

# Environmental Design Guide

- **Introduction**

The Appendix “A” defines the scope of A&E services. This Environmental Design Guide further defines the environmental services identified in the Appendix “A” and identifies technical and submittal requirements for architects and engineers (A&E) performing environmental design services for the Atlantic Division.

- **Communications**

Direct communication with the LANTNAVFACENGCOM environmental reviewer is encouraged. If you have a question concerning a particular comment, contact your LANTNAVFACENGCOM reviewer. This may avoid unnecessary re-submittal of plans and specifications due to a misunderstood comment. The reviewer’s name, phone number and email address appear on comment sheets.

- **Environmental Design Requirements**

- **Asbestos-Containing Materials (ACM)**

Asbestos-containing materials (ACM) are commonly found in older building materials and related products. Federal regulations require a facility asbestos survey prior to any renovation, alteration, and repair or demolition project that will disturb building materials. Perform a thorough, project specific survey and evaluation during the site investigation phase. Comply with all safety and environmental regulations during sample collection and field investigations. Take precautions to protect human health and the environment as required by federal, state and local regulations. Data from previous asbestos surveys may be available at the activity. Earlier surveys may not have included all suspect ACM that will be impacted by the project. If available, the data should be used to help determine the scope for the project. Obtain previous data from the activity asbestos program manager (APM) or designated representative.

- **Lead containing paint**

Lead containing paint is commonly found in older buildings, fuel piping, and steel structures and on every type of surface that can be painted or coated. Paint is identified as containing lead for construction projects if any levels are present as determined by a valid detection limit (usually 0.01%). When demolishing materials that have lead containing paint there are hazards associated with the generation of lead dust. There are four different scenarios when making a determination with regard to lead hazards associated with a project. Each scenario must address three aspects: worker protection, protection of surrounding areas, and disposal requirements. **Scenario No. 1:** Demolition of an entire building. In this case, the designer must make provisions for worker protection during the demolition activities and the disposal of the demolition debris will be handled as non-hazardous waste. **Scenario No. 2:** Interior or Exterior Renovation of portions of an existing building where painted materials are to be removed or renovated (i.e. windows, doors, walls, molding, ceilings, pipes, etc.) In this case, the designer must make provisions for worker protection, ensure renovation activities won’t expose personnel in surrounding areas to lead levels above the Action Level of  $30 \mu\text{g}/\text{m}^3$ , and determine, during the design phase, the characterization of the wastestream for disposal purposes. The wastestream characterization will determine whether the waste is disposed of as hazardous or non-hazardous waste. **Scenario No. 3:** Removal of lead containing paint from a substrate. In this case the designer must make

provisions for worker protection and disposal of the paint waste as hazardous waste. **Scenario No. 4:** Installation of new work that would require minor demolition of surfaces that have lead containing paint. Examples of this type of work include cutting holes in walls to install new electrical wires or mechanical piping; nailing of new items to existing surfaces; cutting out portions of painted piping; and welding to existing steel structures that are painted with lead containing paint. In this case the designer must provide for worker protection, ensure activities won't expose personnel in surrounding areas to lead levels above the Action Level of  $30 \mu\text{g}/\text{m}^3$ , and provide for disposal of any residue that might be collected from dust filters or vacuum filters.

Identifying all the lead issues associated with a demolition/renovation project is critical. The designer must, at the earliest stage, determine all activities that will be required during the construction of the project. The sampling plan must then be carefully tailored to correctly identify all areas with lead containing paint. The construction documents must then clearly identify all the areas with lead containing paint and the protocol for the contractor to provide protection of workers and the environment during all construction activities. The construction documents must also identify the appropriate clearance level required for the contractor to attain when finishing the construction activities that generate lead dust. The clearance level must be thoroughly researched for each type of construction project and differences established based upon the nature of the project (i.e. housing vice non-housing.)

- **PCB containing lighting ballasts**

PCB containing lighting ballasts are commonly found in older buildings. PCBs are currently regulated as a toxic substance under the Toxic Substance Control Act (TSCA.) Most Navy activities have replaced aging PCB containing lighting ballasts. However, some have not been replaced. The designer should obtain a current environmental survey from the activity that will indicate the status of all the existing ballasts in the building to be renovated or demolished. The designer should document that no PCB ballasts exist in the building. If no current information exists, then during the field survey, the designer must examine the ballasts to be removed. If there is no label that states "NON-PCB" then the ballasts will be assumed to be PCB containing. The designer must then provide the information on the drawings that the existing ballasts are to be removed and disposed of as PCB waste.

- **Mercury containing lighting lamps**

Currently most High Intensity Discharge (HID) and fluorescent lighting lamps contain mercury that requires disposal as a universal waste. The designer must identify all lamps on the demolition drawings and indicate that they shall be removed prior to any additional demolition and disposed of as universal waste. The lamps cannot be broken during the removal. The specifications will then indicate the proper regulations to follow in the disposal procedures. There are companies that recycle used lamps but it will be left up to the construction contractor as to which method of disposal is chosen.

As of 1999, lighting companies began producing "low-level" mercury lighting lamps that, when tested, do not constitute a universal waste for disposal purposes. The designer must therefore identify these lamps separately and provide different disposal instructions on the plans and in the specification. The designer must become familiar with the different manufacturer's data to identify these lamps during the field survey and in the environmental report.

- **Underground and Aboveground Storage Tanks**

There are several environmental issues that must be addressed when removing and disposing of underground or aboveground storage tanks. The designer must determine

the correct collection and disposal procedures for items such as cleaning water, rinse water, and existing sludge or product in the tank. The drawings and specification together must provide the contractor with sufficient information to determine quantities of materials, disposal classification (hazardous, non-hazardous, special waste) and regulatory testing requirements so that the contractor can provide a firm-fixed-price bid. The specifications should require that the Construction Contractor certify that the removed tanks were rendered unusable before transportation to the disposal site. The designer must incorporate any specific confirmatory soil samples to prove clean conditions as are required in the Activity's Tank Closure Report for Removed Tanks. The designer must coordinate specific environmental requirements with the activity environmental office and the Code EV, Environmental representative.

- **Contaminated soil and groundwater on Construction Site**

There are instances where construction will occur on sites that are known or suspected to have contaminated groundwater or soil. The surrounding area could also be classified as a "past hazardous waste site" or "Installation Restoration (IR)" site. In these circumstances, special considerations must be made as to the collection of any groundwater or soil generated from the construction activities. As an example: a construction site was known to have low levels of Volatile Organic Compounds in the soil and groundwater. The construction documents provided detailed requirements for compliance with 29 CFR 1910.120, "HAZWOPPER" regulations regarding worker protection, collecting groundwater, stockpiling contaminated soil, testing and disposing of the wastes. Any new design that requires dealing with contaminated soil or groundwater must clearly state all information pertaining to the existing conditions at the site. The drawings and specification together must provide the contractor with sufficient information to determine quantities of materials, disposal classification (hazardous, non-hazardous, special waste) and regulatory testing requirements so that the contractor can provide a firm-fixed-price bid. The designer must also have the Contractor comply with regulations regarding worker protection and require the submittal of an additional (or supplemental) Health and Safety Plan. The designer must coordinate specific environmental requirements with the activity environmental office and the Code EV, Environmental representative.

- **Pre-Design Services**

- **Field Investigation**

- **Asbestos Testing**

Survey and sample collection shall be project specific and applicable to all suspect materials, including those previously sampled or identified. This may include roofing materials, crawl space soils, and confined utility chases. Identify ACM, for renovation projects, as required by the OSHA asbestos construction standard (such as, separation of joint compound from wallboard). For renovation projects that include demolition or demolition specific projects, ensure that destructive testing is performed and identification of ACM includes EPA requirements (such as, analyzing joint compound and wallboard as a composite). Notify the Activity Asbestos Program Manager (APM) or designated representative prior to conducting site work.

Ensure that personnel who are currently EPA-accredited, state licensed, building inspectors perform sampling of ACM. Additional state or local licensing requirements are required, where applicable, for survey work (i.e. some states require that the building inspectors who perform sampling be licensed in the state where the sampling

is to be accomplished.) Provide copies of accreditation and applicable licenses with the Asbestos Report.

Laboratories performing analysis for asbestos in bulk materials shall be accredited by the National Institute of Standards and Technology/National Voluntary Laboratory Accreditation Program (NIST/NVLAP) and shall be a successful participant and maintain proficiency in the NIST/NVLAP sponsored quality assurance program for asbestos identification. Provide copies of laboratory certification and state/local accreditation certificates with the Asbestos Report. Include copies of all certificates of analyses or test reports with the Asbestos Report.

- **Lead Paint Testing**

Evaluate all painted surfaces that will be impacted by the project for lead. Areas to survey include all painted structures and surfaces, coatings on steel structures and fuel lines. If an X-ray Fluorescence (XRF) instrument is used for screening, classify the results as positive, inconclusive or negative according to the EPA Performance Characteristics Sheet for the instrument. Inconclusive results are to be treated as positive for the presence of lead. Negative XRF readings require paint chip sampling and analysis. Collect and analyze 5% of the inconclusive XRF readings to verify the presence of lead. Paint is identified as containing lead for construction projects if any levels are present as determined by a valid detection limit (usually 0.01%). Collect soil and wipe samples as necessary to identify potential lead hazards for the project. Use applicable current ASTM, EPA or HUD guidelines for paint, soil and wipe sample criteria.

Determination of lead painted components and materials, as hazardous or solid waste for disposal, shall be performed in conjunction with site work and in accordance with LANTDIV Instruction 10360.1. Components which will be demolished and disposed of as part of the project shall be sampled using the Toxicity Characteristic Leaching Procedure (TCLP) for lead in accordance with the provisions of 40 CFR 261, Subpart C. Destructive testing of components is required. Testing includes, but is not limited to collecting subsamples of baseboards, window systems, doors and walls. Collect adequate amounts of subsample materials to provide the requested number of composite samples. Patch and repair occupied areas with suitable materials (joint compound or caulking). Four ounces (110 grams) of material is required for a composite of subsamples. ***Subsamples shall be proportioned to components identified for disposal.*** When decontamination procedures of drill bits or core tools are performed, a rinse water sample shall be submitted for TCLP lead analysis.

#### WASTE CHARACTERIZATION STUDY

The EPA is currently involved in several "waste-study" projects involving architectural component demolition. Recommendations resulting from the studies are expected to modify current regulations regarding disposal of architectural demolition debris. Until these changes are adopted, however, current federal and state regulations require that the generator evaluate the debris for its potential to be a hazardous waste as defined by RCRA.

Lead is defined as a hazardous waste when the TCLP extract contains a lead concentration above the Toxicity Characteristic (TC) threshold of 5 parts per million (ppm) or milligrams per liter (mg/L). Leachable lead analysis differs from total lead analysis, as determined by XRF or chip analysis, in that leachable lead is dependent on the type of lead compound present and the size of the particle (i.e. solubility.) Some lead compounds are more leachable/soluble than others. Since the total lead analysis does not determine the specific lead compound present, it is difficult to predict how much of the lead will be leachable.

In order to determine if the lead concentration of the building demolition waste is within regulatory limits for disposal as a non-hazardous material, a representative sample of the

waste stream must be analyzed for lead using the TCLP Method. It is sometimes necessary to look at the demolition waste materials as a heterogeneous waste stream comprised of different items, objects, components and materials that are dissimilar in composition.

To accomplish the analysis of a heterogeneous waste stream, a composite sample (comprised of different building materials, painted and non-painted) must be collected and analyzed for lead in accordance with EPA Method 1311, TCLP. The representative composite sample should be prepared from samples of each of the different building material categories, and then mixed in proportion to the percentage by weight of the different components in the anticipated waste stream.

- **PCB and Mercury Survey**

Older buildings may still have PCB-containing lighting ballasts. Evaluate and survey all existing lighting ballasts for the presence of PCBs. The initial survey shall begin with the activity environmental coordinator for PCB disposal records or replacement records. If existing records are available, then document that PCBs are or are not present in the existing ballasts to be removed. If records are not available, then every ballast (or a representative percentage of each different type of fixture) must be inspected for a "non-PCB" label. Every different type of ballast that exists without a "non-PCB" label must be assumed to have PCBs and should be indicated on the design demolition drawings. Include field survey information and any existing records found in the environmental report for the project.

Identify all fluorescent and High Intensity Discharge (HID) lighting lamps that will be removed as part of the building renovation or demolition. Currently most fluorescent and HID lighting lamps contain mercury that must be disposed of as universal waste. However, new low-level mercury lamps are currently being installed in buildings. These new lamps will not require disposal as a universal waste. The survey must identify the low-level mercury lamps and specify different handling procedures. The field survey shall identify all lamps for inclusion in the demolition drawings for the project.

- **Soil Testing**

Where the construction site is potentially located on contaminated soil or groundwater, the design contract may require sampling. The designer shall complete the testing required by the Scope of Work and provide the required results to the Project Manager. The designer will then provide the appropriate design information in the construction documents.

- **Design Services**

- **Environmental Basis of Design**

The Environmental Section of the Basis of Design shall address all issues that will affect the demolition/renovation/construction project. This section shall include subheadings for all environmental areas that might apply, i.e. Asbestos, Lead Containing Paint/Materials, PCBs, Mercury-containing lamps, Contaminated Soil and Groundwater, or Tank Removal.

**Asbestos:** Indicate existence or absence of asbestos. If present provide description and rationale for removal. Indicate disposal requirements.

**Lead Containing Paint/Materials:** Describe all the different scenarios that will be encountered in the project (i.e. "tasks" per OSHA.) Describe how the drawings will provide all the information required for the contractor. Indicate disposal requirements and any special waste segregation that must be done.

**PCBs:** Indicate existence or absence of PCBs. If present provide description of how PCBs will be indicated on the drawings and the disposal requirements.

**Mercury-containing lamps:** Describe how lamps will be shown on the drawings.

**Contaminated Soil and Groundwater:** Indicate the existence or absence of contaminated soil and groundwater and source of information. List all reports that contain existing analytical information on the existing site conditions. Describe methodology to protect the construction workers and the environment. Describe which site controls will be used during construction (i.e. use of OVAs, meters/equipment to test and monitor atmosphere), method of measurement and payment, and all analytical requirements for testing and disposal of the contaminated material.

**Tank Removal:** Describe tanks – type, size, contents, piping, etc. Describe how much product will be left in the tank and who will be responsible for removing any existing product prior to the construction (verify with Activity.) Describe all required construction activities such as gas-free tank, cleaning, removing fuel lines, draining fuel lines, and testing of cleaning residue, sludge, water and/or product for disposal purposes.

- **Environmental Report**

An Environmental Report shall be attached to the basis of design and include the following information (as required by the scope of work.)

- Asbestos Section which includes:
  - a) Provides a narrative summary of the site work that identifies the project description, location, previous survey data and additional asbestos identified. List the areas, types, location and quantities of ACM and any contamination that will impact the project.
  - b) Identifies conditions that affect access or egress for workers and equipment, such as, confined spaces, crawl spaces or elevated working surfaces. Identifies utility systems (HVAC, steam, electrical, etc), which may require shutdown during the project. Note: Where the building is to remain partially occupied by the Gov't during construction, specifically identify these utility shutdowns to the project manager, in writing.
  - d) Summarizes state or local laws that affect asbestos removal and disposal for the project, such as project size, limitations on removal methods and air monitoring requirements. Includes notification requirements, permit fees, licensing or other specialized requirements.
  - e) Includes copies of all accreditation certificates, licenses, certificates and analyses or test reports identified above.
  - f) Provides the estimated number of construction days for the asbestos portion of the project.
- Lead Section which includes:
  - a) Provides a narrative summary of the site work that identifies the project description, location, previous survey data, additional lead paint identified, and a description and full characterization of all wastestreams (i.e. hazardous – providing all waste codes, or

non-hazardous.) List the areas, types, and location of lead-containing paint and any contamination that will impact the project.

b) Identifies conditions that affect access or egress for workers and equipment, such as, confined spaces, crawl spaces or elevated working surfaces. Identifies utility systems (HVAC, steam, electrical, etc), which may require shutdown during the project. Note: Where the building is to remain partially occupied by the Government during construction, specifically identify these utility shutdowns to the project manager, in writing.

d) Summarizes state or local laws that affect lead containing material removal and disposal for the project, such as project size, limitations on removal methods and air monitoring requirements. Includes notification requirements, permit fees, licensing or other specialized requirements.

e) Includes copies of all accreditation certificates, licenses, certificates, sampling plans, and analyses and test reports identified above.

- PCB Section which includes:

a) Provide a narrative summary of the site work that identifies the project description, location, previous survey data and additional PCBs identified. List the areas, types, and location of PCB containing lighting ballasts and any contamination that will impact the project.

b) Summarizes state or local laws that affect PCB removal and disposal for the project, such as project size, limitations on removal methods and monitoring requirements. Includes notification requirements, permit fees, licensing or other specialized requirements.

- "Other" Testing Section which includes:

a) Description of tests performed including site history and analytical methods. Results of testing required to determine characteristics of sludge, product, soil or water.

b) Summarizes state or local laws that affect removal of sludge, product, soil or water, and disposal requirements for the project. State limitations on removal methods and monitoring requirements. Includes notification requirements, permit fees, licensing or other specialized requirements.

- **Environmental Calculations**

Provide calculations as part of the Environmental Report. Calculations for environmental work include:

- Relative volume calculations for total wastestream categorization when providing representative amounts of building components for TCLP testing (a total volume of demolition debris shall be calculated and a breakdown of each debris component shall be shown.)
- Quantities of contaminated soil and groundwater when unit pricing must be used (typical for all work with contaminated soil and groundwater when the *exact* quantities are unknown.) When contaminated soil or groundwater exist at the site, the designer must provide an initial estimate of the anticipated quantity of these items. The calculations shall include all assumptions made in determining the final estimated quantities.

- Quantity of hazardous, toxic or petroleum waste products that will be left in aboveground or underground storage tanks. The A&E must coordinate with the Activity and ROICC all requirements associated with removal of remaining product in a tank. Provide all information/assumptions to show how the remaining amount was calculated.

- Drawings and Specifications**

- Environmental Drawings and Specifications**

All environmental drawings will be labeled as specified in the *LANTDIV Electronic Bid Solicitation-Manual of Policies and Procedures* ([http://www.lantdiv.navy.mil/pls/lantdiv/url/page/CI4\\_ENGINEERING\\_AND\\_DE\\_SIGN\\_Click\\_on\\_Guidance\\_and\\_Policy\\_Tab](http://www.lantdiv.navy.mil/pls/lantdiv/url/page/CI4_ENGINEERING_AND_DE_SIGN_Click_on_Guidance_and_Policy_Tab).) These drawings will be placed before the Civil Drawings in a drawing set. These drawings will indicate all “environmental” type work that must be done on the project. These construction activities include:

Asbestos Removal

Lead Demolition Activities

PCB Lighting Ballast Removal (May be shown on Electrical Demolition Sheets and noted on the environmental sheets. *Example: “Note 1. Removal of PCB lighting ballasts is shown on Sheet ED-1.”*)

Mercury Containing Lighting Lamp Removal (May be shown on Electrical Demolition Sheets and noted on the environmental sheets. *Example: “Note 1. Removal of Mercury containing lighting lamps is shown on Sheet ED-1.”*)

Contaminated Soil and Groundwater Removal (May be shown on the Civil Demolition sheets with extent of contamination delineated and appropriate notes.)

Removal and Disposal of Tanks and the Contents (May be shown on the Civil Demolition sheets with appropriate notes regarding tank demolition and disposal of contents.)

**Asbestos Drawing Information**

Provide scaled and dimensioned drawings and floor plans or building sections showing all ACM. (NOTE: Quantification by use of a schedule indicating ft<sup>2</sup> or ft<sup>3</sup> on the drawings or in the specifications is not a substitute for scaled and dimensioned drawings. Scaled and dimensioned drawings are the only acceptable means to quantify asbestos by showing the location and full extent of work.) If asbestos is present and will not be disturbed by the project, provide a drawing note indicating the type and location of the ACM, with a note that the material is not to be disturbed by project work. For ACM impacted by the project, indicate location, condition, and form of all ACM to be removed as well as structures, utilities and equipment that hinder access or egress. Provide dimensions for access or egress to crawl spaces, attics, chases or restrictive areas that affect asbestos removal personnel or equipment. Identify rooms by name and number. Provide reflected ceiling plans showing grid size and layout. Indicate all diffusers, registers/grilles, light fixtures, and other ceiling mounted equipment. Specify new ceiling system. Indicate all valves, gauges or other equipment associated with boiler or piping systems insulated with ACM and all dimensions or changes in duct or pipe elevations, provide pipe/duct schematics for clarity. Indicate approximate size and description of equipment and tanks. Identify utility services, such as steam, water or HVAC that will require system shutdowns during construction. Address the provision of temporary utility service where required. A certified Asbestos Project Designer must prepare asbestos drawings and specifications.

### **Lead Demolition Drawings**

Lead demolition is defined as demolishing and removing any items/building components that are painted with lead containing paint. The lead demolition information can be shown directly on the demolition drawings by adding notes indicating that specific items are covered with lead containing paint and that demolition activities must be conducted in accordance with Specification Section 13282, "Removal and Disposal of Lead Containing Material (LCM)." All existing lead levels determined from the field survey must be indicated on the drawings by a chart or some other method to display the laboratory results of the lead analysis. A certified Lead Project Designer must prepare lead removal drawings and specifications.

### **Lead Abatement Drawings**

Provide scaled and dimensioned drawings and floor plans or building sections showing all items with lead containing paint from which the paint must be removed (and hence abated.) Examples of this include wood molding or steel structures that are to be salvaged and reused in the finished project but are coated with lead containing paint. Indicate all locations of lead containing paint to be removed as well as structures, utilities and equipment that hinder access or egress. Provide dimensions for access or egress to crawl spaces or attics or restrictive areas that affect lead removal personnel or equipment. A certified Lead Project Designer must prepare lead abatement drawings and specifications.

### **PCB Lighting Ballasts and Mercury Containing Lighting Lamp Removal Drawings**

Provide drawings that indicate the exact number of lighting fixtures to be removed. Drawing notes or symbols should allow the Contractor to do an accurate takeoff of the number of lighting lamps and ballasts to be removed. Notes on the drawings should indicate that the ballasts **do or do not** contain PCBs and that the lighting lamps **do or do not** contain mercury. The notes should indicate how the contractor is to distinguish between PCB and PCB-free ballasts, and mercury and low-level mercury lighting lamps. The notes should reference the applicable specification section for removal procedures. As an alternative, if Electrical Demolition drawings are part of the same contract and they have sufficient detail to show all electrical fixtures, then the lamps and ballasts may be shown on these drawings. Reference still must be made to PCBs, mercury and the applicable specification section. The notes must clearly indicate that the ballasts and lighting lamps must not be broken and must be removed prior to any additional demolition.

### **Contaminated Soil and Groundwater Removal**

Provide separate Environmental drawings or use civil drawings that indicate the extent of known or suspected soil and groundwater contamination. Indicate the type and level of contamination and refer to the appropriate specification for instructions on how to handle the contamination.

### **Removal and Disposal of Tanks and the Contents**

Provide separate Environmental drawings or use civil drawings to indicate aboveground or underground storage tanks that are to be removed or cleaned. Notes shall clearly indicate tank contents, quantity of remaining product, water or sludge. Provide an overview of the steps to cleaning and removing the tank. Indicate the disposal requirements for the product in the tank. Refer to the appropriate

specification section for complete instructions. The specifications must require the use of a Marine Chemist to certify gas-free conditions prior to entering the tank for any reason. The designer must coordinate closely with the Activity to determine if the tank product can be disposed of on base – if so, the drawings and specifications must clearly indicate where the disposal facilities are located. The specifications shall provide all testing requirements for disposal and/or characterization and should identify any need for product/sludge disposal documentation (i.e. manifests, receipts, etc.) The designer shall have the Contractor submit photographs of the removed tank to show it has been rendered unusable.

- **Design Submittals**

- **35% Design Development Submittal**

- **Basis of Design-Environmental Contents**
- **Environmental Report**
- **Drawings**

Drawings shall indicate preliminary location of any environmental areas of concern. At least one Environmental drawing shall be started to show the layout of the work.

- **Calculations**

- **100% Prefinal Submittal**

- **Revised Environmental Report**

A revised environmental report shall be prepared based on comments from the 35% submittal, if applicable.

- **Drawings**
- **Calculations**

Final calculations for all environmental work shall be submitted. Basis for all unit priced work shall be shown.

- **Final Submittal**

- **Final Environmental Report**

The final environmental report shall be included with the project specifications.

- **Drawings**

The final Environmental drawings must be signed by the appropriate Certified Asbestos and/or Lead Project Designer in the State where the work is to be accomplished. This can be done with a block inserted on the drawing that includes the Asbestos and/or Lead Project Designer' name, License Number and the signature.

- Calculations

- **Overseas Requirements**

- **Final Governing Standards (FGS)**

The Final Governing Standards may provide supplemental information on the standards to be used for Navy designs at activities in an overseas location. The A&E shall comply with all requirements of the FGS for the country/host nation where the Activity is located. A certified Asbestos/Lead Project Designer must prepare all asbestos/lead drawings and specifications. If the country has no designer certification requirements then the certification must be from the United States. If the country has designer certification requirements then the lead/asbestos designer must possess that certification and provide their name on the drawings and specification.

Current FGSs:

Italy (available at: <http://www.lantdiv.navfac.navy.mil>)

- Business Lines
- Environmental
- Engineering Support

Spain (paper copies only)  
Greece (paper copies only)  
Azores (paper copies only)  
Cuba (paper copies only)  
Iceland (paper copies only)