



March 15, 1994

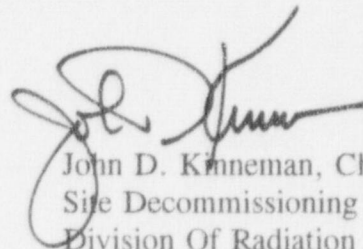
License No. 20-01010-04  
SNM-00244  
SUB-00238  
Docket No. 030-04593  
070-00263  
040-02253  
Control No. 119083  
119084  
118747

MEMORANDUM TO: Files

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

SUBJECT: VOID OF LICENSE ACTION FOR ARL'S PART 20  
EXEMPTION REQUEST.

In a memorandum, dated December 6, 1993, Region I requested NMSS to approve the U.S. Army Research Laboratory's (ARL) request for an exemption to the Revised 10 CFR 20. In a telephone conversation between myself and a representative from NMSS, NMSS requested that we have ARL provide information comparable to the Cintichem Environmental Assessment for the ARL facility. Region I issued a deficiency letter to ARL based on NMSS's request. This item is closed for NMSS unless Region I forwards additional information to NMSS. NMSS was contacted by telephone to verify that this item was closed for NMSS. On February 8, 1994, ARL withdrew their exemption request.



John D. Kinneman, Chief  
Site Decommissioning Section  
Division Of Radiation Safety  
and Safeguards



REPLY TO  
THE ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY RESEARCH LABORATORY  
ARSENAL STREET  
WATERTOWN, MASSACHUSETTS 02172-0001



M56  
J-8

8 February 1994

Commander

License No. SUB-238  
20-01010-04  
SNM-244

Mr. John D. Kinneman  
Chief, Research Development  
and Decommissioning Section  
Division of Radiation Safety and Safeguards  
U.S. Nuclear Regulatory Commission/Region I  
475 Allendale Road  
King of Prussia, PA 19406-1416

Dear Mr. Kinneman,

Reference our letters of 17 September and 8 November 1993 requesting a waiver to the implementation of 10 CFR 20.

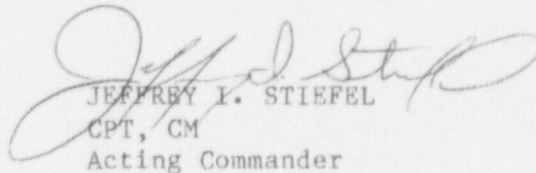
Reference your request of 14 January 1994 for additional information in order to complete a brief environmental assessment.

As Peter Cornetta indicated during his 31 January 1994 conversation with Mr. Mark Bouwens, we are no longer pursuing an exemption to the implementation of the new 10 CFR 20 regulations. The impact of passing time has prompted a reassessment of our needs.

Weighing the amount of work remaining and assessing the application of the new regulation versus the old at the time of estimated approval has lead to the decision that reverting back to the old regulations would not be cost effective or productive.

In fact we now have our new procedures in place and have been functioning in compliance with these new regulations. If further information pertaining to this action is desired, Peter Cornetta may be reached at (617) 923-5225.

Sincerely,

  
JEFFREY I. STIEFEL  
CPT, CM  
Acting Commander

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118747/119083/119084

FEB 02 1994



JAN 14 1994

License Nos. 20-01010-04  
SNM-00244  
SUB-00238  
Docket Nos. 030-04593  
070-00263  
040-02253  
Control Nos. 119083  
119084  
118747

Department of the Army  
U.S. Army Research Laboratory  
SLCMT-DDM(5-10c)  
ATTN: Jeffery I. Stieffel  
Captain, CM  
Acting Commander  
405 Arsenal Street  
Watertown, Massachusetts 02172-0001

Dear Captain Stieffel:

This is in reference to your request in a letter dated September 17, 1993 to amend License No. SUB-00238 to exempt your activities from the new 10 CFR 20. We have determined that in order to complete the action on this request we must prepare a brief Environmental Assessment. In order to prepare this assessment, we need the following additional information:

1. Estimate the cost to implement the requirements in 10 CFR 20.1001-20.2401.
2. Briefly describe the implementation of your ALARA program over the last year and discuss how your policies and procedures have maintained occupational radiation exposures as low as is reasonably achievable. Specify the administrative limits which you place on external and internal exposure and state whether they have been exceeded.
3. Estimate the percentage of the remediation activities that are completed.
4. Describe the current status of the remediation activities at the facility. Briefly list the activities remaining.
5. Estimate the fraction of radioactive contamination that has been removed from the facility and estimate the quantity of radioactive material remaining at the facility.

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Include radioactive material which is present as contamination on surfaces and in the soil in excess of release criteria.

6. Estimate the dose equivalent to the potentially worst case exposed member of the public during 1993 and 1994 as a result of the activities conducted under your licenses, including the facility remediation.
7. What was the maximum whole body dose equivalent and the maximum airborne exposure to any individual worker during 1993?
8. Estimate the maximum whole body dose equivalent and the maximum airborne exposure that will be received by any one worker in 1994.
9. Estimate the average worker whole body dose equivalent expected for 1994.
10. Estimate the total whole body dose equivalent for remediating the facility and the fraction of that total which has been delivered to date.

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 Nos. 119083, 119084, and 118747. The reviewer for this license action is Mark R. Bouwens. If you have any questions regarding this letter please call the reviewer at (610) 337-6910.

Sincerely,

Original Signed By:  
John D. Kinneman

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

cc:  
Peter Cornetta, Radiation Protection Officer

U.S. Army Materiel Command  
ATTN: AMCSF-P (Mr. John Manfre)  
5001 Eisenhower Avenue  
Alexandria, Virginia 22333-0001

U.S. Army ARL

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Department of the Army  
Corps of Engineers, New England Division  
ATTN: Richard D. Reardon,  
Director of Engineering  
424 Trapelo Road  
Waltham, Massachusetts 02254-9149

Commander  
Department of the Army  
Corps of Engineers, New England Division  
ATTN: CENED-PD-L (Mr. Dennis Waskiewicz)  
424 Trapelo Road  
Waltham, Massachusetts 02254-9149

Commander  
U.S. Army Toxic and Hazardous Materials Agency  
ATTN: CETHA-BC (Mr. Salvatore Torrisi)  
Aberdeen Proving Ground, Maryland 21010-5401

Commonwealth of Massachusetts  
Department of Health  
ATTN: Robert Hallisey  
Director  
Radiation Control Program  
150 Tremont Street  
Boston, Massachusetts 02111

U.S. Environmental Protection Agency  
ATTN: Ms. Anne Fenn  
JFK Federal Building (PAS)  
Boston, Massachusetts 02203

Commonwealth of Massachusetts  
Department of Environmental Protection  
Bureau of Waste Site Clean-Up  
ATTN: Ms. Anne Malewicz  
1 Winter Street, Fifth Floor  
Boston, Massachusetts 02108



U.S. Army ARL

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U.S. Army Research Laboratory  
Adelphi Laboratory Center  
ATTN: AMSRL-OP-RK-S (M. Borisky)  
2800 Powder Mill Road  
Adelphi, Maryland 20783

Watertown Main Library  
ATTN: Reference Department  
123 Main Street  
Watertown, MA 02172

U.S. Army ARL

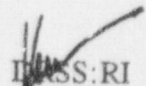
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bcc:

M. Bouwens, RI

DRSS:RI  
Bouwens

*MB*  
01/14/94

  
DRSS:RI  
Kinneman

01/14/94

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REGIONAL TECHNICAL ASSISTANCE REQUEST FORM

Date: December 6, 1993

Mail or E-Mail to: Carl J. Paperiello (CJP1), Mail Stop: 6H3-OWFN, If E-mail, cc: CLE  
Division of Industrial and Medical Nuclear Safety, NMSS

From: James H. Joyner (JHJ) (Name and E-mail initials) Region I  
Chief, Facilities Radiological Safety and Safeguards Branch

Licensee: U.S. Army Research Laboratory License No.: SUB-238

- Control No. 118747 (if applicable)
- Letter dated: September 17, 1993 (if applicable)
- Suggested change in licensing procedure (enclosed): \_\_\_\_\_

Problem/Issue: The Department of the Army requested an exemption from implementation of the Revised 10 CFR Part 20 for the U.S. Army Research Laboratory in Watertown, Massachusetts (Watertown Arsenal).

Action Required: Approve an exemption from the Revised 10 CFR Part 20 for the U.S. Army Research Laboratory, License Nos. 20-01010-04, SNM-244, and SUB-238.

Recommended Action (with revisions):  Approve or  Reject

Remarks: \_\_\_\_\_

Headquarter Reviewer: \_\_\_\_\_

Regional Reviewer: Mark R. Bouwens

Reviewer Code: J8

Reviewer Phone No.: (215) 337-6910

FAX No.: (215) 337-5368

Request Needed by: 12/20/93 (date)

Form TAR-10  
9/93

December 6, 1993

License No. SUB-238  
Docket No. 040-02253  
Control No. 118747

MEMORANDUM FOR: Carl J. Paperiello, Director  
Division of Industrial and  
Medical Nuclear Safety, NMSS

FROM: James H. Joyner, Chief  
Facilities Radiological Safety  
and Safeguards Branch  
Division of Radiation Safety  
and Safeguards, RI

SUBJECT: TECHNICAL ASSISTANCE REQUEST: U.S. ARMY RESEARCH  
LABORATORY (WATERTOWN ARSENAL)

The active portion of the Watertown Arsenal site [U.S. Army Research Laboratory (ARL), Watertown, Massachusetts] is composed of about 14.6 hectare (36 acres) located along the north branch of the Charles River approximately 7 miles west of Boston, Massachusetts. Work with various radioactive materials has been conducted at various locations within the Arsenal since at least 1946. This work has been under AEC and NRC license since February 6, 1958. The Department of the Army (Army) began remediation activities at ARL under an NRC approved Decommissioning Plan in July 1992 and the facility is scheduled by the Army for closure by 1996. The primary contaminant on the site is depleted uranium (DU).

The Army requested an exemption from the implementation of the Revised 10 CFR Part 20 for ARL, License No. SUB-238. The majority of the remediation of the site has been completed; however, the Army expects that some remediation activities will not be completed until after December 31, 1993. The Army requested the waiver to avoid additional expenses that will be incurred by retraining employees and developing a radiation protection program to meet the requirements of the Revised 10 CFR Part 20. An acceptable radiation safety program is in place and provides adequate protection to workers and the public. The radioactive material remaining on-site is mostly isolated DU contamination which is not likely to produce exposures to workers or the public even approaching the current or Revised 10 CFR Part 20 dose limits.

We have reviewed the Army's request and conclude it should be approved based on the following:

1. Remediation of the site is almost complete; there will be little handling of radioactive material in 1994 and 1995.
2. The inventory of radioactive material on-site is very small.
3. The Army expects to request termination of License Nos. 20-01010-04 and SNM-244 (Docket Nos. 030-04593 and 070-00263) in February 1994.
4. The Army will complete decommissioning activities at the facility and submit the final Termination Survey by May 1994.
5. Region I inspected the decommissioning activities at ARL from November 30, 1992 to December 3, 1992 and October 4-6, 1993. Dosimetry records and results of effluent sampling showed adequate control of exposures to workers and members of the public. No safety concerns or violations were identified. Exposures recorded were well below the limits in the Revised 10 CFR Part 20.
6. An exemption to the Revised 10 CFR Part 20 was (or will be) issued for decommissioning activities at the Shoreham Nuclear Power Station, Unit 1, License No. NFP-82. Reference letter, dated November 5, 1993, from Clayton L. Pittiglio, Jr., NRC, to Arthur J. Bortz, Long Island Power Authority.

However, the approval of the Army's request should incorporate the following conditions.

1. The exemption will be for the three active licenses at the ARL facility. We have requested that ARL provide a formal request for an exemption to the Revised 10 CFR Part 20 for License Nos. 20-01010-04 and SNM-244 (Docket Nos. 030-04593 and 070-00263).
2. The exemption will continue until license termination.
3. Remediation activities at the ARL facility must continue toward completion of the decommissioning of the facility and license termination.
4. The approval is for decommissioning activities at the ARL facility, Mall Property, and GSA Property.
5. We will make clear that the dose limit of not more than 100 millirem to a member of the public in 10 CFR 20.1301 may be used to evaluate contamination remaining at any of the sites.



There is no benefit to workers or public by requiring the implementation of the Revised 10 CFR Part 20 at this facility. We recommend you concur in the issuance of an exemption to the Revised 10 CFR Part 20 for the U.S. Army Research Laboratory, License Nos. 20-01010-04, SNM-244, and SUB-238.

We appreciate your assistance with the issues at this SDMP Site.

James H. Joyner, Chief  
Facilities Radiological Safety  
and Safeguards Branch  
Division of Radiation Safety  
and Safeguards

cc:

J. Austin, NMSS

U.S. Army MTL TAR

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bcc:

M. Bouwens, RI (w/o enclosures)

RI:DRSS  
Bouwens  
*AB*  
12/6/93

RI:DRSS  
*fr* Kinneman  
12/7/93

RI:DRSS  
*JAS* Joyner  
12/7/93

RI:DRSS  
*Henl*  
12/7/93



REPLY TO  
THE ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY RESEARCH LABORATORY  
ARSENAL STREET  
WATERTOWN, MASSACHUSETTS 02172-0001



17 September 1993

040-02253

Commander

License No. SUB-238  
Docket No. 40-02253  
Control No. 113651

Mr. John D. Kinneman  
Chief, Research Development, and Decommissioning Section  
Division of Radiation Safety and Safeguards  
U.S. Nuclear Regulatory Commission/Region I  
475 Allendale Road  
King of Prussia, PA 19406-1416

Dear Dr. Kinneman,

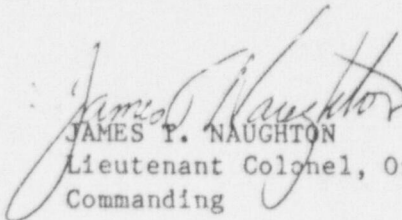
Request your agency approve a waiver to implementation of the new 10 CFR 20 at the Watertown site. The limited period of application of 10 CFR 20 at Watertown would not justify the expense or the effort involved in making such a change.

While it is our intent to complete decontamination activities prior to the end of this year, unforeseen requirements such as may be involved with the remediation of the contaminated pipe extending from under Building 43 out under Arsenal Street, the possibility of difficulties arising during the mixed waste processing in Building 43, and tasks associated with the GSA site cleaning may extend beyond our control into next year.

Furthermore, extensive radiation protection procedures covering regulations under the old 10 CFR 20 were written at considerable expense to the Army by our contractor, Scientific Ecology Group. As you are aware, preparations for the implementation of the new 10 CFR 20 involve retraining of radiation workers as well as detailed radiation protection program development tasks relating to topics such as ALARA, record keeping, exposure determination, waste disposal, planned special exposures surveys and new rules on precautionary measures, etc. Additional expenditure in these areas would not contribute significantly to a reduction in personnel exposure due to the nature of the radioactive contamination involved and we expect to terminate our byproduct and other special nuclear materials licenses shortly.

Your consideration and assistance in this matter is appreciated.

Sincerely,

  
JAMES Y. NAUGHTON  
Lieutenant Colonel, Ordnance Corps  
Commanding

118747

"SECTION COPY"

SEP 23 1993





REPLY TO  
THE ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY RESEARCH LABORATORY  
ARSENAL STREET  
WATERTOWN, MASSACHUSETTS 02172-0001



8 November 1993

Commander

License No. SUB-238  
Docket No. 40-02253

Mr. John D. Kinneman  
Chief, Research Development and Decommissioning Section  
Division of Radiation Safety and Safeguards  
U.S. Nuclear Regulatory Commission/Region I  
475 Allendale Road  
King of Prussia, PA 19406-1416

Dear Mr. Kinneman:

The additional information requested by your office concerning our request for a waiver to the implementation of the new 10 CFR 20 and how it would effect individual members of the public is included here.

The radioactive sources in our possession that have significant ambient radiation fields associated with them are: 1) the 5Ci PuBe source; 2) three, 500 mCi plutonium foils; and 3) the reactor beam tubes. The PuBe source is stored in a steel container that is filled with paraffin. The ambient field measured from the container due to the x-ray and neutron emissions is 5mRem/hr on contact and not measurable outside the cement walls of the facility. The dose rate on contact with the steel container holding the 500mCi Pu-239 foils is approximately 5mR/hr. These sources are locked in our calibration facility as stated in license number SNM - 244. Compliance with 20.1302 is satisfied by the results of monthly surveys of this building which indicate background levels of radiation and also meet the requirement (20.1301) that the effective dose equivalent to individual members of the public should not exceed 0.1 Rem in a year and that the dose in any unrestricted area from external sources does not exceed 0.002 Rem in any one hour.

These plutonium sources are being stored-awaiting shipment to the Department of Energy. Access is restricted in accordance with license SNM-244 and our Radiation Safety program, thus keeping exposures as low as reasonably achievable. Finally the beam tubes (enclosed in lead) that are being stored inside LSA boxes will be cut, marked, encapsulated and shipped this month.

Further questions concerning compliance with "Dose limits for Individual Members of Public" may be directed to Peter Cornetta at (617) 923-5225.

Sincerely,

James T. Naughton  
Lieutenant Colonel, Ordnance Corps  
Commanding

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NOV 17 1993



REPLY TO  
THE ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY RESEARCH LABORATORY  
ARSENAL STREET  
WATERTOWN, MASSACHUSETTS 02172-0001



17 September 1993

040-02253

Commander

License No. SUB-238  
Docket No. 40-02253  
Control No. 113651

Mr. John D. Kinneman  
Chief, Research Development, and Decommissioning Section  
Division of Radiation Safety and Safeguards  
U.S. Nuclear Regulatory Commission/Region I  
475 Allendale Road  
King of Prussia, PA 19406-1416

Dear Dr. Kinneman,

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Your consideration and assistance in this matter is appreciated.

Sincerely,

*James T. Naughton*  
JAMES T. NAUGHTON  
Lieutenant Colonel, Ordnance Corps  
Commanding

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SEP 23 1993

