DOCKET NO. 70-36

For Div. of Compliance

UNITED NUCLEAR CORPORATION
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May 5, 1970

In Reply Refer to NIS:DGD-70-84

RECEIVED MAY 7 1970

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Mr. Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Material Licensing
4915 St. Elmo Place
Bethesda, Maryland 20014

Subject: SNM-33, Docket 70-36; Request for Temporary Approval of High Enrichment Incineration

Dear Mr. Nussbaumer:

United Nuclear Corporation respectfully requests temporary amendment of SNM-33 to permit incineration of combustible wastes containing small quantities of highly enriched uranium in an incinerator unit currently approved for a maximum enrichment of 3.2%. This request confirms my telephone conversation of May 1, 1970 with Messrs. R. Layfield and R. Dube of your office.

The incinerator to be used is described in Subsection 401.4.5.4 of SNM-33. The operations which this incinerator was installed to serve have not been in production for six months. No more low enrichment combustibles remain and low enriched production will not resume until June 1, 1970 or after. Therefore, in the interim period we wish to use this equipment to assist recovery of high enrichment combustible wastes.

Nuclear safety of the proposed operations will be maintained in accord with the following:

1. All low enrichment uranium will be removed from the Recycle Area (Ref.: Section 401.4.5).

2. Materials to be incinerated will include rags, gloves, paper towels, empty vacuum cleaner bags, filter papers, contaminated polyethylene and similar combustible residues generated by our high enrichment production operations.

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3. Nuclear safety will be maintained by use of a maximum 350 gram U^{235} batch limit. U content of residues will be determined by material balance, chemical analysis, gamma counting, or other appropriate analytical technique.

4. A material balance log will be maintained for the incinerator. When the total charged reaches 350 gram U^{235}, the unit will be shut down. Residues will be removed from the chambers by a portable 2.5 gallon maximum capacity vacuum unit which is exhausted through an absolute filter.

   Residues will be removed from the vacuum unit and transferred into a 1-gallon poly bottle and moved into approved storage pending recovery operations. This transfer will take place in the consolidation hood (Ref.: Subsection 401.4.5.7).

5. Only one 350 gm U^{235} batch may be in the Recycle area at any time. All residues must be removed from the preceding batch before another batch is started into process.

6. The provisions of Subsection 401.4.5.10 will apply to these operations.

7. The incinerator and consolidation hood will be thoroughly cleaned when high enriched incineration terminates, prior to processing of low enriched residues.

Temporary approval for these operations is requested only until June 1. Therefore, your prompt consideration and favorable response to this request is earnestly solicited.

Should you have further questions or require additional information, please contact the undersigned by collect telephone.

Very truly yours,

David G. Darr

David G. Darr, Acting Manager
Nuclear and Industrial Safety

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