

NOV 5 1996

License No. SUB-466 (Retired)
Docket No. 040-01266

SECOR International, Incorporated
ATTN: Dale Evans, P.E.
Vice President, Chief Engineer
355 Union Boulevard
Suite 225
Lakewood, CO 80228-1500

SUBJECT: SUMMARY OF WORK PLAN COMMENT RESPONSES FOR SITE
REMEDATION AT THE FORMER TENNECO POLYMERS, INC. SITE,
FORDS, NJ-ADDITIONAL COMMENTS

Dear Mr. Evans:

This transmittal provides comments regarding your letter to Todd Jackson dated October 8, 1996 and the referenced revised Work Plan dated September 12, 1996. In order to continue our review, some additional information is needed. The "Item numbers" listed below refer to the original comment number in the June 26, 1996 letter from R. Bellamy of the US Nuclear Regulatory Commission (NRC) to T. Kreutz.

- Item 2 The revised Work Plan does not address the surface "derived" beta limit to be used. As stated in the original NRC comment, the "derived" value is the beta limit which may be calculated using the beta-to-alpha emission ratio for the U-238 decay chain. Please describe the beta emission limit which will be used in the field, as well as its basis.
- Item 3 As described in "Disposal or Onsite Storage of Thorium or Uranium Wastes From Past Operations" (FR 46, pp. 52061-52063) the unrestricted use criteria are currently stated directly as 35 pCi/g for depleted U, and "...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...under any foreseeable use of the material or property". Please confirm that your objective is to achieve conditions for unrestricted release as stated under Option 1 in the referenced Federal Register Notice, which is 35 pCi/g for depleted uranium.

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- Item 8 Section 3.10.2 of the Work Plan discusses evaluation of building surfaces. It does not include a description of how survey units/grids will be organized and sized. Please describe the methodology you plan to use to grid building surfaces, including the number and location of "systematic measurements of surface activity" planned following any necessary decontamination of affected surfaces (see the discussion of "Affected Areas" on page 4.13 of NUREG-5849).
- Item 9 A similar comment in item 8 above applies to the methods you will use to perform a final survey following remediation of contaminated soils. Your October 8, 1996 response referenced your planned approach for final site survey, however you did not discuss the methods you plan to use for characterizing areas which exceed the guideline soil concentration. Please describe your planned methods for systematic surveys of affected soils and outdoor areas (see the discussion of "Affected Areas" on page 4.16 of NUREG-5849).
- Item 10 Current data was requested for groundwater samples from wells M23S-1 and M23S-2, however it was not included in your response. Please provide, including data on any radioactive contaminants.
- Item 11a Section 4.2.1 of the Work Plan does not completely address how soils beneath concrete will be characterized. Although you discuss how soil beneath identified cracks will be monitored, it is not clear whether or how you will sample soil beneath concrete in other areas to assure that the soil is not contaminated. Some cracks may not be visible, or contamination may have entered soils in other, unidentified ways. A systematic approach to characterizing soil under concrete is necessary, such as through boring or other means. Please provide additional information describing these characterization methods.
- Items 13 & 15 Section 2.2 of the Work Plan states that "... part of the project will include a detailed site walkover survey that will evaluate the extent of any soil impacts that may have occurred from surface water drainage." Soil concentrations on the order of guideline values may not be detectable by gamma exposure rate measurements made during a walkover survey. It may be necessary to sample soil in the flow path of water drainage. Please describe your sampling plan to characterize soil or sediment from such areas. This should also address the need to collect some samples of sediment from drains/lines that appear to be in affected areas. Provide a survey plan for the pipes, drains, and catch basins in affected areas.

Additionally, although section 3.10.5 of the Work Plan discusses "subsurface piping and drainage feature surveys", the Plan does not address whether or not the liquid waste collection and processing facilities of the plant could have been affected by uranium contamination. Please provide information on the potential effects of past use of uranium on wastewater treatment facilities, as well as a survey plan for these facilities.

- Item 19 Section 4.2.2 of the Work Plan addresses concrete removal and states that concrete saw cooling water, "will create minimal additional migration of contamination because the volume will be small and as much as possible will be collected". However, the Plan does not address how the collected water from the process will be managed (stored, sampled, processed and disposed). Please provide information on how this water will be managed.
- Item 22 Your response discussed air monitoring and sampling in section 3.10.7 of the Work Plan. However you addressed only the sampling and did not discuss analysis of samples. Please provide additional information regarding the radiation detection instrumentation and procedures to be used for quantifying the concentration of radioactive materials in air.
- Item 23 Dr. Johnson's resume lists "C.I.H." as part of his title, yet the resume indicates he is certified by the American Board of Health Physics. Please clarify the apparent discrepancy in the statement whether he is certified as "CIH" or "CHP".
- Item 24 Section I.B of the Health and Safety Plan dated October 10, 1996 does not state that the Site Health & Safety Officer will be responsible for ensuring that all records are maintained. Please confirm that this responsibility is clearly defined and assigned to the SH&SO.
- Item 28 Question 28 requested submittal of your QA/QC procedures for sample collection and analysis. Section 3.10.9 of the Work Plan discusses the QA/QC program but does not include the requested procedures. Please submit the requested procedures for review.
- Item 29 On page 3-15 the LLD for the GM survey meter is stated as 3800 dpm/100 cm². The criteria for removable contamination is 1000 dpm/100 cm². This instrument is therefore not capable of detecting removable radioactivity at the limit. Please provide information describing how it will be determined in the field that the removable contamination limit is not exceeded.

D.W. Evans, P.E.
SECOR International, Inc.

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In addition to the above requested clarifications of your earlier responses, please provide the following information:

- A. You discuss in Health and Safety (H&S) Plan sections I.A. and I.B. the general H&S responsibilities of all workers and the specific H&S responsibilities for the Site H&S Officer. Please describe the SECOR and Tenneco organizations directly involved with this project, including who will be responsible for the site H&S if the Site H&S Officer is not available.
- B. Please confirm that all site activities will be conducted in accordance with written procedures approved by corporate management.
- C. Please provide a project schedule, including expected completion date. Section 5 of the Work Plan discusses the Project Schedule and refers to Figure 3. No Figure 3 was included in the Work Plan, nor were any schedules provided.

Our review will continue as soon as the requested information is received. In order to continue this review in a timely manner, it is requested that you provide the requested information within 30 days of the date of this letter. If you have any technical questions regarding this letter, please call Todd Jackson at (610) 337-5308. Your cooperation with us is appreciated.

Sincerely,

ORIGINAL SIGNED BY:

Ronald R. Bellamy, Ph.D.
Division of Nuclear Materials Safety

License No. SUB 466 (Retired)
Docket No. 040-01266

Enclosure:

1. Disposal or Onsite Storage of Thorium or Uranium Wastes from Past Operations

cc: Roger Towe, Tenneco
State of New Jersey

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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 4810-26-01

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. Hoyla,
Advisory Committee, Management Officer.

(FR Doc. 81-30733 Filed 10-23-81; 8:45 am)

BILLING CODE 7590-01-01

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. 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 recommended by the Environmental Protection Agency (EPA) for protection against transuranium elements present in the environment as a result of unplanned contamination (42 FR 60950-60959). In addition, the concentrations are sufficiently low so that no individual may receive an external dose in excess of 10 microrentgens 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-232 if all daughters are present and in equilibrium)	10
Depleted Uranium	35
Enriched Uranium	30
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 50-60 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-232) 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*	2*	3*	4*
Natural Thorium (Th-232+Th-228) with daughters present and in equilibrium	50	50		500
Natural Uranium (U-238+U-234) with daughters present and in equilibrium	98		98	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

* Based on EPA cleanup standards.
 * Concentrations based on limiting individual doses to 170 mrem/yr.
 * Concentration based on limiting equivalent exposure to 0.02 working level or less.
 * 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. 81-30008 Filed 10-23-81; 8:40 am)

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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. 81-30770 Filed 10-23-81; 8:45 am)

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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. 81-30004 Filed 10-23-81; 8:40 am)

BILLING CODE 3190-01-01

SECURITIES AND EXCHANGE COMMISSION

[Release No. 22236; 70-6650]

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

October 18, 1981.

Arkansas Power & Light Company