

## **ATTACHMENT 2**

# **GANT CHART FOR THE COMMODITY SITE SURVEY SCHEDULE OF ACTIVITIES**

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FORT McCLELLAN, ALABAMA



ID	WBS	Task Name	Duration	Start	Finish	Predecessors
28	3.4.14	Bldg 257	4.2 days	Fri 11/12/99	Fri 11/19/99	27
29	3.4.15	Bldg 303A	0.2 days	Fri 11/19/99	Fri 11/19/99	28
30	3.4.16	Demobilization 2	1 day	Fri 11/19/99	Mon 11/22/99	29
31	3.4.17	Remobilization 3	1 day	Wed 12/1/99	Thu 12/2/99	30FS+5 days
32	3.4.18	Bldg 338	0.75 days	Thu 12/2/99	Fri 12/3/99	31
33	3.4.19	Bldg 345	1 day	Fri 12/3/99	Mon 12/6/99	32
34	3.4.20	Bldg 350	1.1 days	Mon 12/6/99	Tue 12/7/99	33
35	3.4.21	Bldg 3182	2.5 days	Tue 12/7/99	Thu 12/9/99	34
36	3.4.22	Bldg 4416	0.25 days	Thu 12/9/99	Thu 12/9/99	35
37	3.5	Final Demobilization	1 day	Thu 12/9/99	Fri 12/10/99	36
38	4	Phase III	45 days	Wed 11/17/99	Tue 1/25/00	
39	4.1	Batch 1 Analytical Results	1 day	Wed 11/17/99	Thu 11/18/99	21FS+15 days
40	4.2	Batch 2 Analytical Results	1 day	Wed 12/15/99	Thu 12/16/99	30FS+15 days
41	4.3	Batch 3 Analytical Results	1 day	Tue 1/4/00	Wed 1/5/00	37FS+15 days
42	4.4	Data Review	38 days	Thu 11/18/99	Mon 1/17/00	39
43	4.5	Data Assembly	4 days	Mon 1/17/00	Fri 1/21/00	42
44	4.6	Survey Evaluation	18 days	Fri 12/10/99	Fri 1/7/00	21,30,37
45	4.7	Report Summary	2 days	Fri 1/21/00	Tue 1/25/00	44,42,43
46	4.8	Submit Report	0 days	Tue 1/25/00	Tue 1/25/00	45

Project: IOC Project USA 99-100  
Date: Thu 9/30/99

Task Milestone  
Split Summary  
Progress Rolled Up Task

External Tasks  
Project Summary

Legend:  
 - Milestone: Diamond symbol  
 - Summary: Dotted line  
 - Rolled Up Task: Thick black bar  
 - Rolled Up Milestone: Diamond symbol  
 - Rolled Up Progress: Thick black bar

# **ATTACHMENT 3**

## **TABLE OF INSTRUMENTATION FOR RADIOLOGICAL SURVEY**

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FORT McCLELLAN, ALABAMA

## INSTRUMENTATION FOR RADIOLOGICAL SURVEY

This table illustrates the radiological detection and measurement instrumentation to be employed for the survey activities, along with typical parameters and detection sensitivities for the type of instrument and its application.

Type of Measurement	Instrumentation		Background Rate	4π Efficiency	Detector Sensitivity
	Detector	Meter			
Surface Scan (beta-gamma)	Gas Proportional Ludlum 43-68	Ratemeter Ludlum Model 3, Model 18 or Equivalent	400 cpm	0.15	980 DPM/100cm <sup>2</sup>
Surface Activity (alpha)	Gas Proportional Ludlum 43-68	Scaler Ludlum Model 3, Model 18 or Equivalent	5 cpm	0.15	110 DPM/100cm <sup>2</sup>
Exposure Rates (beta-gamma)	Tissue Equivalent Detector	Bicron Micro R Meter	-	-	< 1 μR/hr
Accessibility Surface Scan Dose Rates	Gas Proportional Ludlum Model 239-1F	Rate Meter Ludlum Model 2221 or Equivalent	10 cpm α	.17	23 DPM / Probe Area
			400 cpm βγ	.25	98 DPM / Probe Area

Scan Sensitivity based on:

$$MDA (DPM/100cm^2) = \frac{4.65 \sqrt{\text{Background (cpm)}}}{\frac{2 \times T_c (\text{min})}{\text{Efficiency} \times A/100}}$$

Surface Measurement

Sensitivity based on:

$$MDA (DPM/100cm^2) = \frac{2.71 + 4.65 \sqrt{\text{Background (cpm)} \times T_c (\text{min})}}{\text{Efficiency} \times A/100}$$

# **ATTACHMENT 4**

## **DESCRIPTION OF AREAS (15 BUILDINGS, 2 SITE AREAS)**

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FORT McCLELLAN, ALABAMA

# COMMODITY SITE STORAGE AREA DESCRIPTIONS

FT. McCLELLAN

## BUILDING 228

*Status – Vacant*

Floor plans exist for this building. Built originally as a Quartermaster Maintenance Shop in 1936, the installation converted this building to a RADIAC calibration facility in 1978. In 1991, it was converted again for use by Explosive Ordnance personnel. The installation completely vacated the building in 1998. Real property records indicate the overall building dimensions are 69 ft x 123 ft, total square footage: 8,487. The Northwest corner of the South bay will be surveyed as a MARSSIM Class III area. The radionuclides of concern are Pu-239 (AN/LJDM-6 calibrator), Ni-63 and Sr-90 (AN/UDM-2 calibrator).

## BUILDING 256

*Status – Active*

Floor plans exist for this building. Built in 1954, the Directorate of Logistics used this structure as warehouse. The radiological contamination potential comes from the fact that the installation historically used the building to store packaged, ready to ship Army radioactive commodities. Real property records indicate the dimensions are 300 ft x 80 ft with 40 ft 8 in x 18 ft 2 in offset, total square footage: 24,739. The building will be surveyed as a MARSSIM Class III area. The primary radionuclides of concern are Ni-63, H-3, Ra-226, Am-241 and Ra-226.

## BUILDING 257

*Status – Active*

Floor plans exist for this building. Built in 1941, the Directorate of Logistics used the structure as a warehouse. The potential radiological contamination comes from the fact that the installation packaged Army radioactive commodities in preparation for transport in this building. Real property record describes dimensions as 60 ft x 170 ft. Total square footage: 10,200. The primary radionuclides of concern are Ni-63, H-3, Ra-226, Am-241 and Th-232. The facility will be surveyed as a MARSSIM Class III area.

## BUILDING 303A

*Status – Active*

Built in 1942, it serves as the Central Issue Facility for all soldier items, including radio-luminescent lensatic compasses. Real property records describe the building dimensions as 60 ft x 450 ft with 9 ft x 450 ft platform (dock). The total building footprint is 27,000 ft<sup>2</sup>.

The front portion of the building (i.e., the portion of the building that houses the issue desk) will be surveyed as a MARSSIM Class III area. The radionuclide of concern is H-3.

### **BUILDING 335**

*Status – Active*

No floor plans exist for this building. Built in 1941, the installation used the structure as a General Support vehicle maintenance shop. The Alabama National Guard currently uses the structure as a storage building. Real property records indicate dimensions of 67 ft x 92 ft with 28 ft 6 in x 27 ft wing. Total square footage: 6,933. The building will be surveyed as a MARSSIM Class III area. The radionuclide of concern is Ra-226.

### **BUILDING 337**

*Status – Active*

No floor plans exist for this building. Built in 1941, the site used this building as a General Support vehicle maintenance shop. The Alabama National Guard currently uses the structure as a storage building. Real property record describes dimensions of 40 ft x 241 ft. Total square footage: 9,640. The building will be surveyed as a MARSSIM Class III area. The radionuclide of concern is Ra-226.

### **BUILDING 338**

*Status – Active*

No floor plans exist for this building. Built in 1941, the site used this building as a General Support vehicle maintenance shop. The Directorate of Community Activities currently uses the building as the Ft. McClellan Recycle Center. Real property records describe dimensions of 76 ft x 240 ft. Total square footage: 18,240. The building will be surveyed as a MARSSIM Class III area. The radionuclide of concern is Ra-226.

### **BUILDING 339**

*Status – Inactive*

No floor plans exist for this building. Built in 1943, the installation initially used this building as a General Support vehicle maintenance shop. The building is derelict, falling down on one side. Real property records list dimensions of 56 ft x 140 ft with 20 ft x 135 ft wings. Total square footage: 10,540. The building will be surveyed as a MARSSIM Class III area. The radionuclide of concern is Ra-226.

## **BUILDING 341**

*Status – Active*

No floor plans exist for this building. Picked up as "Found On Post" in 1977. This was originally a general storehouse used by the Defense Reutilization and Marketing Organization (DRMO). The Directorate of Environment currently uses it as a Hazardous Waste accumulation point. Total square footage is 4,040 ft<sup>2</sup>. The building will be surveyed as a MARSSIM Class II area. The primary radionuclides of concern are H-3 and Ra-226.

## **BUILDING 345**

*Status – Active*

No floor plans exist for this building. Built in 1977, DRMO used this structure as a general storage building. The Directorate of Environment currently uses the building for storage. Dimensions are unavailable, but records indicate the total square footage is 4,040. The building will be surveyed as a MARSSIM Class II area. The primary radionuclides of concern are H-3 and Ra-226.

## **BUILDING 350**

*Status – Active*

Floor plans exist for this building. The installation built the structure 1991. Ft. McClellan designed it as General/Direct Support Maintenance shop. Direct Support Maintenance uses two bays for wipe testing/routine maintenance of M43A1 detectors and CAMs. The square footage for entire building is 87,832 ft<sup>2</sup>. The maintenance areas of the building will be surveyed as a MARSSIM Class III area. The primary radionuclides of concern are Ra-226, Ni-63 and Am-241.

## **BUILDING 812-1/2**

*Status – Inactive*

This is a very small (approximately 5' x 5' x 5') concrete structure that the installation used at one time as a storage vault for radium gauges. The building will be surveyed as a MARSSIM Class III area. The primary radionuclide of concern is Ra-226.

## **BUILDING 3181, Room 35 and Room 36**

*Status – Inactive*

Floor plans are available. The installation used rooms in question as a radiological laboratory. Another Army agency allegedly surveyed the rooms several months ago, but cannot locate the survey data. This building will be surveyed as a MARSSIM Class II area. The primary radionuclides of concern are Co-60, Mn-54, Cs-137, Au-198, Na-22, Ni-63 and P-32.

## **BUILDING 3182**

*Status – Active*

No floor plans are available for this building. Built in 1954 originally as an Applied Instruction Building, the Ft. McClellan Radiological Laboratories used one wing in conjunction with the "Hot Cell" facility. The building currently serves as the Military Police Corps museum. Total square footage is 11,696 ft<sup>2</sup>. The building will be surveyed as a MARSSIM Class III area. The primary radionuclides of concern are H-3 and Ra-226.

## **BUILDING 4416**

*Status – Active*

This is an ammunition magazine currently used to store chemical munitions. Special permission be required to enter this facility. Property records indicate the building dimensions are 11 ft x 24 ft. At one time the installation used this structure to temporarily house sealed Co-60 and Cs-137 sources. The building will be surveyed as a MARSSIM Class III area. The primary radionuclides of concern are Co-60 and Cs-137.

## **BROMINE FIELD**

*Status – Parking lot*

Ft. McClellan used a portion of the parking lot near building 3195 and the field adjacent to the parking lot as a decontamination training area. Several years ago, the site would contaminate Army equipment with Br-77 (2.4 day half-life) so personnel could practice decontamination procedures. A search will be conducted of the history of this operation, survey data will be collected, and/or the rationale for a rule-out presented, and a written discussion of the findings will be placed in the Final Report.

## **ALPHA FIELD**

*Status – Parking lot*

Ft. McClellan used a portion of the parking lot near building 3195 to simulate a radiation field. The site placed uranium-233 plates on the ground for training purposes. A search will be conducted of the history of this operation, survey data will be collected, and/or the rationale for a rule-out presented, and a written discussion of the findings will be placed in the Final Report.

AMSIO-SF (385-11e)

MEMORANDUM FOR AMSIO-ACE-D (Mr. Matthys)

SUBJECT: Request for Proposal, Allied Technology Group (ATG),  
Release Surveys for Ft. McClellan Commodity Storage Sites,  
Project Number USA 99-100

1. The attached scope of work (SOW) is for conducting radiological release surveys at 17 buildings and outdoor areas at Ft. McClellan.
2. Please forward the SOW to ATG and request they submit a cost estimate and technical proposal. We recommend ATG for this effort based on their vicinity to the project site, their familiarity with this type effort and the fact that they have an extensive working relationship with the site.
3. The POC is Mr. Mike Styvaert, AMSIO-SF, extension 20880, E-mail address StyvaertM.

KELLY W. CROOKS  
Leader, Operations Team  
Safety/Rad Waste Team

**DESCRIPTION OF WORK**  
DEPARTMENT OF THE ARMY  
US ARMY CHEMICAL SCHOOL

FORT McCLELLAN, ALABAMA  
**RADIOLOGICAL SURVEYS FOR COMMODITY USE AREAS**  
USA 99-100

Fort McClellan is comprised of three parts; the Main Post, the Choccolocco Corridor and the Pelham Range. The installation occupies 45,679 acres adjacent to Anniston, AL. The Main Post encompasses 19,000 acres and contains the majority of the facilities. The Army leases the Choccolocco Corridor, which occupies approximately 4,500 acres from the state of Alabama. It connects the Main Post with the Talladega National Forest to the east. The Pelham Range consists of approximately 22,000 acres west of the Main Post.

The Army Base Closure and Realignment Committee (BRAC) has identified Fort McClellan as an installation for closure. The Army must resolve several radiological issues before closing the installation. This scope of work is for the buildings and areas that Ft. McClellan used for the storage and routine maintenance on Army radioactive commodities.

The contractor shall develop a radiological survey plan describing the survey methodologies and techniques that they will follow for release of the identified structures. This scope does not address any decontamination or decommissioning waste. The contractor shall use the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), NUREG-1575 for designing the final release survey. We will address future remedial actions and or disposal activities under a separate scope of work.

All operations must comply with all applicable federal, state, and municipal laws, rules and regulations including the Defense Appropriations Act as it pertains to the use of ozone depleting substances.

**SCOPE OF WORK**

FORT McCLELLAN, ALABAMA  
**RADIOLOGICAL SURVEYS FOR COMMODITY USE AREAS**

USA 99-100

1. COORDINATION. The contractor shall coordinate all project activities with the installation Environmental Coordinator, Ms. Lisa Kingsbury and the HQ, IOC Project Officer, Mr. Mike Styvaert:

U.S. Army Chemical School,  
ATTN: ATZN-CM-AHP (Mr. John May),  
Fort McClellan, AL 36205-5020  
Telephone (205) 848-5737/4115  
E-mail: mayj@mccllellan-cmls.army.mil

U.S. Army Chemical School,  
ATTN: (Ms. Lisa Kingsbury),  
Fort McClellan, AL 36205-5020  
Telephone (205) 848-7455  
E-mail: kingsbury1@mccllellan-emh2.army.mil

U.S. Army Industrial Operations Command  
ATTN: AMSIO-SF, (Mr. Mike Styvaert)  
Rock Island, IL 61299-6000  
Telephone (309) 782-0880  
FAX: (309) 782-2988  
E-mail: styvaertm@ioc.army.mil

2. REGULATORY CONCERNS. The contractor shall adhere to the surface release limits prescribed in "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses, By-product, Source, or Special Nuclear Materials, (NRC 1987)".

2.1. The contractor shall obtain required permits, licenses and authorizations from federal, state, and municipal agencies necessary to complete this effort.

2.2. The contractor shall obtain a Department of Army Radiation Permit (DARP) IAW Army Regulation (AR) 385-11 for radioactive material brought on-site for more than 15 days. This includes check sources. The contractor may obtain copies of the DARP application form (DA 3777) from the Army POC listed in paragraph 1.

2.3. In accordance with the Defense Appropriations Act, the contractor, in performing the efforts as defined by this scope of work, shall in no way construe the government direction as supporting, suggesting, or directing the use of ozone depleting substances. The contractor shall specifically bid and perform all contractual efforts in compliance with this Act.

3. FACILITIES, EQUIPMENT AND SUPPLIES. The installation will provide limited office space, restroom facilities, telephone lines, facsimile equipment and access to a copy machine. The

contractor shall supply all other services, facilities, supplies and equipment necessary to complete this scope of work.

4. WORK PLANS AND HEALTH AND SAFETY PLAN. The contractor shall, as a deliverable item, prepare a Radiological Work Plan that details the proposed final status survey methodology. The contractor shall submit the Plan and receive approval by the IOC, Fort McClellan, the EPA, the NRC and the State of Alabama before the fieldwork begins. After completion of the field work and survey effort, the contractor shall prepare a Final Report, which is a deliverable item and considered complete once the IOC, Fort McClellan and the regulatory agencies have reviewed and accepted it.

4.1. Survey Plan. The contractor's Survey Plan shall address the safety procedures for on-site work, survey and sampling procedures and criteria, and the radiation protection procedures to minimize potential exposures. The Plan shall address the overall technical approach, sampling and analysis and Quality Assurance/Quality Control (QA/QC). The contractor shall follow the survey design guidance prescribed in MARSSIM, NUREG-1575.

4.1.1. MARSSIM Parameters.

a. Derived Concentration Guideline Values (DCGLs). For surfaces, the contractor shall use the residual surface contamination limits specified in "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Materials (NRC 1987)" as the DCGLs.

b. Decision Errors. The contractor shall assume Type I and Type II decision errors of 0.05 for the initial survey design. The values are subject to change after review by the NRC and other applicable regulatory agencies.

c. Sample Variability. Direct measurement frequency is directly related to the assumed final status survey sample variability. The contractor shall identify the proposed methodology for estimating sample variability and the plan for correcting the survey if the actual sample variability exceeds the assumed value.

d. Scan Minimal Detectable Concentration (MDC). The instrumentation scanning MDC may impact the sample frequency for the final status survey. The contractor shall prepare the survey work plan to include a discussion and the rationale for their scanning instrumentation selection.

e. Area Factors. The contractor survey design shall incorporate the MARSSIM area factor provisions for small-elevated areas of contamination that exceed the DCGL.

f. Area Classifications. We have defined the specific MARSSIM survey classifications in section 5 of this scope of work. If the contractor finds discrepancies with our assumptions during the actual survey work, they shall immediately notify the installation and IOC. We will then investigate the possibility of revising the area classification.

4.2. Health and Safety Plan. The contractor shall develop a Health and Safety Plan (HASP) specific to this project. Radiation protection standards of 10 CFR 20 and OSHA standards of 29 CFR 1910.120 apply for worker and public protection and shall be incorporated into the HASP. The contractor shall provide operational health physics procedures for all tasks to ensure personnel exposures, environmental releases and contamination are controlled to ALARA (as low as reasonable achievable).

4.2.1. The HASP shall address procedures to reduce hazards and protect workers. Existing site hazards include heavy equipment operations, noise hazards, and unstable building structures. Surveyors shall coordinate each day for access to survey areas, and will notify area supervisors of their actions. Contractor personnel shall use safety equipment such as goggles and hearing protection as appropriate. Examples of expected procedures are:

4.2.2. Prior to a new action occurring, the work is analyzed to determine what possible hazards, safety and radiation, might exist. Once done, procedures are implemented to reduce the risk of these hazards. A certified Health Physicist shall review these procedures.

4.2.3. All contractor personnel shall receive, as a minimum, a briefing on the hazards of the work area, the expected dose, and possible biological effects from receiving that exposure. All contractor personnel working in a restricted area shall wear personal monitoring devices.

4.2.4. The environment in all buildings and surrounding areas is expected to be very low dose rate, and the greatest danger from a radiation safety viewpoint is potential contamination. For most of the operations, only disposable anti-contamination clothing is required. For operations where a possible inhalation hazard exists, NIOSH approved respirators with HEPA filters will be used.

4.2.5. Control areas shall be established at the boundary to any area where the spread of contamination is possible. In addition, any material or equipment leaving the controlled area shall be monitored for contamination using appropriate instrumentation.

4.2.6. The contractor may encounter hazardous materials other than radioactive materials during the survey effort. These materials are likely to include as a minimum, lead based paint, PCB's (including that in light fixture ballasts), mercury (potentially in switches, controls and light tubes and fixtures)

and asbestos. The contractor shall identify procedures for the safe handling of such materials in the HASP.

4.3. QA/QC Plan. The contractor shall describe their proposed QA/QC procedures and protocols. All laboratory analysis shall conform to SW-846. If the contractor proposes to use an "in-house" laboratory for sample analysis then, as a minimum, 10% of the samples shall be duplicated and analyzed by an independent third party laboratory. The contractor shall verify instrument operation each day with a check source before use.

5. SITE SPECIFICS. The contractor shall develop and conduct radiological release surveys for the following 17 buildings and areas at Fort McClellan. The contractor shall design the survey protocol to bias sample locations towards areas with the greatest contamination potential (i.e., rough cracked surfaces, joints, corners, drain traps, change rooms, utility access points, etc.).

(1) Bldg 228. Status - Vacant. We have floor plans for this building. Built originally as a Quartermaster Maintenance Shop in 1936, the installation converted this building to a RADIAC calibration facility in 1978. In 1991, they converted it again for use by Explosive Ordnance personnel. The installation completely vacated the building in 1998. Real property records indicate the overall building dimensions are 69 ft x 123 ft, total square footage: 8,487. The contractor shall survey the NW corner of the South bay as a MARSSIM class III area. The radionuclides of concern are Pu-239 (AN/LJDM-6 calibrator), Ni-63 and Sr-90 (AN/UDM-2 calibrator).

(2) Building 256. Status - Active. We have floor plans for this building. Built in 1954, the Directorate of Logistics used this structure as warehouse. The radiological contamination potential comes from the fact that the installation historically used the building to store packaged, ready to ship Army radioactive commodities. Real property records indicate the dimensions are 300 ft x 80 ft with 40 ft 8 in x 18 ft 2 in offset, total square footage: 24,739. The contractor shall survey the building as a MARSSIM class III area. The primary radionuclides of concern are Ni-63, H-3, Ra-226, Am-241 and Ra-226.

(3) Building 257. Status - Active. We have floor plans for this building. Built in 1941, the Directorate of Logistics used the structure as a warehouse. The potential radiological contamination comes from the fact that the installation packaged Army radioactive commodities in preparation for transport in this building. Real property record describes dimensions as 60 ft x 170 ft. Total square footage: 10,200. The primary radionuclides of concern are Ni-63, H-3, Ra-226, Am-241 and Th-232.

(4) Building 303A. Status - Active. Built in 1942, it serves as the Central Issue Facility for all soldier items,

including radio-luminescent lensatic compasses. Real property records describe the building dimensions as 60 ft x 450 ft with 9 ft x 450 ft platform (dock). The total building footprint is 27,000 ft<sup>2</sup>. The contractor shall survey the front portion of the building (i.e., the portion of the building that houses the issue desk) as a MARSSIM class III area. The radionuclide of concern is H-3.

(5) Building 335. Status - Active. No floor plans exist for this building. Built in 1941, the installation used the structure as a General Support vehicle maintenance shop. The Alabama National Guard currently uses the structure as a storage building. Real property records indicate dimensions of 67 ft x 92 ft with 28 ft 6 in x 27 ft wing. Total square footage: 6,933. The contractor shall survey the building as a MARSSIM class III area. The radionuclide of concern is Ra-226.

(6) Building 337. Status - Active. No floor plans exist for this building. Built in 1941, the site used this building as a General Support vehicle maintenance shop. The Alabama National Guard currently uses the structure as a storage building. Real property record describes dimensions of 40 ft x 241 ft. Total square footage: 9,640. The contractor shall survey the building as a MARSSIM class III area. The radionuclide of concern is Ra-226.

(7) Building 338. Status - Active. No floor plans exist for this building. Built in 1941, the site used this building as a General Support vehicle maintenance shop. The Directorate of Community Activities currently uses the building as the Ft McClellan Recycle Center. Real property records describe dimensions of 76 ft x 240 ft. Total square footage: 18,240. The contractor shall survey the building as a MARSSIM class III area. The radionuclide of concern is Ra-226.

(8) Building 339. Status - Inactive. No floor plans exist for this building. Built in 1943, the installation initially used this building as a General Support vehicle maintenance shop. The building is derelict, falling down on one side. Real property records list dimensions of 56 ft x 140 ft with 20 ft x 135 ft wings. Total square footage: 10,540. The contractor shall survey the building as a MARSSIM class III area. The radionuclide of concern is Ra-226.

(9) Building 341. Status - Active. Will check for availability of floor plans. Picked up as "Found On Post" in 1977. This was originally a general storehouse used by the Defense Reutilization and Marketing Organization (DRMO). The Directorate of Environment currently uses it as a Hazardous Waste accumulation point. Total square footage is 4,040 ft<sup>2</sup>. The contractor shall survey the building as a MARSSIM class II area. The primary radionuclides of concern are H-3 and Ra-226.

(10) Building 345. Status - Active. Will check for availability of floor plans. Built in 1977, DRMO used this structure as a general storage building. The Directorate of Environment currently uses the building for storage. Dimensions are unavailable, but records indicate the total square footage is 4,040. The contractor shall survey the building as a MARSSIM class II area. The primary radionuclides of concern are H-3 and Ra-226.

(11) Building 350. Status - Active. We have floor plans for this building. The installation built the structure 1991. Ft. McClellan designed it as General/Direct Support Maintenance shop. Direct Support Maintenance uses two bays for wipe testing/routine maintenance of M43A1 detectors and CAMs. The square footage for entire building is 87,832 ft<sup>2</sup>. The contractor shall survey the maintenance areas of the building as a MARSSIM class III area. The primary radionuclides of concern are Ra-226, Ni-63 and Am-241.

(12) Building 812-1/2. Status - Inactive. This is a very small (approximately 5' x 5' x 5') concrete structure that the installation used at one time as a storage vault for radium gauges. The contractor shall survey the building as a MARSSIM class III area. The primary radionuclide of concern is Ra-226.

(13) Building 3181, rooms 35 and 36. Status - Inactive. Floor plans are available. The installation used rooms in question as a radiological laboratory. Another Army agency allegedly surveyed the rooms several months ago, but cannot locate the survey data. The contractor shall survey the building as a MARSSIM class II area. The primary radionuclides of concern are Co-60, Mn-54, Cs-137, Au-198, Na-22, Ni-63 and P-32.

(14) Building 3182. Status - Active. Will check for availability of floor plans. Built in 1954 originally as an Applied Instruction Building, the Ft. McClellan Radiological Laboratories used one wing in conjunction with the "Hot Cell" facility. The building currently serves as the Military Police Corps museum. Total square footage is 11,696 ft<sup>2</sup>. The contractor shall survey the building as a MARSSIM class III area. The primary radionuclides of concern are H-3 and Ra-226.

(15) Building 4416. Status - Active. This is an ammunition magazine currently used to store chemical munitions. Contractor will need special permission to enter this facility. Property records indicate the building dimensions are 11 ft x 24 ft. At one time the installation used this structure to temporarily house sealed Co-60 and Cs-137 sources. The contractor shall survey the building as a MARSSIM class III area. The primary radionuclides of concern are Co-60 and Cs-137.

(16) Bromine Field. Status - Parking lot. Ft. McClellan used a portion of the parking lot near building 3195 and the field adjacent to the parking lot as a decontamination training

area. Several years ago, the site would contaminate Army equipment with Br-77 (2.4 day half-life) so personnel could practice decontamination procedures. The contractor shall research the history of this operation, collect a very limited amount of survey data and provide a written discussion of the findings in the final report.

(17) Alpha Field. Status - Parking lot. Ft. McClellan used a portion of the parking lot near building 3195 to simulate a radiation field. The site placed uranium-233 plates on the ground for training purposes. The contractor shall research the history of this operation, collect a limited amount of survey data and provide a written discussion of the findings in the final report.

6. SCHEDULE. We expect the installation to vacate the majority of the active structures by the end of September 1999. In some instances new tenants are ready to move in as soon as the Ft. McClellan activities cease. Therefore, the release survey timing on some structures is critical. The contractor shall make up to four separate mobilizations to Ft. McClellan to release portions of the building inventory listing. The contractor shall respond to survey scheduling changes with as little as a 5 working day notification.

7. PERSONNEL. The contractor shall propose a project manager with a minimum of 3-years experience in conducting environmental remediation/restoration efforts, primarily with radioactive material.

7.1. The contractor shall provide resumes of technical personnel with the project proposal.

7.2. On-site personnel must have the training mandated by 29 CFR 1910.120 (40 hours plus 3 days on-site experience). Supervisors shall have 8 hours of additional supervisory training. The contractor shall provide written evidence of current Occupational Safety and Health Administration training for each person performing work and a Corporate certification that each person is medically capable of working on a hazardous waste site.

7.3. Contractor personnel shall receive and document a briefing on the hazards of the work area, the expected dose, and possible biological effects from receiving that exposure.

8. FINAL REPORT. The contractor shall provide as a deliverable item 6 hard copies of a draft final report within 30 days after completion of the on site activities. The contractor shall incorporate Army and regulator comments within 30 days of receipt.

8.1. The contractor shall provide as a deliverable item 7 hard copies and 2 compact disc (CD) copies of a comprehensive final report detailing all radiological release surveys. The final

report for the Ft. McClellan commodity sites shall detail the survey procedures, instrumentation used, findings, results, suggestions, and QA/QC practices and documentation. The report shall address, in detail, the methodology used for the detection, removal, and packaging of any radioactive contamination recovered as a result of the effort. The report shall address residual radioactive contamination that was not remediated during the survey effort, as well as hazardous materials and/or wastes identified during the on-site effort.

8.2. The report shall address the contractor's Quality Assurance program, including calibration dates and certificates and details (including records) on how they calibrated and field checked portable instruments.

8.3. The contractor shall describe (in terms of MARSSIM, NUREG-1575 requirements) the final survey design and how the results meet the MARSSIM statistical tests.

8.4. The contractor-prepared plans and reports developed under this effort will become the property of the U.S. Army. The Army reserves the right to distribute the documents without restriction.

8.5. The contractor shall coordinate final report activities with Mr. Styvaert.

## 9. REFERENCES.

a. NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual, MARSSIM, December 1997.

b. NUREG-1500, Working Draft Regulatory Guide on Release Criteria for Decommissioning: NRC Staff's Draft for Comment.

c. Memorandum, Subject: DA-Wide Policy on Radiological Surveys at BRAC Commodity Sites, dated January 20, 1998.

**CLASS I OZONE DEPLETING CHEMICALS (ODC)**



U.S. Army Fort McClellan  
Fort McClellan, Alabama  
HQ, IOC Project Number USA 99-100

Release Survey of Ft. McClellan Commodity Storage Sites

HEALTH AND SAFETY PLAN

Prepared by:

Allied Technology Group, Inc.  
669 Emory Valley Road  
Oak Ridge, TN 37830

October 1999



U.S. ARMY FORT McCLELLAN

RELEASE SURVEY FOR COMMODITY STORAGE SITES

PROJECT HEALTH AND SAFETY PLAN

APPROVAL PAGE

October 1999

Concurrence: \_\_\_\_\_ Date: \_\_\_\_\_  
Lee A. Young, ATG Project Manager

Concurrence: \_\_\_\_\_ Date: \_\_\_\_\_  
Frank Whitaker, Project Lead

Concurrence: \_\_\_\_\_ Date: \_\_\_\_\_  
Joel Cehn, CHP, ATG Corporate Radiation Safety Officer

Concurrence: \_\_\_\_\_ Date: \_\_\_\_\_  
John W. May, U.S. Army Chemical School Radiation Protection Officer

Concurrence: \_\_\_\_\_ Date: \_\_\_\_\_  
Mike Styvaert, IOC Health Physicist

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## 1.0 INTRODUCTION

The Project Health and Safety Plan incorporates the health and safety procedures and practices to be followed during the activities specified in the Fort McClellan 'Commodity Storage Sites' Sampling and Analysis Plan (SAP). This Project Health and Safety Plan will be used to support the work activities and will be verified with the guidelines specified in the Allied Technology Group, Inc. (ATG) Corporate Health and Safety Plan. This Project Health and Safety Plan includes radiological, industrial, environmental, and biological health and safety concerns and considerations.

The radiological surveys of the 'Commodity Sites' at Fort McClellan are to be performed by ATG under contract number DAAA09-98-C-0039 Modification number P00003; internally tracked as ATG project number 10036.02.

## 2.0 SCOPE OF WORK

The fifteen (15) buildings and two (2) outdoor sites which comprise the 'Commodity Storage Sites' at Fort McClellan near Anniston, Alabama will be radiologically surveyed by ATG personnel following the guidelines specified in the project-specific Sampling and Analysis Plan. The verification surveys are to achieve unconditional release using the protocols of the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM, NUREG-1575) for the historical general license use areas.

No adverse impacts are expected during the performance of this contract. There will be no expected air emissions, liquid releases, personnel exposures or environmental impacts during the Class 2 and 3 area surveys. The work tasks will be performed by trained and qualified personnel. Project oversight and monitoring will additionally be performed by trained and qualified personnel in accordance with the Health and Safety Plan procedures.

## 3.0 HAZARD ASSESSMENT

Hazard assessment will be evaluated in eight categories; radiological hazards, industrial hazards, environmental hazards, bloodborne pathogens, lead hazards, polychlorinated biphenyls (PCBs), asbestos and mercury hazards. Appropriate personal protective equipment, monitoring devices and data acquisition will be applied for existing potential and actual hazards.

### 3.1 Radiological Hazards

It is expected that an individual performing work on this project will receive an external occupational exposure of less than 10 millirem (mRem), which is the sensitivity limit of the TLD vendor. Existant conditions yield essentially

'background' radiation levels, and only a rule-out of elevated surface contamination is anticipated. However, the suspected potentially present radionuclides of concern in the buildings are Pu-239, Ni-63, Sr-90, H-3, Ra-226, Am-241, Th-232, Co-60, Mn-54, Cs-137, Au-198, Na-22, and P-32. The ATG crew is entirely comprised of appropriately trained and qualified health physics technicians, and both corporate and project oversight is provided by Certified Health Physicists. There is little potential for loose contamination, if it exists, to be suspended by project activities such that airborne contamination attributes to an internal dose concern. Project tasks entail surveying into facilities for discernment of the gross radiological characterization, and the structures/areas will be otherwise uninhabited by base occupants during the surveys.

In the event that residual contamination is found to warrant area re-classification up to and including ultimate decontamination and subsequent verification surveys, the airborne concentration will be maintained below the the acceptable airborne concentration limit of 10% of DAC for the isotope of interest or respiratory protection will be worn in order to ensure that there will not be an internal radiological hazard.

Additional exposure to radiation will come from the reference sources used in performance tests of the radiation detection equipment and from the samples taken to assess the potential hazards. The reference sources will be used by the radiation protection technicians and will be maintained in a labeled and locked container. Samples taken to monitor the potential hazards will be sealed and handled appropriately and in as short amount of time as possible. The radiation protection technicians will screen and package the samples employing the appropriate precautions to prohibit personal cross-contamination and limit external exposure.

### **3.2 Industrial Hazards**

Industrial hazards for this project should be limited to mechanical failures, possible heavy loads (moving residual materials to access survey areas), suspended loads, physical stress (climbing, lifting, reaching) and extreme temperature exposure. Lifting, suspending, moving and packaging of materials could cause wear and tear on the equipment or fatigue to the workers. Mechanical failure will be reduced by using equipment in near new condition and not over-loading the equipment. Equipment will be visually inspected prior to each use to reduce the potential for failure. Personnel safety equipment shall be required for field work on this project. Safety shoes, hard hats, and safety glasses will be required for personnel at the discretion of the Project Manager or designated alternate.

Physical stress could occur if an individual tries to lift items that are too heavy or

oversized. Individual lifting limits will be 50 lbs. Items that are odd shaped or bulky will be lifted by more than one individual or by a mechanical means.

Accidents will be handled on a case by case basis and will be evaluated by the Project Manager or designated alternate to determine if preventive measures can be applied to preclude the accident from recurring.

Complications from high temperature exposure, such as heat stress, will be handled with medical treatment as deemed necessary by the Project Manager or designated alternate. The timing of the project reduces the concern for heat stress and raises the alternative cold weather issue to some extent. Under either cold or high temperature scenarios, the first round of treatment is prevention through appropriate training, monitoring, and regimented practices.

### **3.3 Environmental Hazards**

Hazards from the environment could most likely occur from abnormal weather, an accident or from carelessness while performing the work tasks. Controlling the amount of unsealed material, at any given time, will reduce the extent of an environmental impact. Affected materials, as suspected prior to screening and as verified by subsequent radiological monitoring, will be addressed as soon as practical. Immediate project action regarding discovered elevated surface contamination will include prominent posting and notification of site (base) and client (IOC) representatives.

Other environmental hazards which may be encountered and for which precautions should be extended for avoidance in the static areas may be lighting constraints, insects (bees, ticks, spiders), snakes, rodent and bird infestation and/or droppings, high wind and precipitation.

### **3.4 Bloodborne Pathogens**

Bloodborne pathogens are micro-organisms in human blood that can cause disease. Although health care workers have long worked with the threat of exposure to bloodborne pathogens, exposure was viewed in a different light once AIDS was recognized.

Because the virus that causes AIDS is said to always be fatal, there has been increased concern about bloodborne pathogens in the last 15 years. AIDS, however, is not the only source of concern; other diseases caused by micro-organisms include malaria, syphilis and hepatitis-B virus (HBV).

The purpose of this plan is to establish requirements with the intent to protect those employees who have a significant potential of exposure to Bloodborne Pathogens which may cause such disease as Human Immunodeficiency Virus and Hepatitis-B Virus. Principally at risk are those designated to be first-aid providers/first-responders. Specific information is found in section 4.2.6.

### **3.5 Lead**

Lead-based paint is expected to be present or an issue of concern at the project site. Either chipping paint or lead-based paint material having already fallen to the ground due to deterioration of a facility and lack of upkeep may be prevalent. Proper PPE and training guidelines will be followed in accordance with 29 CFR 1926.62. These areas will be avoided by all employees if at all possible. As applicable to the scope of the survey effort, identification of the potential for the presence of lead and avoidance (PPE or literal occupancy) is the matter of course.

### **3.6 Polychlorinated Biphenyls (PCBs)**

It is possible that PCBs could be encountered during work activities on this project (i.e. light fixture ballasts). Should this be the case, the PCB containing materials will be handled, if necessary, with radiological controls in place. Proper PPE and training will be performed in accordance with the guidelines set forth in 40 CFR 761, 40 CFR 302, 40 CFR 116, and 40 CFR 117. These items will be avoided by all employees under routine project tasking.

### **3.7 Asbestos**

Asbestos could be encountered during work activities on this project. Proper PPE and training guidelines will be followed in accordance to 29 CFR 1101, 40 CFR 61, and 40 CFR 763. Proper precautions will be taken to prevent any airborne releases. Suspected Asbestos Containing Material (ACM) will be covered, if necessary, and avoided by all employees.

### **3.8 Mercury**

Mercury is potentially a concern at the site and may be present in such items as switches, controls and light tubes, and fixtures. Proper PPE and training guidelines will be followed in accordance with 29 CFR 1910.95 and 29 CFR 1910.252. Proper precautions will be taken to prevent any release to the workers or to members of the public. These materials will be covered if necessary and avoided by all employees.

## 4.0 WORKER PROTECTION

### 4.1 Personnel Protection

The field work on the surveying of the 'Commodity Storage Sites' involves the hazards typically present during radiation work, in addition to the dynamic conditions from unstable building structures. In general, ATG work procedures are in effect for safety of our workers and others. However, the following points are to be emphasized.

#### 4.1.1 Contamination Control

ATG will conduct all work activities with radiological controls in place, using qualified and appropriately trained personnel. Proper PPE will be worn when entering the controlled areas and will be discarded appropriately upon exiting. The activity on this project does not represent a significant hazard but should not be allowed to be distributed outside of the controlled area in order to maintain doses to personnel ALARA.

#### 4.1.2 Industrial Safety

Industrial safety is an important consideration on this job. There are several existing hazards that are of concern on this job site. These hazards include heavy equipment operations, noise hazards, and unstable building structures.

4.1.2.1 Heavy equipment operations exist throughout the site. All personnel will receive a pre-job briefing on all existing job-site hazards. Personnel will be made aware of areas in which heavy machinery is being used. The buddy system will be employed on this contract, thus providing a spotter for each other. Personnel will notify the operator(s) if they are to be performing work in proximity where equipment operations are taking place.

4.1.2.2 Noise hazards are a concern with the work being performed on site. Existing conditions in the area will be monitored and noise-suppression will be used if necessary. If noise levels in the work area reach or exceed 85 dBA, hearing protection will be required. The hearing protection provided must be able to lower noise levels below 85dBA when worn.

4.1.2.3 Unstable building structures are a concern with some of the buildings on-site. A pre-job briefing will be performed with all the

employees before work begins to heighten their awareness concerning these areas. If possible, these areas will be barricaded off to prevent any unauthorized access.

- 4.1.2.4 All personnel will be required to wear safety glasses, steel toe shoes, and hard hats while in any work area during operations. These requirements may be altered at the discretion of the Project Manager or designee.

### **4.1.3 Procedures**

#### **4.1.3.1 Site Control**

The work site will be clearly marked and access will be limited to ATG personnel and authorized visitors. Walkways and paths will be rerouted as necessary to limit access to the area. Postings will be in place to notify people of restricted access, hazards associated, and PPE required.

#### **4.1.3.2 Confined Space Entry**

A confined space is any space that has a limited means of egress and is subject to an accumulation of toxic or flammable contaminants or has an oxygen-deficient atmosphere. Confined spaces include, but are not limited to, storage tanks, process vessels, bins, boilers, ventilation, or exhaust ducts, sewers, underground utility vaults, tunnels, pipelines, and open-top spaces more than four feet in depth such as pits, tubs, vaults, and vessels.

A confined space will not be entered until atmospheric conditions are monitored and the area is verified safe. A valid "Confined Space Entry Permit" must be posted, reviewed, and in effect prior to entry. Fuel operated equipment will not be used in or near the opening or air intake for a confined space due to the potential for carbon monoxide build up. Confined space blowers will be used if necessary to ventilate the area and refresh the air. All entrants and spotters must review the rescue procedures before entry. All personnel entering the confined space must wear a safety harness with a secured lifeline in the event they need to be pulled out of the area.

A spotter will remain in continuous visual and voice contact with

personnel in the confined space. The spotter must account for all entrants and will not leave the post unless relieved by a competent person. The area will be continuously monitored while personnel are in the confined space due to the potential of changing atmospheric conditions.

#### **4.1.3.3 Hazardous Energy Control**

All personnel that work on or near energy sources should have completed and documented Site Training which covered this subject. Danger tags are used only to prevent operation of a switch, valve, or piece of equipment in cases where someone may get hurt or equipment may be damaged. Lockout/Tagout procedures will be used to prevent energy sources from becoming energized while personnel or equipment are in the area. The personnel working in the hazardous energy area must personally lock and tag the energy source out. A signed and dated tag will be placed on the system after it is locked out.

The system must be tested after locking to ensure it is de-energized prior to starting work. Prior approval must be obtained before de-energizing a system. Only the person that placed the lockout/tagout on a system can remove it and only after all personnel are clear from the work area. All personnel that are working in the area must have their own lockout / tagout in place on the system. Personnel cannot remove a lockout/tagout that was put in place by someone else. Once a tag is removed it must be destroyed and a new one used each time a system is locked out.

All electrical components will be treated as if they are energized regardless if lockout/tagout procedures are in place. Personal protective equipment will be inspected and worn when working on energy systems. Test equipment will be used to ensure systems are de-energized. Grounding equipment will be applied after the system has been de-energized. Caution must be used when removing enclosure covers, panels, or opening doors to expose electrical systems.

Work on or near electrical circuits will only be performed by qualified personnel who have been authorized to do the work.

Non-metal frame safety glasses are required when performing

electrical work. Other conductive items such as metal hard hats, rings, watches, necklaces, earrings, etc. will not be worn when working on or near electrical systems. Electrical rated rubber gloves must be inspected for cracks, punctures, tears, etc. prior to wearing them.

Hand tools and power tools rated and insulated for electrical work will be used on or near power sources. Drills and penetrating equipment must be grounded so that accidental contact with an unexpected energized electrical source will be cleared quickly by the circuit protective device. Double insulated equipment cannot be relied on to provide protection when accidental contact is made with energized circuits.

#### **4.1.3.4 Tools**

Equipment and tools will be used for their specific design and not rigged for purposes other than those specified by the manufacturer. Tools will not be used beyond their designed capacity. Tools will be inspected prior to each use. Damaged or worn tools will not be used and will be taken out of service. Tools taken out of service will be marked with a "Do Not Use" tag or sticker until they can be properly disposed of or repaired. Tool subject to impact will be dressed to prevent flying steel fragments. Tools cannot be brought into or out of a radiological area without prior approval from a health physics technician.

#### **4.1.3.5 Ladders**

Ladders will be inspected prior to each use. Ladders will not be painted except to be marked with an identifier. If ladders must be placed in a doorway, the door will be barricaded and warning signs will be posted. If the doorway is a marked exit, then the door cannot be barricaded and a spotter must be used. A hand line will be used to raise or lower tools or materials so personnel do not carry anything in their hands when ascending or descending a ladder. The ladder position will be changed as often as necessary to prevent excessive leaning or stretching on a ladder. When working from a ladder, both feet will be kept on the rungs and the person will be facing the ladder. If it is necessary to work backwards from a ladder, then the person must wear a safety belt and be tied off to a secure area and not to the ladder. Only one person is allowed on a ladder

at one time unless "two-man" stepladders are being used. Metal ladders will not be used for electric welding or near any electrical lines or services. Ladders may be used on scaffolds only if secured and the user is tied off with a safety belt. If a ladder must be built to use on-site, it must conform with established OSHA standards and be approved by the Health and Safety Representative or designated alternate. Areas around the top and base of the ladder must be cleared of tripping hazards. Ladders will not be placed against moving objects. Broken or damaged ladders will not be used. Ladders to be repaired must be tagged out and taken out of service. Step off distance from ladders must not exceed one foot.

#### **4.1.3.6 Straight and Extension Ladders**

Straight and extension ladders must be placed using a 4:1 ratio (for every 4 feet in height from the ground to the point of contact on the supporting surface, the ladder base must be placed 1 foot away from the supporting surface). Ladders must extend at least 3 feet beyond the supporting object. The ladder must have non-skid safety feet and be secured. When the extension ladder is raised to the desired height, the safety dogs or latches must be engaged and the extension rope secured to a rung on the base section of the ladder. Extension ladders must overlap a minimum of three rungs.

#### **4.1.3.7 Stepladders**

Stepladders must have all four feet on a level surface. The spreaders must be locked in place. Stepladders will not be used as a straight ladder. Tools or materials will not be placed on steps or the platform. The maximum height for stepladders without a safety platform is 12 feet and with a safety platform is 16 feet. If a ladder is over eight feet in height, it will be tied off.

#### **4.1.3.8 Weather Conditions**

The weather conditions may include possible thundershowers during the anticipated work schedule. If the potential for lightning is present, work will be stopped and personnel will move to a safe sheltered area until weather conditions improve. Any other severe or adverse weather conditions may require work to be stopped and personnel to move to a sheltered area.

#### **4.1.3.9 Inadequate Lighting**

Work performed on-site must have adequate lighting. If daylight does not provide the adequate 5-foot candle requirement (29 CFR 1910.120) then artificial light must be provided or all work must stop in time for personnel to exit the area during adequate daylight.

#### **4.1.3.10 Good Housekeeping**

Personnel will be expected to maintain good housekeeping within and around the work site. Materials or equipment that could be potential trip hazards will be moved out of walkways. Uneven walkways will be cleared or have restricted access. Materials will not be stacked in such a way that they may fall on personnel or equipment. Open pits will be roped off and labeled to prevent falls.

#### **4.1.3.11 Electrical**

Only power sources rated to handle the load required for equipment on-site will be used. Power sources will be required to have ground fault circuit interrupters unless the equipment has built in ground faults. Ground faults will be tested daily prior to using electrical equipment. Electrical equipment, plugs, and extension cords will be used and stored away from water sources. Electrical equipment that is not properly grounded, damaged, insulated, or have exposed wiring will be taken out of service and marked "Do Not Use". Extension cords with frays, exposed wire, damaged or missing prongs, or not insulated will be taken out of service and marked "Do Not Use". Electrical equipment cords and extension cords can not be taped to cover damaged areas or for any other reasons. Metal or conductive ladders will not be used near energized electrical lines or equipment.

#### **4.1.3.12 Dust**

Work operations will be designed as to generate little or no dust. Airborne concentrations will be monitored. Personnel will wear the proper PPE in accordance with RWP requirements if dust is generated.

#### **4.1.3.13 Noise**

Heavy equipment used on-site may generate elevated noise levels and will require hearing protection. Noise levels will be monitored and noise-suppression will be used when possible. If noise levels reach or exceed 85 dBA, hearing protection will be required and the area should be posted "Hearing Protection Required". The hearing protection provided must be able to lower noise levels below 85 dBA when worn.

#### **4.1.3.14 Motor Vehicles**

ATG personnel will abide by all traffic laws on base as well as pedestrian right-of-ways. Speed limits will be adhered to and seat belts will be worn by all passengers in the vehicle. Drivers will have a current drivers license and will not drive under the influence of drugs or alcohol. Special precautions will be taken in the event that road conditions become hazardous.

#### **4.1.3.15 Hazardous Material Storage**

No more than 10 gallons of flammable/combustible materials will be stored on-site unless these materials are stored in an approved flammable storage cabinet or tank. Chemicals stored together must be compatible. Containers must be stored in an area that has limited traffic and little chance for containers to be broken, toppled, or spilled. A spill kit will be kept on-site in the unlikely event that a spill were to occur. Appropriate personnel at Fort McClellan will be notified immediately in the event of a spill. Containers should be placed in a designated posted area. The storage area should be diked if possible. The fire department must be aware of where the storage area is located and what it contains. Flammable and/or combustible materials must be stored away from ignition sources. All containers must be properly labeled and an MSDS must be on-site for the material. Gas cylinders must be secured in an upright position with a cap over the valve when not in use.

#### **4.1.3.16 Fire Awareness**

Fire extinguishers will be on-site in a designated area readily accessible to personnel. Combination ABC fire extinguishers will be provided and inspected by a qualified person on a monthly basis or as needed. Personnel will be trained in the proper use of a fire extinguisher. Exits will be clearly marked to the containment tent in the event of a fire. Directional arrows will be placed around the lower portion of the tent to guide personnel to the closest exit. The fire department will be notified immediately in the event of a fire.

#### **4.1.3.17 First Aid**

A first aid kit will be on-site in a designated area clearly identified by a "First Aid" sign. The first aid kit will be readily accessible to personnel and visitors to the site. A minimum of two personnel trained in first aid/CPR will be present at the site at all times work is being performed.

#### **4.1.4 Respiratory Protection**

Respiratory protection may be required during certain operations. All personnel assigned respiratory protection must be medically qualified, trained on the use of the equipment, and when appropriate, have qualitative fit testing. All personnel in respirators must be clean shaven. All respirators must be cleaned and checked daily. Engineering practices may be employed to reduce airborne contamination. Respiratory protection will be mandated for area workers when the concentration of airborne contamination is found to  $\geq 10\%$  of the DAC for the specific isotope of interest.

#### **4.1.5 Personnel Dose**

The commodity site areas typically have no history of the use/handling of loose radioactive materials. Direct surface measurements will be obtained for comparison with background radiation levels in close proximity. Any finding of significant contamination will require re-classification of the area and deferred actions. External dosimetry is not required by regulation. However, as a conservative measure, ATG will require dosimetry for all project personnel.

#### **4.1.6 Radiation Work Permit**

The routine verification surveys to be performed of the commodity sites DO NOT warrant the adoption of an RWP. Should widespread elevated contamination be discovered, area re-classification will be planned and subsequent action which involves the increased potential for personal exposures will require implementation under a completed RWP.

Should site conditions and an expanded contractual scope of work issuance of a Radiation Work Permit (RWP), all personnel working at the Fort McClellan project will be assigned to a specific Radiation Work Permit, (ATGF-002 - Previously ATG Form 113), applicable to the job being performed (see note in section 4.1.6). A Radiation Work Permit Sign In Sheet (ATGF-023) will be attached to each Radiation Work Permit if deemed necessary by the Project Manager or designee. All personnel assigned to a job, requiring a Radiation Work Permit, shall sign the RWP Sign In Sheet.

#### **4.1.7 ALARA (As Low As Reasonably Achievable)**

It is the intent of all radiological work practices that the efforts performed will be done in such a manner as to subject the individual to the lowest possible dose. Practices that will ensure these are compliant to the project Sampling and Analysis Plan, Health and Safety Plan, and Quality Assurance Plan. Also, activities will be in compliance to procedural practices detailed in ATG Field Procedure, AD-004, 'Administrative/Regulatory/ALARA Compliance - Policy and Procedure' and ATG Field Procedures. All radiological work activities will be performed under radiation work permits (see note in section 4.1.6). Morning 'tailgate meetings' will be held to discuss safety issues and brief all personnel on the daily scheduled work activities and the performance of assigned tasks. These tailgate meetings will be documented and signed by all individuals in attendance on ATG Form ATGF-027, 'Daily Training Record'. All equipment will be tested before being used in the field. All individuals involved in the performance of the work have 'stop work authority'. If for any reason a job is not being performed safely or correctly, the job may be stopped and management notified until the situation may be remedied.

## 4.2 Personnel Monitoring

Occupational exposure will be continually monitored for all personnel on this ATG project. Personnel monitoring for this project will be supplied by Allied Technology Group using the following procedure.

### 4.2.1 Occupational Exposure Guides

Allied Technology Group Administrative Control Levels per calendar year;

4.2.1.1	Whole Body	1.0 Rem
4.2.1.2	Extremities	5.0 Rem
4.2.1.3	Skin	5.0 Rem

The ATG Corporate Health Physicist shall approve any authorization for exposure above the annual control levels. This approval will only be given if the dose is necessary and shown to maintain collective dose on the project ALARA.

### 4.2.2 Site Registration Form

All personnel assigned to work on the project must complete a Site Registration Form, ATG Form 109, prior to starting work. Completed Site Registration Forms will be retained with the personnel exposure files.

### 4.2.3 Occupational Radiation Exposure History

Before an individual will be permitted to work in a controlled area, a U.S. Nuclear Regulatory Commission Form 4 must be completed and reviewed by the Project Manager or designee.. Exposure results shall be listed on the NRC Form 4.

An Occupational Radiation Exposure History Letter, (ATGF Form 047) will be completed for all personnel assigned to the job. Copies of this letter are sent to the individual and the Allied Technology Group office in Oak Ridge, TN., within 30 days of obtaining the monitoring results.

### 4.2.4 Thermoluminescent Dosimetry

TLDs shall be the permanent record of an individual's occupational radiation exposure. The TLDs used by Allied Technology Group are supplied and

evaluated by a NVLAP approved vendor. All personnel assigned to the project will be issued a TLD for the job or on a monthly basis as the work requires.

The individual's name, social security number, issue date, and a date of return are to be recorded on the TLD Issue Log, (ATG Form 111a). In the event of a lost TLD, immediate notification to the Project Manager or designee, is required. A Lost TLD Report (ATG Form 111), will be completed and filed in the individual's exposure file. TLD results will be documented. The NRC Form 4 will be updated when the TLD results are received and will be maintained in the individual's exposure file.

#### 4.2.5 Bioassays

Routine bioassay sampling and analysis is not required for the base survey activities, unless elevated contamination is found AND subsequent action is contractually committed. In which case, entry bioassay samples will be collected to provide a baseline, and exit bioassay samples will be submitted at project completion. The samples (urine) will be analyzed per third party gamma spectroscopy to determine the extent of uptake and to calculate the attributing dose, if any, as warranted. Dependant upon the discrete work areas involved and the identity of suspected radioisotopes relevant to the location, additional analytical parameters may be required.

#### 4.2.6 Bloodborne Pathogens

The purpose of this notice is to establish requirements with the intent to protect those employees who have a significant potential of exposure to Bloodborne Pathogens which may cause such disease's as Human Immunodeficiency Virus and Hepatitis-B Virus.

Key Definitions:

**Bloodborne Pathogens:** Micro-organisms present in human blood that can cause disease in humans include, but are not limited to, Hepatitis-B virus (HBV) and Human Immunodeficiency Virus (HIV).

**Exposure Incidents:** A specific eye, mouth, other mucous membrane, non-intact skin or penetrable contact with blood or other potentially infectious materials that results from performing required tasks.

**Occupational Exposure:** A reasonably anticipated skin, eye, mucous

membrane or other penetrable contact with blood or other potentially infectious material that might result from performing required tasks.

**Penetrable Contact:** A piercing of mucous membranes or the skin barrier by means of a needle stick, human bite, cut and/or abrasion.

**Potentially Infectious Materials:** Materials that might be present in a first-aid emergency, including blood, vomit, urine or other body fluids.

#### 4.2.7 ATG Field Project Potential

ATG has conducted a thorough evaluation of the processes and tasks which are performed in relation to Contractual Field Projects and has determined the potential for employee exposure to be minimal. However, because of the potential for accidents and injuries resulting in the possible contact of body fluids, ATG shall require additional training. Although the likelihood of accidental exposure is minimal, the following information shall be discussed with assigned site personnel prior to work activity.

#### 4.2.8 The following is the ATG policy for field operations.

**Training:** All ATG personnel who receive Basic First-Aid training and are designated as Emergency Medical Response personnel shall receive additional training in Occupational Bloodborne Pathogen awareness.

**Vaccinations:** All ATG personnel trained in Basic First-Aid shall be offered the Hepatitis-B series of inoculations at no cost to the individual. This shall be offered on a voluntary basis and because the risk is minimal and First-Aid treatment of others is voluntary, no statement of refusal of the vaccine shall be required. All ATG personnel who are designated and certified as Emergency Medical Technicians shall be required to receive the Hepatitis-B inoculations. This shall be at no cost to the individual.

**Handling of Sharps:** All ATG personnel who handle materials containing sharps shall be required to wear puncture resistant gloves. Any injuries received while working with such materials shall be reported to their immediate supervisor. In addition, personnel exposed to blood or other body fluids while aiding an injured individual, no matter how minor, shall report to their immediate supervisor. The supervisor shall then promptly log and report the incident to the Project Manager.

**Protective Equipment:** Protective Equipment such as gloves, masks and

respiratory barriers are provided in each first-aid kit. All personnel responding to a first-aid situation in which there is a potential for exposure to blood or other body fluids are expected to use these devices for protection of both themselves and the personnel they are aiding.

#### **4.3 Training**

Individuals assigned to this project will be trained and qualified radiation workers. Training records will be supplied as part of the Project Quality Assurance Plan. Training specific to the project will be performed prior to the start of work by the Project Lead Investigator and recorded on the Training Record, (ATGF Form 027 - Previous ATG Form 102). Requirements of the Project Decommissioning Plan, Project Quality Assurance Plan and the Project Health and Safety Plan will be covered in the on-site training.

#### **4.4 Decontamination**

Contamination control barriers will be established and personal protective equipment will be required to minimize the potential for areas or personnel to become contaminated. In the event that personnel contamination is detected, the following procedure will be used to remove or contain the contamination.

##### **4.4.1 Explanation**

This section is a follow-up to ATG Field Procedure, HP-OP-0 1 3, Personnel Decontamination which describes how a radiation worker detects personal contamination. Once detected, this procedure will explain where and how to decontaminate to acceptable levels. It further provides for ongoing documentation to assure adequate review and improvement of existing procedures.

##### **4.4.2 Decontamination Methods**

###### **4.4.2.1 Personnel Decontamination**

When contamination is found on the worker, the worker shall notify a Health Physics Technician and the Project Manager or designee. immediately that he/she has become contaminated. The worker will indicate where he/she believes the contamination occurred, and the route taken to where the surface contamination was detected. This information will assist the Health Physics Technician in determining which areas to survey to avoid the contamination of

other personnel. After notifying the Health Physics Technician, the individual who is contaminated shall, if possible, isolate the contaminated item or items by the use of clean plastic bags and remain in the personnel survey area. Any method of decontamination used will require monitoring and documentation of the results for each step in the procedure. All liquids used for decontamination purposes, will be considered contaminated and handled as radioactive waste. A spray solution of RadiacWash or equivalent mild detergent solution should be used as the primary agent to remove skin contamination. RadiacWash foam will be sprayed on the contaminated area, allowed to soak for a few minutes, then wiped clean. Radiation surveys will be performed between each wash.

**NOTE: UNDER NO CIRCUMSTANCES WILL THE SKIN BE ABRADED WITHOUT DIRECT MEDICAL SURVEILLANCE. NOTIFY THE ATG RADIATION SAFETY OFFICER AND THE CORPORATE RADIATION SAFETY OFFICER SHOULD THIS BE RECOMMENDED.**

Additional washing may be required if the affected area contamination levels are not reduced to below acceptable limits. If needed, lava soap, a soft brush and small amounts of water can be used with light pressure to produce a heavy lather. Only wash 3 times for about 2 minutes each. Rinse and monitor. Use care not to scratch or erode the skin. Apply lanolin or hand cream to prevent chapping. Continued washing will abrade the skin. Any additional decontamination techniques shall be approved by the Radiation Safety Officer on a case by case basis.

#### **4.4.2.2 Clothing Decontamination**

When contamination is found on clothing, the worker shall immediately notify a Health Physics Technician and inform him/her of the situation, including where the worker believes the contamination occurred and the route taken to where the contamination was detected. This information will assist the Health Physics Technician in determining which areas to survey to avoid the contamination of other personnel. The contaminated clothing shall be removed, taking special care not to further contaminate additional clothing or personnel. The item(s) shall be surveyed to determine the degree of contamination. Depending on the source of

contamination, decontamination methods such as using tape to adhere the contamination to or scraping a shoe with a knife may be used. If the contaminated item cannot be easily decontaminated without using soap and water methods, the item shall be disposed of as radioactive waste.

#### **4.4.3 Documentation**

In order to fully assess the degree of contamination, the skin dose to personnel and to critique the incidents to improve future procedures, documentation is necessary. Documentation of the event should start and continue from the initial detection of contamination to the final release. Personnel contamination that requires decontamination will be classified in two categories, skin and clothing. A separate form shall be used for each, along with a Contamination Report Index, (ATG Form 116) to chronologically categorize all personnel contamination.

A Personnel Contamination Report, (ATG Form 117), and a Clothing Contamination Report, (ATG Form 118) shall be completed by the individual performing the decontamination and submitted to the Project Manager for evaluation and filing. The Contamination Report Index shall be maintained by the Project Manager. The contamination reports shall be maintained in the individual's exposure file.

## **5.0 SAFETY RULES**

### **5.1 Purpose**

The purpose of the safety rules section is to provide a code of conduct which will allow for a smooth operation of the job site with as little time loss as possible due to violation of Safety Rules and Regulations. The safety rules apply to both the workers assigned to the project and visitors.

### **5.2 General Requirements**

Compliance with the Safety Rules is considered a condition of employment, and as such, disciplinary action may be taken for violations as necessary. Safety rule violation and disciplinary action will be determined by ATG management. All workers have the responsibility to report safety violations to their supervisor.

### 5.3 Safety Rules

The following safety rules have been compiled and reviewed by ATG management and will be accepted by all employees prior to employment. A copy of the Safety Rules and Regulations will be available at the job site and will be made available to any employee requesting a personal copy.

- 5.3.1 Employees must be in working clothes and ready for work at the designated starting time.
- 5.3.2 Employees may take lunch breaks only during designated times and must eat in the assigned area while on the job site. There will be no smoking, eating or drinking while handling any hazardous materials or within the work site.
- 5.3.3 Personnel will not quit work before the time designated for the conclusion of the work shift. There will be sufficient time allocated for removal of protective clothing or work clothes.
- 5.3.4 Employees must report to work each regularly scheduled work day. One hour call in time will be allowed to notify your superior of an absence. Excessive absences will not be tolerated.
- 5.3.5 No employee will report to work under the influence of alcohol or drugs. Likewise, it is forbidden to carry or use alcohol or drugs on the job site or company property.
- 5.3.6 Personnel must comply with both verbal and written instructions from the Project Manager or designee..
- 5.3.7 All personal work injuries must be reported to the Project Manager or designee. or Health and Safety Representative (or designated alternate).
- 5.3.8 All unsafe conditions, or unsafe acts must be reported to the Project Manager or designee..
- 5.3.9 Any required personal protective devices and clothing must be properly worn by all personnel while on the job site.
- 5.3.10 Radiological monitoring equipment such as air samplers must not be tampered with or altered.
- 5.3.11 Good housekeeping by all personnel is considered mandatory.

- 5.3.12 Employees will not engage in malicious horse play, practical jokes or mischief while on the job site.
- 5.3.13 Fighting or attempting bodily injury to another employee while on the job site is not permitted.
- 5.3.14 Carrying a concealed weapon on the job site is expressly forbidden.
- 5.3.15 Falsifying company records or falsifying data will not be tolerated and will result in disciplinary action.
- 5.3.16 Equipment marked "Out Of Service" or "Do Not Use" shall not be used.

#### **5.4 Disciplinary Actions**

The following steps will be administered in a fair and nondiscriminatory manner:

- 5.4.1 All Disciplinary actions will be documented and maintained in the employee's personnel file.
- 5.4.2 Supervisory personnel are responsible for giving appropriate and specific safety instructions and are responsible for assuring that the instructions are clearly understood.
- 5.4.3 A violation of the safety rules will be promptly corrected. The violations will be documented by the supervisor and the employee will be given a copy of the written violation report.
- 5.4.4 Individual safety rule violations will be assessed on their merit with appropriate consideration given to the seriousness of the violation, the effect on the other employees, the employee's prior work record and previous safety violations. Any disciplinary action to be taken will be approved by the Project Manager or designee..
- 5.4.5 There may be some situations where the safety rule violation is so serious that modification or total disregard of the steps may be warranted. In these situations the employee may be suspended or terminated. It is suggested that in cases of this type, the employee be suspended pending the outcome of a full investigation of the incident and the employee's previous safety history. When this method is followed, the results of the investigation should

determine the severity of the discipline to be administered.

## 6.0 STOP WORK CONDITIONS

During the performance of this contract, certain conditions may be encountered that will require specific work tasks to be immediately halted. Conditions such as; discovery of explosive materials, excessive contamination levels in an uncontrolled environment, high wind speeds, extreme high or low temperatures, severe storms or flash floods. Depending on the specific work task that is being performed at the time on such an adverse condition, work may be halted until a safe condition exists to restart the task.

If time permits, the Project Manager or designated alternate will communicate with the Government representative to determine the appropriate action to be taken at a given time. The following guidelines will be used to aid in determining stop work conditions.

6.1 Excessive Contamination Levels in non-controlled areas means that contamination levels in excess of 1000 dpm/100 cm<sup>2</sup> have been detected in non contamination controlled areas. All work tasks will immediately be halted and a concerted effort will be made to clean the affected area. The Radiation Safety Officer will be immediately notified of such conditions and work will not restart without his approval. This activity will be documented in the Daily work log and by survey documentation.

6.2 The guidance for the determination of working conditions for heat stress will be determined per the guidance given in the American Conference of Governmental and Industrial Hygienists (ACGIH), "Threshold limit values for Chemical Substances and Physical Agents and Biological Exposure Indices" under the Heat Stress Section. Working conditions will be explained to the workers each day by the Health and Safety Representative or designated alternate during the safety meetings and documented in the Final Report.

Extreme High Temperatures means in excess of 105 degrees. Heat stress to the workers may occur. When high temperatures are occurring, specific work tasks that are hampered will be halted. Work tasks that require physical work or work tasks that protective clothing is required may be affected. The Project Manager or designated alternate will evaluate the conditions and determine if work tasks will be halted.

6.3 Extreme Low Temperatures means less than 10 degrees. When low temperatures are occurring, specific work tasks that are hampered will be halted. The Project Manager or designated alternate will evaluate the conditions and determine if work tasks will be halted

- 6.4 High Wind Speed means a steady wind speed in excess of 25 mph or wind gusts of 40 mph that seem to be ongoing throughout the day. Unsealed sources of radioactive material may be spread to uncontrolled areas if wind speeds are excessive. During high wind speeds the soil packaging activity will be performed inside a sheltered area but may still be affected by steady winds or wind gusts. If excessive winds are encountered, the soil packaging activity will cease and the soil containers will be sealed and the remaining soil covered with plastic. Other work activities may be halted at the discretion of the Site Coordinator..
- 6.5 Severe Storms or Flash Floods could cause all work tasks to be halted. Water damage to the controlled areas and wind barriers will cause all work tasks to be halted until the areas can be repaired. Should these type of conditions occur, the equipment and areas will be secured and evacuated. Prior to the restart of work, the Site Coordinator will receive approval from the contract administrator or the Radiation Safety Officer.
- 6.6 Natural Disasters will be handled on a case by case basis. Depending on the type and magnitude of the disaster, work operations will be determined by the Site Coordinator.
- 6.7 Discovery of unidentified underground utilities could cause all work tasks to be halted until the utilities are identified and disconnected by the proper authorities.
- 6.8 Unauthorized person(s) entering the exclusion zone would constitute work to be stopped and the proper authorities notified. The incident would be properly documented.

## 7.0 ACCIDENT REPORTING

**NOTE:** All accidents, injuries, fires, or any emergency incidents will be reported following the guidance of the Section 10.0 of this procedure, the EMERGENCY PLAN, under part 10.3 'Radiological Incident'.

### 7.1 Insurance

ATG's Worker Compensation Carrier has the responsibility for the following:

- 7.1.1 Making sure that every claimant is entitled to a fair investigation of his/her claim and a prompt decision as to its merit.
- 7.1.2 Determining how much a particular liability case is worth and negotiating a settlement within that range.

- 7.1.3 Making sure that cases of no liability, tenuous liability or those tainted by fraud are vigorously resisted.
- 7.1.4 Consulting with the company's Controller on all claims requiring settlement in excess of \$5,000.00.
- 7.1.5 Consulting with the company's President or Vice President on all claims requiring settlement in excess of \$10,000.00.
- 7.1.6 Maintaining the risk management reporting system, the risk detail report and forwarding monthly report updates to the company's President or Vice President.

## 7.2 Accident or Injury Reporting Requirements

All injuries shall be promptly reported to the ATGProject Manager or designee., and the Fort McClellan Safety Office.

To make sure that each incident is properly and appropriately reported and recorded, the Foreman's Report of Injury or Illness (ATG Form 133) is required. The Foreman's Report of Injury or Illness will provide all of the information to generate the employees first report of an injury. It can also be used as the company's medical authorization. The Foreman's Report of Injury or Illness must be completed in detail for every accident, injury or illness which occurs to an ATG employee, visitor or subcontractor either in connection with or on company property or on a contracted job site. Every effort should be made to complete this form as quickly as possible following notification of the incident. The injured worker's foreman is responsible for completing this form. Once completed, the form should be reviewed and signed by the Health and Safety Representative or designated alternate and a copy forwarded to the insurance carrier. Copies shall be provided to U.S. Army Industrial Operations Command.

Accidents resulting in any fatality, lost-time injury or illness, hospitalization of 3 or more personnel, or property damage to government or contractor property (which occurred during performance of the contract) equal to or exceeding \$2000.00 must be telephonically reported to USA, IOC as soon as possible, but not later than 2 hours after occurrence and reported in writing within 5 days of occurrence on DA Form-285. All other accidents/incidents must be reported by telephone to USA, IOC, (309) 782-0880, within 8 hours of occurrence.

### **7.3 Employee's First Report of Injury**

Each state within the United States has either developed its own Employer's First Report of Injury Form or has indicated a willingness to accept a suitable substitute. Generally where a state does not have its own form, the substitute is that form used by the employer's Workman's Compensation Carrier. Every state requires some type of injury notification.

The Project Manager or his/her designee shall report immediately by telephone, or in writing, to the nearest District Office of the Division of Occupational Safety and Health any serious injury, accident or death of an employee. "Immediately" is defined for this purpose to mean as soon as practical but no longer than twenty four hours after the employer knows of or should have known of the death, illness or serious injury. The Project Manager will notify the nearest office of the Division of Occupational Safety and Health whenever a State, County, or Local Fire or Police Agency is called to an accident involving an employee that has suffered a serious injury, illness or death.

### **7.4 OSHA Forms**

The OSHA Form 200 Log and Summary of Occupational Injury and Illness along with the OSHA Form 101, Supplementary Record, will be completed and maintained at the ATG Corporate office in Fremont, California.

The corporate office has the responsibility to record and report OSHA reportable incidents. All forms are available on request.

## **8.0 HAZARD COMMUNICATION PROGRAM**

### **8.1 Purpose**

The purpose of this written Hazard Communication Program is to comply with the requirements of the Code of Federal Regulations, Title 29, Part 1910.1200, "Hazard Communication". This program is site specific.

### **8.2 Policy**

ATG as an employer engaged in a business within the Standard Industrial Classification, Codes 20 through 39, where chemicals or hazardous materials are either used or are produced for use. This program will assure that the hazards of all chemicals found in the work place will be evaluated and that information concerning their hazard will be transmitted to all affected employees.

The known hazard that will be handled on this project will be radioactive material and potential biological hazards. The hazards have been evaluated in this Project Health and Safety Plan. Communication to the employees will be handled in the project training and verified through the Project Quality Assurance Plan. Identification of the radiological hazard is required by posting radiological controlled areas and labeling containers or items that contain radioactive material in accordance with 10 CFR 20. All potential biological hazards will be properly labeled and the work site will have the proper postings.

Any currently unknown hazards will be handled in the same manner when they are encountered. The Project Manager or designated alternate will be responsible for conducting the evaluation, communication and identification.

Material Safety Data Sheets (MSDS) will be provided for all materials brought onto the site. All MSDS's will be placed alphabetically in a labeled notebook and in a designated highly visible area that is readily accessible for personnel and visitors. A copy of all MSDS's for the materials on-site will be provided to the fire department. The fire department will also be notified of the quantity of the material and the storage location. All personnel will be briefed on the materials on-site, the location of the MSDS's, and the proper way to use the MSDS's.

## **9.0 PROJECT ROLES AND RESPONSIBILITIES**

### **ATG Project Manager**

The Project Manager or his/her designee is responsible for the overall project. He/she is to assure the project meets the objectives and contracted commitments. He/she has the direct management responsibility and authority for cost, schedule, quality and technical performances of all activities in support of the project. He/she is ultimately responsible for the implementation of all quality related activities. Other responsibilities include: selecting project staff and assigning duties, budgets and schedules, and identifying and resolving project specific problems. The Project Manager will assure the tasks are completed in a professional, efficient, and safe manner.

### **ATG Project Lead Investigator**

The ATG Project Lead Investigator or his designated alternate will have overall responsibility for ATG's on-site conduct of the project and will report to the Project Manager for oversight and management control. He/she will be the primary point of contact. He/she is responsible for implementing and monitoring compliance with the operations plan and implementing corrective actions.

### **ATG Field Personnel**

ATG Field Personnel will take all reasonable precautions to prevent injury to themselves and to their fellow workers by remaining alert to potential harmful situations. All tasks must be performed in accordance with the Project Sample Analysis Plan and the Health and Safety Plan. Any unsafe conditions must be reported immediately to the Project Manager or designated alternate. Personnel must report any medical conditions that may be affected by the work environment. All injuries must be reported - no matter how minor. The Field Personnel must read and comply with all postings and rules at the work site. Spilling and splashing of materials must be kept to a minimum. Good housekeeping must be maintained within and around the work area.

## **10.0 EMERGENCY PLAN**

The objective of emergency response actions is to minimize adverse health risks to site workers, the environment, and local community. The Project Manager or designee will be the site emergency coordinator.

The following is a course of action for any accidents or emergencies that may occur during this project and the immediate actions to be pursued. In any situation outside the scope of the work identified in this work plan, the actions taken should be to stabilize the area, notify appropriate personnel, contain the area and prevent unauthorized personnel from entering the area (thus minimizing their exposure and contact), surveying the area for all hazards, and then formulating a plan for recovery from the accident or situation. The following will be performed prior to work on site:

- a. Locate the nearest telephone.
- b. Confirm and post emergency telephone numbers.
- c. Post site map of work areas marked with evacuation routes.
- d. Inventory and check site emergency equipment and supplies.
- e. If a radio is supplied, ensure it is charged and in good working condition.

Work is expected to be performed by ATG personnel over weekend periods and during installation non-duty hours. Special arrangements will be made with the appropriate emergency service organizations.

## 10.1 Evacuations

In the event of an emergency that requires evacuation of the site, verbal instructions will be given by the Health and Safety Representative or designated alternate. During an emergency evacuation, personnel will proceed to the assembly point designated on the map unless conditions cause the assembly point to be unstable or harmful. Verbal instructions will be given if evacuation beyond the assembly point is required. Personnel working on-site should not take time to monitor for contamination unless time allows. Contaminated personnel and areas they have been in contact with will be monitored when the conditions are stable and considered safe.

The following conditions would require evacuation:

- Fire
- Chemical Release
- Radiological Release
- Any event that an injury is incurred
- Any other event that would cause the working conditions to be unstable and no longer safe

The Project Manager or designee. will account for all personnel, ascertain information about the emergency, and advise further instructions to the on-site personnel.

In the event that an evacuation occurs, the following will be performed prior to reentry:

- a. The conditions resulting in the evacuation have been corrected.
- b. The hazards have been reassessed.
- c. The Work Plan and Health and Safety Plan have been revised accordingly and approved by the Project Manager or designee., and the appropriate facility personnel.
- d. Site personnel have been informed on changes to the site and work conditions.
- e. Site personnel have been informed on precautions to take and any change in PPE requirements.
- f. The Project Manager or designee. has given the approval for reentry.

## 10.2 Medical Emergencies

If a situation occurs that results in the injury of personnel or visitors, the following actions shall be taken:

- 10.2.1 Stop all work activities. Ensure the area is in a safe condition.
- 10.2.2 Qualified personnel will provide first aid to the injured person.
- 10.2.3 In the event the injury is severe, the Project Manager or designee. will act as the emergency point of contact. Ensure the emergency personnel are aware that contamination may be present.
- 10.2.4 For any incident, accident, or injury, notify the Emergency Response Organization at phone number 911, the Base Security Post, and the ATG Project Manager or designated alternate.
- 10.2.5 If the injuries and time allow, the injured person will be surveyed for contamination and decontaminated if necessary.
- 10.2.6 If a hazardous material gets on the person's skin or eyes, the area will be flushed immediately with clean water until medical personnel arrive.
- 10.2.7 If a person succumbs to heat stress, the following should be used as a guide:
  - a. Heat cramps: Caused by heavy sweating and inadequate water and electrolyte replacement.  
  
Symptoms: muscle spasms; pain in the hands, feet, and abdomen.  
  
Treatment: drink Gatorade to replace fluids and electrolytes.
  - b. Heat Exhaustion: Caused by sustained exertion in a heated environment. Lack of acclimatization and failure to properly rehydrate may contribute.  
  
Symptoms: clammy skin; heavy sweating; dizziness; nausea; and fainting.  
  
Treatment: Promptly remove individual to a cooler environment and give water or Gatorade to replace fluids and electrolytes. If medical assistance is needed, contact emergency personnel

immediately.

- c. Heat stroke: the most serious form of heat stress occurs when temperature regulation fails and the body temperature rises to critical levels.

Symptoms: Red, hot, and dry skin; lack of, or reduced perspiration; nausea; dizziness or confusion; strong rapid pulse; and coma.

Treatment: Immediately summon emergency medical services. While waiting for emergency services to arrive, and if facilities are available, cool person by immersion in cold water or by wrapping in a wet sheet with vigorous fanning with cool dry air. Treat for shock.

- d. High concentrations will be identified by the Threshold Limit Values (TLVs) for Chemical Substances and Physical Agents and Biological Exposure Indices (BEIs) as referenced in the Reference List.

### 10.3 Radiological Incident

A radiation incident may be defined as an unforeseen occurrence, either actual or suspected, involving exposure or radiation. An accident is considered to occur over a short period of time, from seconds up to several days. Chronic occupational or other long-term exposure is not considered accidental.

There are two ways in which humans can be exposed to ionizing radiation:

1. External. The source of ionizing radiation may be outside of the body so that the radiation strikes the individual and is absorbed. Radiation from x-ray generators, particle accelerators, sealed sources of radionuclides, and reactors are examples. The radiation may be beta, gamma, or neutron. Alpha emitters present no significant external hazard.
2. Internal. The source of ionizing radiation may gain entrance into the human body by inhalation, ingestion, injection, or absorption through intact or abraded skin. Radionuclides may also be formed within the body following exposure to an external source of neutrons. All persons who are known or suspected to have been internally exposed to radioactive material will be reported to the Fort McClellan Radiation Protection Office.

### SPECIFIC GUIDELINES

In the event of an emergency, the Project Manager or designee, will assume control of the situation and direct activities until relieved by proper authority. The exact actions and sequence of actions to be taken will be determined by the nature of the emergency. The following actions are typical responses to emergency situations, however, the sequence of these actions are highly variable.

- 10.3.1 Stop all work activities
- 10.3.2 Leave the area in a safe condition
- 10.3.3 Limit the radiation exposure and the spread of radiation contamination, if undue hazard to personnel does not result. For example:
  - a. Return sources to shield containers
  - b. Place absorbent material on spills
  - c. Turn off ventilation and equipment
  - d. Extinguish flames, heaters, etc.
  - e. Restrict access to the area
- 10.3.4 Perform radiological surveys (airborne, contamination, and radiation) to determine the nature and extent of the release and spread of contamination.
- 10.3.5 Contain the area with herculite or an equivalent material to prevent the continued spread of radioactive material and/or hazardous material to the environment.
- 10.3.6 Evacuate and survey all personnel to a identified safe area.

**NOTE: In the event of any injury, this will take precedence to evacuate and place the injured individual in a safe condition. Immediate medical attention will be obtained for any injuries occurring during this operation. All injuries will result in immediate work stoppage and evaluation of the conditions prior to recommencing activities under the direction of the Project Manager or designated alternate.**

- 10.3.7 Radioactively contaminated personnel will receive all necessary medical care and treatment at the earliest practical time.

- 10.3.8 Radiation and radioactive contamination will not deter medical personnel in efforts to save life or limb, although slightly different techniques must be employed, e.g. rotating medical personnel to minimize exposure to any one individual, keep individual exposures As Low As Reasonably Achievable (ALARA), etc.
- 10.3.9 Radioactively contaminated personnel will be decontaminated at the earliest opportunity consistent with their medical needs.
- 10.3.10 Every effort will be made to minimize radiation exposure and the spread of contamination during medical treatment.
- 10.3.11 The ATG Project Manager or designated alternate will advise the Site RPO of the extent of contamination and exposure of the individual.
- 10.3.12 At the earliest possible time consistent with the patient's medical needs, the attending physician will allow decontamination to begin. Decontamination will be provided under the guidance of ATG Radiation Protection personnel.
- 10.3.13 All contaminated clothing, equipment, and waste material will be retained by ATG Radiation Protection personnel.
- 10.3.14 Contaminated valuables will be retained by ATG Radiation Protection personnel who will account for them, and will decontaminate them as soon as the situation permits so that they may be returned or disposed of properly. Valuables and personal property will not be disposed of as contaminated waste without written consent of the owner.
- 10.3.15 Formulate a recovery plan, obtain approval as required, and commence recovery operations.

#### **10.4 Responsibilities**

##### **10.4.1 Personnel**

All personnel are responsible for the following:

Become thoroughly familiar with the contents of this regulation prior to using radioactive material.

Take adequate precautionary measures to protect all personnel from unnecessary exposure to radiation.

Seek advice and assistance from ATG Radiation Protection personnel concerning the safety of an operation.

Prescribe rules, procedures, or protocols for the use of radioactive materials under his control to ensure proper and safe use. These will be made available to any radiation worker in the area and will be furnished for review and comment by Allied Technology Group.

Ensure that all rules, procedures, and practices of radiation safety are rigorously followed in the work area.

Report actual or potential emergency situations to the Project Manager or designee..

Promptly contact ATG Radiation Protection personnel. Exposed individual(s) should cooperate in any and all attempts to evaluate his/her radiation exposure.

If working with radioactive material, maintain a current inventory of the quantity of radioactive material on hand to be readily available to the RPO upon request. The inventory will include the radionuclide(s), current activity, and form.

Evacuating the area immediately.

If qualified, provide first aid to the injured.

#### 10.4.2 Management

All supervisors are responsible for the following:

Anticipate hazardous conditions and prevent them from occurring.

Ensure personnel are trained on emergency situations.

Ensure emergency contact numbers are current.

Ensure evacuation routes are clear.

Alert emergency personnel and act as the point of contact.

Account for all personnel.

The overall health and safety of their workers.

Limiting possible radiation exposure to the general public.

Notification of the Base RPO if a radiation incident should occur involving contractors.

Generation of a written report of all incidents involving radiological hazards including the following as a minimum:

- The type of radiation incident: internal contamination, external contamination, or exposure.
- The number of contaminated individuals and their condition.
- The type of radioactive material.
- Efforts, if any, that have been made to decontaminate the individual at the accident site.

Levels of radiation measured on the patient.

10.4.3 The Fort McClellan Radiation Protection Office will respond to all radiological emergencies and will:

Provide technical advice as necessary.

Arrange for additional resources, e.g. personnel, supplies, and equipment.

Provide assistance as needed.

Provide advice and radiation monitoring.

Provide exposure control and monitoring of staff personnel attending the patient.

Direct decontamination of the personnel at the earliest time consistent with medical needs.

If required, make a prompt investigation of the incident.

Issue specific guidance to minimize exposure of the staff or spread of

contamination.

Such guidance will be developed on the scene by the Fort McClellan Radiation Protection Office.

Make appropriate reports to MEDCOM, the Nuclear Regulatory Commission (NRC), and other agencies in accordance with pertinent directives.

#### 10.4.4 Medical Personnel

The medical personnel present at the scene of an accident will:

Evaluate the injury

Apply first aid

Take the person to a designated decontamination area

Employ contamination control measures

Follow recommendations whenever possible since radioactive contamination can necessitate very costly decontamination operations and result in the loss of facilities for many days.

Notify the Fort McClellan Radiation Protection Office.

### 10.5 Safety Signals

Vehicle, tractor, and portable gas-operated horns are used for safety signals as follows:

One Long Blast      **WARNING ALARM** - prepare for emergency response

Two Short Blasts      **ACTIVATION ALARM** - initiate emergency response activities as directed by the Project Manager or designee..

Three Short Blasts      **ALL CLEAR** - return to normal activities.

## 10.6 Emergency Information

Emergencies may include fires, fire hazards, accidents requiring first aid, or other incidents requiring emergency procedures. ATG and its subcontractors will, at all times, minimize potential emergencies. The following section lists emergency phone numbers which should be posted in all work areas:

### EMERGENCY PHONE NUMBERS

Ambulance (Fire Department)	(256) 848-2315
Hospital (Emergency Room)	(256) 235-8900
Fire Department	(256) 820-1117
Security	(256) 848-5159 or 3560
Center for Disease Control (CDC)	(404) 452-4100
RCRA Hotline	(800) 424-9346
Poison Control Center	(619) 543-6000
National Response Center	(800) 424-8802

### DIRECTIONS TO HOSPITAL

The nearest hospital is Stringfellow Memorial of Anniston which is 5 miles from the project site on 301 East 18th Street

**10.7 Key ATG Personnel**

<u>POSITION</u>	<u>NAME</u>	<u>PHONE</u>	<u>PAGER</u>
Project Manager	Lee Young	(800) 348-5389	(888) 352-2010
Project Lead Investigator	Frank Whitaker	(800) 348-5389	(800) 690-6403
Corp. Health Physicist	Joel Cehn	(800) 227-2840	

**10.8 Key Contracting Personnel**

<u>POSITION</u>	<u>NAME</u>	<u>PHONE</u>
US Army IOC Health Physicist	Mike Styvaert	(309) 782-0880
US Army IOC Contract Officer	Robert Matthys	(309) 782-5554

**10.9 Key Facility Personnel**

<u>POSITION</u>	<u>NAME</u>	<u>PHONE</u>
Fort McClellan RPO	John May	(256) 848-5737
Fort McClellan Env Comp.	Lisa Kingsbury	(256) 848-7455

## **11.0 SPILL PREVENTION AND CONTROL**

Spill prevention control shall be as follows:

The use and spread of materials will be initially prevented by the elimination of unnecessary materials being introduced to the site. The basic survey effort requires that only exempt quantity radioactive check sources, instrument batteries, and P-10 gas (10% methane, 90% argon) be mobilized for routine use.

The control of spills is thus intended for encountered or discovered materials on the base as the result of or during the radiological surveys.

### **11.1 Spill Response**

If a spill of hazardous material occurs, the following actions will be taken:

Notify the Project Manager or designated alternates immediately.

Take immediate measures to control and contain the spill within site boundaries.

Keep unnecessary personnel away, isolate the hazardous area, and deny entry.

Stay upwind and keep out of low-lying areas.

Allow no flares, smoking, or flames in the hazard area.

For liquids, keep combustibles away from the spilled material.

Take necessary steps to clean up the spill and all contaminated material.

## 12.0 ACRONYMS

ACGIH	American Conference of Governmental and Industrial Hygienists
ALARA	As Low As Reasonably Achievable
ATG	Allied Technology Group
BEI	Biological Exposure Indices
CDC	Center for Disease Control
CFR	Code of Federal Regulations
EOD	Explosive Ordnance Disposal
HBV	Hepatitis-B Virus
IOC	Industrial Operations Command
LEL	Lower Explosive Limit
MSDS	Material Safety Data Sheet
NRC	Nuclear Regulatory Commission
OSHA	Occupational Safety & Health Association
PPE	Personnel Protective Equipment
RCRA	Resources Conservation and Recovery Act
RPO	Radiation Protection Office(r)
RSO	Radiation Safety Officer
RWP	Radiation Work Permit
TLD	Thermoluminescent Dosimeter
TLV	Threshold Limit Value
UXO	Unexploded Ordnance

### 13.0 REFERENCES

29 CFR 1910, OSHA Standards for General Industry.

29 CFR 1926, OSHA Standards for Construction.

U.S. Nuclear Regulatory Commission Division of Industrial and Medical Safety, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material".

ATG Corporate Health and Safety Manual.

ATG "Decommissioning Plan for the Fort McClellan 'Burial Mound' for the IOC, December 1998.

ATG "Project Quality Assurance Plan for the Fort McClellan 'Burial Mound' for the IOC, December 1998.

ATG Respiratory Protection Program.

American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices".

ANSI A14 Series - 1992, Safety Standard for Ladders.

ANSI B30 Series, Safety Standards for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Stings.

ANSI B56 Series, Safety Standard for Powered industrial Trucks.

ANSI Z41 - 1991, Personnel Protection - Protective Footwear.

ANSI Z49.1 - Safety in Welding and Cutting.

ANSI Z87.1 - 1989, Practice for Occupational and Educational Eye and Face Protection.

ANSI Z89.1 - 1986, Protective Headwear for Industrial Workers.

ANSI Z1 17.1 - 1989. Safety Requirements for Confined Spaces.

NUREG/CR 2082 "Monitoring for Compliance with Decommissioning Termination Survey Criteria".

NUREG-1575, "Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)"

NUREG-1515, "A Non-Parametric Statistical Methodology for the Design and Analysis of Final Status Decommissioning Surveys".

NUREG-1517, "Minimum Detectable Concentrations with Typical Survey Instruments for Various Contaminants and Field Conditions".

NRC Decommissions and Regulatory Issue Branch Technical Position, "A Summary of NRC and Interim Radiological Cleanup Criteria and Current Dose Rates" (Nov, 1992).

NUREG/CR5512, "Residual Contamination from Decommissioning".

Industrial Radiation Study No. 27-MH-0987-R2-97, Pelham Range Burial Mound Site Fort McClellan, Alabama 29 August - 15 September 1995 and 14-28 January 1996, U. S. Army Center for Health Promotion and Preventive Medicine.

**14.0 FORMS**

ATG Form-027	Training Record
ATG Form-047	Occupational Radiation Exposure History Letter
ATG Form-109	Site Registration
ATG Form-112	Radiation Exposure Record
ATG Form-116	Contamination Report Index
ATG Form-117	Personnel Contamination Report
ATG Form-118	Clothing Contamination Report
ATG Form-133	Foreman's Report of Injury or Illness



Allied Technology Group, Inc.  
 47375 Fremont Blvd.  
 Fremont, California 94538  
 (800) 227-2840

**OCCUPATIONAL RADIATION EXPOSURE HISTORY**  
**Exposure Year 1999**

Name: \_\_\_\_\_ Social Security Number: \_\_\_\_\_

Address: \_\_\_\_\_ Date of Birth: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

The Occupational Radiation Exposure listed below was received by the above individual while assigned by Allied Technology Group

Project/Location Monitored	Monitoring Method TLD/Film Badge	Record/Estimate	NRC License Number(s):
	TLD Badge #		

Abbreviations: NC - Not Calculated ND - None Detected NM - Not Monitored SA - See attached

Monitoring Period	Deep-Dose Equivalent		Shallow-Dose Equivalent		LDE	CEDE	CDE	TEDE	TODE
	X or γ	Neutron	Total DDE	Extremity SDE, ME					
From									
To									

THIS REPORT IS FURNISHED TO YOU UNDER THE PROVISIONS OF THE NUCLEAR REGULATORY COMMISSION REGULATION 10 CFR PART 20 TITLED "STANDARDS FOR PROTECTION AGAINST RADIATION". YOU SHOULD PRESERVE THIS REPORT FOR FURTHER REFERENCE. ALL DOSE EQUIVALENT VALUES ARE REPORTED IN MILLIREM.

Radiation Safety Officer: \_\_\_\_\_

Date: \_\_\_\_\_

SITE REGISTRATION FORM  
ALLIED TECHNOLOGY GROUP, INC.

**PERSONAL INFORMATION**

Name:		Date:
Social Security:	Date of Birth:	Project Name:
Permanent Address:		
City:	State:	Zip:

**EMPLOYER INFORMATION**

Employer's Name:	
Employer's Address:	
Name of Emergency Contact:	
Address of Emergency Contact:	
Emergency Contact Phone:	
Signature:	

**MEDICAL HISTORY**

List any condition or ailment that may affect your ability to perform your job:	
Indicate if you are epileptic or diabetic:	
List any allergies you have:	
List any medications you are now taking:	
Last Tetanus Shot date:	Date of Last Physical:
Signature:	
Date:	

**FINAL PAYCHECK ADDRESS**

Address:	
City:	
Phone:	

FedEx: <input type="checkbox"/>	Check box at left if you want your check Federal Expressed to you. ATG must deduct a \$15.00 fee from your final pay for this service. If not checked, paycheck will be sent regular mail.
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1995 RADIATION EXPOSURE RECORD

AME:

SOCIAL SECURITY NO:	BIRTH DATE:
EXTREMITY BADGE NO:	LM BADGE NO:
LIFETIME WHOLE BODY EXPOSURE:	

	WHOLE BODY	SKIN	EXTREMITIES		LIFETIME HIGHEST WHOLE BODY
			LEFT	RIGHT	
JANUARY					
FEBRUARY					
MARCH					
QUARTER TOTALS					
APRIL					
MAY					
JUNE					
QUARTER TOTALS					
JULY					
AUGUST					
SEPTEMBER					
QUARTER TOTALS					
OCTOBER					
NOVEMBER					
DECEMBER					
QUARTER TOTALS					
ANNUAL TOTALS					



**PERSONNEL CONTAMINATION REPORT**

NAME	DATE
LOCATION WHERE CONTAMINATION OCCURRED:	RWP#
<b>EXTENT OF CONTAMINATION:</b>	
A. INITIAL SURVEY RESULTS:	
B. SURVEY RESULTS AFTER DECONTAMINATION:	
C. RELEASE SURVEY RESULTS:	
<b>SKIN DOSE EVALUATION:</b>	
<p>A. Maximum contamination level conversion from dpm to mrad/hr maximum skin dose rate          _____ dpm (4,000 dpm/mrad/hr) = _____ mrad/hr.</p> <p>B. Maximum skin dose rate Total time skin contaminated          Total maximum skin dose _____ mrad/hr x _____ hr* = _____ mrad**.</p> <p>* If skin contamination cannot be removed, assume a residence time of 48 hours. Contact the Radiation Safety Officer in all cases where skin contamination cannot be reduced below 1000 dpm.</p> <p>** If 75 mrad, contact the Radiation Safety Officer. (75 mrad is equivalent to 75000 cpm on the skin for 4 hours.)</p>	
<b>RADIATION SAFETY OFFICER COMMENTS:</b>	
SIGNATURE (TECHNICIAN)	DATE
SIGNATURE (INDIVIDUAL)	DATE
SIGNATURE (SUPERVISOR)	DATE

## CLOTHING CONTAMINATION REPORT

NAME:	BADGE NO.:
WORK AREA:	
DATE OF OCCURRENCE:	TIME OF OCCURRENCE:
LOCATION WHERE CONTAMINATION OCCURRED:	
JOB BEING PERFORMED:	
WAS WORK COVERED BY RWP? <input type="checkbox"/> YES    OR <input type="checkbox"/> NO	IF YES, RWP#
ANTI-C's WORN? <input type="checkbox"/> YES    OR <input type="checkbox"/> NO	
DESCRIBE:	
EXTENT OF CONTAMINATION, INCLUDING APPROXIMATE AREA:	
CAUSE OF CONTAMINATION:	
METHOD OF DECONTAMINATION:	
RADIATION PROTECTION COMMENTS:	
SURVEY SECTION:	
A.    INITIAL SURVEY RESULTS:	
B.    AFTER DECONTAMINATION:	
C.    RELEASE SURVEY RESULTS:	
HEALTH AND SAFETY OFFICER	DATE
INDIVIDUAL'S SIGNATURE	DATE

**FOREMAN'S REPORT OF ACCIDENT, INJURY OR ILLNESS**

EMPLOYER'S NAME:	
EMPLOYER'S ADDRESS:	
WORK LOCATION:	
WORK LOCATION ADDRESS:	
EMPLOYEE'S NAME:	DATE OF BIRTH:
EMPLOYEE'S ADDRESS:	
IS THIS A WORK RELATED INJURY OR ILLNESS? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	
DATE OF OCCURRENCE:	TIME OF OCCURRENCE:
ACCIDENT OR INJURY DESCRIPTION:	
IS THIS A LOST TIME ACCIDENT, INJURY OR ILLNESS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
IS THIS AN OSHA RECORDABLE ACCIDENT OR ILLNESS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
WAS MEDICAL TREATMENT NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO	
EMPLOYEE SIGNATURE	DATE
WITNESS SIGNATURE	DATE
WITNESS SIGNATURE	DATE
FOREMAN'S SIGNATURE	DATE
PROJECT MANAGER SIGNATURE	DATE