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Allied Chemical

INSPECTION AND ENFORCEMENT

Nuclear Services Division
P.O. Box 8005P
Morristown, New Jersey, 07960

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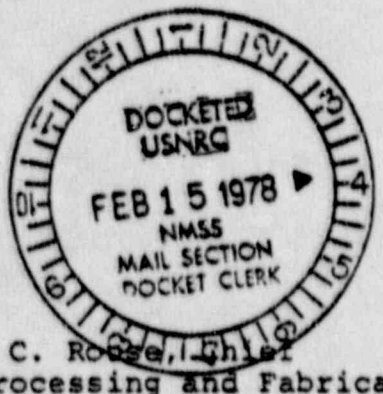
U.S. ATOMIC ENERGY COMM.
REGULATORY
MAIL SECTION



February 8, 1978

Mr. L. C. Rouse, Chief
Fuel Processing and Fabrication Branch
Division of Fuel Cycle and Material Safety
United States Nuclear Regulatory Commission
Washington, D. C. 20555

Reference: License SUB-526, Docket No. 40-3392

Dear Mr. Rouse:

We have enclosed a copy of our plan to decommission our uranium hexafluoride facility at Metropolis, Illinois. This plan is submitted pursuant to license condition No. 17 of the current license.

As is shown by the plan, we would anticipate that the value of recovered uranium and scrap metal is more than adequate to fund the costs of decommissioning. Accordingly, we believe there is no need to consider now other methods of financing or assuring the financing of decommissioning at some future date.

Very truly yours,

R. I. Newman
Director, Environmental
and Regulatory Affairs

RIN/ew
Enc.

FEB 16 1978

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DECOMMISSIONING PLAN

METROPOLIS WORKS

URANIUM HEXAFLUORIDE FACILITY

License No. SUB-526

Docket No. 40-3392

ALLIED CHEMICAL CORPORATION

JANUARY 1978

Allied Chemical does not anticipate closing its uranium hexafluoride manufacturing facility which, together with other facilities for manufacturing sulfur hexafluoride, antimony pentafluoride, iodine pentafluoride,and elemental fluorine, comprise what is known as Metropolis Works. Allied Chemical also does not anticipate closing Metropolis Works as a site for the general manufacture of inorganic chemicals; however, in the event the uranium hexafluoride manufacturing portion of the works is shut down with the anticipation that it would never be useful in UF_6 manufacturing again, the following decommissioning plan would be put into effect pursuant to condition No. 17 of License SUB-526 which expires August 31, 1982:

1. All in-process uranium will be converted to product uranium hexafluoride as required to meet customer contracts. All processing equipment will be emptied. A clean-out of the manufacturing facility will be accomplished through partial dismantlement of major pieces of processing equipment and lines to remove the bulk of the residual uranium.

   Allied Chemical has the experience of a clean-out of this facility in 1964 when the process was shut down and mothballed. The cost of the clean-out in 1964 dollars was approximately $220,000 which is escalated to approximately $600,000 in 1978 dollars. This is based upon an average hourly wage of $4.00 per hour in 1964, including fringe benefits, compared to $10.56 per hour in 1978.

It is anticipated that the value of the recovered uranium will substantially exceed the cost of clean-out in 1978 dollars since the value of uranium rose from approximately $9.00 per pound to greater than $40.00 per pound during the same time frame. Allied Chemical will use the recovered uranium to pay for the clean-out costs.

The 1964 clean-out resulted in recovery of some 70 tons of uranium which had been lodged in pipes and equipment. Assuming a recovery of only 30 tons when the Facility is decommissioned, the total value of such uranium, at today's price of about $40/lb U_3O_8, would be $2,830,000, substantially greater than the cost of clean-out.

2. All structural steel and processing equipment from the sampling plant and UF_6 conversion plant will be dismantled and decontaminated to the extent feasible using water, steam, sodium carbonate solution, etc., to remove the majority of surface contamination. It is recognized, however, that some interior surfaces of process equipment and lines would not meet NRC contamination release limits. Allied Chemical will, therefore, dispose of all metal used in the UF_6 manufacturing areas through a licensed scrap metal disposal firm.

Uranium hexafluoride product cylinders and any other associated equipment which could contain significant quantities of uranium will also be cleaned and disposed of as scrap metal. The

associated uranium recovery and sodium removal processing areas will be dismantled last in the manner described above. This is due to the necessity of operating these units for recovery of the uranium contained in waste and scrap materials removed during dismantlement.

The best estimate of a reputable licensed scrap metal dealer indicates the scrap metal value of the dismantled buildings and equipment will equal or exceed the cost of dismantling and decontaminating the manufacturing facility. Please refer to Attachment No. 1.

3. After all residual uranium and scrap metal has been removed from the processing area, radiation levels are expected to be near background. A thorough sampling and surface contamination monitoring program will be initiated to determine contamination levels of the remaining concrete pads, rock and soil areas inside the restricted area fence. Processing area material which is found to contain more than source material quantities, or 500 ppm U natural, will be disposed of by on-site burial in accordance with Appendix C of 10 CFR 20.

Areas where the surface contamination exceeds the limits specified in "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special

Nuclear Material" USNRC, December, 1975, will be decontaminated or disposed of by burial even though Allied Chemical continues to use the site for the general manufacture of inorganic chemicals.

Allied Chemical will pay the cost incurred for disposal of soil, rock, concrete, etc., which is contaminated by more than 500 ppm U natural. A realistic appraisal of these costs projected to some future year is impractical due to inability to predict contamination levels, but based upon our best estimate, these costs appear to be minimal; for example, uranium in soil concentration may be reduced significantly by simple plowing. Certainly such costs would be less than the net of the value of uranium recovered in the clean-out after paying for the clean-out.

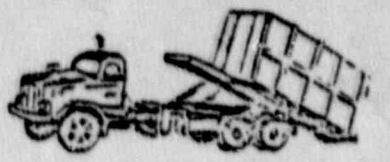
4. Execution of the decommissioning plan and termination of license SUB-526 is expected to require 12-18 months for completion. Upon completion of the project, an environmental TLD radiation monitoring network will be established inside the perimeter fence to demonstrate that employees are not exposed to more than non-occupational levels of radiation. It is anticipated that Allied Chemical will continue to use the 860 acre site for chemical manufacturing.

DAVID WITHERSPOON, INC.

901 OLD MARYVILLE PK. • KNOXVILLE, TENN.
P. O. BOX 806 • PHONE: 577-1613
ZIP CODE: 37901 • AREA CODE: 615

"Environmental Recycling Organization"

ATTACHMENT # 1



Solid Waste Disposal

January 23, 1978

Mr. R. W. Yates
Allied Chemical Company
P. O. Box 430
Metropolis, Ill. 62960

Dear Mr. Yates:

In reference to my recent visit to your plant at which time I examined your UF_6 manufacturing buildings, process equipment, vessels lines, etc., I believe the following things can be done.

A large part of the scrap metal to be disposed of consists of building structural steel which could easily be decontaminated, if at all necessary, to meet NRC contamination release limits. This material could then be disposed of as non contaminated scrap.

Allied Chemical will provide clean-out of process equipment, vessels, lines, etc. to remove the bulk of the residual uranium. This would include, where feasible, washing or steaming of the equipment. This scrap metal very likely would not meet the NRC contamination release limits and would require disposal as contaminated scrap.

In consideration of the items listed above, the salvage value of all metal contained in the UF6 manufacturing area would equal or exceed the labor cost of dismantling and decontaminating the metal.

Thank you for the courtesies shown to me on my visit. If I can be of further assistance, please do not hesitate to contact me.

Very truly yours,

David Witherspoon, Jr.

DW,Jr./mg