PDR

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

JUN 06 1979

WMJR:RC
40-8722
SUA-1354

Brush Wellman, Inc.
ATTN: Martin B. Powers
Vice President
17876 St. Clair Avenue
Cleveland, Ohio 44110

Gentlemen:

Enclosed is Source Material License No. SUA-1354 authorizing the recovery of uranium from beryllium mill tailings solution in your facility at Delta, Utah. The conditions of this license were discussed and agreed to by you and your staff on May 8, 1979 during a site visit by Dr. Cooperstein of my staff.

Enclosed are copies of pertinent NRC regulations for your use, Parts 19, 20 and 40. Please note the posting requirements of 10 CFR Part 19 as well as the requirements for instructions to workers. You will receive instructions on the reporting requirements of Section 40.64, 10 CFR Part 40, under a separate cover from our Division of Safeguards. A copy of our environmental/safety appraisal of your Delta operation and a notice of its availability are also enclosed.

As discussed with you and your staff, you are requested to advise us and the NRC Region IV Office of Inspection and Enforcement of your anticipated start of plant operations at least 30 days prior to this date. Specifically, the start of operations shall mean any operation resulting in the concentration of the feed solution to greater than 0.05 wt% uranium.

All correspondence, including reports, related to this license should reference Docket No. 40-8722.

If you have any questions regarding these matters, please contact me.

Sincerely,

Ron Scarano

R. A. Scarano, Section Leader
Uranium Recovery Licensing Branch
Division of Waste Management

Enclosures:
As stated

79336

7908210031

ANNEX A

# 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 Fuel Cycle and
Material Safety
Washington, D.C. 20555

NOVEMBER 1976

796337

The instructions in this guide in conjunction with Table I specify the radioactivity and radiation exposure rate limits which should be used in accomplishing the decontamination and survey of surfaces or premises and equipment prior to abandonment or release for unrestricted use. The limits in Table I 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 will be 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 I prior to applying 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.

796338

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 I. A copy of the survey report shall be filed with the Division of Fuel Cycle and Material Safety, USNRC, Washington, D.C. 20555, and also the Director of the Regional Office of the Office of Inspection and Enforcement, USNRC, 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.

796339

TABLE I

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 $\alpha$/100 $cm^2$ | 15,000 dpm $\alpha$/100 $cm^2$ | 1,000 dpm $\alpha$/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 | 1,000 dpm/100 $cm^2$ | 3,000 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. | 5,000 dpm $\beta\gamma$/100 $cm^2$ | 15,000 dpm $\beta\gamma$/100 $cm^2$ | 1,000 dpm $\beta\gamma$/100 $cm^2$ |

[a] Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.

[b] As 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.

[c] Measurements 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.

[d] The maximum contamination level applies to an area of not more than 100 $cm^2$.

0823 84

[e] The amount of removable radioactive material per 100 $cm^2$ 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.

[f] The 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.