



# **Environmental Permitting for Engineers: Navigating Regulations, Approvals, and Compliance**

**An Online Continuing Education Course for Engineers**

**Course Number: EN-2062**

**Credit: 2 Hours / 2 PDH / 2 CPD**

# Environmental Permitting for Engineers: Navigating Regulations, Approvals, and Compliance

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## Introduction

Engineers are entrusted to create designs that comply with regulatory requirements and obtain the necessary regulatory approvals and permits. Obtaining the needed approvals and permits is often referred to as “permitting”. There are many types of permits, but *environmental* permits can be some of the most challenging. Environmental permits often take months and can delay a project.

This course starts by covering approaches to permitting that can help engineers be efficient and effective at obtaining approvals. Roles in permitting are covered. Steps in a typical permit process are explained, and an example permit tracking log is included.

Next, common environmental permits are covered. For each permit, there is a discussion on the regulatory agencies, permit categories, typical documents engineers need to prepare, and example applications.



**Figure 1: Front loader relocating a large tree and root ball as part of a construction project, in accordance with an environmental permit.**

Source: [commons.wikimedia.org/wiki/File:Tree\\_relocation\\_and\\_planting\\_with\\_loaders.jpg](https://commons.wikimedia.org/wiki/File:Tree_relocation_and_planting_with_loaders.jpg), Gregory Garnich, CC-BY-2.0

## Roles in Permitting

The following are typical roles of a permitting process:

<b>Owner:</b>	Property owner for the location of improvements or utility owner for work within easements. Can be a private or public entity. A principal officer (vice president, president, etc.) has signature authority. Most permit applications require an owner's signature.
<b>Engineer:</b>	Professional Engineer (P.E.) in responsible charge who prepares and seals the design documents. There may be multiple P.E.'s responsible for different portions/disciplines of the design. Often, a P.E. is required to sign and seal the permit application.

<b>Design Firm:</b>	A business that provides engineering services and employees one or more P.E.s for the project. The design firm may need to be registered/certified by the state in which the improvements are to be located.
<b>Regulatory Agency:</b>	A government agency with the authority to grant approvals or permits. Often, multiple agencies collaborate to review and approve an environmental permit.
<b>Construction Contractor:</b>	Contractor chosen to perform on-site construction of the improvements. Often not required to be named at the time of securing environmental permits.
<b>Authorized Agent:</b>	A principal officer for the owner can sign a statement allowing a person, often the engineer, to be an authorized agent to sign on behalf of the owner. See Figure 2 for an example.
<b>Attorney</b>	Assists Owner and Engineer as needed to review environmental law, respond to agency comments, review permit language, and offer strategic counsel on risk management.

**SAMPLE AGENT AUTHORIZATION FORM**

PROPERTY LEGAL DESCRIPTION:  
 LOT NO. \_\_\_\_\_ PLAN NO. \_\_\_\_\_ PARCEL ID: \_\_\_\_\_

STREET ADDRESS: \_\_\_\_\_  
 \_\_\_\_\_

Please print:  
 Property Owner: \_\_\_\_\_  
 Property Owner: \_\_\_\_\_

The undersigned, registered property owners of the above noted property, do hereby authorize  
 \_\_\_\_\_, of \_\_\_\_\_  
 (Contractor / Agent) (Name of consulting firm)

to act on my behalf and take all actions necessary for the processing, issuance and acceptance of  
 this permit or certification and any and all standard and special conditions attached.

Property Owner's Address (if different than property above):  
 \_\_\_\_\_

Telephone: \_\_\_\_\_

We hereby certify the above information submitted in this application is true and accurate to the  
 best of our knowledge.

\_\_\_\_\_  
 Authorized Signature Authorized Signature

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

**Figure 2: Example agent authorization form allowing an engineer to sign permit applications on behalf of the owner.**  
**Source: Author**

## Steps in a Permit Process

Just as each project is unique, the permitting required for each project is unique. However, there are logical steps that can be applied to nearly all permits. The following are typical steps in a permitting process:

1. **Permit Assessment:**  
Initial investigation to identify required permits and potential impacts on the project approach, budget, and schedule.
2. **Agency Coordination:**  
Reach out to regulatory agencies to confirm permit requirements, submittal documents needed, estimated review times, and status of any current permits impacted by the project. A permit tracking log is filled out.
3. **Document Preparations:**  
Engineers typically prepare the documents needed for a permit submittal. The forms and attachments required are unique to each permit and project. Documents include a transmittal, forms, reports, plans/drawings, specifications, calculations, test results, historic imagery, surveys, and schedules. This step often takes the most engineering effort.
4. **Signing and Sealing:**  
Most permit applications require a signature from the owner, such as from a principal officer (president, vice-president, secretary, or treasurer). Environmental permit applications typically require a professional engineer in responsible charge to sign and seal documents such as forms, reports, plans, specifications, and calculations. Digital signatures are now commonly accepted.
5. **Permit Submittals & Reviews:**  
The application documents may be sent via email, uploaded, mailed hard copy, or in-person hard copy. Digital submittals via upload to an agency site are becoming common. A cover letter or letter of transmittal is helpful to document what was submitted and when. Regulatory agencies typically have a required number of days to respond with comments. Some agencies also give an estimated review time based on workload. A public hearing, public notice sign, and/or public notice newspaper ad are sometimes required to inform and gain input from the public.
6. **Permit Issuance:**  
Sometimes, a draft permit will be issued with a “public review and comment period”. Engineers are expected to review the draft permit with the Owner and provide comments to the agency. After the window, if there are no comments or comments have been incorporated, the permit is reissued as final.

7. Oversight of Permit Conditions:

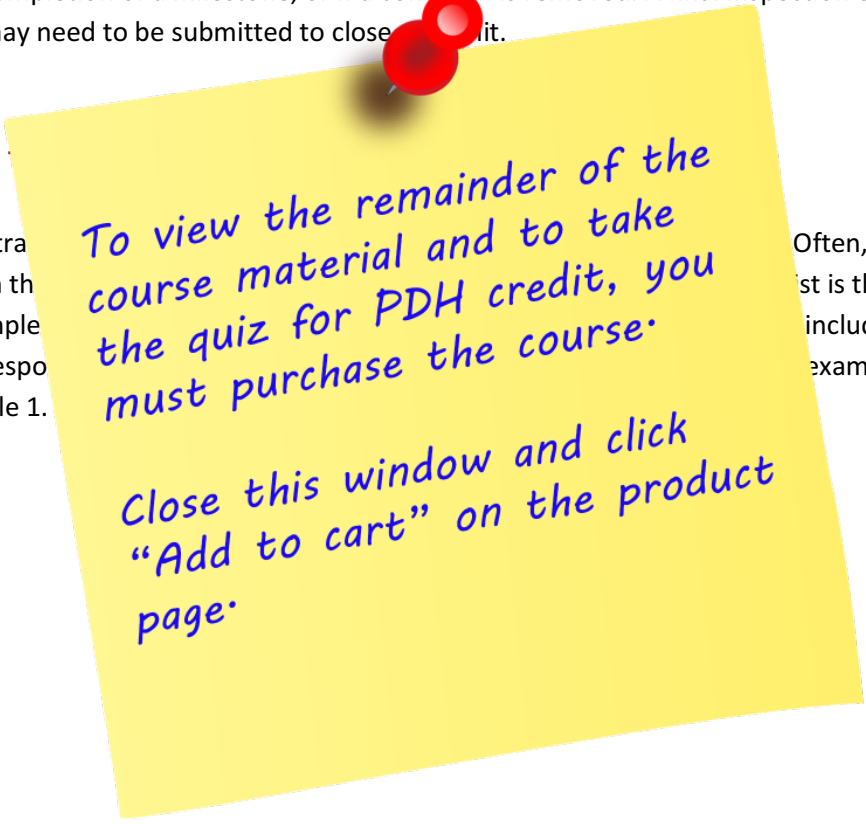
Engineers often help ensure that permit conditions are being met. Depending on the permit, the conditions could apply during construction, commissioning, initial operations, or ongoing operations. This is often referred to as permit compliance support.

8. Permit Closure:

Some permits require a “request for permit closure” to be submitted when the work is done or permit conditions no longer apply. Other permits simply expire after a set time period, upon completion of a milestone, or if a condition is removed. A final inspection or record drawings may need to be submitted to close a permit.

## Permit

A permit tra  
created in th  
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agency, respo  
log in Table 1.



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Often, a permit list is  
st is then expanded into a  
include the permit name,  
example permit tracking