

8.0 CONCLUSIONS

8.1 TEMPORARY LABS (BUILDINGS T-810, T-811, T-812, T-836 & T-837)

Plate 2, Figure 3, FN 133 315

The original Radiological Laboratories were located in Post Area No. 8 and consisted of five buildings: T-810, T-811, T-812, T-836 & T-837 (Old T-836A). These buildings were used from 1952 until the completion of the new permanent buildings in Area 31 (Circa 1954). Note: Only the foundation remains of building T-836.

In August of 2000 a MARSSIM Class III Survey on Buildings T-810, T-811, T-812 and the foundation of the demolished Building T-836 was completed. At the same time a MARSSIM Class II Survey was also completed on Building T-837.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated October 2000, and the results of the NRC inspection and confirmatory survey completed in February 2000 and documented in the NRC Inspection Report 01-02861-05/01-01, dated 9 March 2001, the NRC concluded that the buildings and areas meet the criteria for unrestricted use as described in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.2 BUILDING T-812½

Plate 2, Figure 3, FN 133 315

Used as a Radium²²⁶ and Cobalt⁶⁰ storage vault from the early 1952 to 1973. Documented in the EBS. Results of 1995 wipe tests were clean. Unrestricted use. Recommend no new surveys.

In November of 1999 a MARSSIM Class III Survey on Building T-812½ was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated March 2000, the NRC determined that no further action is required as documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584). No further action under MARSSIM is recommended.

8.3 PERMANENT HOT CELL (BUILDING 3192)

Plate 2, Figure 2, FN 119 303

Building used from late 1950's to 1973. Documented in the Environmental Baseline Survey (EBS). Connected to an underground drainage system leading to two underground storage tanks. Liquid waste disposal pit also connected. Initial decontamination of building in 1973. In 1995 additional soil removed and cleaned up. Building is locked and fenced.

RECOMMENDED ACTION: Based upon Allied Technology Group, Remediation and Closeout Survey Report, dated December 1996, Industrial Radiation Survey No. 27-MH-6999-97 Facility Closeout Verification Survey, dated 6 February 1998 and NRC confirmatory surveys documented in NRC Inspection Report Nos. 01-02861-04/97-01, 98-01 and 98-02, dated 7 October 1997, 21 April 1998 and 22 May 1998, respectively, the NRC released Building 3192 and Surrounding Fenced Area (containing former Building 3180, Liquid Waste Disposal pit and Radioactive Waste Storage Yard) for unrestricted use as documented in the NRC letter dated 19 October 1998, Subject: Termination of License No. 01-02861-0401-02861-04(Reference: Control No. 257737; Docket No. 030-14759030-14759), no further action under MARSSIM is recommended.

8.4 STORAGE VAULT (BUILDING 3180)

Plate 2, Figure 2, FN 119 303

Used from the early 1950's to 1973. Documented in the EBS. Demolished in 1989. Debris removed. Released by the NRC in 1998.

RECOMMENDED ACTION: Based upon the results of the survey contained in the U.S. Army Chemical School, Final Survey Report, Radiological Laboratories Building 1081, dated March 2000, the results of the NRC inspection and confirmatory survey completed in October 1999 and documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584), Building 1081 meets the criteria for unrestricted release delineated in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.5 RADIOLOGICAL LAB (BUILDING 3182)

Plate 2, Figure 2, FN 119 304

Used from the early 1950's to 1973. This building also housed a temporary Hot Cell prior to the building of the permanent hot cell. Documented in the EBS. Tiles removed from floor in 1995. Released by the NRC in 1998.

In August of 2000 a MARSSIM Class I Survey on Building 3182 was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated October 2000, and the results of the NRC inspection and confirmatory survey completed in February 2000 and documented in the NRC Inspection Report 01-2861-05/01-01, dated 9 March 2001, the NRC concluded that the building meets the criteria for unrestricted use as described in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.6 BUILDING 3181

Plate 2, Figure 2, FN 118 305

Scaler Lab T (Building 3181): Used from the early 1950's to 1973. Documented in the EBS. Released by the NRC in 1998.

Isotope Lab (Building 3181): Used from the early 1950's to 1973. Documented in the EBS. Released by the NRC in 1998.

Isotope Lab Vault (Building 3181): Used from the early 1950's to 1973. Documented in the EBS. Released by the NRC in 1998.

In November of 1999 a MARSSIM Class II Survey on Building 3181 was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Commodity Site Survey Report, dated March 2000, the NRC determined that no further action is required as documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584), no further action under MARSSIM is recommended.

8.7 PERSONNEL DECONTAMINATION CENTER (BUILDING 3185)

Plate 2, Figure 2, FN 118 327

Students, while receiving training at the Bromine Pad used this building. Students changed clothes here and after the exercise went through personal decontamination procedures in the various rooms of the building. Use of this building in conjunction with the Bromine Field is from the late 1960's to the early 1970's.

In August of 2000 a MARSSIM Class III Survey on Building 3185 was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated October 2000, and the results of the NRC inspection and confirmatory survey completed in February 2000 and documented in the NRC Inspection Report 01-2861-05/01-01, dated 9 March 2001, the NRC concluded that the building meets the criteria for unrestricted use as described in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.8 BUILDING 1081 (Sibert Hall, Radiological Lab)
Plate 3, FN 118 327

The lab was used from original occupancy (late 1980's) to 1999. Documented in the EBS. No known releases or problems.

Building 1081 was surveyed in August-December 1999 in accordance with the Decommissioning Plan, U.S. Army Chemical School, dated March 1999.

RECOMMENDED ACTION: Based upon the results of the survey contained in the U.S. Army Chemical School, Final Survey Report, Radiological Laboratories Building 1081, dated March 2000, the results of the NRC inspection and confirmatory survey completed in October 1999 and documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584), Building 1081 meets the criteria for unrestricted release delineated in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.9 BUILDING 2281, EDWIN R. BRADLEY RADIOLOGICAL LABORATORY
Plate 3, FN 113 323

After the U.S. Army Chemical School returned to Fort McClellan in 1979, the Edwin R. Bradley Radiological Laboratory (Building 2281) became the focus of radiation training with isotope sources. Use continued until the late 1980's when the Radiological Laboratory was established in Sibert Hall (Building 1081). Reported used for the storage of radiological materials (Weston 1990). The EBS found no other documentation. Released by Nuclear Regulatory Commission (NRC) for unrestricted use.

RECOMMENDED ACTION: Based upon survey results contained in Closeout Survey, Building 2281, Edwin R. Bradley Radiological Laboratories, dated November 1988, the results of the NRC inspection and confirmatory survey completed in October 1999 and documented in the NRC Inspection Report No. 01-02861-05/99-01, dated 1 March 2000, Building 2281 meets the criteria for unrestricted release delineated in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.10 ALPHA FIELD

Plate 2, Figure 2, FN 118 302

Located southeast of Building 3192, site was used for Alpha surveys from around 1960 to 1972. Documented in the EBS. No leaks or contamination. Released for unrestricted use.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Commodity Site Survey Report, dated March 2000, no survey was required for the Alpha Field, the NRC determined that no further action is required as documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584), no further action under MARSSIM is recommended.

8.11 BROMINE FIELD

Plate 2, Figure 2, FN 118 302

Located south of Building 3192, used jointly in the 1960's by army and navy personnel. Building 3185 now occupies part of the Bromine Field location. Documented in the EBS. No termination or closeout survey on file. No further action planned.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Commodity Site Survey Report, dated March 2000, no survey was required for the Bromine Field, the NRC determined that no further action is required as documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584), no further action under MARSSIM is recommended.

8.12 BROMINE TANKS

Plate 2, Figure 2, FN 118 302

Located next to the Bromine Field and used to hold contaminated, waste water until safe to drain. Documented in the EBS. Used from the late 1960's to the early 1970's. Tanks have been removed and disposed of. No further action planned.

RECOMMENDED ACTION: These tanks have been removed. Recommend no new surveys.

8.13 LIQUID WASTE DISPOSAL PIT

Plate 2, Figure 2, FN 119 303

This pit was connected to the Permanent Hot Cell (Building 3192) and was located between the Permanent Hot Cell and Building 3180. Use is from the 1950's to 1973. Documented in the EBS. Released in 1998 by the NRC.

RECOMMENDED ACTION: Based upon the results of the survey contained in the U.S. Army Chemical School, Final Survey Report, Radiological Laboratories Building 1081, dated March 2000, the results of the NRC inspection and confirmatory survey completed in October 1999 and documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584), Building 1081 meets the criteria for unrestricted release delineated in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.14 RADIOACTIVE WASTE STORAGE YARD

Plate 2, Figure 2, FN 119 303

This Yard was created when fencing was erected from the south side of Building 3182 around Buildings 3192 & 3180. The Chemical School temporarily stored Cobalt⁶⁰ sources in 3 ton and 5 ton containers. The NRC released the area in 1998.

RECOMMENDED ACTION: Based upon the results of the survey contained in the U.S. Army Chemical School, Final Survey Report, Radiological Laboratories Building 1081, dated March 2000, the results of the NRC inspection and confirmatory survey completed in October 1999 and documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584), Building 1081 meets the criteria for unrestricted release delineated in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.15 RATTLESNAKE GULCH RADIOLOGICAL SURVEY AREA (1952)

Plate 2, Figure 1, FN 098 289

In 1952, field training in Radiological Surveys was initiated. The first course area was known as Rattlesnake Gulch and used 48 Curies of Cobalt⁶⁰ in sources of 2 to 4 Curies each. The course was located south of Summerall Gate Road near the western edge of main post. In 1953 the course was moved closer to Summerall Gate road and became known as Radiological Survey Area #1. During the site survey three rows of military pickets were found defining two long lanes, the center of which is FN 09885 28939. No other documentation or evidence found during the site survey pinpointed to the original survey area called Rattlesnake Gulch. The area is believed to be just east of the Anniston Community Center east parking lot, in a small ravine. In the lane area the noses of two

concrete practice bombs were found at FN 09852 28868. From the Isotope Committee Meeting Minutes all radioactive sources and radioactive waste were removed in 1953. The radiological sources were moved to the new Radioactive Survey Area #1, just south of Summerall Gate Road and the radioactive waste was buried in the Chemical School Radioactive Burial Ground.

In August of 2000 a MARSSIM Class III Survey on the Original Rattlesnake Gulch area was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated October 2000, and the results of the NRC inspection and confirmatory survey completed in February 2000 and documented in the NRC Inspection Report 01-02861-05/01-01, dated 9 March 2001, the NRC concluded that the area meets the criteria for unrestricted use as described in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.16 RADIOLOGICAL SURVEY AREA #1 (1953-1958)

Plate 2, Figure 1, FN 099 296

This area replaced the original Rattlesnake Gulch Radiological Survey Area in 1953. The area is believed to be close to the south side of Summerall Gate Road, between the old Chemical Demonstration Area and the Biological Warfare Area (T-4). Over time it also became known as being part of the Rattlesnake Gulch Area. It was reconfigured at least once and was removed with the completion of Radiological Survey Area #3 at Pelham Range in 1958.

RECOMMENDED ACTION: Based upon the survey results contained in the Center for Health Promotion and Preventive Medicine, Industrial Radiation Study No. 27-MH-0987-RI-96, Iron Mountain and Rattlesnake Gulch Sites, and the results of the NRC inspection and confirmatory survey completed in October 1999 and documented in the NRC Inspection Report 01-2861-05/99-01, dated 1 March 2001, the NRC concluded that the area meets the criteria for unrestricted use as described in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.17 FIELD HOT CELL (FN 100 297)

Plate 2, Figure 1, FN 100 297

The Field Hot Cell was the first Hot Cell at Fort McClellan. It was used in the early 1950's until a second temporary hot cell was built in Building 3182. From the letter, written by Lieutenant Colonel Powell, in Major Anderson's AAR on the radiological cleanup of the burial grounds, the field hot cell was made of cinder blocks and sandbags. It was located close to Summerall Gate Road and near the fence that separated Radiological Survey Area #1 from the Biological training Area (T-4). During the

November 1999 site visit a shallow square excavation was found just west of T-4. The area was depressed about two feet and was approximately 12 feet square. An empty upright 55-gallon drum was found a little farther to the west.

RECOMMENDED ACTION: Based upon the survey results contained in the Center for Health Promotion and Preventive Medicine, Industrial Radiation Study No. 27-MH-0987-RI-96, Iron Mountain and Rattlesnake Gulch Sites, and the results of the NRC inspection and confirmatory survey completed in October 1999 and documented in the NRC Inspection Report 01-2861-05/99-01, dated 1 March 2001, the NRC concluded that the area meets the criteria for unrestricted use as described in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.18 CHEMICAL SCHOOL RADIOLOGICAL BURIAL GROUNDS

Plate 2, Figure 1, FN 099 292

This area was used for radiological burials from 1953 to the 1957-1958 timeframe. In 1958 or 1959 some of the radioactive burials were removed and buried in a new burial ground located at Pelham Range. Documents indicate that Post Engineers received a granite marker, with the types and amounts, of burials. However with the partial removal of some of the burials the marker became obsolete. The first fence around the area consisted of 3 strands of barbed wire. A second fence was built to encircle the existing one. This second fence consisted of a 6' fence made of hog wire topped by 3 strands of barbed wire.

In 1971 this area was rediscovered. A second cleanup took place and materials recovered were removed off post (Pelham Range). At the end of the work the fencing was bulldozed and all radioactive signs removed. Sometime after 1971 Fort McClellan exceded part of the parcel that the Chemical School Radiological Burial Grounds occupied.

During the site surveys in September and November of 1999 little evidence was found on Fort McClellan property. However, numerous 4" pipes and mounds of pushed up fencing, mixed with 4" pipes were found in the northeast corner of the Anniston Community Center Property. Remnants of fencing, which is embedded in trees, indicate that the majority of the burial grounds may be off post. (See photos, Appendix C)

In August of 2000 a MARSSIM Class II Survey on the Chemical School Radiological Burial Ground was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated October 2000, and the results of the NRC inspection and confirmatory survey completed in February 2000 and documented in the NRC Inspection Report 01-2861-05/01-01, dated 9 March 2001, the NRC concluded that the area meets the criteria for unrestricted use as described in 10 CFR 20.1402, no further action under MARSSIM is recommended.

8.19 RANGE 25 (OLD BANDHOLTZ KD RANGE)

Plate 2, FN 140 303

In 1963 the Chemical School conducted a one-time test of prototype actuators to be used at the new Radiological Survey Area at Pelham Range. Five prototypes were tested for a period of six weeks. Fencing was installed between the 300-yard and 400-yard firing lines. No recorded evidence of leaking or burial.

RECOMMENDED ACTION: Based upon the information contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated October 2000, no survey was required for Range 25. The NRC determined that no further action was required as documented in the NRC Inspection Report 01-2861-05/01-01, dated 9 March 2001, no further action under MARSSIM is recommended.

8.20 BUILDING 4416 (AMMO MAGAZINE)

Plate 3, FN 135 325

Reportedly used for the storage of radiological materials sometime after the Chemical School was re-established in 1979 (Weston 1990). The EBS found no other documentation. Nor did this Historical Assessment. Wipe tested clean. No known releases or problems.

In November of 1999 a MARSSIM Class III Survey on Building 4416 was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated March 2000, the NRC determined that no further action is required as documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584). No further action under MARSSIM is recommended.

8.21 BUILDINGS 256, 257 & 303A

Plate 2, FN 131 315

These buildings were used to store materials such as lensetic compasses (timeframe unknown).

In November of 1999 a MARSSIM Class III Survey on Buildings 256, 257 & 303A was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated March 2000, the NRC determined that no further action is required as documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584). No further action under MARSSIM is recommended.

8.22 BUILDINGS 341 & 345
Plate 3, FN 132 319

These buildings were used for general storage. No known radiological mission, use or disposal.

In November of 1999 a MARSSIM Class II Survey on Buildings 341 & 345 was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Commodity Site Survey Report, dated March 2000, the NRC determined that no further action is required as documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584), no further action under MARSSIM is recommended.

8.23 BUILDING 228
Plate 2, FN 119 314

Used as a radiological calibration facility for Test Measuring and Diagnostic Equipment (TMDE) from the 1950's to the 1980's. Documented in the EBS. No indication of spills or releases. No further action planned.

In November of 1999 a MARSSIM Class III Survey on Building T-228 was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated March 2000, the NRC determined that no further action is required as documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979; Docket No. 030-17584). No further action under MARSSIM is recommended.

8.24 BUILDINGS 335, 337 & 338
Plate 3, FN 128 317

These buildings were used for General Support Vehicle Maintenance Shops.

In November of 1999 a MARSSIM Class III Survey on Buildings 335, 337 & 338 was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated March 2000, the NRC determined that no further action is required as documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979: Docket No. 030-17584). No further action under MARSSIM is recommended.

8.25 BUILDINGS 339 & 350
Plate 3, FN 131 318

These buildings were used for Vehicle Maintenance Shops.

In November of 1999 a MARSSIM Class III Survey on Buildings 339 & 350 was completed.

RECOMMENDED ACTION: Based upon the survey results contained in the Allied Technology Group, Select Commodity Site Areas, Final Radiological Status Report, dated March 2000, the NRC determined that no further action is required as documented in the NRC letter dated 27 July 2000, Subject: Transmittal and Explanation of Amendment to License No. 01-02861-05 (Reference Control No. 258979: Docket No. 030-17584). No further action under MARSSIM is recommended.