

ENVIRONMENTAL QUALITY CONSTRUCTION SPECIFICATIONS
LAUGHLIN AIR FORCE BASE



Dec 2025

This supersedes any previous versions.

TABLE OF CONTENTS

1.0	SCOPE	3
2.0	ENVIRONMENTAL COMPLIANCE	3
2.1	Compliance with Laws.....	3
2.2	Installation Restrictions.....	3
2.2.1	POL/Fuels	Error! Bookmark not defined.
2.2.2	Disposal	4
2.2.3	Toxics	Error! Bookmark not defined.
2.2.4	Concrete Washout.....	4
3.0	REQUIREMENTS PRIOR TO CONSTRUCTION	4
3.1	Environmental Management System.....	4
3.2	Hazardous Materials/Hazardous Waste.....	4
3.2.1	Hazardous Materials Approvals.....	4
3.2.2	Hazardous Materials/Hazardous Waste	5
3.3	Earth Disturbance.....	5
3.3.1	Laydown Areas.....	5
3.3.2	Restoration Sites	6
3.3.3	Clean Water Act Requirements.....	Error! Bookmark not defined.
3.3.4	Repair Grounds.....	6
3.4	Water Quality	6
3.4.1	Water Systems	6
3.4.2	Clean Water Act.....	6
3.5	Air Emissions	7
3.5.1	Permits	7
3.5.2	Toxics	8
4.0	ITEMS REQUIRING IMMEDIATE NOTIFICATION DURING CONSTRUCTION	9
4.1	Toxics.....	9
4.2	Artifacts/Remains.....	9
4.3	Spills.....	9
4.4	Species of Interest	10
5.0	ITEMS TO CONSIDER DURING CONSTRUCTION.....	10
5.1	Disposal of Non-Hazardous Waste.....	10
5.2	Disposal Hazardous Waste	10
5.3	Contractor Vehicles.....	11
5.4	Disturbance/Nuisance.....	11
5.5	General Good Housekeeping.....	11
6.0	BEFORE CLOSE-OUT	11
6.1	HM Usage	11
6.2	Refuse Weight Tickets	11
6.3	Repair Grounds	11
6.4	Manifests.....	12
APPENDIX A. ACRONYMS		13
APPENDIX B. EMS AWARENESS TRAINING		14
APPENDIX C. SHORT-TERM CONTRACTOR HAZMAT USAGE LOG.....		24
APPENDIX D. DETERMINING WHETHER COVERAGE IS REQUIRED.....		25
APPENDIX E. QUICKVIEW CHECKLIST BEFORE START OF CONSTRUCTION		26

1.0 SCOPE

These standards apply to all new construction, demolition, rehabilitation, alteration, modification, repair, and maintenance of all facilities, infrastructure, and utilities on Laughlin Air Force Base (LAFB) properties (including its geographically separated units).

The “Contractor” refers to both the primary Contractor as well as all of their Subcontractors. “LAFB” refers to any property owned by LAFB. “Construction” refers to the work done during the construction phase(s) of the project. The Contractor shall ask the Contracting Officer (CO) for any of the plans pertaining to the Contractor’s work. The Contractor shall provide all documents and submittals to the CO as required in these specifications. For every instance the Contractor must stop work, the Contractor shall resume work only with the CO’s approval.

2.0 ENVIRONMENTAL COMPLIANCE

2.1 Compliance with Laws

The Contractor shall comply with all current and applicable Air Force, federal, state, and local laws, regulations, ordinances, and standards related to environmental regulation. The Contractor shall be responsible for any fines, penalties, or administrative actions for non-compliance levied due to the actions or inactions of the Contractor. For any notices of violation, the Contractor shall provide a copy of the notice to the CO within 24-hours as well as any corrective action reports.

Project sites are subject to visitation by the 47th Civil Engineer Squadron Environmental Element (47 CES/CEIE) to ensure compliance with environmental regulations and practices. If there are any violations, the Contractor will be notified by the CO and it shall be addressed.

2.2 Installation Restrictions

2.2.1 POL/Fuels

The Contractor shall comply with the Clean Water Act and Code of Federal Regulations, Title 40, Chapter I, Part 112 (40 CFR 112) and the Laughlin AFB Spill Prevention Controls and Countermeasures Plan (SPCCP) and Facility Response Plan (FRP).

Fuel storage tanks brought onto LAFB cannot exceed 500 gallons and must be double-walled or have secondary containment that can hold 110% of the capacity of the tank. The tank should be inspected daily for leaks or drips and repaired as necessary. All spills shall be cleaned up immediately by the Contractor. The Contractor shall have an appropriate spill kit on site if more than 55 gallons of fuel or any other liquid (except water) are on site. If more than 5 gallons of a liquid are spilt, the Contractor shall inform the CO.

Any aboveground storage tanks containing regulated substances defined in 30 Texas Administrative Code 334.2, including fuels must be registered with Texas Commission on Environmental Quality (TCEQ) if the capacity is greater than 1,100 gallons.

The Contractor shall request a copy of the SPCC Plan and Hazardous Waste Management Plan (HWMP) from the CO if their work includes the handling of hazardous materials (HM),

hazardous waste (HW), or non-regulated materials (such as oils, antifreeze, grease, latex paint, hydraulic fluid, etc.).

If the contractor is installing an aboveground fuel tank on LAFB greater than 1,100 gallons, they must have the appropriate Texas license, must notify TCEQ, and must register the tank with TCEQ per 30 Texas Administration Code 344 (30 TAC 344).

2.2.2 Disposal

Dumping on LAFB is prohibited. Polluting or discharging any materials (such as vehicle maintenance fluids, residue from saw cutting operations, solid waste and hazardous substances, runway rubber, etc.) into building drains, site drains, streams, waterways, holding ponds, or to the ground surface is prohibited and the Contractor shall be held responsible for any and all resulting damages.

The Contractor shall dispose of all construction debris, refuse, and soil at an appropriate off-base landfill. The landfill information shall be approved by the CO. If any material from the demolition can be recycled, the Contractor shall make an effort to recycle the materials.

The Contractor shall maintain records of solid waste and recycling disposal weights and associated weight tickets. The Contractor shall provide copies when requested or prior to the end of the contract.

2.2.3 Concrete Washout

Concrete truck washout shall occur off base unless the Contractor provides a written request with an explanation as to why washout must be performed on LAFB. If approved by the CO, the concrete truck washout procedures shall comply with the requirements of TCEQ's General Permit, TXR050000, to discharge under the Texas Pollutant Discharge Elimination System (referred herein as the "General Permit"). If the project requires a concrete washout, the Contractor shall request a copy of the Stormwater Pollution Prevention Plan (SWPPP) from the CO and must abide by all requirements.

3.0 REQUIREMENTS PRIOR TO CONSTRUCTION

3.1 Environmental Management System

Per Department of the Air Force Instruction 32-7001, all personnel on LAFB are required to complete Environmental Management System Awareness Training. The training slides are in Appendix B.

3.2 Hazardous Materials/Hazardous Waste

3.2.1 Hazardous Materials Approvals

LAFB complies and abides by the Department of Defense's Consolidated Emergency Planning and Community Right-to-Know Act Policy. All HM must be authorized before they are brought onto LAFB. The Contractor shall fill and submit an initial Hazmat Usage Log for requests to

bring any HM onto LAFB along with the most recent safety data sheet (SDS) of each HM to be used for the project. The Hazmat Usage Log lists products, quantities, and application methods used during this project and can be found in Appendix C. The Contractor shall request a copy of the SPCC if using HM and the LAFB HWMP if generating HW.

3.2.2 Hazardous Materials/Hazardous Waste

The Contractor shall comply with all requirements in the LAFB HWMP and ensure the following items are available:

- Inventory of all HM and Hazmat Usage Log(s) (frequency described in section 6.1). Refer to Appendix C for the Hazmat Usage Log.
- SDS for each HM. 47 CES/CEIE will request an updated SDS if it is older than five years. 47 CES/CEIE will not accept material safety data sheets (MSDS).
- Proper HM storage. All HM shall be properly stored in accordance with their respective SDS. Liquid HM shall be stored in an area with proper secondary containment and labeling.
- Personnel HW training certificates or equivalent if Contractors will generate HW.

The Contractor is responsible for providing a safe and restricted HW storage area. Contractors that will accumulate and store HW on LAFB, as defined by §261.3 of Title 40 of the Code of Federal Regulations, Definition of Hazardous Waste, shall establish a HW satellite accumulation point.

The Contractor shall determine the planned disposal method of HW generated and shall use a Uniform Hazardous Waste Manifest to document all parties and locations involved in the transportation, storage, and disposal of all HW. The Contractor shall request generator information from 47 CES/CEIE, if needed, to complete or sign the manifest. The 47 CES/CEIE shall sign manifests as the Generator. The Contractor shall provide copies of the signed Uniform Hazardous Waste Manifest to the CO.

The Contractor shall provide an outline of procedures to be followed in the case that special waste (such as asbestos and lead) is or will be encountered. These items require specialized disposal procedures and notifications that the Contractor shall follow if such wastes are generated. This includes providing proof of certification for all involved in handling specialized waste as well as a copy of the shipping manifest for abatement. Any sampling/testing results shall be submitted to the CO.

3.3 Earth Disturbance

3.3.1 Laydown Areas

Designated laydown yards are located behind building 100 near building 2018. If an alternate laydown area is required, the Contractor shall submit a request to the CO for approval. The request shall be submitted two weeks prior to mobilization and shall include the Contractor's preferred location and justification, dimensions, type of materials to be stored, and any other site requirements the Contractor may have. The request must be approved prior to mobilization to the site.

If the Contractor uses another laydown yard besides those designated by 47 CES located behind building 100, they are responsible for restoring the area to its original condition.

3.3.2 Restoration Sites

LAFB has several restoration sites that have land-use controls. Prior to award, the site is approved for work by 47 CES/CEIE. If the location of the construction site is changed in any way, the Contractor shall ensure with the CO there are no land-use controls in the area in which the contractor intends to work. If the project is in a land-use control or restoration site, the CO and Contractor shall work with the Restoration Program Manager to determine requirements for the site.

If 47 CES/CEIE has identified that PFAS is expected in the soil or water to be disposed, the media should be sampled and disposed of according to the AF's most recent guidance which can be provided upon request.

3.3.3 Repair Grounds

Any grounds, including the laydown yard, that are disturbed by contractor operations shall be restored to their original or better conditions before construction began. If a live tree is removed, one shall be planted at the end of construction to replace it. The tree shall be a native species and shall be watered for establishment (three months of watering twice per week).

3.4 Water Quality

3.4.1 Water Systems

The Contractor shall notify the CO in writing of any work involving the Public Water System and its distribution system at least 14 calendar days prior to start of work. The Contractor shall coordinate with the required state or federal agency for proper documentation and procedures. If involving the Public Water System, the Contractor shall complete and submit TCEQ's Form 20699, Customer Service Inspection Certificate, in accordance with the Texas Administrative Code 290.46(j)(4), to TCEQ. If necessary, the Contractor shall also complete and submit TCEQ's Form 10233, TCEQ Public water system plan review submittal form, to TCEQ. The Contractor shall provide all submitted forms and/or obtain the CO's approval before start of work.

3.4.2 Clean Water Act

The Contractor shall provide all documentation in regards to TCEQ's General Permit before start of construction. If applicable, the Contractor shall provide a copy of a Notice-of-Intent (NOI) for the Multi Sector General Permit and their SWPPP. LAFB does not operate under a Municipal Separate Storm Sewer System.

The Contractor is required to abide by all Clean Water Act Requirements. State requirements for water discharge activities are governed by TCEQ. The Contractor shall refer to TCEQ's website if there are any updates. Applicability of the General Permit is determined by area of land to be disturbed. Refer to Appendix D to determine permit coverage as required by TCEQ.

3.4.2.1 Disturbance of Less Than One Acre of Land

If the construction project requires the Contractor to disturb less than one acre of land, a stormwater permit is not required. The Contractor shall adhere to the requirements in LAFB's SWPPP and shall be responsible for implementing best management practices to decrease the likelihood of accidental releases of pollutants. The Contractor shall request a copy of the SWPPP from the CO as the Contractor must comply with these documents.

3.4.2.2 Disturbance of Over One but Less than Five Acres of Land

If the construction project requires the Contractor to disturb more than one, but less than five, acres of land and the Contractor is the operator, the Contractor shall prepare and implement a SWPPP and post a site notice. If the Contractor is not the operator, coverage under the General Permit is not required. The Contractor shall adhere to the requirements in LAFB's SWPPP and shall be responsible for implementing best management practices to decrease the likelihood of accidental release of pollutants. Part III, Section F of the General Permit describes the requirements for SWPPP contents.

3.4.2.3 Disturbance of Five or More Acres of Land

If the construction project requires the Contractor to disturb five or more acres of land and the Contractor is a primary operator, the Contractor shall prepare and implement a SWPPP, submit a NOI to TCEQ, and post a site notice. If the Contractor is not a primary operator, a NOI is not required. Part III, Section F of the General Permit describes the requirements for SWPPP contents.

3.5 Air Emissions

The Contractor is required to comply with the Clean Air Act. Air emissions, such as dust, construction fumes, and products of combustion, shall be kept at a minimum. No ozone-depleting substances (refrigerants or any other compounds) shall be released in any capacity during the project without the written approval from the CO. If a refrigerant unit is being removed or replaced, provide the unit information, refrigerant removal method, and documentation to the CO. New refrigerants brought onto LAFB are subject to the Hazardous Materials guidelines outline in section 3.2.

If a generator is projected to be stationary for more than 12 months, the Contractor shall record equipment information, provide monthly usage reports, and provide a copy of the Environmental Protection Agency's emissions certification.

3.5.1 Permits

The Contractor shall ensure the CO is aware, prior to construction, of all stationary air emission sources the Contractor intends to use. If the Contractor uses equipment during the project requiring any air permits, the Contractor is responsible for applying for that permit and the fees that may be included. The Contractor shall comply with all requirements of the applicable air permit and provide a copy before start of construction.

If an on-site batch plant is to be constructed and used during the project, the Contractor must acquire the correct permits from TCEQ. If the concrete batch plant meets all requirements of the standard permit PI-1S-CBP, then it must be registered and the Contractor shall provide proof of registration. If the batch plant requires a New Source Review Authorization, proof of this authorization must be provided to the CO.

3.5.2 Toxics

3.5.2.1 Asbestos

The Contractor shall sample and test for ACM for any demolition and renovation projects that occur on Laughlin AFB prior to start of construction unless facility has already been abated. If the installation has little to no records, then sampling and testing is required. The Contractor shall comply with the LAFB Asbestos Operations and Management Plan; a copy can be requested from the CO. If abatement and/or removal of ACM is/are necessary, the Contractor shall submit an Asbestos Hazard Abatement Plan for review.

The Contractor shall notify the Department of State Health Services (DSHS) before beginning renovation projects, which include the disturbance of any ACM in a building or facility or before the demolition of a building or facility, even when no asbestos is present. Requirements/procedures are posted at <https://dshs.texas.gov/asbestos/notification.shtm>.

The Contractor shall notify DSHS in no less than 10 working days prior to start of demolition or asbestos abatement activity or any other activity that will disturb asbestos (except for emergencies or ordered demolitions) and provide a copy of the notification. The Contractor shall be responsible for the fees associated with the state notification.

3.5.2.2 Lead-Based Paint

Paint with a lead content of 0.009% or greater shall not be used in any capacity.

The Contractor shall sample and test for lead based paint for any demolition and renovation projects that occur on Laughlin AFB prior to start of construction unless facility has already been abated. If the installation has little to no records, then sampling and testing is required.

If the Contractor plans on disturbing (sanding, cutting, demolishing) surfaces that contain lead-based paint, a Worker/Area Protection and Abatement Plan shall be submitted by the Contractor for review before work. Removal shall be conducted by properly trained personnel as required by regulations and copies of sampling results shall be provided. The Contractor shall start work only with the CO's approval.

3.5.2.3 Mercury

If the contractor is removing mercury containing lamps, they must be handled with care and recycled through a facility that accepted mercury containing lamps.

3.5.2.4 Abatement

The Contractor shall notify the Texas DSHS of asbestos and/or lead abatement activities no less than 10 working days prior to start of abatement. The Contractor shall provide a copy of the notification letter when requested.

The Contractor is responsible for coordinating the disposal of waste generated from abatement activities with an approved landfill and providing waste manifests. The Government will sign the manifests as a Generator. Coordinate with 47 CES/CEIE for manifest signature.

4.0 ITEMS REQUIRING IMMEDIATE NOTIFICATION DURING CONSTRUCTION

4.1 Toxics

All necessary precautions shall be taken to avoid disturbing material that may contain asbestos or lead-based paint. If material is encountered which may contain toxics, all work on this material shall cease. The Contractor shall immediately notify the CO and shall proceed only with the CO's approval to start the process of abatement/removal before resuming work. The Contractor shall also follow the state notification process in section 3.5.2.1.

4.2 Artifacts/Remains

It is a federal offense, under the provisions of Archaeological Resources Protection Act (ARPA) and 32 CFR 229, to excavate, remove, damage, or otherwise deface any archaeological resources located on federal lands. The provisions of ARPA apply to archaeological material greater than 100 years in age, regardless of the National Register of Historic Places status of the site where they are found. Contractor personnel that make a potential cultural discovery (such as unearthing an arrowhead, pottery, ceramics, bones, etc.) shall:

- Immediately cease potentially damaging activities and take efforts to ensure protection of resources,
- Immediately notify the CO of the nature and location of the discovery, and
- Establish an appropriate buffer zone around the location.

47 CES/CEIE may need to be on site to protect or remove these items. The Contractor shall proceed only with the CO's approval.

4.3 Spills

Any spills of HM/HW or non-regulated materials (such as oils, antifreeze, grease, latex paint, hydraulic fluid, etc.) greater than 5 gallons, which contaminate soil, surface waters, ground water, and/or air, shall be immediately reported to the CO. The Contractor shall take immediate action to prevent the spread of the spill and clean the area. It shall be the Contractor's responsibility to immediately report the spill to the Base Fire Department at (830) 298-5633 and the CO, and to 47 CES/CEIE at (830) 298-5694. If the spill is 25 gallons and greater, 47 CES/CEIE has to report to state and federal agencies. The Contractor shall be responsible for cleanup within their area(s) of responsibility, which includes the construction site and laydown

areas. The Contractor shall request a copy of the SPCC and/or Facility Response Plan if they will have more than 5 gallons of HM/HW or non-regulated materials (such as oils, antifreeze, grease, latex paint, hydraulic fluid, etc.) on site.

4.4 Species of Interest

Per the United States Endangered Species Act, and Texas legislation of Threatened and Endangered Species Protection (Chapter 67 and 68 of Title 31 of the TAC). The Contractor shall protect all natural resources to include but not limited to animals, birds, water resources, soil, trees, and plants. The Contractor shall cease work and notify the CO if any of the following threatened species are seen so their location can be documented: Texas Tortoise and Texas Horned Lizard. The Contractor shall request a copy of the LAFB Integrated Natural Resources Management Plan and Integrated Cultural Resources Management Plan from the CO if they plan to disturb any land.



Texas Tortoise



Texas Horned Lizard

Bird and nests are protected under the Migratory Bird Treaty Act. Any disturbance of a nest with eggs or chicks in it requires a take permit from the United States Fish and Wildlife Service, otherwise nests must be left alone until vacated by all birds.

5.0 ITEMS TO CONSIDER DURING CONSTRUCTION

5.1 Disposal of Non-Hazardous Waste

The Contractor shall be responsible for removing all construction debris, soil, and generated solid waste from LAFB property. The Contractor shall not use any of the installation's refuse or recycle collection containers but shall recycle to the maximum extent possible. If required, the Contractor shall provide their own disposal containers during construction. The Contractor shall provide non-hazardous waste manifests that contain weight and disposition (mulched, diverted [recycled/reused/reduced], landfilled, incinerated, or converted to energy [waste to energy]). The Contractor shall request a copy of the Integrated Solid Waste Management Plan for more information regarding disposal of non-hazardous waste.

5.2 Disposal Hazardous Waste

LAFB complies with the Resource Conservation and Recovery Act. Refer to section 3.2.2 on Method of HW disposal for instruction to use a Uniform Hazardous Waste Manifest. The Contractor shall provide all HW manifests to the CO before the waste is transported from the limits of government property.

5.3 Contractor Vehicles

Contractor-owned vehicles shall adhere to established haul routes. The Contractor shall minimize driving in areas other than their construction site and for official business only in order to minimize the disturbance of natural resources. If areas are disturbed/damaged, the Contractor shall be responsible for restoring the areas to their original condition or better.

5.4 Disturbance/Nuisance

The Contractor shall conduct activities in such a fashion which avoids creating any legal nuisance, including but not limited to, suppression of noise and dust, control of erosion and implementation of other measures as necessary to minimize off-site impacts of work activities.

5.5 Good General Housekeeping

The Contractor shall comply with TCEQ, Texas Pollutant Discharge Elimination System, and Storm Water Multi-Sector General Permit, and ensure good housekeeping. Examples include:

- Keeping construction sites clean.
- Construction exits shall be set up in accordance with the Texas Department of Transportation's Special Provision Item 506, Temporary Erosion, Sedimentation, and Environmental Controls.
- Checking sediment control fences and making repairs to any damaged sections.
- Cleaning construction areas and areas affected by construction traffic.
- Checking construction equipment for leaks and making necessary repairs (while containing leak). If leak cannot be repaired, the Contractor shall immediately remove the equipment off LAFB.
- Checking surrounding streets for visible debris on paved surfaces as a result of construction. The area shall be cleaned with a street sweeper or similar if there is visible debris.

6.0 BEFORE CLOSE-OUT

6.1 HM Usage

The Contractor shall fill and submit a Hazmat Usage Log, which documents HM products, quantities, and application methods used during this project. If construction spans multiple months, a log shall be submitted at the end of each month of construction. Refer to Appendix C for the Hazmat Usage Log.

6.2 Refuse and Recycle Weight Tickets

The Contractor shall provide solid waste and recycling disposal weights and associated weight tickets so the AF can accurately account for all materials leaving the installation.

6.3 Repair Grounds

Any grounds, including the laydown yard, that are disturbed by contractor operations shall be

restored to their original conditions, or better, before construction began. There shall be no truck/tire ruts at entrances and exits and the grass shall be in a comparable state to the conditions before construction began. All roads shall be cleaned of any dirt from the construction activity and there should be no trash in the construction area and laydown yard.

If any live trees are removed during construction, a native tree shall be planted in a location approved by the CO to replace trees removed (1:1). The tree shall be watered for establishment (three months of watering twice per week).

6.4 Manifests

A fully signed original of the manifest and/or waste shipment record shall be submitted to the CO no later than 45 calendar days from the date of signature of the receiving facility.

APPENDIX A. ACRONYMS

47 CES/CEIE	47th Civil Engineer Squadron, Environmental Element
ACM	Asbestos-Containing Materials
ARPA	Archaeological Resources Protection Act
CFR	Code of Federal Regulation
CO	Contracting Officer
DSHS	Department of State Health Services
HM	Hazardous Materials
HW	Hazardous Waste
HWMP	Hazardous Waste Management Plan
LAFB	Laughlin Air Force Base
NOI	Notice of Intent
PFAS	Per- and Polyfluoroalkyl Substances
SDS	Safety Data Sheet
SPCC	Spill Prevention Control and Countermeasures
SWPPP	Stormwater Pollution Prevention Plan
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality

APPENDIX B. EMS AWARENESS TRAINING

The Civil Engineer School

Relevant - Vital - Connected

The Civil Engineer School



Environmental Management System (EMS)

Welcome to a brief lesson on the Air Force's Environmental Management System also known as EMS.



EMS Awareness

Objectives:

- Explain basic facts and principles environmental management system (EMS)
- List the directives relevant to the Air Force use of EMS
- Describe benefits of the Air Force EMS
- Describe various roles and responsibilities under EMS

Here are the objectives of the EMS lesson.

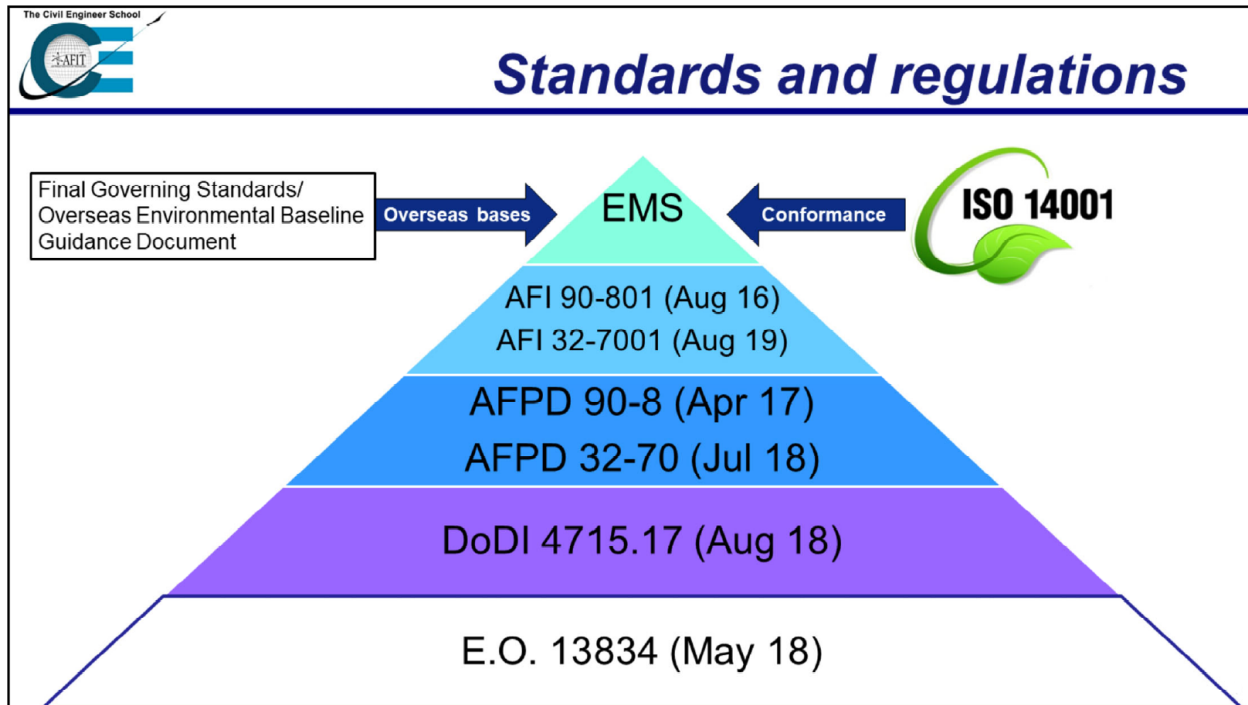


What is EMS?

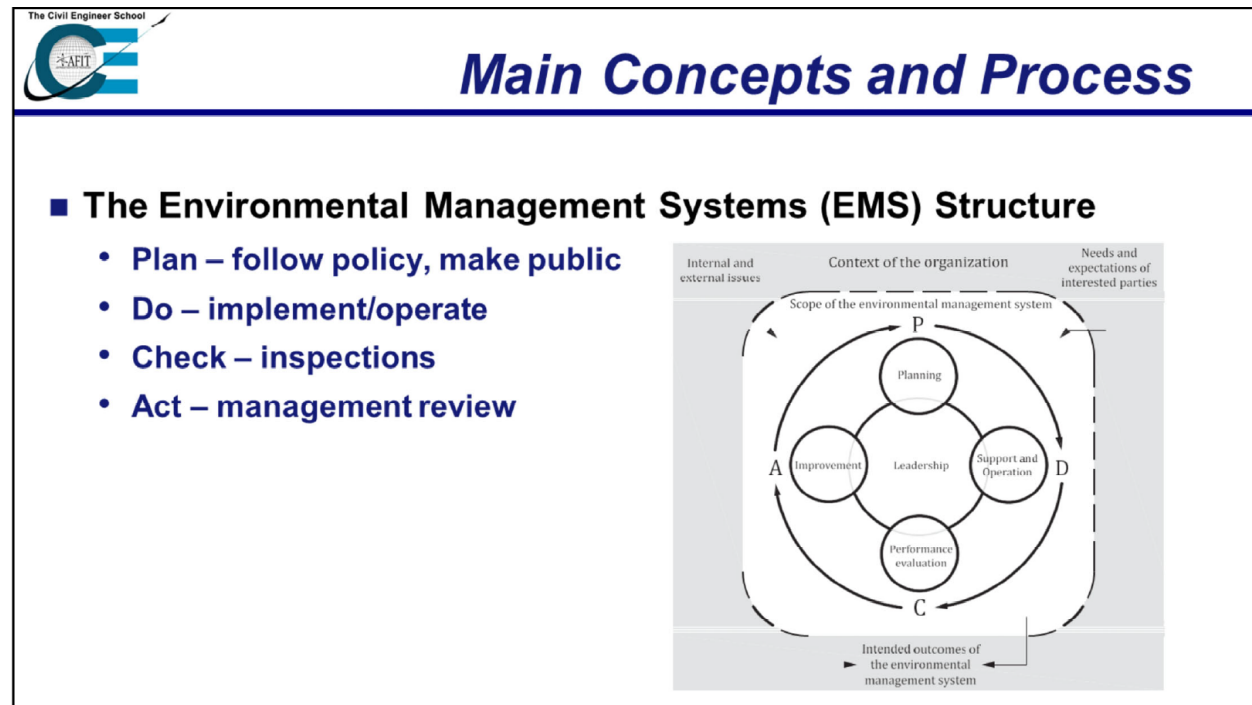
The Air Force adopted EMS as a management system to:

- ***Comply*** - comply with all environmental legal obligations
- ***Reduce risk*** - ensure availability of workforce, natural, and manmade resources by effectively managing environmental risks
- ***Continually improve*** - instill a culture of continuous environmental improvement.

Though a little abstract, EMS is a management system (or business model) the Department of Defense (DoD) and Air Force (AF) adopted to ensure we meet DoD and AF environmental obligations and execute efficient federal operations while achieving the mission in air, space, and cyberspace. The AF expects all Airmen to make protection of the environment a priority and remain focused on minimizing the environmental risk in the execution of the global mission. The AF is committed to the following three priorities, consistent with AFD 90-8 and AFD 32-70: Comply with all environmental legal obligations and applicable regulations; minimize environmental risks to AF personnel both on and off the installation; and minimize risk to mission operations and flexibility due to noncompliance or natural resources constraints; and instill a culture that encourages and supports continual improvement of environmental performance.



The Executive Order (EO) signed by President Trump in 2018 updates earlier EOs that began with President Clinton in 2000 and continued with every president since then. A section of the EO stated, “through development and implementation of environmental management systems, each agency shall ensure that strategies are established to support environmental leadership programs, policies, and procedures and that agency senior level managers explicitly and actively endorse these strategies.” In this EO, federal agencies should maintain their now-mature EMSs. So, for those who act like EMS is some new requirement, and it’s going away soon, remind them that it was initiated in 2000, and has been endorsed by four presidents of both major political parties. DoD implements this EO with DoD Instruction 4715.17, which in turn is implemented at the AF level with AFPD 32-70 and AFPD 90-8. How EMS is implemented within the AF is described in AFI 32-7001 Environmental Management and conforms to the International Organization for Standardization (ISO), standard 14001. For overseas installations in foreign countries, Final Governing Standards or in countries without it, the Overseas Environmental Baseline Guidance Document direct similar actions within the US and AFI 32-7091 augments the overall guidance.



The basis for the approach underlying an EMS is founded on the concept of Plan-Do-Check-Act (PDCA). The PDCA model provides an iterative process used by organizations to achieve continual improvement. The applied framework can be briefly described as follows.

- **Plan:** establish environmental objectives and processes necessary to deliver results in accordance with the organization's environmental policy.
- **Do:** implement the processes as planned.
- **Check:** monitor and measure processes against the environmental policy, including its commitments, environmental objectives and operating criteria, and report the results.
- **Act:** take actions to continually improve.

The success of an EMS depends on leadership commitment from all levels and functions of the organization, led by top management. Organizations can leverage opportunities to prevent or mitigate adverse environmental impacts and enhance beneficial environmental impacts, particularly those with strategic and competitive implications. Top management can effectively address its risks and opportunities by integrating environmental management into the organization's processes, strategic direction and decision making, aligning them with other mission priorities, and incorporating environmental governance into its overall management system.



Concepts

**Environmental
Aspects Vs. Impacts**

■ **EMS key concepts:**

- **Aspects vrs impacts**
 - Aspects = cause
 - Impacts = effect

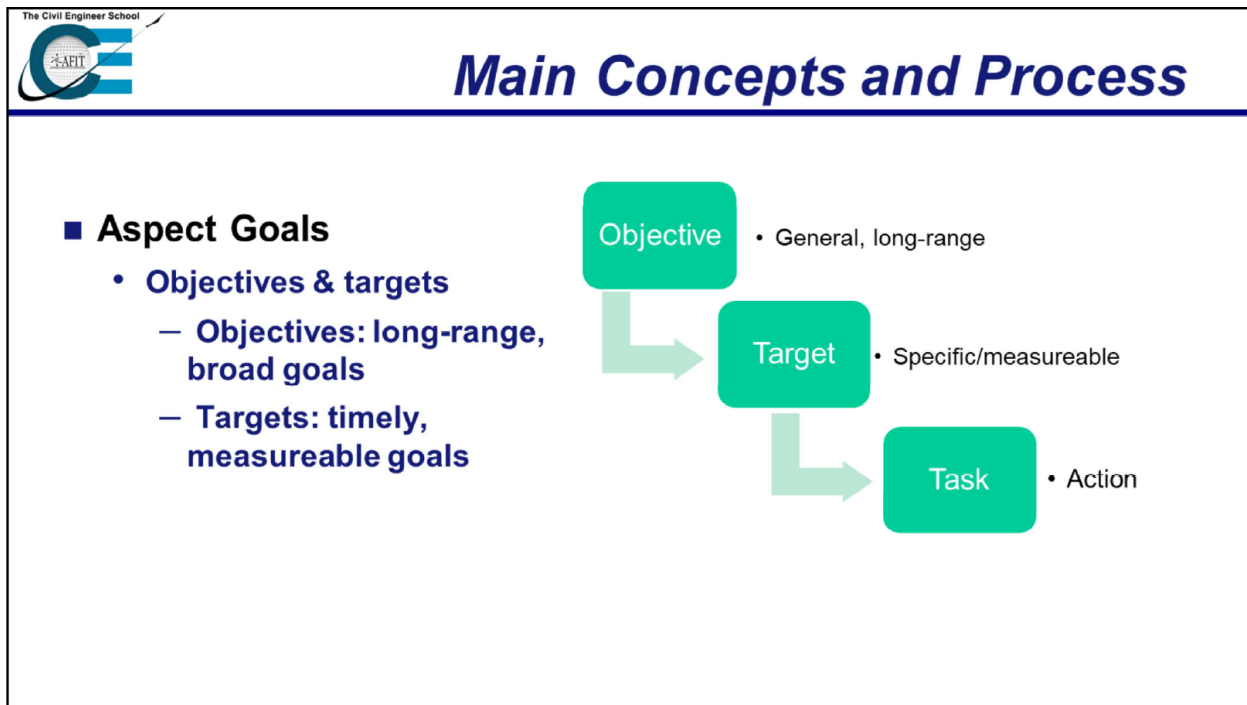
Activity	Aspects	Impacts
Use of computer	Consumption of electricity	Depletion of energy resources



vs.ekbote@gmail.com

Key concepts of EMS are aspects & impacts and objectives & targets. Starting with aspects and impacts, the AF looked at all of our processes, found where they interact with the environment, and identified what the resultant impact is. Both inputs and outputs to a process are known as aspects. The relationship between aspects and impacts is one of cause and effect. The aspect causes the effect known as “impact”. To use an example most are familiar with, consider computer usage. This common activity affects the environment in one way by consuming electricity (a significant aspect). This consumption of electricity or energy depletes the overall availability of energy (the impact). As a result of identifying the aspect and impact, we can now work on objectives and targets consistent with the broad environmental policy such as reducing energy demand.

18



The second key EMS concept relates to objectives and targets. Objectives and targets are goals at multiple levels. The installation leadership determines objectives and targets for the most important aspects and those presenting the highest risk. Objectives and targets are framed by legal and regulatory requirements as well as AF environmental policy. Distinguishing between objectives and targets rests on specific level of detail in which the goal is expressed. Objectives may not include measurable factors, so we establish targets to go with each objective, since targets are always measurable. Targets will specifically define some action or task measurable over time. Considering the previous example of using a computer, the aspect was consumption of electrical power. An objective related to this might be to reduce demand for electricity. A target, being more specific, would further say, “reduce demand for electricity 10% from an FY16 baseline every year for the next five years.” The task identifies with specific actions taken to meet the objective and target.



EMS Benefits

What are the benefits of an Air Force EMS?

- Enables the AF to identify goals and ensure continual improvement and facilitates Mission Readiness
- Helps reduce impacts to the environment during day-to-day operation
- Provides proactive management which may result in savings of resources
 - Ensures funds and manpower are focused on highest risk priorities
 - Provides consistency during personnel turnover
- Conforms to DOD and AF guidance (based on ISO 14001 standard)

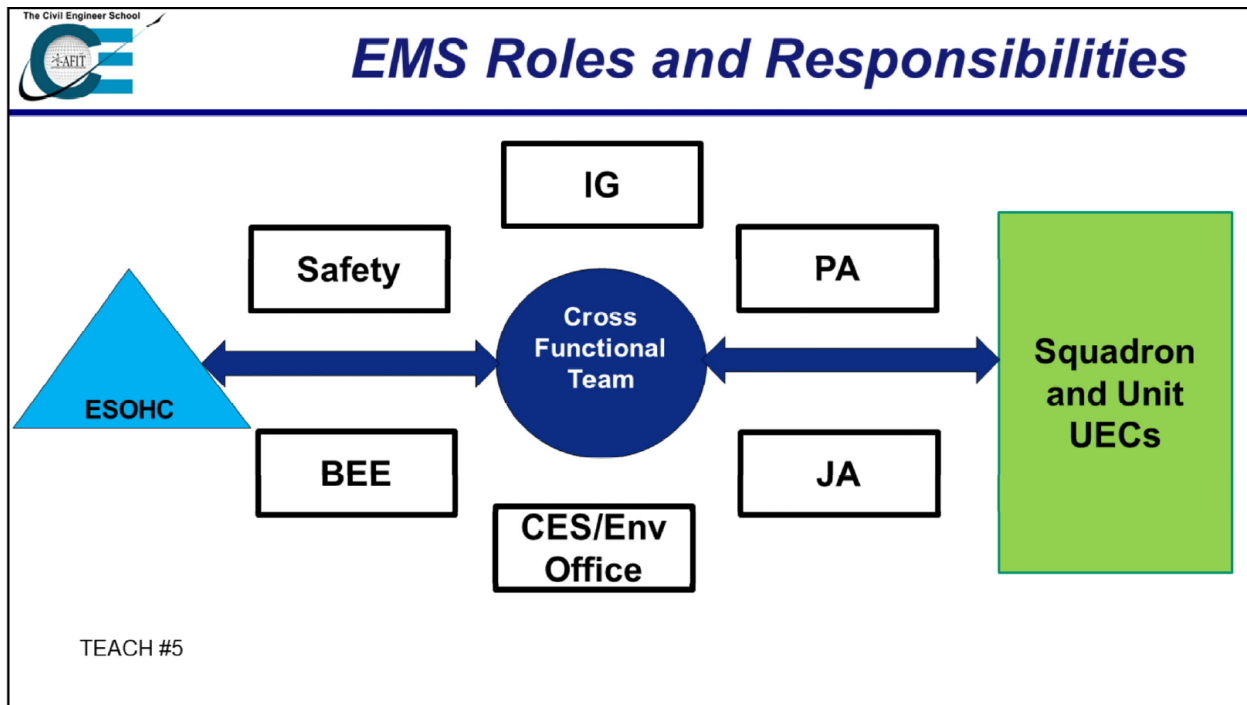


DOD policy is in place to achieve a number of benefits and good outcomes. Listed here are just some of the main benefits an EMS brings when implemented across installations. EMS's main focus is to increase efficiency and eliminate waste to benefit our mission and operational performance.

<http://www.af.mil/News/Photos/igphoto/2000938437/>

<http://www.af.mil/News/Photos/igphoto/2000290869/>

<http://www.af.mil/News/Photos/igphoto/2001851010/>



The broader EMS organization consists of several groups that support the ESOHC as evident in this figure. The ESOHC establishes a Cross Functional Team (CFT) to ensure direct involvement in implementing, maintaining, and improving the environmental management system. Additionally, the Inspector General, in directing the AF Inspection System at the installation, produces important compliance and conformance processes and documentation vital to the ESOHC evaluation and decision making. Organic to the CFT are the CFT Chair and the EMS Coordinator who lead and facilitate all CFT activities and tasks. Functional experts from Environment, Safety, and Bioenvironmental engineering offices as well as legal, inspector general, and public affairs fill important advisory and management roles on the CFT. The unit environmental coordinators (UECs) represent the EMS eyes and ears within the units to check on performance and address unit mission activities within the EMS framework. The UECs often participate in CFT meetings. One of the critical CFT activities performed is the annual environmental management review.



Risk

Air Force manages risk in a process of identifying, assessing, and controlling activities with decision making that balances costs with mission benefits. Environmental risk is identified in base's aspect inventories and:

- **All personnel in scope of installation EMS receive appropriate training**
- **Installation process to review new and changing laws and regs**
- **Aspects marked as improve must have action plans with goals**
- **IDs ways to prevent pollution, conserve energy, efficiently use natural resources, and improve health and safety**
- **CFT approves aspect inventory and briefs ESOHC of changes**

Risk is a combination of the probability and severity of a loss or an adverse impact resulting from exposure to hazards. The greater the risk, the more likely it will cause a drain on resource capability and negatively affect the mission. The AF identifies environmental risk in a comprehensive list of aspects. Each installation EMS identifies and evaluates aspects and impacts associated with the organization's activities, products, and services at least annually, and during mission changes in accordance with DoDI 4715.17. Listed here are the general responsibilities an installation has as it manages its environmental aspects with associated risks.



Summary of EMS general awareness

EMS is a comprehensive management system that:

- ***Comply*** - comply with all environmental legal obligations
- ***Reduce risk*** - ensure availability of workforce, natural, and manmade resources by effectively managing environmental risks
- ***Continually improve*** - instill a culture of continuous environmental improvement.

EMS is a comprehensive management system that implements DoD policy and guidance. EMS improves work conditions through pollution prevention; it ensures compliance with relevant Federal, State, and local laws; it conserves critical resources; and it continually seeks ways to improve AF processes and activities.

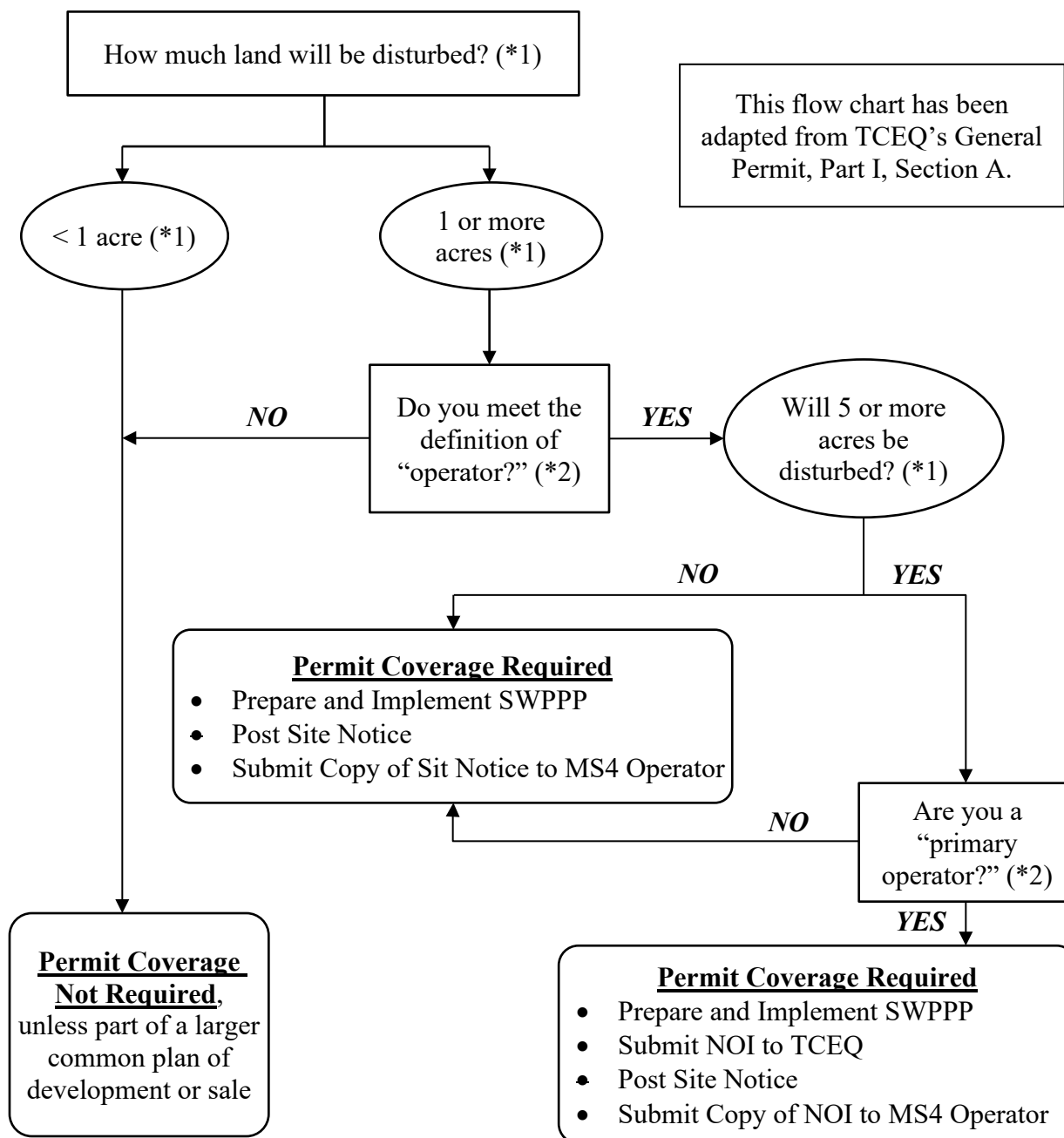
APPENDIX C. SHORT-TERM CONTRACTOR HAZMAT USAGE LOG

Contract number:						
Contractor:				Month/Year:		
Product Name	Product Code / Part Number	Manufacturer	Container Size and Type	Max # Containers Stored On Site	# Containers Used	Application Method (Brush, Roller, Spray*, Rag, Other)
Interior Latex Flat Paint, Lennar Pure White	B30WL7005	Sherwin-Williams	5 gallon bucket	3	3	Brush

*Cannot use more than 100 gallons of paint if spray-painting an external surface.
Complete log and submit to the Contracting Officer at the start and end of work for contracts spanning less than six months. If the contract spans six months or more, submit log monthly and at completion of work.
All HM must be authorized before they are brought onto LAFB.

APPENDIX D. DETERMINING WHETHER COVERAGE IS REQUIRED

When calculating the acreage of land area disturbed, include the disturbed land-area of all construction and construction support activities. This includes laydown areas.



(*1) To determine the size of the construction project, use the size of the entire area to be disturbed, and include the size of the larger common plan of development or sale, if the project is part of a larger project (refer to Part I.B., “Definitions,” of TCEQ’s General Permit for an explanation of “common plan of development or sale”).

(*2) Refer to the definitions for “operator,” “primary operator,” and “secondary operator” in Part I., Section B. of TCEQ’s General Permit.

APPENDIX E. QUICKVIEW CHECKLIST BEFORE START OF CONSTRUCTION

Question	If yes	If no	Submission deadline	Reference
Will Contractor require a laydown area?	Submit request to the CO for approval.	No action needed.	Two weeks prior to mobilization	3.3.1
Will construction disturb land?	Follow flow chart in Appendix D to determine requirements.	No action needed.	Prior to construction	3.3
Will construction involve the Public Water System and/or its distribution system?	1. Notify in writing for approval.	No action needed.	At least 14 calendar days prior to construction	3.4
	2. Contact TCEQ for state requirements.			
	3. Provide copies of any submitted TCEQ forms.			
Will construction involve renovation and/or demolition?	Notify DSHS and provide copy of notification.	No action needed.	No less than 10 working days prior to start of demolition or asbestos abatement activity or any other activity that will disturb asbestos (except for emergencies or ordered demolitions)	3.5.2
Will construction disturb any part of a building that was constructed on or before 1984?	1. Test or sample for asbestos in the area to be disturbed.	No action needed.		3.5.2
	2. Submit Asbestos Hazard Abatement Plan for review if abatement/removal is necessary.			
Will Contractor use HM and/or create HW?	1. Submit SDS and expected usage for authorization for HM to be brought onto base.	No action needed.	Before bringing HM onto base	3.2.1
	2. Submit HM/HW management plan for review.		At least 30 days prior to construction	3.2.2

Question	If yes	If no	Submission deadline	Reference
	3. Respond to Government comments.		No later than 14 days after receipt	6.4
	4. Submit complete original signed manifest		No later than 45 days from signature date of receiving facility	
Does Contractor plan on disturbing surfaces that contain lead-based paint?	1. Submit Worker/Area Protection Plan for review.	No action needed.	Before start of work	3.5.2
	2. Provide copies of sampling results			
If using HM, will construction span multiple months?	Submit Hazmat Usage Log at the end of every month.	Submit Hazmat Usage Log before close-out.		6.1
Will Contractor generate waste?	Submit original signed manifest and/or waste shipment record.	No action needed.	No later than 45 days from signature date of receiving facility	6.4
Will Contractor be able to wash out concrete off of the base?	No action needed.	Provide for approval a written explanation as to why washout must be performed on base.		2.2.4
If using a generator, is it projected to be stationary for more than 12 months?	1. Record equipment information.	No action needed.		3.5
	2. Provide monthly usage reports.			
	3. Provide a copy of the EPA emissions certificate.			