

CHAPTER 14

ENVIRONMENTAL REQUIREMENTS

Environmental Requirements

January 2017 revised

I. Purpose: the purpose of this document is to summarize the environmental requirements for the Louisville District's military construction projects (using Full Plans and Specs RFPs) in order to assist the AE in assembling a more complete package.

A. Edited versions of the following specifications are required on every Design Bid Build project unless an exception is noted. It should be noted that specifications change often. The most current versions should be obtained from the following web site:

<https://lrl.usace.afpims.mil/Missions/Engineering/Specs.aspx>

Note: Reserves and Ft. Campbell have separate specification packages

01 57 19 00 06 Temporary Environmental Controls and Permits
01 74 19 Construction Demolition Waste Management
01 62 35 Recycled/ Recovered Materials
01 35 26 Government Safety Requirements

B. If renovation or demolition of structures is to be performed edited versions of the following may also be required.

02 82 16.00 20 Engineering Control of Asbestos Containing Materials
02 83 13 00 06 Lead in Construction
01 74 19 Construction Demolition Waste management
02 41 00 Demolition

02 84 16 Handling of Lighting Ballasts and Lamps Containing PCBs
02 84 33 Removal and Disposal of Polychlorinated Biphenyls (PCBs)

31 21 13 Radon Mitigation

C. Section 0800 Special Provisions has some requirements that we think are important enough to point out in this guidance document. The following items must appear in section 0800:

1. NO ASBESTOS - CONTAINING MATERIAL (ACM)
CERTIFICATION

Before final payment to the contractor, the contractor's project engineer/manager will sign and submit to the government, on the contracting firm's letterhead, a dated copy of the following statement:

I hereby certify that to the best of my knowledge no asbestos-containing material (ACM) was used as a building material during this project.

I understand that the building owner presumes that all materials marked 'May contain mineral fibers' are asbestos unless I either

- Have on file and have submitted to the Government the manufacturer's certification that the material does not contain asbestos, or
- Have supplied to the Government documentation to show that the material has been microscopically examined by an AIHA- or NVLAP-certified laboratory and the lab has determine that it that it does not contain asbestos."

D. It is important that Section 01 57 19 00 06 Temporary Environmental Controls and Permits appropriately address borrow material and excess soil. Therefore the following must be edited appropriately and included. If the language options below do not appear in the specification being used, it is not the correct specification.

MANAGEMENT OF BORROW MATERIAL AND EXCESS SOIL

Depending on the specifics of the project, the specification preparer shall choose one of the following or all four options:

1. [Under this contract, the intent is that all excavated soils are to be reused on-site to the greatest extent practicable and economically justified and the use of borrow from off-site sources shall be avoided to the greatest extent practicable and economically justified. (If available, the Government will identify on the contract drawings disposal areas and/or borrow areas outside the construction work limits on the Government installation where excess soils may be taken. Any compaction or grading requirements will be noted on the drawings or in the specifications.)]
2. [If reuse of all excavated soils is not practical or economical and disposal on the Government installation is not available, then all soil removed from the project site will be disposed of at a State permitted RCRA Subtitle D disposal facility in accordance with all applicable federal, state and local laws and regulations.]
3. [If reuse of all excavated soils is not practical or economical and disposal on the Government installation is not available, the Contractor shall place excess excavated soil material on a receiving property that has been approved by the Government. The action of placing excess soil on the receiving property shall have had the appropriate level of National Environmental Policy Act (NEPA) compliance activity performed and deemed acceptable. If the NEPA assessment has not evaluated placement of spoils off-site, then compliance with NEPA will need to be demonstrated through the preparation of a [Record of Environmental

Consideration (REC) or a Supplemental Environmental Assessment (EA)]. NEPA documents shall be prepared using an inter-disciplinary approach which will ensure the integrated use of the natural and social sciences and the environmental design arts (section 102(2)(A) of the Act). The disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process.

A written certification signed by the contractor shall be furnished to the Government indicating the soil was placed on the approved receiving site prior to payment for this effort. The certification shall identify dates and quantities of soils placed.]

4. [If borrow material is required and borrow is not available from the project site or the Government installation, the Contractor shall obtain borrow material from an off-site borrow source that has been approved by the Government. The action of acquiring borrow and transporting that material to the project shall have had the appropriate level of National Environmental Policy Act (NEPA) compliance activity performed and deemed acceptable. If the NEPA assessment has not evaluated the acquisition of borrow, then compliance with NEPA will need to be demonstrated through the preparation of a [Record of Environmental Consideration (REC) or a Supplemental Environmental Assessment (EA)]. NEPA documents shall be prepared using an inter-disciplinary approach which will ensure the integrated use of the natural and social sciences and the environmental design arts (section 102(2)(A) of the Act). The disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process.]

Note to Specification Preparer: Ensure the NEPA documentation addresses placement of spoils off-site and/or the acquisition of borrow from off-site if part of the design/project. If spoils removal or borrow acquisition is not part of the project, then this Specification can be adjusted accordingly or deleted. The US Army Corps of Engineers' Environmental Team member of the PDT will evaluate previously completed NEPA documentation and will help determine what level of NEPA assessment is required, if any.

If deemed necessary by the US Army Corps of Engineers Environmental Team member, an environmental site assessment (ESA) shall be performed on the receiving property and/or the borrow area by the Contractor. If an ESA is deemed necessary, the following shall be placed in the Specifications:

[The ESA shall meet the requirements of ASTM E1527-05 and was performed no earlier than two months prior to award of the contract and by a qualified environmental professional as defined by X2.1 of ASTM E1527-05. The findings of the ESA shall state that no indications of contamination were found on or adjacent to the property and that no

additional investigation is warranted. A copy of the ESA report shall be furnished by the Contractor to the Government.]

E. Design Analysis – the DA will need to provide a discussion on the former use of the property and the use of adjacent properties. There should also be a discussion on required National Environmental Policy Act (NEPA) documentation such as the Record of Environmental Consideration (REC), Categorical Exclusion (CATX) or Environmental Assessment (EA) or any environmental baseline document that will provide an indication of the former use of the property. Look for an Environmental Condition of Property (ECP) or ECP Checklist. The ECP is required by the Department of Army to document the environmental condition of the transferrable property in an ECP report. The Army Reserves requires an ECP checklist which is a shorter version that does not require the signature of an environmental professional as defined in ASTM 1527.

1. There should also be a discussion on the Environmental Assessment (EA) or Record of Environmental Consideration (REC). Findings of these studies such as any wetlands, threatened and endangered (T&E) species or State Historic Preservation Office (SHPO) sites should be highlighted in the DA. Actions required to mitigate or protect such items are to be included in the submittal plans and specifications.
2. Radon – for new construction (regardless of the projected radon level) passive radon mitigation systems shall be incorporated into the original building design. The design shall include provisions to permit installation of exhaust fans, if necessary, after testing the building under occupied conditions. Criteria for radon mitigation in new construction is specified in EPA 625-R-96-016, (1994, Third Printing with Addenda) "Radon Prevention in Design and Construction of Schools and Other Large Buildings. This should be specified in 01 57 19 00 06 Temporary Environmental Controls and Permits.

For facilities undergoing renovation, please ensure the specification 31 21 13 Radon Mitigation is included in the submittal.

This guide specification covers the requirements for diagnostic testing for radon and designing and constructing radon mitigation systems in existing buildings and facilities, including constructing radon mitigation systems enclosures, when required.

1. UXO/MEC - If the project is taking place on an existing Installation, the design analysis should include a discussion of munitions and explosives of concern (MEC) if used or suspected to be on site. Ensure that there has been a survey has been performed to detect any unexploded ordnances (UXO) –*Note: the UXO has been replaced with the MEC term. The contractor will need to specify that work will need to be performed in*

accordance with EP 75-1-2, 02 August 2004, Munitions and Explosives of Concern (MEC) Support during Hazardous, Toxic and Radioactive Waste (HTRW) and Construction Activities.

Additionally, if there is any potential at a site for Munitions for Explosive Concern (MEC) or Material Potentially Presenting an Explosive Hazard (MPPEH) to be present the following language needs to appear in the plans/specs. The following needs to be included in Section 1.7.1 EM385-1-1 Contents, of specification 01 35 26 Governmental Safety Requirements.

- **Recognize.** Recognize the hazard and do not touch, disturb, or move the item as it could detonate with movement or ground vibrations.
- **Retreat.** Stop work, mark the general location, and have everyone retreat from the area.
Report. Report the situation immediately to the appropriate local emergency response authority (i.e., call 911 or the equivalent on DoD installations), providing as much information as possible about the items encountered. USACE personnel should also notify their project chain of command, District Safety Office, and installation staff as appropriate.

- F. Hazardous Material Drawings – renovations/demolitions which require handling/disposal of hazardous materials prior to construction activities drawings should contain both locations and quantities of noted hazardous materials.
- G. Installation Specific Requirements – several installations within the LRL boundaries have their own design guides and specifications.
1. Wright Patterson Air Force Base has its own set of specifications that are required to be utilized. These are obtained from the PE/A who receives them from Installation personnel. A Louisville District Environmental Protection and Permits specification is required to be used along with the Wright Patterson specifications.
 2. Fort Campbell utilizes UFGS guide specs that are edited to contain Fort Campbell specific requirements. The Fort Campbell specific items are contained in the Fort Campbell Technical Design Guide which is located http://www.campbell.army.mil/campbell/directorates/dpw/documents/docs/ftc_tdg_ufigs_18_mar_14.pdf. A Louisville District Environmental Protection and Permits specification is required to be used along with the Fort Campbell specifications.

H. Common problems – the following are issues that often occur on renovation projects.

1. The AE will obtain an asbestos survey from the installation and include as part of the design submittal. The surveys performed for the installation are not adequate for renovation/demolition and do not satisfy the National Emissions Standard Hazardous Air Pollutants (NESHAPs) requirements for a thorough inspection. Installation inspections are typically Operations and Maintenance (O&M) surveys that only assess building materials visible to the normal building inhabitants. The NESHAPs survey assesses both visible and hidden building materials. The use of O&M surveys increases the likelihood of modifications. Surveys are required to be performed by current state accredited Building Inspectors from the state in which the survey is performed.
2. Contractors often assume because an asbestos inspection is required upfront by regulation that a lead based paint survey is required as well. There is never a need for a lead survey prior to demolition or renovation unless the renovation is being performed in Target Housing or a Child Occupied Facility. Both of these scenarios involve children under the age of 6 and not typical LRL construction. Work in these facilities is governed by the EPA's Housing and Urban Development (HUD) guidelines. All work on LRL construction sites is governed by the OSHA Lead in Construction Standard 29 CR 1926.62. LRL sites meeting the definition Target Housing or Child Occupied Facilities are governed by both regulations. Each LRL project which involves the disturbances of painted surfaces requires the use of 02 83 13 00 06 Lead in Construction.

I. Independent Technical Review – all submittals should include signed ITR certifications.

II. Purpose: the following is to summarize the environmental requirements for the Louisville District's military construction projects (using Design Build RFPs) in order to assist the AE in assembling a more complete package.

- A. Edited versions of the following specifications are required on every Design Build project unless an exception is noted. The design is only required to contain edited 0100 specifications. The 0100 specifications must present information on environmental issues at the site such as the need for any hazardous material surveys or any special site hazards known at the time of the RFP development. The section 2 and beyond specification will be edited by the construction contractor or his subcontractor after award of the RFP. Once the contract is awarded, the construction contractor (DB contractor?) will edit the specifications and

submit to USACE in the form of a compliance review (QA review) to ensure the contractor is following the process. It should be noted that specifications change often. The most current versions should be obtained from the following web site:

<https://lrl.usace.afpims.mil/Missions/Engineering/Specs.aspx>

01 57 19 00 06 Temporary Environmental Controls and Permits

01 74 19 Construction Demolition Waste Management

01 62 35 Recycled/ Recovered Materials

01 05 26 Government Safety Requirements

- B. If renovation or demolition of structures is to be performed versions of the following may also be required. These specifications will be edited by the construction contractor or his subcontractor after award of the RFP. The edited specifications will not be seen until the contractor submits his Quality Assurance (QA) package. The submittal is sometimes referred to as a Compliance Review.

02 82 16.00 20 Engineering Control of Asbestos Containing Materials

02 83 13 00 06 Lead in Construction

01 74 19 Construction Demolition Waste management

02 41 00 Demolition

02 84 16 Handling of Lighting Ballasts and Lamps Containing PCBs

02 84 33 Removal and Disposal of Polychlorinated Biphenyls (PCBs)

32 21 13 Radon Mitigation

- C. Section 0800 Special Provisions has some requirements that are important enough to point out in this guidance document. The following items must appear in section 0800:

**1. NO ASBESTOS - CONTAINING MATERIAL (ACM)
CERTIFICATION**

Before final payment to the contractor, the contractor's project engineer/manager will sign and submit to the government, on the contracting firm's letterhead, a dated copy of the following statement:

I hereby certify that to the best of my knowledge no asbestos-containing material (ACM) was used as a building material during this project.

I understand that the building owner presumes that all materials marked 'May contain mineral fibers' are asbestos unless I either

- Have on file and have submitted to the Government the manufacturer's certification that the material does not contain asbestos, or
- Have supplied to the Government documentation to show that the material has been microscopically examined by an AIHA- or NVLAP-certified laboratory and the lab has determine that it that it does not contain asbestos."

D. It is important that Section 01 57 19 00 06 Temporary Environmental Controls and Permits appropriately address borrow material and excess soil. Therefore the following must be edited appropriately and included. If the language options below do not appear in the specification being used, it is not the correct specification.

MANAGEMENT OF BORROW MATERIAL AND EXCESS SOIL

Depending on the specifics of the project, the specification preparer shall choose one of the following or all four options:

1. [Under this contract, the intent is that all excavated soils are to be reused on-site to the greatest extent practicable and economically justified and the use of borrow from off-site sources shall be avoided to the greatest extent practicable and economically justified. (If available, the Government will identify on the contract drawings disposal areas and/or borrow areas outside the construction work limits on the Government installation where excess soils may be taken. Any compaction or grading requirements will be noted on the drawings or in the specifications.)]
2. [If reuse of all excavated soils is not practical or economical and disposal on the Government installation is not available, then all soil removed from the project site will be disposed of at a State permitted RCRA Subtitle D disposal facility in accordance with all applicable federal, state and local laws and regulations.]
3. [If reuse of all excavated soils is not practical or economical and disposal on the Government installation is not available, the Contractor shall place excess excavated soil material on a receiving property that has been approved by the Government. The action of placing excess soil on the receiving property shall have had the appropriate level of National Environmental Policy Act (NEPA) compliance activity performed and deemed acceptable. If the NEPA assessment has not evaluated placement of spoils off-site, then compliance with NEPA will need to be demonstrated through the preparation of a [Record of Environmental Consideration (REC) or a Supplemental Environmental Assessment (EA)]. NEPA documents shall be prepared using an inter-disciplinary approach

which will ensure the integrated use of the natural and social sciences and the environmental design arts (section 102(2)(A) of the Act). The disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process.

A written certification signed by the contractor shall be furnished to the Government indicating the soil was placed on the approved receiving site prior to payment for this effort. The certification shall identify dates and quantities of soils placed.]

- 4) [If borrow material is required and borrow is not available from the project site or the Government installation, the Contractor shall obtain borrow material from an off-site borrow source that has been approved by the Government. The action of acquiring borrow and transporting that material to the project shall have had the appropriate level of National Environmental Policy Act (NEPA) compliance activity performed and deemed acceptable. If the NEPA assessment has not evaluated the acquisition of borrow, then compliance with NEPA will need to be demonstrated through the preparation of a [Record of Environmental Consideration (REC) or a Supplemental Environmental Assessment (EA)]. NEPA documents shall be prepared using an inter-disciplinary approach which will ensure the integrated use of the natural and social sciences and the environmental design arts (section 102(2)(A) of the Act). The disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process.]

Note to Specification Preparer: Ensure the NEPA documentation addresses placement of spoils off-site and/or the acquisition of borrow from off-site if part of the design/project. If spoils removal or borrow acquisition is not part of the project, then this Specification can be adjusted accordingly or deleted. The US Army Corps of Engineers' Environmental Team member of the PDT will evaluate previously completed NEPA documentation and will help determine what level of NEPA assessment is required, if any.

If deemed necessary by the U.S. Army Corps of Engineers Environmental Team member, an environmental site assessment (ESA) shall be performed on the receiving property and/or the borrow area by the Contractor. If an ESA is deemed necessary, the following shall be placed in the Specifications:

[The ESA shall meet the requirements of ASTM E1527-05 and was performed no earlier than two months prior to award of the contract and by a qualified environmental professional as defined by X2.1 of ASTM E1527-05. The findings of the ESA shall state that no indications of contamination were found on or adjacent to the property and that no additional investigation is warranted. A copy of the ESA report shall be furnished by the Contractor to the Government.]

E. Design Analysis – the DA will need to provide a discussion on the former use of the property and the use of adjacent properties. There should also be a discussion on required National Environmental Policy Act (NEPA) documentation such as the Record of Environmental Consideration (REC), Categorical Exclusion (CATX) or Environmental Assessment (EA) or any environmental baseline document that will provide an indication of the former use of the property. Look for an Environmental Condition of Property (ECP) or ECP Checklist. The ECP is required by the Department of Army to document the environmental condition of the transferrable property in an ECP report. The Army Reserves requires an ECP checklist which is a shorter version that does not require the signature of an environmental professional as defined in ASTM 1527.

1. There should also be a discussion on the Environmental Assessment (EA) or Record of Environmental Consideration (REC). Findings of these studies such as any wetlands, threatened and endangered (T&E) species or State Historic Preservation Office (SHPO) sites should be highlighted in the DA. Actions required to mitigate or protect such items are to be included in the submittal plans and specifications.
2. Radon – for new construction (regardless of the projected radon level) passive radon mitigation systems shall be incorporated into the original building design. The design shall include provisions to permit installation of exhaust fans, if necessary, after testing the building under occupied conditions. Criteria for radon mitigation in new construction is specified in EPA 625-R-96-016, (1994, Third Printing with Addenda) "Radon Prevention in Design and Construction of Schools and Other Large Buildings. This should be specified in 01 57 19 00 06 Temporary Environmental Controls and Permits.

For facilities undergoing renovation, please ensure the specification 31 21 13 Radon Mitigation is included in the submittal. This guide specification covers the requirements for diagnostic testing for radon and designing and constructing radon mitigation systems in existing buildings and facilities, including constructing radon mitigation systems enclosures, when required.

3. UXO/MEC - If the project is taking place on an existing Installation, the design analysis should include a discussion of munitions and explosives of concern (MEC) if used or suspected to be on site. Ensure that there has been a survey has been performed to detect any unexploded ordnances (UXO) –*Note: the UXO has been replaced with the MEC term.* The contractor will need to specify that work will need to be performed in accordance with EP 75-1-2, 02 August 2004, Munitions and Explosives of

Concern (MEC) Support during Hazardous, Toxic and Radioactive Waste (HTRW) and Construction Activities.

Additionally, if there is any potential at a site for Munitions for Explosive Concern (MEC) or Material Potentially Presenting an Explosive Hazard (MPPEH) to be present the following language needs to appear in the plans/specs. The following needs to be included in Section 1.7.1 EM385-1-1 Contents, of specification 01 35 26 Governmental Safety Requirements.

- **Recognize.** Recognize the hazard and do not touch, disturb, or move the item as it could detonate with movement or ground vibrations.
- **Retreat.** Stop work, mark the general location, and have everyone retreat from the area.
- **Report.** Report the situation immediately to the appropriate local emergency response authority (i.e., call 911 or the equivalent on DoD installations), providing as much information as possible about the items encountered. USACE personnel should also notify their project chain of command, District Safety Office, and installation staff as appropriate.

F. Hazardous Material Drawings – renovations/demolitions which require handling/disposal of hazardous materials prior to construction activities drawings should contain both locations and quantities of noted hazardous materials.

G. Installation/Customer Specific Requirements – several installations within the LRL boundaries have their own design guides and specifications.

1. Wright Patterson Air Force Base has its own set of specifications that are required to be utilized. These are obtained from the PE/A who receives them from Installation personnel. A Louisville District Temporary Environmental Controls and Permits specification 01 57 19 00 06 is required to be used along with the Wright Patterson specifications.
2. Fort Campbell utilizes UFGS guide specs that are edited to contain Fort Campbell specific requirements. The Fort Campbell specific items are contained in the Fort Campbell Technical Design Guide which is located http://www.campbell.army.mil/campbell/directorates/dpw/documents/docs/ftc_tdg_ufigs_18_mar_14.pdf. A Louisville District Environmental Protection and Permits specification is required to be used along with the Fort Campbell specifications.
3. The U.S. Army Reserves has its own statement of work section 01 02 00.00 48 which appears in Volume 1A of their specifications. Section

1.7.3 Environmental Considerations and Mitigation Requirements within the Statement of Work provides a template of the Environmental issues associated with most Reserves sites and must be tailored to the site. Attachments to the statement of work contain the specifications applicable to the site. These attachments can be edited but do not have to be. Typical Environmental specifications appear as the following attachments:

4. Attachment N- UFGS 02 84 16 – Handling of Lighting Ballasts and Lamps containing PCBs and Mercury
5. Attachment V- UFGS Section 02 84 33 – Removal and Disposal of Polychlorinated Biphenyls.
6. Attachment W- 02 83 13.00 20 06 Lead in Construction.
7. Attachment X- - 02 82 16.00 20 Engineering Control of Asbestos Containing Materials

The other Environmental specifications appear in Volume 1C and are the following:

01 35 26.00 00 06 Government n Safety Requirements
01 57 19. 00 06 Temporary Environmental Controls and Permits
01 62 35 Recycled / Recovered Materials
01 74 19 Construction and Demolition Waste Management

The U.S. Army Reserves statement of work can be found within the LRL specifications and U.S. Army Reserve specifications located within the following web site -

<http://www.lrl.usace.army.mil/Missions/Engineering/Specs.aspx>

H. Common problems – the following are issues that often occur on renovation projects.

1. The AE will obtain an asbestos survey from the installation and include as part of the design submittal. The surveys performed for the installation are not adequate for renovation/demolition and do not satisfy the National Emissions Standard Hazardous Air Pollutants (NESHAPS) requirements for a thorough inspection. Installation inspections are typically Operations and Maintenance (O&M) surveys that only assess building materials visible to the normal building inhabitants. The NESHAPS survey assesses both visible and hidden building materials. The use of O&M surveys increases the likelihood of modifications. Surveys are required to be performed by current state accredited Building Inspectors from the state in which the survey is performed.

2. Contractors often assume because an asbestos inspection is required upfront by regulation that a lead based paint survey is required as well. There is never a need for a lead survey prior to demolition or renovation unless the renovation is being performed in Target Housing or a Child Occupied Facility. Both of these scenarios involve children under the age of 6 and not typical LRL construction. Work in these facilities is governed by the EPA's Housing and Urban Development (HUD) guidelines. All work on LRL construction sites is governed by the OSHA Lead in Construction Standard 29 CR 1926.62. LRL sites meeting the definition of Target Housing or Child Occupied Facilities are governed by both regulations. Each LRL project which involves the disturbances of painted surfaces requires the use of 02 83 13 00 06 Lead in Construction.

- I. Independent Technical Review – all submittals should include signed ITR certifications.
- J. MATOC contracts- the purpose of this document is to summarize the environmental requirements for the Louisville District's military construction projects utilizing MATOC RFPs. In order to assist the contractor in assembling a more complete package the following guidance is provided. Edited versions of the some or all, depending upon the type of project, (new construction, renovation or demolition) of the following specifications are required on MATOC Task Orders. It should be noted that specifications change often. The most current versions should be obtained from the following web site:
<https://lrl.usace.afpims.mil/Missions/Engineering/Specs.aspx> Division 1 specifications on MATOC Task Orders are usually not included in MATOC awards. These specifications and the division 0 specifications are part of the base contract award and do not change. For changes that have occurred after the MATOC base was awarded 0850 Special Provisions for MATOCs is utilized. Specification 0850 would need to capture the need for any hazardous material surveys or special site hazards/conditions unique to the site.

Note: Wright Patterson Air Force Base has its own separate set of specifications generated by WPAFB. The specification package should be obtained through the USACE PE/A.

Note: Fort Campbell utilizes the Fort Campbell Technical Design Guide and should be included as reference on every Fort Campbell project. The guide is located at http://www.campbell.army.mil/campbell/directorates/dpw/documents/docs/ftc_tdg__ufgs_18_mar_14.pdf.