildings, Equipment, and Outdoor Areas

HMI's proposal for decontamination of buildings, equipment, and outdoor areas is provided in the FSSP, supplemented by additional letters clarifying remediation activities in response to NRC's request for additional information. In 1991, process equipment, Wet and Dry Mill buildings, and survey units with operating equipment suspected to contain radioactive material were cleaned and decontaminated. Decontamination methods used for mill equipment included high pressure washing, steaming, general wipe down and scrubbing, blowing, and dusting and sweeping of surfaces. Radiation surveys of buildings and areas around the monazite pile have been performed routinely by HMI since that time.

The FSSP describes the proposed decommissioning activities and methods for protecting workers and the public during removal of monazite contaminated soil. Residual radioactivity remaining inside buildings is confined to fine sand grains present on equipment surfaces. Affected survey units may require further decontamination prior to performing the final status survey. Areas that contain only loosely adhered contamination will be HEPA vacuumed to remove contaminants. Fixtures, tanks, pumps, high tension separators, piping, and heavy equipment will be isolated, disassembled, and decontaminated as necessary, then resurveyed prior to release for unrestricted use. Equipment that cannot be economically decontaminated will be resurveyed, and all equipment with contamination above the NRC limits for unrestricted release or equipment suspected to contain radioactive material will be treated as radioactive waste.

When removal of process equipment from mill buildings is completed, building characterization surveys will be conducted. Walls up to two meters and floors are to be surveyed in accordance with the FSSP. Those buildings that contain residual contamination will be decontaminated below NRC guideline values using the most economical and reliable methods available. HMI's objective is to free release all buildings above grade to allow demolition (if deemed necessary) of clean buildings. Decontamination of ground-level floors will include the top surface of the concrete slabs, if needed. Material from demolition of ground-level floors and underlying soils will be surveyed for contamination and remediated.

Surface and subsurface soils with Th-232 concentrations greater than 10 pCi/g is restricted to the monazite pile. HMI proposes two excavations of materials with monazite concentrations greater than 10 pCi/g above background. Contaminated soil (monazite ore) will be excavated, placed into a hopper, and transferred to shipping containers. This will be followed by a second excavation of surface layer soil to be removed in a similar manner. A fenced security area near the existing pile will be established for staging of shipping containers and contaminated equipment prior to transportation off-site. After the second excavation, area radiation levels are expected to be reduced to no more than twice background. Excavation of soil to meet Th-232 cleanup criteria will also serve to remove residual uranium contamination because both contaminants are contained in the monazite-rich soil. Once remediated, the remaining soil will be resurveyed in a manner consistent with NRC-accepted methods to ensure residual thorium and uranium contamination meet the NRC unrestricted release criteria. Soil and other material will be transported from the site either to a licensed disposal facility or exported under NRC Export License XSOU8751, issued to HMI on May 2, 1997.

Under Condition 15 of Materials License SMB-1541, HMI cannot release for unrestricted use areas within plant buildings or the monazite pile without specific, written authorization from the NRC. Based on the NRC review of building and equipment decontamination methods described in the FSSP and supporting documents, NRC concludes that the methods are adequate for ensuring that equipment, buildings, and outdoor areas will meet the NRC guidelines for unrestricted use and no adverse environmental impacts will result from planned activities.

5.0 DECOMMISSIONING ALTERNATIVES AND IMPACTS

5.1 No Action

No decommissioning action by HMI would constitute a violation of 10 CFR 40.42(d) requirements, which requires that licensees begin site decommissioning of buildings and outdoor areas that contain residual radioactivity after permanently ceasing principal activities. Impacts of the no-action alternative are maintaining an NRC license, which would significantly reduce options for future property use, and require perpetual care and security of the site in its current radiological condition to prevent radiation exposure to monazite contamination and unauthorized public access.

5.2 Proposed Action

The proposed action is the approval to implement the Heritage Minerals, Inc. Final Status Survey Plan, for decommissioning activities at the Lakehurst, New Jersey facility that will permit unrestricted use of the site and termination of License No. SMB-1541. Decommissioning the facility for unrestricted release allows productive use of the land in the future. Site remediation is expected to mitigate potential future environmental impacts attributable to existing radiological contamination resulting from past operations.

5.3 Alternatives to Proposed Action

Two alternatives to the proposed action are considered. The first alternative is to not release the site for unrestricted use and keep the property under license. This alternative is unfavorable

because maintaining an NRC license for the site would provide negligible, if any, environmental benefit, but would greatly reduce options for future use of the property. The second alternative involves storage of excavated soils on-site for an indefinite period should HMI be unable to export or transfer the material for disposal. While on-site storage defers the costs associated with disposal at a licensed facility, it removes the property from productive use, resulting in a negative impact to the economic potential of the local area.

The NRC determines the proposed action to be more favorable than either no-action or alternatives to the proposed action.

6.0 RADIATION PROTECTION PROGRAM

6.1 Radioactive Waste Management and Transportation Program

The radioactive waste management program at the HMI site includes identification, characterization, segregation, packaging, labeling, manifesting, and transporting waste in accordance with NRC, U.S. Department of Transportation (DOT), and other applicable federal, state, and local regulations. Included as contaminated radioactive waste materials from decommissioning activities will be equipment, tools, process material, building debris, decontamination materials (rags, wipes, filters), decontamination waste, soils, residual process equipment waste (sludges), and used personal protective equipment.

Since HMI intends to comply with all applicable requirements, NRC finds the planned radioactive waste management and transportation programs adequate for the materials at the site, and no adverse environmental impacts are expected from waste management activities or transfer of the material offsite.

6.2 Technical and Environmental Specifications

6.2.1 Unrestricted Use Guidelines

Guidelines for unrestricted use for natural thorium and uranium for the Heritage Minerals, Inc. site are Option 1 in the 1981 Branch Technical Position on "Disposal or Onsite Storage of Thorium or Uranium Wastes From Past Operations" (46 FR 52061), and NRC "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use for Termination of Byproduct, Source, and Special Nuclear Material Licensees," Policy and Guidance Directive, FC 83-23. The unrestricted release criteria are identified in the table below.

Soil release criteria[1]

Radionuclide	Maximum Soil Concentration (pCi/g)	Reference
Natural Thorium (Th-232 plus Th-228) if all daughters are in equilibrium	10	(46 Federal Register 52061–52063)

Natural Uranium Ores (U-238 plus U-234) if all daughters are present and in equilibrium	10	(46 Federal Register 52061–52063)

[1]If only one radionuclide is present, the maximum concentration is the value listed in this table. If more than one radionuclide is present, however, the ratio between the measured concentration and the corresponding limit listed in this table is determined. The sum of such ratios for all radionuclides present must not exceed one.

6.2.2 Radiological Health and Safety Program

HMI will select a decommissioning contractor who will follow radiation protection procedures sufficient to administer the radiation protection program authorized by License SMB-1541. The radiation protection program has been routinely inspected by NRC staff and found to be well implemented. The proposed action is limited in scope and not expected to include unique health and safety issues outside the scope of the radiation protection program. NRC will conduct site inspections while decommissioning activities are in progress. NRC determines the radiation protection program adequate for the proposed action.

6.2.3 Corporate Organization and Management

The HMI site manager will function as the licensee representative of the decommissioning project to provide oversight for all project activities. The site manager's function is to coordinate scheduling and status reports with the contractor Project Manager (PM) and HMI legal advisor. The PM will maintain overall responsibility for performance of project operations for the duration of the project until decommissioning activities are completed. The PM and decommissioning workers report directly to the HMI technical and legal staff for all project related activities, management direction, and resolution of operational issues. Primary responsibility of the PM includes on-site workforce management to ensure agreed to work schedules are met. The HMI Radiation Safety Officer (RSO) will report to the site manager and continue to perform oversight of all radiological work-related activities throughout the decommissioning project.

From review of job descriptions and responsibilities involved in radiological safety during decommissioning, NRC determines that the designated functions are acceptable to implement the radiological safety program during proposed decommissioning activities.

6.2.4 Radiological Exposure Control

Areas where radioactive materials are used and stored will be posted to control exposures to workers and visitors and avoid the spread of contamination. Measures to be taken to ensure control of contamination include donning of anti-contamination clothing, personnel monitoring, and frequent area radiation surveys. External radiation monitoring will be conducted through the use of environmental dosimeters placed at strategic locations around the monazite pile and work areas. The need for and type of dosimetry for workers and visitors in radiologically controlled areas will be determined by the contractor, and may include issuance of a radiation work permit. The primary dosimeter will be the thermoluminescent dosimeter (TLD) for whole body exposure, however, other types such as extremity TLD's will be employed, as conditions warrant.

For activities that have the potential to generate dusts, airborne particulate monitoring will be performed to demonstrate compliance with 10 CFR Part 20 intake limits, determine whether precautionary measures are needed (engineering controls, use of respiratory equipment), and show how exposures are being maintained ALARA. To reduce the amount of airborne particulates during excavations, the monazite pile will be sprayed with water twice per day. For equipment decontamination within affected survey units, HEPA air filtration in the immediate work area will be used, as needed.

Resuspension and airborne transport of contaminated soil during excavations serves as the primary pathway for off-site releases from decommissioning activities. HMI proposes to measure air particulates in the downwind direction through the use of a high-volume air sampler. Workers involved in excavations will be required to wear respiratory protection until radiological airborne activity levels are determined. HMI does not expect the proposed action will result in the generation of off-site, airborne concentrations that would result in dose to a member of the public in excess of the dose limits in 10 CFR Part 20. Previous results of groundwater and surface water sampling have shown negligible dose contribution due to the low levels of radionuclides during site operations. Decommissioning activities will have no further impact, therefore, additional water sampling is not needed.

HMI's total dose estimates for a worker based on direct gamma exposure rate from airborne soil releases from excavation activities of the monazite pile of 1mR/h is 320 mRem, with dust inhalation dose at 6% of the annual limit of intake (ALI) for the duration of the proposed action. The off-site (public) annual dose limit in 10 CFR Part 20 is 100 mrem. Given the low estimated exposure beyond the site boundary, the air sampling is adequate for off-site monitoring of potential releases to ensure compliance with the dose limits of 10 CFR Part 20.

Following review of radiological exposure controls, NRC determines the proposed program methodologies are adequate for detecting potential environmental impacts prior to license termination.

6.2.5 Security

Security of radioactive material at the HMI facility is maintained by a fence with a locked front entry gate around the perimeter of the monazite pile. Security for mill buildings is minimal, and other site areas are left unattended for long periods. Equipment theft in mill buildings has been a known concern within buildings, but missing equipment was believed to have been decontaminated after operations shut down in 1990. These concerns should be alleviated by the presence of on-site decommissioning personnel. HMI has committed to establishing a fenced exclusion area for shipping containers and equipment removed from buildings which cannot be released for unrestricted use.

NRC determines this is an adequate level of security to ensure radiological safety will be maintained during decommissioning activities at the site.

6.3 Radiological accident analysis

Potential accident scenarios considered include building fire and loading or shipping incidents of radioactive materials. Due to the low potential for fire or explosion in building structures and the limited quantities of material used during transfer operations, accidental releases of radioactive materials in quantities that could affect public health and safety are unlikely. A 24-hour number will be established to provide Radiation Safety Officer notifications in the event emergency response is necessary.

The NRC concludes that HMI has adequately addressed the potential for radiological accidents.

7.0 ENVIRONMENTAL IMPACTS

7.1 Radiological Impacts to the Public and Workers

Potential sources of worker exposure from decommissioning activities include characterization work, decontamination and remediation of buildings and associated structures (piping, foundations), and excavation of soils. Past NRC inspections showed activities resulted in no measurable internal or external dose to workers. These activities were similar to the proposed activities and included equipment and building decontamination, radiological characterizations, and monazite pile maintenance. NRC dose calculation based upon excavation and packaging of 700 m^3 of monazite soil at an average thorium soil concentration of 25 pCi/g (highest sample result obtained during NRC inspection) project an occupational worker exposure under 10 mRem, primarily due to external exposure. Based on the above, the staff believes that worker exposures will be well within the 10 CFR Part 20 annual worker dose limit of 5000 mRem, and that no adverse impacts to workers will result.

Potential sources of radiological impacts to the public from decommissioning activities at the HMI site are similar to those pertaining to worker exposures (decontamination and excavation dusts), but require transport over greater distances to reach off-site receptors. As a result, lower concentrations and doses are expected for members of the public than for workers. Previous NRC inspections showed that worker exposures during past activities were undetectable. Similarly, the public doses from these activities should be undetectable. The NRC staff has determined that HMI has provided adequate plans to ensure that potential radiological impacts to members of the public from the proposed action will not exceed NRC limits and are unlikely to result in adverse environmental impacts.

7.2 Nonradiological Impacts

There are no planned direct uses of chemicals in the proposed action, only the excavation of soil, and remediation of equipment and buildings. No other operations have a potential to affect the environment. During scoping and characterization surveys, an assessment of each building will be performed to identify the presence of hazardous or mixed wastes. The survey will identify items requiring management of hazardous substances, if found.

The NRC staff has determined that HMI has acceptably addressed the control of potential releases of nonradiological hazardous materials.

8.0 AGENCIES AND INDIVIDUALS CONSULTED

NRC transmitted the FSSP to the New Jersey Department of Environmental Protection (NJDEP), US Environmental Protection Agency, Region 2, and Township of Manchester by letters dated February 13, 1998, for review and comment. The response letter of March 18, 1998 from the NJDEP included comments regarding characterization of areas with thorium levels below licensable quantities and extent of soil removal, was forwarded to HMI for evaluation. HMI addressed the State's comments in their letter of November 30, 1998 to NRC providing acceptable responses to the NJDEP questions. No response was received from the EPA or Manchester Township. HMI has committed to coordinate with the NJDEP and comply with applicable State and local regulations during decommissioning activities.

9.0 FINDING OF NO SIGNIFICANT IMPACT

The Commission has prepared an EA related to the proposed unrestricted release, and removal from license SMB-1541, of 700 m^3 of monazite-rich soil from the Heritage Minerals, Inc., Lakehurst, New Jersey site. On the basis of the EA, the Commission has concluded that this licensing action would not significantly affect the environment and does not warrant the preparation of an environmental impact statement. Accordingly, it has been determined that a Finding of No Significant Impact is appropriate.

The NRC hereby provides notice that this is a proceeding on a license amendment falling within the scope of Subpart L, "Informal Hearing Procedures for Adjudications in Materials and Operator Licensing Proceedings," 10 CFR Part 2. Pursuant to Sec. 2.1205(a), any person whose interest may be affected by this proceeding may file a request for hearing in accordance with Sec. 2.1205 (d). A request for hearing must be filed within thirty (30) days of the date of publication of this Federal Register Notice.

The request for a hearing must be filed with the Office of the Secretary either:

1. By delivery to the Docketing and Service Branch of the Secretary at One White Flint North, 11555 Rockville Pike, Rockville , MD 20852-2738; or
2. By mail or telegram addressed to the Secretary, U.S. Nuclear Regulatory Commission, Washington , D.C., 20555. Attention: Docketing and Service Branch.

In addition to meeting other applicable requirements of 10 CFR Part 2 of the NRC's regulations, a request for a hearing filed by a person other than an applicant must describe in detail:

1. The interest of the requestor in the proceeding;
2. How that interest may be affected by the results of the proceeding, including the reasons why the requestor should be permitted a hearing, with particular reference to the factors set out in Sec. 2.1205(h),
3. The requestor's area of concern about the licensing activity that is the subject matter of the proceeding; and
4. The circumstances establishing that the request for a hearing is timely in accordance with Sec. 2.1205(d).

In accordance with Sec. 2.1205(f), each request for hearing must also be served, by delivering it personally or by mail, to:

1. Heritage Minerals, Inc., Attention: Anthony J. Thompson, Esquire, ShawPittman, 2300 N Street, NW, Washington, DC 20037-1128; and

2. The NRC staff, by delivery to the Executive Director for Operations, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738 or by mail, addressed to the Executive Director for Operations, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

The documents related to this proposed action are available for public inspection and copying at the NRC Public Document Room, 2120 L Street NW., Washington, DC 20555 or at the NRC's Region I offices located at 475 Allendale Road, King of Prussia, PA 19406.

10.0 REFERENCES

Berger, J.D., "Manual for Conducting Radiological Surveys in Support of License Termination," NUREG/CR–5849, Washington, DC: Nuclear Regulatory Commission. 1992.

Nuclear Regulatory Commission, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use for Termination of Byproduct, Source, and Special Nuclear Material Licenses," Policy and Guidance Directive FC 83-23, 1983.

Nuclear Regulatory Commission, "Final Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC Licensed Nuclear Facilities," NUREG–1496, Volume 2, 1997.

Orlando, D., et al., "NMSS Handbook for Decommissioning Fuel Cycle and Materials Licensees," NUREG/BR–0241, Washington, DC: Nuclear Regulatory Commission, 1997.

Dated at King of Prussia, Pennsylvania this 20th Day of August 1999

FOR THE NUCLEAR REGULATORY COMMISSION

George Pangburn, Director
Division of Nuclear Materials Safety

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. 81-30745 Filed 10-22-81; 8:45 am]

BILLING CODE 4510-26-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. 81-30732 Filed 10-22-81; 8:45 am]

BILLING CODE 7590-01-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 or 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. 20555, telephone 301-427-4309.

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 recommened 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 microroentgens 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.

Kind of material	Concentration (pCi/gm)
Natural thorium (Th-232 plus Th-228) if all daughters are present and in equilibrium	10
Depleted Uranium	35
Enriched Uranium	90
Natural Uranium Ores (U-238 plus U-234) 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 1.3 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 fo 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–228) 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-228) 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 Options			
	1[1]	2[2]	3[3]	4[4]
Natural Thorium (Th-232 + Th-228) with daughters present and in equilibrium	10	50		500
Natural Uranium (U-238 + U-234) with daughters present and in equilibrium	10		40	200
Depleted Uranium:				
*Soluble	35	100		1,000
*Insoluble	35	300		3,000
Enriched Uranium:				
*Soluble	30	100		1,000
*Insoluble	30	250		2,500

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

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. 81-30606 Filed 10-22-81; 8:45 am]

BILLING CODE 7590-01-M

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 10-22-81; 8:45 am]

BILLING CODE 6325-01-M

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. 81-30584 Filed 10-22-81; 8:45 am]

BILLING CODE 3190-01-M

SECURITIES AND EXCHANGE COMMISSION

[Release No. 22236; 70-6650]

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

October 19, 1981.

Arkansas Power & Light Company