



DUBAI AVIATION CITY CORPORATION OHSE CODE OF PRACTICES



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DACC CODE OF PRACTICE – CHEMICAL FERTILIZER
WORKS



CHEMICAL FERTILIZER WORKS
DACC (DUBAI SOUTH) Code of Practice
Document Reference No.: DACC.DS.OPS.OHSE.OPS.02.FW

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1.0 INTRODUCTION

- (a) The Code is intended to cover the full range of products that are used, known as or seen as fertilizers, and are recognized as such under the Ministerial Decree No. (476) for the year 2007, on the Regulations for the Law (system) fertilizers and soil conditioners for the Arab States of the Gulf, and the Federal Law No. (39) For the year 1992 regarding the production, import and trading of fertilizers and agricultural conditioners. If there is any uncertainty about whether a given product is considered a 'fertilizer', this Code specifically covers:

"Any substance (whether solid or fluid in form) which is described as or held out to be for, or suitable for, sustaining or increasing the growth, productivity, or quality of plants or animals through the application of the following essential nutrients to plants or soils:

Nitrogen, phosphorus, potassium, Sulphur, magnesium, calcium, chlorine, sodium, as major nutrients or manganese, iron, zinc, copper, boron, cobalt, molybdenum, iodine, selenium, as minor nutrients or additives"

And,

"Any other product which is considered to meet identified soil or plant nutrient deficiencies and is applied with this as the principle objective. Products discharged or applied as part of a waste treatment process require resource consents. Products that have received resource consent and will be used as a nutrient source should comply with the principles of the Code."

- (b) This Code of Practice (COP) is mandatory to all duty holders, entities or organizations operating within the Dubai South jurisdiction. This COP is designed to incorporate requirements set by **Dubai Aviation City Corporation (DACC) – Dubai South** Occupational Health, Safety and Environment (OHSE) Department and Dubai South Management. If requirements of this document conflict with requirements set by another regulatory authority, employers / organizations are required to follow the more stringent requirement.
- (c) This Cop has been developed following "**Dubai Aviation City Corporation (DACC) – Dubai South OHSRF – Regulation 2 – Risk Management**" to give clear guidance on the safe management of chemical fertilizers.
- (d) Operational facilities means the business operating in Dubai South such as Offices, Educational Institutions, Medical Facilities, Logistics and Warehouse Facilities, Factories, Recreational Facilities, Multi Store Apartments, Retail Facilities, etc. and all other facilities which are registered under Dubai South License.
- (e) A duty Holder is defined as;
- (i) the person(s) who owns or is in control, through contact or tenancy, of non-domestic premises;
 - (ii) With regard to multiple tenanted premises, the duty holder shall be the person who owns or is in control of the building, including access and egress
 - (iii) All other persons shall cooperate with the with the duty holder to allow them to comply with their duties requirements under this COP.



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1.1 Objectives

- (a) The objectives of this Cop are to provide a set of voluntary standards of practice for all stakeholders involved in the use and management of fertilizers, including the fertilizer industry, agricultural extension and advisory services, the private sector, end users and other public entities.
- (b) Encourage cooperation and collaboration between all duty holders involved in the fertilizer value chain for the responsible and sustainable development, production, use and management of fertilizers and reused and recycled nutrients.
- (c) Promote collaboration, partnership and information exchange among the fertilizer industry in the access to and use of fertilizers consistent with legal competition obligations.
- (d) Promote recycling of nutrients for agricultural and other land uses to reduce the environmental impacts of excess nutrients in the biosphere.
- (e) Inspire duty holders to promote and fund innovation in sustainable agricultural nutrient technologies and management.
- (f) Assist duty holders to control and enforce fertilizer quality through appropriate regulatory mechanisms and reducing economic losses to end users.
- (g) Improve fertilizer safety and reduce the risks to human and animal health.
- (h) Encourage the promotion and dissemination of knowledge, including comparable statistics, on all matters related to fertilizer use and management through appropriate mechanisms, institutions and outreach programs.
- (i) Encourage Integrated Soil Fertility Management (ISFM) using nutrients from a range of sources.

2.0 COMPETENCE, TRAINING AND AWARENESS

- (a) Duty holders shall ensure that OHSE training complies with the requirements of:
 - (i) *Dubai Aviation City Corporation (DACC) – Dubai South OHSERF - Regulations 6 – Competence, Training and Awareness.*
- (b) Duty holders shall ensure that no person to deal with chemical fertilizers unless such person has the competency gained from training and experience of the precautions to be taken against the risk of death or personal injury, and is under such degree of supervision as may be appropriate having regard to the nature of the work. Such competency will be assessed and awarded based on a training and assessment.
- (c) Duty holder shall ensure that the training program shall cover, as a minimum the following:
 - (i) Hazard identification;
 - (ii) Specific Safe working procedures;



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- (iii) Equipment selection and testing;
 - (iv) Hygiene;
 - (v) Type, selection, inspection and use of PPE; and
 - (vi) Incident and emergency procedures.
- (d) Duty holder shall ensure that a record of the required training contains the following information:
- (i) Company, name and company employee ID number;
 - (ii) Emirates ID number / Dubai South ID Pass;
 - (iii) Topic / subject of training;
 - (iv) Training provider;
 - (v) Date of training; and
 - (vi) Person conducting the training.

3.0 REQUIREMENTS

3.1 Roles and Responsibilities

- (a) Duty holders shall undertake their roles and responsibilities in accordance with the general requirements of *Dubai Aviation City Corporation (DACC) – Dubai South OHSERF – Regulation 5 – Leadership, Roles, Responsibility and Self-Regulation*.
- (b) Duty holder shall be responsible for performing a risk assessment in accordance with *Dubai Aviation City Corporation (DACC) – Dubai South OHSERF – Regulation 2 – Risk Management* to identify all the hazards that may be present and the risks associated in chemical fertilizer activities.
- (c) Duty holder shall develop safe systems of work including control measures and safety rules to reduce employee's exposures that could cause an injury and to prevent property damage. Consultation and advice shall be in accordance with the requirements of *Dubai Aviation City Corporation (DACC) – Dubai South OHSERF – Regulation 7 – Communication, Consultation and Participation*.
- (d) Provide correct information and/or adhere to best management practices for fertilizer use including proper handling, storage, transportation, and disposal, and follow locally relevant fertilizer recommendations.
- (e) Generate knowledge and provide information to fertilizer users on the health and safety aspects of handling and using fertilizers, and how to protect humans, and animals, from possible adverse effects including impacts of low-level chronic exposure.
- (f) Duty holder shall develop an emergency response plan for incidents involving chemical fertilizers.
- (g) Duty holder shall appoint competent persons to oversee the storage use and disposal of chemical fertilizers within the workplace.



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3.1.1 Employees

- (a) Employees shall undertake their roles and responsibilities in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) – Dubai South – Dubai South OHSERF – Regulation 5 - Leadership, Roles, Responsibility and Self-Regulation.***
- (b) Employees shall undertake their specific roles and responsibilities in accordance with the following:
- (i) Follow information, instruction and training provided to them by the employers regarding chemical fertilizers;
 - (ii) Never deal with chemical fertilizers unless competent and authorized to do so and only when appropriate control measures have been identified and implemented;
 - (iii) Report any hazards and defects immediately;
 - (iv) Not to operate any equipment that they are not familiar with and competent to operate and/or appropriately trained on its use; and
 - (v) Inspect PPE prior to use in accordance with the employer's instruction before handling the chemical fertilizers and in line with the requirements of ***Dubai Aviation City Corporation (DACC) – Dubai South COP – DACC.DS.OPS.OHSE.OST.10.PP - Personal Protective Equipment.***

3.2 Fertilizers handling

Duty holder shall ensure that fertilizer handling, transport, or storage should aim for containment of the product until it is applied and in line with the requirements of ***Dubai Aviation City Corporation (DACC) – Dubai South COP- DACC.DS.OPS.OHSE.CGF.01.SH – Control of Substances Hazardous to Health and Dangerous Goods.*** This means that no fertilizer should be lost to the environment during transport, storage and any other handling operations, thus avoiding any possible adverse environmental effects. Contamination arising from handling, transport, or storage problems is a point source (i.e. highly localized) contamination, which can be effectively managed and contained if appropriate actions are taken immediately.

Ensure all individual containers and bulk packaging of chemical fertilizers are labelled as required by applicable federal and local laws and regulations and/or applicable international model regulations.

3.2.1 Transporting Fertilizers

Duty holder will comply with the requirements of ***Dubai Aviation City Corporation (DACC) – Dubai South COP - DACC.DS.OPS.OHSE.CGF.01.SH – Control of Substances Hazardous to Health and Dangerous Goods*** and Code of Practice for the Management of Dangerous Good in the Emirates of Dubai - Part 9.1 Transport of Dangerous Goods by Road and RTA Regulations or the appropriate legislation of the time, when transporting fertilizer by road. It is the duty holder responsibility to ensure that:

- All freight is correctly restrained,
- Any hazardous substances are segregated correctly,
- The driver's license has the appropriate endorsements, and



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- Safe driving techniques;
- Actions to take in the event of an incident;
- Any safety equipment required, which is provided by the carrier, is used.
- Any transport pathways pre-assigned by the authorities

Duty holders are responsible for ensuring that their drivers meet these requirements. Fertilizer products need to be kept free of any foreign material throughout all transport, storage, and handling. Loading and unloading procedures should be designed to minimize segregation of fertilizer components (i.e. fertilizer mixes and blends separating out into their various component products) and to prevent changes to the particle size and size range of the fertilizer. General requirements for the transport of fertilizers are:

- Vehicle decks shall be such that fertilizer cannot spill during transport,
- Vehicle decks shall be cleaned so that no contamination or chemical reaction of fertilizers carried can occur. The wash down shall occur on areas where there is no runoff into a waterway or a storm water system.
- o All loads of fertilizer products shall be securely covered to prevent dust blowing from the truck and to prevent moisture uptake by the product, and
- o When unloading fertilizer the driver should ensure that all fertilizer is removed from the vehicle decks.

All carriers shall be aware of the requirements of the Operators Handbook for the Transport of Hazardous.

3.2.2 Fertilizers Storage

Location

Storage conditions shall ensure that fertilizer is never contaminated with other chemicals or chemical products, and that fertilizer does not escape from the storage facility. Some stores may also need to provide appropriate signage.

Fertilizer storage buildings shall be sited to minimize any risk of environmental contamination. In particular, storage sites must not present a risk of direct water contact with stored fertilizer. This includes the entry of storm water or runoff from surrounding areas.

Inside Storage

Fertilizer buildings shall be constructed so that stored fertilizer remains in a useable condition. In particular, fertilizer should stay dry and free from contamination by other fertilizer types or any foreign material. Bulk fertilizer shall be stored in a manner that preserves the physical properties of the fertilizer and allows the fertilizer to be retrieved from storage and used without contamination. The fertilizer shall be stored on an impermeable surface to prevent leaching to ground water and to prevent the localized accumulation of contaminants in the soil.

- a) Fertilizer storage buildings may be subject to approval and issue of the necessary consents from the local authority concerned.
- b) Temporary storage sites should comply with ***Dubai Aviation City Corporation (DACC) – Dubai South OHSERF - Regulations 3 – Legal Compliance requirements.***



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- c) Bagged fertilizer should be protected from direct sunlight, rainfall and contamination by chemical products.
- d) Store at least 1 meter away from eaves and beams and, in case of bagged fertilizer, also from walls and other stacks of fertilizer.
- e) Limit the size of stacks of bags of ammonium nitrate-based fertilizers in accordance with *Dubai Aviation City Corporation (DACC) – Dubai South OHSERF - Regulations 3 – Legal Compliance requirements*.
- f) Do not store urea near ammonium nitrate based fertilizers; keep them well segregated, as it is not compatible.

Outside Storage

- a) Store on a raised level, well-drained, dry and smooth surface (e.g. on pallets).
- b) Place a layer of empty pallets on top of the stack prior to sheeting to prevent product deterioration due to heat effects, as advised by the manufacturer/supplier, in order to preserve quality.
- c) Stacks should be sheeted and the sheets secured to the bottom layer of the stacks to prevent damage, which may be caused by rubbing and friction.

3.2.3 Compatibility of Fertilizers

Duty holder shall ensure that requirements of compatibility of fertilizers are in line with *Dubai Aviation City Corporation (DACC) – Dubai South COP – DACC.DS.OPS.OHSE.CGF.01.SH – Control of Substances Hazardous to Health and Dangerous Goods*. Fertilizer blends or physical mixtures shall only be used if there is no risk of chemical or physical (e.g. moisture absorption) reaction between fertilizers in the blend or mixture that may reduce application accuracy. The blend or mixture should be such that there is little or no physical segregation (separating out or settling) of the blended or mixed components in transport and handling operations. Expert advice should be sought before creating a blend as some fertilizers are not compatible.

3.2.4 Fertilizer Disposal

Under no circumstances shall any fertilizer be disposed of in a way that risks adverse environmental effects. The best practical option for the disposal of any surplus or unwanted fertilizer is application onto suitable land or crops in accordance with this Code or finding an approved contractor for the disposal of unwanted fertilizers.

While most fertilizer materials are handled in bulk, some products are provided in bags of varying sizes and some as liquids. Re-usable or recyclable containers should be used if available. For all other situations, containers should be disposed of in a manner that minimizes any risk to human health and the environment as per the requirements of *Dubai Aviation City Corporation (DACC) – Dubai South COP – DACC.DS.OPS.OHSE.ENV.03.WM – Waste Management*.

3.2.5 Fertilizers spills

Fertilizer spilled during transport, storage and handling can have significant adverse environmental effects. In the event of any spillage of fertilizer products, the employers/duty holders/stakeholders must take immediate steps to prevent any further loss, risk to other people and/or any contamination of land or waterways. The employers/duty holders/stakeholders must:

- o Notify the appropriate authority and Dubai South (80027738) if there is a large spill



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- o Minimize any hazard to other road users
- o Ensure that no residual product remains that could pose any immediate or future threat to the environment.

3.3 Fertilizers use and management

It is the fertilizer user's responsibility to ensure that they have adequate information about any fertilizer product they intend to use and the potential risks its use may pose to the environment. Fertilizer companies have safety data sheets available.

Information required for good understanding of potential environmental risks arising from the use of any fertilizer product includes:

- o Name of the fertilizer material
- o Nutrient content (including Nitrogen, Phosphorus, Potassium, Sulphur, Magnesium proportions, etc.)
- o Physical characteristics (e.g. liquid, solid, particle size range, blended/compound)
- o Particular hazards associated with the product – e.g. chemical compatibility (also with reference to storage requirements), hygroscopic characteristics, solubility and dust.

Misuse of fertilizers can involve, but is not limited to:

- a) Over or excessive use, that is, the application of one or more plant nutrients to the soil, foliage or water that would not reasonably be expected to produce a positive response in growth or composition for plants or crops growing in that soil, or to maintain soil health.
- b) Improper or inappropriate use, such as the application of fertilizers to the soil surface when not appropriate, not suited to the soil type, soil properties or the landscape, crop requirement, or the prevailing weather and climatic conditions, thus resulting in nutrient losses to the environment;
- c) Nutrient imbalance resulting from fertilizers composed of an incomplete or improperly balanced nutritional profile compared to what the target crop(s) in question requires for optimal growth and product quality;
- d) The application of contaminants to the soil via fertilizers that might pose unacceptable risk to human health or the environment;
- e) Improper storage of fertilizers; or
- f) Fertilizer spills.

3.4 Emergency management

Duty holder shall ensure that emergency arrangements comply with the requirements of:

Dubai Aviation City Corporation (DACC) – Dubai South OHSERF – Regulation 13 – Emergency Management:

Emergency plans shall be established to deal with emergencies arising from the accidental discharge of hazardous materials. Adequate fire-fighting, safety, and spill control equipment shall



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be readily available. Personnel shall be trained to handle emergency procedures. In the case of bulk storage of corrosive chemicals, adequate supplies of neutralizing agents shall be kept on hand. The contingency plan should also be developed so as to provide for coordination with the Authority and other government agencies.

4.0 RECORD KEEPING

- a) Duty holder shall ensure record keeping in accordance with the requirements of Dubai Aviation City Corporation (DACC) – Dubai South OHSERF for the purpose of performance review in accordance with the requirements of *Dubai Aviation City Corporation (DACC) – Dubai South OHSERF – Regulation 14 – Performance Management* and *Dubai Aviation City Corporation (DACC) – Dubai South OHSERF – Regulation 19 – Management Review*.

5.0 REFERENCES

NO.	DOCUMENT NAME	DOCUMENT NO.
1	Risk Management	DACC OHSERF – Regulation 2
2	Legal Compliance	DACC OHSERF - Regulations 3
3	Leadership, Roles, Responsibilities and Self-Regulations	DACC OHSERF – Regulation 5
4	Competence, Training and Awareness	DACC OHSERF – Regulation 6
5	Communication, Consultation and Participation	DACC OHSERF – Regulation 7
6	Document Control and Record Management	DACC OHSERF – Regulation 8
7	Performance Management	DACC OHSERF – Regulation 14
8	Management Review	DACC OHSERF – Regulation 19
9	Personal Protective Equipment	COP – DACC.DS.OPS.OHSE.OST.10.PP
10	Waste Management	COP - DACC.DS.OPS.OHSE.ENV.03.WM
11	Control of substances hazardous to health and Dangerous Goods	COP - DACC.DS.OPS.OHSE.CGF.01.SH
12	Dubai Municipality Code of Practice for the Management of Dangerous Goods	
13	Roads & Transport Authority - Dubai	
14	Ministerial Decree No. (476) for the year 2007, on the Regulations for the Law (system) fertilizers and soil conditioners for the Arab States of the Gulf	
15	Federal Law No. (39) for the year 1992 regarding the production, import and trading of fertilizers and agricultural conditioners	