DEPARTMENT OF THE AIR FORCE
AIR FORCE INSTITUTE FOR OPERATIONAL HEALTH (AFMC)
BROOKS CITY-BASE TEXAS

9 June 2006

MEMORANDUM FOR AFRPA/DD
3411 Olson Drive
McClellan Park, CA 95652-1003

FROM: AFIOH/SDRH
2350 Gillingham Drive
Brooks City-Base TX 78235-5103

SUBJECT: Consultative Letter # IOH-SD-BR-CL-2006-0041, Radiological Assessment of Building 458 on the Former McClellan AFB CA

1. The Air Force Institute for Operational Health (AFIOH), Radiation Surveillance Division (SDR), Health Physics Consulting Branch (SDRH) performed an assessment of survey results and historical records to determine if Building 458, at the former McClellan AFB, may have been impacted by residual radioactive material. The assessment was performed at the request of the Air Force Real Property Agency (AFRPA) Western Region Execution Center. The building was placed on the list of potentially impacted buildings because a portion of it was used as a radiation detection meter (RADIAC) calibration facility. Based on the results of the survey work and the review of the historical records, Building 458 is not radiologically impacted.

2. Background:

Bldg 458 was constructed in 1939 covering an approximate area of 14,600 square feet in a two story configuration. From 1939 to approximately 1958, Bldg 458 was used as a reciprocating engine test cell. In 1958, the building was modified for jet engine testing, which was performed until 1972. A calibration laboratory used to check and calibrate radiation detection equipment also operated in the building from the early 1960s to 1974. The former calibration facility is comprised of two rooms covering approximately 1200 square feet. The rooms are constructed of reinforced concrete with painted concrete floors and a wood ceiling. From 1990 until 1999, a laundry operated in Bldg 458. Portions of the building have also been used for the storage of construction equipment. A portion of the building is currently used for rag dry cleaning operations and storage. Due to the historical presence of the RADIAC calibration facility, the building was placed on the list of potentially impacted buildings. Once on the list, additional work was required to release the building for unrestricted use.

3. Historical Document Review:

a. Mitretek Systems, Inc., 2005, Radiological Historical Site Assessment for the former McClellan AFB.

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b. Radian International, 2000, Draft Radiological Final Status Survey Report (FSSR) for Bldg 458.

c. USAEC/USNRC license number 04-08699-01.

4. Results:

a. Historically, USAF calibration laboratories only used sealed check sources (e.g., ^{137}Cs and ^{239}Pu). As a part of the normal operations, the facility would have performed regular leak tests of the check sources. No documentation was found that indicated that there was ever any leakage from any of the check sources used by the facility.

b. By-product License Number 04-08699-01 was issued on 21 August, 1962. In 1974, the license was amended for the relocation of the RADIAC calibration facility and 130 Curie ^{137}Cs irradiator to Building 677. In May 1979, the license was amended to allow possession of two ^{137}Cs sources. The licensed expired in March 1984 and the Air Force applied for another license for the irradiators in April 1984 that was issued under number 04-08699-05. This license was terminated in December 1985 when the Air Force issued a Master Materials License permit under 04-08699-05 AFP. This permit was consolidated by the Air Force under Permit number 04-10117-02AFP to McClellan Air Force Base. The irradiators were transferred to other licensees in 1993 which allowed for the closure of the calibration facility.

c. The FSSR of Bldg 458 concluded that residual radioactivity in the building is indistinguishable from background and should be released for unrestricted use based on the results of the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) survey.

5. Recommendations and Conclusions:

a. Based on survey results of the draft FSSR there is no indication of residual radioactive material in Building 458.

b. Building 458 should be removed from the list of potentially radiologically impacted buildings and released for unrestricted use.

6. If you have any comments or questions regarding this consultation, please contact Mr. Brian Harcek at 210-536-4263 (DSN 240-4263).

//signed//

SCOTT M. NICHELSON, Lt Col, USAF, BSC, CHP, CIH
Chief, Radiation Surveillance Division

cc:
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AFMOA/SGZR
HQ AFRPA/EV

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