

# ArcelorMittal - External Environmental Performance Assessment

## Audit Report

Version - Final

06 June 2016

ArcelorMittal South Africa Limited

GCS Project Number: - 16-0525

Client Reference: - 6019721375 / 2016.05.23

DEA Reference: GAUT 002/05-06/0510

RoD for Carbon Separation Plant



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May 2016 06 June 2016

ArcelorMittal South Africa Limited

16-0525

THIS SERVES AS THE FINAL REPORT FOR SUBMISSION TO THE CLIENT

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	Name	Signature	Date
Author	Suzaan Rossouw		June 2016
Document Reviewer	Renee Janse van Rensburg		June 2016
Group Manager Environment	Jacques Harris		June 2016

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## EXECUTIVE SUMMARY

### Background

ArcelorMittal South Africa (ArcelorMittal) Vanderbijlpark Works was established in 1942 and commenced production in 1952. ArcelorMittal South Africa Vanderbijlpark Works (Vanderbijlpark Works) is one of the largest steel producers in South Africa. The Vanderbijlpark Works manufacture steel products by charging raw materials such as iron ore, coke and dolomite into blast furnaces to produce liquid iron. The liquid iron is refined in basic oxygen furnaces to produce liquid steel. The liquid steel is further processed into various rolled and coated steel products.

A Record of Decision (RoD) was issued to ArcelorMittal for the installation and operation of a Carbon Separation Plant (CSP) (RoD number: GAUT 002/05-06/0510) in terms of Regulations 1182 and 1183 and promulgated under Section 22 of the Environmental Conservation Act, 1989 (Act No. 73 of 1989) (ECA). The RoD was issued by the Gauteng Department of Agriculture, Conservation and Environmental (GDACE) in 2006.

The following conditions are requirements of the RoD in terms of the ECA as issued by the GDACE:

- Condition 3.4 C of the RoD: An annual Environmental Performance Audit conducted by an independent, accredited auditor must be submitted to the Department on request, the first audit being due 12 (twelve) months after commissioning of the CSP project, and every 12 (twelve) months thereafter.

GCS Water and Environment (Pty) Ltd. (GCS) was contracted by ArcelorMittal to conduct an independent Environmental Performance Assessment (EPA Audit) for the Vanderbijlpark Works. The EPA Audit was carried out against all conditions included in the RoD.

Accordingly, the following activities were undertaken as part of the EPA Audit:

- Assessment and comparison of the current site activities with those described in the approved RoD;
- Comparison of environmental mitigation measures implemented on site to those required and committed to in terms of the approved RoD in order to assess whether these comply with the management objectives committed to in the RoD;
- Assessment of monitoring requirements to current monitoring practices;
- Assessment of relevant documentation pertaining to various compliance aspects; and

- Identification of current activities and facilities at the Vanderbijlpark Works, which are not specifically included in the approved RoD.

### Audit Methodology

In line with conditions of ArcelorMittal's approved RoD, the Audit focused on all the conditions included as part of the RoD to ensure that the specified conditions are executed and adhered to.

The external audit process followed, included the following steps:







- **Step 1:** Conducting the opening meeting in order to:
  - Ensure mutual understanding of the objectives, as well as scope of the audit; and
  - Discuss the relevant documentation such as the audit checklist and site layout before conducting the on-site audit activities;
- **Step 2:** Conducting the on-site audit observation, using the prepared checklists; and
- **Step 3:** Conducting the closing meeting at the end of the audit.

The findings of the Audit are included in **Table 4.1** of this Report. The audit findings also include practical recommendations whereby the various non-compliance issues can be corrected.

All findings were ranked according to the following criteria:

- Compliance
- Minor Non- compliance
- Moderate Non- compliance
- Major Non- compliance

The following colour coding was used to indicate areas of compliance, minor non-compliance, moderate non-compliance, and major non-compliance:

	- Compliant;
	- Minor non-compliance;
	- Moderate non-compliance; and
	- Major non-compliance.
	- Noted/ Not applicable
	- Repeat Condition.

### Key findings

Currently the overall compliance with the Record of Decision (RoD) is at met.

There was only one (1) incident of minor non-compliances observed. The non-compliance was administrative and related to the submission of the Environmental Management Plan (EMP).

ArcelorMittal is aware of this issue and it is recommended that corrective action related to this non-compliances be implemented within 6 months of the audit.

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## 1 INTRODUCTION

ArcelorMittal South Africa (ArcelorMittal) Vanderbijlpark Works was established in 1942 and commenced production in 1952. ArcelorMittal South Africa Vanderbijlpark Works (Vanderbijlpark Works) is one of the largest steel producers in South Africa. The Vanderbijlpark Works manufacture steel products by charging raw materials such as iron ore, coke and dolomite into blast furnaces to produce liquid iron. The liquid iron is refined in basic oxygen furnaces to produce liquid steel. The liquid steel is further processed into various rolled and coated steel products.

A Record of Decision (RoD) was issued to ArcelorMittal for the installation and operation of a carbon separation plant (CSP) (RoD number: GAUT 002/05-06/0510) in terms of Regulations 1182 and 1183 and promulgated under Section 22 of the Environmental Conservation Act, 1989 (Act No. 73 of 1989) (ECA). The RoD was issued by the Gauteng Department of Agriculture, Conservation and Environmental (GDACE) in 2006.

The following conditions are requirements of the RoD in terms of the ECA as issued by the GDACE:

- Condition 3.4 C of the RoD: An annual Environmental Performance Audit conducted by an independent, accredited auditor must be submitted to the Department on request, the first audit being due 12 (twelve) months after commissioning of the CSP project, and every 12 (twelve) months thereafter.

GCS Water and Environment (Pty) Ltd. (GCS) was contracted by ArcelorMittal to conduct an independent Environmental Performance Assessment (EPA) Audit for the Vanderbijlpark Works. The EPA Audit was carried out against all conditions included in the RoD. The audit assessment was undertaken by Ms. Suzaan Rossouw from GCS. Suzaan is an Environmental Legal Advisor at GCS and her key area of expertise is in the South African environmental law and development sphere. Suzaan has experience in mining and non-mining related projects and provides professional accredited training on South African environmental legislation. Suzaan has an in-depth understanding of the International Environmental Law sphere and the legal complexities that surround compliance with legislative requirements in Africa and abroad. She is also registered with the Environmental Law Association (ELA) of South Africa.

A one (1) day site visit was undertaken at the Vanderbijlpark Works site on 30 May 2016. The site visit was initiated with a project kick-off meeting during which GCS met with Ms. Ilze Broekman, ArcelorMittal's Environmental Control Officer (ECO). Following the kick-off meeting, a comprehensive review of the RoD documentation and associated checklists was

undertaken. This assessment monitored compliance in terms of document control, systems and procedures. Following the checklist audit and documentation review, the remaining time was spent on site observing and inspecting the activities being conducted.

Accordingly, the following activities were undertaken as part of the EPA Audit:

- Assessment and comparison of the current site activities with those described in the approved RoD;
- Comparison of environmental mitigation measures implemented on site to those required and committed to in terms of the approved RoD in order to assess whether these comply with the management objectives committed to in the RoD;
- Assessment of monitoring requirements to current monitoring practices;
- Assessment of relevant documentation pertaining to various compliance aspects; and
- Identification of current activities and facilities at the Vanderbijlpark Works, which are not specifically included in the approved RoD.



## 2 AUDIT PROCESS

The following steps formed the basis of the EPA Audit.

### 2.1 Step 1: What is the objective of the audit?

The objectives of any audit should be clearly defined and settled before either an internal or external audit begins. The setting of objectives is important as it is against these objectives that ArcelorMittal will be reviewed and expected to improve.

The following objectives formed the basis for the EPA Audit:

- Ensuring legal compliance in terms of the approved RoD;
- Checking that the environmental management tools to achieve compliance are used correctly and efficiently;
- To check whether the environmental management tools are effectively fulfilling their intended purpose of environmental compliance;
- Ensuring environmental performance on a continuous basis, i.e. throughout the life cycle of the Vanderbijlpark Works site;
- Reducing environmental liability;
- To facilitate the transference of information or best practice between operating units;
- To increase environmental awareness among the employees; and
- To track the environmental accountability of managers.

### 2.2 Step 2: Scope of the audit

The conditions of the RoD stipulate that regular performance assessments need to be undertaken to ensure compliance with the prescribed conditions as contained in the said documents. Furthermore, Condition 3.4 C of the RoD: An annual Environmental Performance Audit conducted by an independent, accredited auditor must be submitted to the Department on request, the first audit being due 12 (twelve) months after commissioning of the CSP project, and every 12 (twelve) months thereafter.

This EPA Audit is taken to mean a regular, systematic, documented verification of whether ArcelorMittal is in compliance with the conditions of the approved RoD; the provisions of the ECA and the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), which superseded the ECA; and whether environmental performance objectives and targets are being met.

### 2.3 Steps 3: Information required to conduct the audit

Table 2.1 sets out the procedures that were used to obtain the audit information.

**Table 2.1: Process to obtain audit information**

ACTION	DESCRIPTION
<b>Inspection</b>	Inspection consists of examining records and documents. Inspection of records and documents provides audit evidence of varying degrees of reliability depending on their nature and source and the effectiveness of internal controls over their processing.
<b>Observation</b>	Observation consists of on-site observation of the activities being conducted on site.
<b>Enquiry</b>	Enquiry consists of seeking information of knowledgeable persons inside the organisation.
<b>Confirmation</b>	Confirmation consists of making enquiries to corroborate information contained in the RoD.
<b>Computation</b>	Computation consists of checking the accuracy of source documents and the site's records or performing independent checks of information relating to environmental aspects and impacts.

### 2.4 Steps 4: Conducting the audit

The audit consisted of comparing the information gathered during on-site interviews, from reports as well as assessing on-site activities with the conditions of the RoD. A checklist was developed based on the RoD conditions and used as an auditing tool to establish the audit results.

### 2.5 Steps 5: Evaluating the audit results

The results of the audit are presented and the auditor assesses the final compliance in relation to the realistic representation of on-site activities; taking into account South African Environmental Legislation. Through such an assessment the auditor should determine whether the final compliance is a true representation of on-site activities and a final recommendation should be made regarding actual compliance.

### 2.6 Step 6: Presenting the audit results

The findings of the Audit are included in **Table 4.1** of this Report. The audit findings also include practical recommendations whereby the various non-compliance issues can be corrected.

All findings were ranked according to the criteria indicated in **Table 2.2**. The colour coding assigned to the rankings is used to visually indicate areas of compliance, minor non-compliance, moderate non-compliance, and major non-compliance. Furthermore, to indicate

which conditions are not applicable to the on-site activities and which are repeat conditions that have already been scored. Each colour coding has a value (score) attached to it.

**Table 2.2: Ranking criteria and colour coding scores.**

<b>RANKING</b>	<b>SCORE</b>
Compliant	2
Minor non-compliance	1
Noted/Not Applicable	0
Repeat Condition	-
Moderate non-compliance	-1
Major non-compliance	-2

All findings were ranked according to the following criteria:

**Noted/Not-Applicable:**

- The specific condition is not relevant to the current on-site activities.

**Repeat Condition:**

- The specific condition is a repeat of a previous condition.

**Compliant:**

- ArcelorMittal complies with the conditions as stated in the RoD.

**Non-compliance:**

- **Minor Non-compliance:**
  - Isolated observations demonstrating that full compliance to the environmental requirements on site have not been, or will not be, fully achieved.
- **Moderate Non-compliance:**
  - There is a substantial failure to meet the environmental requirements for the project, there is a possibility of substantial environmental degradation and/or pollution, and/or objective evidence was observed raising doubt as to the integrity of data or records inspected.
- **Major Non-compliance:**
  - There is a critical failure against legal requirements or management response that presents an immediate or significant risk that could result in prosecution and/or adverse legal findings due to failure to meet regulatory requirements; result in immediate injury or serious injury; result in prolonged business outage; and/or could result in serious damage to the project's reputation.

It must be noted that duplicate conditions are not scored due to the fact that this will negatively influence the scoring results. Duplicate conditions are marked as a Repeat Condition.

## **2.7 Step 7: Decision-making based on audit results**

Decision making, based on the audit results, must have the following objectives; to improve the present situation and to institute fair and reasonable corrective action. ArcelorMittal should make decisions based on the significance of the problem or non-compliance and the resources required to improve the situation.

## **2.8 Step 8: Instituting corrective action**

It is recommended that an environmental action plan be implemented to address the Audit recommendations. The plan may include:

- Goals;
- Strategies;
- Performance indicators;
- Responsibilities; and
- A timetable for achievement.

An EPA Audit is an effective management tool on condition that the recommendations, as identified in this Audit, are considered and implemented. The Audit provides a basis for recommending actions to correct any deficiencies and to address any areas of environmental non-compliance recorded as part of the audit findings.

### 3 DETAILS OF THE AUDITOR

GCS, appointed by ArcelorMittal to conduct an external EPA Audit, has more than 30 years of experience and expertise in undertaking and compiling compliance Audits.

#### 3.1 Project Team

The EPA Audit was undertaken by the GCS team presented in **Table 3.1**.

**Table 3.1: GCS Team**

NAME	DESIGNATION	RESPONSIBILITY
Suzaan Rossouw <ul style="list-style-type: none"> <li>• LLB, LLM, specialising in Environmental Law and Governance</li> <li>• ELA</li> </ul>	Enviro-Legal Advisor	<ul style="list-style-type: none"> <li>• Overall Legal Compliance</li> <li>• Site visits</li> <li>• Liaison with Client and Project Management</li> <li>• Environmental Legal Assessment</li> <li>• Compilation of Audit Report</li> </ul>
Renee Janse van Rensburg <ul style="list-style-type: none"> <li>• MSc Environmental Management</li> <li>• Pr. Sci. Nat. Reg No: 400099/06</li> <li>• ELA</li> <li>• IAIA</li> <li>• SSAG</li> </ul>	Manager: Environmental Authorisation and Assessment Unit	<ul style="list-style-type: none"> <li>• Overall assistance</li> <li>• Report review</li> <li>• Technical and quality control</li> </ul>

#### 3.2 Assumptions and Limitations

The findings, results, observations, conclusions and recommendations given in this Audit are based on the Auditor's best legal and professional knowledge as well as available information.

Although GCS exercises due care and diligence in rendering services and preparing documents, GCS accepts no liability, and the client by receiving this document, indemnifies GCS and its directors, managers, agents and employees against all actions, claims, demands, losses, liabilities, costs, damages and expenses arising from or in connection with services rendered, directly or indirectly by GCS and by the use of the information contained in this document.

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Audit. If these form part of a main audit relating to this investigation or report, this audit must be included in its entirety as an annexure or separate section to the main audit.

Refer to Appendix A for the Declaration of Independence of the Auditor.

## 4 AUDIT FINDINGS - ECA RECORD OF DECISION

**Table 4.1** overleaf represents the conditions, observations and recommendations, found in the ArcelorMittal's Carbon Separation Plant RoD for the May 2016 Audit.

Table 4.1: Scoring Results of the EPA Audit in respect of conditions of the Carbon Separation Plant RoD (audit undertaken in May 2016).

DATE: 30/05/2016		SITE: Operations: Vanderbijlpark Works			
No	Conditions	Status	Score	Observations	Recommendations
Description and extent of the activity					
	<p>The authorisation applies in respect of the construction and operation of the Carbon Separation Plant using Winnowing technology (air separation mechanism) within the existing Magnetic Separation plant and/or building at Mittal Steel Vanderbijlpark Steel, as part of the project to change management of dolochar disposal to reuse. The project falls within the ambit of sub-regulations 1(c) (ii) of GN R.1182 (as amended) promulgated under section 21 of the Act. The extent of the project and process is summarised as follows:</p> <p>a) Mittal Steel Vanderbijlpark Steel's (MSVS) proposed carbon separation process entails the reutilisation of the currently dumped by-product called dolochar.</p> <p>b) Dolochar consists of two size fractions i.e. +1mm and -1mm and contains carbon rich material i.e. +1mm fraction and it is proposed that it will replace virgin material (fine coal) at Electric Arc Furnaces thus reducing dumping of +1mm dolochar by ca 36% (in mass).</p>	Noted/Not Applicable	0	This condition is noted and subsequent to the granting of the authorisation the authorised activities have not changed.	ArcelorMittal should take note that if any of the activities change, the Department must be dually notified and any required environmental authorisations amended if necessary.



DATE: 30/05/2016		SITE:		Operations: Vanderbijlpark Works	
No	Conditions	Status	Score	Observations	Recommendations
	<p>c) The proposed carbon separation process will use Winnowers (air separation mechanism) and it is a wholly dry process, and as a result, no effluent will be generated throughout the whole process.</p> <p>d) The carbon separation will comprise of the following process:</p> <p>1) Screening - the winnowing process depends on particle size as well as density, so the winnower feed is also separated into two size fractions. Accordingly the dolochar from the direct reduction process is screened into four size fractions. The two size fractions of winnower feed constitute about 5000 t/month and each fraction is processed in the winnowers separately to recover the carbon. Each winnower feed size fraction is processed by a pair of winnowers in a series and in the coarse separation the dolochar is separated into three fractions i.e. tailings (ash), middlings (ash/carbon blend) and concentrate (carbon-rich dolochar).</p> <p>2) Winnower - in this process, feed materials that are separated by density. Particle size also plays a major part. The winnowing process is a two stage coarse</p>				

DATE: 30/05/2016		SITE:		Operations: Vanderbijlpark Works	
No	Conditions	Status	Score	Observations	Recommendations
	separation and refined separation. Eight pairs of winnowers process the material and each winnower is tuned to have exactly the correct airflow across it to suit the feed material. The airflow is controlled by a pressure controller which controls the pressure downstream of the winnower. In this way the constant flow of air is generated across the falling curtain of dolochar. The airflow is generated by the induced draft fan of the Electrostatic Precipitator (ESP) and the densest material is the ash due to iron and other metals being entrapped in it.				
3.2	<b>Specific Conditions</b>				
1	Authorisation is only granted for the Winnowing carbon separation plant within the Magnetic Separation Plant at the existing MSVS direct reduction area and/or building.	Compliance	2	The condition is adhered to.	No applicable recommendations.
2	An updated project schedule with time-frames must be submitted to the Department within 30 (thirty) calendar days of the commencement of construction activities. The schedule must clearly indicate the different phases of construction (as applicable) and commissioning.	Compliance	2	The condition is adhered to. Notice was given to the Department of Environmental Affairs' (DEA) Authorisation Unit and Air Quality Unit on 10 March 2010.	No applicable recommendations.

DATE: 30/05/2016		SITE:		Operations: Vanderbijlpark Works	
No	Conditions	Status	Score	Observations	Recommendations
3	The Department must be informed of the start of commissioning at least 30 (thirty) calendar days prior to the commencement thereof.	Compliance	2	This condition is adhered to, kindly refer to Condition 2 above for more details.	No applicable recommendations.
4	Final design plans for storm water management system must be provided to the Department 30 (thirty) calendar days prior to the commencement of construction. The above design plans must include information on specific pollution prevention measures (e.g. impermeable layers, leak detection systems, etc.) and compliance with relevant SABS standards.	Compliance	2	This condition is adhered to, kindly refer to Condition 2 above for more details.  ArcelorMittal has noted that a stormwater management plan and sketch for the whole Director-Reduction (DR) area was submitted to the Department, however this area is located on the second floor and no water or effluent is present.	No applicable recommendations.
5	Should any effluent be generated from the CSP, it must be segregated into concentrated and dilute effluents in order to allow the Zero Effluent Discharge system to function optimally.	Noted/Not Applicable	0	This condition is noted as not applicable at this stage, since no water or effluent is present.	No applicable recommendations.
6	An auditable Preventative Maintenance Plan must be developed to ensure that all environmentally critical equipment such as dust extraction system, electrostatic precipitator (ESP), and others are maintained as required. The management of Mittal Steel Vanderbijlpark Steel is to commit to the budget to undertake the required	Compliance	2	Auditor's discussion on this condition: ArcelorMittal has developed and implemented a Preventative Maintenance Plan for all equipment. Various job card can also be formulated from this electronic system. Therefore the auditor consider this activity to be adhered to.  However it should be noted that Arcelor	No applicable recommendations.

DATE: 30/05/2016		SITE:		Operations: Vanderbijlpark Works	
No	Conditions	Status	Score	Observations	Recommendations
	preventative maintenance. A discussion on the implementation of and compliance with the maintenance plan must be included in the bi-annual audit reports.			Mittal has 'mothballed' this plant and the plant has not been operational during the last year of the applicable audit timeframe. Therefore no scheduled maintenance is currently undertaken.	
7	A finalised and detailed Environmental Management Plan (EMP) for the implementation of the project must be submitted to the Department for approval 30 (thirty) calendar days prior to the commencement of construction activities. The EMP must specifically include, Inter alia the following: a) An auditable plan for monitoring all facets of the CSP project implementation and operation. b) Air quality monitoring program based on the requirements of Condition 3.2(8).	Minor non-compliance	1	Although ArcelorMittal has developed and implemented an EMP, they have, subsequent to the construction activities, not submitted this to the Department.	It is recommended that ArcelorMittal submit the EMP to the Department within 6 months of this audit and that this condition be addressed in the next annual audit.
8	In order to provide empirical data which will verify the assumptions made in the air quality report, the following air quality management, monitoring and reporting regime must be implemented and reported on in the bi-annual environmental performance audits as applicable:	Noted/Not Applicable	0	This condition is noted and subsequent conditions mentioned below, will be scored.  It should be noted that the CSP does not have an independent monitoring stack and all air quality monitoring of this operation is run through Kiln 5. Therefore, all related air monitoring results will be submitted under Kiln 5.	No applicable recommendations.

DATE: 30/05/2016		SITE:		Operations: Vanderbijlpark Works	
No	Conditions	Status	Score	Observations	Recommendations
8.1	The dust stack monitoring must be conducted continuously and the report made available on request. (Condition amended on 03/03/2013)	Compliance	2	This condition is adhered to and all monitoring is conducted on a continuous basis. ArcelorMittal has an electronic system that manages all monitoring results and information can easily be accessed through this system.	No applicable recommendations.
8.2	The monitoring results for the above parameters must be graphically represented and included in the bi-annual audit report. Emissions must be presented at the following reference conditions: 273 Kelvin, 101, 3 kPa. (Condition amended on 19/06/2012)	Compliance	2	Kindly refer to Appendix B for the Monitoring results: 273 Kelvin, 101, 3 kPa.	No applicable recommendations.
8.3	The stack must be so designed that if the monitoring results in the first year indicate that there is a need for further or improved mitigation then additional technology can be easily installed in the stack.	Noted/Not Applicable	0	This condition is noted, but is not relevant to the current audit time-frame.	No applicable recommendations.
8.4	A long-term Air Quality Management and Audit Plan must be compiled for the MSVS CSP and Magnetic Separation Plant based on the outcome of the above monitoring results. These plans must consider international standards and best practice.	Compliance	2	A long-term Air Quality Management Monitoring system for all the Kiln's are in place. ArcelorMittal considers all applicable standards, since it is within the Vaal Air Priority Area and has very strict conditions in its existing Air Emissions Licence (AEL).	No applicable recommendations.

DATE: 30/05/2016		SITE:		Operations: Vanderbijlpark Works	
No	Conditions	Status	Score	Observations	Recommendations
8.5	Considering that Mittal Steel Vanderbijlpark Steel (MSVS) intends increasing its production capacity and is located within a hotspot area, it is therefore essential that MSVS consider lowering the emissions more than the applicable standards require. The emission reduction strategies must be developed to make provision for the new local and applicable international standards.	Compliance	2	An Emission Reduction Strategy is in place. This policy was reviewed in April 2015 and includes reduction projects and sets out the dust monitoring results/inventories and findings. Based on the outcomes of the results and findings different projects are then created and implemented site wide.	No applicable recommendations.
9	Detailed and up to date records must be kept of all incidents and complaints pertaining to the CSP project, how these were managed, and the prevention of their recurrence thereof. These records must be made available to the Department within 14 (fourteen) calendar days upon written request by the Department.	Compliance	2	ArcelorMittal uses the Pivot System to ensure all documents are correctly stored and access to documents are easily attained.  The complaints register is also kept on this system and since the CSP has not being operational no complaints have been received for the audit period.	No applicable recommendations.
10	This Department and the Department of Water Affairs and Forestry must be informed of any major environmental and pollution incidents relating to the CSP project within 24 (twenty four) hours of such incidents occurring.	Noted/Not Applicable	0	This condition is noted and no such incidents have occurred.	No applicable recommendations.

DATE: 30/05/2016		SITE:		Operations: Vanderbijlpark Works	
No	Conditions	Status	Score	Observations	Recommendations
11	Mittal Steel Vanderbijlpark Steel must consider using flared waste gases from Coke Ovens and other sources within the industry as a fuel resource for auxiliary equipment.	Noted/Not Applicable	0	This condition is noted.	No applicable recommendations.
12	MSVS must investigate the potential of using the existing dumped or stored dolochar as input material into the CSP. This must be reported in the quarterly progress report/s.	Compliance	2	<p>This condition is adhered to and ArcelorMittal has investigated this potential.</p> <p>ArcelorMittal has furthermore noted that they cannot use the existing dumped dolochar (as per condition 3.2.12) as this will require a Waste Management License (WML) and currently there is no separation of waste streams upon disposal. The dolochar is disposed of together with the other waste streams and can't be stored separately on the waste site for later use.</p>	No applicable recommendations.
13	The operation of the CSP and the Magnetic Separation plant as a whole must comply with the Occupational Health and Safety Act (No. 85 of 1993) and sound occupational hygiene procedures implemented and improved upon. Engineering control measures must be considered as first choice for mitigation.	Compliance	2	<p>This condition is adhered to and Health and Safety studies are conducted on a yearly basis depending on the specific legislative requirements site wide.</p> <p>Across the whole site the only incidents that have arisen are dust issues, and these have been addressed by ArcelorMittal though the implementation of various PPE apparel.</p>	No applicable recommendations.
14	The CSP must be integrated into the existing MSVS ISO system.	Compliance	2	This condition is adhered to and the whole site is ISO accredited.	No applicable recommendations.

DATE: 30/05/2016		SITE:		Operations: Vanderbijlpark Works	
No	Conditions	Status	Score	Observations	Recommendations
15	The recommendations contained in the specialist studies submitted in support of the application for authorisation of the CSP project are regarded as an extension of the conditions of this authorisation. Implementation of or compliance with these recommendations must be discussed as part of the quarterly progress reports and bi-annual environmental performance audits thereafter.	Compliance	2	Auditor's discussion on this condition: After the specialist studies were conducted, a summary of all requirements that were submitted under these studies were made. These requirements are included for all audit purposes and all additional requirements are considered. Therefore the auditor consider this activity to be adhered to.	No applicable recommendations.
16	All potential emergencies that can be expected from the CSP must be addressed in line with the existing Direct Reduction Plant and Mittal Steel Vanderbijlpark emergency response procedures.	Compliance	2	This condition is adhered to and the following policies are in place: Emergency Plan - Policy Number: DR SWPGC.0263. Emergency Response Plan - Policy Number: MHROAD00005	No applicable recommendations.
17	The Department of Water Affairs and Forestry and any other Government Department's requirements and/or conditions pertinent to the proposed project must be complied with.	Noted/Not Applicable	0	This condition is noted. No communication has been received from the Department.	No applicable recommendations.
18	An independent Environmental Control Officer (ECO) with an understanding of the carbon separation process must be appointed for the duration of construction and commissioning, to	Compliance	2	This condition is adhered to and Ms. Ilze Broekman has been appointed as ECO.	No applicable recommendations.



DATE: 30/05/2016		SITE:		Operations: Vanderbijlpark Works	
No	Conditions	Status	Score	Observations	Recommendations
	monitor and report on compliance with the conditions of this authorisation.				
<b>3.3</b>	<b>General Conditions</b>				
a	Any changes to, or deviations from, the project description set out in this letter must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations.	Noted/Not Applicable	0	This condition is noted.	No applicable recommendations.
b	This Department may review the conditions contained in this letter from time to time and may, by notice in writing to the applicant, amend, add or remove a condition.	Noted/Not Applicable	0	This condition is noted.	No applicable recommendations.
c	The applicant must notify the Department, in writing, at least 10 (ten) days prior to the change of ownership, project developer or the alienation of any similar rights for the activity described in this letter. The applicant must furnish a copy of this document to the new owner, developer or person to whom the rights accrue and inform the new owner, developer or person to whom	Noted/Not Applicable	0	This condition is noted.	No applicable recommendations.

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No	Conditions	Status	Score	Observations	Recommendations
	the rights accrue that the conditions contained herein are binding on them.				
d	Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/ or telephonic details, the applicant must notify the Department as soon as the new details become known to the applicant.	Noted/Not Applicable	0	ArcelorMittal has noted that a change was made in terms of the Environmental Manager who is the responsible person for the licence. The details of the RoD was amended and a notification letter was sent to the Department on 30 August 2012.	No applicable recommendations.
e	Authorisation for the activity is granted in terms of the Environment Conservation Act, 1989 (Act 73 of 1989) only and does not exempt the holder from compliance with other relevant legislation.	Noted/Not Applicable	0	This condition is noted.	No applicable recommendations.
f	The applicant shall be responsible for ensuring compliance with the conditions contained in this letter by any person acting on his behalf, including but not limited to, an agent, servant, or employee or any person rendering a service to the applicant in respect the activity, including but not limited to, contractors and consultants.	Noted/Not Applicable	0	This condition is noted.	No applicable recommendations.

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No	Conditions	Status	Score	Observations	Recommendations
g	Departmental officials shall be given access to the property referred to in 1 above for the purpose of assessing and/or monitoring compliance with the conditions contained in this document at all reasonable times.	Noted/Not Applicable	0	This condition is noted.	No applicable recommendations.
h	The applicant must notify the Department within 24 (twenty four) hours if any condition of this authorisation cannot, or is not, adhered to. The notification must be supplemented with reasons for non-compliance.	Noted/Not Applicable	0	This condition is noted.	No applicable recommendations.
3.4	<b>Reporting Requirements</b>				
a	The occupational hygiene surveys and assessment must be done in line with the Occupational Health and Safety Act, 1993 (Act no 85 of 1993). The subsequent report must be submitted to this Department on request. (Condition amended on 13/09/2010)	Compliance	2	The condition is adhered to and health and safety precautions are applied site wide. Furthermore, Health and Safety Assessments are done according to legislative requirements.	No applicable recommendations.

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No	Conditions	Status	Score	Observations	Recommendations
c	<p>An annual Environmental Performance Audit conducted by an independent, accredited auditor must be submitted to the Department on request, the first audit being due 12 (twelve) months after commissioning of the CSP project, and every 12 (twelve) months thereafter. The-annual audit must include, inter alia, the following (results in graph format as applicable):</p> <ul style="list-style-type: none"> <li>• Air quality monitoring and reporting as required by Condition 3.2(8),</li> <li>• Discussions on the implementation (or non-implementation) of the recommendations as contained in the Environmental Impact Report and Specialist Studies.</li> <li>• Discussion on the following as provided for in the EMP:               <ol style="list-style-type: none"> <li>a. Description of the general state of plant.</li> <li>b. Occupational health and safety surveys.</li> <li>c. Discussion on the spikes that may occur in the air quality monitoring data.</li> <li>d. Logbook of the wastes (if any) that were generated and where they were disposed of.</li> <li>e. Logbook of any environmental</li> </ol> </li> </ul>	Compliance	2	<p>Ms. Suzaan Rossouw from GCS Water and Environment (Pty) Ltd. has been appointed as external independent auditor.</p> <p>The last external Audit Report was submitted on 15 July 2015.</p> <p>Auditor's discussion on the general state of the site: Since the CSP is currently not operational no issues or incidents of concern were noted.</p> <p>Auditor's discussion on the air quality: Since the CSP is not operational no spikes in emissions were observed in the monitoring results. Overall Kiln 5, although still compliant, had various restarts and after these start-ups high emissions were expected. As a result of the numerous start-ups higher dust emissions are observed, but overall the results are still compliant.</p> <p>No waste was generated or disposed of during this past year. This is due to the fact that the plant wasn't operational during this time.</p> <p>No incidents or complaints were received related to the CSP.</p>	No applicable recommendations.

DATE: 30/05/2016		SITE:		Operations: Vanderbijlpark Works	
No	Conditions	Status	Score	Observations	Recommendations
	<p>incident,</p> <ul style="list-style-type: none"> <li>• Discussion on the implementation of and compliance with the Preventative Maintenance Plan (see 3.2(6) above),</li> <li>• Records of any major incidents (see 3.2(9) above),</li> <li>• Reporting on compliance with the provisions of this authorisation and the environmental management plan, and steps taken to rectify non-compliance,</li> <li>• Details on the quality and quantity of any discharge (air, water and land), reasons for discharge, management of discharges and prevention of future discharges.</li> <li>• Additional jobs created as a result of this project. ,</li> <li>• Efficiency of the air pollution abatement technology i.e. dust extraction system and electrostatic precipitator,</li> <li>• Actual reduction of dolomitic disposal and reuse of it thereof.</li> </ul> <p>(Condition amended on 06/03/2013)</p>			<p>Auditor's discussion on the Preventative Maintenance Plan (PMP): Although the site as a whole has a PMP, the CSP specifically hasn't had a need for any maintenance at this stage, since it is not in operation.</p> <p>The only discharge at this stage is in the form of air. Find attached the air quality discharge results as included under Appendix B.</p> <p>No additional jobs were created during this audit period since the CSP is not operational.</p> <p>Efficiency as per the electrostatic precipitator requirements is at 98%.</p> <p>Currently, there is no reuse of waste; a certain amount of the waste is sold and the rest is disposed of.</p>	
3.5	Duration of authorisation				

DATE: 30/05/2016		SITE:		Operations: Vanderbijlpark Works	
No	Conditions	Status	Score	Observations	Recommendations
	If the activity authorised by this letter does not commence within 1 (one) year from the date of signature of this letter, the authorisation will lapse and the applicant will need to re-apply for authorisation in terms of the above legislation or any amendments thereto.	Noted/Not Applicable	0	This condition is noted as not applicable at this stage.	No applicable recommendations.
4	<b>Consequences of non-compliance</b>				
	The applicant must comply with the conditions set out in this letter. Failure to comply with any of the above conditions may result in, inter alia, the Department withdrawing the authorisation, issuing directives to address the non-compliance - including an order to cease the activity - as well as instituting criminal and/or civil proceedings to enforce compliance.	Noted/Not Applicable	0	This condition is noted.	No applicable recommendations.
<b>Total Findings</b>			<b>42</b>		

## 5 CONCLUSION AND RECOMMENDATIONS

Currently the overall compliance with the Record of Decision (RoD) is met.

There was only one (1) incident of minor non-compliances observed. The non-compliance was administrative and related to the submission of the Environmental Management Plan (EMP).

ArcelorMittal is aware of this issue and it is recommended that corrective action related to this non-compliances be implemented within 6 months of the audit.

**APPENDIX A: *DECLARATION OF AUDITOR INDEPENDENCE***



I, Suzanne Rossain, declare that -

- I act as the independent environmental auditor in this assessment;
- I will perform the work relating to the assessment in an objective manner, even if this results in views and findings that are not favourable to the authorisation holder;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental auditing, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activities;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 34 of the Regulations when preparing this assessment and any report relating it;
- I have no, and will not engage in, conflicting interests in the undertaking of this assessment;
- I undertake to disclose to the holder and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the assessment is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the assessment;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will provide the competent authority with access to all information at my disposal regarding the assessment, whether such information is favourable to the holder or not;
- All the particulars furnished by me in this form are true and correct;
- I will perform all other obligations as expected from an environmental auditor in terms of the Regulations; and
- I realise that a false declaration is an offence in terms of regulation 48 of the Regulations and is punishable in terms of section 24F of the Act.

- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of

~~NONE~~

GCS (Pty) Ltd.

28 / 06 / 2016

Date \_\_\_\_\_

**APPENDIX B:** *MONITORING RESULTS: 273 KELVIN, 101, 3 kPa.*

**Monitoring results: 273 Kelvin, 101, 3 kPa**

**Emissions History - Direct Reduction - Kiln 5**

