



DEPARTMENT OF THE ARMY  
 U.S. ARMY ELECTRONIC PROVING GROUND  
 FORT HUACHUCA, ARIZONA 85613-7110

230-05220

REPLY TO  
 ATTENTION OF

STEEP-CT-0 (70)

JUN 21 1989

MEMORANDUM FOR United States Nuclear Regulatory Commission, Region V, 1450  
 Maria Lane, Suite 210, Walnut Creek, CA 94596-5000

SUBJECT: Amendment to Nuclear Regulatory License Numbers SNM 1446 and BML  
 02-09090-02

1. Reference:

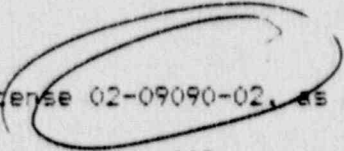
- a. US Nuclear Regulatory Commission License 02-09090-02, as amended.
- b. US Nuclear Regulatory Commission License SNM 1448.
- c. Telephone conversation, 17 Jun 89, above subject, between Mr. George Broxton, US Army Electronic Proving Ground, Ms. Beth Riedlinger and Mr. Bob Thomas, Region V Nuclear Regulatory Commission.
- d. Title 10 Code of Federal Regulations, Part 20.105.

2. This amendment is for the temporary removal of two sections of hurricane fence as shown on the attached diagram (encl 1). This removal is necessary to allow access to the area by machinery during the construction of a building addition. The sections are comprised of a 13 foot length and a 40 foot length forming the "L" shaped portion of the perimeter outside the southwest wall of building 12508, where the radioactive sources are stored and used. We will erect a temporary 40 foot chain-link fence as shown on the diagram, and it will remain for the duration of the construction, expected to take approximately 1 year. The temporary fence will contain a "Caution Radiation Area" sign similar to the one presently mounted on the existing fence. At the end of the construction phase, we will reinstate the original 8 foot fence at its present location, and remove the temporary fence.

3. We performed a radiation survey, 19 Jun 89 along the outside southwest wall with the J. L. Shepherd Model 138 Irradiator operating in its most radiation-intense mode, i.e., both Cobalt and Cesium sources exposed in a 30 degree beam width. The maximum radiator level at the point of temporary fence construction is 0.6 milliroentgens per hour (encl 2). We very rarely operate the Model 138 in this configuration. We have it calibrated once a year in the 30 degree beam mode, and we rarely require it to support a test program in this mode. We expect that the maximum usage in this mode would not exceed 20 hours in the next 12 month period; thus resulting in a maximum exposure of 12 millirems. This is much less than the maximum allowable in 10CFR 20.105.

JUN 27 09:45

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 REG 5 LIC 30  
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FEE EXEMPT

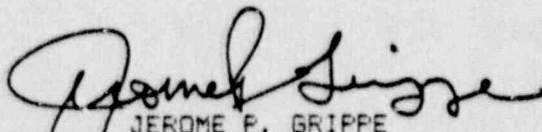
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STEEP-CT-0

SUBJECT: Amendment to Nuclear Regulatory License Numbers SNM 1448 and EML  
02-09090-02

4. If you require further information, please contact the Radiological Protection Officer (RPO), Mr. George Broxton, at (602) 538-6157 or the alternate RPO, Mr. Virgil Thomas at (602) 538-6935.

2 Encls

  
JEROME P. GRIPPE  
Colonel, SC  
Commanding

Incl 1

ENCLOSURE

360'

ANNEX 2

100'

160'

100'

PARKING AREA

PERSONNEL GATE LOCKED

GUARD HOUSE

NORMAL ACCESS GATE

GATE LOCKED

PERSONNEL DOOR TO BLDG

PROPOSED ADDITION

COMPOUND AREA  $\approx$  3.3 ACRES  
SURROUNDED BY 8' HURRICANE  
TYPE FENCE TOPPED WITH  
3 STRANDS BARBED WIRE

EMI TEST FACILITY

BLDG 12508

Section to be Temporarily Removed

Section to be Temporarily Removed

CRA = CAUTION RADIATION AREA  
(8' HURRICANE FENCE)

LOCKED DOOR

CRA

CRA

GATE LOCKED

13 ft

CRA

CRA

CRA

GATE LOCKED

Proposed Temporary Fence Location During Construction

CRA

CRA

CRA

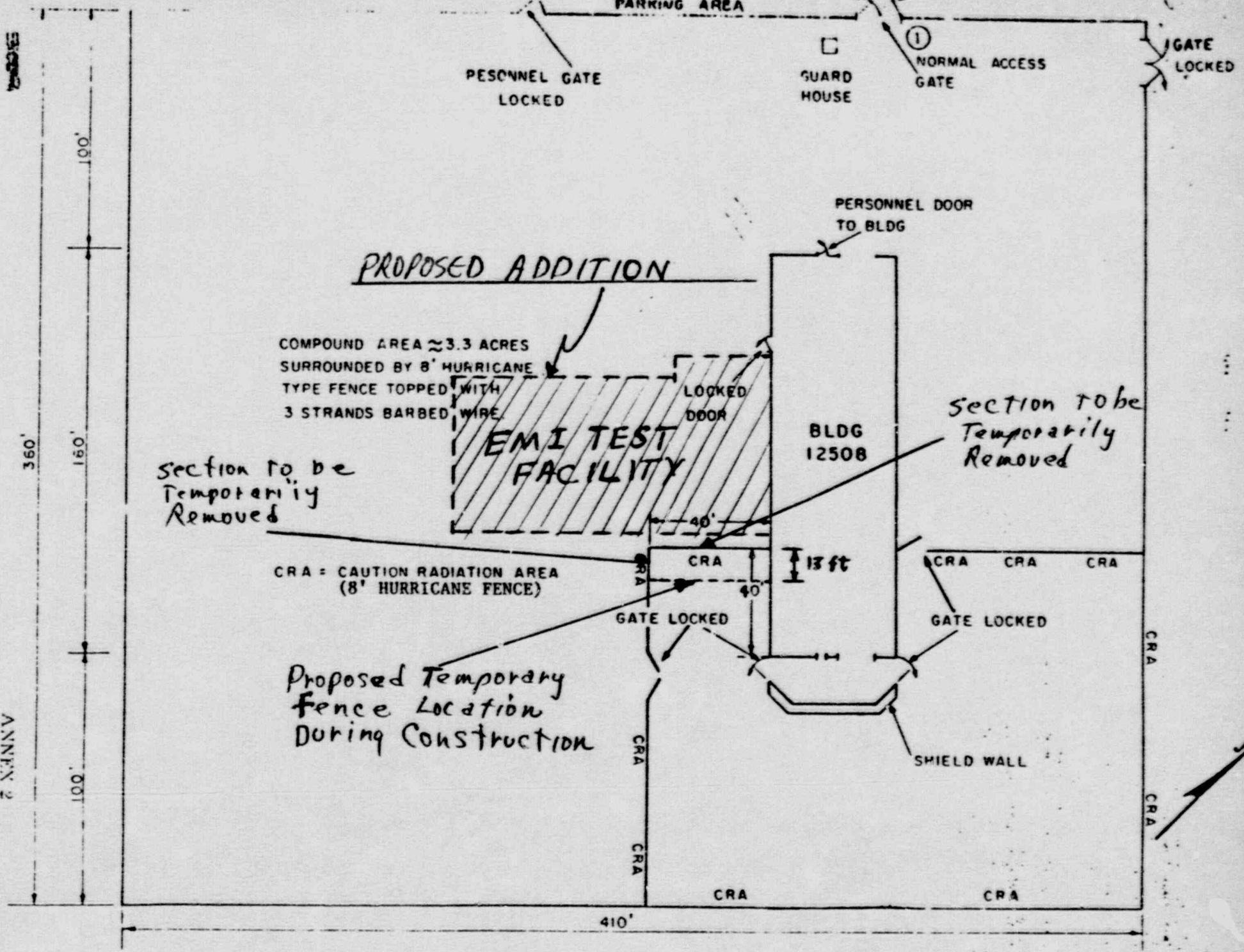
CRA

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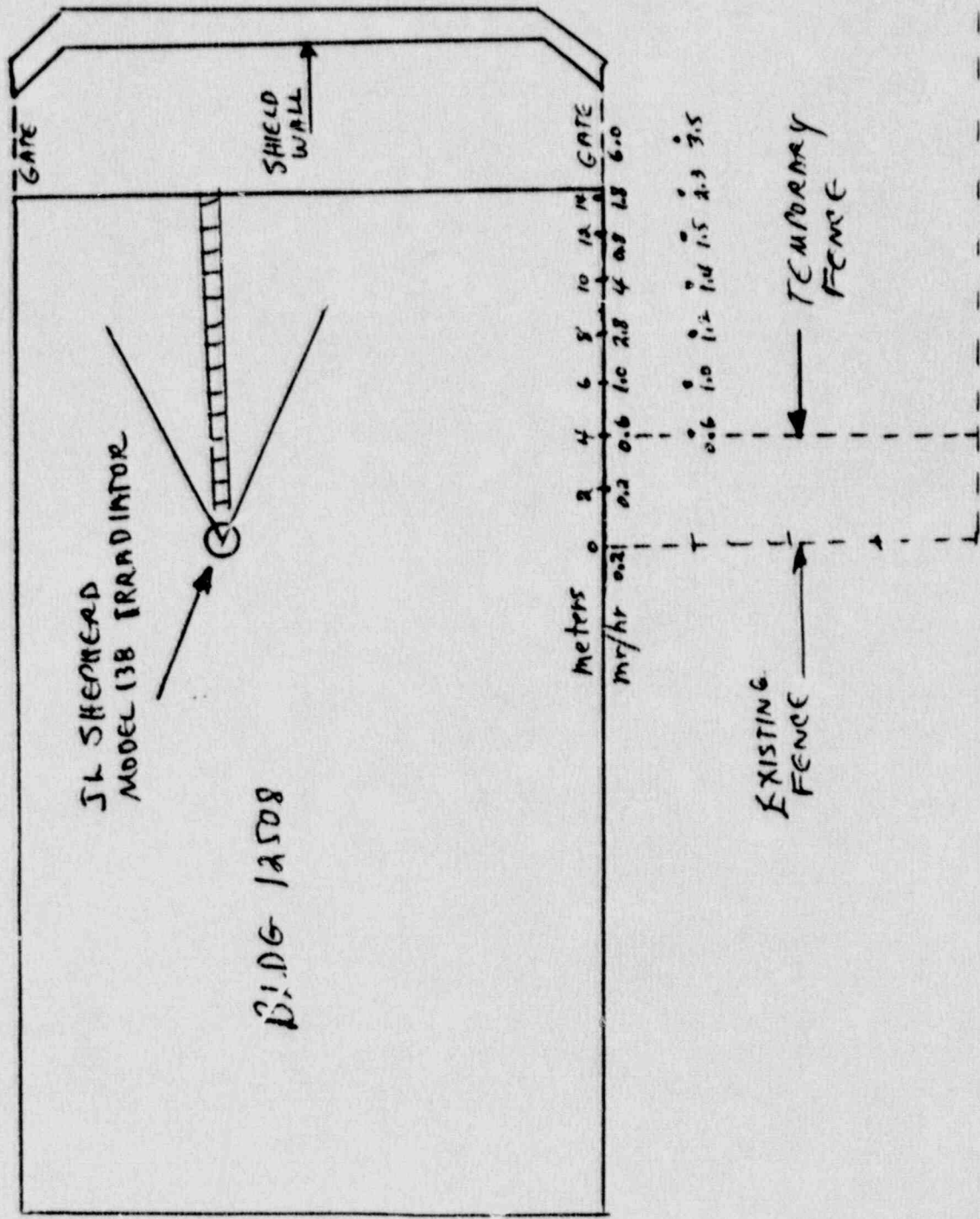
CRA

410'

SHIELD WALL







3/3/87

CONFIRMATORY ACTION LETTER

Docket No. : 030-06380  
License No.: 02-09090-02

Department of the Army  
U.S. Army Electronic Proving Ground  
CDR, USAEPG  
ATTN: STEEP CO  
Ft. Huachuca, Arizona 85613-7110

Attention: Colonel Arthur J. Downey  
Commander

Gentlemen:

This refers to the telephone conversations held on March 2, 1987 between you and James L. Montgomery, Chief, Nuclear Materials Safety and Safeguards, concerning the apparent malfunction of a safety interlock system in the J.L. Shepherd Model 138 irradiator, and the control of access to the radiation area outside of the Building 12508 irradiator facility. These matters were also discussed with you and other members of your staff at the conclusion of the routine NRC inspection on February 6, 1987, and during telephone conversations which were held on February 13, 18, and 23, 1987 between Mr. David D. Skov of this office and Mr. George A. Broxton, Radiological Protection Officer.

With our earlier request on February 18, 1987, Mr. Broxton had agreed to suspend further use of the Model 138 irradiator until the radioactive source safety interlock system was inspected and verified to be in operable condition, or if necessary repaired or adjusted, by the manufacturer. On March 2, 1987, Mr. Skov was notified by J.L. Shepherd that he had supervised the servicing of the Model 138 irradiator during his visit to Ft. Huachuca on February 27, 1987, and that the unit was now operating in a satisfactory manner and could be used safely. We were also informed that the Model 138 unit had been physically modified to allow insertion of the emergency rod to mechanically drive the radioactive sources from their exposed portal position to the fully shielded position as originally designed. Mr. Shepherd also stated that he had prepared written procedures for transmittal to Ft. Huachuca which specify that the source interlock system should be tested at monthly intervals. We have therefore concluded that the earlier restriction concerning further use of the Model 138 irradiator can now be removed and you are free to use the irradiator under the conditions of your license and with additional provisions as specified below.

On the basis of our earlier conversations with you and George Broxton, it is our understanding that you have taken or will take immediate action with regard to the servicing, routine maintenance and periodic testing of the irradiator, and the installation of barriers to prevent access to portions of the Building 12508 radiation area which are described in detail as follows:

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1. Lubrication and other routine maintenance of all irradiators used under your license will be performed at a frequency and in a manner as specified by the manufacturer. Tests will be conducted by operator personnel at a frequency of once per month to verify that the Model 138 source safety interlock system remains fully operational.
2. If a malfunction of the Model 138 safety interlock system is detected at any time, the use of the irradiator will be terminated immediately, and will not resume until repairs or adjustments are made by the manufacturer, or by operator personnel in accordance with instructions provided by the manufacturer.
3. A seven foot high chainlink fence barrier with lockable entrance gate(s) will be installed within a period of two months in order to prevent unauthorized personnel access to the radiation area outside of Building 12508. The fence will be located within the outer perimeter fence at the boundary which has been identified as posted with "Caution, Radiation Area" signs as described in Annex 2 of the license application dated November 15, 1985.

If our understanding of the planned actions as described above is not in accordance with your planned corrective actions, please contact this office immediately.

Sincerely,

*original signed*

John B. Martin  
Regional Administrator

bcc:  
G. Cook  
B. Faulkenberry  
RSB/Document Control Desk (RIDS)  
State of Arizona  
M. Smith  
docket file  
J. Axelrad  
J. Lieberman

REGION V *John*  
DSkov/dot  
3/3/87

*John*  
RThomas  
3/3/87

*John*  
JMontgomery  
3/3/87

*John*  
RScarano  
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*John*  
AJohnson  
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JMartin  
3/3/87

*I've contacted & informed  
including EN document staff*

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SEND TO PDR  
YES / NO