SECTION 00 72 00

ENVIRONMENTAL REQUIREMENTS FOR CONSTRUCTION ON TINKER AIR FORCE BASE

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GENERAL ENVIRONMENTAL REQUIREMENTS FOR CONSTRUCTION ON TINKER AIR FORCE BASE

PART 1 GENERAL

1.1 REFERENCES

The current editions of the publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

10 CFR 835	Occupational Radiation Protection
29 CFR 1910.94	Ventilation
29 CFR 1910.1000	Air Contaminants
29 CFR 1910.1025	Lead
29 CFR 1910.107	Spray Finishing Using Flammable and Combustible Materials
29 CFR 1910.1200	Hazard Communication
29 CFR 1910.134	Respiratory Protection
29 CFR 1910.141	Sanitation
29 CFR 1910.38	Emergency Action Plans
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR 1926.1101	Asbestos
29 CFR 1926.59	Hazard Communication
29 CFR 1926.62	Lead
40 CFR 247	Comprehensive Procurement Guideline for Products Containing Recovered Materials
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 268	Land Disposal Restrictions
40 CFR 355	Emergency Planning and Notification
40 CFR 60	Standards of Performance for New Stationary Sources
40 CFR 61	National Emission Standards for Hazardous Air Pollutants

40 CFR 63	National Emission Standards for Hazardous Air Pollutants for Source Categories
40 CFR 761	Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
40 CFR 763	Asbestos
40 CFR 82	Protection of Stratospheric Ozone
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

OKLAHOMA ADMINISTRATIVE CODE (OAC)

OAC 252 100	Air Pollution Control
OAC 252 626	Public Water Supply Construction Standards

OKLAHOMA STATUTES (OS)

O.S 27A Supp. 1993 2-6-3	Oklahoma Water Supply Systems Act

U.S. AIR FORCE (USAF)

AFMAN 40-201	(2019) Radioactive Material (RAM) Management
AFMAN 48-148	(2020) Ionizing Radiation Protection

TINKER AIR FORCE BASE (TAFB)

TAFB HWMP	(2020) Tinker AFB Hazardous Waste Management Plan
TAFB INRMP	(2020) Tinker AFB Integrated Natural Resources Management Plan

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 33	Standard for Spray Application Using Flammable or Combustible Materials
NFPA 55	Compressed Gases and Cryogenic Fluids Code

U. S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA CPG	Comprehensive Procurement Guidelines (located at https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Storm Water Pollution Prevention Plan; G
Water System Construction Permits; G
AF Form 3952 Chemical/Hazardous Material Request/Authorization; G
Restoration Plan; G
Construction Debris Management Plan
Spray Painting Plan; G
Environmental Management System Awareness Training
Tree Planting/Removal Permit
Tree Protection Plan

SD-03 Product Data

New Boiler Information Form
Affirmative Procurement Documentation

SD-06 Test Reports

AF Form 487 Generator Operating Log (Inspection and Testing)

SD-07 Certificates

Fire Ant Federal Compliance Agreement or state phyto-sanitary certificate
Monthly Hazardous Material Usage Report
Refrigerant Technical Certifications
Refrigerant Installation Record
Debris Management Report

SD-08 Manufacturer’s Instructions

Safety Data Sheets/Material Safety Data Sheets

SD-11 Closeout Submittals

Notice of Termination for Storm Water Discharges, DEQ Form 640-572

1.3 ENVIRONMENTAL PROTECTION

For the purpose of this specification, Environmental Pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to

man; or degrade the utility of the environment for aesthetic and recreational purposes. The control of environmental pollution requires consideration of air, water, and land, and involves noise, solid waste management and management of radiant energy and radioactive materials, as well as other pollutants.

1.3.1 Applicable Regulations

In order to prevent, and to provide for abatement and control of, any environmental pollution arising from the construction activities of the Contractor and his Subcontractors in the performance of this contract, they shall comply with all applicable Federal, State and Local laws and regulations concerning environmental pollution control and abatement.

1.3.2 Protection of Land Resources

It is intended that the land resources within the project boundaries and outside the limits of permanent work performed under this contract be preserved in their present condition, or be restored to a condition, after completion of construction, that shall appear to be natural and not detract from the appearance of the project.

Insofar as possible, the Contractor shall confine his construction activities to areas defined by the plans or specifications, to areas to be cleared for other operations, or to quarry, borrow or waste areas indicated on the plans. This shall be accomplished by installing construction barrier fencing at the limits of construction for the duration of the contract.

At the onset of borrow excavation, topsoil shall be saved for use in restoring the borrow area. Waste and borrow areas shall be leveled or trimmed to regular lines and shaped to provide a neat appearance. In all instances, the restored shall be well drained, to prevent the accumulation of stagnant water.

All activities potentially impacting tree resources including root zones shall be accomplished in accordance with Attachment 12 (Tree Protection Requirements). Except in areas marked on the plans to be cleared, the Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without approval of the Contracting Officer. Any trees, shrubs, grass areas, flower gardens, etc, scarred or damaged by the Contractor’s equipment or operations shall be restored to the original condition at the Contractor’s expense. The Contracting Officer will determine whether damaged trees/shrubs will be removed and replaced or treated and healed. If the Contractor is directed to replace plants, then it shall be to the original condition and degree of establishment. That is, if removed plants were not on an irrigation system, then the replacement plants must be irrigated until they can survive solely on natural precipitation. For replacement trees, this equates to the Contractor providing irrigation for a minimum of two full growing seasons. The Contractor will submit to the Contracting Officer for approval, a restoration plan showing how the damaged area(s) will be returned to their original condition.

The Contractor will be responsible for all erosion control required until the area is accepted by the Contracting Officer as being returned to its original condition. When a temporary ground cover is needed until warm-season grasses can be established, the ground shall be covered with an appropriately anchored biodegradable material such as straw/native hay

mulch, erosion control blankets, hydromulch, or similar material. Cool-season grasses and cereal grains, such as ryegrass and wheat are not permitted without advance approval from the base natural resources function and Contracting Officer. However, permanent native warm-season grasses shall be established prior to contract completion. All grasses must be native and comply with the base Integrated Natural Resources Management Plan, unless waived by the Contracting Officer.

1.3.3 Protection of Water Resources

The Contractor shall not pollute streams, lakes, or reservoirs with fuels, oils, bitumen's, calcium chloride, chlorinated potable water, acids or harmful materials. It is the responsibility of the Contractor to investigate and comply with all applicable Federal, State, County, and Municipal laws concerning pollution of rivers and streams. All work under this contract shall be performed in such a manner that objectionable conditions shall not be created in streams through or adjacent to the project areas.

1.3.3.1 Erosion Control

Surface drainage from cuts and fills within the construction limits, whether or not completed, and from borrow and waste disposal areas, shall, if turbidity producing materials are present, be held in suitable sedimentation ponds; otherwise the surface shall be graded to control erosion within the construction site. Temporary erosion and sediment control measures such as berms, dikes, drains, or sedimentation basins, if required to meet the above standards, shall be provided and maintained until permanent drainage and erosion control facilities are completed and operative. The area of bare soil exposed at any one time by construction operations shall be held to a minimum. Stream crossings by fording with equipment shall be limited to control turbidity, and in areas of frequent crossings, temporary culverts or bridge structures shall be installed before the need arises, and then removed upon completion of the project. Fills and waste areas shall be constructed by selective placement to eliminate silts or clays on the surface that will erode and contaminate adjacent streams. The Contractor shall be required to contain all eroded soil, silt, sand, or other debris on the construction site. When necessary a containment area shall be constructed on the project site to prevent eroded soils or debris from entering storm sewer systems, drainage channels, or streams. The Contractor shall prevent eroded soils or debris from entering, crossing, or standing on existing street and roadways.

1.3.3.2 Storm Water Quality Control

The Contractor is required to comply with the requirements outlined in the Oklahoma Department of Environmental Quality (ODEQ) General Permit for Storm Water Discharges from Construction Activities (OKR10). In brief, the Contractor is required to submit Tinker AFB's Notice of Intent (NOI) form to Tinker's Storm Water Program Management office requesting for the authorization to discharge pollutants for the construction activity. The development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) is required and must be submitted with the NOI. This plan shall provide for the control of storm water runoff from construction activities to reduce storm water contamination. The NOI and SWPPP must be submitted and authorized prior to discharging any pollutants. The Environmental Office can be contacted at (405)734-1228 to obtain further information.

For projects disturbing over an acre of land, the Contractor is required to submit to the ODEQ DEQ Form 605-002A, Notice of Intent for Storm Water Discharges Associated with Construction Activity on Sites of One Acre or More Acres. The Contractor must provide a copy of the certification authorizing the discharge from the ODEQ to Tinker's Storm Water Program Management office before any consideration will be given for authorization for Tinker AFB's NOI.

Adequate Best Management Practices (BMP's) and appropriate control measures shall be included in the SWPPP to prevent construction dirt, chemicals, and/or debris from becoming a pollutant source to storm water discharges and to retain sediment on site. Such measures include but are not limited to silt fences, hay bales, earth dikes, sediment traps, storm drain inlet protection, and temporary/permanent sediment basins. Stabilization practices shall be included in the SWPPP and implemented to preserve existing vegetation and stabilize those portions of the construction site that are disturbed. The Contractor shall be required to amend the SWPPP when there is a change in the project design, operation, or maintenance and when BMP's/control measures are ineffective in minimizing pollution.

The Contractor shall ensure that inspections of the construction site are performed at least every 14 calendar days and within 24 hours after a storm event of 0.5 inches or greater. The Contractor shall inspect the area to ensure that structural control measures and BMP's are effective in preventing the discharge of dirt and construction debris. Any instances of non-compliance shall be corrected within 7 days of the inspection. The Contractor shall annotate these inspections in a report to be kept on site or at an easily accessible location. The report shall summarize the scope of the inspection, person performing the inspection, the date and time, and the major observances relating to the effectiveness of the SWPPP. The inspection report is subject to inspection by the Contracting Officer at any time during construction performance period.

The Contractor's self-inspections will be submitted to the Contracting Officer in batches every 30 days. These submittals, coordinated by the Construction Inspector and approved by the Contracting Officer, should satisfy permit compliance requirements.

The Contractor shall include in the submittals, the maximum height of each piece of construction equipment expected to be used during construction, which is to be submitted to the Contracting Officer prior to the start of construction. For all construction sites with a trailer or office, the Contractor shall post with a brief description of the project, point of contact and the location of the SWPPP. For those without an on-site trailer, the Contractor shall maintain the information at an easily accessible location.

The Contractor shall submit a completed form to terminate coverage under base permit for storm water discharges from construction activities to Tinker's Storm Water Program Management office. Tinker AFB's Notice of Termination (NOT) can be obtained by contacting Tinker's Storm Water Program Management office at (405)734-1228. If NOI was also submitted to the ODEQ for the construction activity, DEQ Form 605-003 must be submitted to the ODEQ. Completed form shall be submitted when final stabilization of construction site has been achieved. Final stabilization means all soil

disturbing activities have been completed and a uniform vegetative state with a density of 70% of native background cover has been established.

1.3.3.3 Spillage

At all times, special measures shall be taken to prevent chemicals, fuels, oils, greases, bituminous materials, waste washings, herbicides and insecticides, cement and surface drainage from entering surface or ground waters. If a spill occurs, the Contractor is responsible for reporting the spill to the Base Fire Department. The Contractor shall dial 911 from a base phone or 737-1117 to report the spill. The Contractor shall also advise the Contracting Officer immediately. The Contractor is liable for all clean-up, damages and repairs that resulted from the spill.

Spill Classification Guidelines: Standard spill classifications will enable response personnel to communicate the extent of a spill to other personnel within a common framework. The Contractor will determine if the spill creates a fire hazard to aircraft or equipment and will post a fireguard. The following classifications are provided:

- Class I or Minor Spill – This spill involves an area less than two (2) feet in any dimension and is not of a continuing nature.
- Class II or Medium Spill – This spill involves an area of less than ten (10) feet in any dimension, or not over fifty (50) square feet in area and is not of a continuing nature.
- Class III or Major Spill – This classification includes spills that are over ten (10) feet in any one dimension or over fifty (50) square feet in total area, or spills that have a continuing source.

1.3.3.4 Disposal

Disposal of any materials, wastes, effluents, trash, garbage, oil, grease, chemicals, etc.; in areas adjacent to streams or other bodies of water shall be subject to the written approval of the Contracting Officer. If any waste material is dumped in unauthorized areas, the Contractor shall remove the material and restore the area to the condition of the adjacent undisturbed area. If necessary, contaminated ground shall be excavated, disposed of as directed by the Contracting Officer, and replaced with suitable fill material, compacted and finished with topsoil all at the expense of the contractor.

1.3.3.5 Flushing & Sampling Requirements for Potable Water System

All newly constructed water mains and/or service lines shall be cleaned and sterilized according to Oklahoma Administrative Code (OAC) 252.626; which requires that all new piping be flushed and cleaned, isolated, and filled with a 50-100 mg/l chlorine solution for a continuous time period not less than 24 hours. A residual of not less than 10 mg/l chlorine must remain after the 24 hour retention period. If retention residual is met, the line will be flushed and sampled for coliform bacteria. Two consecutive safe bacteriological samples separated by a time period of not less than 24 hours must be obtained before the new line may be placed in service. If the 10 mg/l chlorine residual cannot be maintained, or if water samples test positive for coliform bacteria, the sterilization and flushing process shall be repeated until such time as required chlorine residual and bacteriological requirements met. In accordance with National Pollutant Discharge Elimination System (NPDES) requirements and storm water quality

regulations, water flushed from the system shall be de-chlorinated and tested for chlorine prior to discharge. Water shall contain less than 0.1 mg/l total residual chlorine when discharged into any conveyance of the storm water system. See letter from 72 ADS/SGPB at Attachment 1 on Bacteriological Sampling Requirements for Water Line Maintenance for more detailed information. In addition, anytime that a Contractor taps into the bases water supply, they are required to utilize a backflow prevention device to prevent any possible contamination to the bases water supply.

1.3.3.6 Water System Construction Permits

Any project proposing to extend the Tinker AFB potable water system with connections to two or more buildings shall meet the construction permit requirements of "Oklahoma Water Systems Act", 27A O.S. Supp. 1993, 2-6-301 et seq. as directed by Oklahoma Administrative Code Section 252, Chapter 626, Subchapters 3 and 5 (OAC 252:626-3-5). All required documents by the Act should be submitted to the Contracting. The Contractor shall plan accordingly in the scheduling of water permits to allow for ample lead time to accommodate the government (i.e., holidays, down days, etc).

1.3.4 Protection of Fish and Wildlife

The Contractor shall at all times take such steps required to prevent any interference of or disturbance to fish and wildlife. The Contractor shall not be permitted to alter water flow or otherwise disturb native habitat adjacent to the project area that are critical to fish and wildlife. Fouling or polluting of water shall not be permitted. Wash waters and wastes, shall be processed, filtered, ponded or treated by the Contractor and disposed of off base at no expense to the government. Additionally, the discharge of chlorinated water into storm drains, creeks, ponds, or other water bodies is strictly prohibited as it can be lethal to fish and other aquatic life. All chlorinated water must be dechlorinated prior to discharge into base water bodies and drainage systems. Additional measures and precautions are required for areas draining directly to a pond or water way where long-term exposure of chlorine could be lethal to fish and other aquatic species. If disturbing the native habitat is essential to project completion, the Contractor shall request permission, in writing, from the Contracting Officer. The Contractor shall notify the Contracting Officer of any construction that impacts native habitat to determine if any permits, such as a Clean Water Act permit, are required. The contractor shall notify the natural resources office when work sites are within or adjacent to wildlife management areas or other sensitive fish and wildlife habitat for case-by-case requirements for protection. These requirements may include, but not be limited to, protection of the Texas horned lizard, a state sensitive species. Consult the current TAFB Integrated Natural Resources Management Plan (INRMP) for identification and mapping of these resources.

1.3.4.1 Control of Invasive Species (Red Imported Fire Ants)

Certain products coming from Red Imported Fire Ant (RIFA) quarantine areas (as designated by the Oklahoma Department of Agriculture) to Tinker AFB must be certified by either a federal or state inspection before being shipped out of the quarantine areas. This includes soil, plants (trees, shrubs, grasses, flowers, etc) with soil attached, grass sod, used soil-moving equipment, hay and straw, and anything else deemed a threat by any authorized agent of the Oklahoma Department of Agriculture Food and Forestry or United States Department of Agriculture.

The Contractor shall provide written verification to the Government that the products/equipment listed above are coming from non-quarantine areas. Or, if they are coming from quarantined areas, the Contractor shall provide the Government with a signed Federal Compliance Agreement or state phyto-sanitary certificate validating the products/equipment are fire ant free.

1.3.4.2 Control of Invasive Species (Other Flora and Fauna)

The Contractor shall ensure all equipment, tools, plant materials, soil, hay, straw, and any other items brought on Tinker AFB are free of invasive plant and animal species to include, but not limited to, seed, roots/ rhizomes, eggs, or other viable plant/animal parts. Invasive plant/animal species are defined as any plant or animal found on invasive/nuisance species lists published by the federal government (as applicable to Oklahoma), state of Oklahoma (e.g., Oklahoma Aquatic Nuisance Species Management Plan), Oklahoma Invasive Plant Council, and Tinker AFB invasive/ nuisance species lists. The Contractor shall ensure that no invasive plants (as identified on the aforementioned lists or as identified by TAFB natural resources staff) are used for landscaping purposes on Tinker AFB.

1.3.5 Disposal of Removed Material

Unless otherwise specified in other sections of these specifications or unless reusable under the terms of this contract, all removed material shall be disposed of off base. This disposal shall be in accordance with all applicable Federal, State, County, and Municipal laws. Contractor is required to follow Tinker Air Force Base Construction and Demolition Debris Procedures (Attachment 5) to properly track and document all material removed, whether reused, recycled or sent for disposal. If hazardous waste is generated as a result of the project, the Contractor is required to comply with TAFB HWMP.

1.3.6 Dust Control

The Contractor shall be required to maintain all excavations, embankments, stockpiles, haul roads, permanent access roads, plant sites, waste areas, borrow areas, and all other work areas within or without the project boundaries free from dust which would cause a hazard or nuisance to others. Additionally, no visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. Approved temporary methods of stabilization consisting of sprinkling chemical treatment, light bituminous treatment or similar methods shall be permitted to control dust. Sprinkling, to be approved, shall be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times; the Contractor shall have sufficient competent equipment on the job to accomplish this task. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs. Where necessary the planting and maintenance of vegetative ground cover may be employed to control dust. All open-bodied trucks and trailers transporting dusty materials in areas where the general public must access shall have covering or have wetting performed. A dust nuisance shall be defined as a concentration of nuisance insoluble total particulates of less than 15 milligrams per cubic meter (mg/m3). A dust hazard shall be defined as a concentration of any dust that exceeds its Permissible Exposure Limit

(PEL) as listed in 29 CFR 1910.1000 or its Threshold Limit Value – Time Weighted Average (TLV-TWA), Short Term Exposure Limit (TLV-STEL), or Ceiling Value (TLV-C) as listed in "Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices" published by the American Conference of Governmental Industrial Hygienists, Cincinnati, OH.

1.3.7 Maintenance of Pollution Control Facilities During Construction

During the life of this contract the Contractor shall maintain all facilities constructed for pollution control under this contract as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created. During the construction period the Contractor shall conduct and document frequent training courses for his maintenance personnel and provide copies of this training to the Government. The curricula shall include methods of detection of pollution, familiarity with pollution standards, and installation and care of vegetation covers, plants and other facilities to prevent and correct environmental pollution.

1.3.8 Air Quality

1.3.8.1 Generators

AF Form 487 *Generator Operating Log (Inspection and Testing)* shall be completed for every runtime occurrence of a generator(s) or fire pump(s) already placed and secured at the location where it is intended to be operated. Once the generator is installed and proper operation is verified, the contractor shall turn off the unit for the remainder of the contract period until the government takes possession of the unit. Contractor shall comply with all applicable requirements listed in the following

- 40 CFR 63 Subpart ZZZZ
- 40 CFR 60 Subpart IIII
- Air Quality Permit 2015-0383-TVR2
- OAC 252:100.

A copy of all completed AF Form 487 (Attachment 13) shall be provided to Base Environmental Management as part of the closeout documentation.

1.3.8.2 Boilers

Contractor shall submit a New Boiler Notification Form (Attachment 14) to Environment Management Air Quality within 5 days from the date of continuous operation (startup).

1.3.9 Pesticides (Insecticides, Fungicides, Herbicides, Etc.)

Application of all pesticides shall be accomplished by a licensed and certified pest control operator, and in accordance with labeling and state/federal laws. Delivery and storage of pesticides shall be monitored by certified personnel to insure the adequacy of containers and the safe storage of toxic materials. Disposal of containers and chemicals off base shall not pollute natural drainage systems. If hazardous waste is generated as a result of the project, the Contractor is required to comply with AFI 32-7086. The Contractor shall submit any/all pesticides through the Hazardous Material Reporting process in specified in paragraph 1.3 of this section; to include application procedures, quantities, application rates,

and storm water protection measures shall be included in the submittal. The Contractor shall notify the Contracting Officer at least 14 days prior to use of any pesticide.

1.3.10 Green Procurement Program

Tinker Air Force Base has a requirement for the cost effective procurement of environmentally preferable products and services. The Green Procurement Program is defined as the process of purchasing environmentally preferable products; especially products manufactured from recycled and reclaimed materials. The purpose of Tinker AFB's Green Procurement Program is to increase the purchase and use of products with the highest percentage of recovered materials practicable. The U.S. Environmental Protection Agency (EPA) has designated guideline items in the Comprehensive Procurement Guidelines (CPG) for mandatory procurement. These CPG products are products that are or can be made containing recycled materials. In the CPG, the EPA organizes these items into 8 product categories as follows:

1. Construction Products
2. Landscaping Products
3. Non-paper Office Products
4. Paper and Paper Products
5. Park and Recreation Products
6. Transportation Products
7. Vehicular Products
8. Miscellaneous Products

A current detailed listing of these products and recycled content requirements can be found at:

https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program

Once in the website, to view the products, click on a specific product. The following information will be provided: Recommend Recovered Materials Content levels, Product Specifications, and Product Information, which includes the list of suppliers, will be provided. In accordance with 40 CFR 247.2, the Contractor is required to research, propose and utilize these designated products, and any other recycled-content products available in the market place. CPG products with the highest percentage of recovered materials practicable shall be utilized, unless otherwise specified, or if one more of the following exemptions apply:

- Does not meet appropriate performance specifications.
- Is not available competitively (from two or more sources).
- Is not available within a reasonable time frame.
- Is only available at an unreasonable price.

The Contractor shall certify that the percentage of recovered materials to be used in the performance of the contract will be at least the amount required by applicable specifications or other contractual requirements, and shall also estimate the percentage of total material utilized, the Contractor shall provide written explanation and documentation as to why the products were not used. A Recovered Material Determination Form, (Attachment 8), shall be used to document any exemption.

1.4 HAZARDOUS MATERIAL REPORTING

In accordance with the requirements in AFI 32-7086, Hazardous Materials Management, the following management practices are required. The Contractor shall submit the following forms/reports as indicated to the Contracting Officer.

Safety Data Sheets/Material Safety Data Sheets: To assist in the evaluation of health hazards and to provide information pertinent to 42 USC 116, the Emergency Planning and Community Right-to-Know Act (EPCRA), the Contractor shall submit copies of the Material Safety Data Sheets (MSDS) for all hazardous materials used, to the Contracting Officer.

The Contractor shall submit an electronic AF Form 3952, Chemical/Hazardous Material Request/Authorization (Attachment 7a), for all hazardous material that is Contractor furnished or provide information as contract specifies.

Monthly Hazardous Material Usage Report (Attachment 7b): The Contractor is required to furnish to the Contracting Officer a monthly report stating the type, amounts, and locations of Hazardous Materials the Contractor used in the construction of this project. This report shall be provided by the fourth workday of each month for information on the preceding month. If no hazardous materials were used during the preceding month, the contractor will indicate as such by entering “NONE” in the appropriate space on the report(s).

1.5 REFRIGERANT MANAGEMENT

Prior to installation or recovery of refrigerants to or from contracted equipment, the Contractor shall submit: 1) a copy of the refrigerant technical certification for the technician(s) involved in the work as required by 40 CFR (Code of Federal Regulations) part 82, subpart F; and 2) a copy of the certification to the EPA that the Contractor acquired recovery equipment per 40 CFR 82.162.

Contractor shall submit a refrigerant installation record, indicating the amount of refrigerant installed with the contracted equipment, or recovered from equipment contracted for demolition into government furnished containers. In the case of commissioning new or retrofitted equipment, the Contractor shall provide the refrigerant amount determined to be the “Full Charge” as defined in 40 CFR 82.152. Provide information concerning refrigerant losses to the atmosphere, including that associated with warranty work.

1.6 ASBESTOS ABATEMENT

Contracts that include asbestos abatement requirements will adhere to the requirements contained in Attachment 2, Tinker Air Force Base Asbestos Abatement Specification.

1.7 LEAD-BASED PAINT ABATEMENT

Contracts that include lead-based paint abatement requirements will adhere to the requirements in Attachment 3 and Attachment 3A, Tinker Air Force Base Lead-Based Paint Abatement Specifications.

1.8 PCB FILLED BALLAST TRANSFORMER & UNIVERSAL WASTE LAMP ABATEMENT

Contracts that include PCB-filled ballast, PCB-filled transformer and universal waste lamp abatement requirements will adhere to the requirements contained in Attachment 4, Tinker Air Force Base PCB Filled Ballast and Universal Waste Lamp Abatement Specifications.

1.9 SPRAY FINISHING

Spray finishing operations (painting) shall be used only after the written approval of the Contracting Officer. The Contractor shall submit a spray painting plan, a list of resultant cost savings, and a list of procedures, which indicates methods of isolating the contract area from other areas of the building. The plan shall provide for air infiltration, isolation of work area and complete work safety methods as outlined in applicable regulations and specifications. The Contracting Officer shall evaluate the plan and decide if spraying will be allowed. Adherence to applicable regulations is mandatory for continued operation of spraying. Applicable regulations include, but are not limited to:

29 Code of Regulations (CFR) 1910.94, Ventilation

29 Code of Federal Regulations (CFR) 1910.107, Spray Finishing Using Flammable and Combustible Materials.

NFPA 33 Spray Application of Flammable and Combustible Materials

When spray painting is being performed in occupied areas, all personnel with the exception of painters and their helpers shall be removed. The area shall be physically isolated from the occupied areas by the use of plastic or some other vapor proof barrier. This isolation shall remain in place until the paint has cured and dried and is no longer emitting air contaminants. Local exhaust ventilation IAW OSHA regulations listed above shall be utilized in the isolated area to remove air contaminants so they do not build to an explosive level or exceed the capacity of the respirator being worn. This local exhaust ventilation shall not be directly vented to the outdoors unless a permit has already been obtained from the Oklahoma City/County Health Department for air contaminants prior to discharge to the environment. Storage use and handling of all portable cylinder gases shall comply with NFPA 55.

1.10 ENVIRONMENTAL MANAGEMENT SYSTEM AWARENESS TRAINING

An Environmental Management System (EMS) is a system to achieve continual improvement in mission performance by reducing environmental risks and cost. To help meet these goals, all contractors working on TAFB are required to receive EMS awareness training.

The Contractor will be responsible to ensure that all personnel working on Tinker AFB (including sub-contractors) review the one page Environmental Management System (EMS) Awareness Training sheet, Attachment 9; the EMS General Awareness Training for Contractors presentation (PowerPoint file available from the Contracting Officer); and the Installation Commanders' Environmental Policy memo found in Attachment 10. A copy of Attachment 9, signed by the contractor and certifying that all personnel have received this training, shall be submitted to the contracting officer.

1.11 UNEXPECTED DISCOVERIES OF ARCHEOLOGICAL RESOURCES

In the event of the discovery of unexpected archeological resources (i.e. human remains or cultural items) during construction, contractors shall follow the guidelines set in the Integrated Cultural Resource Management Plan (2005) Section E.13, *Unexpected Discoveries of Archeological Materials During Construction Projects*. A copy of this document is included as Attachment 11.

1.12 USING RADIOACTIVE MATERIALS

When a civilian organization or other Federal agency desires to bring radioactive material onto or conduct operations using radioactive materials, written approval must be obtained from the installation RSO. The request must be at least 30 calendar days before bringing the materials onto the installation. The installation RSO is located in the BEF.

Per AFMAN 48-148: Use of RAM or radiation devices by contractors, as specified by contract. Note: Contractors are solely responsible for the health and safety of their personnel as specified in their contract. New AF facilities designed for use of RAM or radiation sources shall be constructed so that a member of the public will not likely receive more than 0.02 mSv (2 mrem) deep-dose equivalent in any one hour and 1 mSv (100 mrem) total effective dose equivalent (TEDE) in a calendar year from the normal operation of the facility.

Per AFMAN 40-201: Establish a unified approach to the management and safeguarding of RAM used by the USAF or contractors working on USAF installations world-wide. Provide assistance to the Contracting Squadron in evaluating compliance with this instruction, local instructions and Federal regulations on procurement of RAM and contractor use. Ensure that contractors supporting the PM coordinate with the IRSO prior to bringing RAM onto USAF installations. Ensure contractors are fully informed (orally and in writing) of the requirement to possess the appropriate licensure. In areas of exclusive Federal jurisdiction, contractors must have an NRC license, or an Agreement State license with current NRC Form 241, authorizing possession, use, storage, and transfer of RAM on the installation. Written approval from the installation commander's appointed approval authority is also required; this is normally the IRSO. Ensure contractors have established procedures instructing their employees and subcontractors on how to use their RAM safely. Contractors are solely responsible for the safety and health of their employees and subcontractors. Contractors shall immediately contact the IRSO and contracting officer if radioactive devices/items may impact operations, personnel, facilities, or real estate. Ensure that all contracts involving RAM contain the terms and conditions the IRSO has determined must be in the contract in order to be in compliance with all applicable statutes, regulations and instructions for managing RAM in the USAF. Contracts involving use of RAM must have:

- An NRC or Agreement State license. A copy of the NRC Form 241 must be an adjunct to the Agreement State license for those areas of exclusive Federal jurisdiction. For those areas of concurrent or proprietary jurisdiction in an agreement state, then the respective Agreement State license is a valid authorization; or

- A valid US Navy or Veterans Affairs (VA) RAM permit; or

- Written certification from DOE organizations or DOE prime contractors that they are exempt from NRC license requirements; and

- Written approval from the IRSO to transfer, transport, or use temporary storage areas for RAM on the installation.

- A clause authorizing the IRSO to suspend unsafe operations involving the use of RAM.

- Provides all design reviews and work order requests involving potential use, movement or disposal of RAM to the IRSO for review and approval prior to allowing work to commence on contract. Work requests without prior approval of the IRSO will be denied.

- In coordination with the IRSO, and IAW the terms and conditions of the contract, suspends contractor operations that violate this instruction, a permit, or Federal regulations until corrective action is taken.

The non-USAF organization must send a request to the IRSO at least 30 calendar days before bringing the RAM onto the installation. For contractors, these requirements must be included in the statement of work.

Requests must be in writing and include:

- A brief description of the proposed activities;

- A copy of a current NRC or Agreement State license with current NRC Form 241 for areas of exclusive Federal jurisdiction, when applicable. For those areas of concurrent or proprietary jurisdiction in an Agreement State, then the respective Agreement State license is a valid authorization. The license must either specifically list the installation or authorize approval for work at temporary job sites anywhere in the United States where the NRC or Agreement State has jurisdiction.

  Exception: Contractors using generally licensed materials (e.g., certain NITON Lead Paint Analyzers) and DOE or DOE prime contractors operating IAW 10 CFR 835 do not require an NRC license or NRC Form 241.

A written authorization in the contract that the IRSO can conduct periodic assessments to ensure contractor personnel is complying with radiation safety practices to prevent exposures to USAF personnel and avoid contamination of government property. In addition, the contract should specify the IRSO must have authority to suspend contractor operations believed to be unsafe.

1.13 LIST OF ATTACHMENTS

Attachment 1	Bacteriological Sampling Requirements
Attachment 2	TAFB Asbestos Abatement Specifications
Attachment 3	TAFB Lead-Based Paint Abatement Specifications for High Priority Facilities.
Attachment 3a	TAFB Lead-Based Paint Abatement Specifications for Industrial Facilities.
Attachment 4	TAFB PCB-Filled Ballast, PCB-Filled Transformer and Universal Waste Lamp Specifications.

Attachment 5	TAFB Construction and Demolition Debris Management Procedures
Attachment 6	TAFB hazardous Waste Management Procedures
Attachment 7a	AF Form 3952, Chemical/Hazardous Material Request/ Authorization
Attachment 7b	Monthly Hazardous Material Usage Report
Attachment 8	Recovered Material Determination Form
Attachment 9	Environmental Management System Awareness Training
Attachment 10	Environmental Policy Statement
Attachment 11	Integrated Cultural Resource Management Plan (2005), Section E.13 – Unexpected Discoveries of Archeological Materials During Construction Projects
Attachment 12	Tree Protection Requirements
Attachment 13	AF Form 487, Generator Operating Log (Inspection and Testing)
Attachment 14	Information for New Boilers

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section –

ATTACHMENT 1

Bacteriological Sampling Requirements

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 72 MEDICAL GROUP (AFMC)
TINKER AIR FORCE BASE OKLAHOMA

SUBJECT: Bacteriological Sampling Requirements for Water Line Maintenance

In the event of a water line break or installation of a new line, certain steps must be taken to ensure the water meets standards set by the Safe Drinking Water Act. Oklahoma Department of Environmental Quality (DEQ) promulgated legislative code to administer EPA regulations. This month, DEQ revoked existing code and replaced it with updated, more flexible code (see Attachment 1). Subsequently, Tinker AFB procedures must be updated. The updated procedures for disinfection after a line break or installation are consistent with the DEQ code and now allow more operational flexibility.

a. New water mains. According to Oklahoma Administrative Code (OAC) 252.626, all new mains will be flushed and cleaned, isolated and filled with a 50 – 100 mg/l chlorine solution. A residual of at least 10 mg/l chlorine must exist after 24 hours retention. If retention residual is met, the line will be flushed and sampled for coliforms Two consecutive safe bacteriological samples must be obtained before the new line may be used. Civil Engineering personnel must coordinate all sampling for new construction with Bioenvironmental Engineering or supply certified sampling results to Bioenvironmental Engineering for any new line installation. In accordance with National Pollutant Discharge Elimination System (NPDES) requirements and storm water quality regulations, water flushed from the system shall be de-chlorinated and tested for chlorine prior to discharge. Water shall contain less than 0.1 mg/l total residual chlorine when discharged into any conveyance of the storm water system.

b. Existing System Maintenance.

1) Wells that are inactive for more than 6 months must be treated as new wells when they are brought back on-line. Therefore the procedures outlined in paragraph 1a.

2) The following procedures apply to water lines which are wholly or partially de-watered during the course of system maintenance. These procedures do not apply to repairs made with clamping devices if the line remains pressurized. Such repairs require no disinfection.

(a) Liberal quantities of hypochlorite shall be applied to open trench areas around the repair to reduce the possiblity of contamination of the water line. This area disinfection shall occur only when the interior of the water line is exposed.

(b) All pipes, elbows, couplings and fittings used to make the repair shall be sprayed with a 1% hypochlorite solution before installation.

ATTACHMENT 1

Bacteriological Sampling Requirements (cont.)

(c) Where practical, the section of repaired line shall be isolated, flushed and chlorinated with a 50 – 100 ppm chlorine solution and allowed to stand for 24 hours. If the section cannot be isolated for long periods of time, chlorination may be increased to 300 ppm with a 15 minute contact time.

(d) Once the appropriate chlorination/contact time option has been accomplished, the repaired section of line shall be flushed. Flushing shall occur toward the work location and shall continue until all discolored water has disappeared. In accordance with National Pollutant Discharge Elimination System (NPDES) requirements and storm water quality regulations, water flushed from the system shall be de-chlorinated and tested for chlorine prior to discharge. Water shall contain less than 0.1 mg/l total residual chlorine when discharged into any conveyance of the storm water system.

(e) After the lines are flushed, repair peronnel shall coordinate water sampling with Bioenvironmental Engineering. Water service shall remain "on" during sample incubation, but customers shall be notified to avoid consuming the water (an example is attached). Repair personnel are responsible for accomplishing all notifications.

(f) If water samples test postive for coliform bacteria, this process shall be repeated. Once water samples test negative for coliform bacteria, this process terminates.

2) In the event the sampling must be accomplished after duty hours, the Bioenvironmental Engineer technician on call can perform the sampling. On-call personnel can be contacted through the Fire Department control room, 4-7964.

2. Please direct suggestions or questions to Bioenvironmental Engineering at 734-7844.

ATTACHMENT 1

Bacteriological Sampling Requirements (cont.)

DO NOT DRINK THE WATER !!

Due to the recent water line break, we must rule out bacteriological contamination. Bioenvironmental Engineering has taken water samples and will receive results in 1 to 2 days.

Water may be used for hygiene purposes (toilets, showers, handwashing, etc). If you must use water for cooking or drinking, please boil it for at least 20 minutes.

You may smell a strong chlorine odor due to line repair disinfection. This odor will diminish in 1 to 2 days. We will notify you when the water use restriction is lifted.

Please contact Bioenvironmental Engineering (4-7844) with questions.

ATTACHMENT 2

TINKER AIR FORCE BASE ASBESTOS ABATEMENT SPECIFICATIONS

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PART A

GENERAL

The requirements for asbestos abatement are stated herein. The drawings or statement of work associated with this project outline the work area that contains asbestos and the work to be accomplished. In case of conflict between the drawings and the specifications, the specifications shall govern. The following regulations, their appendices, memorandums, attachments and other appurtenant documents, which form a part of these regulations, shall apply in their entirety.

A.1 Title 29 Code of Federal Regulations (CFR), Section 1926.1101 including all appendices and memorandums, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor, latest edition.

A.2 Title 40 CFR, part 61, Subparts A and M, National Emission Standards for Hazardous Air Pollutants, U. S. Environmental Protection Agency (EPA), latest edition.

A.3 Title 29 CFR, Section 1910.134, Respiratory Protection (OSHA), latest edition.

A.4 Title 40 CFR, Part 355.40, Emergency Planning and Notification, latest edition.

A.5 Title 49 CFR, Part 172, Hazardous Material Tables and Hazardous Materials Communications Regulations, latest edition.

A.6 The Asbestos Contractor shall have in his possession, at the job site and in view, one copy of each of the following: OSHA Reg 1926.1101, EPA 40 CFR, Part 61, subparts A and M, and the Tinker AFB Asbestos Specification.

A.7 Where a conflict exists between the requirements of this specification and any of the above-mentioned regulations, the most stringent shall be applicable.

A.8 All Asbestos Contractors are encouraged to make a pre-bid site visit, to ensure familiarization with site conditions and the extent of the work requirements.

A.9 Health Warnings: Asbestos Contractors are warned that unprotected exposure to asbestos fibers has been determined to significantly increase risk of incurring four diseases; lung cancer, gastrointestinal cancer, mesothelioma, and asbestosis. Care must be taken to avoid releasing or causing to be released, asbestos fibers into the atmosphere. The Government assumes no liability for damages, personal injuries, illness, disabilities or death to the Asbestos Contractor, Asbestos Contractor Employees, and other persons subject to the Asbestos Contractor’s control or to any other person including members of the general public, arising from, or incident to the purchase, use, disposition, subsequent operations performed on, contact with or exposure to the asbestos, provided such is caused or contributed to in any manner by the Asbestos Contractor. Heat Stress: The Contractor should also be aware that due to the nature of asbestos

work, the wearing of respirators, impermeable clothing, material to be abated (steam lines, boilers, etc.), and containment could all add to heat stress.

A.10 Property Damage: The Asbestos Contractor shall be responsible for all damages caused by or during the abatement. All damaged areas shall be restored to their original condition subject to approval by the Contracting Officer. Any repair or replacement shall be done at no cost to the Government.

A.11 Quality Assurance: The Asbestos Contractor shall ensure all employees are knowledgeable of and comply with the procedures listed in this specification. Work shall not begin each day until a monitor from CE is on site.

A.12 Glovebag Removal: Glovebags shall not be used on surfaces whose temperatures exceeds 150 Fahrenheit, shall not be larger than 60 inches X 60 inches and shall not be used more than once or moved after use. Two employees per glovebag and all employees monitored.

A.13 HEPA Filters/Shower Filters: All filters shall be new at the beginning of the project.

A.14 All asbestos removal shall be supervised by a Competent Person and shall have daily air monitoring.

A.15 Air Monitoring: The Asbestos Contractor shall use an independent laboratory for air monitoring and analysis support.

A.16 Site Security: The Contractor shall be required to provide security at all Negative Pressure Enclosures after abatement has begun and until clean air has been established. This employee shall maintain the negative pressure enclosure, prevent unauthorized entry, watch for fires within the negative pressure enclosure, and guard Contractors material/equipment.

A.17 Fire Protection: The work area shall have dry-change ammonium fire extinguishers with a UL rating of at 10A:B:C, with a valid inspection tag for every 1500 square feet of area for Negative Pressure Enclosures and at least one extinguisher for every glovebag removal area.

PART B

DEFINITIONS

The following is a listing of terms and definitions for this specification.

B.1 Class I Asbestos Work: Work activities involving removal of TSI, surfacing ACM, and PACM.

B.2 Class II Asbestos Work: Work activities involving the removal of ACM, which is not thermal system insulation or surfacing material. Removal of non-friable building materials such as asbestos wallboard, floor tile, roofing, siding, shingles, construction mastics, etc. are examples of Class II Asbestos Work.

B.3 Class III Asbestos Work: Means repair and maintenance operations, where "ACM", including thermal systems insulation and surfacing material is likely disturbed.

B.4 Class IV asbestos work: Includes maintenance and custodial activities where employees contact but do not disturb ACM or PACM, as well as activities to clean up dust, waste, and debris resulting from Class I, II, and III activities. Activities include, but are not limited to, vacuuming carpets, mopping floors, and dusting surfaces.

B.5 Abatement: Procedures to control fiber release from asbestos containing materials. This includes removal, encapsulation and enclosure.

B.6 Air Monitoring: The process of measuring the fiber concentration of a specific volume of air over a specified period time.

B.7 Airlock: An enclosure consisting of two polyethylene curtained doorways (3 sheets of plastic per doorway) at least 3 feet apart.

B.8 Amended Water: A mixture of at least one ounce of 50 percent polyoxyethylene ester or 50 percent polyoxyethylene ether in five gallons of water.

B.9 Asbestos: A group of naturally occurring minerals that separate into fibers. There are six asbestos minerals used commercially: chrysotile, amosite, crocidolite, anthophyllite, tremolite and actnolite and any of these minerals that has been chemically treated and/or altered.

B.10 Asbestos Containing Material (ACM): Any material containing more than 1 percent asbestos.

B.11 Asbestos Contractor: A private entity certified in asbestos abatement.

B.12 Asbestos Fiber: A particulate form of asbestos 5 micrometers or longer with a length to diameter ratio of at least 3:1.

B.13 Authorized Visitor: Any representative of a regulatory or other agency having jurisdiction over the project or anyone authorized by CEIE and is required by work duties to be present in the regulated area.

B.14 Clean Room: An uncontaminated area or room which is part of the worker decontamination enclosure with provisions for storage of worker's street clothes and protective equipment.

B.15 Competent Person: One who is capable of identifying existing and predictable hazards in the surroundings or working conditions and has authorization to take prompt corrective measures to eliminate the hazards. The Competent person must be an employee of the Asbestos Contractor and shall be named as that person in the project pre-abatement submittals. The Competent person shall meet the criteria of the EPA's Model Accreditation Plan for Supervisors 40 CFR Part 763 and duties required by Subpart C of 29 CFR 1926.20 through 1926.32.

B.16 Decontamination Enclosure System: A series of connected rooms and airlocks used for the decontamination of workers and of materials and equipment (i.e., airlock, clean room, airlock, shower, airlock, dirty or equipment room, airlock, work area).

B.17 Demolition: The wrecking or taking out of any load supporting structural member and related asbestos containing materials.

B.18 Employee: Any person working for the Asbestos Contractor who physically engages in the abatement of asbestos or performs a task on the job site.

B.19 Encapsulant (Sealant): A material applied to asbestos containing materials to control the release of asbestos fibers by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components (penetrating encapsulant).

B.20 Encapsulate: The application of a sealant to asbestos containing materials to control the release of asbestos fibers.

B.21 Enclosure: The complete enclosing of asbestos containing material behind airtight, impermeable, permanent barriers.

B.22 Equipment Room: A contaminated room which is part of the worker decontamination enclosure system used for storage of contaminated clothing and equipment.

B.23 Friable Asbestos: Any material or combination of materials containing more than 1% asbestos than hand pressure can crumble, pulverize or reduce to powder when dry.

B.24 General Contractor: Shall deem to exercise general supervisory authority over the work even though the General Contractor is not qualified to serve as the “competent person” as defined in 29 CFR 1926.1101 paragraph b. The General Contractor shall have the overall responsibility that his Subcontractor(s) are in compliance with this standard and all other regulations covering asbestos abatement.

B.25 Glovebag: An asbestos labeled bag constructed of 6 mil or greater transparent plastic, two inward projecting long-sleeve rubber gloves, one inward projecting water wand sleeve and an internal tool pouch.

B.26 HEPA Filter: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97 percent of particles (asbestos fibers) greater than 0.3 micrometers in diameter.

B.27 HEPA Vacuum Equipment: Vacuuming equipment with a HEPA filter system.

B.28 Load-Out Area: An area designated for controlled transfer of asbestos waste and equipment. This area can be adjacent to the equipment room or work area and must have two airlocks.

B.29 Landfill (approved): An EPA approved site for the disposal of asbestos containing materials and other hazardous waste.

B.30 Mini-Containment: A small enclosure intended for a small scale abatement procedure from the environment through negative air pressure, physical barriers, and/or other means, mini-containments will ordinarily not have an attached decontamination system.

B.31 Negative Pressure Enclosure (NPE): An enclosure of the regulated area with a minimum of -0.02 column inches of water pressure relative to the outside area using HEPA filtered negative air pressure equipment, four (4) air exchanges per hour. This shall be maintained within the NPE as evidenced by a manometer. The NPE also has a decontamination facility and a load-out area.

B.32 Negative Air Pressure Equipment: A portable local exhaust system equipped with HEPA filtration and capable of maintaining low velocity airflow into a contaminated area from an adjacent uncontaminated area.

B.33 Objects: Fixed items are those which cannot be removed from the work area. Moveable items are those which can be removed from the work area.

B.34 Non-Friable Asbestos: Any material containing more than 1% asbestos by weight that hand pressure cannot crumble, pulverize or reduce to powder when dry.

B.35 Presumed Asbestos Containing Material (PACM): Thermal systems and surfacing material found in buildings constructed no later than 1985, that the Government has not verified the absence of asbestos.

B.36 Plasticize: To cover with plastic sheeting.

B.37 Personal Protective Equipment (PPE): Disposable, impervious coveralls that are equipped with head and foot covers, gloves, and respirators.

B.38 Regulated Area: The area surrounding the work area demarcated by danger warning tape and signs. All personnel entering the regulated area must wear full PPE.

B.39 RACM: Regulated asbestos-containing materials.

B.40 Shower Room: A room between the clean room and the equipment room in the worker decontamination enclosure with hot, cold, or warm-running water suitably arranged for complete showering during decontamination. Showers shall comply with 29 CFR 1910.141. All wastewater shall be filtered to the one (1) micron level prior to being discharged into the sewer system.

B.41 Warning Labels and Signs: Signs and labels which conform to OSHA CFR 1910.1200 (f), and 29 CFR 1926.1101 (8).

B.42 Wet Cleaning: The process of eliminating asbestos contamination by using cloth’s, mops, or other cleaning tools which have been dampened with amended water.

B.43 Work Area: A regulated area where asbestos is abated. A contained work area is sealed, plasticized and equipped with a decontamination enclosure system. A non-contained work area is not plasticized but is

equipped with a decontamination enclosure system and is demarcated by danger warning tape.

B.44 CEIE: Asset Management Division

B.45 BEF: Bio-environmental Engineering Flight.

B.46 CE: Civil Engineering Directorate.

PART C

PRE-ABATEMENT SUBMITTALS

The Contractor shall submit all required pre-abatement submittals to the Contracting Officer at least five working days prior to commencement of work for review and/or approval. After completion of the submittal review, additional information may be required for clarification of or in support of documents submitted. The required submittal areas include, but are not limited to the following:

C.1 Documentation of Contractor License and Proof of Insurance: Include a copy of Contractor's current Oklahoma State Abatement License and their required Proof of liability insurance.

C.2 Documentation of Training/Experience: All training must meet the criteria of 40 CFR 763 and 29 CFR 1926.1101. All abatement employees must be certified in accordance with 40 CFR 763 and 29 CFR 1926.1101, and certifications must be current throughout the contract period.

C.3 Regulatory Agency Notification: Verify that NESHAPS report (attachment) was received by the following agency and a copy of this verified report must be submitted to the Contracting Officer prior to start of work: The NESHAPS coordinator is located in Oklahoma City, the Compliance Section, Air Quality Division, Oklahoma Department of Environmental Quality, 707 North Robinson, Oklahoma City, OK 73102.

C.4 Security Documentation: Work area and equipment must be secured at all times to ensure no unauthorized persons enter contaminated or asbestos storage areas. The Contracting Officer prior to starting the asbestos abatement must approve storage sites for all contractor equipment.

C.5 Communications: The Contractor shall submit the Contracting Officer a phone and/or pager number where the General Contractor Supervisor and the Competent Person of the Asbestos Contractor may be reached at all times.

C.6 Step-by-Step Abatement Procedures: This applies to friable and non-friable asbestos abatement procedures for each distinct location.

C.7 Glovebag Procedures: The submittal for glovebag procedures shall include but not be limited to the following:

- Sizes and type of bags to be used.

- Glovebag installation insuring leak-proof system.

- Method used for smoke testing bag.
- Type and manufacturer of negative air equipment.
- Method to be used to maintain Negative pressure within the negative air bag.
- Method used to provide makeup air without creating a fiber release.
- Negative air bag design to insure work accomplishment while maintaining continuous negative pressure.
- Composition of amended water or wetting agent used.
- Bridging encapsulant used.
- Manufacturer’s specifications for HEPA vacuum.
- Personal protective equipment (respirators, suits, etc.).
- Method of regulating the work area (signs, barrier tape, etc.).
- Procedures for removal of ACM within the negative air bag.
- Method of support for wet ACM within the negative air bag.
- Disposal method (storage type, location, transporter, landfill name and location, etc.).
- Decontamination unit location with respect to the regulated area, water filtration and disposal.

C.8 Negative pressure enclosure construction procedures, including drawings. Drawings will show layout of the containment, how containment walls are to be attached, decontamination unit, load-out area, location for negative air machines, structural design of the containment and materials used in the construction of the containment.

C.9 Respirator Protection Program: IAW OSHA 29 CFR, Section 1910.134, 1926.1101 and ANSI Z88.2-80. Manufacturer’s certification (including TC#) that all asbestos respiratory protective devices are NIOSH approved.

C.10 Manufacturer’s Certification: Vacuum’s, air purifying equipment, negative air pressure equipment and other local exhaust ventilation equipment must conform to ANSI Z9.2-79.

C.11 Encapsulation Procedures: Type of encapsulate, method of application and location. Asbestos encapsulants being used must meet the following minimum criteria:

- Penetrating Encapsulant, Class A fire rating, oil/chemical resistant, non-toxic when applied and colored.

- Bridging Encapsulant, Class A fire rating, seamless, flexible, impact resistant, micro-porous, algae/mold resistant, oil/chemical resistant, bird/rodent proof, non-toxic when applied, colored and waterproof.

C.12 Laboratory and Monitoring Requirements: The Asbestos Contractor must use an independent laboratory for air monitoring and analysis support (see part E, para 1.3 for required monitoring qualifications). Should the contractor change independent laboratories while the contract is in progress, the Contractor shall resubmit the qualifications/certifications of the new laboratory for approval by the Contracting Officer. The new laboratory must participate in the bulk asbestos analysis program with the National Voluntary Laboratory Accreditation Program (NVLAP) and shall have a good record in the program. The new laboratory must also participate in the Proficiency Analytical Testing (PAT) program with the National Institute of Occupational Safety and Health (NIOSH).

C.13 Asbestos Waste Transporter Requirements: Certification of Insurance showing the transporter has $1,000,000.00 Environmental Impairment and Transportation coverage as required by the State of Oklahoma. Certifications and physicals for personnel transporting and unloading material.

C.14 Landfill Qualifications: Written evidence that the landfill for disposal of the asbestos is approved for the disposal of asbestos by the USEPA and they will accept the material.

C.15 Safety Data Sheets/Material Safety Data Sheets (SDS/MSDS): A MSDS shall be submitted for all chemicals to be used on the project.

C.16 Work Schedule: Provide starting date, completion date, days to be worked (weekdays/weekends) and hours to be worked. If the abatement will be conducted at any time other than 0700 to 1600 hours, Monday through Friday, justification must be furnished and approved by the Contracting Officer. Any requests for variance from this specification shall be in writing and submitted to the Contracting Officer at least ten (10) days in advance. Approval shall be at the discretion of the Contracting Officer.

C.17 Emergency Plans and Fire Prevention Plans: As detailed in 29 CFR 1910.38.

C.18 Written Hazardous Communication Program: As detailed in 29 CFR 1926.59.

C.19 Rental Equipment: Provide a list of all rental equipment and written verification that the rental company has been informed that equipment is to be used for asbestos related activities.

PART D

ABATEMENT MATERIAL REQUIREMENTS

D.1 Deliver all materials in the original unopened packages, containers or bundles bearing the name of the manufacturer and the brand name.

Materials must be approved by the Contracting Officer before their use.

D.2 Store all materials subject to damage off the ground and under cover to prevent damage or contamination. Material to be used on the project site shall not be stored in the same location where the asbestos waste is located.

D.3 Damaged to deteriorating material shall not be used and shall be removed from the construction site immediately by the Contractor. The cost of the removal or disposal shall be the responsibility of the Contractor and at no cost to the Government.

PART E

AIR SAMPLING AND MONITORING ALL CLASSES OF REMOVAL

NOTE 1: Air monitoring shall be required by all Contractors on all asbestos projects on Tinker AFB.

NOTE 2: A "Third Party" Industrial Hygienists or Contracted Air Sampling Technician, required for all asbestos abatement projects, shall be required to remain at the project site while the Contractor is working.

E.1 Air sampling data must include sample volume, sampling times, sampling locations (with appropriate dimensions and sketches), evidence of periodic inspection of sampling equipment, documentation of pre and post calibration of equipment, detailed description of work conditions, and description of worker protective devices.

E.2 Laboratory analysis data must include sample identification, total sample duration, sample flow rate, total air volume, total fibers counted, and total field concentration in fibers per cubic centimeter.

E.3 All air sampling and monitoring shall be conducted by an Industrial Hygienist or an individual properly trained in air sampling and monitoring as determined by the Contracting Officer and be IAW OSHA 29 CFR, Section 1926.1101, Appendix A-OSHA Reference Method.

E.4 The contractor may request to perform pre-abatement background sampling. We recommend one background sample for every 1500 square feet of work area, and at least one sample per room or distinct restricted area. BEF or the Asbestos Program Manager (APM) may request to review background sampling prior to start of work. When back-ground sampling is not performed the clearance shall be less than or equal to 0.005 fibers/cc.

E.5 Clearance Sampling is the Contractor's responsibility. Collect one clearance sample for every 1500 square feet of work area, but as a minimum, one sample per room or distinct restricted area. The aggressive sampling method shall be used. Clearance shall be 0.005 fibers/cc or pre-abatement sample concentration, whichever is more stringent.

E.6 Clearance Failure: Should clearance results fail the final clean-up requirements, the Contractor shall pay all costs associated with all

required re-cleaning, re-sampling and analysis until final clearance requirements are met.

E.7 Blank samples: Include 10% field blanks or a minimum of 2 (two) field blanks as required by 29 CFR 1926.1101, Appendix A.

E.8 A minimum of 1 (one) area sample from each work shift shall be collected for each 1500 square feet of work area or one sample for each restricted area.

E.9 If at any time the results of the air samples rise above the OSHA Permissible Exposure Limit (PEL), a confirmation asbestos fiber count analysis will be required. If the confirmation count exceeds the PEL, the abatement will stop immediately and clean down procedures will be required. Cleaning will continue until air sample results are below the PEL.

E.10 Personal Sampling: The Asbestos Contractor's Industrial Hygienist (IH) shall conduct personal sampling at all times unless all employees are equipped with supplied air respirators in the pressure demand mode.

E.11 All personal samples must be taken at the breathing zones of persons who are performing asbestos abatement. The open face of the filter cassette must face downward during sampling.

E.12 Twenty-five percent of the asbestos abatement employees must be sampled per work shift in each work area. A minimum of two personal samples must be collected each shift from each work area.

E.13 Excursion limit: The Contractor shall ensure that no employee is exposed to airborne concentrations of asbestos in excess of 1.0 f/cc of air (1 f/cc) as averaged over a sampling period of thirty (30 minutes, as determined by the method prescribed in 29 CFR 1926.1101, Appendix A.

E.14 All personnel performing glovebag removal shall be monitored.

E.15 Contractor's shall submit air monitoring results to the Contracting Officer prior to the beginning of the next work shift.

PART F

RESPIRATORY PROTECTION

F.1 The Contractor shall implement a respiratory protection program in accordance with 29 CFR 1926.1101 and 1910.134. All respirators shall be NIOSH approved.

PART G

CLASS I ASBESTOS REMOVAL, NEGATIVE PRESSURE ENCLOSURE (NPE) AREA PREPARATION

G.1 Visually inspect area to be contained by the Negative Pressure Enclosure (NPE) and identify material to be removed. Locate any hazards that could harm Contractor employees or the containment.

G.2 Post signs and tape as specified by OSHA 29 CFR 1926.1101(k)(7) and 29 CFR 1910.1200 (f).

G.3 Have CE Monitor or the Construction Inspector contact the Civil Engineering Electrical Shop for the best location for the Contractors licensed electrician to hook-up the GFI and to lock-out and tag-out electrical circuits to work area without interfering with power to other Government operations.

G.4 Shut down and seal with 2 layers of 6 mil plastic sheeting all openings, including heating, cooling, and ventilating air systems, to prevent fiber dispersal to other areas.

G.5 Pre-clean movable objects from within work area(s) using HEPA vacuum and/or wet cleaning methods and remove from work are to a temporary location. Pre-clean fixed objects within the work area and plasticize with two (2) layers of 4 mil or greater plastic sheeting to provide an airtight, waterproof seal.

G.6 Pre-clean the proposed work area(s) using HEPA vacuum and wet wiping method. Special attention shall be paid to places/material that could hold asbestos fibers. Activities such as dry sweeping or vacuuming with non-HEPA filter vacuums are prohibited.

G.7 After the area is pre-cleaned; cover the floor with two (2) layers of 6 mil plastic sheeting extending up the walls 12 inches. Cover walls with two (2) layers of 4 mil or greater plastic sheeting overlapping floor sheeting 12 inches, with no butt joints. Should a roof (ceiling) be required for the containment, it shall consist of 2 layers of 4 mil plastic extending down the walls 12 inches. Critical barriers of minimum 3/8 inch plywood are required to separate the work area from adjacent occupied areas or in areas of heavy traffic.

G.8 Assemble/construct decontamination unit consisting of a clean room, shower, and an equipment room (dirty room). Triple flaps will be used between each area of the decontamination unit. Shower facilities shall have liquid soap and shall comply with 29 CFR 1910.141(d)(3). Securely attach decontamination unit to the Negative Pressure Enclosure. On projects employing both female and male workers, the Contractor shall build separate decontamination units or stagger the work schedule to prevent embarrassment or harassment to either sex. Lockers shall be provided for street clothing. The Contractor shall maintain a containment log at the entry of the decontamination unit consisting of date of entry, name, time in, and time out.

G.9 Install a sufficient number of HEPA filtered air machines to maintain a pressure drop of -0.02 inches of water within the enclosure and a manometer to verify the pressure drop. The manometer inlet tube shall

be located in the NPE in an area to get a representative sample of airflow. One HEPA filtered air machine must be installed as a standby.

G.10 The Contractor shall have a generator for backup power at all Negative Pressure Enclosure projects.

G.11 The Negative pressure enclosure shall be inspected prior to any removal of any asbestos containing material.

PART H

NEGATIVE PRESSURE ENCLOSURE, REMOVAL

H.1 Visually inspect enclosures at the beginning of each work period. Repair damaged barriers and remedy defects immediately upon discovery.

H.2 Perform a daily wet cleaning of any area outside the work or restricted area, which becomes contaminated with duct or debris as a consequence of work, performed on that day.

H.3 Should areas outside the work area become contaminated with asbestos-containing dust or debris as a consequence of the asbestos abatement employees' work practices, the abatement contractor shall be responsible for cleaning these areas in accordance with the procedures outlined in this specification.

H.4 Start the HEPA filtered negative air pressure system and maintain a pressure of -0.02 inches of water. Do not deactivate until CE personnel grant final clearance. One backup HEPA filtered negative air pressure system must be installed in the work area to provide backup support in case of equipment failure. Each negative pressure system must be equipped with an audible alarm and an electronic mechanism which shuts off the system in the event of filter breach or absence of filter.

H.5 High RPM power equipment, pressure washers or hydroblasters will not be used without approval from the Contracting Officer.

H.6 Spray asbestos material with amended water using an airless sprayer. Saturate the material to the substrate without causing excess dripping. Spray the asbestos material repeatedly during work process to maintain wet condition and to minimize asbestos fiber dispersal. Water must not leak through the enclosure and contaminate adjacent areas. The Asbestos Contractor shall inform the Contracting Officer, the APM, or BEF immediately if a health hazard is created during the abatement. This includes, but is not limited to, such occurrence as breaching the containment area, air monitoring results indicating airborne asbestos concentrations at unacceptable levels, accidents, etc.

H.7 Remove all asbestos material identified in contract statement of work. In all cases, asbestos-containing materials shall be removed in manageable sections and handled carefully. Material shall not be allowed to dry out. Material drop shall not exceed 15 feet. For heights from 15 to 50 feet, provide inclined chutes or scaffolding to

intercept the drop. For heights exceeding 50 feet, provide enclosed airtight chutes.

H.8 During the abatement, immediate cleanup and bagging of asbestos materials is required; the material must remain saturated until the waste container is sealed. Removed materials shall be double bagged in 6 mil plastic bags and sealed.

H.9 Brushes utilized for removing loose asbestos-containing materials shall consist of nylon or fiber bristles only.

H.10 Label containers in accordance with OSHA 29 CFR, Section 1926.1101. Wet pipe external surfaces of containers thoroughly. Move containers to load-out area and repeat wet cleaning.

H.11 Should asbestos material extend past the limits of the containment and the removal process has exposed unprotected asbestos these areas shall be encapsulated with a heavy non-asbestos encapsulant ¼ inch thick overlapping existing end 4 inch sufficient to create a permanent seal.

H.12 After completion of gross removal, wet brush and sponge all surfaces to remove visible asbestos-containing material. Surfaces being cleaned shall be kept wet with amended water. All asbestos contaminated water will be filtered through a 1 micron filter system prior to discharge. Discharge will be disposed of into a sanitary line or an industrial line. Discharge shall not be disposed of onto the ground or into a storm drain.

H.13 Decontamination (cleanup): Cleanup materials (including mop heads), clothing and other disposable material used in the work area, shall be double bagged in 6 mil plastic bags and sealed for disposal as asbestos waste.

H.14 Use rubber dust pans and rubber squeegees only to move and pick up material on the floor. Special care must be taken to minimize damage to floor sheeting.

H.15 Wet clean and HEPA vacuum all surfaces in the contained work area. After all surfaces are dry, the cleaning procedure shall be repeated. Dry dusting or sweeping will not be permitted.

H.16 After the second cleaning, a visual inspection will be conducted by the Construction Inspector. If the area is clean, approval shall be given to apply a lock-down encapsulant to the innermost layer of plastic only. No encapsulant shall be applied to the substrate from which asbestos was removed. If the area does not pass the visual inspection, it shall be cleaned again using the procedures outlined above until it does pass.

H.17 After the lock-down encapsulant is dry, as verified by Construction Inspector; the innermost layer of sheeting shall be removed, double bagged, sealed and disposed as asbestos waste.

H.18 After the innermost layer of plastic sheeting has been removed from the work area; the remaining layer of plastic sheeting shall be cleaned as outlined in paragraph H.12 of this part.

H.19 After passing the second visual inspection, clearance samples will be collected. If clearance sample results are below 0.005 f/cc or pre-abatement sample concentration whichever is more stringent, CE approval will be given to apply lock-down encapsulant and the remaining layer of plastic sheeting. If the clearance sample results exceed 0.005 f/cc or the pre-abatement sample concentration, whichever is more stringent, the Contractor will repeat cleaning until an acceptable fiber count is obtained.

H.20 After the lock-down encapsulant is dry, as verified by CE personnel, the final layer of floor poly will be removed while the final layer of wall poly is still in place and the negative air machines are still running. After the floor area has been inspected by CE, the negative air machine(s) may be turned off. The final layer of plastic shall be removed, double bagged, sealed, and disposed of as asbestos waste.

PART I

CLASS I ASBESTOS ABATEMENT, GLOVEBAG, NEGATIVE PRESSURE GLOVEBAG REMOVAL PRE-ABATEMENT PREPARATION

I.1 Regulate and demarcate work area using warning signs or labels in accordance with 29 CFR 1926.1101(k). Means to ensure employee comprehension may include the use of foreign languages, pictographs, and graphics.

I.2 Isolate HVAC system in regulated area sealing with a double layer of 6-mil plastic or greater.

I.3 Deactivate electrical circuits within regulated area.

I.4 Pre-clean area using HEPA vacuums and wet method, cover all non-movable objects with 2 layers of 6-mil plastic.

I.5 Place impermeable drop cloths on all surfaces beneath removal activity.

I.6 Construct and locate decontamination unit in central location to work area and within regulated area where feasible.

I.7 Attach HEPA vacuum to glovebag and maintain negative pressure throughout removal.

PART J

GLOVEBAG ABATEMENT

J.1 Glovebag Removal Procedures: Two workers per glovebag. All workers performing glovebag work shall wear full PPE during the installation of a glovebag, removal of ACM and removal of the glovebag. All workers performing glovebag removal shall be monitored.

J.2 Perform a daily wet cleaning of any area outside the work area or restricted area which becomes contaminated with dust or debris as a consequence of work performed on that day.

J.3 Should areas outside the work area become contaminated with asbestos containing dust or debris as a consequence of the asbestos abatement employees' work practices, those employees shall be responsible for cleaning these areas in accordance with the procedures indicated in this specification.

J.4 All removal tools and encapsulating supplies shall be placed in the glovebag tool pouch. Place glovebag around pipe, glue and tape edges to form an airtight seal.

J.5 Install the sprayer wand and HEPA vacuum hose into the glovebag. Tape both to the bag for an airtight seal.

J.6 Ensure that the glovebag is supported at the bottom to prevent separation caused by the weight of the wet debris (i.e., taping the bottom of the glovebag, platform to set the glovebag on, support bracket, etc.).

J.7 Saturate all insulation within the glovebag with amended water prior to removing any insulation. The insulation shall then be removed and placed into the glovebag. The material must remain wet at all times to minimize fiber release. When all insulation is removed, the pipe shall be thoroughly scrubbed clean.

J.8 After the pipe is clean; encapsulate all exposed edges of insulation and the pipe inside the glovebag. Spray inside of glovebag to wash all asbestos material to the bottom of the glovebag.

J.9 Invert one glove and place tools inside it. Twist inverted glove and tape securely at elbow portion of glove. Cut the inverted glove through tape to separate from glovebag. Seal the cut end with tape. Deflate the bag with HEPA vacuum. Twist and tape glovebag near pipe. Carefully remove glovebag from pipe. Place glovebag in 6-mil plastic bag and tape to form an airtight seal. Tape the end of the vacuum hose.

PART K

CLASS II ASBESTOS WORK

K.1 Asbestos gaskets, preparation, and removal: If gasket is visibly deteriorated and unlikely to be removed intact, removal shall be within a glovebag. Gasket(s) shall be immediately placed in a disposal container. Any scraping to remove residue must be performed wet.

K.2 Transite clapboard and panels: Place 6-mil plastic sheeting below work site. Cutting, abrading, or breaking siding, shingles, or transite panels, shall be prohibited. Wet material with amended water and remove carefully to minimize breakage. Material shall be wrapped twice in 6 mil plastic or double bagged in manageable bundles. Removal shall begin from the top and proceed down. Nails shall be cut with flat, sharp instrument. Cutting, abrading, or breaking of panels is prohibited. Dispose of material as asbestos waste when required.

K.3 Floor tile, sheet vinyl, linoleum/resilient sheeting procedures: Removal of floor tile, which has been classified as "RACM", and asbestos containing sheet flooring must be accomplished using the following procedures:

(1) Removal shall be done only by a licensed asbestos abatement contractor, using only certified asbestos abatement workers.
(2) Air monitoring shall be conducted.
(3) There shall be a decontamination shower adjacent to the work area or in a location convenient to the work area protected from the public.
(4) The work area shall be properly secured and marked.
(5) All air handling units affecting the work area shall be disabled.
(6) All electrical power within arm's reach of the floor shall be locked out or securely covered to prevent water intrusion or contact by workers.
(7) Critical barriers shall be erected.
(8) There shall be a minimum of one layer of 4-mil covering the walls.
(9) There shall be sufficient negative air machines in the work area to provide 4 air changes per hour. The negative air machines need not be externally vented.
(10) Asbestos-containing adhesive may be removed by manually scraping.
(11) Any water escaping from the work area shall be considered to have created a breach of containment and shall be handled accordingly.

K.4 Transite pipe: Penetration of this material must be performed by certified asbestos abatement personnel. Exception: some penetrations may be performed by non-certified asbestos personnel when using tapping sleeves and valves. The following method is required for certified personnel: Regulate and demarcate work area using warning signs or labels in accordance with 29 CFR 1926.1101(k). Attach pipe cutter to pipe and apply amended water. Continue to apply amended water through the entire cutting process to minimize asbestos fiber release. HEPA vacuum and wet wipe the area after the work has been accomplished. Double bag the material and dispose of it as asbestos waste.

K.5 Removal of Non-Friable Asbestos Containing Materials: The following materials may be removed by a general contractor, who has experience working with non-friable asbestos containing materials. The contractor shall employ a certified competent person to oversee the removal. The contractor shall provide its employees with Asbestos Awareness Training prior to removal and conduct a daily safety briefing. Removal procedures are outlined below:

Roofing materials (shingles, felt, tar, etc). Roof level heating and ventilation air intake sources must be isolated and the ventilation system shall be shut down. Roofing material shall be removed in an intact state to the extent feasible. Wet methods shall be used to remove roofing materials that are not intact, or that will be rendered not intact during removal, unless such methods are not feasible or will create safety hazard. Methods other than wet methods shall be approved by the Contracting

Officer. Cutting machines shall be continuously misted. When removing built up roofs with asbestos-containing roofing felts and an aggregate surface using power roof cutter, all dust resulting from a roof shall be collected by a HEPA dust collector, or shall be HEPA vacuumed by vacuuming along cutting line. Asbestos-containing material that has been removed from a roof shall not be dropped or thrown to the ground. Unless the material is hand carried or passed to the ground by hand, it shall be lowered to the ground via covered, dust-tight chute, crane or hoist. Intact ACM shall be lowered to the ground as soon as is practicable, but in any event no later than the end of the work shift; the lowered unwrapped material shall be transferred to a closed receptacle in such a manner so as to preclude the dispersion of dust. The roofing material may be disposed of in a conventional landfill provided the requirements of the landfill are met.

Vinyl asbestos floor tile (not classified as RACM). Area Preparation: A minimum of one layer of 6-mil poly shall be placed on walls prior to removal. During removal, the floor tile shall be kept wet with amended water. The floor tile shall be removed with hand scrapers (equipment such as power scrapers, chippers, and buffers are prohibited). The floor tile shall be placed in 6 mil poly bags and put in a box. Seal the box and label it properly. Vacuums equipped with HEPA filters shall be used to clean floor of debris. The floor tile, when removed properly, may be disposed of in a conventional landfill as construction debris.

K.6 Asbestos-containing ceiling tile abatement procedures shall be in accordance with Oklahoma Title 40 451-456. Removal of friable asbestos-containing ceiling tiles must be done using the following procedures:

(1) Removal shall be done only by a licensed asbestos abatement contractor, using only asbestos abatement workers.
(2) The ceiling tile removal may only be done when the area is not occupied.
(3) All moveable objects must be removed from the room.
(4) Decontamination facilities must be established, but need not be contiguous with the tile removal area provided.
(5) Critical barriers must be erected.
(6) Negative air machines in the removal area must be installed vented internally, and provide a minimum of one air change each 30 minutes.
(7) The floor must be covered at least one layer of 6 mil poly.
(8) Workers shall work in teams, with one worker removing and bagging tiles and one worker holding a HEPA vacuum near the grid.
(9) Tiles must be doubled bagged in 6-mil asbestos marked bags and sealed with tape.
(10) The tiles must be disposed of in an approved asbestos landfill.
(11) The ceiling grid must be HEPA vacuumed and wet-wiped.
(12) Air monitoring must be conducted.

PART L

DISPOSAL

L.1 Asbestos contractor shall notify the Contracting Officer via the Construction Inspector in advance of the date and time that asbestos waste will be transported.

L.2 To prevent exceeding available storage capacity on site, sealed and labeled containers of asbestos waste periodically shall be removed and transported to the disposal site.

L.3 A completed generator label shall be placed on each bag, drum and wrapped component before transporting to the landfill site. Transport vehicle shall display Class 9 placards.

L.4 All regulated asbestos waste shall be disposed of at an authorized site in accordance with regulatory requirements of EPA and applicable state and local guidelines and regulations.

L.5 Loading of asbestos waste shall not begin until the Construction Inspector arrives at the site. The Construction Inspector will inspect the waste packaging while loading. Wet wipe all containers in work area prior to transfer to load-out. Wet wipe containers again in load-out area prior to transfer to disposal vehicle.

L.6 Personnel loading and unloading asbestos-containing waste shall wear full PPE. Workers removing asbestos waste from the abatement enclosure shall enter the load-out from outside. No one shall use the load-out as a means to leave or enter the work area.

L.7 Drums/bags of asbestos waste and wrapped asbestos components that have been removed from the work area shall be transported directly to an EPA approved asbestos disposal site. Temporary storage of asbestos waste at an intermediate location is not permitted except under special authorization from CEIE via the Construction Inspector.

L.8 Asbestos transported in an open truck or trailer must be in 6 mil bags within sealed drums. Drums must be secured to prevent movement and shall not be loaded higher than the sidewalls of the vehicle.

L.9 The cargo area of the truck shall be free of debris and lined and sealed with 6 mil plastic to prevent contamination.

L.10 Large structural asbestos containing components shall be loaded and secured prior to loading bags. Do not throw items into truck cargo area.

L.11 Any asbestos waste observed on containers or surfaces outside the work area shall be immediately cleaned using HEPA filtered vacuuming equipment and/or wet cleaning methods.

L.12 Non-friable asbestos waste may be handled and transported by non-certified asbestos employees. Disposal shall be at an approval asbestos landfill provided the requirements of the landfill are met. All non-friable materials must be wetted and bagged/wrapped prior to transport.

L.13 Transport Vehicles and Trailers shall have current vehicle licensing as required by State Law and display a DOT Class 9 placard.

L.14 Transport Vehicles or Trailers shall be professionally constructed. Asbestos shall not be transported in make-shift vehicles.

PART M

POST-ABATEMENT SUBMITTALS

M.1 Within 10 working days after completion of work and prior to release from contract obligations with the USAF, the Asbestos Contractor shall provide the Contracting Officer:

- A signed receipt from the waste disposal site operator stating date, time and amount (cubic yards) of asbestos waste received.
- A signed copy of all air sample results, from samples collected during the contract. (See Part E, Air Sampling and Monitoring).

PART N

HAZARDOUS PROPERTY DISCLAIMER

The Government cautions that asbestos containing materials, substances, or component parts thereof, which are being removed under this contract, exhibit hazardous or toxic properties. The Government assumes no liability for any damage to the property of the Asbestos Contractor; any person or public property, or for the personal injuries, illness, disabilities, or death to the Asbestos Contractor or his employees, any other person subject to the Asbestos Contractor’s control or any other person including members of the general public, arising from, or incident to, the purchase, use, processing, disposition, or any subsequent operation performed upon, exposure to or contact with any component, part, constituent or ingredient of this item, or substance or material whether intentional or accidental. The Asbestos Contractor agrees to hold harmless and indemnify the Government for any and all costs and expenses incurred incident to any claim, suit, demand, judgment, action, debt, liability costs and attorney’s fees or any other request for moneys or any other type of relief arising from or incident to the purchase, use, processing, disposition, subsequent operation performed upon, exposure to , or contact with any component, part, constituent, or ingredient of this item, material, or substance, whether intentional or accidental.

- End of Attachment 2 -

ATTACHMENT 3

TINKER AIR FORCE BASE LEAD-BASED PAINT ABATEMENT SPECIFICATIONS FOR HIGH PRIORITY FACILITIES USING HUD GUIDELINES

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PART A

GENERAL

The requirements for lead-based paint abatement are stated herein. The drawings or statement of work associated with this project outline the work area that contains the lead-based paint and the work to be accomplished. In case of a conflict between the drawings and the specifications, the specifications shall govern. The following regulations, their appendices, memorandums, guidelines, attachments and other pertinent documents that form a part of these regulations shall apply in their entirety.

A.1 U. S. Environmental Protection Agency (EPA), latest edition, 40 CFR part 261, Identification and Listing of Hazardous Waste, 40 CFR Part 268, Land Disposal Restrictions.

A.2 Title 29 CFR, Part 1910.134, Respiratory Protection (OSHA) latest edition; 29 CFR 1926.62, OSHA Lead Standard; Oklahoma Lead-Based Paint Management Act Title 27A O.S. Supp. 1994, Section 2-12-101.

A.3 Title 49 CFR, Part 172, Hazardous Materials Tables and Hazardous Materials Communications Regulations, latest edition.

A.4 Lead-Based Paint: HUD Guidelines for the Evaluation and Control of lead-Based Paint in Housing (1995).

PART B

DEFINITIONS

B.1 Abatement: Procedures to control dust release from lead containing materials. This includes removal and encapsulation.

B.2 Air Monitoring: The process of measuring the dust concentration of a specific volume of air over a specified period of time.

B.3 Airlock: An enclosure consisting of two polyethylene curtained doorways (3 sheets of plastic per doorway) at least 3 feet apart.

B.4 Authorized Visitor: Any representative of a regulatory or other agency having jurisdiction over the project (i.e., OSHA, EPA, Oklahoma Department of Health, Labor, contractor representative not on the job site, full time, etc). Such visitor must immediately report to the Environmental Management or Bio-Environmental Monitor on the job site and sign in/out in the daily log book. Furthermore, these visitors will not be allowed inside of the containment area without documented proof of approved lead-based paint abatement hazards and respirator fit tested.

B.5 Biological Monitoring: The analysis of a person’s blood and/or urine, to determine the level of lead contamination in the body.

B.6 Clean Room: An uncontaminated area or room which is part of the worker decontamination enclosure with provisions for storage of workers street clothes and protective equipment.

B.7 Competent Person: One who has completed an approved EPA Lead-based Paint Abatement Contractor training course and who is capable of identifying existing and predictable hazards in the surroundings of working conditions and has authorization to make prompt corrective measures to eliminate the hazards.

B.8 Critical Barrier: Two (2) layers of six (6) mil plastic sheeting which covers all openings to prevent dust dispersal to other areas of the structure.

B.9 Decontamination Enclosure System: A series of connected rooms and airlocks used for the decontamination of workers and of materials and equipment (i.e., airlock, clean room, airlock, shower, airlock, dirty or equipment room, airlock, work area).

B.10 Demolition: The wrecking or taking out of any load supporting structural member.

B.11 Employee: Any person working for the lead-based paint abatement contractor who physically engages in the abatement of lead-based paint or performs a task on the job site.

B.12 Encapsulation: Involves resurfacing or covering surfaces and sealing or caulking with durable materials so as to prevent or control chalking, flaking lead containing substances from becoming dust.

B.13 Equipment Room: A contaminated room that is part of the worker decontamination enclosure system used for storage of contaminated clothing and equipment.

B.14 Exterior Work Area: An outdoor porch, stairway or other element of trim or walls on the exterior of the building.

B.15 Full Containment: An enclosure of the work area that is airtight, maintains negative air, contains a decontamination facility and has a load-out area.

B.16 HEPA Filter: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97 percent of particles greater than 0.3 micrometers in diameter.

B.17 HEPA Vacuum Equipment: Vacuuming equipment with a HEPA filter system.

B.18 Landfill (approved); An EPA approved site for the disposal of lead containing materials and other hazardous wastes.

B.19 Lead-Based Paint (LBP) Coated Surfaces: Any surface identified by the Government, by the use of portable direct reading X-Ray fluorescence (XRF) detector or other methods of analysis, including laboratory analysis that indicates a hazardous level of lead as specified in HUD Guidelines.

B.20 Lead-Based Paint Abatement Contractor: A private entity Licensed for lead-based paint abatement.

B.21 Lead Abatement Supervisor: The "Competent Person" on the project site representing the Contractor during the abatement; licensed and experienced in lead-based paint removal and air monitoring.

B.22 LBPPM: Tinker Air Force Base Lead Based Paint Program Manager.

B.23 Objects (Fixed and Moveable): Fixed items are items which cannot be removed from the work area. Moveable items are items which can be removed from the work area.

B.24 Permissible Exposure Limit/OSHA) (PEL): Current OSHA Exposure Limit measured as micrograms of lead per cubic meter. (OSHA Lead Standard 29 CFR 1910.1025).

B.25 Plasticize: To cover with 4 or 6 mil polyethylene sheeting.

B.26 Personal Protective Equipment (PPE): Disposable, impervious coveralls that are equipped with head and foot covers, gloves and respirators. Required PPE may also include items such as hard hat, steel-toe boots, eye protection, hearing protection, and etc.

B.27 Restricted Area: The area surrounding the work area demarcated by danger warning tape and signs. All personnel entering the restricted area must wear appropriate PPE.

B.28 Shower Room: A room between the clean room and equipment room in the worker decontamination enclosure with hot, cold, or warm running water suitably arranged for complete showering during decontamination. All wastewater shall be collected in 55 gallon or smaller drums and held on site in a designated secure area and disposed of IAW RCRA regulations.

B.29 Substrate: A surface upon which paint or varnish has been or may be applied. Examples of substrate include wood, plaster, concrete, metal and drywall.

B.30 Tri-sodium Phosphate Solution (TSP): A mixture of at least one ounce of 5 percent TSP to each gallon of water.

B.31 Wet Cleaning: The process of eliminating lead contamination by using cloths, mops, or other cleaning tools which have been dampened with TSP solution.

B.32 Work Area: A designated area where lead-based paint is being abated. A contained work area is sealed, plasticized and equipped with a decontamination enclosure system. A non-contained work area is not equipped with a decontamination enclosure system but is demarcated by danger warning tape.

B.33 CEIEC: 72 ABW/CEIEC; Environmental Management Division

B.34 BEF: 72 AMDS/SGPB; Bio-Environmental Engineering Flight

B.35 CE: 72 ABW/CE; Civil Engineering Directorate

PART C

PRE-ABATEMENT SUBMITTALS

At least five (5) days prior to commencement of pre-abatement work, the lead pre-abatement Contractor shall submit copies of all required pre-abatement submittals to the Contracting Officer. After completion of the submittal review additional information may be required for clarification of, or in support of documents submitted. Work will not commence until all submittals have been approved by the LBPPM, including employee certifications and physicals. Required submittals include, but are not limited to the following.

C.1 Documentation of Training/Experience: All Contract employees (including prime and subcontractors – supervisors, foremen, workers, etc.) conducting LBP abatement in High Priority Facilities shall be licensed by the State of Oklahoma. Include current copies of each employee's LBP Abatement License.

C.2 Employee Physicals: Provide documentation of employee physical examination, conducted in accordance with OSHA and Lead Standard, 29 CFR 1910.1025. The contractor should maintain for employees removing LBP:

(1) A medical and work history with special emphasis directed to the pulmonary, cardiovascular and gastrointestinal systems.

(2) A physical examination directed to the pulmonary and gastrointestinal systems, including a chest roentgenogram to be administered at the discretion of the physician, and pulmonary function tests of forced vital capacity (FVC) and forced expiratory volume at one second (FEV).

(3) Results of blood level tests for the purpose of establishing baseline blood lead levels for each worker involved in lead-based paint surface preparation, abatement and the handling of lead-based paint debris. Workers found to have blood lead levels greater than or equal to 30 micrograms/deciliter (30 mcg/dl) shall be prohibited from any work involving lead-based paint.

(4) Physician's Written Opinion: The employer shall obtain a written opinion from the examining physician. This written opinion shall contain the results of the medical examination to be included with submittals and shall include:

- The physician's opinion as to whether the employee has any detected medical conditions that would place the employee in an increased risk of material health impairment from exposure to lead.
- Any recommended limitations on the employee or on the use of PPE including respirators.
- A statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions that may result from lead exposure.
- Exception: No medical examination is required of any employee if adequate records show that the employee has

been examined in accordance with this paragraph within the past one year period. The physical must be current within the length of the contract.

C.3 Security Documentation: Work area and equipment must be secured at all times to ensure no unauthorized persons enter contaminated work or waste storage areas. Storage sites for equipment, supplies and lead contaminated waste must be pre-determined and approved by the Contracting Officer prior to starting the lead-based paint abatement. The Contractor will submit to the Contracting Officer, a phone or pager number where the contractor supervisor or competent person may be reached on the non-working days in case of an emergency.

C.4 Step-by-Step Abatement Procedures Plan: Document the plan meets HUD Guidelines for contained and non-contained abatement procedures at each distinct location. The plan of action shall include preparation of the regulated area (position of critical barriers, signs and etc). Also include LBP surface preparation methods, removal techniques, type, size, debris accumulation, cleanup and disposal procedures.

C.5 Document full containment construction procedures, abatement, and final clearance shall follow HUD Guidelines.

(1) Provide personnel decontamination unit construction procedures.

(2) Provide encapsulation procedures (method of encapsulation and location).

C.6 Respirator Protection Program: Provide a copy of the contractor Respirator Protection Program. Document your program is IAW OSHA 29 CFR, Section 1910.134 and ANSI Z88.2-80. Include the manufacturer’s certification (including TC#) that all respiratory devices are NIOSH/MSHA approved.

C.7 Manufacturer’s Certifications: Document HEPA vacuums, air purifying equipment, negative air pressure equipment and other local exhaust ventilation equipment is approved for LBP abatement activities.

C.8 Laboratory and Monitoring Qualifications: The LBP abatement contractor must use an independent “third party” laboratory for air monitoring and analysis support (see Part E.3 for required monitoring qualifications). Include documentation of qualifications for the air technician, and prove the contracted laboratory meets HUD Guidelines. Should the Contractor change independent laboratories while the contract is in progress, the Contractor shall resubmit the qualifications/certifications of the new air technician and laboratory for approval by the LBPPM.

C.9 Lead-Based Paint Waste: Disposal of waste generated by the abatement of lead based paint shall be coordinated through the Tinker Hazardous Waste Facility, bldg 808. The contractor shall contain the generated waste. The contractor shall provide a TCLP analysis of the waste and forward the results to the Tinker Hazardous Waste Facility, who will determine proper disposal of the waste. Barrels to contain the waste will be provided by the Government.

C.10 Materials List: Include a materials list of all items proposed to be furnished and used under the contract including any associated manufacturer's literature. Provide a separate list for rental equipment and written verification that the rental company has been notified that equipment is to be used for lead-based paint abatement.

C.11 Work Schedule: Provide starting date, completion date, days to be worked (weekdays/weekends) and hours to be worked. If the abatement will be conducted at any time other than 0700 to 1600 hours, Monday through Friday, justification must be furnished and approved by the Contracting Officer.

C.12 Any request for variance from this specification shall be at the discretion of the Contracting Officer.

PART D

ABATEMENT MATERIAL REQUIREMENTS

D.1 Deliver all materials in their original unopened packages, containers or bundles bearing the name of the manufacturer and the brand name. Materials must be approved for LBP abatement use.

D.2 Store all materials subject to damage off the ground and under cover to prevent damage or contamination. Material to be used on the project site shall not be stored in the same location where the lead contaminated waste is stored.

D.3 Damaged or deteriorating equipment shall not be used and shall be removed from the construction site immediately by the Contractor. The cost of the removal or disposal shall be the responsibility of the Contractor and at no cost to the Government.

PART E

SAMPLING AND MONITORING

E.1 Air sampling data must include the sample volume, sampling times, sampling locations (with appropriate dimensions and sketches), evidence of periodic inspection of sampling equipment, documentation of pre and post calibration of equipment, detailed description of work conditions, and description of worker protective devices.

E.2 Laboratory analysis data must include sample identification; total sample duration, sample flow rate, total air volume and final analysis results must be recorded in micrograms per cubic meter (ug/n3).

E.3 All air sampling and monitoring shall be conducted by a LBP licensed industrial hygienist, or LBP licensed individual properly trained in air sampling and monitoring as required by the HUD Guidelines.

E.4 Pre-abatement Background Sampling: Pre-abatement sampling shall be conducted by the approved "third party" company and meet the HUD Guidelines requirements.

E.5 Area Sampling: Area Sampling shall be conducted as required in the HUD Guidelines.

(1) If at any time the results of the air samples taken by the contractor's independent laboratory rise above the OSHA action level the abatement will stop immediately and clean down procedures will be required. Cleaning will continue until air sample results are below the current levels issued by OSHA and EPA.

E.6 Personal Sampling: The Lead-Based Paint Abatement Contractor shall conduct personal sampling at all times.

E.7 Clearance Sampling: Clearance sampling procedures shall follow HUD guidelines. Clearance levels and the final clearance determination will be IAW HUD clearance criteria.

Sample results shall be provided to the government and maintained in the facility records.

PART F

RESPIRATORY PROTECTION AND PPE

The Contractor shall implement a respiratory program IAW with 29 CFR 1910.134 and 1926.62. The contractor shall be solely responsible for the safety and health of their employees.

PART G

CONTAINED ENCLOSURE CONSTRUCTION

G.1 Construct abatement enclosure system(s) for each work area. The entrance to the enclosure(s) shall be outside the restricted area. Should lockable entry or exit doors be used for containment, a key to these doors shall be at the project site for emergency entry. All plastic sheeting shall be a Fire Resistant/Retardant material to protect personnel working inside and outside the enclosure from a rapidly spreading fire that will produce thick toxic smoke.

G.2 The abatement contractor shall post danger signs in the following manner:

(1) Except in emergency situations, at least three (3) days before removing or encapsulating lead paint, the Contractor shall post signs immediately outside all entrances and exits to the work area.

(2) The Contractor shall keep the signs posted until the CEIE inspector gives final clearance to the area.

(3) The signs will be at least 20 inch X 14 inch and indicate the date and place of the lead abatement project.

(4) The signs must include the phrase "CAUTION LEAD HAZARD, KEEP OUT" in bold lettering at least two (2) inches high.

(5) Sign stating that no eating, drinking or smoking in the work area shall also be posted.

G.3 Shut down electric power and lockout all circuit breaker boxes. Provide temporary power and lighting equipment and ensure safe installation of temporary power sources and equipment per applicable electrical code requirements.

G.4 Shut down and seal with two (2) layers of 6 mil plastic sheeting all openings, including heating, cooling, and ventilating air systems, to prevent dust dispersal to other areas. Plywood (3/8 inch minimum thickness) critical barriers are required to separate the work area from adjacent occupied areas.

G.5 Pre-clean moveable objects within the work area(s) using HEPA vacuum and/ wet cleaning methods. Remove decontaminated objects from work areas to a temporary location. Carpeting shall be thoroughly cleaned using HEPA vacuum. Carpet scheduled to be removed shall be disposed of as lead contaminated waste.

G.6 Pre-clean fixed objects within the work area(s) using HEPA vacuum equipment and/or wet cleaning methods. Plasticize all decontaminated fixed objects with 2 layers of 4 mil or greater plastic sheeting and duct tape to provide an air tight and water proof seal. Engineering controls shall be used to prevent overheating of pumps, electric motors, and other Government owned property within the containment when plastic is used to prevent contamination.

G.7 Pre-clean the proposed work area(s) starting at the ceiling and working down to the floor using HEPA vacuum and/or wet cleaning methods. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.

G.8 Cover floor with a minimum of two (2) layers of 6 mil plastic sheeting extending at least 12 inches up the walls and seal with duct tape. Then, cover walls and ceiling (when required) with two layers of 4 mil clear plastic sheeting overlapping the floor plastic by 12 inches and seal with duct tape. Blue chalk dust shall be applied between layers at all seams to detect water leaks. Exit routes shall be marked clearly within the work area.

PART H

NEGATIVE PRESSURE ENCLOSURE AREA PREPARATION

H.1 Visually inspect the area to be contained by the NPE and identify the material to be removed. Locate any hazards that could harm Contractor employees or the containment.

H.2 Post signs and tape as specified by OSHA 29 CFR 1926.1101(k)(7) and 29 CFR 1926.1200 (f).

H.3 Have the Construction Inspector contact the Civil Engineering Electrical Shop for the best location for the Contractor's licensed electrician to hook-up the GFCI and to lock-out and tag-out electrical circuits to work area without interfering with power to other Government operations.

H.4 Shut down and seal with two layers of 6 mil plastic sheeting, all openings, including heating, cooling and ventilating air systems, to prevent fiber dispersal to other areas.

H.5 Pre-clean movable objects from within the work area(s) using HEPA vacuum and/or wet cleaning methods and remove from the work area to a temporary location. Pre-clean fixed objects within the work area and plasticize with two layers of 4-mil or greater plastic sheeting to provide an airtight, waterproof seal.

H.6 Pre-clean the proposed work area(s) using HEPA vacuum and wet wiping method. Special attention should be paid to places/material that could hold asbestos fibers. Activities such as dry sweeping or vacuuming with non-HEPA filter vacuums are prohibited.

H.7 After the area is pre-cleaned; cover the floor with two layers of 6 mil plastic sheeting extending up the walls twelve inches. Cover walls with two layers of 4 mil or greater plastic sheeting overlapping floor sheeting twelve inches, with no butt joints. Should a roof (ceiling) be required for the containment, it shall consist of two layers of 4 mil plastic sheeting extending down the walls twelve inches. Critical barriers of minimum 3/8 inch plywood are required to separate the work area from adjacent occupied areas or in areas of heavy traffic.

H.8 Assemble/construct decontamination unit consisting of a clean room, shower, and an equipment room (dirty room). Triple flaps will be used between each area of the decontamination unit. Shower facilities shall have liquid soap and shall comply with 29 CFR 1910.141(d)(3). Securely attach decontamination unit to the NPE. On projects employing both female and male workers, the Contractor shall build separate decontamination units or stagger the work schedule to prevent embarrassment or harassment to either sex. Lockers shall be provided for street clothing. The Contractor shall maintain a containment log at the entry of the decontamination unit consisting of date of entry, name, time in, and time out.

H.9 Install a sufficient number of HEPA filtered air machines to maintain a pressure drop of -0.02 inches of water within the enclosure and manometer to verify the pressure drop. The manometer inlet tube shall be located in the NPE in an area to get a representative sample of airflow. One HEPA filtered air machine must be installed as a standby.

H.10 The NPE shall be inspected by Construction Inspector prior to any removal of any Lead based paint.

PART I

EXTERIOR WORK AREA PREPARATION

I.1 The following methods are to be used for exterior abatement of buildings only.

I.2 Uncontained water blasting and open abrasive blasting are unacceptable methods of abatement.

I.3 Contractors who do not take proper containment measures and contaminate soil will be required to test, abate and dispose of soil contaminated with lead as a result of improper abatement methods.

I.4 For Liquid Waste:

(1) Place polyethylene plastic sheeting (6 mil) as close to the building as possible. Extend the edge of the sheets a sufficient distance to contain the runoff and raise the outside edge of the sheets with 2 x 4’s to trap liquid waste.

(2) Have available appropriate containers to hold liquid waste for later transfer and disposal.

(3) Where seams occur, they must be sealed with tape and edges must be raised (e.g. with 2 x 4 framing) and a new section of plastic sheeting and framing should be added as needed.

(4) Liquid waste can be pumped, vacuumed or bailed for transfer to a 55 gallon or smaller drum for disposal.

I.5 For Dry Waste:

(1) Place polyethylene plastic sheeting (6 mil) as close to the building as possible.

(2) Extend the plastic sheeting out from the foundation a sufficient distance to contain waste and debris.

(3) Weight the sheeting at the foundation and along the edges and seams.

(4) Erect vertical shrouds if constant wind speed exceeds 15 mph or there is visible movement of debris beyond the ground sheeting.

(5) The containment system must be kept intact for as long as needed. All tears and breaks must be repaired as they occur. Damaged floor sheeting shall be covered with new layers and not removed. In addition to routine repairs, the abatement Contractor is responsible for inspecting the containment system on a daily basis or more often as needed to ensure its’ integrity.

(6) The use of manually operated abrasive blasting and vacuuming equipment may be used, provided it does not release lead

contaminated dust or grit to the surrounding ground or atmosphere.

(7) The use of power tools and vacuuming may be used provided it does not release lead contaminated dust to the surrounding ground or atmosphere. Post blasting to remove residual dust is not permitted.

(8) On a daily basis, as well as during final cleanup, the immediate area shall be examined visually to ensure that no lead debris has escaped containment. Any such debris shall be wet down and raked or swept and placed in single 6 mil or double 4 mil plastic bags, which shall then be sealed and stored along with other contaminated debris.

PART J

NON-CONTAINED WORK AREA PREPARATION

J.1 Cordon off area with danger tape at least 50 feet, or a distance as determined by the Construction Inspector, on all sides of the work area to restrict unauthorized access to the site during removal, clean-up or encapsulation processes. Proper danger signs shall be posted at the perimeter.

J.2 Construct critical barriers with two (2) layers of six (6) mil plastic sheeting, covering all openings which includes and shutting down (if possible) all heating, cooling and ventilating air systems, in order to prevent dust dispersal to other areas of the structure.

J.3 Pre-clean moveable objects within the work area(s) using HEPA vacuum and/or wet cleaning methods. Remove such objects from work area to a temporary location.

J.4 Pre-clean fixed objects within the work area(s) (IAW para1.1) using HEPA and/or wet cleaning methods and tightly cover with two (2) layers of 4 mil or greater plastic sheeting.

J.5 Pre-clean the work area(s) using HEPA vacuum/wet cleaning methods. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.

PART K

CONTAINED WORK AREA REMOVAL PROCEDURES

K.1 Visually inspect enclosures at the beginning of each work period. Repair damaged barriers and remedy defects immediately upon discovery.

K.2 Perform a daily wet cleaning of any area outside the work or restricted area which becomes contaminated with dust or debris as a consequence of work performed on that day.

K.3 Should areas outside the work area become contaminated with lead containing dust or debris as a consequence of the abatement employees'

work practices, the Abatement Contractor shall be responsible for cleaning these areas in accordance with the procedures outlined in this specification at no additional cost to the Government.

K.4 Start the HEPA filtered negative air pressure system and maintain a pressure of -0.02 inches of water. The Contractor will be required to have a manometer in each negative pressure containment. Do not deactivate without Government approval. One backup HEPA filtered negative air pressure system must be installed in the work area to provide backup support in case of equipment failure. Each negative pressure system must be equipped with an audible alarm and an electronic mechanism which shuts off the system in the event of a filter breach or absence of a filter.

K.5 High RPM power equipment, pressure washers, sandblasting equipment, or hydroblasters will not be used outside of containment. Containment structure must be constructed and maintained to prevent the possibility of lead contaminated dust, sand, or water to be released from the containment.

K.6 The Contractor shall inform BE and the Contracting Officer immediately if a health hazard is created during the abatement. This includes, but is not limited to, such occurrences as breaching the containment area, air monitoring results indicating airborne lead dust concentrations at unacceptable levels, accidents, etc.

K.7 Remove all lead containing material identified in the project Statement of Work. Waste material drop shall not exceed 15 feet. For heights from 15-50 feet, provide inclined chutes or scaffolding to intercept drop. For heights exceeding 50 feet, provide enclosed air tight chutes.

K.8 During the abatement, periodic cleanup and bagging of lead containing waste materials is required. Removed materials shall be double bagged in 4 mil plastic or single 6 mil plastic bags, barreled and sealed (e.g. doors, windows, trim, etc.).

K.9 After completion of lead-based paint removal, HEPA vacuum all surfaces to remove visible lead-containing material. Surfaces shall be cleaned with a 5 percent tri-sodium phosphate solution and HEPA vacuumed again. All lead contaminated liquid waste will be collected in 55 gallon or smaller drums for proper disposal. Discharge shall not be disposed of onto the ground, into a storm drain, or industrial waste line.

Note: In addition, at a minimum meet HUD Guidelines abatement regulations.

PART L

DECONTAMINATION/CLEAN-UP

L.1 Cleanup materials (including mop heads), clothing and all other disposable materials used in the work area shall be considered lead-contaminated waste.

L.2 Inner-most layer of plastic must be HEPA vacuumed and wet wiped and visually inspected by CEIE before removal. Carefully fold plastic in upon itself while removing. Place debris in double 4 mil or single 6 mil plastic bags and seal. Plastic sheeting used to isolate contaminated rooms from non-contaminated rooms should not be removed at this time.

L.3 Before removal of floor plastic, it should be sprayed and HEPA vacuumed. Remove floor plastic from the corners and fold to the middle while removing to trap any remaining lead dust. Place into double 4 mil or single 6 mil plastic bags and seal.

L.4 After the plastic has been removed from the contaminated area, the entire area should be HEPA vacuumed starting with the area farthest from the entrance to avoid ret-racking dust through an already-cleaned area. In each area, vacuuming should begin with the ceilings and proceed down the walls, including doors and door trim, windows, window sills, wells, trim, baseboards, etc.

L.5 The entire affected area shall be washed down with a 5 percent tri-sodium phosphate (TSP) solution working from the ceiling down. After the 5 percent TSP solution wash down, the entire area shall be HEPA vacuumed again.

L.6 After the preliminary final cleanup effort is completed, a CEIE inspector will visually inspect the entire affected area to ensure that all surfaces requiring abatement have been addressed and all visible dust and debris have been removed.

L.7 If results of the visual inspection are unsatisfactory, affected surfaces must be re-abated and/or cleaned in accordance with the Contracting Officer’s instructions until satisfactory results are achieved.

L.8 After the inspected area passes the final visual inspection, a 24 hour settling period will be required prior to clearance wipe sampling. If any of the clearance wipe sample results exceed the clearance criteria, the area will be re-cleaned and BE will again conduct clearance wipe sampling at the Contractors Expense. This procedure will be repeated until clearance criteria met.

L.9 After passing the final clearance standards as established by the Government, the Contractor may continue with the painting or sealing of abated surfaces. Final layer of plastic must be sprayed with lockdown and removed at this time. During removal of final layer of floor plastic, HEPA vacuum the area under the floor plastic as it is being removed to clean up any debris that may have breached the containment.

L.10 After painting/sealing is completed, the final cleanup can take place. The entire area will be HEPA vacuumed, washed down with the 5 percent TSP solution and HEPA vacuumed again. Walls and ceiling surfaces newly painted with latex paint are exempted from the final wash down due to the danger of staining or otherwise damaging the final painted surface, but should be HEPA vacuumed again.

L.11 Following the final cleaning the Construction Inspector and a CEIE inspector will conduct a final visual inspection. If the area does not pass a final visual inspection, it will be re-cleaned until it passes.

PART M

DISPOSAL

M.1 The Abatement Contractor will notify the Construction Inspector in advance of the date and time that lead contaminated waste will be transported.

M.2 Lead-Based Paint Waste: Disposal of waste generated by the abatement of lead based paint shall be coordinated through the Tinker Hazardous Waste Facility, bldg 808. The contractor shall contain the generated waste. The contractor shall provide a Toxicity Characteristic Leaching Procedure (TCLP) analysis of the waste and forward the results to the Tinker Hazardous Waste Facility, who will determine proper disposal of the waste. Barrels to contain the waste will be provided by the Government.

M.3 Personnel loading and unloading lead contaminated waste from the abatement enclosure shall enter the load-out from outside. No one shall use the load-out as a means to leave or enter the work area.

M.4 Drums/bags of lead contaminated waste and wrapped lead contaminated components that have been removed from the work area shall be transported directly to an EPA approved disposal site. Temporary storage of lead contaminated waste at an intermediate location is not permitted except under special authorization from the Contracting Officer.

M.5 Lead contaminated waste transported to the Tinker Hazardous Waste Facility shall meet DOT regulations for transport of hazardous waste.

M.6 Large structural lead waste containers shall be securely sealed and transported as outlined in DOT regulations.

M.7 Any lead containing dust observed on containers or surface outside the work area shall be immediately cleaned using HEPA filtered vacuuming equipment and/or wet cleaning methods.

PART N

POSTABATEMENT SUBMITTALS

N.1 Within 10 working days after completion of work, and prior to release from contract obligations with the U. S. Air Force, the Abatement Contractor shall provide the Contracting Officer.

- A signed waste disposal manifest signed by the site operator stating date, time, and amount of lead contaminated waste received.

- A signed copy of all air sampling results from samples collected during the contract (as noted in Part E, Air Sampling and Monitoring).

- Written verification from the rental company that equipment was decontaminated by the Contractor prior to return.

PART O

HAZARDOUS PROPERTY DISCLAIMER

The Government cautions that lead containing materials, substances, or component parts thereof, which are being removed under this contract exhibit hazardous or toxic properties. The Government assumes no liability for any damage to the property of the Lead-Based Abatement Contractor; any person or public property, or for the personal injuries, illness, disabilities, or death to the Lead-Based Paint Contractor or his employees, any other person subject to the Contractors control or any other person including members of the general public, arising from, or incident to, the purchase, use, processing, disposition, or any subsequent operation performed upon, exposure to or contact with any component, part, constituent or ingredient of this item, or substance or material whether intentional or accidental. The Lead-Based Paint Abatement Contractor agrees to hold harmless and indemnify the Government for any and all costs and expenses incurred incident to any claim, suit, demand, judgment, action, debt, liability costs and attorney’s fees or any other request for moneys or any other type of relief arising from or incident to the purchase, use, processing, disposition, subsequent operation performed upon, exposure to, or contact with any component, part, constituent, or ingredient of this item, material, or substance, whether intentional or accidental.

- END OF ATTACHMENT 3 -

Attachment 3a

TINKER AIR FORCE BASE LEAD-BASED PAINT ABATEMENT SPECIFICATIOINS FOR INDUSTRIAL FACILITIES

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PART A

GENERAL

The requirements for lead-based paint abatement are stated herein. The drawings or statement of work associated with this project outline the work area which contains the lead-based paint and the work to be accomplished. In case of a conflict between the drawings and the specifications, the specifications govern. The following regulations, their appendices, memorandums, guidelines, attachments and other pertinent documents from a part of these regulations shall apply in their entirety.

A.1 U. S. Environmental Protection Agency (EPA), latest edition, 40 CFR, Part 261 Identification and Listing of Hazardous Waste, 40 CFR, Part 268, Land Disposal Restrictions.

A.2 Title 29 CFR, Part 1910.134, Respiratory Protection (OSHA) latest edition, 29 CFR 1926.62, OSHA Lead Standard; Oklahoma Lead-Based Paint Management Act, Title 27A, O.S. Supp. 1994, Section 2-12-101.

A.3 Title 49 CFR, Part 172, Hazardous Materials Tables and Hazardous Materials Communications Regulations, latest edition.

A.4 29 CFR 1910.1025, General Industry Lead Standard

Where a conflict exists between the requirements of this specification and any of the above mentioned regulations, the most stringent shall be applicable.

PART B

PRE-ABATEMENT SUBMITTALS

At least five (5) days prior to commencement of lead-based paint removal in industrial areas; the Contractor shall submit all required submittals to the Contracting Officer for review/approval. After completion of the submittal review, additional information may be required for clarification of, or in support of documents submitted. Work will not commence until the Government has approved all submittals. Required submittals include, but are not limited to the following:

B.1 Removal procedures to be used.

B.2 List of materials to be utilized.

B.3 MSDS sheets for all materials/chemicals used.

B.4 Disposal Procedures

- END OF ATTACHMENT 3A -

Attachment 4

TINKER AIR FORCE BASE PCB FILLED BALLAST AND UNIVERSAL WASTE LAMP ABATEMENT SPECIFICATIONS

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PART A

GENERAL

A.1 The abatement requirements for handling and disposal of ballast and fluorescent lamps are stated herein. In case of a conflict between these requirements and project drawings or specifications, these requirements shall govern.

A.2 The following regulations, their appendices, guidelines, memorandums, attachments, and other pertinent documents, which form a part of these regulations, shall apply in their entirety.

PART B

BALLAST REMOVAL

B.1 Point of Contact: On TAFB, the point of contact for work involving PCB is 72ABW/CEIEC, 736-3093.

B.2 The use of open top 55-gallon drums with lid and lock band is recommended. The drums can be obtained from Bldg 808 between the hours of 0700 and 1500. The Contractor shall coordinate drum pickup with the Construction Inspector. If prior approval for the generation of the PCB ballasts has not been established, then the Government representative must request the approval through the Unit Environmental Coordinator of the generating organization. Labels and DRMO turn0in documents, DD Form 1348-1A, will be furnished with drums. A start date must be annotated on a label at the time the first ballast is placed in a drum. The total quantity of ballasts in the full drum must be annotated on the label prior to turning the container into DRMO. When the drums have been filled, the Government will contact DRMO and schedule a time to deliver drums to Bldg 810 and contact CEIEC at 734-3278 or 734-3279 and request DRMO turn-in documents, DD Form 1348-1a for the drums to be delivered to DRMO. The turn-in document(s) may be picked up from Bldg. 808 just prior to delivery to DRMO. The remover shall use care in making economical use of Government furnished materials.

B.3 Personnel Protection During Ballast Removal: Personnel removing the ballast from light fixtures shall wear rubber gloves and eye protection. Wearing a Ty-Vek suit is recommended.

B.4 Floor Covering Requirements: In preparation for ballast removal, the Contractor shall spread 6 mil polyethylene sheeting on the floor of the area where the removal is performed. The sheeting shall be sealed at the joints and shall extend 3 feet beyond the work area. Damaged, holed, or torn sheeting shall be resealed before ballast removal work continues or resumes. The purpose of the sheeting is to contain spills.

B.5 Ballast Removal: Ballast having labels with the word “NO PCB’s” or labels with similar words having the same meaning, may be recycled of with the light fixture. All unlabeled ballast, regardless of age, will be assumed to contain PCB. Ballast containing, or assumed to contain, PCB may be removed from mounted light fixtures, or the entire

light fixture may be removed and taken to a ballast removal area. Floor covering requirements must be met if ballast is removed from mounted fixtures, and ballast shall not be dropped, thrown, or miss-handled. Open top 55-gallon drums, with lids and lock bands, shall be used for disposal of the ballast. A count of the number of ballasts shall be noted on the drum and the Form 1348-A.

B.6 Removal of Leaking Ballast: Ballast removal shall be immediately discontinued if any sign of a black tar-like substance is discovered on a ballast, light fixture, or cover. The Contractor shall don a Ty-Vek suit, along with rubber gloves and eye protection before continuing work. Light fixtures, covers, and ballast with the black tar-like substance shall be scraped and wet wiped with an approved solvent until clean and no visible signs of the tar-like substance remain. Kerosene is a Government pre-approved solvent. Use of other solvents must be submitted, for approval, to the Contracting Officer prior to use.

B.7 Disposal of Tar-Like Substance Cleaning Materials: The remover shall place all tar-like substance residue and materials with the tar-like substance on them (such as Ty-Vek suits, disposable scrapers, rags, and floor covering) in a separate steel drum. The external surface of all drums, lids, and lock bands shall be thoroughly cleaned of all tar-like substance, labeled and sealed.

B.8 Disposal of the Drums: The drums containing PCB ballast and those containing rags, towels, residue, etc. along with completed DD Form 3148-1a will be transported to building 808 and placed on the wooden pallets (four drums to a pallet). The objective being that DRMO personnel will be able to use a forklift to transport the pallet mounted drums.

PART C

DISPOSAL OF FLUORESCENT AND OTHER UNIVERSAL LAMPS

C.1 Point of Contact for Waste Lamp Disposal: On TAFB, the point of contact for work involving waste lamps is 72ABW/CEIEC, 736-3093.

C.2 Background: The U. S. Environmental Protection Agency (EPA) has promulgated regulations governing the accumulation and disposal of Universal Waste Lamps. These regulations became effective in January 2000, and amend the EPA Universal Waste Rule, dated 11 may 1995. The Oklahoma Department of Environmental Quality (DEQ) has adopted the EPA rules for waste lamp regulations.

C.3 Containers for Disposal of Lamps: Containers for disposal of waste UW lamps, fluorescent lamps) are available to the Contractor through building 808, 72ABW/CEIEC, 734-3278, TAFB. Containers cannot be received from CEIE without the proper Government release. The Contractor shall coordinate with the Project Inspector for this release. The Construction Inspector, in turn, shall coordinate with Civil Engineering Quality and Safety Unit Environmental Coordinator (CECQS) to obtain the release. Once the release has been obtained, the Contractor shall be responsible for picking up and transporting

the containers. The Contractor shall use care in making economical use of Government furnished materials.

C.4 Lamp Removal: Assume all fluorescent lamps on TAFB, regardless of age, are harmful to the environment. The Government will provide the containers, for disposal of the lamps. After all waste lamps have been placed in the containers, identification and hazard labels shall be placed on each container.

C.5 Disposal of Containers: Prior to transporting containers, a Tracking Log shall be completed. The containers shall be transported to the Waste Lamp Consolidation Site (WLCS) at Building 808.

C.6 Disposal of light transformers and high voltage fuses: These are not hazardous and contain recyclable metals, therefore they should be turned in as scrap metal to Services.

PART D

PCB-CONTAINING LIQUIDS AND TRANSFORMER REMOVAL

D.1 Point of contact for PCB items is 72ABW/CEIEC, 736-3093.

D.2 Requirements for removal of PCB-containing transformers shall follow and comply with Subpart D of 40 CFR, Part 761.

- END OF ATTACHMENT 4 -

Attachment 5

TINKER AIR FORCE BASE CONSTRUCTION AND DEMOLITION DEBRIS MANAGEMENT PROCEDURES

1. GENERAL

1.1 DEFINITIONS

1.1.1 Point of contact for Construction and Demolition Debris Management Procedures is 72ABW/CEIE, 734-5199.

1.1.2 Construction and Demolition Debris: Solid wastes such as building materials, packaging and rubble resulting from construction, remodeling, demolition and repair of buildings/facilities, paving and infrastructure.

1.1.3 Recyclable Materials: Products and materials that can be recovered and remanufactured into a new product. Recyclable materials include, but are not limited to, the following:

a. Metals (ferrous and non-ferrous), including banding, metal studs, ductwork, and piping.
b. Asphaltic concrete paving
c. Portland cement concrete
d. Land clearing debris including trees and plant materials
e. Native rock and granular fill
f. Gypsum products
g. Paper and cardboard
h. Wood products, including structural, finish, crates and pallets
i. Brick and masonry
j. Carpet and padding
k. Plastics
l. Copper wiring
m. Mechanical and electrical products and equipment

For more information on recyclable materials, see the Environmental Protection Agency’s Comprehensive Procurement Guidelines, electronically at http://www.epa.gov/epaoswer/non-hw/procure/index.htm.

1.1.4 Recycling Facility: A business that specializes in collecting, handling, processing, distributing, or remanufacturing waste materials generated by demolition and new construction projects, into products or materials that can be used for this project of by others.

1.1.5 Salvage and Reuse: Existing usable product or material that can be saved and reused in some manner on the project site. Materials that can be salvaged and reused must comply with applicable technical specifications and include, but are not limited to, the following:

a. Dimensional lumber and other wood products
b. Structural steel
c. Soil
d. Masonry products

1.1.6 Salvage for Resale: Existing usable product or material that can be saved and removed intact (as is) from the project site to another site for resale to others without remanufacturing.

1.1.7 Trash: Product or material unable to be salvaged for resale, salvaged and reused, returned, or recycled.

1.1.8 Waste Materials: Product or material that can be salvaged for resale, salvaged and reused, returned to vendors, or recycled.

1.2 CONSTRUCTION WASTE MANAGEMENT

1.2.1 General Intent: The Contractor shall use all means available to divert to the greatest extent practical and economically feasible, construction and demolition debris from landfills and incinerators.

1.2.2 Construction Debris Management Operations: Take a proactive, responsible role in management of construction debris and require all subcontractors, vendors, and suppliers to participate in the effort. Establish a construction debris management program that includes the following categories:

a. Minimizing Packaging Waste
b. Salvage and reuse
c. Salvage for resale or donation
d. Disposal

1.2.3 Construction Debris Management Plan: Perform a waste analysis to determine the types and quantity of construction debris anticipated and identify salvage for resale, salvage and reuse, recycling and disposal options available. Prior to performing any demolition work, submit a Construction Debris Management Plan to the Contracting Officer for review and approval. The Construction Debris Management Plan shall include the following:

a. Project construction debris analysis.
b. A list of debris materials that will be salvaged for resale, salvaged and reused, and recycled.
c. Identification of each recycling facility to be utilized.

2. PROGRAM IMPLEMENTATION AND MONITORING:

The Contractor shall implement and maintain, for the duration of the project, the construction debris management program. Establish a method of monitoring and documenting the program, and submit a Debris Management Report monthly that includes the following:

a. Amount (by weight) and type of waste materials disposed of in a landfill or incinerator.
b. Amount (by weight) and type of waste materials salvaged for sale, salvaged for reuse, and recycled. Estimated weights can be used if actual weights are not available.

2.1 HAZARDOUS MATERIALS/HAZARDOUS WASTES:

If any non-acceptable materials such as hazardous materials or hazardous wastes are encountered, the Contractor shall notify the Contracting Officer.

2.2 SALVAGE AND REUSE:

The Contractor shall practice effective debris management when, sizing, cutting, and installing products and materials.

2.3 SEPARATION OF RECYCLABLE DEBRIS:

Provide the necessary containers and bins, to facilitate the construction debris management program, that are clearly and appropriately marked. Prevent contamination of recyclable materials from incompatible products and materials. Separate construction debris at the project site by one of the following methods:

a. Source Separated Method: Debris products and materials, that are recyclable, are separated from trash and sorted into appropriately marked separate containers and then transported to the respective recycling facility for further processing. Trash is transported to a landfill or incinerator.
b. Co-Mingled Method: All construction debris is placed into a single container and then transported to a recycling facility where the recyclable materials are sorted and processed and the remaining trash is transported to a landfill or incinerator.
c. Other methods proposed by the Contractor and approved by the Contracting Officer.

- END OF ATTACHMENT 5 -

Attachment 6

TINKER AIR FORCE BASE WASTE MANAGEMENT PROCEDURES

Table of Contents

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PART A - General Section 68
PART B - Hazardous Waste Management Procedures 68

PART A

GENERAL

The procedures for handling and disposing of hazardous waste and industrial waste are stated herein. The following regulations, their appendices, guidelines, memorandums, attachments, and other pertinent documents, which form a part of these regulations, shall apply in their entirety.

PART B

HAZARDOUS WASTE MANGEMENT PROCEDURES

B.1 TAFB HWMP is the applicable regulation for hazardous waste management.
B.2 Each organization is responsible for the hazardous waste that they create.
B.3 Any hazardous waste will be characterized to determine nature and extent of potential hazard.
B.4 Hazardous wastes shall be maintained in appropriate containers and handled in a safe manner.
B.5 Containers will be identified with appropriate information to warn of hazards to health and environment.
B.6 Hazardous waste shall be stored in a manner to prevent adverse health and environment effects in the event of unexpected release.
B.7 Complete tracking documentation must be maintained for all hazardous wastes from their point of generation (cradle) to their point of disposal (grave).
B.8 Personnel involved in handling hazardous wastes shall have all required training.
B.9 Compliance with required laws and regulations shall be monitored by an established system of inspectors.
B.11 Any organization/facility improperly managing hazardous wastes shall cease all operations until safe conditions have been re-established.

- END OF ATTACHMENT 6 -

ATTACHMENT 7a

CHEMICAL/HAZARDOUS MATERIAL REQUEST/AUTHORIZATION

CHEMICAL/HAZARDOUS MATERIAL REQUEST AUTHORIZATION FORM PART I - MATERIAL REQUEST	1. TYPE OF REQUEST	2. PROCESS CODE

SECTION I. REQUESTOR INFORMATION

3. COMMAND/INSTALLATION/ORGANIZATION/OFFICE SYMBOL:	4. WORKCENTER TITLE:
5. DODAAC and SUPPLY ACCOUNT CODE(S)	6. BUILDING NUMBER	7. LOCATION *(Be specific)*

SECTION II. MATERIAL INFORMATION (Attach copy of MSDS)

8. MATERIAL NAME	9. NSN/LSN/MSN	10. MATERIAL SPECIFICATION
11a. SOLE SOURCE MANUFACTURER NAME/CAGE	11b. SOLE SOURCE PART NUMBER/TRADE NAME	

12. MSDS REFERENCE #/DATE	13. UNIT OF ISSUE	14. DRAW AMOUNT	15. DRAW FREQUENCY

SECTION III. REQUIRING DOCUMENT(S) (Attach copies of specified pages)

16a. DOCUMENT NUMBER	16b. PARAGRAPH NUMBER	16c. PAGE NUMBER	16d. REVISION/CHANGE NUMBER	16e. REVISION/CHANGE DATE

SECTION IV. PROCESS INFORMATION

17. IS THIS REQUEST FOR A NEW WORKLOAD OR PROCESS IN THIS SHOP? (Circle one): ☐ YES ☐ NO

18.PROCESS *(Fully describe the process in which this material is used.)*

19. AMOUNT OF MATERIAL USED PER PROCESS	20. FREQUENCY OF PROCESS	21. DURATION OF PROCESS

22. DESCRIBE ANY ENGINEERING CONTROLS IN USE DURING THE PROCESS *(such as exhaust/ventilation systems, enclosures, covered tanks, cooling coils, etc.)*

23. INDICATE ANY PERSONAL PROTECTIVE EQUIPMENT *(PPE)* CURRENTLY BEING USED IN CONJUNCTION WITH THIS PROCESS

24. DESCRIBE THE METHOD OF DISPOSAL FOR THE WASTE THAT IS GENERATED

SECTION V. REMARKS

25. PROVIDE ADDITIONAL INFORMATION

SECTION VI. CERTIFICATION

26a. REQUESTER'S NAME/ORGN SYMBOL, AND PHONE	26b. SIGNATURE "I certify that material will be used as stated above."	26c. DATE
27a. CERTIFYING OFFICIAL'S NAME/ORGN SYMBOL/TELEPHONE NO.	27b. SIGNATURE "I certify that material is required as stated above."	27c. DATE

AF IMT 3952, 20050301, V1

ATTACHMENT 7a

CHEMICAL/HAZARDOUS MATERIAL REQUEST/AUTHORIZATION (CONT)

CHEMICAL/HAZARDOUS MATERIAL REQUEST/AUTHORIZATION
PART II - MATERIAL AUTHORIZATION

SECTION I. HEALTH REVIEW *(To be filled in by the Bioenvironmental Engineer)*

☐ BLANKET AUTHORIZED	☐ AUTHORIZED WITH THE RESTRICTIONS LISTED IN PART 1 SECTION IV AND THOSE LISTED BELOW (IF ANY)	☐ NOT AUTHORIZED	☐ CONTRACTOR SUBMITTED 3952-REVIEWED FOR INFORMATION PURPOSES ONLY *(This does not involve evaluation and approval of the conractor's safety and health programs)*

REMARKS

For information on specific health hazards or precautions for use, consult the manufacturer's MATERIAL SAFETY DATA SHEET (MSDS) or your BIOENVIRONMENTAL ENGINEERING REVIEWER.

BIOENVIRONMENTAL ENGINEERING REVIEWER'S NAME, TITLE, ORGANIZATION OFFICE, SYMBOL, AND PHONE NO.	SIGNATURE	DATE

SECTION II. SAFETY REVIEW *(To be filled in by the Safety Office)*

☐ BLANKET AUTHORIZED	☐ AUTHORIZED WITH THE RESTRICTIONS LISTED IN PART 1 SECTION IV AND THOSE LISTED BELOW (IF ANY)	☐ NOT AUTHORIZED	☐ CONTRACTOR SUBMITTED 3952-REVIEWED FOR INFORMATION PURPOSES ONLY *(This does not involve evaluation and approval of the conractor's safety and health programs)*

REMARKS

SAFETY OFFICE REVIEWER'S NAME, TITLE, ORGANIZATION, OFFICE SYMBOL, AND SYMBOL, AND PHONE NO.	SIGNATURE	DATE

SECTION III. ENVIRONMENTAL AND FIRE PROTECTION REVIEW *(To be filled in by Civil Engineering/Environmental Management).*

☐ BLANKET AUTHORIZED	☐ AUTHORIZED WITH THE RESTRICTIONS LISTED IN PART 1 SECTION IV AND THOSE LISTED BELOW (IF ANY)	☐ NOT AUTHORIZED

REMARKS	ODS SAO APPROVAL NUMBERr

CIVIL ENGINEERING REVIEWER'S NAME, TITLE, ORGANIZATION OFFICE SYMBOL, AND TELEPHONE NUMBER	SIGNATURE	DATE

ANY changes to the conditions or process stated on the AF Form 3952 invalidate this authorization. Notify the HAZMART of any changes or resubmit your AF Form 3952.

AF IMT 3952, 20050301, V1 ***(REVERSE)***

ATTACHMENT 7b

MONTHLY HAZARDOUS MATERIALS USAGE REPORT

MONTHLY HAZARDOUS MATERIAL USAGE REPORT
REPORT ON CHEMICAL USAGE

1. GENERAL INFORMATION

Contract Number _____ Contract Performance Period _____

Contractor's Name _____ Date of Report _____

Name of On-Base Contractor Point of Contact _____

Phone Number of Contractor On-Base Point of Contact _____

Emergency Phone Number _____

Address or Physical Location of the Contractor's Field Office

_____

2. PRODUCT INFORMATION

Product Nomenclature _____

Product Trade Name _____

Product Part Number _____

Manufacturer's Name _____

Manufacturer's Address _____

Physical Locations(s) of On-Base Usage and Storage

_____ Same as Above _____ Other

_____

Description of How Product is used _____

3. USAGE/STORAGE AMOUNT

Unit of Measure: _____ Gallon(s) _____ Unit(s) _____ Pint(s)

_____ Fluid Ounce(s) _____ Pound(s)

_____ Other (Specify) _____

Amount Brought on Installation	Amount Used During Reporting Period	Amount Stored	Amount Removed
_____	_____	_____	_____

Signature _____
(Responsible Contractor)

(Continue on additional sheets if needed)

Attachment 8

TINKER AIR FORCE BASE RECOVERED MATERIALS DETERMINATION FORM

Recovered Materials Determination Form (RMDF)
User's Guide

1. PURPOSE OF FORM. The "Recovered Materials Determination Form" (RMDF) is used to clearly identify items listed in the Comprehensive Procurement Guidelines (CPG) that are included in a procurement action, require the consideration of energy efficiency and environmentally preferable purchasing (EPP) for the procurement action, and document the use of applicable exemptions taken for the CPG items identified.

2. APPLICABILITY. The RMDF applies to all procurement actions (other than GPC purchases) that include items that are listed in the CPG, biobased, Energy Star®, or FEMP Low Standby Power programs.

3. INTENT FOR USE.

a. Contractors and CE Operations shop personnel (for in-house job and work orders regardless of project cost) will be responsible for completing an RMDF if any of the mandatory EPP items are required. For CPG items where exemptions are identified during project/contract performance, an amended RMDF must be completed documenting the exemption.

b. If the procurement action does not include any CPG, biobased, Energy Star®, or FEMP Low Standby Power items, complete the GPP Statement instead.

4. FILING PROCEDURE. If applicable, the RMDF and any amended RMDFs will be included in the purchasing or contracting file. Contracting is responsible for ensuring that either a Green Procurement Statement or RMDF (and any amended RMDFs) is included in contracting files.

5. SIGNER. The Recovered Materials Determination Form can be signed by any person who has technical knowledge of the products or services being purchased. For service and construction contracts, the signer should have general knowledge of the products that will be purchased by the contractor to complete the job. It is the signer's responsibility to check the mandatory purchase lists and determine if any of those products will be purchased.

6. INSTRUCTIONS. This form is to be completed when EPA-designated items included in the Green Procurement Program for Recovered Materials are being procured from outside vendors. For questions on whether the product counts as "EPA-designated" or what the required recycled content is, refer to product descriptions on EPA's website at **www.epa.gov/cpg/products**. For USDA designated items, refer to the website at **http://www.biopreferred.gov/?SMSESSION=NO**. For Energy Star items, refer to the website at **www.energystar.gov/products** . For FEMP items, refer to the website at **http://oahu.lbl.gov**. The completed form becomes part of the contracting office contract file.

Attachment 8

TINKER AIR FORCE BASE RECOVERED MATERIALS DETERMINATION FORM (CONT)

Recovered Materials Determination Form

Project No._____

The EPA-designated items being procured are:

Construction Products
____ Building insulation products
____ Polyester carpet
____ Carpet cushion
Cement and concrete containing:
____ Coal fly ash
____ Ground granulated blast furnace slag
____ Cenospheres
____ Silica fume
____ Consolidated and reprocessed latex paint
____ Floor tiles
____ Flowable fill
____ Laminated paperboard
____ Modular threshold ramps
____ Nonpressure pipe
____ Patio blocks
____ Railroad grade crossing surfaces
____ Roofing materials
____ Shower and restroom dividers/partitions
____ Structural fiberboard

Landscaping Products
____ Compost and fertilizer made from recovered
____ organic materials
____ Garden and soaker hoses
____ Hydraulic mulch
____ Lawn and garden edging
____ Plastic lumber landscaping timbers and posts

Nonpaper Office Products
____ Binders, clipboards, file folders, clip portfolios,
____ and presentation folders
____ Office furniture
____ Office recycling containers
____ Office waste receptacles
____ Plastic desktop accessories
____ Plastic envelopes
____ Plastic trash bags
____ Printer ribbons
Toner cartridges

Paper and Paper Products
____ Commercial/industrial sanitary tissue products
____ Miscellaneous papers
____ Newsprint
____ Paperboard and packaging products
____ Printing and writing papers

Park and Recreation Products
____ Park benches and picnic tables
____ Plastic fencing
____ Playground equipment
____ Playground surfaces
____ Running tracks

Transportation Products
____ Channelizers
____ Delineators
____ Flexible delineators
____ Parking stops
____ Traffic barricades
____ Traffic cones

Vehicular Products
____ Engine coolants
____ Rebuilt vehicular parts
____ Re-refined lubricating oils
____ Retread tires

Miscellaneous Products
____ Awards and plaques
____ Bike racks
____ Blasting grit
____ Industrial drums
____ Manual-grade strapping
____ Mats
____ Pallets
____ Signage
____ Sorbents

Page 1

Attachment 8

TINKER AIR FORCE BASE RECOVERED MATERIALS DETERMINATION FORM (CONT)

The USDA-designated biobased items being procured are:

Construction and Industrial

____ Carpets
____ Chain and cable lubricants
____ Composite panels:
  ____ Acoustical
  ____ Interior panels
  ____ Plastic lumber
  ____ Structural interior panels
  ____ Structural wall panels
____ Concrete and asphalt release fluids
____ Expanded polystyrene foam recycling products
____ Forming lubricants
____ Fluid-Filled transformers:
  ____ Synthetic ester-based
  ____ Vegetable oil-based
____ Hydraulic fluids:
  ____ Mobile equipment
  ____ Stationary equipment
____ Industrial cleaners
____ Metalworking fluids:
  ____ General purpose soluble, semi-synthetic, and synthetic oils
  ____ High performance soluble, semi-synthetic, and synthetic oils
  ____ Straight oils
____ Parts wash solution
____ Plastic insulating foam for residential and commercial construction
____ Roof coatings
____ Water tank coatings
____ Wood and concrete sealers:
  ____ Membrane concrete sealers
  ____ Penetrating liquids

Miscellaneous

____ Bedding, bed linens, and towels
____ Firearm lubricants
____ Hand cleaners
____ Hand sanitizers
____ Lip care products
____ Topical pain relief products

Facility Operations and Maintenance

____ 2-Cycle engine oils
____ Corrosion preventatives
____ Diesel fuel additives
____ Dust suppressants
____ Fertilizers
____ Gear lubricants
____ General purpose de-icers
____ Greases:
  ____ Food grade
  ____ Multipurpose
  ____ Other
  ____ Rail truck
  ____ Track
____ Heat transfer fluids
____ Ink removers and cleaners
____ Mulch and compost materials
____ Multipurpose lubricants
____ Penetrating lubricants
____ Sorbents
____ Turbine drip oils

Janitorial

____ Adhesive and mastic removers
____ Bathroom and spa cleaners
____ Carpet and upholstery cleaners:
  ____ General purpose
  ____ Spot removers
____ Floor strippers
____ General purpose household cleaners
____ Glass cleaners
____ Graffiti and grease removers
____ Laundry products:
  ____ General purpose
  ____ Pretreatment/spot removers
____ Multipurpose cleaners
____ Trash bags/can liners (films):
  ____ Non-durable
  ____ Semi-durable

Food Service

____ Disposable containers
____ Disposable cutlery
____ Disposable tableware
____ Food Cleaners

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Attachment 8

TINKER AIR FORCE BASE RECOVERED MATERIALS DETERMINATION FORM (CONT)

The Energy Star products being procured are:

Building Products
___ Seal and insulate
___ Roof products
___ Windows, doors, and skylights

Commercial Appliances
___ Commercial clothes washers
___ Vending machines
Water coolers

Commercial Food Service Equipment
___ Commercial kitchen package
___ Commercial dishwashers
___ Commercial fryers
___ Commercial griddles
___ Commercial hot food holding cabinets
___ Commercial ice machines
___ Commercial ovens
___ Commercial refrigerators and freezers
___ Commercial steam cookers

Computers and Electronics
___ Audio/Video
___ Battery chargers
___ Computers
___ Displays
___ Enterprise servers
___ External power adapters
___ Imaging equipment
___ Televisions

Heating and Cooling
___ Air conditioning, central
___ Boilers
___ Fans, ventilating
___ Heat pumps, geothermal
___ Light commercial heating and cooling

Lighting
___ Commercial LED lighting
___ Light bulbs (CFLs)
___ Light Fixtures
___ LED light bulbs

Plumbing
___ Water heater, gas condensing
___ Water heater, heat pump
___ Water heater, high efficiency gas storage
___ Water heater, solar
___ Water heater, whole home gas tankless

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Attachment 8

TINKER AIR FORCE BASE RECOVERED MATERIALS DETERMINATION FORM (CONT)

The Federal Energy Management Program Low Standby Power products being procured are:

___ Audio products
___ Cell phone
___ Computer monitor
___ Copier
___ Cordless phone
___ Desktop computer
___ Docking station
___ DVD player
___ External disk drive
___ Fax
___ Laptop computer
___ Microwave
___ Multifunction device
___ Multimedia projectors
___ FPDA holder and charger
___ Printer
___ Room air conditioner
___ Scanner
___ Telephone answering machine
___ TV
___ TV/VCR/DVD combinations

Page 4

Attachment 8

TINKER AIR FORCE BASE RECOVERED MATERIALS DETERMINATION FORM (CONT)

Recovered Materials Procurement Determination

____ EPA recycled-content requirements have been met for this procurement action.

****** OR *******

____ The following EPA designated guideline item is included in the specifications for project number _____, however, compliance with EPA standards is not attainable.

Item(s): _____

I have determined that the EPA guidelines were considered and determined inapplicable, based on the following:

____ Item is not available within a reasonable period of time.

Need date:_____ Date available: _____

____ Item fails to meet a performance standard in the specifications.

Describe the standard and why it is needed:_____

_____

_____

Describe how the guideline item fails to meet the standard: _____

_____

_____

____ Item is not available from 2 or more sources.

Market research was performed by calling _____ (insert number) vendors, but only _____ (enter name) was able to supply the item.

____ Item was only available at an unreasonable price (i.e., recycled item is more expensive).

Price of recycled item: _____

Price of non-recycled item: _____

This determination is made in accordance with FAR 23.405(c).

_____ _____ Approve _____ Disapprove

Civil Engineering Recommendation

_____ _____

Signature of Contracting Officer Date

Page 5

ATTACHMENT 9

EMS Awareness Training

Environmental Management System (EMS) Awareness Training

WHAT IS AN ENVIRONMENTAL MANAGEMENT SYSTEM?

An Environmental Management System (EMS) is a system to achieve continual improvement in mission performance by reducing environmental risks and cost. It allows senior leaders to determine and focus on the highest priorities to sustain or enhance the mission. It integrates our existing environmental programs into a single framework.

SELF-DECLARATION OF ENVIRONMENTAL MANAGEMENT SYSTEM IN-PLACE

Tinker AFB formally established its EMS in November 2005 with the latest Self-Declaration of conformance on 30 Aug 2018.

ENVIRONMENTAL POLICY STATEMENT

The latest Environmental Policy Statement was issued on 30 Aug 2018 and is attached for review as part of this training requirement.

DEFINITIONS

Environmental Aspect – Element of an organization's activities or products or services that can interact with the environment
Environmental Impact – Any change to the environment whether adverse or beneficial, wholly or partly resulting from an organization's environmental aspects
Environmental Objective – Overall environmental goal, consistent with the environmental policy that an organization sets itself to achieve

SIGNIFICANT ENVIRONMENTAL ASPECTS

Tinker high priority environmental aspects are as follows:

- Hazardous Waste Generation
- Air Emissions
- Storm Water

OBJECTIVES AND TARGETS

- Maintain Compliance – No Notices of Violation
- Reduce Hazardous Waste – Hazardous Waste Target: Reduce 20% by 2020, 2008-10 baseline; Interim 7% by 2015; 15% by 2018
- Reduce Solid Waste – Solid Waste Target: Divert 65% by weight by 2020 (excluding construction/demolition debris); interim 55% by 2015 and 60% by 2018
- Reduce Toxic Release Inventory (TRI) Releases – Toxic Release Inventory (TRI) Releases Target: Reduce 35% by 2020, 2006 baseline; interim 20% by 2015 and 30% by 2018

TRAINING REQUIREMENTS:

Contractor employees working on Tinker AFB must review the Tinker Environmental Management System (EMS) General Awareness Training for Contractors (PowerPoint slides) and the annual EMS policy letter (attached).

ADDITIONAL INFORMATION

For additional information or assistance with the EMS training, contact: Mr. Joe Kracke, EMS Coordinator, 405-734-4586, joseph.kracke.1@us.af.mil

ENVIRONMENTAL COMPLIANCE AND STEWARDSHIP IS THE DUTY OF EACH INDIVIDUAL WORKING ON TINKER AFB.

CONTRACTOR CERTIFICATION:

I certify that all employees physically working on Tinker AFB will be view the Tinker AFB EMS General Awareness Training slides.

_____

Contractor Representative Date

ATTACHMENT 10

Environmental Policy Statement

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 72D AIR BASE WING (AFMC)
TINKER AIR FORCE BASE OKLAHOMA

MEMORANDUM FOR TINKER DISTRIBUTION E AND ALL ASSOCIATE UNITS

FROM: 72 ABW/CC

SUBJECT: Tinker AFB Environmental Policy

1. Tinker Air Force Base, including all units, mission partners and contractors, is committed to performing its mission in a responsible manner that protects human health and the environment. In doing so, we strive to comply with all applicable environmental laws and regulations. We are dedicated to continuous improvement of our processes to prevent and reduce waste generation and pollution. This commitment goes beyond compliance with the law and integrates sound environmental practices into our daily decisions and activities. In all our activities we will seek to:

a. Maintain an effective Environmental Management System (EMS), promote the use of safe technologies and operating practices, and provide rapid response to spills and other environmental emergencies, in order to enhance environmental stewardship and minimize adverse impacts to base employees, their families, and the environment

b. Set environmental goals, measure progress, take corrective action when necessary to address noncompliance situations and to remediate environmental damage from past activities, and effectively communicate all applicable environmental information to base workers, regulators, and the public

c. Establish and implement an effective pollution prevention program, minimize generation of waste, recycle materials to prevent waste when possible, and dispose of all remaining waste in an environmentally responsible manner

d. Ensure responsible use of energy throughout the installation; including the adoption of innovative practices and procedures to improve energy efficiency

e. Balance development of built and natural land areas to ensure a quality environment which fully supports and sustains military readiness while meeting environmental conservation mandates

2. Compliance with this policy is the responsibility of everyone at Tinker AFB. In accordance with the Air Force EMS policy, all personnel are responsible to support the Air Force mission by complying with regulations, reducing risks, and instilling a culture of continual improvement.

3. Should you have any questions or concerns regarding this policy, please contact Tinker Environmental Management System (EMS) Coordinator, Mr. Joe Kracke, 734-4586, joseph.kracke.1@us.af.mil.

FILCEK.PAUL.G.1169589751 Digitally signed by FILCEK.PAUL.G.1169589751 Date: 2019.12.13 07:00:51 -06'00'

PAUL G. FILCEK, Colonel, USAF
Commander

ATTACHMENT 11

Integrated Cultural Resource Management Plan, Section E.13 – Unexpected Discoveries of Archeological Materials During Construction Projects

E.13 Unexpected Discoveries of Archeological Materials During Construction Projects

Although Tinker AFB may receive concurrence from the SHPO and other parties about its proposed undertakings at many points in the compliance process, Tinker AFB should also maintain the necessary resources to handle an unanticipated discovery.

An unanticipated discovery is defined as one found during a construction project in an area that has already been adequately surveyed or deemed not to require surveyance (with SHPO concurrence), and the site in question was not found during that survey. Unanticipated discoveries are usually archeological in nature, found when ground-disturbing activities uncover a new site in an area that has already been adequately surveyed. The following are the steps that are taken during an unexpected cultural resource discovery involving human remains:

1. The persons responsible for the activity that resulted in the discovery of human remains (construction contractor, permittee, etc.) stop all work in the area around the resource and notify the CRM. All work is not obligated to cease on the project, but every effort must be made to prevent further damage until an NRHP evaluation is completed and any mitigation activities completed.

2. The CRM notifies the Department of the Interior's Department Consulting Archaeologist (DCA) of the discovery, who must respond within 48 hours of notification. The CRM also notifies the SHPO.

3. The DCA (or a representative), in conjunction with the SHPO, will conduct an on-site inspection, during which time the DCA and SHPO will make an NRHP determination. If the determination is that the site is not eligible, then the work proceeds. If the site is eligible for the NRHP, then the DCA and SHPO will produce an appropriate mitigation plan. The eligibility determination and mitigation plan are produced within 48 hours of the initial DCA notification.

4. If the SHPO is unable to participate in the NRHP evaluation or the development of the mitigation plan, the SHPO will comment on the mitigation plan produced by the DCA.

5. If the SHPO and DCA cannot agree on the mitigation procedures, then the ACHP is asked to participate.

6. The CRM abides by the NRHP-eligibility decision and implements the mitigation procedures. The CRM arranges for project funds to be appropriated in order to carry out the mitigation plan.

7. Tinker AFB then selects a qualified contractor (see page 128) who completes the mitigation measures within a reasonable period of time. The CRM works with the

ATTACHMENT 11

Integrated Cultural Resource Management Plan, Section E.13 - Unexpected Discoveries of Archeological Materials During Construction Projects (cont)

(c) Where practical, the section of repaired line shall be isolated, flushed and chlorinated with a 50 – 100 ppm chlorine solution and allowed to stand for 24 hours. If the section cannot be isolated for long periods of time, chlorination may be increased to 300 ppm with a 15 minute contact time.

(d) Once the appropriate chlorination/contact time option has been accomplished, the repaired section of line shall be flushed. Flushing shall occur toward the work location and shall continue until all discolored water has disappeared. In accordance with National Pollutant Discharge Elimination System (NPDES) requirements and storm water quality regulations, water flushed from the system shall be de-chlorinated and tested for chlorine prior to discharge. Water shall contain less than 0.1 mg/l total residual chlorine when discharged into any conveyance of the storm water system.

(e) After the lines are flushed, repair peronnel shall coordinate water sampling with Bioenvironmental Engineering. Water service shall remain "on" during sample incubation, but customers shall be notified to avoid consuming the water (an example is attached). Repair personnel are responsible for accomplishing all notifications.

(f) If water samples test postive for coliform bacteria, this process shall be repeated. Once water samples test negative for coliform bacteria, this process terminates.

2) In the event the sampling must be accomplished after duty hours, the Bioenvironmental Engineer technician on call can perform the sampling. On-call personnel can be contacted through the Fire Department control room, 4-7964.

2. Please direct suggestions or questions to Bioenvironmental Engineering at 734-7844.

ATTACHMENT 11

Integrated Cultural Resource Management Plan, Section E.13 – Unexpected Discoveries of Archeological Materials During Construction Projects (cont)

selected contractor to coordinate the earliest time the base can resume work in the site area.

The following are the offices the CRM contacts in the event of an unexpected (emergency) discovery of human remains. The DCA is located in Washington DC and will usually send someone from a local NPS office to conduct the on-site inspection.

1. Departmental Consulting Archaeologist
   Department of the Interior
   National Park Service
   P.O. Box 37127
   Washington, DC 20013-7127
   (202-343-4101)

2. National Park Service
   Midwest Regional Office
   1709 Jackson Street
   Omaha, Nebraska 68102
   (402-864-3431)

3. Oklahoma Historical Society
   State Historic Preservation Office
   2704 Villa Prom, Shepard Mall
   Oklahoma City, Oklahoma 73107-2441
   (405-521-6249)

E.13.1 Discovery and removal of human remains

Discoveries involving human remains will most likely come from an unexpected discovery made during the course of a ground-disturbing activity such as construction or an authorized archeological excavation. In the event of a discovery, it is imperative that all work in the area that might affect the integrity of the burial be terminated immediately. Because burials may fall under three possible categories—Native American, Euro-American, and recently interred—the guidelines below are used to determine what chain of command is to be followed.

The unexpected discovery of human remains requires the following steps:

1. The persons responsible for the activity that resulted in the discovery of the remains (construction contractor, permittee, etc.) stop all work in the area that could potentially have an adverse effect on the discovered human remains and simultaneously contact Security Forces (SF) and the CRM for consultation and implementation of the appropriate burial laws.

2. The CRM is then to notify a qualified Cultural Resources Specialist (referred to as "Specialist") for the base. The Specialist then needs to first certify the receipt of notification of the burial, and then take immediate steps, if necessary, to secure and

ATTACHMENT 11

Integrated Cultural Resource Management Plan, Section E.13 – Unexpected Discoveries of Archeological Materials During Construction Projects (cont)

a. literature search, professional archeological survey, and spatial mapping of individual burials;

b. physical recordation of existing burial/cemetery (photographs, marker rubbings, oral histories);

c. consultation with next of kin or descendants of previous land owners;

d. acquisition of space for reburial;

e. exhumation by a qualified professional (in accordance with ARPA and its implementing regulations) using protective health measures for burial excavations;

f. reinternment by a qualified professional;

g. spatial mapping of new burial sites; and

h. documentation of compliance with ARPA and other applicable Federal, state, and local laws.

9. Tinker AFB may resume its activity 30 days after receipt of written confirmation, providing all state and federal rules have been met. A waiver of the 30-day work stoppage requirement is possible if there is a contingency plan in place.

Attachment 12

TREE PROTECTION REQUIREMENTS

1. TREE PLANTING/REMOVAL.

1.1 TREE PLANTING/REMOVAL PERMIT.

If trees are removed or planted on base, a permit must be obtained prior to commencement of work. Contact Civil Engineering Natural Resources (739-7074 or 739-7062) for permit information.

1.2 TREE SPECIES SELECTION/PLANTING.

Only trees listed on the Tinker Air Force Base Native Tree List shall be planted on base. Contact Civil Engineering Natural Resources (739-7074 or 739-7062) for current list. All trees shall be planted as shown on the TAFB Tree Planting/Staking and Root Protection Detail available from Natural Resources office. Trees shall not exceed two (2) inches in trunk diameter (measured at 6 inches above the top of the root ball or soil in a containerized plant) at the time of planting. All contractor-provided trees shall comply with ANSI Z60.1-1990, American Standard for Nursery Stock (or most current version).

1.3 TREE TRANSPLANTING.

If select trees cannot be retained on a particular site, they shall be transplanted when practicable. For purposes of this requirement, transplantable trees are typically defined as healthy, native, well-formed trees with trunk diameters between 1 and 6 inches (measured at 6 inches above the ground).

1.4 TREE REPLACEMENT.

It is base policy that for every tree removed two replacement trees shall be planted. Trees shall be replanted within the construction limits. If this is not possible, trees shall be replanted at another location on base approved by the Contracting Officer.

2. TREE PROTECTION.

2.1 TREE PROTECTION PLAN.

Prior to construction/demolition activities around trees, a tree protection plan shall be submitted to the Contracting Officer for coordination/approval. This is not intended to be an extensive, costly plan but rather a simple outline detailing what will be done to protect the trees during construction. The plan shall include:

a. Plan view sketch or drawing of site showing tree locations and proposed protection measures.
b. A brief narrative of what materials will be used and when they will be installed/removed.
c. If trenching is required across a root zone, techniques used to minimize root damage shall be described.

2.2 ROOT ZONE PROTECTION.

Root zones shall be protected from erosion, soil compaction, unearthing, severing, and other events that could be harmful to the health of trees. Trees that are to be retained in place during construction shall be fenced off using steel T-posts and high visibility barrier fencing prior to bringing construction equipment on site. Fencing shall be installed 10’ beyond the drip line of each tree or cluster of trees. Where this is not practicable, trees shall be fenced at the drip line, as a minimum. No vehicles, equipment, or supplies shall be staged within the barricaded area. Tree care protection procedures shall be accomplished for the duration of construction.

In some locations where barrier fencing is not possible (e.g., due to construction requirements such as vehicles needing to travel over root zones), impacts must be minimized by such practices as temporary placement of heavy woodchip mulch (10” deep minimum) on the area to be traversed prior to commencement of work.

Trenching across root zones shall be avoided. Alternatives such as reconfiguring trench routes or horizontal boring shall be employed where possible. If trenching across a root zone is the only viable option, roots shall be severed cleanly with specialized trenching equipment.

2.3 TRUNK PROTECTION.

All newly planted trees shall be protected with tree guards (Arbor Guard, or equivalent). Guard placement shall be such that the base of the guard is in firm contact with the soil at the base of the tree. It shall be securely tacked (½ to ¾ inch tack) to the tree to prevent the guard from riding up or coming off the trunk. The tack shall be opposite the open end of the tree guard such that the guard can freely expand as the tree grows.

3. TREE SALVAGE.

As determined by the Government (i.e., Civil Engineering natural resources staff), all marketable or otherwise recyclable/salvageable trees removed from construction sites shall be salvaged and hauled to Government-designated on-base sites. The Government will determine which tree products will be salvaged and may include, but are not limited to:

3.1 LOGS

Large millable trees shall be cut down by the contractor in dimensions specified by the Government. The contractor shall load, haul, and off-load the logs intact and undamaged.

3.2 FIREWOOD

Some unmillable trees, or limbs removed from millable trees, shall be cut into clean (i.e., no small branches, stubs, leaves, etc.) 16-inch firewood lengths and hauled to the on-base forest products staging area. The Contractor shall off-load and stack the firewood at the staging area as directed by the Government. This shall be done for all branches and trunks over 2-inches in diameter. All limbs smaller than 2-inches in diameter and all other tree debris shall be properly disposed of off-base by the Contractor.

3.3 FISH & WILDLIFE STRUCTURE:

Some trees shall be hauled essentially intact and placed in base ponds or other areas for fish and wildlife habitat improvements or other conservation program needs. Rootballs from felled trees shall be removed intact and placed in ponds or other on-base locations. The Government will designate the locations.

ATTACHMENT 13

AF Form 487, Generator Operating Log (Inspection and Testing)

GENERATOR OPERATING LOG (Inspection Checklist)

Front: annotate optimal readings (operating temp., peak kW and amps, etc.)
Reverse: continuation of readings and annotate any discrepancies and/or corrective actions.

1. GENERAL INFORMATION

A. INSPECTOR/OPERATOR (Print)	B. DATE	C. SUPERVISOR (Print/Signature)	D. DATE

E. RECORD ID	F. SITE NAME/BUILDING NUMBER	G. ORGANIZATION	H. BASE

I. START HRS	J. FINISH HRS	K. TIME	L. OUTSIDE TEMP.	M. SYSTEM TYPE	N. EQUIPMENT TYPE
				AUTO ☐ MANUAL ☐	RPIE ☐ EAID ☐

2. ALTERNATOR INFORMATION

A. MAKE	B. MODEL	C. SERIAL NUMBER	D. POWER FACTOR

E. VOLTAGE	F. AMPERAGE RATING	G. KILOWATT RATING	H. OTHER_____

3. ENGINE INFORMATION

A. MAKE	B. MODEL	C. SERIAL NUMBER	D. RPM/HZ	E. EXHAUST GAS TEMP.

4. AUTOMATIC/MANUAL TRANSFER SWITCH DATA ☐ N/A (This section is not required for generators without switchgear)

A. MAKE	B. MODEL	C. SERIAL NUMBER	D. BYPASS CAPABILITY
			YES ☐ NO ☐

E. AMP RATING	F. PHASE	G. POLES	H. DISCONNECT METHOD FOR LOAD TEST	I. ATS OPERATED (Attempt)
			KEY/TEST SWITCH ☐ MAIN DISCONNECT ☐	FIRST ☐ SECOND ☐ THIRD ☐ MANUAL ☐

5. GENERAL SITE AND GENERATOR SET CONDITIONS

	SAT	REMARKS/CORRECTIVE ACTION		SAT	REMARKS/CORRECTIVE ACTION
A. CLEANLINESS			E. BELT CONDITION		
B. LOOSE ITEMS			F. CONTROLS/GAUGES		
C. AREA (Room) LIGHTING			G. ENGINE VIBRATION		
D. GROUND CONNECTION			H. EXHAUST TEMP./CONDITION		°F

6. COOLING SYSTEM

A. LEAKS			
B. COOLANT LEVEL			
C. HOSES			
D. RADIATOR, LOUVERS			
E. AMBIENT TEMP.		°F	
F. OPERATING TEMP.		°F	

7. FUEL SYSTEM

A. LEAKS				
B. TRANSFER PUMP OPERATION				
C. TANK CAPACITY (Gal)	DAY		STORAGE	
D. TANK LEVEL (Gal)	DAY		STORAGE	
E. WATER DRAINED (Gal)	YES ☐	NO ☐	QUANTITY	

8. LOAD DEMAND

A. KILOWATTS (PEAK)						
B. AMPERAGE	PH1		PH2		PH3	
C. VOLTAGE (L-L)	PH1		PH2		PH3	

9. LUBRICATION SYSTEM

A. LEAKS		
B. OIL LEVEL		
C. OIL PRESSURE		PSI
D. OIL TEMP. (If applicable)		°F

10. BATTERY AND CHARGING SYSTEM

A. WIRING CONNECTIONS					
B. BATTERY VOLTS DC		C. INSTALL DATE (mm/yy)			
D. BATTERY TYPE	WET CELL		SEALED		
E. BATTERY CHARGING	VOLTS DC		AMPS		
F. BATTERY LOAD TEST	GOOD	WEAK	NOT TESTED		

11. AUTOMATIC/MANUAL TRANSFER SWITCH

A. WIRING AND CONNECTIONS		
B. CONTACT CONDITION		
C. COMPONENTS AND CONTROLS		
D. MECHANISM OPERABILITY		
E. INDICATOR LIGHTS		

12. MAINTENANCE ACTIONS ☐ (No maintenance due)

A. FILTER CHANGE	AIR		COOLANT		FUEL		OIL	
B. FLUIDS ADDED (Gal)			COOLANT		OIL			
C. LAST OIL CHANGE DATE (mm/yy)								
D. OIL ANALYSIS DATE (mm/yy)			RESULTS					

13. INSPECTION TYPE

A. SEMI-MONTHLY		B. MONTHLY		C. QUARTERLY	
D. SEMI-ANNUAL		E. ANNUAL		F. OTHER	
G. TEST METHOD (EGT, 30% Load or Less Than 30% Load)					
H. LOAD TYPE (Facility, Load Bank or Both)				I. DENIED LOAD TEST	

14. SITE DOCUMENTATION (Current Documentation)

A. OI's		B. TRAINING LETTER		C. ONE-LINE DIAGRAMS	

15. UNIT STARTED

A. FIRST		B. SECOND		C. THIRD		D. DID NOT START	

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ATTACHMENT 13

AF Form 487, Generator Operating Log (Inspection and Testing)

16. SEMI-MONTHLY (These checks are minimum inspection requirements, personnel must complete all manufacturer inspection items)

DATE	ENG HRS	FLUID LEVEL		FUEL LEVEL		DC ELECTRICAL SYSTEM		PRINT NAME	SIGNATURE
		OIL	COOLANT	DAY	STORAGE	BATTERY	CHARGER		

17. READING CONTINUATION (This form will be closed out by 0000 hrs daily; close -out engine hours will be recorded in block 1J)

TIME	ENGINE HOURS	OIL PRESSURE	WATER TEMP	FUEL LEVEL		AMPS			kW	PRINTED NAME
				DAY	STORAGE	PH1	PH2	PH3		

18. REMARKS

19. FACILITY REPRESENTATIVE (Required for Semiannual Insp. or Denied Test)	Print Name/Rank	Sign
A. TEST DENIED ☐ Approval MFR from MAJCOM/CV has been provided	B. TEST COMPLETED ☐ I have verify proper function of all building equipment and systems while connected to actual facility load and under generator operation	

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ATTACHMENT 14

Information for New Boilers

INFORMATION REQUIRED FOR NEW BOILER

INFORMATION REQUIRED FOR INSTALLATION/START-UP OF THE BOILER IN BLDG_____
POST LOCATION_____

Boiler Information

Manufacturer:

Model and MMBtu/hr input:

Serial Number:

Type of Boiler:

Primary Fuel:

Secondary/Alternative Fuel:

Dates of construction/installation/startup

Date construction commenced:

Date of installation of boiler:

Date of boiler startup (initial startup to check if the boiler is operating properly):

Date of boiler startup for continuous operation (official startup date):

Boiler Stack Information (note units, if different than shown)

Stack Diameter (ft):

Stack Height (ft):

Rated Stack Flow (cfm):

Stack temperature (°F):

Provide brochures and specifications available for the boiler

CONTINUOUS MAINTENANCE AND RECORDKEEPING REQUIREMENTS

Tune-up requirement-

Frequency is dependent on the Rated Heat Input Capacity of the Boiler, as follows:

> =10MMBtu/hr	Annual tuneups
< 10 but >5MMBtu/hr	Tune-ups every 2 years
<= 5MMBtu/hr	Tune-ups every 5 years

CEAN must be informed every time tune-ups are performed in the boilers

Date, time, and duration of every startup and shutdown of the boiler
Type of fuel and amount of fuel used during every startup and shutdown of the boiler

For dual fuel boilers (boilers that operate using NG and have liquid fuel as backup)

Date, type and amount of alternative fuel usage. Reason for using alternative fuel. If alternative fuel is used due to a natural gas curtailment, it needs to be notified immediately to CEAN.