



# Environmental & Social Management System

## Air Emissions Management Plan



## Air Emissions Management Plan

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1

### TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION</b>	<b>4</b>
1.1	DOCUMENT NUMBER	4
1.2	PURPOSE	4
1.3	APPLICATION	4
1.4	COMMENCEMENT	4
1.5	AUTHORITY AND MANAGEMENT	4
<b>2</b>	<b>SCOPE</b>	<b>5</b>
2.1	SCOPE OF THIS MANAGEMENT PLAN	5
2.2	OVERLAPS WITH OTHER MANAGEMENT PLANS	5
<b>3</b>	<b>ROLES AND RESPONSIBILITIES</b>	<b>6</b>
3.1	KEY ROLES AND RESPONSIBILITIES FOR MANAGEMENT PLAN IMPLEMENTATION	6
3.2	KEY INTERFACES	7
<b>4</b>	<b>PROJECT STANDARDS</b>	<b>7</b>
4.1	APPLICABLE TURKISH NATIONAL STANDARDS	7
4.2	TURKISH EIA REQUIREMENTS	7
4.3	OTHER COMMITMENTS TO AND REQUIREMENTS OF TURKISH GOVERNMENT AUTHORITIES	7
4.4	APPLICABLE INTERNATIONAL STANDARDS AND GUIDELINES	8
4.5	APPLICABLE CENTERRA AND OMAS STANDARDS, POLICIES AND PROCEDURES	8
4.6	OTHER INDUSTRY GUIDELINES WITH WHICH OMAS HAS COMMITTED TO COMPLY	8
4.7	SUMMARY OF APPLICABLE PROJECT STANDARDS	8
4.8	OCCUPATIONAL EXPOSURE TO AIR EMISSIONS	10
<b>5</b>	<b>MITIGATION MEASURES AND MANAGEMENT CONTROLS</b>	<b>11</b>
5.1	SUMMARY	11
<b>6</b>	<b>IMPLEMENTATION SCHEDULE</b>	<b>15</b>
6.1	REVIEW AND REVISION OF THIS MANAGEMENT PLAN	15
<b>7</b>	<b>MONITORING</b>	<b>15</b>
7.1	OVERVIEW OF MONITORING REQUIREMENTS	15
7.2	MONITORING REQUIREMENTS WITHIN THE TURKISH EIA	15
7.3	KEY MONITORING ACTIVITIES	17
7.4	KEY PERFORMANCE INDICATORS	19
<b>8</b>	<b>TRAINING</b>	<b>20</b>
8.1	OVERVIEW	20
8.2	INDUCTION TRAINING	20
8.3	JOB-SPECIFIC TRAINING	20
8.4	OTHER TRAINING REQUIREMENTS	20
<b>9</b>	<b>AUDIT AND REPORTING</b>	<b>21</b>
9.1	AUDITING	21
9.2	EXTERNAL AUDITING	21
9.3	RECORD KEEPING	21
<b>10</b>	<b>DOCUMENT CONTROL</b>	<b>21</b>

## Air Emissions Management Plan

Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-0001	Rev: 1
-------------------------------	---	-----------

### Figures

Figure 1: Map of Proposed Air Quality Monitoring Locations in the Turkish EIA .....	16
Figure 2: Monitoring Locations .....	19

### Tables

Table 1: Key Roles and Responsibilities .....	6
Table 2: Project Ambient Air Quality Standards .....	9
Table 3: Ambient Air Metal Pollutant Concentration Limits .....	10
Table 4: Limits for Atmospheric Emissions from Stationary Sources .....	10
Table 6: Key Management Controls .....	12
Table 6: Key Monitoring Measures.....	17
Table 7: Key Performance Indicators and Monitoring Measures .....	20



<b>Air Emissions Management Plan</b>		
Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-0001	Rev: 1

## **1 INTRODUCTION**

### **1.1 Document Number**

This document is the Air Emissions Management Plan for the Öksüt Gold Project. The document reference number for this Management Plan is OMAS-ESMS-AE-PLN-001.

### **1.2 Purpose**

The purpose of this Management Plan is to:

- define the scope of the Management Plan and set out applicable management interfaces;
- define roles and responsibilities;
- outline the applicable Project Standards relevant to this Management Plan;
- define Project commitments, operational procedures and guidance relevant to this Management Plan;
- define monitoring and reporting procedures, including Key Performance Indicators;
- define training requirements;
- set out references for supporting materials and information.

### **1.3 Application**

The requirements set out in this Management Plan apply to all OMAS activities throughout the lifecycle of the Öksüt Gold Project, including those carried out by contractors.

This Management Plan is based on the OMAS Environmental & Social Management System Framework (OMAS-ESMS-001), which is owned by the OMAS General Manager. Any subsequent changes to the OMAS Environmental & Social Management System (ESMS) Framework may result in changes to this Management Plan.

### **1.4 Commencement**

This Management Plan applies from 1 April 2016.

### **1.5 Authority and Management**

The OMAS General Manager approved this Management Plan on 1 March 2016.

This Management Plan is owned by the OMAS HSE & Training Manager. This Management Plan will be reviewed on a minimum of a six monthly basis during construction and commissioning. During steady state operations, this Management Plan will be reviewed on an annual basis to determine whether any changes or updates are required to the plan; unless a more frequent update is required to reflect changing project design or procedures.

## Air Emissions Management Plan

Effective Date:  
01.04.2016

Document Number:  
OMAS-ESMS-AE-PLN-0001

Rev:  
1

Any requests for changes to this Management Plan must be addressed to the owner of this Management Plan and will be subject to appropriate review and approval processes as outlined in the Management of Change (MOC) Procedure set out in the ESMS Framework.

## 2 SCOPE

### 2.1 Scope of this Management Plan

This Management Plan covers all OMAS activities, including contractor activities. Implementation by contractors is addressed in the Contractor Management Plan (OMAS-ESMS-CM-PLN-001).

This Management Plan relates to the potential for OMAS activities to generate emissions to the atmosphere. Certain emissions to the atmosphere can cause air pollution, affecting community health or causing nuisance from dust or offensive odour. Other emissions, particularly those from fossil fuel combustion, may contribute to climate change (i.e. 'greenhouse gases').

The key air emissions from OMAS operational activities, in terms of potential impact to air quality, comprise:

- dust emissions together with their impact on human health and their potential to cause nuisance to those exposed;
- emissions of potentially polluting gases: sulphur dioxide (SO<sub>2</sub>), oxides of nitrogen (NO<sub>x</sub>) and carbon monoxide (CO), and their potential impact on human health;
- emissions of GHGs (principally CO<sub>2</sub>).

### 2.2 Overlaps with other Management Plans

This Management Plan is part of the overall suite of Management Plans developed for the OMAS Project and as described in the ESMS Framework Document (OMAS-ESMS-001).

This Management Plan has overlaps and cross-linkages to a number of other Management Plans which have air quality implications, including:

- The Community Health, Safety and Security Management Plan (OMAS-ESMS-CHSS-PLN-0001), particularly in relation to dust impacts on local communities.
- The Transport Management Plan (OMAS-ESMS-TM-PLN-001), particularly in relation to the control of vehicles within and outside of the mine area.
- The Biodiversity Management Plan (OMAS-ESMS-BM-PLN-001), particularly in relation to location of activities or plant and equipment relative to identified sensitive receptors.
- The Livelihoods Restoration Framework (OMAS-ESMS-LR-PLN-001), particularly in relation to entitlements for damage to crops caused by dust from OMAS activities

A separate Cyanide Management Plan (OMAS-ESMS-CY-PLN-001) will be prepared by OMAS and its selected supplier in accordance with the International Cyanide Management Code and Turkish regulatory requirements.

<b>Air Emissions Management Plan</b>		
Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-0001	Rev: 1

### 3 ROLES AND RESPONSIBILITIES

#### 3.1 Key Roles and Responsibilities for Management Plan Implementation

Principal roles and responsibilities for the implementation of this plan are outlined below.

**Table 1: Key Roles and Responsibilities**

<b>Role</b>	<b>Responsibilities</b>
<b>OMAS General Manager</b>	<ul style="list-style-type: none"> <li>Approval of this Plan and resources required for implementation.</li> </ul>
<b>OMAS HSE &amp; Training Manager</b>	<ul style="list-style-type: none"> <li>Ensure Project compliance with the Project Standards and other requirements set out in this Plan.</li> <li>Overall responsibility for Plan scope and implementation.</li> <li>Development, monitoring and revision of this Plan.</li> </ul>
<b>Environmental Coordinator</b>	<ul style="list-style-type: none"> <li>Ensure that air quality monitoring is undertaken as set out in applicable Management Plans and Procedures.</li> <li>Work with the Community Relations Manager to address any off-site air quality issues and/or grievances.</li> </ul>
<b>OMAS Community Relations Manager</b>	<ul style="list-style-type: none"> <li>Engagement with local stakeholders related to off-site noise</li> <li>Management of grievance procedure</li> </ul>
<b>Operational Department Managers and Principal Contractors</b>	<ul style="list-style-type: none"> <li>Ensure that relevant activities are undertaken in accordance with this Management Plan and related Procedures.</li> <li>Ensure that department personnel are fully trained in air quality management practices.</li> <li>Ensure incident<sup>1</sup> investigations are undertaken and reported.</li> </ul>
<b>Workplace Supervisors / Superintendents</b>	<ul style="list-style-type: none"> <li>Provide oversight and conduct routine work area inspections to ensure relevant activities are in accordance with this Management Plan and related Procedures.</li> <li>Report all hazards, non-conformances and incidents.</li> </ul>
<b>All employees and contractors</b>	<ul style="list-style-type: none"> <li>Report any activities which are causing unnecessary dust or emissions.</li> <li>Avoid performing activities which unnecessarily generate dust or emissions.</li> </ul>

<sup>1</sup> Incidents are defined by reference to the Project finance documents and OMAS ESMS Framework.

## Air Emissions Management Plan

Effective Date:  
01.04.2016

Document Number:  
OMAS-ESMS-AE-PLN-0001

Rev:  
1

### 3.2 Key Interfaces

Key interfaces in the implementation of this Management Plan (i.e. roles with responsibility for delivering elements of this Management Plan) include:

- OMAS Project Manager, particularly in relation to the safe implementation of off-site activities during construction;
- OMAS Mine Operations Manager, particularly in relation to the implementation of on-site and off-site activities during operation;
- OMAS Operational Department Managers (including contractors), particularly in relation to specification of control measures and emissions limits to plant and equipment.

## 4 PROJECT STANDARDS

Applicable Standards must be complied with for all Project activities (the "Project Standards"). Project Standards comprise:

- applicable Turkish Standards;
- Turkish EIA requirements;
- other commitments to and requirements of Turkish Government authorities;
- applicable international standards and guidelines;
- applicable Centerra and OMAS standards, policies and procedures;
- other industry guidelines with which OMAS has committed to comply.

### 4.1 Applicable Turkish National Standards

Key relevant regulations include:

- Turkish National Regulation on Control of Industrial Air Pollution (dated: 03 July 2009, Official Gazette No: 27277);
- Regulation on Assessment and Management of Air Quality (dated: 06 June 2008, Official Gazette No: 26898);
- Regulation on Control of Exhaust Gas Emission (dated: 30 November 2013, Official Gazette No: 28837).

### 4.2 Turkish EIA requirements

The Turkish EIA sets out monitoring requirements in line with Turkish regulatory requirements.

### 4.3 Other Commitments to and Requirements of Turkish Government Authorities

None applicable.

<b>Air Emissions Management Plan</b>		
Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-0001	Rev: 1

#### **4.4 Applicable International Standards and Guidelines**

The international standards which OMAS will implement are those set by the European Bank for Reconstruction and Development (EBRD). EBRD Performance Requirement 3 *Resource Efficiency and Pollution Prevention and Control* sets out the following objectives:

- identify project-related opportunities for energy, water and resource efficiency improvements and waste minimisation;
- adopt the mitigation hierarchy approach to addressing adverse impacts on human health and the environment arising from the resource use and pollution released from the project;
- promote the reduction of project-related greenhouse gas emissions.

Performance Requirement 3 states the requirement for projects to meet the relevant EU substantive environmental standards, where these can be applied at the project level. Projects must also be designed to comply with applicable national law, and will be maintained and operated in accordance with national laws and regulatory requirements. When host country regulations differ from the levels and measures presented in EU requirements or other identified appropriate environmental standards, projects will be expected to meet whichever is more stringent.

#### **4.5 Applicable Centerra and OMAS Standards, Policies and Procedures**

None applicable.

#### **4.6 Other industry guidelines with which OMAS has committed to comply**

##### **International Cyanide Management Code**

The International Cyanide Management Code covers emergency response related to the transportation, use and management of cyanide. The following key requirements (“Standards of Practice”) are set out:

- Prepare detailed emergency response plans for potential cyanide releases.
- Involve site personnel and stakeholders in the planning process.
- Designate appropriate personnel and commit necessary equipment and resources for emergency response.
- Develop procedures for internal and external emergency notification and reporting.
- Incorporate into response plans monitoring elements and remediation measures that account for the additional hazards of using cyanide treatment chemicals.
- Periodically evaluate response procedures and capabilities and revise them as needed.

#### **4.7 Summary of Applicable Project Standards**

OMAS will comply with the more stringent of national standards, applicable EBRD requirements and applicable Centerra Standards, with these more stringent standards representing the Project Standards.



<b>Air Emissions Management Plan</b>		
Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-0001	Rev: 1

The Project Standards in relation to ambient air quality are presented in Table 2 which includes applicable European Union and National legislation<sup>2</sup>. Metal pollutant concentration limits<sup>3</sup> for ambient air are presented in Table 3. The Project Standard for limits for atmospheric emissions from stationery sources are provided in Table 4.

**Table 2: Project Ambient Air Quality Standards**

Pollutant	Time/Averaging Period	Maximum Allowable Limit		
		EU	Turkish	Project Standard
SO <sub>2</sub> (µg/m <sup>3</sup> )	Hourly	350	470 (for 2015) 440 (for 2016) 410 (for 2017) 380 (for 2018) 350 (for 2019-2023)	<b>350</b>
	24 hour	125	225 (for 2015) 200 (for 2016) 175 (for 2017) 150 (for 2018) 125 (for 2019-2023)	<b>125</b>
	Yearly and winter season (Oct 1st – March 31st) (for wildlife and ecosystem)	-	20	<b>20</b>
NO <sub>2</sub> (µg/m <sup>3</sup> )	Hourly	200	290 (for 2015) 280 (for 2016) 270 (for 2017) 260 (for 2018) 250 (for 2019-2023)	<b>200</b>
	Yearly	40	56 (for 2015) 52 (for 2016) 48 (for 2017) 44 (for 2018) 40 (for 2019-2023)	<b>40</b>
PM <sub>10</sub> (µg/m <sup>3</sup> )	24 hour	50	90 (for 2015) 80 (for 2016) 70 (for 2017) 60 (for 2018) 50 (for 2019-2023)	<b>50</b>
	Yearly	40	56 (for 2015) 52 (for 2016) 48 (for 2017) 44 (for 2018)	<b>40</b>

<sup>2</sup> Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on Ambient Air Quality and Cleaner Air For Europe and National Regulation.

Regulation on Control of Industrial Air Pollution (dated: 03 July 2009, Official Gazette No: 27277).

<sup>3</sup> <http://ec.europa.eu/environment/air/quality/standards.htm>

<b>Air Emissions Management Plan</b>		
Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-0001	Rev: 1

Pollutant	Time/Averaging Period	Maximum Allowable Limit		
		EU	Turkish	Project Standard
			40 (for 2019-2023)	
<b>Fine particles (PM<sub>2.5</sub>, µg/m<sup>3</sup>)</b>	Yearly	25	-	<b>25</b>
<b>Settled Dust (mg/m<sup>2</sup>day)</b>	24 hour	-	390	<b>200</b> <sup>1</sup>
<b>Ozone µg/m<sup>3</sup></b>	Maximum daily 8-hour average in calendar year	120		<b>120</b>

<sup>1</sup> Best practice limit for dust deposition, as suggested by Vallack, H. W. & Shillito, D. E. (1998), "Suggested guidelines for deposited ambient dust", Atmospheric Environment, Vol.32, pp.2737-274

**Table 3: Ambient Air Metal Pollutant Concentration Limits**

Parameter	Average Period	Maximum Allowable Limit*
Lead (Pb) (µg/m <sup>3</sup> )	1 year	0.5
Arsenic (As) (ng/m <sup>3</sup> )	1 year	6
Cadmium (Cd) (ng/m <sup>3</sup> )	1 year	5
Nickel (Ni) (ng/m <sup>3</sup> )	1 year	20

\* Heavy metals are maximum allowable limits from the total content of the PM<sub>10</sub> fraction averaged over one year. Limits are from Directive 2004/107/EC

**Table 4: Limits for Atmospheric Emissions from Stationary Sources**

Source	Pollutant	Standard (mg/Nm <sup>3</sup> ) unless stated otherwise		
		Turkish	EU	Project Standard
Diesel generators*	NO <sub>x</sub> **	-	N/A	<b>1460</b> <sup>1</sup> <b>1850</b> <sup>2</sup>
	SO <sub>2</sub>	1700		<b>1700</b>
	PM	200		<b>200</b>
	CO	150		<b>150</b>

\* Typically rated <2MW and below 50MW threshold in EU Directive 2001/80/EC

\*\*In the absence of applicable Turkish and EU standards for small-scale generators, the applicable IFC emissions guidelines have been used.

<sup>1</sup> IFC Standard: exhaust bore size diameter [mm] < 400

<sup>2</sup> IFC Standard: exhaust bore size diameter [mm] > or = 400

#### 4.8 Occupational Exposure to Air Emissions

Occupational Exposure Limits and associated monitoring programmes are set out in the Worker Health & Safety Management Framework.

<b>Air Emissions Management Plan</b>		
Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-0001	Rev: 1

## **5 MITIGATION MEASURES AND MANAGEMENT CONTROLS**

### **5.1 Summary**

This Management Plan is supported by the following procedures and guidelines, which present more details on specific aspects of the day-to-day air emissions management activities at OMAS:

- Environmental Monitoring and Measurement Procedure (OMAS-HSEC-PRC-009), which will include the development of an Emission Inventory and GHG Inventory;
- Topsoil Management Procedure (TBC) related to the control of dust from topsoil handling and storage;
- Stakeholder Engagement Plan (OMAS-ESMS-SEP-PLN-001), in relation to engagement with communities and the Grievance Procedure;
- Community Health, Safety and Security Management Plan (OMAS-ESMS-CHSS-PLN-001), in relation to management of community exposure to dust generated by OMAS activities;
- Livelihood Restoration Framework (OMAS-ESMS-LR-PLN-001) related to entitlements for damage to crops caused by dust from OMAS activities.

Other procedures may be developed, as required, to support this Air Emissions Management Plan in addition to those mentioned above.

The table below presents the key management controls that OMAS will implement.

## Air Emissions Management Plan

Effective Date:  
01.04.2016

Document Number:  
OMAS-ESMS-AE-PLN-001

Rev:  
1

**Table 5: Key Management Controls**

ID	Applicability/ Activity	Control Description	Responsible Parties	Means of verification
AQ01	Ambient Air Quality Monitoring	Monitoring of air quality as part of the regular ambient air monitoring undertaken by OMAS, and enabling the early identification of potential hazards. Ambient air quality monitoring to be undertaken in terms of Environmental Monitoring and Measurement Procedure (OMAS-HSEC-PRC-009).	Environmental Coordinator	Air Quality Monitoring Results
AQ02	Emission Inventory	Establish an emissions inventory that identifies and characterises emissions from all significant sources including fugitive emissions, and their method of release into the environment. The inventory will be established and managed through the implementation of the Environmental Monitoring and Measurement Procedure (OMAS-HSEC-PRC-009).	Environmental Coordinator	Emissions Inventory
AQ03	Risk Register	Maintain and develop the risk register to identify health and environmental hazards (and nuisance) arising from the operational activities. Prioritise emission controls and abatement targets on the basis of risk levels determined through documented risk assessments. The Community Health, Safety and Security Management Plan (OMAS-ESMS-CHSS-PLN-001) will also provide procedures to manage community-related hazards and nuisance.	Environmental Coordinator	Risk Register
AQ04	Emission Control	Develop appropriate procurement specifications for the purchase of new equipment, and use control technologies to demonstrate that Project air quality standards are met.  Specific controls identified as impact mitigations in the ESIA are: <ul style="list-style-type: none"> <li>• Selection of machinery and equipment with low emissions were practicable</li> <li>• Machinery and vehicles to be maintained and operated in accordance with manufacturer's recommendations</li> </ul>	Project Manager (Construction)  Mine Operations Manager  Director, Finance and Administration	Equipment Specifications
AQ05	Dust Control	Implement appropriate control measures for activities, locations and sites where potential for dust generation is significant (for example, soil stockpiles), on highly trafficked roads and especially for activities near sensitive receptors. The Transport Management Plan (OMAS-ESMS-TMP-PLN-001) will also provide	Environmental Coordinator  Mine Operations	Topsoil Management Procedure  Air Quality Monitoring

## Air Emissions Management Plan

Effective Date:  
01.04.2016

Document Number:  
OMAS-ESMS-AE-PLN-001

Rev:  
1

ID	Applicability/ Activity	Control Description	Responsible Parties	Means of verification
		<p>procedures to control off-road vehicle access outside the fence line.</p> <p>Specific controls identified as impact mitigations in the ESIA are:</p> <ul style="list-style-type: none"> <li>• Wetting and covering powdery materials transported on trucks;</li> <li>• Enforce speed limits;</li> <li>• Washing facilities, such as hose-pipes and ample water supply, should be provided at site exits, including mechanical wheel spinners where practicable;</li> <li>• If necessary, all vehicles should be washed down before existing the construction site;</li> <li>• Periodic wetting of the stockpiled material to maintain the humidity percentage at about 5%;</li> <li>• Periodic wetting of the construction areas;</li> <li>• Wetting of blasting areas immediately after blasting event;</li> <li>• Provision of compacted granular wearing course on all graded roads;</li> <li>• Restriction on vehicular usage in off-road areas and informal tracks.</li> </ul>	Manager	<p>Results</p> <p>Community complaints</p>
AQ06	GHG Emissions	<p>Measures to manage Greenhouse Gas (GHG) emissions will be implemented for all Project facilities, equipment and activities. The GHG emission inventory will be updated annually and GHG emission reduction initiatives implemented where necessary.</p> <p>The GHG emissions inventory will be implemented as part of the Environmental Monitoring and Measurement Procedure (OMAS-HSEC-PRC-009).</p>	Environmental Coordinator	GHG Emissions Inventory
AQ07	Fuel Quality	The lowest sulphur content diesel practically and economically available from local fuel suppliers will be used	Director, Finance and Administration	Records of fuel quality
AQ08	Indirect Crop Damage	<p>Measures to compensate individuals who claim damage to crops from dust related to construction are included in the Livelihoods Restoration Framework (OMAS-ESMS-LR-PLN-01).</p> <p>At a minimum OMAS will install dust gauges at suitable locations and take regular</p>	<p>Director, Finance and Administration</p> <p>Environmental Coordinator</p>	<p>Grievance records</p> <p>Air Quality Monitoring Results</p>

## Air Emissions Management Plan

Effective Date:  
01.04.2016

Document Number:  
OMAS-ESMS-AE-PLN-001

Rev:  
1

ID	Applicability/ Activity	Control Description	Responsible Parties	Means of verification
		photographs of areas where there could be real/perceived damage due to dust.		

<b>Air Emissions Management Plan</b>		
Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-001	Rev: 1

## 6 IMPLEMENTATION SCHEDULE

### 6.1 Review and Revision of this Management Plan

This Management Plan will be reviewed on a minimum of a six monthly basis during construction and commissioning. During steady state operations, this Management Plan will be reviewed on an annual basis and any necessary revisions made to reflect the changing circumstances or operational needs of OMAS. Revision of this Management Plan will be the responsibility of the OMAS HSE & Training Manager, who is custodian of this Plan.

If material changes to operating procedures are required (as identified through the MOC Procedure contained within the OMAS ESMS Framework) this Management Plan may be updated on an “as required” basis.

Any revisions to this Management Plan will be uploaded to the OMAS Document Control Centre to ensure that all OMAS staff has access to the latest version of this Management Plan.

## 7 MONITORING

### 7.1 Overview of Monitoring Requirements

The Monitoring measures that are to be implemented during the operations phase to assess compliance with Project Standards (see *Section 4: Project Standards*) are described in the section.

In the event that monitoring identifies non-conformance with Project Standards, these will be investigated and appropriate corrective actions identified (see *Component 12: Non-conformance incident and action management, OMAS ESMS Framework*).

### 7.2 Monitoring Requirements within the Turkish EIA

The Turkish EIA sets out a range of monitoring requirements related to air emissions and ambient air quality. The commitments set out in the Turkish EIA are set out below:

- **Respirable particulate matter (PM<sub>10</sub>):** PM<sub>10</sub> includes suspended particulate matters with aerodynamic diameter less than 10 µm. PM<sub>10</sub> monitoring works will be carried out within the fence boundary of the plant at the points nearby the villages of Zile and Öksüt. If additional measurement points are deemed necessary, measurement points will be determined in sensitive areas around the plant and/or on the fence border and measurement works will be carried out.
- **Settled dust:** Measurement of settled dust determines the amount of dust settled over a particular surface area over a particular period of time. The settled dust will be measured by using an ISO-type dust bucket. Monitoring works will be carried out at two environmental monitoring spots determined within and in the surrounds of the project site (nearby the villages of Öksüt and Zile). Evaluation of the settled dust and the PM<sub>10</sub> concentrations together within this area will be possible as well.
- **Hydrogen Cyanide (HCN):** HCN emissions can arise from the processing plant and the heap leaching unit. The airborne HCN concentration within close distance of these units is expected to be at levels below approximately 1 ppm (a one millionth of gas volume) and this level is much below the threshold value of 10 ppm as accepted under the “Occupational Safety and Health” (OSH). Meanwhile, a quantitative data set on the OSH is required to be provided, and to this end, measurement of the airborne HCN concentration at two spots, one being preliminary in the heap leaching area within the fence boundary of the plant and the other in areas nearby the process



## Air Emissions Management Plan

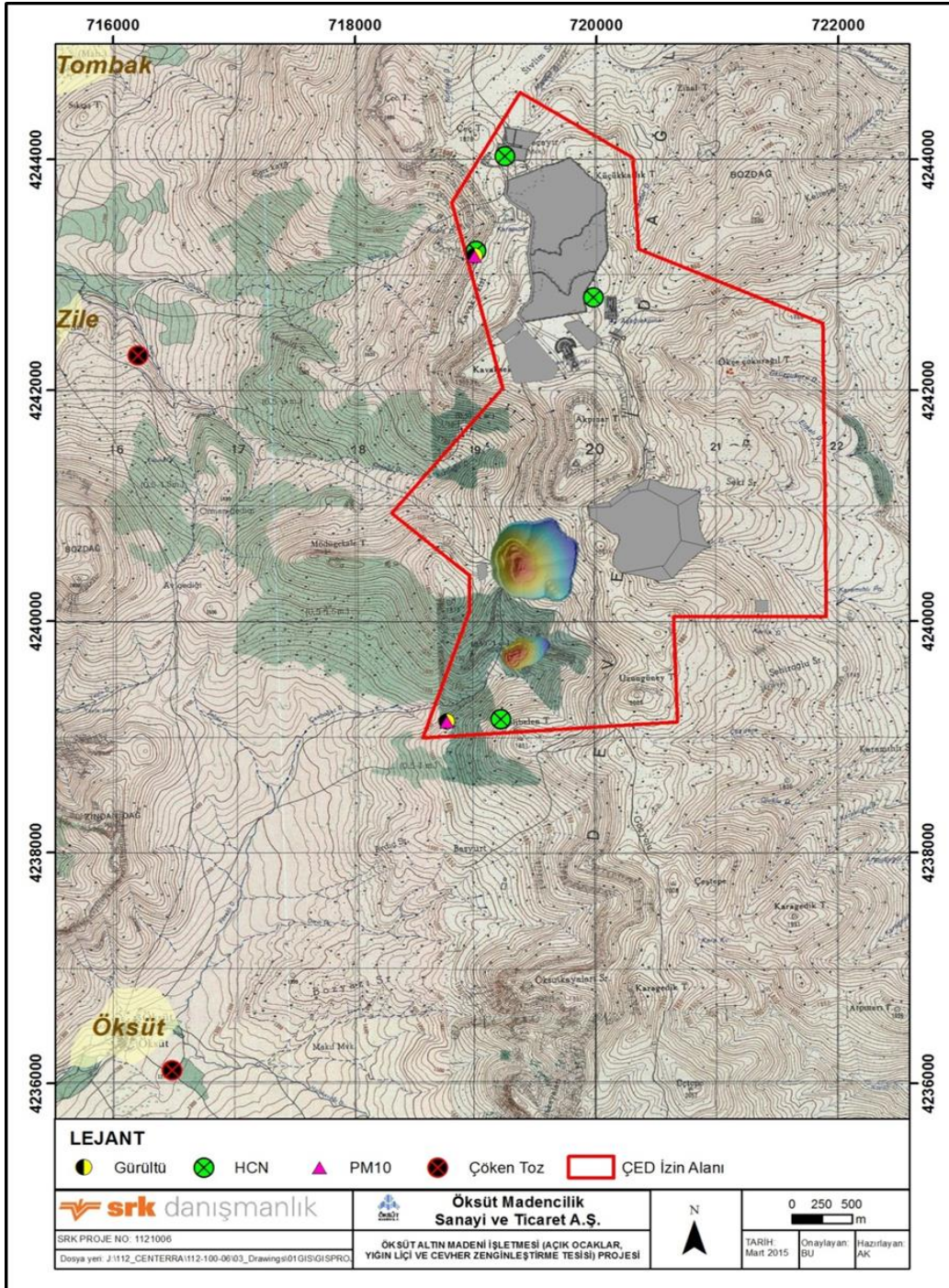
Effective Date:  
01.04.2016

Document Number:  
OMAS-ESMS-AE-PLN-001

Rev:  
1

units, on a daily basis is proposed. Permanence of HCN in the ecosystem is low. The compound is transformed by oxidation into nitrogen, carbon monoxide and nitrogen oxides. Since HCN is lighter than air, the compound directly rises to and dissipates in the upper atmosphere. Therefore, a marked increase in the atmospheric concentrations due to HCN arising from the proposed plant in the nearby settlement areas is not expected. HCN measurement spots will be selected within the fence boundary of the plant at two points nearby the villages of Öksüt and Zile and measurement works will be carried out throughout the operation period. The number and locations of the HCN measurement points may be changed during the planning stage.

**Figure 1: Map of Proposed Air Quality Monitoring Locations in the Turkish EIA**





<b>Air Emissions Management Plan</b>		
Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-001	Rev: 1

### 7.3 Key Monitoring Activities

Based on the monitoring commitments set out in the Turkish EIA, and the additional monitoring requirements arising from the ESIA, key monitoring measures are set out below. Full details of monitoring are set out in the Environmental Monitoring and Measurement Procedure (OMAS-HSEC-PRC-009). Note that workplace monitoring for Hydrogen Cyanide gas is addressed under the Worker Health & Safety Framework.

The monitoring measures to be implemented to ensure compliance with legal and other requirements and the Project Standards are described below.

In the event that any monitoring results identify a non-conformance with the Project Standards, these will be investigated and corrective actions identified (see OMAS ESMS Framework Document for further details). The Project will develop and implement a hazardous materials management audit/inspection programme (for OMAS and Contractor activities) to verify compliance with applicable Project Standards. Specific monitoring requirements are further detailed below.

OMAS will create a register (Emission Inventory) to record each significant atmospheric emissions source on the Project along with their thermal capacity. This inventory shall be updated periodically to ensure it is always up-to-date and used for the monitoring of emission sources and checking the performance of the Project against the applicable Project Standards.

Specific monitoring requirements detailed are detailed in Table 6 below. The key monitoring activities will focus on four areas:

- visual observation of significant dust, supplemented with direct readings of dust concentrations;
- ambient air quality monitoring;
- emissions within certain equipment exhausts;
- Sensitive receptors monitoring.

**Table 6: Key Monitoring Measures**

ID	Topic/Aspects	Parameters	Methods	Periodicity	Location	Comments
AM01	Meteorology	Temperature, Pressure, Humidity, Rainfall, Wind speed and direction, Evaporation / Sublimation	Weather Station	Continuous	OMAS Weather Station	See Environmental Monitoring and Measurement Procedure for further details on locations

## Air Emissions Management Plan

Effective Date:  
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OMAS-ESMS-AE-PLN-001

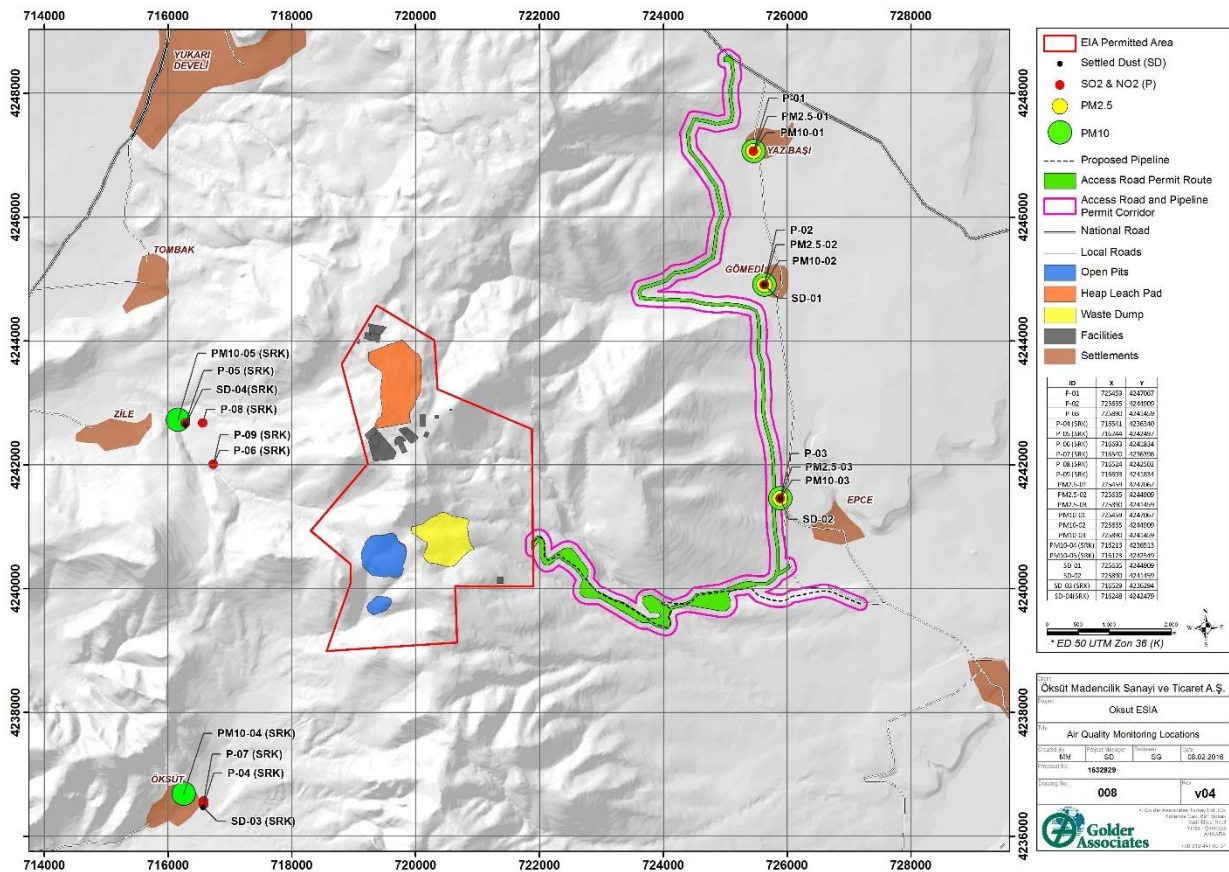
Rev:  
1

ID	Topic/Aspects	Parameters	Methods	Periodicity	Location	Comments
AM02	Dust	TSP	Dust deposition gauge. Analysis of weight and composition of dust for metals.	Routinely. Minimum of every month	Öksüt, Zile, Yazıbaşı, Gömedi and Epçe: Monitoring points outlined in Figure 2 below	See Environmental Monitoring and Measurement Procedure for further details on locations.  Measure settled dust arising from construction activities and confirm its compliance with the Regulation on Control of Industrial Air Pollution.
AQ03	Dust during construction of access road.	PM <sub>10</sub> PM <sub>2.5</sub> Settled dust	DustTrak 8533 monitoring equipment or similar	Routinely. Minimum of every six days	Yukarı Develi, Zile, Yazıbaşı, Gömedi and Epçe.	Measure PM arising from construction activities and confirm its compliance with the Regulation on Control of Industrial Air Pollution.
AQ04	Emissions during construction of the access road.	NO <sub>2</sub> , SO <sub>2</sub> ,	Drager Xam 5000 or similar	Routinely	Yukarı Develi, Zile, Yazıbaşı, Gömedi and Epçe.	To ensure that Project Standards are not exceeded during construction of the access road
AM04	Fine Particulate Matter	PM <sub>10</sub> PM <sub>2.5</sub>	DustTrak 8533 monitoring equipment or similar	Routinely. Minimum of every six days	Monitoring points outlined in Figure 2 below	See Environmental Monitoring and Measurement Procedure for further details on locations  Measure PM arising from construction activities and confirm its compliance with the Regulation on Control of Industrial Air Pollution.
AM05	Greenhouse Gases	O <sub>2</sub> , CO, CO <sub>2</sub> , CH <sub>4</sub> , NO <sub>2</sub> , SO <sub>2</sub> , NH <sub>3</sub> ,	Drager Xam 5000 or similar	Routinely	Various	See Environmental Monitoring and Measurement Procedure for further details on periodicity and locations
AM06	HCN Gas	HCN	Mobile HCN measurement device	Continuous	Two points on fence line close to villages of Zile and Öksüt. Other monitoring points as identified	See Environmental Monitoring and Measurement Procedure for further details on locations.  Compliance with ICMC and Turkish İSİG Regulation.

Air Emissions Management Plan		
Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-001	Rev: 1

ID	Topic/Aspects	Parameters	Methods	Periodicity	Location	Comments
AM07	Workplace Inspections	NA	Daily inspections will be carried out by area HSE superintendents / supervisors.	Daily	All main workplaces	-

Figure 2: Monitoring Locations



## 7.4 Key Performance Indicators

The table below summarises the key performance indicators and associated key monitoring actions that can be used to assess the progress and effectiveness of proposed mitigation strategies.

<b>Air Emissions Management Plan</b>		
Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-001	Rev: 1

**Table 7: Key Performance Indicators and Monitoring Measures**

ID	KPI	Target	Monitoring measure
AQ-KPI01	Air Quality Incidents	Minimise and continued improvement in number of reported air quality related incidents.	Number of reported air quality related incidents per year
AQ-KPI02	Non-Compliance with Air Quality Standards	Target: 0 per year. Threshold <sup>4</sup> : 5 per year with agreed mitigation.	Number of measured non-compliances with Project air quality standards per year that are not caused by natural weather conditions.
AQ-KPI03	Community Complaints	Minimise and continued improvement in number of air quality related community complaints.	Number of reported air quality related community complaints per year

## 8 TRAINING

### 8.1 Overview

All necessary training is provided as part of induction training (to provide general awareness) and job-specific training as necessary.

### 8.2 Induction Training

All employees of OMAS and Contractors working at the Öksüt Gold Project site will be provided with general induction, site specific induction and a broad range of health, safety and environmental awareness training.

Appropriate Personal Protective Equipment (PPE) will be made available to personnel if required. All relevant personnel will be trained in the use and maintenance of protective equipment.

### 8.3 Job-Specific Training

Specialist training shall be provided to plant operators and key personnel involved in activities which involve land clearance, construction or materials handling activities.

### 8.4 Other Training Requirements

General aspects of environmental management will be included in induction training to be provided to all employees.

<sup>4</sup> The threshold concept is used to reflect the operational realities that exceedances will occur from time to time. The threshold is used to provide an indication of when a possible trend of non-compliance is developing and so OMAS can investigate further. This will provide flexibility to accommodate changes in operational circumstances and performance.

<b>Air Emissions Management Plan</b>		
Effective Date: 01.04.2016	Document Number: OMAS-ESMS-AE-PLN-001	Rev: 1

## **9 AUDIT AND REPORTING**

### **9.1 Auditing**

Daily inspections will be carried out by operational area superintendents / supervisors covering a broad range of operational aspects.

Any incidents identified during these inspections will be reported to the incident management system (Component 10 of the ESMS).

Conformance will be monitored in accordance with Component 11 of the ESMS (Monitoring and Evaluation).

All incidents and non-conformances will be reported as per the requirements of the OMAS ESMS as described in the OMAS ESMS Framework Document (OMAS-ESMS-001).

### **9.2 External Auditing**

Conformance with this plan will be subject to periodic assessment as part of the Centerra audit programme and separately by Project Lenders.

### **9.3 Record Keeping**

Records of audits, inspections and incidents will be managed in accordance with OMAS procedures.

## **10 DOCUMENT CONTROL**

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