GOVERNMENT OF RAS AL KHAIMAH
RAK PORTS

DUST MANAGEMENT PLAN

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RAK PORTS INTEGRATED MANAGEMENT SYSTEM

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1.0 Introduction

RAK Ports has established, implemented and maintained its Dust Management Plan in order to meet applicable legislative requirements to combat and mitigate potential dust emissions from its cargo handling activities including loading and discharging of cargo, storage of cargo and movement of vehicles and equipment inside the Port as identified in the Environmental Aspect and Impact Identification Register. The plan also details on the strategic measures to be adopted by the relevant Ports to ensure protection and safeguarding of the local environment and its neighbouring communities.

RAK Ports’ has an established Integrated Management System satisfying the requirements of OHSAS 18001, ISO 14001 & ISO 9001 standard. This document describes Saqr Port’s Environment department and Al Jazeera Port’s Operations department strategies for dust management, dust control and details an action plan.

1.1 Commitment of the Environment department (SPA)/Operations department (AJZP):

The relevant department is committed to control any potential dust affecting the applicable Port as well as controlling potential dust affecting its neighbouring communities.

The Board of RAK Ports’ has drafted an Environmental Policy as the initial element of the RAK Ports role in protecting the environment. These are added to the Port’s internal network server as well as uploaded on to the RAK Ports website.

RAK Ports’ has established Management Systems Objectives for Environmental protection including prevention of pollution in line with the requirements of the Environmental Policy and have been approved by RAK Port’s Top Management.

RAK Ports’ has established, documented and implemented an Environment Management Procedure in line with the OHSAS 18001:2007, ISO 14001:2004 & ISO 9001:2008 Standards requirements, to address the operational activities that are related to the RAK Ports environmental responsibilities for combating dust emissions.

2.0 Air quality management

The department anticipates one of RAK Ports main potential environmental aspect that can impact on the environment as wind-blown dust particles associated with the activities of;

i. Loading and discharging cargo.

ii. Storage of cargo (stockpile areas).

iii. Movement of vehicles & equipments inside the port.

The potential dust that may have an impact on the environment will be controlled by the responsible department staff as follows;

2.1 Roles of Environment department (SPA)/Operations department (AJZP) staff

2.1.1 Role of Team Leader (SPA) in dust control:

i. Coordinating with Duty Officer regarding daily work plan (vessel arrival times, loading and discharging on berths, loading in yards, shovel numbers and sites in storage areas) in port.
ii. As per the direction from Environment Officer, the Team leader coordinates with the Environment Supervisor regarding duty details.

iii. Responsible for receiving water supply requests from residents and supplying the required quantity of water.

2.1.2 Role of Port Operations Supervisor (AJZP) in dust control:

i. Coordinating with Duty Officer regarding daily work plan (vessel arrival times, loading and discharging on berths, loading in yards, shovel numbers and sites in storage areas) in port.

ii. Coordinates with Supervisor regarding duty details.

2.1.3 Role of Supervisors in dust control:

i. Receives daily work instructions from the Environment Team Leader (SPA)/Port Operations Supervisor (AJZP).

ii. Move Pollution Control tanker (P.C.T at SPA) water units and tankers to yards and berths as per the work requirements.

iii. Commence spraying operations according to the wind direction, temperature, trucks movements and types of cargo.


v. Responsible for selling water to vessels and agents at SPA.

vi. In case of requests from Agents to stop spraying on cargo, Supervisor shall take suitable action according to the wind direction. If the wind direction is towards local resident area, he shall suspend the cargo operation to avoid dust emission towards local resident area.

vii. Water cannot be sprayed on some types of cargo as detailed in sub-section 2.1.6 paragraph (i), for example clinker or white cement. In such cases, procedures detailed in section 2.1.6 will be implemented for SPA and 2.1.8 will be implemented for AJZP.

2.1.4 Role of drivers in dust control:

i. Responsible for moving the P.C.T (SPA)/mobile tankers (AJZP) to yards and berths without affecting other operations in the Port.

ii. Positioning the P.C.T (SPA)/mobile tankers (AJZP) in a suitable place to start spraying operation.

iii. Shall observe the process of mixing aggregate with water by shovel. If the mixing process does not happen in the acceptable way, the driver shall inform the shovel operator to carry out the mixing process effectively.

iv. After completing the spraying operation, the driver shall ensure that the workers are in the desired place in the P.C.T (SPA)/mobile tankers (AJZP). The driver then moves the truck outside the yard.

2.1.5 Role of labourers in dust control:

i. To ensure before spraying operation, spraying site is completely free of moving trucks.
ii. Helping the driver to position the P.C.T (SPA)/mobile tankers (AJZP) at a suitable place for spraying operation.

iii. After parking the P.C.T (SPA)/mobile tankers (AJZP) in a suitable place, the labourer takes his place on the P.C.T (SPA)/mobile tankers (AJZP) and starts spraying operation.

iv. Once the process of mixing aggregate with water is completed, the labourers shall stop spraying operation.

v. The Labourers shall not leave the desired place on the P.C.T (SPA)/mobile tankers (AJZP) until the spraying operation is fully completed. The labourer can leave the place once the P.C.T (SPA)/mobile tankers (AJZP) leaves the spraying site.

2.1.6 Mobile fogging system (SPA)

The Environment department commenced the operation of mobile fogging systems from May 2014 onwards to control the dust emitted from materials that cannot be sprayed directly with water (e.g. mixed cargo-0.5 aggregate, powder, gypsum, soda ash, iron or clinker).

In case of wind direction towards residential areas, the Environment supervisor places suitable fogging machines in the opposite direction of the wind to prevent the dust from ingressing into residential areas.

Each fogging system requires one labourer and driver for operation.

2.1.7 Static fogging system (SPA)

The Environment department has plans to fix static fogging systems on berths, one unit has been fixed on September 2015.

Static fogging systems have bigger radius which can control the dust emitted from loading operation on multiple berths at the same time.

Static fogging systems can be operated by one labourer which will decrease the need for too many equipments to cover operations on two or more berths.

2.1.8 Forklift with mobile tanker (AJZP)

The Operations department commenced the use of forklift with mobile tanker from March 2016 onwards to reduce the dust emitted from materials that can be sprayed with water.

For materials that cannot be sprayed directly with water (e.g. mixed cargo-0.5 aggregate, powder, gypsum, soda ash, iron or clinker) they will be covered with tarpaulin sheet to reduce the emission of dust.

Each forklift with mobile tanker requires one fork lift Operator and one Assistant for operation.

2.1.9 Sweeping operations

The potential dust from vehicle movement on road network is one of the major dust emission sources within the Port.
The Environment department (SPA) has started operating new equipment for road cleaning on a daily basis and schedules work to control dust emissions from the roads. At AJZP, this is achieved by using the Bobcat attached with sweepers.

At SPA, a total of 5 sweepers (1 x Johnston, 3 x Dulevo & 1 x Beam for exterior road network) have been added to the Environment department in order to maintain a constant cleaning programme. At AJZP, 1 bobcat with brush will be used initially on roads and jetties and further cleaning will be done manually by labourers using brush.

At SPA, a **Sweepers Work Plan** has been established (as detailed in Appendix A) to ensure scheduled cleaning is maintained in the following locations as shown in below map (area A, area B, area C & area D) to ensure full coverage of these areas and recorded in the **Cleaning Daily Report**.

Fig. 1 (below): SPA port map showing designated areas for cleaning.
For AJZP, all berths and port roads will be cleaned twice daily.

Fig. 2 (below): AJZP port map. <designated areas for cleaning to be identified>

### 3.0 Emission control and maintenance procedures

#### 3.1 Dust control measures by Environment department (SPA)/Operations department (AJZP) to control potential dust

**3.1.1 Spraying water on cargo and roads**

i. Spraying specified quantities of water (maximum 3 gallons per ton for Gabro).

ii. Environment department (SPA)/Operations department (AJZP) considers wind direction as an environmental indicator for spraying water:

**SPA:**

- In case of wind direction towards Khor Khowair village, the action will be to start spraying operation if possible on the opposite berths (8, 9, 10, 11 & 12) and yards (from yard no. 8 to 16) to Khor Khowair area.

- In case of wind direction towards Ghalilah village, the action will be to start spraying operation if possible on berths no. 5 and no. 6 and yards from yard no 17 to 23.

- In case of wind direction towards cement factories, the Environment Supervisor will give due consideration only for yards.

- In case of wind direction towards the sea, the Environment Supervisor will give due consideration for spraying only on roads.
AJZP:

- In case of wind direction towards local resident area, the action will be to start spraying operation.

iii. Spraying water on roads depending on ambient temperature, wind direction and number of trucks moving on the roads. All these are monitored by the Environment Supervisor (SPA)/Supervisor (AJZP).

3.1.2 Vehicle speed control

The Environment department (SPA)/Operations department (AJZP) has identified vehicle speed as a potential factor for dust emissions. Therefore the department controls the vehicle speed inside the Port by coordinating with the Security department (maximum speed limit inside the port is 30kmph for SPA and 20kmph for AJZP).

If any vehicle drives more than the stated speed limit, the Environment department (SPA)/Operations department (AJZP) contacts Security department for further action.

3.1.3 Planting trees in Khor Khowair area (SPA)

Planting more trees will help in reducing the potential dust in the port.

Top Management has approved a tree planting project. This will be monitored through the HSEQ Objectives of the Environment Department.

3.1.4 Maintenance of Port gardens (SPA)

The Cleaning section of the Environment department shall conduct maintenance of Port gardens and trees (including grass cutting, tree trimming, cleaning and irrigation).

The Cleaning section shall plant and maintain gardens around the surrounding areas of the port in order to improve the air quality in the area.

3.2 Equipment maintenance

3.2.1 Dust control equipment maintenance (including monitoring/measuring equipment):

Maintenance of all applicable dust control equipment including PCT’s, mobile tankers, Bobcat attached with sweepers, sprinkler systems will be done internally through the Engineering department (SPA)/Technical department (AJZP).

Calibration of dust control related equipment if required will be done by external agencies through the Stores department in accordance with the Control of monitoring and measurement procedure.

Fogging systems at SPA shall be maintained in accordance with the manufacturers training delivery. Regular attention shall be paid to filters in order to maximise the output of the equipment.

4.0 Monitoring programmes

4.1 Objectives and targets

The primary objective of this Dust Management Plan is to prevent significant potential impacts from affecting the port, local communities and significant environment values.

RAK PORTS INTEGRATED MANAGEMENT SYSTEM
This objective will be achieved through establishing:

i. Measurable management systems objectives and targets.
   
   Environment department’s (SPA)/Operations department’s (AJZP) management systems objectives and targets relevant to the environment have been identified as detailed in accordance with the *Objectives, Targets and Programmes* procedure.

ii. A monitoring system that can report performance against these targets.
   
   An air quality monitoring will be carried out on a periodic basis in accordance with the *Environment Management Procedure*.

### 4.2 Complaint handling process

Saqr Port has established a telephone number for dust complaints which is managed by the Environment department. The availability of this number is communicated to local residents when they request for fresh water. At AJZP, dust complaints if any will be received by the Control Tower and handled by POS.

This line is operated 24 hours per day by the Environment department Supervisor (SPA)/Control Tower (AJZP) and allows callers to identify themselves or remain anonymous. Complaints are recorded, disseminated, and responded to as per the *Environment Management Procedure*. The Environment department shall investigate these complaints and include details of the complaint, the investigation; management actions implemented and follow up using the *Dust Complaint Form*.

As RAK Ports intends to satisfy local residents on environmental matters, the Environment department (SPA)/Operations department (AJZP) always accepts comments, complaints and suggestions from them.

### 5.0 Contingencies

During windy conditions, it is possible that dust emissions may still be generated from the site. The following management actions will be taken to ensure that potential dust levels generated by the activities of loading/unloading cargo, stockpile and truck movement do not create unacceptable impacts:

i. The Environment department (SPA)/Operations department (AJZP) will only spray water on roads and yards during rough wind conditions (Turbulence condition).

ii. If an activity is causing high or abnormally dusty conditions (as determined by visual assessment), the activity will cease until weather conditions change or appropriate dust controls are put in place to control the dust emissions.

iii. Dust levels will continue to be monitored in accordance with the commitments of this management plan (above).

### 6.0 Stakeholder consultation and involvement

RAK Ports engages regularly with the nearby local residents regarding dust management issues. The department also engages in regular consultation with the stakeholders including Environment Protection and Development Authority – RAK regarding legal matters on dust emissions and management strategies:
7.0 Legislative requirements

RAK Ports has identified the following applicable legal and other requirements relevant to the implementation of its Dust Management Plan;

- Article 15, 35 & 48 of the UAE Federal Law No: 24 of 1999 for the Protection and development of the environment.
- Article 3 of the Air Pollution Law No: 12 of 2006.
- UAE Cabinet Decision No. (12) of 2006 on Ambient Air Quality Standards (Air Pollutants Limits in the Ambient Air).

Port’s compliance with the above legal requirements will be evaluated by auditors during internal audits and updated in the legislation registers in accordance with the **Legal and other requirements** procedure.

8.0 Auditing

The Environment department (SPA)/Operations department (AJZP) will assess its compliance with this plan on a regular basis or as required for specific projects.

Audits conducted will be both internal and external with findings recorded and used to ensure continual improvement of management strategies.

9.0 Review and revision

This management plan will be reviewed and revised by the Environment department (SPA)/Operations department (AJZP):

i. In response to the internal or external audit findings.
ii. If there are major changes to the operations.
iii. In response to issues raised by the stakeholders.
iv. In response to issues arising from the local community (local residents).
v. In response to any incident which results in a failure to meet any of the commitments of this plan.

10.0 Reference

RP ISP 008: Control of monitoring and measurement.
RP ISP 025-06: Dust Complaint Form.
RP ISP 026-01: Environmental Aspect and Impact identification Register.
RP ISP 027: Legal and other requirements.
RP ISP 028: Objectives, Targets and Programmes.

11.0 Appendices

RP MP 002-01: Sweepers Work Plan (SPA).
Appendix- A: **Sweepers Work Plan (SPA)**

<table>
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<tr>
<td>1</td>
<td>A</td>
<td>Dulevo 1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>B</td>
<td>Dulevo 2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>C</td>
<td>Duelvo 3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>D</td>
<td>Beam 1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Jhonston 1</td>
<td>When requested by Operations to clean berth no: 01,02,03 (Cement)</td>
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**Area A**
The Roads from main road round about to KGL gate.  
Parking outside main gate.  
In front of Engineering building road.  
Main Office Parking.  
MHC Yard.

**Area B**
The Roads from Eng building to Merit roundabout to yard no.8.  
The Road through the Sheds 4, 5 and 6 to berth 6.  
Merit round about to berth no. 5 & 6.  
Between yard no.5 and 5A +yard no.6 and 6A.  
Main workshop street.

**Area C**
The Roads from yard no.8 through gate 5 till berth 12.  
From gate no.5 to roundabout outside gate no.5.

**Area D**
The road from port round about to Ghaililah round about.  
The road from Ghaililah round about to Shaa'm round about and opposite lane.

**Using Shovel and Brush unit when deemed necessary by Supervisor**  
***When there is Sweeper out of order a contingent plan will be set.***