

MAY - 5 1994

License No: 29-05260-13
Docket No: 030-05310
Control No: 113590

Exxon Research and Engineering Company
ATTN: Jessica R. Nacheman
Senior Attorney
P.O. Box 390
Florham Park, New Jersey 07932-0390

Dear Ms. Nacheman:

Subject: Financial Assurance for Decommissioning

This is in reference to your various submittals dated October 8, 1990, February 26, 1991, August 16, 1993, December 30, 1993 and April 1, 1994 to provide financial assurance for License No. 29-05260-13. We have reviewed these documents and have no further questions at this time.

Based on the information provided in the above referenced documents, you are presently in compliance with the financial assurance requirements outlined in the decommissioning rule in 10 CFR 30.35.

Please note that a decommissioning funding plan, including an actual cost estimate must be submitted along with any application for license renewal.

If you have any questions, please contact Anthony Dimitriadis, of my staff, at (610) 337-6953.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:
Mohamed M. Shanbaky

Mohamed M. Shanbaky, Chief
Research and Development Section
Division of Radiation Safety
and Safeguards

9406100143 940505
PDR ADOCK 03005310
C PDR

OFFICIAL RECORD COPY - C:\BACKUP.P1\EXRE22.FA - 04/21/94

180097

10

cc:
Exxon Research & Engineering Company
ATTN: Steve Hinton, Ph.D.
Radiation Safety Officer
Clinton Township
Route 22 East
Annandale, New Jersey 08801

bcc:
M. Shanbaky, RI
A. Dimitriadis, RI

DRSS:RI
Dimitriadis

04/21/94

DRSS:RI
Shanbaky

MS
04/25/94

NOTE TO DMB:

THE ATTACHED DOCUMENTS ARE TO BE PROCESSED AS ONE FINANCIAL ASSURANCE FOR DECOMMISSIONING PACKAGE.

LICENSE NUMBER: 29-05260-13

DOCKET NUMBER: 030-05310

CONTROL NUMBER: 113590

THIS SHEET MAY BE DISCARDED AFTER PROCESSING.

THANK YOU!

M516
K-8

EXXON RESEARCH AND ENGINEERING COMPANY

P.O. BOX 390, FLORHAM PARK, NEW JERSEY 07932-0390

JESSICA R. NACHEMAN
Senior Attorney

Telephone: 201-765-3172
Cable: EXXONRELAW FLORHAM PARK
Facsimile: 201-765-2529

Certified/Return
Receipt Requested

April 1, 1994

Re: Mail Control No. 113590
Docket No. 030-05310
License No. 29-05260-13

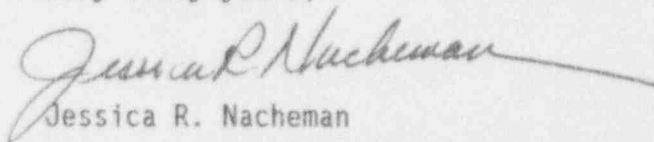
Mr. Anthony Dimitriadis
U.S. Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA 19406-1415

Dear Mr. Dimitriadis:

Enclosed please find an original, and a duplicate, amendment to our Letter of Credit ("LOC") No. 00303150 as issued in favor of the U.S. Nuclear Regulatory Commission.

Please note that the original LOC and accompanying Standby Trust Agreement in satisfaction of the financial assurance requirements of our subject NRC license were submitted to Mr. John Kinneman at the NRC on December 30, 1993.

Very truly yours,


Jessica R. Nacheman

JRN:esr
Enclosures

c: R. E. Dale (w/enclosures)
J. N. Grandorf (w/enclosures)
M. M. Shanbaky (w/o enclosures)

A:04019401.JRN

113590

OFFICIAL RECORD COPY

ML 10

APR 7 1994



FIRST FIDELITY BANK N.A.
TRADE SERVICE PROCESSING CENTER
570 BROAD ST. 11TH FLOOR
NEWARK, NEW JERSEY 07102
SWIFT# FNSB US 33 TLX# 176108

DATE: March 28, 1994

BENEFICIARY

U.S. NUCLEAR REGULATORY COMMISSION
X
WASHINGTON, DC 20555

WE ARE INSTRUCTED BY:

EXXON RESEARCH AND ENGINEERING CO.
180 PARK AVENUE
FLORHAM PARK, NJ 07932


TO AMEND CREDIT 00303150 AS ISSUED IN FAVOR OF:

U.S. NUCLEAR REGULATORY COMMISSION
X
WASHINGTON, DC 20555

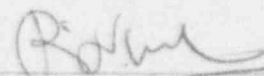
THIS AMENDMENT IS AN INTEGRAL PART OF THE ORIGINAL LETTER OF CREDIT. ALL OTHER TERMS AND CONDITIONS OF THE LETTER OF CREDIT, INCLUDING PREVIOUS AMENDMENTS, REMAIN UNCHANGED.

AMENDED TERMS AND CONDITIONS:

THE BANK SHALL GIVE PROMPT NOTICE TO THE APPLICANT AND THE NRC, TO THE EXTENT THAT THE BANK IS NOT PROHIBITED FROM PROVIDING SUCH NOTICE BY ANY APPLICABLE LAWS OR REGULATIONS, OF ANY NOTICE RECEIVED OR ACTION FILED ALLEGING (1) THE INSOLVENCY OR BANKRUPTCY OF THE FINANCIAL INSTITUTION, OR (2) ANY VIOLATIONS OF REGULATORY REQUIREMENTS THAT COULD REASONABLY BE EXPECTED TO RESULT IN SUSPENSION OR REVOCATION OF THE BANK'S CHARTER OR LICENSE TO DO BUSINESS. THE FINANCIAL INSTITUTION ALSO SHALL GIVE PROMPT NOTICE IF THE BANK, FOR ANY REASON, BECOMES UNABLE TO FULFILL ITS OBLIGATIONS UNDER THE LETTER OF CREDIT.



AUTHORIZED SIGNATURE
JOHN CITROLA, VICE PRESIDENT



AUTHORIZED SIGNATURE
RAVI SOOD, VICE PRESIDENT



FIRST FIDELITY BANK N.A.
TRADE SERVICE PROCESSING CENTER
570 BROAD ST. 11TH FLOOR
NEWARK, NEW JERSEY 07102
SWIFT# FNSB US 33 TLX# 178108

DATE: March 28, 1994

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FLORHAM PARK, NJ 07932


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AUTHORIZED SIGNATURE
JOHN CITROIA, VICE PRESIDENT



AUTHORIZED SIGNATURE
RAVI SOOD, VICE PRESIDENT

030-05310

EXXON RESEARCH AND ENGINEERING COMPANY

P.O. BOX 390, FLORHAM PARK, NEW JERSEY 07932-0390

JESSICA R. NACHEMAN
Attorney

Telephone: 201-765-3172
Cable: EXXONFELAW FLORHAM PARK
Facsimile: 201-765-2520

Via Facsimile/Mail

March 23, 1994

Re: Mail Control No. ¹¹³⁵⁹⁰11390
Docket No. 030-05310
Licensee No. 29-05260-13

Mr. Anthony Dimitriadis
U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

Dear Mr. Dimitriadis:

I am writing in response to Mr. Shanbaky's letter of March 1, 1994 to F. Donald Paris, Esq. on the subject of Financial Assurance.

In that letter Mr. Shanbaky requested that our Irrevocable Standby Letter of Credit, identified as No. N-303150 from the First Fidelity Bank (the "Bank"), be modified to include the last two sentences on Pages 4-33 of the Regulatory Guide 3.66. As you can see by the attached March 10, 1994 letter from James Grandorf to Joseph DiFrancesco, we relayed your request to the Bank and it will modify the current language per the language in the attached memorandum dated March 22, 1994 from S. Fain Hackney to Jessica Nacheman, and subject to approval of the Bank's Letter of Credit Department.

Please review the Bank's proposed language and, if it is acceptable to you, I will seek to have the Bank issue a modified Letter of Credit in favor of the U.S. Nuclear Regulatory Commission.

Your prompt response to this letter will help ensure a prompt redraft of our Letter of Credit.


A:03239401.JRN

113590

- 2 -

If you would like to speak with me directly, I can be reached at
(201) 765-3172.

Very truly yours,


Jessica R. Nacheman, Esq.

JRN:esr
Attachments

c: J. N. Grandorf
S. Fain Hackney, Esq.
M. M. Shanbaky



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

MAR 1 1994

Licensee No. 29-05260-13
Docket No. 030-05310
Control No. 113590

Exxon Research and Engineering Company
ATTN: F. Donald Paris
Counsel
P. O. Box 390
Florham Park, New Jersey 07932-0390

Dear Mr. Paris:

SUBJECT: Financial Assurance

This is in reference to your letter dated December 30, 1993 to provide financial assurance for License No. 29-05260-13. We have reviewed your submittal. Please modify the Standby Letter of Credit to address the specific issue listed below:

Amend the Irrevocable Standby Letter of Credit and include the last two sentences on Page 4-33 of Regulatory Guide 3.66 (enclosed) beginning with the words: "The bank shall give immediate notice to the applicant and the NRC of any notice received or action filed alleging (1) the insolvency or bankruptcy..." This notification clause is required to ensure that, should Exxon Research and Engineering Company default on its primary obligation to decommission its facility, the bank will, in fact, be solvent to honor the Letter of Credit.

The NRC has reviewed dozens of LOC's and each has contained the two sentences. The notification requirement is not unreasonable in light of the present condition of the U.S. banking industry.

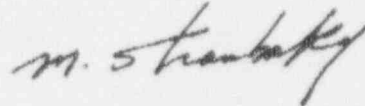
Satisfactory financial assurance is required for your license. Therefore, we request that you respond within 30 calendar days of the date of this letter.

Exxon Research and Engineering Co.

2

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I office and refer to Mail Control No. 11390. If you have any questions regarding this letter, please contact Anthony Dimitriadis of my staff at (215) 337-6953.

Sincerely,



Mohamed M. Shanbaky, Chief
Research and Development Section
Division of Radiation Safety
and Safeguards

Enclosure:
Regulatory Guide 3.66

EXXON RESEARCH AND ENGINEERING COMPANY

P.O. BOX 101, FLOHAM PARK, NEW JERSEY 07832-0101

JAMES N. GRANDORF
Controller and Treasurer

Call: EXCOMPNS FLOHAM PARK

March 10, 1994

Re: Letter of Credit No. N-303150
Exxon Research and Engineering
Company

Mr. Joseph DiFrancesco
Vice President
First Fidelity Bank
550 Broad Street, Fifth Floor
Newark, New Jersey 07102

Dear Mr. DiFrancesco:

Per your telephone conversation with Jessica Nacheman, I am writing to request two (2) original copies of an amendment to the above-identified Letter of Credit.

As evidenced by the attached copy of the March 1, 1994 letter sent to Exxon Research and Engineering Company by the U. S. Nuclear Regulatory Commission, it is imperative that the following language be added to the previously issued irrevocable Standby Letter of Credit:

"The Bank shall give immediate notice to the applicant and the NRC of any notice received or action filed alleging (1) the insolvency or bankruptcy of the financial institution, or (2) any files of regulatory requirements that could result in suspension or revocation of the Bank's charter or license to do business. The financial institution also shall give immediate notice if the Bank, for any reason, becomes unable to fulfill its obligation under the letter of credit."

Your prompt attention to this matter is greatly appreciated as the amended Letter of Credit must be submitted to the Nuclear Regulatory Commission in duplicate before April 1, 1994.

Very truly yours,

JNG:ljd
Enclosure

03109402.JNG

| | | | |
|--|-------------|----------------|--------------|
| Post-It™ brand fax transmittal memo 7671 | | # of pages = 1 | |
| To | J. Nacheman | From | Jim Grandorf |
| Co. | ER&E | Co. | ER&E |
| Dept | LAW | Phone # | 765-10211 |
| Fax # | 765-2529 | Fax # | 765-2135 |



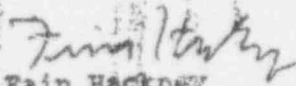
Interoffice Memorandum

DATE: March 22, 1994
TO: Jessica Nachman
FROM: S. Fain Hackney - Legal Department - PMB010
RE: Letter of Credit No. N-303150 in favor of the NRC

The language that the U.S. Nuclear Regulatory Commission ("NRC") has requested the Bank to insert into the above-referenced Letter of Credit would be acceptable (subject to approval of the Bank's Letter of Credit Department) if it was modified as follows:

"The Bank shall give ~~prompt~~ notice to the applicant and the NRC, ~~to the extent that the Bank is not prohibited from providing such~~ notice by any applicable laws or regulations, of any notice received or action filed alleging (1) the insolvency or bankruptcy of the financial institution, or (2) any violations of regulatory requirements that could ~~reasonably be expected to result in~~ suspension or revocation of the Bank's charter or license to do business. The financial institution also shall give ~~prompt~~ notice if the Bank, for any reason, becomes unable to fulfill its obligations under the Letter of Credit."

The black-lining shows the changes from the language suggested by the NRC. Please let me know whether this language would be an acceptable alternative to the language recommended by the NRC. Please feel free to call if you have any questions.


S. Fain Hackney
Counsel

SFH/jc

cc: Dennis Afflerbach

EXXON RESEARCH AND ENGINEERING CO.
LAW DEPARTMENT
(FACSIMILE: 201/765-2529)

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME/COMPANY: MR. ANTHONY DIMITRIADIS, U.S. NUCLEAR REGULATORY COMMISSION
LOCATION: KING OF PRUSSIA, PA DATE: MARCH 23, 1994
FAX NO: (610) 337-5393 PHONE NO.: (215) 337-6953
MESSAGE:

FROM:

NAME: JESSICA R. NACHEMAN, ESQ. PHONE NO.: (201) 765-3172
LOCATION: ER&E, FLORHAM PARK, NEW JERSEY

WE HAVE SENT 7 PAGES OF COPY INCLUDING THIS COVER LETTER. IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL.

CONFIDENTIALITY NOTICE

This facsimile transmission may contain confidential information belonging to the sender which is protected by the attorney-client privilege. The information is intended only for the use of the individual or entity named above. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution, or the taking of any action in reliance on the contents of this information is strictly prohibited. If you have received this transmission in error, please call the sender collect to arrange for the return of the documents.

MAR 1 1994

Licensee No. 29-05260-13
Docket No. 030-05310
Control No. 113590

Exxon Research and Engineering Company
ATTN: F. Donald Paris
Counsel
P. O. Box 390
Florham Park, New Jersey 07932-0390

Dear Mr. Paris:

SUBJECT: Financial Assurance

This is in reference to your letter dated December 30, 1993 to provide financial assurance for License No. 29-05260-13. We have reviewed your submittal. Please modify the Standby Letter of Credit to address the specific issue listed below:

Amend the Irrevocable Standby Letter of Credit and include the last two sentences on Page 4-33 of Regulatory Guide 3.66 (enclosed) beginning with the words: "The bank shall give immediate notice to the applicant and the NRC of any notice received or action filed alleging (1) the insolvency or bankruptcy..." This notification clause is required to ensure that, should Exxon Research and Engineering Company default on its primary obligation to decommission its facility, the bank will, in fact, be solvent to honor the Letter of Credit.

The NRC has reviewed dozens of LOC's and each has contained the two sentences. The notification requirement is not unreasonable in light of the present condition of the U.S. banking industry.

Satisfactory financial assurance is required for your license. Therefore, we request that you respond within 30 calendar days of the date of this letter.

Exxon Research and Engineering Co.

2

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I office and refer to Mail Control No. 11390. If you have any questions regarding this letter, please contact Anthony Dimitriadis of my staff at (215) 337-6953.

Sincerely,

Original Signed By:
Mohamed M. Shanbaky

Mohamed M. Shanbaky, Chief
Research and Development Section
Division of Radiation Safety
and Safeguards

Enclosure:
Regulatory Guide 3.66

bcc:
M. Shanbaky, RI
A. Dimitriadis, RI

RI:DRSS
Dimitriadis

1/28/94

RI:DRSS
Shanbaky

1/25/94

S:\PENDING\EXXON.FA

OFFICIAL RECORD COPY

January 27, 1994

ML 10

030-05310

EXXON RESEARCH AND ENGINEERING COMPANY

P.O. BOX 390, FLORHAM PARK, NEW JERSEY 07932-0390

F. DONALD PARIS
Counsel

Telephone: 201-765-1550
Cable: EXXONRELAW FLORHAM PARK
Facsimile: 201-765-2529

Federal Express Mail

December 30, 1993

Re: License No. 29-05260-13
Docket No. 030-05310

Mr. John D. Kinneman, Chief
Research, Development & Decommissioning Section
Division of Radiation Safety and Safeguards
U. S. Nuclear Regulatory Commission
Region 1, Mail Control No. 113590
475 Allendale Road
King of Prussia, PA 19406-1415

Attention: Mr. Anthony Dimitriades

Dear Mr. Kinneman:

Enclosed herewith for your files are the signed original copies of the Standby Trust Agreement and the Letter of Credit (LOC) No. N-303150, in satisfaction of the financial assurance requirements of our subject NRC License.

On August 16, 1993, we inadvertently sent you copies of these documents and retained the signed originals for our files. We regret any inconvenience that this may have caused.

As Dr. Hinton has previously advised, First Fidelity Bank cannot issue another original of the LOC.

Very truly yours,



F. Donald Paris

FDP:esr
Enclosures

- c: R. E. Dale
- S. M. Hinton
- J. A. Mancuso
- J. R. Nacheman

12299301.FDP

OFFICIAL RECORD COPY

ML 10

113590
JAN 03 1994



First Fidelity Bank, N.A., New Jersey
 570 560 Broad Street, Newark, NJ 07102 U.S.A.
 International Banking Department

SWIFT# FNSB US 33A
 TLX# 178108 FFB NWK NJ UT

ORIGINAL

PLACE AND DATE OF ISSUE: NEWARK, NJ, AUGUST 06, 1993
 LETTER OF CREDIT NO.: N-303150

***** DIRECT *****

APPLICANT:
 EXXON RESEARCH AND ENGINEERING
 COMPANY
 CLINTON TOWNSHIP, ROUTE 22 EAST
 ANNANDALE, NEW JERSEY 08801

BENEFICIARY:
 U.S. NUCLEAR REGULATORY COMMISSION
 WASHINGTON, D.C. 20555

AMOUNT: USD 250,000.00
 (TWO HUNDRED FIFTY THOUSAND
 AND 00/100 UNITED STATES
 DOLLARS)

DEAR SIR OR MADAM:

WE HEREBY ESTABLISH OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO. N-303150 IN YOUR FAVOR, AT THE REQUEST AND FOR THE ACCOUNT OF EXXON RESEARCH AND ENGINEERING COMPANY, CLINTON TOWNSHIP, ROUTE 22 EAST, ANNANDALE, NJ 08801, UP TO THE AGGREGATE AMOUNT OF TWO HUNDRED FIFTY THOUSAND US DOLLARS (\$250,000.00 US) AVAILABLE UPON PRESENTATION OF:

(1) YOUR SIGHT DRAFT, BEARING REFERENCE TO THIS LETTER OF CREDIT NO. N-303150 AND

(2) A WRITTEN DATED STATEMENT PURPORTEDLY SIGNED BY AN AUTHORIZED SIGNER OF THE BENEFICIARY AS FOLLOWS:

*I HEREBY CERTIFY THAT OUR DRAFT IN THE AMOUNT OF (INSERT AMOUNT) PRESENTED WITH THIS CERTIFICATE TO FIRST FIDELITY BANK, N.A., NEW JERSEY UNDER LETTER OF CREDIT NO. N-303150 IS PAYABLE PURSUANT TO REGULATIONS ISSUED UNDER AUTHORITY OF THE U.S. NUCLEAR REGULATORY COMMISSION.

 AUTHORIZED SIGNER
 U.S. NUCLEAR REGULATORY COMMISSION*

EXXON RESEARCH AND ENGINEERING COMPANY STATES: *THIS LETTER OF CREDIT IS ISSUED IN ACCORDANCE WITH REGULATIONS ISSUED UNDER THE AUTHORITY OF THE U.S. NUCLEAR REGULATORY COMMISSION (NRC), AN AGENCY OF THE U.S. GOVERNMENT, PURSUANT TO THE ATOMIC ENERGY ACT OF 1954, AS AMENDED, AND THE ENERGY REORGANIZATION ACT OF 1974. THE NRC HAD PROMULGATED REGULATIONS IN TITLE 10, CHAPTER I OF THE CODE OF FEDERAL REGULATIONS, PART 30, WHICH REQUIRE THAT A

-CONTINUED-

N-303150- -001-L1-01-02-01

6510-1147 (10-89)



First Fidelity Bank, N.A., New Jersey
550 Broad Street, Newark, NJ 07102 U.S.A.
International Banking Department

SWIFT# FNSB US 33A
TLX# 178108 FFB NWK NJ UT

ORIGINAL

PLACE AND DATE OF ISSUE: NEWARK, NJ, AUGUST 06, 1993
LETTER OF CREDIT NO.: N-303150

HOLDER OF, OR AN APPLICANT FOR, A LICENSE ISSUED UNDER 10 CFR PART 30 PROVIDE ASSURANCE THAT FUNDS WILL BE AVAILABLE WHEN NEEDED FOR DECOMMISSIONING." THIS STATEMENT IS INCLUDED HERE AT THE REQUEST OF EXXON RESEARCH AND ENGINEERING COMPANY, HOWEVER IT IS NOT A TERM OR CONDITION OF THIS LETTER OF CREDIT NOR IS IT IN ANYWAY BINDING ON FIRST FIDELITY BANK, N.A., NEW JERSEY.

THIS LETTER OF CREDIT IS EFFECTIVE AS OF AUGUST 6, 1993 AND SHALL EXPIRE ON JULY 31, 1994, BUT SUCH EXPIRATION DATE SHALL BE AUTOMATICALLY EXTENDED FOR A PERIOD OF ONE YEAR ON JULY 31, 1994 AND ON EACH SUCCESSIVE EXPIRATION DATE, UNLESS, AT LEAST NINETY (90) DAYS BEFORE THE THEN CURRENT EXPIRATION DATE, WE NOTIFY BOTH YOU AND EXXON RESEARCH AND ENGINEERING COMPANY, BY CERTIFIED MAIL THAT WE ELECT NOT TO RENEW THIS LETTER OF CREDIT. IN SUCH EVENT YOU MAY CLAIM HEREUNDER ON OR PRIOR TO THE THEN CURRENT EXPIRATION DATE AGAINST (1) YOUR SIGHT DRAFT, BEARING REFERENCE TO THIS LETTER OF CREDIT NO. N-303150 AND (2) A WRITTEN DATED STATEMENT PURPORTEDLY SIGNED BY AN AUTHORIZED SIGNER OF THE BENEFICIARY AS FOLLOWS: "I HEREBY CERTIFY THAT OUR DRAFT IN THE AMOUNT OF (INSERT AMOUNT) PRESENTED WITH THIS CERTIFICATE TO FIRST FIDELITY BANK, N.A., NEW JERSEY UNDER LETTER OF CREDIT NO. N-303150 IS PAYABLE BECAUSE EXXON RESEARCH AND ENGINEERING COMPANY WAS UNABLE TO SECURE ALTERNATIVE FINANCIAL ASSURANCE TO REPLACE YOUR LETTER OF CREDIT NO. N-303150 WITHIN THIRTY (30) DAYS OF YOUR NOTIFICATION OF NON RENEWAL TO US.

AUTHORIZED SIGNER
U.S. NUCLEAR REGULATORY COMMISSION*

ORIGINAL LETTER OF CREDIT MUST BE PRESENTED WITH DOCUMENTS.

DRAFTS MUST BE MARKED AS DRAWN UNDER LETTER OF CREDIT NUMBER N-303150 OF FIRST FIDELITY BANK, N. A., NEW JERSEY DATED AUGUST 6, 1993 AND THE TOTAL OF THIS DRAFT AND ALL OTHER DRAFTS PREVIOUSLY DRAWN UNDER THIS LETTER OF CREDIT DOES NOT EXCEED \$250,000.00.

WE ENGAGE WITH YOU THAT ALL DRAFTS DRAWN UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS CREDIT WILL BE DULY HONORED UPON PRESENTATION OF DOCUMENTS, AS SPECIFIED ABOVE TO US AT 570 BROAD STREET, TRADE SERVICES DEPT., NEWARK, NEW JERSEY 07102, ATTN: STANDBY LC UNIT NOT LATER THAN: JULY 31, 1994 OR ANY AUTOMATICALLY EXTENDED DATE AND PROCEEDS OF SUCH HONORED DRAFTS WILL BE DEPOSITED TO THE STANDBY TRUST FUND ACCOUNT (ACCOUNT NUMBER 69300114) OF EXXON RESEARCH AND ENGINEERING COMPANY.

THIS CREDIT IS SUBJECT TO THE UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS (1983 REVISION), INTERNATIONAL CHAMBER OF COMMERCE PUBLICATION NUMBER 400.

FIRST FIDELITY BANK, N.A., NEW JERSEY

AUTHORIZED SIGNATURE
DENNIS AFFLERBACH, VICE PRESIDENT

N-303150- -001-L1-01-02-01

6510-1147 (10-89)

STANDBY TRUST AGREEMENT

TRUST AGREEMENT, the Agreement entered into as of August 1, 1993 by and between Exxon Research and Engineering Company, a Delaware corporation, herein referred to as the "Grantor," and First Fidelity Bank, N.A., New Jersey, 550 Broad Street, Newark, New Jersey 07102, the "Trustee."

WHEREAS, the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 30. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a Part 30 license provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a letter of credit to provide all of such financial assurance for the facilities identified herein; and

WHEREAS, when payment is made under a letter of credit, this standby trust shall be used for the receipt of such payment; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

- (a) The term "Grantor" means the NRC licensee who enters into this Agreement and any successors or assigns of the Grantor.
- (b) The term "Trustee" means the trustee who enters into this Agreement and any successor Trustee.

Section 2. Costs of Decommissioning. This Agreement pertains to the costs of decommissioning the materials and activities identified in License Number 29-05260-13 issued pursuant to 10 CFR Part 30 as shown in Schedule A.

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a standby trust fund (the Fund) for the benefit of the NRC. The Grantor and the Trustee intend that no third party have access to the Fund except as provided herein.

Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund," together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as

hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the NRC.

Section 5. Payment for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon presentation to the Trustee of the following:

- a. A certificate duly executed by the Secretary of the Depositor attesting to the occurrence of the events, and in the form set forth in the attached Specimen Certificate, and
- b. A certificate attesting to the following conditions:
 - (1) that decommissioning is proceeding pursuant to an NRC-approved Plan.
 - (2) that the funds withdrawn will be expended for activities undertaken pursuant to that Plan, and
 - (3) that the NRC has been given 30 days' prior notice of Exxon Research and Engineering Company's intent to withdraw funds from the escrow fund.

No withdrawal from the Fund can exceed ten percent (10%) of the outstanding balance of the Fund or Twenty five thousand U.S. dollars (\$25,000 U.S.), whichever is greater, unless NRC approval is attached.

In the event of the Grantor's default or inability to direct decommissioning activities, the Trustee shall make payments from the Fund as the NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the NRC, or State agency, from the Fund for expenditures for required activities in such amounts as the NRC, or State agency, shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use

in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended (15 U.S.C. 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency or the Federal Government, and in obligations of the Federal Government such as GNMA, FNMA, and FHLM bonds and certificates or State and Municipal bonds rated BBB or higher by Standard and Poors or Baa or higher by Moody's Investment Services; and
- (c) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment service is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and the NRC or to reinvest in securities at the direction of the Grantor;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary

capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

- (d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. After payment has been made into this Standby Trust Fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the Standby Trust Fund, furnish to the Grantor and to the NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the NRC, or State agency, shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C).

Section 13. Successor Trustee. Upon 90 days notice to the NRC, the Trustee may resign; upon 90 days notice to NRC and the Trustee, the Grantor may replace the Trustee; but such resignation or displacement shall not be effective until the Grantor has appointed a successor Trustee and this successor accepts the appointment. The successor Trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor Trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the NRC or State agency, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this Agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. If the NRC or State agency issues orders, requests, or instructions to the Trustee these shall be in writing, signed by the NRC, or State agency, or their designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor, the NRC, or State agency, hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the NRC, or State agency, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee and the NRC, or State agency, or by the Trustee and the NRC or State agency, if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the NRC or State agency, or by the Trustee and the NRC or State agency, if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor, the NRC, or State agency, issued in accordance with this Agreement.

Section 18. This Agreement shall be administered, construed, and enforced according to the laws of the State of New Jersey.

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this Agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the incorporate seals to be hereunto affixed and attested as of the date first written above.

ATTEST: L. M. Taylor

(Seal)

EXXON RESEARCH AND ENGINEERING COMPANY

By J. Richard
Title Treasurer and Controller

ATTEST:

M. Allen
(Seal)

FIRST FIDELITY BANK, N.A., NEW JERSEY

By NW Simons
Title VICE PRESIDENT

Specimen Certificate

First Fidelity Bank, N.A., New Jersey
550 Broad Street
Newark, New Jersey 07102

Attention: Trust Division

Gentlemen:

In accordance with the terms of the Agreement with you dated _____, I, _____, Secretary of Exxon Research and Engineering Company, hereby certify that the following events have occurred:

1. Exxon Research and Engineering Company is required to commence the decommissioning of its facility located at [insert] (hereinafter called the decommissioning).
2. The plans and procedures for the commencement and conduct of the decommissioning have been approved by the United States Nuclear Regulatory Commission, or its successor, on [Date] (copy of approval attached).
3. The Board of Directors of Exxon Research and Engineering Company has adopted the attached resolution authorizing the commencement of the decommissioning.

Secretary of Exxon Research and Engineering
Company

Date

TRUST AGREEMENT SCHEDULES

SCHEDULE A

This Agreement demonstrates financial assurance for the following cost estimates for the following licensed activities:

| <u>U.S. NUCLEAR REGULATORY COMMISSION LICENSE NUMBER</u> | <u>NAME AND ADDRESS OF LICENSEE</u> | <u>ADDRESS OF LICENSED ACTIVITY</u> | <u>COST ESTIMATES FOR REGULATORY ASSURANCES DEMONSTRATED BY THIS AGREEMENT</u> |
|--|---|---|--|
| 29-05260-13 | Exxon Research and Engineering Company, Clinton Township, Route 22 West, Annandale, NJ 08801 | Linden, Clinton, and Florham Park | \$202,812 (includes 25% contingency) |

The cost estimates listed here were last adjusted and approved* by the NRC with the latest License Renewal in 1993.

*approval pending

SCHEDULE B

AMOUNT \$250,000.00

AS EVIDENCED BY Letter of Credit No. N-303150

SCHEDULE C

Trustee's fees shall be an annual fee equal to one percent (1%) of the Letter of Credit amount.

CONVERSATION RECORD

TIME

7:05 pm

DATE

12/22/93

TYPE

VISIT

CONFERENCE

TELEPHONE

INCOMING

OUTGOING

ROUTING

NAME/SYMBOL

INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

Dr. Stephen M. Hinton

ORGANIZATION (Office, dept., bureau, etc.)

EXXON RES. and Engr. Co.

TELEPHONE NO.

908-730-2125

SUBJECT

Financial Assurance

SUMMARY

I left a message telling him that it had come to my attention that we are still waiting for an original Letter of Credit (LOC) and originally signed duplicates of the Standby Trust Agreement (STA). We are getting a lot of pressure to close out this action and I appreciate a return call.

ACTION REQUIRED

Originally Signed LOC + STA.

NAME OF PERSON DOCUMENTING CONVERSATION

DMITRIADIS

SIGNATURE

[Signature]

DATE

12/22/93

ACTION TAKEN

SIGNATURE

TITLE

DATE

CONVERSATION RECORD

TIME 8:40 AM

DATE 11/26/93

TYPE VISIT CONFERENCE TELEPHONE
 INCOMING OUTGOING

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

ORGANIZATION (Office, dept., bureau, etc.)

TELEPHONE NO.

Dr. Stephen M. Hinton

EXXON Res + Eng. Co.

908-730-2125

SUBJECT

Financial Assurance for Decommissioning

| ROUTING | |
|-------------|-----|
| NAME/SYMBOL | INT |
| | |
| | |
| | |
| | |
| | |

SUMMARY

I left a message regarding their letter dated September 10, 1993 ~~being~~ the enclosure of "second original signed copy" of ^{indicating} the Standby Trust Agreement and an original Letter of Credit.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

DATE

DMITRADIS



11/26/93

ACTION TAKEN

SIGNATURE

TITLE

DATE

EXXON RESEARCH AND ENGINEERING COMPANY

Clinton Township, Route 22 East, Annandale, New Jersey 08801-0998

HEALTH SERVICES DIVISION

ROBERT E. DALE, CIH
Industrial Hygiene and
Environmental Health

Telephone: (908) 730-3053

030-05310

CERTIFIED - RETURN RECEIPT REQUESTED

September 10, 1993

Mr. John D. Kinneman, Chief
Research, Development and Decommissioning Section
Division of Radiation Safety and Safeguards
US Nuclear Regulatory Commission
Region I, Mail Control No. 113590
475 Allendale Road
King of Prussia, PA 19406-1415

Exxon Research & Engineering Company
Financial Assurance for NRC
License No. 29-05260-13

93RAPCL55

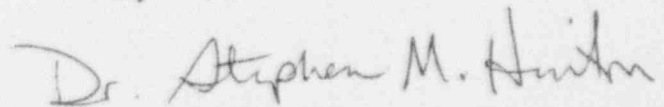
Dear Mr. Kinneman:

Enclosed is a second original signed copy of the Standby Trust Agreement between ER&E and First Fidelity Bank which you require. This copy bears the original signatures of Mr. Grandorf and Mr. Simons, and also has ER&E's and the Bank's seals.

First Fidelity advised that they cannot issue another original of the Letter of Credit (LOC). They do not want two original LOCs to be issued since it increases their potential exposure i.e., both LOCs could be submitted to the Bank.

If you have any questions, please feel free to call me at (908) 730-2125.

Very truly yours,



Stephen M. Hinton
Chairman, Radioisotopes Committee
Exxon Research & Engineering Company

SMH:bam
Enclosure

09089301.red

OFFICIAL RECORD COPY ML 10

113590
SEP 16 1993

STANDBY TRUST AGREEMENT

TRUST AGREEMENT, the Agreement entered into as of August 1, 1993 by and between Exxon Research and Engineering Company, a Delaware corporation, herein referred to as the "Grantor," and First Fidelity Bank, N.A., New Jersey, 550 Broad Street, Newark, New Jersey 07102, the "Trustee."

WHEREAS, the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 30. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a Part 30 license provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a letter of credit to provide all of such financial assurance for the facilities identified herein; and

WHEREAS, when payment is made under a letter of credit, this standby trust shall be used for the receipt of such payment; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

- (a) The term "Grantor" means the NRC licensee who enters into this Agreement and any successors or assigns of the Grantor.
- (b) The term "Trustee" means the trustee who enters into this Agreement and any successor Trustee.

Section 2. Costs of Decommissioning. This Agreement pertains to the costs of decommissioning the materials and activities identified in License Number 29-05260-13 issued pursuant to 10 CFR Part 30 as shown in Schedule A.

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a standby trust fund (the Fund) for the benefit of the NRC. The Grantor and the Trustee intend that no third party have access to the Fund except as provided herein.

Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund," together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as

hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the NRC.

Section 5. Payment for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon presentation to the Trustee of the following:

- a. A certificate duly executed by the Secretary of the Depositor attesting to the occurrence of the events, and in the form set forth in the attached Specimen Certificate, and
- b. A certificate attesting to the following conditions:
 - (1) that decommissioning is proceeding pursuant to an NRC-approved Plan.
 - (2) that the funds withdrawn will be expended for activities undertaken pursuant to that Plan, and
 - (3) that the NRC has been given 30 days' prior notice of Exxon Research and Engineering Company's intent to withdraw funds from the escrow fund.

No withdrawal from the Fund can exceed ten percent (10%) of the outstanding balance of the Fund or Twenty five thousand U.S. dollars (\$25,000 U.S.), whichever is greater, unless NRC approval is attached.

In the event of the Grantor's default or inability to direct decommissioning activities, the Trustee shall make payments from the Fund as the NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the NRC, or State agency, from the Fund for expenditures for required activities in such amounts as the NRC, or State agency, shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use

in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended (15 U.S.C. 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency or the Federal Government, and in obligations of the Federal Government such as GNMA, FNMA, and FHLM bonds and certificates or State and Municipal bonds rated BBB or higher by Standard and Poors or Baa or higher by Moody's Investment Services; and
- (c) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment service is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and the NRC or to reinvest in securities at the direction of the Grantor;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary

capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

- (d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. After payment has been made into this Standby Trust Fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the Standby Trust Fund, furnish to the Grantor and to the NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the NRC, or State agency, shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C).

Section 13. Successor Trustee. Upon 90 days notice to the NRC, the Trustee may resign; upon 90 days notice to NRC and the Trustee, the Grantor may replace the Trustee; but such resignation or displacement shall not be effective until the Grantor has appointed a successor Trustee and this successor accepts the appointment. The successor Trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor Trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the NRC or State agency, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this Agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. If the NRC or State agency issues orders, requests, or instructions to the Trustee these shall be in writing, signed by the NRC, or State agency, or their designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor, the NRC, or State agency, hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the NRC, or State agency, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee and the NRC, or State agency, or by the Trustee and the NRC or State agency, if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the NRC or State agency, or by the Trustee and the NRC or State agency, if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor, the NRC, or State agency, issued in accordance with this Agreement.

Section 18. This Agreement shall be administered, construed, and enforced according to the laws of the State of New Jersey.

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this Agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the incorporate seals to be hereunto affixed and attested as of the date first written above.

ATTEST: *L.M. Taylor*
Lois M. Taylor

(Seal)

LOIS M. TAYLOR

Notary Public of New Jersey

My Commission Expires January 7, 1997

EXXON RESEARCH AND ENGINEERING COMPANY

By *J. Harold J. ...*

Title Treasurer and Controller

ATTEST: *[Signature]*
[Signature]

(Seal)

FIRST FIDELITY BANK, N.A., NEW JERSEY

By *RW Simons* *RW Simons*

Title VICE PRESIDENT

Specimen Certificate

First Fidelity Bank, N.A., New Jersey
550 Broad Street
Newark, New Jersey 07102

Attention: Trust Division

Gentlemen:

In accordance with the terms of the Agreement with you dated _____, I, _____, Secretary of Exxon Research and Engineering Company, hereby certify that the following events have occurred:

1. Exxon Research and Engineering Company is required to commence the decommissioning of its facility located at [insert] (hereinafter called the decommissioning).
2. The plans and procedures for the commencement and conduct of the decommissioning have been approved by the United States Nuclear Regulatory Commission, or its successor, on [Date] (copy of approval attached).
3. The Board of Directors of Exxon Research and Engineering Company has adopted the attached resolution authorizing the commencement of the decommissioning.

Secretary of Exxon Research and Engineering
Company

Date

TRUST AGREEMENT SCHEDULES

SCHEDULE A

This Agreement demonstrates financial assurance for the following cost estimates for the following licensed activities:

| <u>U.S. NUCLEAR REGULATORY COMMISSION LICENSE NUMBER</u> | <u>NAME AND ADDRESS OF LICENSEE</u> | <u>ADDRESS OF LICENSED ACTIVITY</u> | <u>COST ESTIMATES FOR REGULATORY ASSURANCES DEMONSTRATED BY THIS AGREEMENT</u> |
|--|---|---|--|
| 29-05260-13 | Exxon Research and Engineering Company, Clinton Township, Route 22 West, Annandale, NJ 08801 | Linden, Clinton, and Florham Park | \$202,812 (includes 25% contingency) |

The cost estimates listed here were last adjusted and approved* by the NRC with the latest License Renewal in 1993.

*approval pending

SCHEDULE B

AMOUNT \$250,000.00

AS EVIDENCED BY Letter of Credit No. N-303150

SCHEDULE C

Trustee's fees shall be an annual fee equal to one percent (1%) of the Letter of Credit amount.

EXXON RESEARCH AND ENGINEERING COMPANY

Clinton Township, Route 22 East, Annandale, New Jersey 08801-0998

HEALTH SERVICES DIVISION

ROBERT E. DALE, CIH
Industrial Hygiene and
Environmental Health

MS 16

K-8

August 16, 1993

CERTIFIED RETURN RECEIPT

Mr. John D. Kinneman, Chief
Research, Development and Decommissioning Section
Division of Radiation Safety and Safeguards
US Nuclear Regulatory Commission
Region I, Mail Control No. 113590
475 Allendale Road
King of Prussia, PA 19406-1415

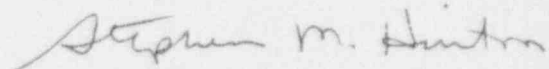
Ref.: License No. 29-05260-13
Docket No. 030-05310
Mail Control No. 113590

93IHCL46

Dear Mr. Kinneman:

Enclosed are original signed copies of our irrevocable Letter of Credit No. N-303150 in the amount of \$250,000 and our Standby Trust Agreement. These documents are submitted in satisfaction of the financial assurance requirements of our License. We expect that you should now have sufficient information to formally approve our decommissioning funding plan. Please feel free to call if further discussion will be useful to the license amendment process.

Very truly yours,



Stephen M. Hinton
Chairman, Radioisotopes Committee
Exxon Research & Engineering Company

SMH:bam
Attachment

OFFICIAL RECORD COPY ML 10

08169301 smh
113590
AUG 18 1993

EXXON RESEARCH AND ENGINEERING COMPANY

P.O. BOX 390, FLORHAM PARK, NEW JERSEY 07932-0390

F. DONALD PARIS
Counsel

Telephone: 201-765-1550
Cable: EXXONRELAW FLORHAM PARK
Facsimile: 201-765-2529

August 12, 1993

Re: Financial Assurance for
NRC License No. 29-05260-13

Dr. S. M. Hinton
CL/LB288

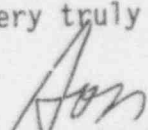
Dear Steve:

Enclosed are original signed copies of (1) the Standby Trust Agreement ("Trust"), and (2) the Letter of Credit No. N-303150 ("LOC") for you to forward to the NRC in satisfaction of the financial assurance requirements of our License. I suggest that you send these documents by express mail or certified mail, return receipt requested. I have retained copies for the Law Department files.

In accordance with our understanding for payment of charges for the LOC/Trust, the initial bill for the LOC charges for the period 8/6/93 to 11/5/93 is being sent to Rob Dale with a copy of this letter to process for payment. Further bills for the balance of the LOC term for '93-'94 and for subsequent years, as well as for establishing the trust, also will be sent to Rob.

Please call me if you have any questions.

Very truly yours,


F. Donald Paris

FDP:esr
Enclosures

c: R. E. Dale
J. A. Mancuso
H. F. Paetzold
P. E. Purwin
K. C. Webb

08099305.FDP



First Fidelity Bank N.J. New Jersey
765 Broad Street, Newark, New Jersey 07101
076504
201 430-4731

Thomas W. Simons
Vice President and Corporate Trust Officer

August 6, 1993

Mr. H. F. Paetzold
Administrator
Exxon Research and Engineering Company
P. O. Box 101
Florham Park, NJ 07932

Re: NRC Trust Agreement

Dear Mr Paetzold:

Enclosed is the executed copy of the Trust Agreement. I would appreciate your execution of a second copy to be returned to us, in order that we may have an originally executed copy for our files. Thank you.

We will follow up shortly with a letter confirming the trustee fee, as previously quoted to you by telephone.

Should you have any questions, please contact Tony Pohlig on (201) 430-4733.

Sincerely,

A handwritten signature in cursive script that reads 'TW Simons'.

Enclosure

cc: Joe DiFrancesco

TS/bak/5
(TS8693)

STANDBY TRUST AGREEMENT

TRUST AGREEMENT, the Agreement entered into as of August 1, 1993 by and between Exxon Research and Engineering Company, a Delaware corporation, herein referred to as the "Grantor," and First Fidelity Bank, N.A., New Jersey, 550 Broad Street, Newark, New Jersey 07102, the "Trustee."

WHEREAS, the U.S. Nuclear Regulatory Commission (NRC), an agency of the U.S. Government, pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, has promulgated regulations in Title 10, Chapter I of the Code of Federal Regulations, Part 30. These regulations, applicable to the Grantor, require that a holder of, or an applicant for, a Part 30 license provide assurance that funds will be available when needed for required decommissioning activities.

WHEREAS, the Grantor has elected to use a letter of credit to provide all of such financial assurance for the facilities identified herein; and

WHEREAS, when payment is made under a letter of credit, this standby trust shall be used for the receipt of such payment; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

- (a) The term "Grantor" means the NRC licensee who enters into this Agreement and any successors or assigns of the Grantor.
- (b) The term "Trustee" means the trustee who enters into this Agreement and any successor Trustee.

Section 2. Costs of Decommissioning. This Agreement pertains to the costs of decommissioning the materials and activities identified in License Number 29-05260-13 issued pursuant to 10 CFR Part 30 as shown in Schedule A.

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a standby trust fund (the Fund) for the benefit of the NRC. The Grantor and the Trustee intend that no third party have access to the Fund except as provided herein.

Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee are referred to as the "Fund," together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as

hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the NRC.

Section 5. Payment for Required Activities Specified in the Plan. The Trustee shall make payments from the Fund to the Grantor upon presentation to the Trustee of the following:

- a. A certificate duly executed by the Secretary of the Depositor attesting to the occurrence of the events, and in the form set forth in the attached Specimen Certificate, and
- b. A certificate attesting to the following conditions:
 - (1) that decommissioning is proceeding pursuant to an NRC-approved Plan.
 - (2) that the funds withdrawn will be expended for activities undertaken pursuant to that Plan, and
 - (3) that the NRC has been given 30 days' prior notice of Exxon Research and Engineering Company's intent to withdraw funds from the escrow fund.

No withdrawal from the Fund can exceed ten percent (10%) of the outstanding balance of the Fund or Twenty five thousand U.S. dollars (\$25,000 U.S.), whichever is greater, unless NRC approval is attached.

In the event of the Grantor's default or inability to direct decommissioning activities, the Trustee shall make payments from the Fund as the NRC shall direct, in writing, to provide for the payment of the costs of required activities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the NRC, or State agency, from the Fund for expenditures for required activities in such amounts as the NRC, or State agency, shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the NRC specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use

in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended (15 U.S.C. 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency or the Federal Government, and in obligations of the Federal Government such as GNMA, FNMA, and FHLM bonds and certificates or State and Municipal bonds rated BBB or higher by Standard and Poors or Baa or higher by Moody's Investment Services; and
- (c) For a reasonable time, not to exceed 60 days, the Trustee is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment service is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale, as necessary to allow duly authorized withdrawals at the joint request of the Grantor and the NRC or to reinvest in securities at the direction of the Grantor;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary

capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the Fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the U.S. Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. After payment has been made into this Standby Trust Fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the Standby Trust Fund, furnish to the Grantor and to the NRC a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the NRC, or State agency, shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to the matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C).

Section 13. Successor Trustee. Upon 90 days notice to the NRC, the Trustee may resign; upon 90 days notice to NRC and the Trustee, the Grantor may replace the Trustee; but such resignation or displacement shall not be effective until the Grantor has appointed a successor Trustee and this successor accepts the appointment. The successor Trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor Trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor Trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor Trustee or for instructions. The successor Trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the NRC or State agency, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are signatories to this Agreement or such other designees as the Grantor may designate in writing. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. If the NRC or State agency issues orders, requests, or instructions to the Trustee these shall be in writing, signed by the NRC, or State agency, or their designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor, the NRC, or State agency, hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the NRC, or State agency, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee and the NRC, or State agency, or by the Trustee and the NRC or State agency, if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the NRC or State agency, or by the Trustee and the NRC or State agency, if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor or its successor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor, the NRC, or State agency, issued in accordance with this Agreement.

Section 18. This Agreement shall be administered, construed, and enforced according to the laws of the State of New Jersey.

Section 19. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement. If any part of this Agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the incorporate seals to be hereunto affixed and attested as of the date first written above.

ATTEST: L.M. Taylor

(Seal)

EXXON RESEARCH AND ENGINEERING COMPANY

By J. Richard
Title Treasurer and Controller

ATTEST:

[Signature]
(Seal)

FIRST FIDELITY BANK, N.A., NEW JERSEY

By NW Simons
Title VICE PRESIDENT

Specimen Certificate

First Fidelity Bank, N.A., New Jersey
550 Broad Street
Newark, New Jersey 07102

Attention: Trust Division

Gentlemen:

In accordance with the terms of the Agreement with you dated _____, I, _____, Secretary of Exxon Research and Engineering Company, hereby certify that the following events have occurred:

1. Exxon Research and Engineering Company is required to commence the decommissioning of its facility located at [insert] (hereinafter called the decommissioning).
2. The plans and procedures for the commencement and conduct of the decommissioning have been approved by the United States Nuclear Regulatory Commission, or its successor, on [Date] (copy of approval attached).
3. The Board of Directors of Exxon Research and Engineering Company has adopted the attached resolution authorizing the commencement of the decommissioning.

Secretary of Exxon Research and Engineering
Company

Date

TRUST AGREEMENT SCHEDULES

SCHEDULE A

This Agreement demonstrates financial assurance for the following cost estimates for the following licensed activities:

| <u>U.S. NUCLEAR REGULATORY COMMISSION LICENSE NUMBER</u> | <u>NAME AND ADDRESS OF LICENSEE</u> | <u>ADDRESS OF LICENSED ACTIVITY</u> | <u>COST ESTIMATES FOR REGULATORY ASSURANCES DEMONSTRATED BY THIS AGREEMENT</u> |
|--|---|---|--|
| 29-05260-13 | Exxon Research and Engineering Company, Clinton Township, Route 22 West, Annandale, NJ 08801 | Linden, Clinton, and Florham Park | \$202,812 (includes 25% contingency) |

The cost estimates listed here were last adjusted and approved* by the NRC with the latest License Renewal in 1993.

*approval pending

SCHEDULE B

AMOUNT \$250,000.00

AS EVIDENCED BY Letter of Credit No. N-303150

SCHEDULE C

Trustee's fees shall be an annual fee equal to one percent (1%) of the Letter of Credit amount.



First Fidelity Bank, N.A., New Jersey
 570 550 Broad Street, Newark, NJ 07102 U.S.A.
 International Banking Department

SWIFT# FNSB US 33A
 TLX# 178108 FFB NWK NJ UT

ORIGINAL

PLACE AND DATE OF ISSUE: NEWARK, NJ, AUGUST 06, 1993
 LETTER OF CREDIT NO.: N-303150

***** DIRECT *****

APPLICANT:
 EXXON RESEARCH AND ENGINEERING
 COMPANY
 CLINTON TOWNSHIP, ROUTE 22 EAST
 ANNANDALE, NEW JERSEY 08801

BENEFICIARY:
 U.S. NUCLEAR REGULATORY COMMISSION
 WASHINGTON, D.C. 20555

AMOUNT: USD 250,000.00
 (TWO HUNDRED FIFTY THOUSAND
 AND 00/100 UNITED STATES
 DOLLARS)

DEAR SIR OR MADAM:

WE HEREBY ESTABLISH OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO. N-303150
 YOUR FAVOR, AT THE REQUEST AND FOR THE ACCOUNT OF EXXON RESEARCH AND
 ENGINEERING COMPANY, CLINTON TOWNSHIP, ROUTE 22 EAST, ANNANDALE, NJ 08801,
 TO THE AGGREGATE AMOUNT OF TWO HUNDRED FIFTY THOUSAND US DOLLARS (\$250,000.
 US) AVAILABLE UPON PRESENTATION OF:

(1) YOUR SIGHT DRAFT, BEARING REFERENCE TO THIS LETTER OF CREDIT
 NO. N-303150 AND

(2) A WRITTEN DATED STATEMENT PURPORTEDLY SIGNED BY AN AUTHORIZED SIGNER OF
 THE BENEFICIARY AS FOLLOWS:

*I HEREBY CERTIFY THAT OUR DRAFT IN THE AMOUNT OF (INSERT AMOUNT) PRESENTED
 WITH THIS CERTIFICATE TO FIRST FIDELITY BANK, N.A., NEW JERSEY UNDER LETTER
 OF CREDIT NO. N-303150 IS PAYABLE PURSUANT TO REGULATIONS ISSUED UNDER
 AUTHORITY OF THE U.S. NUCLEAR REGULATORY COMMISSION.

 AUTHORIZED SIGNER
 U.S. NUCLEAR REGULATORY COMMISSION*

EXXON RESEARCH AND ENGINEERING COMPANY STATES: *THIS LETTER OF CREDIT IS
 ISSUED IN ACCORDANCE WITH REGULATIONS ISSUED UNDER THE AUTHORITY OF THE U.S.
 NUCLEAR REGULATORY COMMISSION (NRC), AN AGENCY OF THE U.S. GOVERNMENT,
 PURSUANT TO THE ATOMIC ENERGY ACT OF 1954, AS AMENDED, AND THE ENERGY
 REORGANIZATION ACT OF 1974. THE NRC HAD PROMULGATED REGULATIONS IN TITLE 1
 CHAPTER I OF THE CODE OF FEDERAL REGULATIONS, PART 30, WHICH REQUIRE THAT A

-CONTINUED-

N-303150- -001-L1-01-02-01



First Fidelity Bank, N.A., New Jersey
550 Broad Street, Newark, NJ 07102 U.S.A.
International Banking Department

SWIFT# FNSB US 33A
TLX# 178108 FFB NWK NJ UT

ORIGINAL

PLACE AND DATE OF ISSUE: NEWARK, NJ, AUGUST 06, 1993
LETTER OF CREDIT NO.: N-303150

HOLDER OF, OR AN APPLICANT FOR, A LICENSE ISSUED UNDER 10 CFR PART 30 PROVIDE ASSURANCE THAT FUNDS WILL BE AVAILABLE WHEN NEEDED FOR DECOMMISSIONING. THIS STATEMENT IS INCLUDED HERE AT THE REQUEST OF EXXON RESEARCH AND ENGINEERING COMPANY, HOWEVER IT IS NOT A TERM OR CONDITION OF THIS LETTER OF CREDIT NOR IS IT IN ANYWAY BINDING ON FIRST FIDELITY BANK, N.A., NEW JERSEY.

THIS LETTER OF CREDIT IS EFFECTIVE AS OF AUGUST 6, 1993 AND SHALL EXPIRE ON JULY 31, 1994, BUT SUCH EXPIRATION DATE SHALL BE AUTOMATICALLY EXTENDED FOR PERIOD OF ONE YEAR ON JULY 31, 1994 AND ON EACH SUCCESSIVE EXPIRATION DATE, UNLESS, AT LEAST NINETY (90) DAYS BEFORE THE THEN CURRENT EXPIRATION DATE, WE NOTIFY BOTH YOU AND EXXON RESEARCH AND ENGINEERING COMPANY, BY CERTIFIED MAIL THAT WE ELECT NOT TO RENEW THIS LETTER OF CREDIT. IN SUCH EVENT YOU MAY CLAIM HEREUNDER ON OR PRIOR TO THE THEN CURRENT EXPIRATION DATE AGAINST (1) YOUR SIGHT DRAFT, BEARING REFERENCE TO THIS LETTER OF CREDIT NO. N-303150 AND (2) A WRITTEN DATED STATEMENT PURPORTEDLY SIGNED BY AN AUTHORIZED SIGNER OF THE BENEFICIARY AS FOLLOWS: "I HEREBY CERTIFY THAT OUR DRAFT IN THE AMOUNT OF (INSERT AMOUNT) PRESENTED WITH THIS CERTIFICATE TO FIRST FIDELITY BANK, N.A., NEW JERSEY UNDER LETTER OF CREDIT NO. N-303150 IS PAYABLE BECAUSE EXXON RESEARCH AND ENGINEERING COMPANY WAS UNABLE TO SECURE ALTERNATIVE FINANCIAL ASSURANCE TO REPLACE YOUR LETTER OF CREDIT NO. N-303150 WITHIN THIRTY (30) DAYS OF YOUR NOTIFICATION OF NON RENEWAL TO US.

AUTHORIZED SIGNER
U.S. NUCLEAR REGULATORY COMMISSION"

ORIGINAL LETTER OF CREDIT MUST BE PRESENTED WITH DOCUMENTS.

DRAFTS MUST BE MARKED AS DRAWN UNDER LETTER OF CREDIT NUMBER N-303150 OF FIRST FIDELITY BANK, N.A., NEW JERSEY DATED AUGUST 6, 1993 AND THE TOTAL OF THIS DRAFT AND ALL OTHER DRAFTS PREVIOUSLY DRAWN UNDER THIS LETTER OF CREDIT DOES NOT EXCEED \$250,000.00.

WE ENGAGE WITH YOU THAT ALL DRAFTS DRAWN UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS CREDIT WILL BE DULY HONORED UPON PRESENTATION OF DOCUMENTS, AS SPECIFIED ABOVE TO US AT 570 BROAD STREET, TRADE SERVICES DEPT., NEWARK, NEW JERSEY 07102, ATTN: STANDBY LC UNIT NOT LATER THAN: JULY 31, 1994 OR ANY AUTOMATICALLY EXTENDED DATE AND PROCEEDS OF SUCH HONORED DRAFTS WILL BE DEPOSITED TO THE STANDBY TRUST FUND ACCOUNT (ACCOUNT NUMBER 69300114) OF EXXON RESEARCH AND ENGINEERING COMPANY.

THIS CREDIT IS SUBJECT TO THE UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS (1983 REVISION), INTERNATIONAL CHAMBER OF COMMERCE PUBLICATION NUMBER 400.

FIRST FIDELITY BANK, N.A., NEW JERSEY

AUTHORIZED SIGNATURE
DENNIS AFFLERBACH, VICE PRESIDENT

N-303150- -001-L1-01-02-01

RECEIVED REGION I
JUL 1993 P2:36

EXXON RESEARCH AND ENGINEERING COMPANY

MS16
K-8

CLINTON TOWNSHIP ROUTE 22 EAST ANNANDALE, NEW JERSEY 08801-0998

HEALTH SERVICES DIVISION

ROBERT E. DALE, CIH
Industrial Hygiene and
Environmental Health

(908) 730-3053

July 23, 1993

CERTIFIED RETURN RECEIPT

Ref.: License No. 29-05260-13
Docket No. 030-05310
Mail Control No. 113590

Mr. John D. Kinneman, Chief
Research, Development and Decommissioning Section
Division of Radiation Safety and Safeguards
US Nuclear Regulatory Commission
Region I, Mail Control No. 113590
475 Allendale Road
King of Prussia, PA 19406-1415

93IHCL50

Dear Mr. Kinneman:

This is in response to your May 27, 1993 letter addressed to Mr. J. A. Mancuso, regarding our license amendment application dated February 26, 1991 that addresses our decommissioning funding plan and financial assurance.

1. Our decommissioning funding plan contains fixed dollar figures for contingency. Separate dollar amounts for contingency are estimated for each of our three sites. The combined dollar contingency for the three sites is \$25,000 [\$10,000 + \$10,000 + \$5,000], or a combined contingency factor of 15.4%.

As you recommended and in accordance with NRC guidance, we hereby amend our decommissioning funding plan to incorporate a contingency factor of 25%. No changes are made in the actual decommissioning cost estimates. Table 3 of our original (February 26, 1991) plan is amended as shown below. The total estimate for decommissioning, including the 25% contingency factor, is now \$202,812.50.

OFFICIAL RECORD COPY ML 10

113590
JUL 26 1993

Table 3 as amended

Summary of Decommissioning Costs at Each Site, and for all Three Sites Combined

| Exxon Site Facility | Decommissioning Cost Estimate (excluding contingency) | Contingency (25%) | Total |
|--|---|-------------------|--------------|
| Site Number 1 Route 22 East, Clinton Twp. Annandale, NJ | \$ 69,700.00 | \$17,425.00 | \$ 87,125.00 |
| Site Number 2 1900 East Linden Ave Linden, NJ | 89,500.00 | 22,375.00 | 111,875.00 |
| Site Number 3 180 Park Avenue Florham Park, NJ | 3,050.00 | 762.50 | 3,812.50 |
| Total for all Three Sites | \$162,250.00 | \$40,562.50 | \$202,812.50 |

2. The decommissioning funding plan will be adjusted as required when we apply for future license renewals, and periodically when necessary to account for 1) changes in the amounts or types of material at our facility, 2) changes in the locations and types of use within our facility, 3) changes in the expected decommissioning procedures, and 4) changes in cost estimates to account for current prices for goods and services to include inflation. If the adjusted decommissioning cost estimate is greater than the financial assurance instrument amount, the financial instrument will be modified to accommodate the revised decommissioning cost estimate. It is our understanding that no license amendment will be required for such periodic adjustment the decommissioning funding plan and financial assurance instruments.

The original decommissioning funding plan included a detailed breakdown of cost elements for each site. The costs of equipment and supplies, including cleaning supplies, packaging containers and materials, while not explicitly mentioned in the original plan, are not expected to exceed a few hundred dollars at most. Radioactive waste container costs are included in the unit costs for disposal and as such were included in the submitted plan. Cleaning supplies will be ordinary household cleaning supplies (e.g., Mr. Clean, Brillo pads, Spic N' Span, paper towels, etc.) whose

costs are incidental to the entire project. Furthermore, decommissioning is planned to be done primarily by disposal (rather than cleaning), for which no cleaning supplies would be required. Survey instrumentation, such as geiger ratemeters, would be either supplied by the outside health physics personnel (included in the unit costs for Certified Health Physicist and Health Physics Technician in the submitted plan) and/or supplied from existing radiation survey equipment already owned by the licensee. Thus, all cost for survey instrumentation are accounted for in the submitted plan.

3. We are planning to change the method of financial assurance from a parent company guarantee to an irrevocable standby letter of credit and standby trust agreement consistent with NRC's Regulatory Guide 3.66. We are submitting the irrevocable standby letter of credit in the amount of \$250,000 and standby trust agreement to a local New Jersey bank for review and execution. We expect that the bank will complete these financial instruments within the next several weeks at which time we will promptly forward you copies of the completed documents.

After you receive the copies of our irrevocable standby letter of credit and standby trust agreement, we expect you will then have sufficient information to formally approve our decommissioning funding plan. Please feel free to call if further discussion will be useful to the license amendment process.

Very truly yours,

Handwritten signature of Stephen M. Hinton in black ink, with the initials "Red" written at the end of the signature.

Stephen M. Hinton
Chairman, Radioisotopes Committee
Exxon Research & Engineering Company

SMH:bam

07229301.red

EXON RESEARCH AND ENGINEERING COMPANY

Clinton Township, Route 22 East, Annandale, New Jersey 08801-0998

HEALTH SERVICES DIVISION

ROBERT E. DALE, CIH
Industrial Hygiene and
Environmental Health

(908) 730-3053

Facsimile (908) 730-3005

June 28, 1993

93RAPCL43

Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

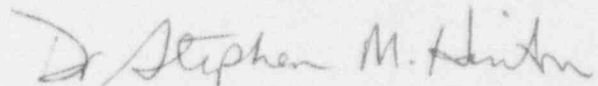
License No. 29-05260-13
Docket No. 030-05310
Control No. 113590

Attention: A. Dimitriadis

Dear Mr. Dimitriadis:

Per our telephone conversation of June 24, 1993, Mr. Mancuso has been out of the office for an extended amount of time due to illness, and his correspondence until now have not been answered. We have asked for and you have granted a 30-day extension until July 27, 1993 to reply to your requests for additional information concerning decommissioning. As agreed, I will phone you in approximately two weeks to let you know our progress. Thank you for your consideration.

Sincerely,



Stephen M. Hinton
Radiosotope Committee Chairman

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MAY 25 1993

License No. 29-05260-13
Docket No. 030-05310
Control No. 113590

Exxon Research and Engineering Company
ATTN: J.A. Mancuso
Clinton Township
Route 22 East
Annandale, New Jersey 08801

Dear Mr. Mancuso:

This is in reference to your application dated February 26, 1991 to amend License No. 29-05260-13. This document contains a decommissioning cost estimate and parent company guarantee of funds for decommissioning costs issued by Exxon Corporation as required by 10 CFR 30.35. In order to continue our review, we need the following additional information:

1. A 13 percent contingency factor was used in your decommissioning cost estimate. A contingency factor helps ensure that you are prepared for unexpected circumstances that could raise decommissioning costs. In your response to this letter, please provide justification for the 13 percent contingency factor, or use the standard 25 percent contingency factor as outlined in NUREG/CR-1754, Addendum 1, Regulatory Guide titled, "Technology, Safety and Costs of Decommissioning Reference Non-Fuel-Cycle Nuclear Facilities: Compendium of Current Information."
2. 10 CFR 30.35(e) requires licensees to describe the means they will use to adjust decommissioning cost estimates and associated funding levels over the life of their facilities. You do not provide such a description in your decommissioning funding plan. Please provide them. You may use the method described in Regulatory Guide 3.66 "Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70 and 72," June 1990, for adjusting your cost estimates. Adjustments may be made when you apply for renewal or when the amounts/types of material at your facility change, by updating cost estimates with current prices for goods and services to account for inflation and for changes in expected decommissioning procedures.

In addition, please submit detail on all cost elements in the decommissioning funding plan, such as information on the costs of equipment and supplies, including cleaning supplies, packaging containers and materials.

3. In your letter dated November 16, 1990, you state: "Exxon Research and Engineering Company, is a wholly-owned subsidiary of Exxon Corporation." This statement is not sufficient evidence that a parent-subsidiary relationship exists, and no other evidence is provided in the submission.

Please demonstrate explicitly that there is a parent-subsidiary relationship. Appropriate evidence includes incorporation agreements (i.e., copies of submissions to the appropriate - State Corporation Commission) or a certified corporate resolution, certifying that the licensee and its parent guarantor are separate and distinct corporate entities and that the parent company owns a majority of the subsidiary's voting stock. If a parent - subsidiary relationship cannot be demonstrated, then a parent guarantee is not permitted by the regulations and you must submit another type of financial assurance mechanism.

If you wish to support your parent guarantee, you must submit the following documents which are described in Regulatory Guide 3.66:

- Letter from Chief Executive Officer of the licensee;
- Letter from the guarantor's Chief financial Officer, including demonstration of ability to pass the financial test (either Alternative I or II);
- Corporate guarantee agreement;
- Evidence that the guarantor is the parent company of the licensee, e.g., that the guarantor has majority control of the licensee's voting stock;
- Guarantor's audited financial statements;
- Auditor's special report and schedule attachment to the special report;
- Evidence that parties signing the parent guarantee agreement for the guarantor are authorized to represent the company in the transaction; and
- Standby trust agreement and related documents.

These documents should be worded as recommended in the draft Regulatory Guide 3.66, Sections 4.3.2 and 4.7.

Exxon Research and Engineering Company 3

Since you are required to comply with 10 CFR 30.35, we would appreciate a response within 30 calendar days from the date of this letter. Please reply in duplicate to my attention at the Region I office and refer to Mail Control No. 113590. If you have any questions regarding this deficiency letter, please contact Anthony Dimitriadis of my staff at (215) 337-6953.

Sincerely,

Original Signed By:
John D. Kinneman

John D. Kinneman, Chief
Research, Development and
Decommissioning Section
Division of Radiation Safety
and Safeguards

Enclosures:

1. 10 CFR 2, 19, 20, 21, 30 and 170
2. Regulatory Guide 3.66

DRSS:RI
Dimitriadis/gc
05/24/93

DRSS:RI
Kinneman
05/24/93



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

AUG 28 1992

MS 20
K8

29-05260-13

MEMORANDUM FOR: John J. Kinneman, Chief
Research, Development and
Decommissioning Section
Division of Radiation Safety
and Safeguards, Region I

FROM: Louis M. Bykoski
Decommissioning and Regulatory
Issues Branch
Division of Low-Level Waste Management
and Decommissioning
Office of Nuclear Material Safety
and Safeguards

SUBJECT: THE OFFICE OF GENERAL COUNSEL AND CONTRACTOR
COMMENTS ON NONSTANDARD FINANCIAL ASSURANCE
SUBMITTAL

Our contractor, ICF Incorporated, and OGC have reviewed and provided comments on four Region I nonstandard financial assurance submittals sent to us for review. Included in this mailing are:

1. Exxon Research and Engineering Company (parent guarantee);
2. Varian Associates, Inc. (certification);
3. Woods Hole Oceanographic Institute (DFP - escrow account);
and
4. Schlumberger Well Services/EAR Photoelectric (DFP - surety bond).

The ICF comments are presented in two parts. The first part deals with specific recommendations to current deficiencies. The second part (Other Issues) provides a discussion of changes to the standard wording that are acceptable and are not considered to be deficiencies. The OGC comments include additional deficiencies that need to be corrected by the licensee and comments for our internal use.

You should carefully review the comments before preparing the deficiency letter. We have enclosed more specific information to help you sort and consolidate the ICF and OGC comments.

113590

John Kinneman

- 2 -

AUG 28 1992

Should you have any further questions with regard to the comments, please call me on FTS 964-2572 or David Futoma of OGC on FTS 964-1621.

Louis M. Bykoski

Louis M. Bykoski
Decommissioning and Regulatory
Issues Branch
Division of Low-Level Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosures: As stated

AUG 28 1992

LIST OF INSTRUCTIONS

EXXON RESEARCH AND ENGINEERING COMPANY

In reviewing the comments the reviewer will note that there will be some overlap between ICF and OGC comments. The following comments should be included in the basis for the deficiency letter:

1. ICF comments 1 through 4.

2. All OGC comments.

All other comments and discussions are for reviewer information.

MEMO TO: Louis M. Bykoski, NMSS
FROM: OGC
RE: REVIEW OF NONSTANDARD SUBMITTALS

AUG 28 1992

Exxon Research and Engineering Company: No legal objection to
ICF Recommendations (1)-(4).



ICF INCORPORATED

July 13, 1992

To: Dr. Lou Bykoski, NMSS/NRC

From: Tom Ciaglo, John Collier, and Craig Dean, ICF Incorporated

Subject: Review of Parent Guarantee/Financial Test Submitted by Exxon Research and Engineering Company

Exxon Research and Engineering Company of Annandale, New Jersey, submitted a decommissioning cost estimate in the amount of \$187,250, and a parent company guarantee from the Exxon Corporation in the amount of \$750,000. The submission assures decommissioning costs for license 29-05260-13 issued under 10 CFR Part 30. The submission includes none of the parent company guarantee/financial test documentation recommended in *Regulatory Guide 3.66* to substantiate the ability of the parent company to provide adequate financial assurance for decommissioning activities of the licensee.

Upon review of the entire submission, ICF recommends that NRC Region I require the licensee to modify the submission in the following ways:

- (1) Submit justification for the contingency factor used in the decommissioning cost estimate (NUREG/CR-1754, Addendum 1);
- (2) Describe the means to be used for adjusting cost estimates and associated funding levels over the life of the facility (10 CFR 30.35(e)); and
- (3) Demonstrate that a parent-subsidiary relationship exists between the guarantor and the licensee, or submit a different method of financial assurance (*Regulatory Guide 3.66*, page 3-23).

Assuming the licensee can demonstrate that it is eligible to use the parent company guarantee, then it should also modify its submission in the following way:

- (4) Submit the required documents in support of the parent guarantee and financial test (*Regulatory Guide 3.66*, pages 3-21 through 3-23).

These recommendations and other issues are discussed below.

- (1) Submit Justification for the Contingency Factor Used in the Decommissioning Cost Estimate (NUREG/CR-1754, Addendum 1)

The licensee included a contingency factor of approximately 13 percent in its total decommissioning cost estimate but did not provide justification

for this amount or percentage. Including a contingency factor in cost estimates helps ensure that licensees are prepared for unexpected circumstances that could raise decommissioning costs. NUREG/CR-1754 uses a contingency factor of 25 percent in its cost estimates for each of six reference laboratories.¹ The licensee may choose to use a lower contingency factor if it can show why a lower factor is appropriate. ICF recommends that the licensee either include in its cost estimate justification for its 13 percent contingency factor, or instead use a 25 percent contingency factor.

- (2) Describe the Means to be Used for Adjusting Cost Estimates and Associated Funding Levels Over the Life of the Facility (10 CFR 30.35(e))

10 CFR 30.35(e) requires licensees to describe the means they will use to adjust decommissioning cost estimates and associated funding levels over the life of their facilities. The licensee does not provide such a description in its decommissioning funding plan. ICF recommends that the licensee use the method described in *Regulatory Guide 3.66 "Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72,"* June 1990, for adjusting its cost estimates. *Regulatory Guide 3.66* suggests that adjustments be made at the time of license renewal or when the amounts/types of material at the facility change, by updating cost estimates with current prices for goods and services. Adjustments should be made to account for inflation, for other changes in prices of goods and services, for changes in facility conditions, and for changes in expected decommissioning procedures.

- (3) Demonstrate that a Parent-Subsidiary Relationship Exists Between the Guarantor and the Licensee, or Submit a Different Method of Financial Assurance (*Regulatory Guide 3.66*, page 3-23)

A parent-subsidiary relationship must exist between a guarantor and a licensee in order for the parent guarantee to be a valid method of financial assurance under NRC regulations. *Regulatory Guide 3.66*, page 3-23, states that parent company guarantee submissions should include evidence that the corporate parent has majority control of the applicant's voting stock. The licensee's submission includes only a letter from an officer of Exxon Corporation² stating that the Corporation is providing a guarantee for "Exxon Research and Engineering Company, a wholly-owned subsidiary of Exxon Corporation." This statement is not sufficient evidence that a parent-subsidiary relationship exists, and no other evidence is provided in the submission.

¹ NUREG/CR-1754, Addendum 1, Technology, Safety and Costs of Decommissioning Reference Non-Fuel-Cycle Nuclear Facilities: Compendium of Current Information, Pacific Northwest Laboratory, October 1989.

² The name and title of the signatory are not legible in the copy of the letter reviewed by ICF.

ICF recommends that NRC require the licensee to demonstrate explicitly that there is a parent-subsiary relationship. Appropriate evidence includes incorporation agreements (i.e., copies of submissions to the appropriate State Corporation Commission) or a certified corporate resolution certifying that the licensee and its parent guarantor are separate and distinct corporate entities and that the parent company owns a majority of the subsidiary's voting stock. If a parent-subsiary relationship cannot be demonstrated, then a parent guarantee is not permitted by the regulations and the licensee must submit another type of financial assurance mechanism.

Assuming, however, that the licensee is able to demonstrate a parent-subsiary relationship, then ICF also recommends that NRC require the licensee to modify its submission as described below.

- (4) Submit the Required Documents in Support of the Parent Guarantee and Financial Test (*Regulatory Guide 3.66*, pages 3-21 through 3-23)

The licensee's parent company guarantee consists only of a single letter stating that Exxon is providing a parent company guarantee on behalf of the licensee, and that "Exxon Corporation, a corporation of the State of New Jersey and the parent company of ER&E, represents that it meets the requisite Financial Test set forth in Appendix A of Part 30 ... and will abide by the relevant criteria required for the parent company guarantee as provided for in said Appendix A." The letter includes none of the wording recommended in the *Regulatory Guide 3.66*.

10 CFR 30.35 requires that "a copy of the financial instrument obtained to satisfy the requirements . . . is to be submitted to NRC." The licensee's submission does not clearly substantiate that a parent guarantee and financial test have been executed satisfactorily. None of the documents specified in *Regulatory Guide 3.66* are included in the submission. Without these documents, the guarantor has not shown that it possesses the financial strength to cover the decommissioning costs of the licensee, or that a valid guarantee exists. In addition to providing evidence that a parent-subsiary relationship exists, as discussed above, the guarantor must explicitly demonstrate its ability to pass the financial test in a letter from its chief financial officer; simply referring to Appendix A of Part 30 does not allow NRC to evaluate whether the guarantee and financial test comply with the requirements.

ICF recommends that NRC require the licensee to submit the following documents, described in *Regulatory Guide 3.66*, substantiate a valid parent guarantee and financial test:

- Letter from chief executive officer of the licensee;
- Letter from the guarantor's chief financial officer, including demonstration of ability to pass the financial test (either Alternative I or II);
- Corporate guarantee agreement;

- Evidence that the guarantor is the parent company of the licensee, e.g., that the guarantor has majority control of the licensee's voting stock;
- Guarantor's audited financial statements;
- Auditor's special report and schedule attachment to the special report;
- Evidence that parties signing the parent guarantee agreement for the guarantor are authorized to represent the company in the transaction; and
- Standby trust agreement and related documents.

These documents should be worded as recommended in the draft *Regulatory Guide* in Sections 4.3.2 and 4.7.

Other Issues

- (a) The licensee did not submit detail on all cost elements in the decommissioning funding plan. Information on the costs of equipment and supplies, such as cleaning supplies and packaging containers and materials, was not provided. However, the estimates for decommissioning each facility component are still reasonable when compared to estimates calculated using the tables found in Appendices A and E of NUREG/CR-1754, Addendum 1.³
- (b) The licensee's decommissioning cost estimate is based on the assumption that, at the time of decommissioning, contamination levels will be comparable to those that currently exist (as evidenced by results of recent radiological survey data). If NRC does not wish to accept this assumption as a basis for the decommissioning cost estimate, then further revisions to the cost estimate would be required.
- (c) The parent company guarantee is issued in the amount of \$750,000, which is substantially greater than the amount of the \$187,250 decommissioning cost estimate. The excess coverage represents additional financial assurance to NRC.

attachments

³ NUREG/CR-1754, Addendum 1, Technology, Safety and Costs of Decommissioning Reference Non-Fuel-Cycle Nuclear Facilities: Compendium of Current Information, Pacific Northwest Laboratory, October 1989. See Appendices A and E. See also NUREG/CR-1754, 1981.

REVIEW OF DECOMMISSIONING FUNDING PLAN (DFF)

Name of company or institution:

Exxon Research and Engineering

Number of licenses and applicable regulations:

| | |
|---------------|----------------|
| <u> ✓ </u> | 10 CFR Part 30 |
| <u> </u> | 10 CFR Part 40 |
| <u> </u> | 10 CFR Part 70 |
| <u> </u> | 10 CFR Part 72 |

Isotopes handled and possession limits (specify units):

Not specified _____

" Type A specific license of broad scope allowing a wide latitude for possession and use of many different radionuclides.

Total cost estimate for licenses listed above:

\$ 187,250

General comments on DFF:

Exxon submitted a DFF for \$187,250, but they also have Financial Assurance for \$750,000 based on possession limits.

CHECKLIST FOR REVIEWING DECOMMISSIONING FUNDING PLANS (DFP's)

QUESTIONS

COMMENTS

| | |
|---|---|
| <p>(1) Does the licensee provide supporting documentation for its cost estimates?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> | |
| <p>(2) Does the licensee use the Appendix F "Cost Estimating Tables?"</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> | |
| <p>(3) Does the cost estimate include the following major cost elements?</p> | <p>} Monies for the purchase of equipment + supplies and packaging materials not clearly set aside.</p> <p>} Stated that not applicable</p> <p>} Stated that not applicable</p> |
| <p>(i) Planning and Preparation?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> | |
| <p>(ii) Decontamination and/or Dismantling of Radioactive Facility Components?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> | |
| <p>(iii) Packaging, Shipping, and Disposal of Radioactive Wastes?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> | |
| <p>(iv) Restoration of Contaminated Areas on Facility Grounds?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> | |
| <p>(v) Final Radiation Survey?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> | |
| <p>(vi) Site Stabilization, Long-Term Surveillance?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> | |

CHECKLIST FOR REVIEWING DFP's (continued)

QUESTIONS

COMMENTS

| | |
|---|---|
| <p>(4) Is the total cost estimate reasonable for the type(s) and size(s) of facility licensed?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Not Sure</p> | <p>Based on the assumption that contamination levels at the time of decommissioning will be the same as current levels.</p> |
| <p>(5) Are the cost estimates for individual facility activities and/or components reasonable?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Not Sure</p> | |

CHECKLIST FOR REVIEWING DFP's (continued)

QUESTIONS

COMMENTS

| | |
|---|--|
| <p>(6) Do the computations seem correct?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> | |
| <p>(7) Does the licensee take credit for the potential salvage value of recovered materials or decontaminated equipment?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> | <p>Clearly stated that no salvage value taken</p> |
| <p>(8) Does the licensee include a contingency factor in the cost estimate?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> | <p>Contingency Factor a little low</p> $\frac{10,000 + 10,000 + 5,000}{187,250} = 13.35\%$ |
| <p>(9) Does the licensee provide a description of the methods that will be used to adjust the decommissioning cost estimate periodically over the life of the facility?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> | |

APPENDIX A
CHECKLIST FOR DECOMMISSIONING FINANCIAL ASSURANCE 29-05260-13

NAME OF LICENSEE OR APPLICANT Exxon Research and Engineering Company
MAILING ADDRESS Clifton Township, Route 22 East
Annandale, NJ

A. Licensee Part (check one of the following):

- Part 30 Licensee or Applicant Part 70 Licensee or Applicant
- Part 40 Licensee or Applicant Part 72 Licensee or Applicant

B. Check appropriate item in each category (if applicable)

1. 3/23/92 Date of Financial Assurance Submission

2. Public Entity

Private Entity

3. Certification of Financial Assurance

Decommissioning Funding Plan

4. (a) Prepayment Option (See Appendix B)

- Trust Fund
- Escrow Account
- Certificate of Deposit
- Government Fund
- Deposit of Government Securities

(b) Surety/Insurance/Other Guarantee (See Appendix C)

- Surety bond
- Letter of Credit
- Line of Credit
- Parent Company Guarantee/Financial Test*

\$750,000

(c) External Sinking Fund, Sinking Account and Surety/Insurance (See Appendix D)

- Trust Fund
- Escrow Account
- Certificate of Deposit
- Government Fund
- Deposit of Government Securities
- Surety Bond
- Letter of Credit
- Line of Credit

(d) Statement of Intent (public entities only)

*May not be used in combination with any other instrument.

APPENDIX C

CHECKLIST FOR SUBMISSION OF SURETY/INSURANCE/PARENT COMPANY GUARANTEE

A. Check Appropriate Form of Surety/Insurance/Guarantee

- Surety Bond
- Letter of Credit
- Line of Credit
- Parent Company Guarantee/Financial Test*
- Insurance

B. Check Documents Submitted for Surety/Insurance/Guarantee

1. Surety Bond
 - Surety Bond
 - Standby Trust Agreement
 - Acknowledgement
2. Letter of Credit
 - Letter of Credit
 - Standby Trust Agreement
 - Acknowledgement
3. Line of Credit
 - Verification
 - Standby Trust Agreement
 - Acknowledgement
4. Parent Company Guarantee
 - Letter from Chief Executive Officer of Applicant or Licensee
 - Letter from Chief Financial Officer of Parent Company
 - Financial Test: Alternative [I or II]
 - Auditor's Special Report and Attached Schedule
 - Corporate Guarantee
 - Standby Trust Agreement
 - Acknowledgement
5. Insurance
 - Certificate of Insurance
 - Standby Trust Agreement
 - Acknowledgement

No documentation submitted

May not be used in combination with any other instrument.

EXHIBIT 3-8

CHECKLIST OF CRITERIA FOR REVIEW OF PARENT COMPANY GUARANTEES

- No*

 - Copy of letter from the chief executive officer of the licensee, verifying that it is a going concern* with positive tangible net worth (submitted annually at same time as parent company financial test in Sections 4.7.3 and 4.7.4 of this guide).

- No*

 - Copy of corporate by-laws or other evidence indicating that parties signing the financial instrument (for the applicant) are authorized to represent the organization in the transaction.

- No*

 - Evidence that the financial instrument is an originally signed duplicate (e.g., an executed copy of the instrument).

- No*

 - Evidence that the corporate parent has majority control of the applicant's voting stock.

- Yes, but address illegal*

 - Name and address of guarantor.

- Not in guarantee*

 - Name and address of the licensee.

- Yes*

 - Name and address of the regulatory agency.

- No*

 - Recitation of the guarantor's authority to provide the guarantee, such as ownership of the licensee.

- No*

 - Identification of the facilities for which the guarantee provides financial assurance and amounts guaranteed for decommissioning activities.

*A "going concern" is a firm that is expected to continue operating at least long enough for current expectations and plans to be carried out and for the reasonably foreseeable future period after that.

EXHIBIT 3-8 (Continued)

- Yes, but made by guar* • Description of the primary obligation (decommissioning requirements).
- no* • Unequivocal statement of guarantee.
 - a. Recitation of the consideration for the guarantee.
 - b. Liability of the guarantor.
 - a. Limitation of liability
 - b. Condition(s) of liability
 - c. Effect on liability of a change in the status of the licensee
- no* • Statement that guarantor remains bound despite amendment or modification of license or decommissioning funding plan, reduction or extension of time of performance of required activities, or any other modification or alteration of an obligation of licensee.
- no* • Notice requirements.
- no* • Discharge of the guarantor.
- no* • Termination and revocation.
 - 1. Termination on occurrence of contingency
 - 2. Voluntary revocation by guarantor
 - 3. Effective date of termination or revocation
- yes* • Date.
- yes* • Signatures.

MAR 23 1992

Docket No. 030-053310
License No. 29-05260-13
Control No. 113590

MEMORANDUM FOR: Louis M. Bykoski, NRC Project Officer
Low Level Waste Management, Low Level Regulatory Branch

FROM: John D. Kinneman, Chief
Research, Development & Decommissioning Section
Division of Radiation Safety
and Safeguards

SUBJECT: FINANCIAL ASSURANCE SUBMITTAL - ~~EDISON~~

John Austin's August 6, 1990 memorandum set forth a procedure for submitting nonstandard financial assurance submittals, parent company guarantees and decommissioning funding plans to you for review by the NRC contractor.

The enclosed submission includes a parent company guarantee plan for your review.

Please refer to License No. 29-05260-13 and Control No. 113590 in your response to this request.

Original Signed By:
John D. Kinneman

John D. Kinneman, Chief
Research, Development &
Decommissioning Section
Division of Radiation Safety
and Safeguards

Enclosure: Letter from licensee dated November 16, 1990 with enclosures

cc w/encl:
J. Glenn, NMSS

bcc:
J. Kinneman, RI

BT:DRSS
Kinneman/gcb

3/23/92

OFFICIAL RECORD COPY

FA BYKOSKI - 0001.0.0
03/19/92

ML 10

EXXON RESEARCH AND ENGINEERING COMPANY

CLINTON TOWNSHIP, ROUTE 22 EAST, ANNANDALE, NEW JERSEY 08801

HEALTH SERVICES DIVISION

ROBERT E. DALE, CIH
Industrial Hygiene and
Environmental Health Coordinator

February 26, 1991

U. S. Nuclear Regulatory Commission, Region I
Nuclear Materials Safety Section B
475 Allendale Road
King of Prussia, PA 19406

91RAPCL13

NRC Materials Licence
Renewal No. 29-05260-13

Dear Sir:

In fulfilling our requirements to renew our Materials Licence, find enclosed in duplicate the following information:

- 1) NRC Licence application and Check No. 473118 for \$2,200.
- 2) Parent Company's Guarantee of funds for decommissioning costs in the amount of \$750,000.
- 3) A detailed decommissioning plan which was formulated by our contractor, EI Associates, E. Orange, N.J. 07018 and Wesley Van Pelt, Ph.D, Paramus, N.J. 07652.
- 4) A copy of the Exxon's RIC Manual (Licence) agreement with the NRC to steward our broadband licence.
- 5) A copy of our Washington State Site Use Permit (2965) sent out with \$175 check on February 26, 1991.

If there are any questions concerning this application, please contact Joseph Mancuso, RIC Secretary.

Sincerely,


Joseph A. Mancuso

JAM:bam
attachment

cc: R. E. Dale

02269103.jam

113590

[Cover letter for Parent Company Guarantee]

November 16, 1990

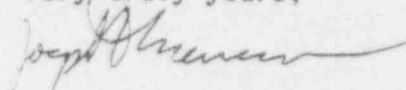
Re: Parent Company Guarantee For
Exxon Research and Engineering
Company
License No. _____

Director
Office of Nuclear Material
2120 L Street, N.W.
Washington, DC 20655

Dear Sir or Madam:

Enclosed is a parent company guarantee of funds for decommissioning costs issued by Exxon Corporation for the benefit of Exxon Research and Engineering Company, in connection with the above identified domestic license. The guarantee is issued pursuant to 10CFR Part 30, et. seq. Exxon Research and Engineering Company is a wholly-owned subsidiary of Exxon Corporation.

Very truly yours,



J. A. Mancuso
Secretary
Radioisotopes Committee

Enclosure

113590

EXXON CORPORATION

EDGAR A. ROSE
Vice President
A. J. ROSE
Assistant Secretary

December 18, 1990

Re: License No. _____

Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20655

Dear Sir or Madam:

This letter constitutes a guarantee of funds for decommissioning costs for Exxon Research and Engineering Company ("ER&E"), a wholly-owned subsidiary of Exxon Corporation. The guarantee is in the amount of \$750,000 established pursuant to 10CFR 30.35(b)(2). Exxon Corporation, a corporation of the State of New Jersey and the parent company of ER&E, represents that it meets the requisite Financial Test set forth in Appendix A of Part 30 of the Rules of General Applicability to Domestic Licensing and will abide by the relevant criteria required for the parent company guarantee as provided for in said Appendix A.

Respectfully submitted,

Exxon Corporation

By *A. J. Rose* 148

DEC 20 1990

Decommissioning Funding Plan
Exxon Research and Engineering Company
February 1991

Introduction. This Decommissioning Funding Plan (DFP) has been prepared in accordance with the Nuclear Regulatory Commission (NRC) regulation 10 CFR 30.35, "Financial Assurance and Recordkeeping for Decommissioning", and NRC Regulatory Guide 3.66, "Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72."

Exxon Research and Engineering Company (Exxon) holds license number 29-05260-13 which authorizes possession and use of byproduct material at three independent facilities located at 1900 East Linden Avenue, Linden, NJ; Route 22 East, Clinton Township, Annendale, NJ; and 180 Park Avenue, Florham Park, NJ. This consolidated DFP contains detailed analyses and cost estimates for each site separately.

Technical Basis. Exxon's byproduct material license is a type A specific license of broad scope allowing a wide latitude for possession and use of many different radionuclides. However, Exxon's actual possession and use of radionuclides has been quite limited and unchanging over the past years. Furthermore, Exxon has no current plans for substantially increasing the amounts, types or locations of byproduct materials it uses for research and development. Therefore, this DFP is based on Exxon's recent and current experience with byproduct material. Each location of current storage and/or use of byproduct material was evaluated with respect to present levels of radioactive contamination. Routine contamination surveys are made for all areas where radioactive materials are used. The recent and present levels of actual measured contamination have been reviewed and compared to the NRC guidance document, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," July 1982. This guidance document lists acceptable surface contamination

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levels for release of equipment and facilities to unrestricted use. These levels are reproduced in Table 1.

In most areas, recent radiological survey data exists and were used to make professional judgements as to the need for decontamination to meet the NRC Table 1 levels for release for unrestricted use. In all cases, recent contamination surveys showed that contemporary radioactive contamination levels, in dpm/100 cm², are below levels acceptable for release to unrestricted use. Areas which are not routinely surveyed, in particular exhaust ducts, are assumed, for the purpose of this DFP, to require decontamination and/or radiological disposal.

No credit has been taken for the salvage value of any materials or equipment which would be decontaminated.

Unit Cost Estimates. Estimates of decommissioning costs are based on unit costs in current (1991) dollars. Table 2 lists unit costs used for estimating specific decommissioning costs.

Summary of Decommissioning Cost Estimates. A summary of the total cost per site, and for the three sites combined, is given in Table 3. Decommissioning costs are estimated separately for each site using cost estimating worksheets derived from NRC Regulatory Guide 3.66. Tables 4, 5, and 6 give the detailed analysis for each cost element for the sites in Clinton, Linden and Florham Park respectively.

Table 1

Acceptable Surface Contamination Levels*

| Nuclides | Average | Maximum | Removable |
|--|---|--|---|
| U-nat, U-235, U-238, and associated decay products | 5,000 dpm α /100 cm ² | 15,000 dpm α /100 cm ² | 1,000 dpm α /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 except Sr-90 and others noted above. | 5,000 dpm /100 cm ² | 15,000 dpm /100 cm ² | 1,000 dpm /100 cm ² |

* from US Nuclear Regulatory Commission, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," July 1982.

Table 2

Unit Costs for Estimating Decommissioning Costs

| Operation or Job Function | Unit Cost |
|--|------------------|
| Waste disposal (licensed radioactive waste broker to pick up drum(s), pay all fees and surcharges, and ship drum to low level waste disposal site.) Cost per 55-gallon drum (7.5 cubic feet/drum). | \$850.00/drum |
| Laboratory analysis of swipe for contamination, liquid contamination analysis for beta activity, gamma scan analysis, alpha count. Cost per radiological analysis. | \$50.00/analysis |
| Qualified Health Physicist | \$1000.00/day |
| Health Physics Technician | \$450.00/day |
| Chemist | \$900.00/day |
| Clerical Worker | \$200.00/day |

Table 3

Summary of Decommissioning Costs at Each Site, and for All Three Sites Combined

| Exxon Site Facility | Decommissioning Cost Estimate |
|---|-------------------------------|
| Site Number 1 Route 22 East, Clinton Township, Annendale, NJ | \$79,700.00 |
| Site Number 2 1900 East Linden Avenue, Linden, NJ | \$99,500.00 |
| Site Number 3 180 Park Avenue, Florham Park, NJ | 13,050.00 |
| Total for all three sites: | \$187,250.00 |

Table 4

Decommissioning Funding Analysis - Site Number 1
(Route 22 East, Clinton Township, Annendale, NJ)

Site Background. The Clinton site has 6 rooms or areas where NRC licensed radioactive materials are stored and/or used. Three of these 6 rooms or areas contain only sealed sources, while the remaining three contain "non-sealed" radioactive materials.

Room LB-275-277 is a 15x30 foot standard chemical research laboratory in which C-14, S-35 and P-32 labeled compounds are sometimes used. It consists of a center aisle with standard lab benches on either side. The most recent routine contamination survey result shows removable radioactivity ranging from background to a maximum of 13 cpm which corresponds to approximately 33 dpm/100 cm².

Room L-304 is the Radioactive Sample Preparations Lab which is dedicated to the storage and initial dispensing and dilution of radioactive materials for research laboratory use. C-14, S-35 and P-32 labeled compounds are handled in this lab. It is 27x15 feet in size and contains approximately 30 linear feet of lab bench and an 8-foot stainless steel lab hood. The hood exhausts through HEPA filters located on the roof level. Approximately 100-130 linear feet of duct connects the hood to the fan and filters. The most recent routine contamination survey results show removable radioactivity ranging from background to a maximum of 30 cpm which corresponds to approximately 60 dpm/100 cm².

Room PC-129 is a small room, approximately 9x13 feet, dedicated to storage of radioactive materials and radioactive waste. It has a bare concrete floor and ceiling, and painted block walls. A small ceiling exhaust louver carries exhaust air through approximately 100 linear feet of duct prior to exiting the building. Radionuclides stored in this room include Tc-99, uranium hexafluoride, Kr-85, tritium, C-14, Cs-137, natural uranium, Ni-63, P-32(decayed), and S-35. The most recent routine contamination survey results show no detectable removable radioactivity. Wipe sample results in this room were less than 50 cpm for Tc-99, less than 6 dpm alpha activity, less than 39 cpm for Fe-55, less than 323 cpm for Cs-137, less than 77 dpm for Kr-85, and less than 60 cpm for C-14, P-32, S-35, Ni-63 and tritium. The above data were reported by Teledyne isotopes, inc., an independent commercial radioactive analysis company.

Room PF-118 contains a 50 mCi Fe-55 sealed source mounted in a Princeton Gamma Tec Sulfur Analyzer. Recent wipe tests of these sealed sources showed no detectable activity (less than 40 dpm/wipe). These data were reported by Teledyne isotopes, Inc., an independent commercial radioactive analysis company.

Room LC-337 contains a 0.5 mCi Po-210 static eliminator sealed source manufactured by Nuclear Products Company. It is located either in a small box in a drawer or mounted on a research apparatus. Recent wipe tests of these sealed sources showed no detectable alpha

Table 4. Continued

activity (less than 24 dpm/wipe). The above data were reported by Teledyne Isotopes, Inc., an independent commercial radioactive analysis company.

Room LB-237 is a research laboratory with two sealed sources containing Pm-147 and Tl-204 respectively. They are located either in a box in a drawer or mounted on a research laboratory instrument used for thickness measurement. Recent wipe tests of these sealed sources showed no detectable activity (less than 50 dpm/wipe). The above data were reported by Teledyne Isotopes, Inc., an independent commercial radioactive analysis company.

Decommissioning Analysis: All contamination survey data reviewed above indicate that routine contamination levels are maintained below the NRC limits for release to unrestricted use. Approximately 250 linear feet of exhaust ducts in rooms L-004 and PC-189, not routinely surveyed, are considered potentially contaminated for purposes of this DFP. The hood in room L-004, which could contain heretofore undetected contamination, will be disassembled, surveyed, and if necessary, decontaminated. The following decommissioning analysis and cost estimate covers all six rooms or areas where NRC licensed material is stored and/or used.

1. Planning and Preparation.

- 1.1 Preparation of documentation for regulatory agencies, including decommissioning plan when required by 10 CFR 30.36(c)(2), and development of work plans. This also includes time to categorize radioactive waste as to its chemical and radiological characteristics and determine proper methods of disposal.

| | |
|--|-----------|
| 1.1.1 Certified Health Physicist, 6 days | \$6000.00 |
| 1.1.2 Clerical, 2 days | \$400.00 |

1.2 Radiological contamination survey.

| | |
|--|-------------|
| 1.2.1 Certified Health Physicist, 3 days | \$3000.00 |
| 1.2.2 Health Physics technician, 5 days | \$2250.00 |
| 1.2.3 Analysis of 250 wipe samples | \$12,500.00 |

2. Decontamination and or Dismantling of Radioactive Facility Components.

- 2.1 Radiological cleaning of minor surface contamination from small areas of benches, hoods, floors, shelving, lab equipment, etc.

| | |
|--|-----------|
| 2.1.1 Certified Health Physicist, 2 days | \$2000.00 |
| 2.1.2 Health Physics Technician, 3 days | \$1350.00 |

- 2.2 Removal and preparation for disposal of approximately 250 linear feet of potentially contaminated exhaust ducts. Duct will be cut into pieces and will

Table 4. Continued

| | | |
|-----|--|--------------------|
| | be flattened on site, but mechanical compaction or supercompaction is not anticipated. | |
| | 2.2.1 Certified Health Physicist, 3 days | \$3000.00 |
| | 2.2.2 Health Physics Technician, 5 days | \$2250.00 |
| | 2.2.3 Removal, sectioning, flattening, packaging and disposal | \$15,000.00 |
| 2.3 | Dismantling and radiological decontamination of laboratory hood. | |
| | 2.3.1 Certified Health Physicist, 2 day | \$2000.00 |
| | 2.3.2 Health Physics Technician, 4 days | \$1800.00 |
| | 2.3.3 Removal, dismantling and decontamination | \$7000.00 |
| 3 | Packaging, Shipping, and Disposal of Radioactive Wastes. | |
| | 3.1 Radwaste contractor to provide containers for the radioactive waste, manifest it and ship it to a low level radioactive waste disposal site. Waste volume includes actual radioactive material in storage, contaminated cleaning supplies, and anti-contamination clothing generated in the decommissioning process. (Note that additional radioactive waste disposal costs are included other line item costs above.) | |
| | 3.1.1 5 drums | \$4250.00 |
| 4 | Restoration of Contaminated Areas on Facility Grounds. | |
| | None anticipated. | |
| 5 | Final Radiation Survey. | |
| | 5.1 Certified Health Physicist, 1 day | \$1000.00 |
| | 5.2 Health Physics technician, 2 days | \$900.00 |
| | 5.3 Analysis of 100 wipe samples | \$5000.00 |
| 6 | Site Stabilization, Long-Term Surveillance (if applicable). | |
| | None anticipated. | |
| 7 | Contingency | \$10,000.00 |
| | Total Clinton Site Cost: | \$79,700.00 |

Table 5

Decommissioning Funding Analysis - Site Number 2
(1900 East Linden Avenue, Linden, NJ)

Site Background. The Linden, NJ site has only 2 rooms where byproduct materials are stored and/or used.

The first is a laboratory, designated Room 2033, where only carbon-14 is stored and used. No other radioisotopes are stored or used in this lab. Room 2033 is about 20 by 27 feet and is constructed like a typical research lab, without any specially constructed facilities for radiation use. Typically 0.01 mCi of carbon-14 labelled chemical compound is purchased from a commercial supplier and stored in the refrigerator in the lab. Aliquots of this material are used in chemical reactions and separations carried out in one of the lab hoods. There are two double hoods in the room each consisting of a 2.5 foot and a 4-foot hood side-by-side. Routine contamination surveys consist of swipes of benches and other surfaces in the lab, including the inner surfaces of the hoods used for radioisotope work. A review of recent survey records shows all swipes to be below 20 cpm which corresponds to approximately 30 dpm/100 cm². This is well below the criteria contamination limits for removable beta gamma activity of 1000 dpm/100 cm².

Since the amounts of radionuclides stored and used in Room 2033 are small and recent and current contamination surveys show levels well below the criteria limits (including the inside surfaces of the hoods), decontamination at the time of decommissioning is not anticipated. However, the cost of removal of all floor tiles is included in this DFP in the event that hidden or future contamination becomes an issue.

The second location is the Radioisotope Storage Room located within Building 19. This room is approximately 12x19 feet and has block walls, concrete floor and a steel roof. Exhaust ventilation through approximately 40 linear feet of duct leads directly outside the building. This room is used only for the storage of radioactive materials. Byproduct material radionuclides include predominately carbon-14 (approximately 60 small containers containing C-14 labelled organic compounds), with a few containers with tritium labelled compounds, and one container each with uranium and thorium respectively with less than 1 kg each. The most recent routine contamination survey of this storage room by beta counting (liquid scintillation counting and gas proportional counting) for carbon-14 and/or tritium showed that 52 of 66 samples were below the analytical reporting limit of 50 dpm/100 cm², while only 4 samples showed any detectable activity. Of these 4 positive swipe samples, the maximum was 186 dpm/100 cm². The same routine contamination survey evaluated three wipe samples associated with the uranium and thorium containers for removable alpha activity. These swipes were all less than the analytical reporting limit of 12 dpm/100 cm². Both the beta and alpha survey results show removable contamination levels well below the levels acceptable for unrestricted use (see Table 1). Therefore, based on current experience, decontamination of the actual room and fixtures would not be anticipated. However, for

Table 5. Continued

purposes of this DFP, removal of 40 linear feet of duct and scarifying the concrete floor of the Radioisotope Storage Rooms is included.

Decommissioning Analysis. All contamination survey data reviewed above indicate that routine contamination levels are maintained below the NRC limits for release to unrestricted use. The Radioisotope Storage Room exhaust duct, not routinely surveyed, is considered potentially contaminated for purposes of this DFP. Hidden or future contamination of the concrete floor of the Radioisotope Storage Room could become a consideration. Therefore, the cost of removing and disposing of the duct and scarifying the top 1/4 inch of the concrete floor is included in the DFP. The following cost estimating evaluation covers all storage and use areas for NRC licensed materials (i.e., the two rooms described above) at the Linden site.

1 Planning and Preparation.

- 1.1 Preparation of documentation for regulatory agencies, including decommissioning plan when required by 10 CFR 30.36(c)(2), and development of work plans. This also includes time to categorize radioactive waste as to its chemical and radiological characteristics and to determine proper and optimal methods of disposal.

| | |
|--|-----------|
| 1.1.1 Certified Health Physicist, 6 days | \$6000.00 |
| 1.1.2 Clerical, 2 days | \$400.00 |

1.2 Radiological contamination survey.

| | |
|--|-----------|
| 1.2.1 Certified Health Physicist, 3 days | \$3000.00 |
| 1.2.2 Health Physics technician, 4 days | \$1800.00 |
| 1.2.3 Analysis of 150 wipe samples | \$7500.00 |

2 Decontamination and/or Dismantling of Radioactive Facility Components.

- 2.1 Provision is made for minor cleaning of surface contamination from small areas of benches, hoods, floors, shelving, lab equipment, etc.

| | |
|--|-----------|
| 2.1.1 Certified Health Physicist, 2 days | \$2000.00 |
| 2.1.2 Health Physics Technician, 3 days | \$1350.00 |

- 2.2 Removal, preparation for disposal, packaging and disposal of approximately 40 linear feet of potentially contaminated exhaust duct from the Radioisotope Storage Room.

| | |
|---|-----------|
| 2.2.1 Certified Health Physicist, 3 days | \$3000.00 |
| 2.2.2 Health Physics Technician, 5 days | \$2250.00 |
| 2.2.3 Removal, sectioning, flattening, packaging and disposal | \$8000.00 |

Table 5, Continued

| | | |
|-------|---|-------------|
| 2.3 | Removal, packaging and disposal of all vinyl floor tiles from laboratory Room 2033. | |
| 2.3.1 | Certified Health Physicist, 2 days | \$2000.00 |
| 2.3.2 | Health Physics Technician, 3 days | \$1350.00 |
| 2.3.3 | Removal, packaging and disposal | \$10,000.00 |
| 2.4 | Scarify surface of concrete from floor of Radioactive Storage Room and dispose of scarified concrete as radioactive waste. | |
| 2.4.1 | Certified Health Physicist, 3 days | \$3000.00 |
| 2.4.2 | Health Physics Technician, 5 days | \$2250.00 |
| 2.4.3 | Scarify, package and dispose of 1/4 inch concrete layer. | \$16,000.00 |
| 3 | Packaging, Shipping and Disposal of Radioactive Wastes. | |
| 3.1 | Preparation and packaging of radioactive waste into forms suitable for commercial disposal. Includes evaluations and chemical or physical reactions to render the waste non-hazardous as defined by EPA regulations under the Resource Conservation and Recovery Act (RCRA). | |
| 3.1.1 | Certified Health Physicist, 2 days | \$2000.00 |
| 3.1.2 | Chemist, 4 days | \$3600.00 |
| 3.1.3 | Health Physics Technician, 4 days | \$1800.00 |
| 3.2 | Radwaste contractor to provide containers for the radioactive waste, manifest it, and ship it to a low level radioactive waste disposal site. Waste volume includes actual radioactive material in storage, contaminated cleaning supplies, and anti-contamination clothing generated in the decommissioning process. (Note that additional radioactive waste disposal costs are included other line item costs above.) | |
| 3.2.1 | 4 drums | \$3400.00 |
| 4 | Restoration of Contaminated Areas on Facility Grounds. | |
| | None anticipated. | |
| 5 | Final Radiation Survey. | |
| 5.1 | Radiological contamination survey | |
| 5.1.1 | Certified Health Physicist, 2 days | \$2000.00 |
| 5.1.2 | Health Physics technician, 4 days | \$1800.00 |
| 5.1.3 | Analysis of 100 wipe samples | \$2000.00 |
| 6 | Site Stabilization, Long-Term Surveillance (if applicable). | |

Table 5, Continued

None anticipated.

| | | |
|---|-------------------------|-------------|
| 7 | Contingency | \$10,000.00 |
| | Total Linden Site Cost: | \$99,500.00 |

Table 6

Decommissioning Funding Analysis - Site Number 3
(180 Park Avenue, Florham Park, NJ)

Background. The only byproduct material at the Florham Park facility are two sealed sources: a 300 mCi tritium titanium tritide gas chromatograph detector sealed source, and a less than 0.01 mCi Cs-137 sealed source. These materials have not caused and are not likely to cause any contamination at all. Routine wipe test of the Cs-137 sealed source showed no detectable activity (less than 91 dpm). The only decommissioning issues would be a final radiation survey to confirm the lack of contamination and the disposal costs.

Decommissioning Analysis. The following cost estimating evaluation covers all storage and use areas for NRC licensed materials (i.e., only 2 sealed sources).

1 Planning and Preparation.

| | |
|---|-----------|
| 1.1 Limited radiological contamination survey | |
| 1.1.1 Certified Health Physicist, 1 day | \$1000.00 |
| 1.1.2 Health Physics technician, 1 day | \$450.00 |
| 1.1.3 Analysis of 15 wipe samples | \$750.00 |

2 Decontamination and/or Dismantling of Radioactive Facility Components.

None anticipated.

3 Packaging, Shipping and Disposal of Radioactive Wastes.

| | |
|--|----------|
| 3.1 Radwaste contractor to package radioactive material, manifest it and ship it to a low level radioactive waste disposal site. | |
| 3.1.1 1 drum | \$850.00 |

4 Restoration of Contaminated Areas on Facility Grounds.

None anticipated.

5 Final Radiation Survey.

None anticipated. The initial radiological contamination shown above is expected to be sufficient in that no contamination is anticipated.

6 Site Stabilization, Long-Term Surveillance (if applicable).

Table 6. Continued

| | | |
|---|-------------------------------|-----------|
| | None anticipated. | |
| 7 | Contingency | \$5000.00 |
| | Total Florham Park Site Cost: | \$8050.00 |

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EXXON RESEARCH AND ENGINEERING COMPANY

CLINTON TOWNSHIP, ROUTE 22 EAST, ANNANDALE, NEW JERSEY 08801

HEALTH SERVICES DIVISION

ROBERT E. DALE, CIH
Industrial Hygiene and
Environmental Health Coordinator

February 26, 1991

U. S. Nuclear Regulatory Commission, Region I
Nuclear Materials Safety Section B
475 Allendale Road
King of Prussia, PA 19406

91RAPCL13
NRC Materials Licence
Renewal No. 29-05260-13

Dear Sir:

In fulfilling our requirements to renew our Materials Licence, find enclosed in duplicate the following information:

- 1) NRC Licence application and Check No. 473118 for \$2,200.
- 2) Parent Company's Guarantee of funds for decommissioning costs in the amount of \$750,000.
- 3) A detailed decommissioning plan which was formulated by our contractor, EI Associates, E. Orange, N.J. 07018 and Wesley Van Pelt, Ph.D, Paramus, N.J. 07652.
- 4) A copy of the Exxon's RIC Manual (Licence) agreement with the NRC to steward our broadband licence.
- 5) A copy of our Washington State Site Use Permit (2965) sent out with \$175 check on February 26, 1991.

If there are any questions concerning this application, please contact Joseph Mancuso, RIC Secretary.

Sincerely

Joseph A. Mancuso
Joseph A. Mancuso

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cc: R. E. Dale

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[Cover letter for Parent Company Guarantee]

November 16, 1990

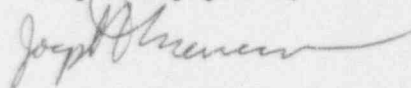
Re: Parent Company Guarantee For
Exxon Research and Engineering
Company
License No. _____

Director
Office of Nuclear Material
2120 L Street, N.W.
Washington, DC 20655

Dear Sir or Madam:

Enclosed is a parent company guarantee of funds for decommissioning costs issued by Exxon Corporation for the benefit of Exxon Research and Engineering Company, in connection with the above identified domestic license. The guarantee is issued pursuant to 10CFR Part 30, et. seq. Exxon Research and Engineering Company is a wholly-owned subsidiary of Exxon Corporation.

Very truly yours,



J. A. Mancuso
Secretary
Radioisotopes Committee

Enclosure

OFFICIAL RECORD COPY

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EXXON CORPORATION

225 E. JOHN W. CARPENTER FREEWAY, IRVING, TX 75062-2298

EDGAR A. ROBINSON
Vice-President and Treasurer
W. A. HARRISON
R. A. ROSENBERG
Assistant Treasurers

December 18, 1990

Re: License No.

Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20655

Dear Sir or Madam:

This letter constitutes a guarantee of funds for decommissioning costs for Exxon Research and Engineering Company ("ER&E"), a wholly-owned subsidiary of Exxon Corporation. The guarantee is in the amount of \$750,000 established pursuant to 10CFR 30.35(b)(2). Exxon Corporation, a corporation of the State of New Jersey and the parent company of ER&E, represents that it meets the requisite Financial Test set forth in Appendix A of Part 30 of the Rules of General Applicability to Domestic Licensing and will abide by the relevant criteria required for the parent company guarantee as provided for in said Appendix A.

Respectfully submitted,

Exxon Corporation

By  168

DEC 20 1990



Decommissioning Funding Plan
Exxon Research and Engineering Company
February 1991

Introduction. This Decommissioning Funding Plan (DFP) has been prepared in accordance with the Nuclear Regulatory Commission (NRC) regulation 10 CFR 30.35, "Financial Assurance and Recordkeeping for Decommissioning", and NRC Regulatory Guide 3.66, "Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72."

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Technical Basis. Exxon's byproduct material license is a type A specific license of broad scope allowing a wide latitude for possession and use of many different radionuclides. However, Exxon's actual possession and use of radionuclides has been quite limited and unchanging over the past years. Furthermore, Exxon has no current plans for substantially increasing the amounts, types or locations of byproduct materials it uses for research and development. Therefore, this DFP is based on Exxon's recent and current experience with byproduct material. Each location of current storage and/or use of byproduct material was evaluated with respect to present levels of radioactive contamination. Routine contamination surveys are made for all areas where radioactive materials are used. The recent and present levels of actual measured contamination have been reviewed and compared to the NRC guidance document, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," July 1982. This guidance document lists acceptable surface contamination

levels for release of equipment and facilities to unrestricted use. These levels are reproduced in Table 1.

In most areas, recent radiological survey data exists and were used to make professional judgements as to the need for decontamination to meet the NRC Table 1 levels for release for unrestricted use. In all cases, recent contamination surveys showed that contemporary radioactive contamination levels, in dpm/100 cm², are below levels acceptable for release to unrestricted use. Areas which are not routinely surveyed, in particular exhaust ducts, are assumed, for the purpose of this DFP, to require decontamination and/or radiological disposal.

No credit has been taken for the salvage value of any materials or equipment which would be decontaminated.

Unit Cost Estimates. Estimates of decommissioning costs are based on unit costs in current (1991) dollars. Table 2 lists unit costs used for estimating specific decommissioning costs.

Summary of Decommissioning Cost Estimates. A summary of the total cost per site, and for the three sites combined, is given in Table 3. Decommissioning costs are estimated separately for each site using cost estimating worksheets derived from NRC Regulatory Guide 3.66. Tables 4, 5, and 6 give the detailed analysis for each cost element for the sites in Clinton, Linden and Florham Park respectively.

Table 1
Acceptable Surface Contamination Levels*

| Nuclides | Average | Maximum | Removable |
|--|---|--|---|
| U-nat, U-235, U-238, and associated decay products | 5,000 dpm α /100 cm ² | 15,000 dpm α /100 cm ² | 1,000 dpm α /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 | 1000 dpm /100 cm ² | 3,000 dpm /100 cm ² | 200 dpm /100 cm ² |
| Beta-gamma emitters except Sr-90 and others noted above. | 5000 dpm /100 cm ² | 15,000 dpm /100 cm ² | 1000 dpm /100 cm ² |

* from US Nuclear Regulatory Commission, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," July 1982.

Table 2

Unit Costs for Estimating Decommissioning Costs

| Operation or Job Function | Unit Cost |
|--|------------------|
| Waste disposal (licensed radioactive waste broker to pick up drum(s), pay all fees and surcharges, and ship drum to low level waste disposal site.) Cost per 55-gallon drum (7.5 cubic feet/drum). | \$850.00/drum |
| Laboratory analysis of swipe for contamination, liquid scintillation analysis for beta activity, gamma scan analysis, or alpha count. Cost per radiological analysis. | \$50.00/analysis |
| Certified Health Physicist | \$1000.00/day |
| Health Physics Technician | \$450.00/day |
| Chemist | \$900.00/day |
| Clerical Worker | \$200.00/day |

Table 3

Summary of Decommissioning Costs at Each Site, and for All Three Sites Combined

| Exxon Site Facility | Decommissioning Cost Estimate |
|---|-------------------------------|
| Site Number 1 Route 22 East, Clinton Township, Annendale, NJ | \$79,700.00 |
| Site Number 2 1900 East Linden Avenue, Linden, NJ | \$99,500.00 |
| Site Number 3 180 Park Avenue, Florham Park, NJ | \$8,050.00 |
| Total for all three sites: | \$187,250.00 |

Table 4

Decommissioning Funding Analysis - Site Number 1
(Route 22 East, Clinton Township, Annendale, NJ)

Site Background. The Clinton site has 6 rooms or areas where NRC licensed radioactive materials are stored and/or used. Three of these 6 rooms or areas contain only sealed sources, while the remaining three contain "non-sealed" radioactive materials.

Room LB-275-277 is a 15x30 foot standard chemical research laboratory in which C-14, S-35 and P-32 labeled compounds are sometimes used. It consists of a center aisle with standard lab benches on either side. The most recent routine contamination survey result shows removable radioactivity ranging from background to a maximum of 18 cpm which corresponds to approximately 36 dpm/100 cm².

Room L-004 is the Radioactive Sample Preparations Lab which is dedicated to the storage and initial dispensing and dilution of radioactive materials for research laboratory use. C-14, S-35 and P-32 labeled compounds are handled in this lab. It is 27x15 feet in size and contains approximately 30 linear feet of lab bench and an 8-foot stainless steel lab hood. The hood exhausts through HEPA filters located on the roof level. Approximately 100-130 linear feet of duct connects the hood to the fan and filters. The most recent routine contamination survey results show removable radioactivity ranging from background to a maximum of 30 cpm which corresponds to approximately 60 dpm/100 cm².

Room PC-189 is a small room, approximately 9x13 feet, dedicated to storage of radioactive materials and radioactive waste. It has a bare concrete floor and ceiling, and painted block walls. A small ceiling exhaust louver carries exhaust air through approximately 100 linear feet of duct prior to exiting the building. Radionuclides stored in this room include Tc-99, uranium hexafluoride, Kr-85, tritium, C-14, Cs-137, natural uranium, Ni-63, P-32(decayed), and S-35. The most recent routine contamination survey results show no detectable removable radioactivity. Wipe sample results in this room were less than 50 dpm for Tc-99, less than 6 dpm alpha activity, less than 39 dpm for Fe-55, less than 323 dpm for Cs-137, less than 77 dpm for Kr-85, and less than 50 dpm for C-14, P-32, S-35, Ni-63 and tritium. The above data were reported by Teledyne Isotopes, Inc., an independent commercial radioactive analysis company.

Room PF-118 contains a 50 mCi Fe-55 sealed source mounted in a Princeton Gamma Tec Sulfur Analyzer. Recent wipe tests of these sealed sources showed no detectable activity (less than 40 dpm/wipe). These data were reported by Teledyne Isotopes, Inc., an independent commercial radioactive analysis company.

Room LC-337 contains a 0.5 mCi Po-210 static eliminator sealed source manufactured by Nuclear Products Company. It is located either in a small box in a drawer or mounted on a research apparatus. Recent wipe tests of these sealed sources showed no detectable alpha

Table 4. Continued

activity (less than 24 dpm/wipe). The above data were reported by Teledyne Isotopes, Inc., an independent commercial radioactive analysis company.

Room LB-237 is a research laboratory with two sealed sources containing Pm-147 and Tl-204 respectively. They are located either in a box in a drawer or mounted on a research laboratory instrument used for thickness measurement. Recent wipe tests of these sealed sources showed no detectable activity (less than 50 dpm/wipe). The above data were reported by Teledyne Isotopes, Inc., an independent commercial radioactive analysis company.

Decommissioning Analysis. All contamination survey data reviewed above indicate that routine contamination levels are maintained below the NRC limits for release to unrestricted use. Approximately 250 linear feet of exhaust ducts in rooms L-004 and PC-189, not routinely surveyed, are considered potentially contaminated for purposes of this DFP. The hood in room L-004, which could contain heretofore undetected contamination, will be disassembled, surveyed, and if necessary, decontaminated. The following decommissioning analysis and cost estimate covers all six rooms or areas where NRC licensed material is stored and/or used.

1 Planning and Preparation.

1.1 Preparation of documentation for regulatory agencies, including decommissioning plan when required by 10 CFR 30.36(c)(2), and development of work plans. This also includes time to categorize radioactive waste as to its chemical and radiological characteristics and determine proper methods of disposal.

| | |
|--|-----------|
| 1.1.1 Certified Health Physicist, 6 days | \$6000.00 |
| 1.1.2 Clerical, 2 days | \$400.00 |

1.2 Radiological contamination survey.

| | |
|--|-------------|
| 1.2.1 Certified Health Physicist, 3 days | \$3000.00 |
| 1.2.2 Health Physics technician, 5 days | \$2250.00 |
| 1.2.3 Analysis of 250 wipe samples | \$12,500.00 |

2 Decontamination and/or Dismantling of Radioactive Facility Components.

2.1 Radiological cleaning of minor surface contamination from small areas of benches, hoods, floors, shelving, lab equipment, etc.

| | |
|--|-----------|
| 2.1.1 Certified Health Physicist, 2 days | \$2000.00 |
| 2.1.2 Health Physics Technician, 3 days | \$1350.00 |

2.2 Removal and preparation for disposal of approximately 250 linear feet of potentially contaminated exhaust ducts. Duct will be cut into pieces and will

Table 4, Continued

be flattened on site, but mechanical compaction or supercompaction is not anticipated.

| | |
|--|--------------------|
| 2.2.1 Certified Health Physicist, 3 days | \$3000.00 |
| 2.2.2 Health Physics Technician, 5 days | \$2250.00 |
| 2.2.3 Removal, sectioning, flattening, packaging and disposal | \$15,000.00 |
| 2.3 Dismantling and radiological decontamination of laboratory hood. | |
| 2.3.1 Certified Health Physicist, 2 day | \$2000.00 |
| 2.3.2 Health Physics Technician, 4 days | \$1800.00 |
| 2.3.3 Removal, dismantling and decontamination | \$7000.00 |
| 3 Packaging, Shipping and Disposal of Radioactive Wastes. | |
| 3.1 Radwaste contractor to provide containers for the radioactive waste, manifest it and ship it to a low level radioactive waste disposal site. Waste volume includes actual radioactive material in storage, contaminated cleaning supplies, and anti-contamination clothing generated in the decommissioning process. (Note that additional radioactive waste disposal costs are included other line item costs above.) | |
| 3.1.1 5 drums | \$4250.00 |
| 4 Restoration of Contaminated Areas on Facility Grounds. | |
| None anticipated. | |
| 5 Final Radiation Survey. | |
| 5.1 Certified Health Physicist, 1 day | \$1000.00 |
| 5.2 Health Physics technician, 2 days | \$900.00 |
| 5.3 Analysis of 100 wipe samples | \$5000.00 |
| 6 Site Stabilization, Long-Term Surveillance (if applicable). | |
| None anticipated. | |
| 7 Contingency | \$10,000.00 |
| Total Clinton Site Cost: | \$79,700.00 |

Table 5

Decommissioning Funding Analysis - Site Number 2
(1900 East Linden Avenue, Linden, NJ)

Site Background. The Linden, NJ site has only 2 rooms where byproduct materials are stored and/or used.

The first is a laboratory, designated Room 2033, where only carbon-14 is stored and used. No other radioisotopes are stored or used in this lab. Room 2033 is about 20 by 27 feet and is constructed like a typical research lab, without any specially constructed facilities for radiation use. Typically 0.01 mCi of carbon-14 labelled chemical compound is purchased from a commercial supplier and stored in the refrigerator in the lab. Aliquots of this material are used in chemical reactions and separations carried out in one of the lab hoods. There are two double hoods in the room each consisting of a 2.5 foot and a 4-foot hood side-by-side. Routine contamination surveys consist of swipes of benches and other surfaces in the lab, including the inner surfaces of the hoods used for radioisotope work. A review of recent survey records shows all swipes to be below 20 cpm which corresponds to approximately 30 dpm/100 cm². This is well below the criteria contamination limits for removable beta gamma activity of 1000 dpm/100 cm².

Since the amounts of radionuclides stored and used in Room 2033 are small and recent and current contamination surveys show levels well below the criteria limits (including the inside surfaces of the hoods), decontamination at the time of decommissioning is not anticipated. However, the cost of removal of all floor tiles is included in this DFP in the event that hidden or future contamination becomes an issue.

The second location is the Radioisotope Storage Room located within Building 19. This room is approximately 12x19 feet and has block walls, concrete floor and a steel roof. Exhaust ventilation through approximately 40 linear feet of duct leads directly outside the building. This room is used only for the storage of radioactive materials. Byproduct material radionuclides include predominately carbon-14 (approximately 60 small containers containing C-14 labelled organic compounds), with a few containers with tritium labelled compounds, and one container each with uranium and thorium respectively with less than 1 kg each. The most recent routine contamination survey of this storage room by beta counting (liquid scintillation counting and gas proportional counting) for carbon-14 and/or tritium showed that 62 of 66 samples were below the analytical reporting limit of 50 dpm/100 cm², while only 4 samples showed any detectable activity. Of these 4 positive swipe samples, the maximum was 186 dpm/100 cm². The same routine contamination survey evaluated three wipe samples associated with the uranium and thorium containers for removable alpha activity. These swipes were all less than the analytical reporting limit of 12 dpm/100 cm². Both the beta and alpha survey results show removable contamination levels well below the levels acceptable for unrestricted use (see Table 1). Therefore, based on current experience, decontamination of the actual room and fixtures would not be anticipated. However, for

Table 5, Continued

purposes of this DFP, removal of 40 linear feet of duct and scarifying the concrete floor of the Radioisotope Storage Rooms is included.

Decommissioning Analysis. All contamination survey data reviewed above indicate that routine contamination levels are maintained below the NRC limits for release to unrestricted use. The Radioisotope Storage Room exhaust duct, not routinely surveyed, is considered potentially contaminated for purposes of this DFP. Hidden or future contamination of the concrete floor of the Radioisotope Storage Room could become a consideration. Therefore, the cost of removing and disposing of the duct and scarifying the top 1/4 inch of the concrete floor is included in the DFP. The following cost estimating evaluation covers all storage and use areas for NRC licensed materials (i.e., the two rooms described above) at the Linden site.

1 Planning and Preparation.

1.1 Preparation of documentation for regulatory agencies, including decommissioning plan when required by 10 CFR 30.36(c)(2), and development of work plans. This also includes time to categorize radioactive waste as to its chemical and radiological characteristics and to determine proper and optimal methods of disposal.

| | |
|--|-----------|
| 1.1.1 Certified Health Physicist, 6 days | \$6000.00 |
| 1.1.2 Clerical, 2 days | \$400.00 |

1.2 Radiological contamination survey.

| | |
|--|-----------|
| 1.2.1 Certified Health Physicist, 3 days | \$3000.00 |
| 1.2.2 Health Physics technician, 4 days | \$1800.00 |
| 1.2.3 Analysis of 150 wipe samples | \$7500.00 |

2 Decontamination and/or Dismantling of Radioactive Facility Components.

2.1 Provision is made for minor cleaning of surface contamination from small areas of benches, hoods, floors, shelving, lab equipment, etc.

| | |
|--|-----------|
| 2.1.1 Certified Health Physicist, 2 days | \$2000.00 |
| 2.1.2 Health Physics Technician, 3 days | \$1350.00 |

2.2 Removal, preparation for disposal, packaging and disposal of approximately 40 linear feet of potentially contaminated exhaust duct from the Radioisotope Storage Room.

| | |
|---|-----------|
| 2.2.1 Certified Health Physicist, 3 days | \$3000.00 |
| 2.2.2 Health Physics Technician, 5 days | \$2250.00 |
| 2.2.3 Removal, sectioning, flattening, packaging and disposal | \$8000.00 |

Table 5, Continued

| | | |
|-------|---|-------------|
| 2.3 | Removal, packaging and disposal of all vinyl floor tiles from laboratory Room 2033. | |
| 2.3.1 | Certified Health Physicist, 2 days | \$2000.00 |
| 2.3.2 | Health Physics Technician, 3 days | \$1350.00 |
| 2.3.3 | Removal, packaging and disposal | \$10,000.00 |
| 2.4 | Scarify surface of concrete from floor of Radioactive Storage Room and dispose of scarified concrete as radioactive waste. | |
| 2.4.1 | Certified Health Physicist, 3 days | \$3000.00 |
| 2.4.2 | Health Physics Technician, 5 days | \$2250.00 |
| 2.4.3 | Scarify, package and dispose of 1/4 inch concrete layer. | \$16,000.00 |
| 3 | Packaging, Shipping and Disposal of Radioactive Wastes. | |
| 3.1 | Preparation and packaging of radioactive waste into forms suitable for commercial disposal. Includes evaluations and chemical or physical reactions to render the waste non-hazardous as defined by EPA regulations under the Resource Conservation and Recovery Act (RCRA). | |
| 3.1.1 | Certified Health Physicist, 2 days | \$2000.00 |
| 3.1.2 | Chemist, 4 days | \$3600.00 |
| 3.1.3 | Health Physics Technician, 4 days | \$1800.00 |
| 3.2 | Radwaste contractor to provide containers for the radioactive waste, manifest it, and ship it to a low level radioactive waste disposal site. Waste volume includes actual radioactive material in storage, contaminated cleaning supplies, and anti-contamination clothing generated in the decommissioning process. (Note that additional radioactive waste disposal costs are included other line item costs above.) | |
| 3.2.1 | 4 drums | \$3400.00 |
| 4 | Restoration of Contaminated Areas on Facility Grounds. | |
| | None anticipated. | |
| 5 | Final Radiation Survey. | |
| 5.1 | Radiological contamination survey | |
| 5.1.1 | Certified Health Physicist, 2 days | \$2000.00 |
| 5.1.2 | Health Physics technician, 4 days | \$1800.00 |
| 5.1.3 | Analysis of 100 wipe samples | \$5000.00 |
| 6 | Site Stabilization, Long-Term Surveillance (if applicable). | |

Table 5, Continued

| | |
|--------------------------------|--------------------|
| None anticipated. | |
| 7 Contingency | \$10,000.00 |
| Total Linden Site Cost: | \$99,500.00 |

Table 6

Decommissioning Funding Analysis - Site Number 3
(180 Park Avenue, Florham Park, NJ)

Background. The only byproduct material at the Florham Park facility are two sealed sources: a 300 mCi tritium titanium tritide gas chromatograph detector sealed source, and a less than 0.01 mCi Cs-137 sealed source. These materials have not caused and are not likely to cause any contamination at all. Routine wipe test of the Cs-137 sealed source showed no detectable activity (less than 91 dpm). The only decommissioning issues would be a final radiation survey to confirm the lack of contamination and the disposal costs.

Decommissioning Analysis. The following cost estimating evaluation covers all storage and use areas for NRC licensed materials (i.e., only 2 sealed sources).

1 Planning and Preparation.

| | |
|---|-----------|
| 1.1 Limited radiological contamination survey | |
| 1.1.1 Certified Health Physicist, 1 day | \$1000.00 |
| 1.1.2 Health Physics technician, 1 day | \$450.00 |
| 1.1.3 Analysis of 15 wipe samples | \$750.00 |

2 Decontamination and/or Dismantling of Radioactive Facility Components.

None anticipated.

3 Packaging, Shipping and Disposal of Radioactive Wastes.

| | |
|--|----------|
| 3.1 Radwaste contractor to package radioactive material, manifest it and ship it to a low level radioactive waste disposal site. | |
| 3.1.1 1 drum | \$850.00 |

4 Restoration of Contaminated Areas on Facility Grounds.

None anticipated.

5 Final Radiation Survey.

None anticipated. The initial radiological contamination shown above is expected to be sufficient in that no contamination is anticipated.

6 Site Stabilization, Long-Term Surveillance (if applicable).

Table 6, Continued

| | | |
|---|--------------------------------------|------------------|
| | None anticipated. | |
| 7 | Contingency | \$5000.00 |
| | Total Florham Park Site Cost: | \$8050.00 |

030-05310
29-05260-13

EXXON RESEARCH AND ENGINEERING COMPANY

CLINTON TOWNSHIP, ROUTE 22 EAST, ANNANDALE, NEW JERSEY 08801

HEALTH SERVICES DIVISION

October 8, 1990

ROBERT E. DALE, CIH
Industrial Hygiene and
Environmental Health Coordinator

90RAPCL62

US Nuclear Regulatory Commission Region I
475 Allendale Road
King of Prussia, PA 19406

NRC Financial Assurance

ATTENTION: Mr. K. Brown

Dear Mr. Brown:

This letter is in response to your telephone conversation with Steve Hinton (RIC Chairman). I have received the information concerning the financial assurance requirements.

An RIC meeting has been scheduled to discuss the monetary impact of our present license. It seems possible that an amendment to our license is in order. The current activity levels allowable under our present license are in excess of our current needs. However, these limits do trigger financial assurance requirements. The meeting will focus on these topics and we will propose a solution to this problem.

Thank you for alerting ER&E about this license oversight. I will be in touch shortly after the RIC meeting on October 24, 1990. Please send all correspondences concerning our license and changes in the regulations to:

J. A. Mancuso
Exxon Research & Engineering Company
Route 22 East, Clinton Twp.
Room CA159
Annandale, NJ 08801

If you have any questions, feel free to call me at Clinton (201) 730-2739.

Sincerely,

J. A. Mancuso
J. A. Mancuso
RIC Secretary

U.S. FEE NIGHT DIVISION

90
NOV 4 1990
11:47

| | |
|-------------------|--------|
| Log | Nov 4 |
| Remitter | |
| Check No. | |
| Amount | |
| Fee Category | 3K 2C |
| Type of Fee | H.M.D. |
| Date Check Rec'd. | |
| Date Completed | 11/6 |
| By | SK |

JAM:bam

10049002.jam

cc: R. E. Dale F. D. Paris
S. M. Hinton K. C. Webb

FEE NOT REQUIRED
Jan 5/30/90 Memo

113590

OCT 12 1990

"OFFICIAL RECORD COPY" ML16

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM
AND
REGIONAL LICENSING SECTIONS

: (FOR LFMS USE)
: INFORMATION FROM LTS
: -----

: PROGRAM CODE: 03610
: STATUS CODE: 0
: FEE CATEGORY: 3L 2C
: EXP. DATE: 19910331
: FEE COMMENTS: -----
:

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: EXXON RESEARCH & ENGINEERING CO.
RECEIVED DATE: 901012
DOCKET NO: 3005310
CONTROL NO.: 113590
LICENSE NO.: 29-05260-13
ACTION TYPE: AMENDMENT

2. FEE ATTACHED

AMOUNT: -----
CHECK NO.: -----

3. COMMENTS

SIGNED Joshua M. Kaverkamp
DATE 10/30/90

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED)

1. FEE CATEGORY AND AMOUNT: 3L 2C ----- **FEE NOT REQUIRED**

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR: See 8/30/90 Memo
AMENDMENT -----
RENEWAL -----
LICENSE -----

3. OTHER -----

SIGNED _____
DATE 11/16/91