DEPARTMENT OF THE ARMY
CORPUS CHRISTI ARMY DEPOT
308 CRECY STREET
CORPUS CHRISTI TX 78419-5260

June 05, 2009

Docket 040-08177
License STB-1168
Control 471956

Nuclear Materials Licensing Branch
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 400
Arlington,TX 76011-8064

SUBJECT: Response to Request for Additional Information(RAI)

Dear Mr. Robert Evans

1. Reference: Letter, U.S. Nuclear Regulatory Commission (NRC) Region IV, Subject: Request for Additional Information, dated 8 May 2009

2. Corpus Christi Army Depot (CCAD) is currently undergoing survey and remediation actions pursuant to termination of CCAD's Source Material License STB-1168. An NRC inspection and confirmatory survey were conducted on 9-10 April 2009 with results provided to CCAD in an inspection report dated 5 May 2009.

3. The enclosure to the above referenced letter requested additional information relative to:

a. Two locations specified in paragraph 1 of enclosure to the referenced letter which exhibited residual radioactivity in excess of screening level derived concentration guideline levels (DCGLs) approved by NRC. The locations were specifically within the welding booth area of Building 8 consisting of one location within the booth used for welding on magnesium-thorium alloys and a second location within the "touchup booth". The RAI noted that "These areas will require additional assessment to ensure that the residual radioactivity is not a health and safety hazard. Alternatively, you may elect to remediate the areas to reduce the residual radioactivity to less than the derived concentration guideline levels and to document the results of your remediation in the final status survey report."

Response: Concur that the areas in question were among over 100 in which residual radioactivity was measured at concentrations exceeding the DCGLs. Each such area to include the two areas identified are being appropriately investigated, remediated, and subsequently resurveyed to confirm achievement of DCGLs. The final status survey report will incorporate the confirmatory survey data.

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b. The identification of potentially impacted areas that were identified by the NRC staff pursuant to review of Docket File 040-08177. The records provided with the RAI listed structures that were not discussed in the historical site assessment resulting in NRC request to "review the attached records and ensure that all areas listed in the attached docket file records have been considered in the historical site assessment.

Response: The following information is provided relative to investigation of areas identified in the enclosures to the RAI:

(1) General.

a. The location codes specified in historical documents (e.g., "5CB1A, Plating Shop") are not fixed locations but, rather, have varied significantly with the history of CCAD operations. As such, these locations do not provide a sound basis for designation of impacted areas.

b. The "Plating Shop" was removed from service over 10 years ago and the structure was demolished and the area of this former structure was backfilled and repaved. Similarly, the areas in the northwest portion of Building 8 adjacent to what is referred to in Figure 3-2 of the CCAD Radiological Survey Plan "Building 8 Impacted Areas" as the "Old Engine Subassembly Area" were demolished and new structures built in that area. As such, the newly constructed areas were not included in the scope of the surveys.

(2) Detailed evaluation of materials enclosed with the RAI:

a. Drawing No 70EFI-J002 entitled "General Layout Building #8 and Adjacent Structures" dated August, 1967, was reviewed in detail. Notably, although possession of magnesium-thorium alloys containing less than four percent thorium by weight are exempted from licensing, the areas identified on the drawing included areas that "process or scrap" the parts. Given that scrapping involves only the removal of the parts from service, the associated areas are not carried forward as

"impacted". Similarly, "Magnesium-thorium Disposal Storage Areas" are inclusive of both areas in which magnesium-thorium alloy process wastes such as turnings and contaminated bead media are stored as well as areas in which complete parts and complete, unserviceable aircraft engines are stored. In addition, it should be noted that "The Safety Stores location" was an area used to store safety supplies such as safety glasses, safety boots etc for issuance to the workforce. Available information does not support the fact that magnesium-thorium alloys were ever stored or processed in the Safety Store location. Nonetheless, the area identified on the drawing was surveyed based on its use for industrial instrument and NDT operations.

b. The basis for designation of the "T-63 Rotor Shop, 5CC3C" is not known as the T-63 engine only contained one component, the scroll assembly, which contained magnesium-thorium alloy. Further, none of the rotors of any aircraft engine contained magnesium-thorium alloys.

c. "Machine Shop #2 (5EB20)" and "Machine Shop #3 (5EB20)" were included in the scope of surveys performed.

d. The "CFD Bond Room Storage" and "Engine Cleaning Shop, 5CB1C" were otherwise reflected on the drawing as "Engine, Non-Destructive Test, 5CB80" and "Engine Cleaning Shop, 5CB1C". These areas were included in the scope of the surveys performed with the exception of the southeast corner of the plating shop. This section of the building was not used to alter the chemical, physical or metallurgical treatment of magnesium-thorium alloy engine parts.

e. Building 1825, Engine Parts and Housing Repair, "5CB3C". Building 1825 was included in Section 7.8 of the CCAD Radiological Survey Plan and was included in the scope of the surveys performed.

f. "Magnesium-Thorium Welding Booths, 5CB2B&C" is an integral part of the Welding Shop which was addressed in Section 7.2.2 of the CCAD Radiological Survey Plan and was included in the scope of surveys performed.

g. Although Hangars 44, 45, 46 (46B) were noted on one drawing, there is no information to indicate that any "chemical, physical or metallurgical treatment or processing" of magnesium-thorium alloy engine parts has taken place in the aircraft hangers. Rather the parts are removed from the aircraft and processed in the appropriate areas of Building 8. Similarly, drawings in the March 24, 1978, application reflect "Y"s in various areas denoting "Radioactive Materials" "Radiating Emitting Equipment". (Note: Another document denotes areas coded with a "Y" as representing areas that "Store, Handle, Work With (Machining, Grinding, Welding, Bead-Blastin, etc.) Magnesium-Thorium Components". Based on this designation there was does not appear to have been an attempt to identify the areas in which magnesium-thorium alloys were processed but, rather, to identify all areas in which they are stored, handled or processed.) The noted areas include "Rubber Equipment Shop", otherwise referred to as "glass and plastic"; an unknown area in the vicinity of "rotor blade storage"; "Calibration"; "Aircraft Assembly"; "Dispensary", "Ward" and "Doctor" Office; "Mechanical Shop" Storage"; and "Instrument Shop P/C". Although one or more of these areas may have contained "Radiation Emitting Equipment" such as x-rays there is no information to suggest that any "chemical, physical or metallurgical treatment or processing" of magnesium-thorium alloys was performed in the areas. (Building 258 was included on one such drawing. This building is addressed in Section 7.7 of the CCAD Radiological Work Plan and included in the scope of surveys performed.

h. A "Radiological Surveillance" document from the March 6, 1973, application notes the presence of X-ray units in Building 8 and

Hangar 44; the presence of (license exempt) engine igniter "exciters" which were sealed sources containing krypton-85 or cesium-137; electron microscopes; a gas chromatographs; areas to be checked for DU counterweights (DU counterweights were not incorporated onto Army aircraft but may have been used by other military services.); an "AN/UDM-2" radiac calibrator (sealed, type-classified calibration source); surveys to identify radium dials and gauges etc.

(3) Based on the investigation of the information provided by the NRC, it is believed that all impacted areas have been appropriately included in the CCAD Radiological Survey Plan.

4. Point of contact for questions or additional information is David R. Askew, telephone 361-961-3200.

// Original Signed //
EDUARDO PEREZ
CCAD, RSO