



هيئة البيئة - أبوظبي
Environment Agency - ABU DHABI



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ENVIRONMENTAL CAMPAIGN FOR THE READY-MIX CONCRETE MANUFACTURING SECTOR

Questions and Answers

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ENVIRONMENTAL CAMPAIGN FOR THE READY-MIX CONCRETE MANUFACTURING SECTOR

Questions and Answers

Facilities that manufacture ready-mix concrete are part of the Concrete Products Manufacturing sector in Abu Dhabi Emirate. The primary classifications of concrete products are *ready-mix concrete* and *precast concrete*. Ready-mix concrete refers to concrete that is prepared at a concrete products facility, and then transported to a construction site or precast concrete facility for pouring or casting. Precast concrete products include concrete blocks, pavers, panels, slabs, beams, and other miscellaneous shapes made from concrete at a concrete products manufacturing facility.

As a respected business in Abu Dhabi, you want to help the Emirate grow economically while operating in compliance with all requirements. Because environmental programs and requirements have changed over the past decade, we have developed this brochure to help you understand these programs, comply with requirements, and learn where to get more information if you need it.

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WHAT ARE THE MAIN ENVIRONMENTAL LAWS IN THE UNITED ARAB EMIRATES AND ABU DHABI?

There are three main environmental laws that may affect your facility:

Federal Law No. 24 of 1999 for the protection and development of the environment

This law protects the environment of the United Arab Emirates through pollution control, environmental awareness, management and protection, biodiversity conservation, and compliance with regional and international agreements. Subsequent Executive Orders require environmental studies for proposed projects, regulate management of hazardous substances and agricultural chemicals, and protect the air and marine environment.

Local Law No. 16 of 2005 pertaining to the reorganisation of the Environment Agency – Abu Dhabi (EAD)

This law established EAD as an independent judicial entity with a mission to protect and conserve the environment and wildlife of Abu Dhabi Emirate. This law requires entities to obtain an environmental permit from EAD and prohibits entities from conducting activities that could negatively affect public health and/or the environment. This law also empowers EAD to stop activities that the Agency determines are being carried out in a dangerous manner.



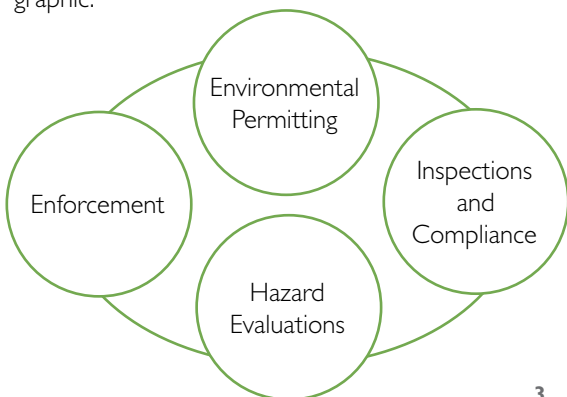
Local Law No. 21 of 2005 for waste management in Abu Dhabi Emirate

This law outlines EAD's responsibilities as the competent authority for waste management practices in Abu Dhabi Emirate and requirements for entities that generate, treat, and dispose of wastes. To further clarify responsibility under this law, The Centre of Waste Management–Abu Dhabi was established in 2008 to coordinate the policy, strategy, and contractual systems of waste management across Abu Dhabi Emirate.

More information

Information about these laws and other international, regional, federal, and local regulations and conventions is available on EAD's website at <http://www.ead.ae/en/portal/environmental.laws.aspx>.

These laws establish a system by which EAD monitors and protects public health and the environment. This system includes the items mentioned in the following graphic.



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WHO ARE THE COMPETENT AUTHORITIES FOR IMPLEMENTING THESE LAWS?



Environment Agency – Abu Dhabi (EAD)

EAD is the governmental agency responsible for protecting the environment in Abu Dhabi Emirate. EAD issues environmental permits and has oversight for environmental compliance inspections at industrial facilities. We also evaluate and register Environmental Consultancy Offices (ECOs) that perform environmental work in Abu Dhabi Emirate and prepare environmental studies for EAD.



Abu Dhabi Environment, Health, and Safety Center (AD EHSC)

The Abu Dhabi EHSC was established in 2010 by the Executive Council of Abu Dhabi Emirate. The AD EHSC supervises the implementation of the Abu Dhabi Emirate Environment, Health and Safety Management System (EHSMS) and is responsible for monitoring all issues related to occupational health and safety in the workplace through provision of an integrated regulatory framework that ensures safe and healthy workplaces and controls negative impacts and incidents resulting from them.



Industrial Development Bureau (IDB)

IDB provides industrial licencing, customs exemptions applications, and environment, health, and safety regulatory services for industrial investors in the Emirate of Abu Dhabi. IDB coordinates with other agencies, such as EAD, to provide industrial facilities with a One-Stop-Shop (OSS) for obtaining and maintaining the necessary licences and permits, including environmental permits. IDB is the Sector Regulatory Authority (SRA) for EHSMS at industrial facilities and conducts environmental inspections, in coordination with EAD, at industrial facilities.



Center of Waste Management–Abu Dhabi (CWM-AD)

The CWM-AD is responsible for managing all wastes (except primary sewage and radioactive waste) throughout the Emirate and developing a comprehensive system to deal with collection, transfer, treatment and disposal - leveraging the capabilities of the private sector where possible.

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WHAT AM I REQUIRED TO DO UNDER THESE LAWS?

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- Obtain or renew an environmental permit,
- Develop an EHSMS (if required by IDB) and/or Environmental Management Plan (if required by EAD), and
- Comply with the laws and the permit conditions applicable to your facility.



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HOW DO I OBTAIN OR RENEW AN ENVIRONMENT PERMIT?

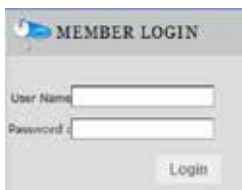
Improperly managed industrial operations can damage the environment and pose hazards to workers and the public. Therefore, all new industrial facilities are required to obtain an environmental permit before construction or operation begins. The permitting process helps a proponent learn about the environmental aspects of their facility's operations and how to control them. The process also allows environmental experts at EAD to examine the potential impacts of the facility's operation and put in place requirements to minimise risks to the environment and public health.

How to apply

Facilities must go through the IDB OSS to obtain a new permit, renew a permit, and submit technical modifications to an existing permit.

The permit application requires a complete description of the activities that the facility will undertake. This information is shared with EAD. EAD, in coordination with IDB, reviews the application and may require the proponent to conduct an environmental study before issuing the permit. Environmental studies identify the potential impacts of the facility and the ways in which these can be reduced and monitored.

If approved, IDB will issue the permit to the proponent. The permit will include the environmental permit conditions provided by EAD. The facility



1. You can apply for a permit through OSS's website at <https://eservices.zonescorp.com/ZonesVII/Secured/Default/Default.aspx>. If this is the first time you are using the OSS, you will need to set up a User Name and Password.
2. Answer questions about the facilities processes and provide supporting documentation before submitting the application.
3. EAD and IDB will review the application.

must operate in accordance with the environmental conditions in its permit because these conditions are the basis for the environmental inspections conducted by IDB and EAD.

Facilities must renew their environmental permits through OSS each year the facility is operational and upon decommissioning. EAD may inspect the facility at any time and may withhold approval of a permit renewal until the facility demonstrates that it is complying with environmental laws.

More information

Contact IDB's Customer Service by calling 800-IDB.

The environmental permitting process is also described in the ***Technical Guideline for Submission of Environmental Applications and Reports***, available on EAD's website at <http://www.ead.ae/en/portal/technica.guidelines.aspx>.

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WHAT TYPE OF ENVIRONMENT, HEALTH, AND SAFETY PLAN SHOULD I HAVE AT MY FACILITY?

During IDB's review of a proponent's permit application, it will decide whether a proponent needs to comply with the EHSMS Regulatory Framework or needs to develop an Environmental Management Plan. An EHSMS or Environmental Management Plan must be developed in accordance with EAD and/or AD EHSC's technical guidance documents.

The Abu Dhabi EHSMS is a performance-based system that takes into consideration aspects related to the protection of the environment and protection of the human health and safety of workers and the community at large. The AD EHSC oversees the implementation Abu Dhabi's EHSMS. IDB is the SRA responsible for implementing the EHSMS in the industrial sector within the Emirate.

More information

For more information about the AD EHSC and EHSMS, please visit this website at <http://www.adehsms.ae/Pages/ADEHSMSDetails.aspx>.

If your facility is required to develop an Environmental Management Plan, please see the *Technical Guidance Document for Operation Environmental Management Plan*, available at <http://www.ead.ae/en/portal/technica.guidelines.aspx>.



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Wearing dust masks, coveralls, and gloves are best practices to ensure worker safety and health. The PPE requirements may differ by type of working situation.

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WHAT ARE THE PERMIT CONDITIONS AND STANDARDS WITH WHICH I MUST COMPLY?

Each environmental permit issued to a facility will contain a set of general permit conditions and a set of detailed permit conditions specific to the ready-mix concrete manufacturing process. Your facility must comply with all permit conditions at all times to minimise impacts to the environment and public health. Your environmental permit will also include the environmental standards with which your facility will need to comply.

Additionally, there are many international best practices available for the ready-mix concrete manufacturing industry (see Question 9) to improve process efficiency and further reduce your facility's environmental impacts. Your EAD inspector can work with you during the inspection and compliance process to identify more areas for improvement at your facility.



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Transporting raw materials from one area to another can create large amounts of dust that need to be controlled.

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HOW WILL MY FACILITY BE INSPECTED?

EAD, in coordination with IDB, is responsible for conducting inspections at industrial facilities prior to commissioning, during operations, and upon decommissioning a facility. Inspections are a method to check a facility's compliance with the laws and environmental permit conditions throughout the life cycle of the facility. These scheduled and unscheduled inspections may be conducted by both IDB and EAD throughout a given year. The designated environment, health, and safety representative at the facility is usually the EAD's point of contact during the inspection and compliance process.

Information collection and report

To improve consistency among inspectors in determining facility compliance, EAD environmental inspectors use a specialised computer software tool during the inspection. This tool collects information about the facility's process operations and environmental impacts. Inspectors will assess compliance with the facility's environmental permit and licence requirements, Civil Defense certificate, and international best management practices. The inspector will also review the facility's chemical inventory records, Material Safety Data Sheets (MSDSs), materials storage and handling practices (focusing on hazardous materials), employee training records, and previous inspection and audit records.

At the end of the inspection, an inspection report will be e-mailed to the facility's point of contact. This report summarises the areas in which violations were found, if any, and recommends best management practices to address the violations.



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EAD inspectors use a specialised computer software tool during an inspection to collect information about the facility's process operations and environmental impacts.

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WHAT HAPPENS IF MY FACILITY IS NOT IN COMPLIANCE WITH THE PERMIT CONDITIONS AND/OR ENVIRONMENTAL LAWS?

If violations are identified during an inspection, EAD may conclude that the facility is not in compliance and may choose not to renew the facility's licence until appropriate steps are taken. The inspection report will clearly list the violations found and the magnitude of compliance. For minor violations, EAD inspectors may schedule a follow-up inspection to determine whether the issues noted in the inspection report have been addressed in a timely manner. Depending on the severity of violations found, EAD may require the facility to develop a Mitigation Plan and/or to work with an Environmental Consultant to develop an Environmental Action Plan detailing the steps to be taken to address the violations.

If the violations identified in the inspection report persist, EAD will not renew the facility's permit until the violations are addressed. EAD may also work with IDB to issue fines if a facility is consistently out of compliance with its environmental permit and the laws.



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During inspections, EAD inspectors identify areas that may be out of compliance and discuss corrective actions with facility managers and representatives. Follow-up inspections may be scheduled to determine whether the issues noted in the inspection report have been addressed in a timely manner.

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WHAT ARE SOME EXAMPLES OF INTERNATIONAL BEST PRACTICES FOR CONTROLLING ENVIRONMENTAL ASPECTS AT MY FACILITY?

An example of the many international best practices for reducing environmental impacts and public health risks from the ready-mix concrete manufacturing process is provided in this section. Your EAD inspector can provide more information about these and other best practices. The inspector will work with you to develop a set of applicable best practices to be implemented at your facility.



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Installing dust filters (fabric filter) is a best practice to reduce dust emissions. No dust will be emitted from an efficiently operating fabric filter as shown here on top of a cement silo.

Process Operations and General Housekeeping

- Apply dust control measures to the facility boundary (for example, sweeping dust off roadways, flushing unpaved areas with water, using dust suppressants, enclosing transfer points)
- Vent all cement and/or fly ash storage silos and weigh hoppers to a fabric filter (baghouse) or cartridge filter system to control particulate matter emissions
- Install and maintain filter systems on each cement silo at the facility.
- Monitor filter systems frequently and regularly check for tears or leaks in fabric and cartridge filter systems and suction shroud, and clean and/or replace filters as per the manufacturers' recommendations
- There should not be any visible emissions from cement silo dust filters or baghouses. Any visible emissions should be investigated immediately
- Be mindful of the amount of water used to control dust and collect and recycle, to the extent practical, the wastewater generated during operations at the facility
- Clean up spills of cement and admixtures immediately after they occur and properly dispose of the waste material(s). Use dry clean-up methods such as absorbent materials, sweeping, dust collection vacuuming, wiping
- Install and maintain wastewater/material disposal areas where water can evaporate and concrete can harden for proper disposal. Empty area when 75% full

Materials Storage and Waste Management

- Store all chemicals and hazardous materials in labelled, compatible containers that are in good condition, and inspect containers regularly for leaks.
- Dispose of all wastes, especially hazardous wastes, through an environmental service provider approved by the CWM-AD.
- Wash out mixers and equipment only in designated areas, such as a concrete pit where the wastewater can be collected for proper reuse, treatment, or disposal. Never wash out mixers or equipment into open ditches, open ground, or the street.
- If fuel is stored on-site, ensure that secondary containment surrounds fuel storage and waste tanks; that the area is regularly inspected and maintained.
- Develop a spill incident response plan and train employees on proper fueling techniques and spill response.

Records Management

- Keep an easily accessible environmental file with records, including the IDB/EAD permit, Civil Defense certificate, Emergency Management Plan, inventory of chemicals and their relevant MSDSs, employee training records, inspections and audits records, and Emergency Management System.



Covering raw material storage areas can reduce the generation of wind-blown dust.



Sweeping and collecting dust from paved areas is a common control measure to reduce the amount of dust that can be re-suspended into the air from trucks and wind.



This facility paved its roadways and sweeps up dust as best practice measures to control dust.

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WHERE CAN I GET MORE INFORMATION?



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Industrial Development Bureau

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Location:	Old Public Works Department, Delma Street

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The Environment Agency – Abu Dhabi is a governmental agency that was established in 1996. We are committed to protecting and managing biodiversity, providing a clean environment and promoting Sustainable Development in the Emirate of Abu Dhabi.

We are also committed to giving environmental protection, regulation and natural resources conservation a high priority on the national agenda. We provide a direction for Government, business and the community to build environmental considerations into the way they plan and live without compromising Abu Dhabi development. In 2008, EAD was awarded ISO 9001 for Quality; ISO 14001 for Environment and OHSAS 18001 for Health and Safety.

