



**Sustainable Environmental Solutions
through integrated
Science and Engineering**

**SAMANCOR CHROME
FERROMETALS**

**EIA SCOPING REPORT
&
PLAN OF STUDY**

*DEA Ref: 12/9/11/L670/6
(Closure of the Existing Slimes Disposal Facility)
DEA Ref: 12/9/11/L700/6
(Construction and Operation – New Slimes Disposal Facility)
MP DEDET Ref: 17/2/3 N-84
(Decommissioning of the Existing Slimes Disposal Facility)*

DRAFT FOR I&AP REVIEW

Report DATE: 20 JUNE 2013
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Prj5684 Ferrometals EIA Scoping Report 2013

COMPILED FOR:

*SAMANCOR CHROME
FERROMETALS DIVISION
PRIVATE BAG X7228
WITBANK
1035*

COMPILED BY:



JMA CONSULTING (PTY) LTD
*“Sustainable Environmental Solutions
through
integrated Science and Engineering”*

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EXECUTIVE SUMMARY

This Report comprises the **Draft Scoping Report** compiled in support of the Scoping & EIA Process, as legally required for the applications for Environmental Authorisation relevant to Ferrometals – A Business Unit of Samancor Chrome (**Ferrometals**).

Ferrometals is situated in Emalahleni (formerly called Witbank), Mpumalanga, and operates six charge chrome furnaces, (4 open and 2 closed), one metal recovery plant and an Intermediate Carbon Ferrochrome converter. In addition, a Pellet and Sintering Plant converts fine ore and UG2 (Upper Group 2 layer of the Rustenburg Layered Suite) into sintered pellets for use in the furnaces. The plant was established in **1959** with an expected life in excess of 25 years.

JMA Consulting (Pty) Ltd (JMA) was appointed as the Environmental Assessment Practitioner by Ferrometals to obtain the necessary environmental authorizations for the decommissioning and rehabilitation of the current existing Slimes Dam footprint and the construction of a new Slimes Dam footprint to ensure continued operations from the Regulating Authorities.

An enviro-legal assessment conducted by JMA with the specific purpose of identifying all listed activities contained in the active South African Environmental and related Legislation, pertaining to the abovementioned activities, has indicated the requirement for authorization applications in terms of the following legislation:

- National Environmental Management Act, Act 107 of 1998 - **NEMA**.
(Listed activities in terms of GNR 544 are present and require a basic environmental impact assessment to be done).
- National Environmental Management: Waste Act, Act 59 of 2008 – **NEMWA**.
(Slimes Disposal is deemed to represent Hazardous Waste Disposal and as such requires Licensing in terms of the provisions contained in the NEMWA. The disposal of any quantity of hazardous waste requires that a Scoping & EIA process to be followed).
- National Water Act, Act 36 of 1998 – **NWA**

(The current Integrated Water Use License will have to be amended in order to adequately address new developments with regards to the decommissioning of the existing and construction of a new slimes dam footprint).

Although all of the above does not require the performing of a **Scoping & Environmental Impact Assessment (S&EIA)**, due to the fact that both Scoping and Basic Assessments are required for the same activities (decommissioning and rehabilitation of the existing slimes dam footprint and the construction of a new slimes dam footprint), the most extensive of the two which is scoping and environmental impact reporting, will suffice.

This application for Ferrometals is therefore an application *inter alia* in terms of section 24 of the NEMA, read with GNR 543 and in particular the application for **Scoping and Environmental Impact Assessment** described in regulations 26 to 35.

Listed activities in GNR 544 will be undertaken in order to give effect to the project and these have been identified and listed in the application that has been submitted to the Nkangala District Office in Emalahleni of the Department of Economic Development, Environment & Tourism (DEDET).

Listed Activities in Category A & B of GNR 718 have been identified and listed in applications made for Waste Licenses which was submitted to Department of Environmental Affairs (DEA) Head Office in Pretoria.

This document represents the **Draft Scoping Report** compiled in terms of the NEMA Regulations, and as such was compiled in strict accordance with the Regulations.

Respectfully submitted

Final will be signed by R. Grobbelaar

Riaan Grobbelaar (Pr.Sci.Nat.)

1. INTRODUCTION

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Listed Activities in Category A & B of GNR 718 have been identified and listed in applications made for Waste Licenses which was submitted to Department of Environmental Affairs (DEA) Head Office in Pretoria.

This document represents the **Draft Scoping Report** compiled in terms of the NEMA Regulations, and as such was compiled in strict accordance with the Regulations depicted below:

EIA Regulations GNR 543 – NEMA (107 of 1998)

28. Contents of Scoping Report

28. (1) *A scoping report must contain all the information that is necessary for a proper understanding of the nature of issues identified during scoping, and must include-*
- (a) *details of-*
 - (i) *the EAP who prepared the report; and*
 - (ii) *the expertise of the EAP to carry out scoping procedures;*
 - (b) *a description of the proposed activity;*
 - (c) *a description of any feasible and reasonable alternatives that have been identified;*
 - (d) *a description of the property on which the activity is to be undertaken and the location of the activity on the property, or if it is-*
 - (i) *a linear activity, a description of the route of the activity; or*
 - (ii) *an ocean-based activity, the coordinates where the activity is to be undertaken;*
 - (e) *a description of the environment that may be affected by the activity and the manner in which activity may be affected by the environment;*
 - (f) *an identification of all legislation and guidelines that have been considered in the preparation of the scoping report;*
 - (g) *a description of environmental issues and potential impacts, including cumulative impacts, that have been identified;*
 - (h) *details of the public participation process conducted in terms of regulation 27(a), including-*
 - (i) *the steps that were taken to notify potentially interested and affected parties of the application;*
 - (ii) *proof that notice boards, advertisements and notices notifying potentially interested and affected parties of the application have been displayed, placed or given;*
 - (iii) *a list of all persons or organisations that were identified and registered in terms of regulation 55 as interested and affected parties in relation to the application; and*
 - (iv) *a summary of the issues raised by interested and affected parties, the date of receipt of and the response of the EAP to those issues;*
 - (i) *a description of the need and desirability of the proposed activity;*
 - (j) *a description of identified potential alternatives to the proposed activity, including advantages and disadvantages that the proposed activity or alternatives may have on the environment and the community that may be affected by the activity;*
 - (k) *copies of any representations, and comments received in connection with the application or the scoping report from interested and affected parties;*

- (l) *copies of the minutes of any meetings held by the EAP with interested and affected parties and other role players which record the views of the participants; and*
 - (m) *any responses by the EAP to those representations and comments and views;*
 - (n) *a plan of study for environmental impact assessment which sets out the proposed approach to the environmental impact assessment of the application, which must include-*
 - (i) *a description of the tasks that will be undertaken as part of the environmental impact assessment process, including any specialist reports or specialised processes, and the manner in which such tasks will be undertaken;*
 - (ii) *an indication of the stages at which the competent authority will be consulted;*
 - (iii) *a description of the proposed method of assessing the environmental issues and alternatives, including the option of not proceeding with the activity; and*
 - (iv) *particulars of the public participation process that will be conducted during the environmental impact assessment process;*
 - (o) *any specific information required by the competent authority; and*
 - (p) *any other matters required in terms of sections 24(4)(a) and (b) of the Act.*
- (2) *In addition, a scoping report must take into account any guidelines applicable to the kind of activity which is the subject of the application.*
- (3) *The EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation (1)(c), exist.*

In terms of the above, this scoping report contains the following information:

- o Chapter 1 gives an **Introduction** to the project.
- o Chapter 2 gives a detailed **Description of the EIA Process** as required by the relevant legislation (NEMA) and also gives **Details of the Environmental Assessment Practitioner** and the **Project Team** appointed to undertake the EIA.
- o Chapter 3 discusses the overall **Project Description** and gives details on the Project Applicant, Project Location, Properties Affected, Project Resource Attributes, Project Enviro-Legal Framework, Project Motivation and a Synoptic Project Description for the Construction Phase, Operational Phase, Decommissioning and Closure Phase, as well as the Post Closure Phase. The chapter also deals with the identification and consideration of **Project Alternatives**.
- o Chapter 4 describes the **Current Environment** that could be impacted on by the proposed activity. The **Manner of Potential Environmental Impacts** on the environment is also summarized in this chapter.
- o Chapter 5 deals with **Environmental Issues and Impacts**. It contains a summarized description of Identified Issues and Impacts, a listing of Potential Cumulative Impacts, a discussion on the proposed Impact Assessment Methodology and concludes with a listing of Proposed Specialist Studies required during the EIA Phase.
- o Chapter 6 gives a detailed description of the **Public Participation Process** conducted to date – Scoping Phase.

- Chapter 7 gives the Plan of Study for the EIA. It lists the actions to be performed, and describes the Consultation Time Line with the Authorities and alludes to the Proposed Public Participation Programme for the EIA Phase.

This **Draft Scoping Report and Plan of Study** will be made available to the I&AP's for review and comments. The review period required for S&EIA's relating to waste management activities is 60 days and will run from 20 June 2013 up until 19 August 2013.

Any comments (issues, concerns, suggestions, etc.) can be submitted to JMA Consulting at the following address, by no later than 19 August 2013:

JMA Consulting (Pty) Ltd

P.O. Box 883
Delmas
2210

Attention: Kobus Du Plessis

Tel: + 27 (0) 13 665 1788
Fax: + 27 (0) 13 665 2364
e-mail: kobus@jmaconsult.co.za

Once comments have been received, the report will be updated to reflect and address all comments, after which the report will be finalized and submitted to the relevant authorities as a **Final Scoping Report and Plan of Study**.

2. THE SCOPING & EIA PROCESS

The Scoping and EIA Process is formally defined in published Regulations promulgated in terms of the NEMA, and Represents the formal EIA driver applicable to this project for Ferrometals.

2.1 INTRODUCTION

With effect from 2 August 2010, the Environmental Impact Assessment (EIA) Regulations, 2010 (GNR 543 of 18 June 2010 (“GN R. 543”)) and three Listing Notices promulgated in terms of the NEMA and as set out in detail below, commenced (save for those listed activities in respect of prospecting, mining, exploration, production, and reconnaissance which will commence at a date to be published). As a result, the relevant notices promulgated in terms of the NEMA pertaining to identified activities (GN R. 386 and 387 of 21 April 2006) and the Environmental Impact Assessment (EIA) Regulations, 2006 (GN R. 385 of 21 April 2006) have been repealed.

Accordingly, the listed activities have been promulgated in three different government notices, namely Government Notice R. 544 of 18 June 2010 (“GN R. 544”), which identifies those activities for which a **basic assessment** must be undertaken in accordance with the procedure set out in regulation 21 to 25 of GN R. 543; Government Notice R. 545 of 18 June 2010 (“GN R. 545”), which identifies those activities for which a **scoping and environmental impact assessment** must be undertaken in accordance with the procedure, set out in regulations 26 to 35 of GN R. 543; and Government Notice R. 546 of 18 June 2010 (“GN R. 546”), which identifies those activities for which a **basic assessment** must be undertaken in accordance with the procedure set out in regulation 21 to 25 of GN R. 543, based on the activities being undertaken in specific identified geographical areas.

The Schedules to GN R. 544, GN R. 545, and GN R. 546 set out those activities that have been identified in terms of section 24(2)(a) of the NEMA which may not commence without environmental authorisation from the competent authority and for which the investigation, assessment and communication of potential impacts of the activities must follow the procedure described in regulation 21 to 25 of the regulations in respect of those activities that require a “basic assessment” or in terms of regulation 26 to 35 of the regulations in respect of those activities that require “scoping and an environmental impact assessment”.

This is an application in terms of section 24 of the NEMA referred to above read with GN R 543 of 18 June 2010 and in particular the application for scoping & environmental impact assessment described in regulations 26 to 35. Listed activities in GN R. 544 of 18 June 2010 will be undertaken in order to give effect to the project and these have been identified and listed in the application that was submitted to DEDET Nkangala District Office in Emalahleni.

Other applications in terms of provisions contained in the NEMWA also require the Scoping & EIA Process to be followed. Section 20 of the NEMWA provides that no person may commence, undertake or conduct a waste management activity except in accordance with inter alia a waste management license issued in respect of that activity, if a license is required. On 3 July 2009 the Minister of Water and Environmental Affairs (“the Minister”) published a list of waste management activities which have or are likely to have a detrimental effect on the environment in GN 718 of 3 July 2009

(“GN 718”) and which require a waste management license in accordance with section 20 of the NEMWA. Certain of the waste management activities listed in GN 718 are governed by specific thresholds. Where any process or activity involving “*waste*” (as defined) falls below or outside the thresholds stipulated, a waste management license is not required, but such processes or activities will be regulated in terms of the remaining relevant provisions of the NEMWA, for instance those provisions dealing with the storage, transportation etc of waste.

In addition to the above, section 47 of the NEMWA provides for the procedure for a waste management license application and states that the applicant must take appropriate steps to bring the application to the attention of relevant organs of state, interested parties and the public, including the publication of a notice.

GNR 718 differentiates between Category A and Category B waste management activities. Category A activities pertain to those activities which have a lesser impact on the environment, whereas Category B activities are perceived to have a significant impact on the environment.

Item 3 of GN 718 states that a person who wishes to commence, undertake or conduct an activity listed under Category A must conduct a basic assessment process as stipulated in the EIA Regulations made under section 24(5) of the National Environmental Management Act 107 of 1998 (NEMA) as part of the waste management licence application. Similarly, item 4 provides that a person who wishes to commence, undertake or conduct an activity listed under Category B must conduct an EIA process as stipulated in the EIA Regulations made under section 24(5) of the NEMA as part of the waste management licence application.

Accordingly, in order to determine the process applicable to a waste management licence application, it must first be determined whether the waste management activity falls within Category A or B. Once this is determined, the application process provided for in the EIA Regulations 2010 must be followed.

2.1.1 EIA Process Flow Diagram

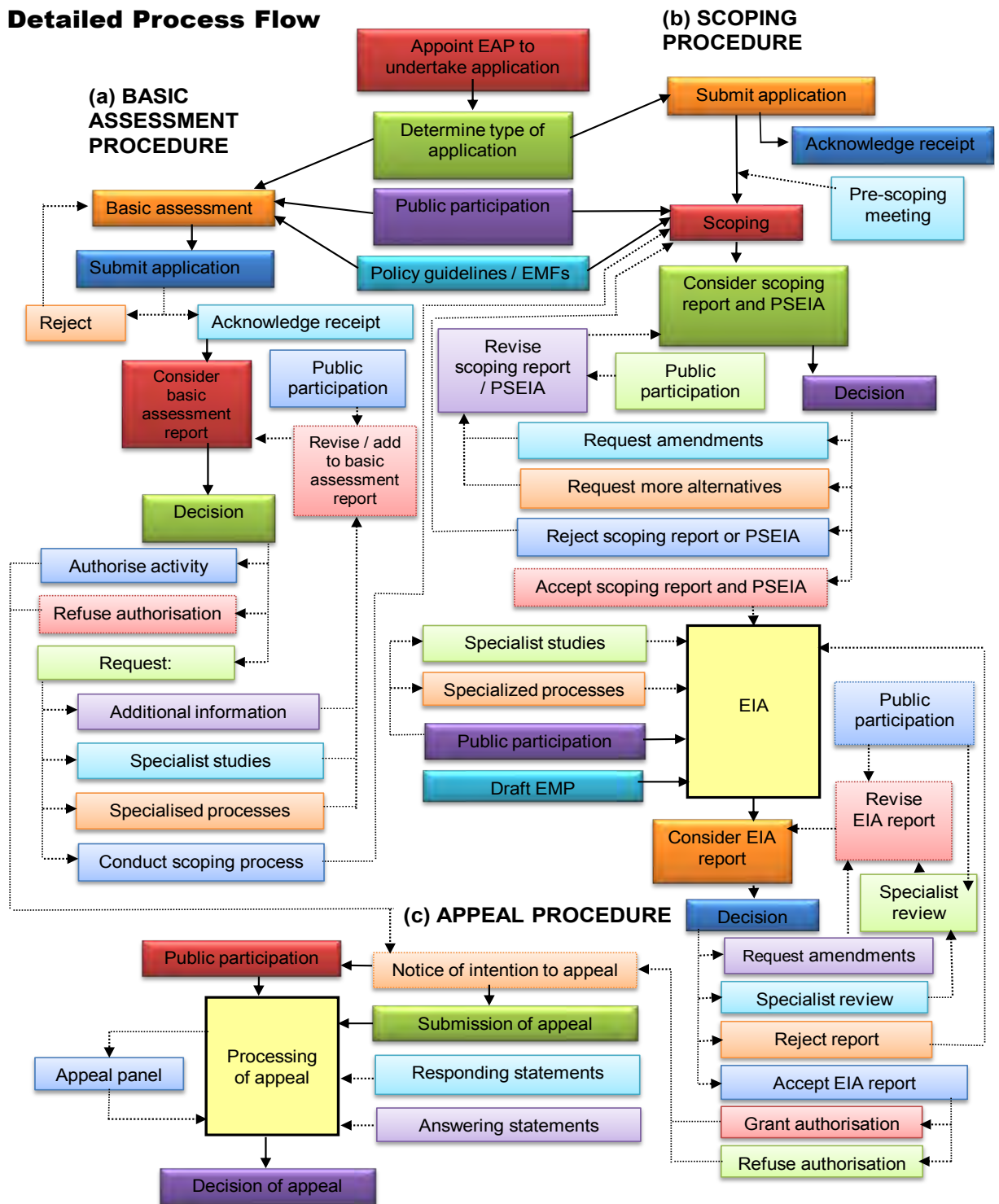


Figure 2.1.1(a): EIA Process Flow Diagram.

The diagram above in Figure 2.1.1(a), illustrates the processes for both a Basic Assessment, and a Scoping and Environmental Impact Assessment. As described in Section 2.1, listed activities contained in GNR 544, as well as in Category B of GNR 718, have been identified for the **Ferrometals** and will be incorporated into one Scoping and Environmental Impact Assessment Process for this project.

2.1.2 Scoping Process and Objectives

As described in the DEAT Scoping Guideline Document, (Scoping, Integrated Environmental Management, Information Series 2; 2002), distributed by the, then, Department of Environmental Affairs and Tourism (DEAT), the scope of an environmental assessment is defined by the **range of issues and alternatives** it considers, and the approach towards the assessment that will follow it.

Scoping is a critical stage in the Integrated Environmental Management (IEM) procedure, since it is an important tool for **involving the public** in the environmental assessment process, and for **structuring assessment** studies. IEM is an approach that integrates environmental considerations into all stages of the planning and development process.

Through scoping, the priorities of the environmental assessment are set. As an open and iterative process, it may continue throughout planning and assessment, depending on whether or not additional issues or alternatives are introduced or eliminated because of new information.

The terms of reference for the assessment phase will be based on issues and concerns raised during scoping. If issues are inadequately identified, the assessment will be of poor quality. A consequence would be further delays in decision-making while further environmental information is gathered and assessed. On the other hand, if insignificant issues are not excluded from the assessment process during scoping a great deal of unnecessary work and wasted resources can be expended.

Internationally there are slight variations from country to country in the approach to scoping. Typically, the procedural aspects of scoping are determined by the legal, policy and administrative requirements and guidelines within a particular jurisdiction. Those that have a stake in a proposed activity are provided with the opportunity to contribute to the scoping process. When effectively done, it will involve the relevant authority, the proponent, other authorities, as well as Interested and Affected Parties (I&APs) in discussions about the proposed activity and the issues raised. The process for the identification of project alternatives must be documented, as well as the criteria used to evaluate these alternatives. Such criteria would include social, economic, and ecological/biophysical issues.

Scoping is typically divided into three phases:

- Planning the scoping procedure;
- A process of stakeholder engagement to identify the key issues; and
- Reporting on the terms of reference for the next phase of the assessment.

Though scoping is described as a discrete step in the environmental assessment procedure, in practice the process of identifying the significant issues usually continues throughout the assessment process, as well as decision-making, detailed design, implementation and monitoring.

2.2 DETAILS OF AND DECLARATION BY THE EAP

The EIA and associated EMP for this project have been compiled by fully qualified and duly registered Professional Scientists and Engineers. Synoptic CV's of all personnel which contributed to the project, are attached in **APPENDIX I** to this report.

The duly appointed **EAP** for the Project is **JMA Consulting (Pty) Ltd.** JMA Consulting sub-contracted the services of the following Professional Consultancies and Certified Laboratories for specialist inputs into the project:

Sub-Consultancies

- Cameron Cross Incorporated
- Ecosys Consulting Engineers CC
- Geostratum Geochemistry Consulting

Laboratories

- Yanka Laboratories

Table 2(a): Details of Project Consultancy.

Project Consultancy:	JMA Consulting (Pty) Ltd
Company Registration:	2005/039663/07
Professional Affiliations:	South African Council for Natural Scientific Professions (SACNASP)
Contact Person:	Mr Riaan Grobbelaar (Pr.Sci.Nat.)
Physical Address:	15 Vickers Street DELMAS 2210
Postal Address:	P O Box 883 DELMAS 2210
Telephone no:	+27 13 665 1788
Fax no:	+27 13 665 2364
E-mail:	riaan@jmaconsult.co.za

2.2.1 Details and Expertise of the Principal EAP

The principle Environmental Assessment Practitioner on this project is Mr Riaan Grobbelaar (**Pr.Sci.Nat.**).

Riaan Grobbelaar holds a M.Sc. (cum laude) in Geohydrology from the University of the Free State and has been involved in projects related to water supply, aquifer management, ground water quality investigations, ground water monitoring, ground water impact and risk assessments since 1996.




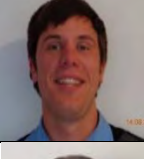
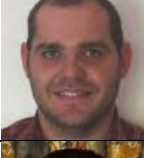
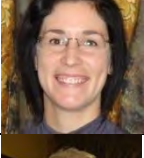



Riaan Grobbelaar (Pr.Sci.Nat.)
(M.Sc. Geohydrology)

Riaan Grobbelaar is responsible for the overall project and specifically for EIA Process and Time Line Management, Project Technical Management (commissioning of specialist studies), and finally all the EIA/EMP Report Compilation including the full integration of all specialist study findings into the EIA/EMP.

2.2.2 Details and Expertise of the EIA Team

The following Scientists and Engineers were directly (specific inputs into this project) and indirectly (inputs incorporated from previous studies) involved with the Environmental Impact Assessment for this project:

Photo	Name Qualification Registration	Consultancy	Responsibility
	Riaan Grobbelaar M.Sc. Geohydrology Pr.Sci.Nat.	JMA Consulting	Geology Ground Water
	Genevieve Cloete B.Sc.Hons. Environmental Sciences Pr.Sci.Nat.	JMA Consulting	GIS Terrestrial Ecology
	Shane Turner B.Sc. Hons. Geology Cand.Sci.Nat.	JMA Consulting	Geology Ground Water Meteorology
	Kobus du Plessis B.Sc.Hons. Environmental Sciences Cand.Sci.Nat.	JMA Consulting	Public Participation
	Johan Fourie M.Sc. Geohydrology Pr.Sci.Nat.	Geostratum	Geochemistry Geochemical Modelling Ground Water Modelling
	Melissa Grobbelaar	Cameron Cross <i>(recently jointed TABACKS)</i>	Enviro-Legal
	Koos Jonck	Ecosys Consulting Engineers CC	Slimes Dam Designs Geotechnical Assessment Surface Water Balances <i>(Only focussed on the two footprints)</i>

2.2.3 Details and Expertise of the EMP Design Team

The following Scientists and Engineers were directly (specific inputs into this project) and indirectly (inputs incorporated from previous studies) involved with the scoping and design of the Environmental Management Plan for this project:

Photo	Name Qualification Registration	Consultancy	Responsibility
	Riaan Grobbelaar M.Sc. Geohydrology Pr.Sci.Nat.	JMA Consulting	Geology Ground Water
	Genevieve Cloete B.Sc.Hons. Environmental Sciences Pr.Sci.Nat.	JMA Consulting	GIS Visuals Terrestrial Ecology
	Shane Turner B.Sc. Hons. Geology Cand.Sci.Nat.	JMA Consulting	Geology Ground Water Meteorology
	Kobus du Plessis B.Sc.Hons. Environmental Sciences Cand.Sci.Nat.	JMA Consulting	Public Participation
	Johan Fourie M.Sc. Geohydrology Pr.Sci.Nat.	Geostratum	Geochemistry Geochemical Modelling Ground Water Modelling
	Melissa Grobbelaar	Cameron Cross	Enviro-Legal
	Koos Jonck	Inprocon	Slimes Dam Designs Geotechnical Assessment Surface Water Balances <i>(Only focussed on the two footprints)</i>

2.2.4 Declaration by the EAP

I, _____, declare under oath that I:
<ul style="list-style-type: none">• I act as the independent environmental practitioner in this application• I act independently• I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant• I declare that there are no circumstances that may compromise my objectivity in performing such work;• I have expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;• 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 8 of the regulations when preparing the application and any report relating to the application;• I have no, and will not engage in, conflicting interests in the undertaking of the activity;• I undertake to disclose to the applicant 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 application 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 application;• I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not• all the particulars furnished by me in this form are true and correct; and• I realise that a false declaration is an offence in terms of regulation 71 and is punishable in terms of section 24F of the Act; and• I will adhere to and comply with all responsibilities as indicated in the National Environmental Management Act and Environmental Impact Assessment. <p>Disclosure of Vested Interest</p> <ul style="list-style-type: none">• 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 the Environmental Impact Assessment Regulations, 2010;
_____ Signature of the environmental practitioner:
_____ Name of company:
_____ Date:
_____ Signature of the Commissioner of Oaths:
_____ Date:
_____ Designation:

2.3 PROJECT EIA STAGE 1 – PRE-APPLICATION & APPLICATION

2.3.1 Appointment of EAP

An independent Environmental Assessment Practitioner must be appointed to conduct the EIA. In this instance the proponent, Ferrometals – A Business Unit of Samancor Chrome Ltd, formally appointed JMA Consulting (Pty) Ltd (**JMA**) for the closure of the old and establishment of a new slimes dam facility.

The JMA terms of reference for this project was to design and obtain all the relevant authorisations relating to the decommissioning and rehabilitation of the existing slimes dam facility and the construction of a new slimes dam footprint, all of which would be based on a high level quantitative Environmental Impact Assessments, followed by effective Environmental Management Plans, incorporating the BPEO (Best Practicable Environmental Option) principle.

2.3.2 Determine Type of Application

The type of applications to be launched must be determined with due consideration of the project details, as well as the relevant Environmental Legal Framework applicable to the project.

JMA studied the terms of reference for the project and concluded that the environmental authorizations relevant to this project would include:

- A Scoping & Environmental Impact Assessment (**S&EIA**) application to DEDET's Nkanagala District Office in Emalahleni;
- A Waste License Application (**WLA**) process (Scoping & EIA process) application to DEA Head Office in Pretoria; and
- An Integrated Water Use License Application (**IWULA**) Amendment Process for which an application to the DWA Regional Office in Bronkhorstspuit will be made.

For the **Scoping and Environmental Impact Assessment** process as prescribed in terms of the National Environmental Management Act, Act 107 of 1998 (NEMA) legislation, JMA investigated, and compiled, a list of all the potential activities, with regard to the project, that may trigger any one of the activities listed in the EIA Listing Notices, GN R. 544, GN R. 545 and GN R. 546. This list of potential activities were discussed between representatives from Ferrometals and JMA and was subsequently finalised after a detailed assessment of the **contents of the proposed activities at Ferrometals**. These identified listed activities are listed in **Section 3.2.3** of this document. The appropriate application forms have been completed and submitted to the relevant authority – in this instance, **DEDET's Nkanagala District Office in Witbank**.

Slimes Disposal at Ferrometals fall in the category of Listed Waste Management Activities that have, or are likely to have, a Detrimental Effect on the Environment – GNR Notice 718 of 3 July 2009, published in terms of section 19; of National Environmental Management Waste Act, Act 59 of 2008. The Slimes were classified as hazardous waste and therefore represent Category B waste management activities in terms of GNR 718. From an authorization perspective **application must be made for a Waste License** and the process must be supported with an EIA and EMP as prescribed in NEMA. The appropriate Waste License application forms have been completed and

submitted to the relevant authority – in this instance, **DEA Head Office in Pretoria**. The Scoping Report will be submitted once public participation had been conducted.

For the **IWULA** Amendment Process prescribed under the National Water Act, Act 36 of 1998 (NWA), an Amended Integrated Water and Waste Management Plan (IWWMP) will be compiled and water use application forms will be completed and submitted to the **DWA Regional Office in Bronkhorstspuit**, for all of the relevant water uses that have been identified in terms of Section 21 of the NWA. The abovementioned water uses were identified by JMA and discussed with Ferrometals and are listed in **Section 3.2.3** of this document.

2.3.3 Authority Consultation

Authority Consultation is conducted with all of the identified authorities prior to the formal application being lodged. This is done in order to ascertain whether all relevant legislatures were investigated and to identify whether the different preferences/requirements of the relevant authorities were met.

2.3.4 Focus Group Meetings

Focus Group Meetings are meetings that are scheduled for I&AP's that have more or less similar issues pertaining to the proposed project. Such meetings are usually on a smaller scale than the I&AP Public Meeting and has the function of providing additional opportunities for communication between the applicant and I&AP's in order to prevent any misunderstanding and/or to address sensitive issues that may arise during the formal public participation process.

2.3.5 Submit Application

For the **Scoping and Environmental Impact Assessment** process the appropriate EIA application forms have been completed and submitted to the relevant authority – in this instance, **DEDET's Nkangala District Office in Witbank**.

For the Waste License Application Process the appropriate Waste License application forms have been completed and submitted to the relevant authority – in this instance, **DEA Head Office in Pretoria**.

For the **IWULA** Amendment Process an Amended Integrated Water and Waste Management Plan (IWWMP) will be compiled and water use application forms will be completed and submitted to the **DWA Regional Office in Bronkhorstspuit**. Discussions with the DWA Regional Office in Bronkhorstspuit regarding the consideration of an application in terms of Section 22 of the National Water Act 36 of 1998 will be undertaken.

Section 22 of the National Water Act 36 of 1998:

- (3) A responsible authority may dispense with the requirement for a licence for water use if it is satisfied that the purpose of this Act will be met by the grant of a licence, permit or other authorisation under any other law.*
- (4) In the interests of cooperative governance, a responsible authority may promote arrangements with other organs of state to combine their respective licence requirements into a single licence requirement.*

2.4 PROJECT EIA STAGE 2 – SCOPING

2.4.1 Background Information Document

A Background Information Document (BID) provides additional information to that which must be contained in the notice. Information usually included in the BID is:

- A more detailed description of the proposed project, accompanied by a map showing its location;
- The need and desirability of the proposed activity;
- An explanation of the process that will be followed;
- The environmental evaluations that will be conducted;
- The time schedule for the environmental assessment;
- The role of I&AP's;
- How and when decisions will be made and by whom; and
- The name and contact details of the Environmental Assessment Practitioner.

2.4.2 Notification

Notification of all identified I&AP's regarding this project was done via formal letter, press advertisement, and site notices that were put up in the surrounding area adjacent to the Ferrometals Site.

2.4.3 Compilation of Scoping Report and Plan of Study (Specialist Studies)

The Scoping Report and Plan of Study for the scoping phase of the project was compiled by JMA and made available for public review after the scoping phase Public Meeting was conducted.

2.4.4 Scoping Public Meeting

Once all identified I&AP's are notified and the project is advertised a Scoping Phase public meeting is held where further information and feedback is given to all I&AP's present at the meeting regarding the project. Also opportunity is given to ask questions or raise any concern/objection that they may have regarding the proposed project. During this meeting I&AP's are also notified of the I&AP review period where project documentation are made available to the public for review.

A similar meeting will be conducted during the EIA phase of the project where feedback is given on all specialist studies that were conducted as part of the EIA that was conducted.

2.4.5 Comments from IAP's

All comments received from I&APs are documented in an I&AP Comments Register, and will be addressed in the Final Scoping Report.

2.4.6 Finalize and Submit Scoping Report and Plan of Study

Upon receipt of the comments from I&AP's, this Scoping Report and Plan of Study will be finalized and submitted to the Nkangala District Office of DEDET in Emalahleni and DEA Head Office in Pretoria.

2.4.7 Authority Review & Decision

The relevant authorities have undertaken to review the scoping report and to issue a decision within reasonable timeframes of acknowledging receipt of the Final Scoping Report and Plan of Study.



2.5 PROJECT EIA STAGE 3 – ENVIRONMENTAL IMPACT ASSESSMENT

2.5.1 Conduct Specialist Studies

In the *Integrated Environmental Management Information Series, Specialist Studies Guideline 4; 2002*, it is stated that it is important to note that not all EIA's have specialist studies. The requirement to undertake specialist studies depends on the outcome of the scoping process. For example, if all the issues that are raised during the scoping can be addressed with the available information, then it may not be necessary to proceed through the full EIA process. The issues raised in the scoping phase of an EIA which cannot be effectively addressed with the currently available information, form the basis for the terms of reference of specialist studies. These specialist studies are commissioned to provide the information necessary to respond to the key issues associated with the proposed project. Specialists are appointed to analyze the current situation and assess the various impacts in terms of their anticipated magnitude. The aim of the specialist study phase is to provide information on the positive and negative impacts associated with the project alternatives. The studies also present recommendations for mitigation actions that may either enhance potential benefits or minimize harmful effects. **EIA is a process designed to facilitate and improve decision-making on development projects.**

The role of the specialist in the EIA process is to:

- (1) address issues raised during scoping, and
- (2) provide sufficient information that can be used by decision-makers.

In most countries, especially in developing countries, there are no established decision-making frameworks or criteria. Specialists thus have a critical role to play in ensuring that decision-makers have sufficient information to make rational and informed decisions.

EIA practitioners draw on inputs from a range of traditional scientific disciplines for example social sciences, earth sciences, and life sciences. The main benefit of using science in this manner in EIA is that the interdisciplinary nature of the process provides an effective way of translating good theory into good practice. Interdisciplinary is the open information exchange and linkages between various scientific disciplines. However, scientific interdisciplinary in EIA is not just a matter integrating scientific results in an environmental report. More importantly, it is the basis for applying scientific knowledge in innovative and fresh ways to identify, define, interpret, analyze, and solve environmental problems.

2.5.2 Conduct EIA, Design EMP and Compile EIAR's

Once the scoping phase has been completed, and all comments and issues raised by the I&APs have been collected, JMA will conduct the actual environmental impact assessment on the different areas of concern identified during the scoping phase. Specialist studies, as described above and if required, will be completed to assist with this assessment.

Once the EIA investigation has been completed, environmental impact assessment reports listing all of the predicted impacts and their expected magnitude and significance for the different areas of the receiving environment, will be completed.

After the impact magnitude and significance reporting has been completed, a Draft Environmental Management Plan (EMP) will be compiled containing measures to address and mitigate these identified environmental impacts.

2.5.3 EIA/EMP Public Meeting

As was the case during the scoping phase of the EIA process, a second round of public participation is also required during the EIA/EMP phase of the process. During this second round of public participation, the results of the specialist studies, the impact assessment, as well as the Draft Environmental Management Plan will be discussed and explained to the I&AP's in a second Public Meeting which is still to be scheduled.

2.5.4 Comments from I&AP's

After this second Public Meeting, the I&AP's will again have the opportunity to review and comment upon the all of the results of the EIA during a still to be stipulated review period. All of the reports generated during the EIA will be made available for public review.

2.5.5 Finalize and Submit EIA/EMP/EIAR

Once the review period has expired, all of the comments raised by the I&AP's will be tabulated and will then subsequently be addressed by the EAP before submitting the final version of the various reports to the relevant authorities.

2.5.6 Authority Review & Decision

For the EIA documentation, to be submitted to the relevant authorities in January 2014, the authorities have a period of 60 days to accept or reject the reports, and 45 days to make a decision, with the further option of sending them for specialist review which will take another 45 days, after which they will have to notify the applicant of their decision. It is intended to have the ROD (record of decision) by April/May 2014.

3. PROJECT/ACTIVITY DESCRIPTION

3.1 PROJECT TITLE

Project Title
<p>FERROMETALS – A BUSINESS UNIT OF SAMANCOR CHROME LIMITED</p> <p>THE DECOMMISSIONING AND REHABILITATION OF THE EXISTING NORTHERN SLIMES DAM FACILITY AT THE FERROMETALS OPERATION AND THE CONSTRUCTION AND OPOERATION OF A NEW SLIMES DAM FFACILITY AT FERROMETALS, LOCATED WITHIN THE BOUNDARIES OF THE EMALAHLENI LOCAL MUNICIPALITY IN EMALAHLENI</p>

3.2 PROJECT ENVIRO-LEGAL FRAMEWORK

3.2.1 Listing of Relevant Acts, Regulations and Technical Guidance

A review of the project components has indicated the following Environmental Acts, Regulations and Technical Guidance to be applicable for the project. An expanded Enviro-Legal framework, as applicable to the project is attached as **APPENDIX II**.

Legislation Considered for Application
1. Constitution Act 108 of 1996
2. National Environmental Management Act 107 of 1998 (NEMA)
3. Environment Conservation Act 73 of 1989 (ECA)
4. National Water Act 36 of 1998 (NWA)
5. National Heritage Resources Act 25 of 1999 (NHRA)
6. National Environmental Management Air Quality Act 39 of 2004 (NEMAQA)
7. Atmospheric Pollution Prevention Act 45 of 1965 (APPA)
8. National Environmental Management Biodiversity Act 10 of 2004 (NEMBA)
9. National Environmental Management Waste Act 59 of 2008 (NEMWA)
10. National Forests Act 84 of 1998 (NFA)
11. Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA)
12. National Environmental Management Integrated Coastal Management Act 24 of 2008 (NEMICMA)
13. National Building Regulations and Building Standards Act 103 of 1997 (NBRBSA)
14. Conservation of Agricultural Resources Act 43 of 1983 (CARA)

The following regulations published in terms of three of these Acts, have pertinent bearing on inputs into this report:

Considered Regulations
NEMA
1. GNR 543 of 18 June 2010 – EIA Regulations
2. GNR 544 of 18 June 2010 – Basic Assessment Listed Activities
3. GNR 545 of 18 June 2010 – Scoping and EIA Listed Activities
4. GNR 546 of 18 June 2010 – Basic Assessment Listed Activities- Specified Geographical Areas
NWA
1. GNR 2274 of 23 October 1981 – Regulations promulgated in terms of section 30(2) of the Water Act 54 of 1956 in respect of subterranean water control areas
2. GNR 704 of 4 June 1999 – Regulations on use of water for mining and related activities aimed at the protection of water resources
3. GNR 1160 of 1 October 1999 – Establishment of Water Management Areas

4. GNR 1352 of 12 November 1999 – Regulations requiring that a water use be registered
5. GNR 212 of 10 March 2000 – Request to register a water use
6. GN 398 of 26 March 2004 – General authorizations in terms of Section 39 of the National Water Act
7. GN 470 of 12 May 2000 – Request to register a water use
8. GNR 399 of 26 March 2006 – General authorizations in terms of Section 39 of the National Water Act
ECA
1. GNR 154 of January 1992 – Noise Control Regulations
NEMAQA
1. GNR 248 of 31 March 2010 – List of Emission Activities
NEMWA
1. GNR 718 of 3 July 2009 – List of Waste Management Activities

The following regulations published in terms of the above Acts, have pertinent bearing on authorizations related to this project:

Considered Technical Guidelines	
DEA and DEDET	
1.	Integrated Environmental Management, Information Series 0, Overview of Integrated Environmental Management
2.	Integrated Environmental Management, Information Series 1, Screening
3.	Integrated Environmental Management, Information Series 2, Scoping
4.	Integrated Environmental Management, Information Series 3, Stakeholder Engagement
5.	Integrated Environmental Management, Information Series 4, Specialist Studies
6.	Integrated Environmental Management, Information Series 5, Impact Significance
7.	Integrated Environmental Management, Information Series 6, Ecological Risk Assessment
8.	Integrated Environmental Management, Information Series 7, Environmental Resource Economics
9.	Integrated Environmental Management, Information Series 8, Cost Benefit Analyses
10.	Integrated Environmental Management, Information Series 9, Project Alternatives in EIA
11.	Integrated Environmental Management, Information Series 10, Environmental Impact Reporting
12.	Integrated Environmental Management, Information Series 11, Review in EIA
13.	Integrated Environmental Management, Information Series 12, Environmental Management Plans
14.	Integrated Environmental Management, Information Series 13, Environmental Auditing
15.	Integrated Environmental Management, Information Series 14, Life Cycle Assessment
16.	Integrated Environmental Management, Information Series 15, Strategic Environmental Assessment
17.	Integrated Environmental Management, Information Series 16, Cumulative Effects Assessment
18.	Integrated Environmental Management, Information Series 17, Environmental Reporting
19.	Integrated Environmental Management, Information Series 18, Environmental Assessment of Trade Related Agreements and Policies in South Africa
20.	Integrated Environmental Management, Information Series 19, Environmental Assessment of International Agreements
21.	Integrated Environmental Management, Information Series 20, Linking EIA and EMS
22.	Integrated Environmental Management, Information Series 21, Environmental Monitoring Committees
23.	Integrated Environmental Management, Information Series 22, Socio-Economic Impact Assessment
24.	Integrated Environmental Management, Information Series 23, Risk Management
25.	Guideline 3: General Guide to the Environmental Impact Assessment Regulations
26.	Guideline 4: Public Participation
27.	Guideline 5: Assessment of Alternatives and Impacts
28.	Guideline 6: Environmental Management Frameworks
29.	Guideline 7: Detailed Guide to Implementation of the EIA Regulations
30.	DWAF, Second Edition, 1998. Waste Management Series. Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste.
31.	DWAF, Second Edition, 1998. Waste Management Series. Minimum Requirements for Waste Disposal by Landfill.
32.	DWAF, Second Edition, 1998. Waste Management Series. Minimum Requirements for Water

Considered Technical Guidelines	
DEA and DEDET	
	Monitoring at Waste Management Facilities.
33.	Draft Guideline: Companion Document on the Environmental Impact assessment Regulations 2010.
34.	Draft Guideline: Public Participation in the EIA Process, 2010.
35.	Draft Guideline: Environmental Management Framework Guideline in support of the Environmental Management Framework Regulations, 2010.
36.	White Paper on Integrated Pollution and Waste Management for South Africa.
DWA	
1.	External Guideline: Generic Water Use Authorisation Application Process, 2007
2.	Internal Guideline: Generic Water Use Authorisation Application Process, 2007
3.	External Guideline: Section 21(c) and (i) Water Use Authorisation Application Process (impeding or diverting the flow of water in a watercourse and /or altering the bed, banks, course or characteristics of a watercourse)
4.	Internal Guideline: Section 21(c) and (i) Water Use Authorisation Application Process (impeding or diverting the flow of water in a watercourse and /or altering the bed, banks, course or characteristics of a watercourse)
5.	Internal Guideline: Section 21(e), (f), (g), (h) and (j) Water Use Authorisation Application Process (waste discharge related)
6.	Operational Guideline: IWWMP Technical Document, February 2010
7.	Best Practice Guideline A2 – Water Management for Mine Residue Deposits; 2006
8.	Best Practice Guideline A4 – Pollution Control Dams; 2006
9.	Best Practice Guideline A6 – Water Management for Underground Mines; 2006
10.	Best Practice Guideline G1 – Storm Water Management; 2006
11.	Best Practice Guideline G2 – Water and Salt Balances; 2006
12.	Best Practice Guideline G3 – Water Monitoring Systems; 2006
13.	Best Practice Guideline G4 – Impact Prediction; 2006
14.	Best Practice Guideline H1 – Integrated Mine Water Management; 2006
15.	Best Practice Guideline H2 – Pollution Prevention and Minimization ; 2006
16.	Best Practice Guideline H3 – Water Reuse and Reclamation; 2006
17.	Best Practice Guideline H4 – Water Treatment; 2006

3.2.2 Existing Authorizations

All existing Environmental Authorizations for the project are listed below, whilst copies of the relevant ROD's, Permits and Licences are attached in **APPENDIX III**.

Sequential Number	Existing Environmental Authorizations
1	ECA Section 20 Permit (12/9/11/P106) issued 30 June 2009
2	Air Quality: APPA Certificate (Ref 47) issued 30 March 2010
3	Water Use License (04/B11K/709) issued 2 April 2011
4	Environmental Authorization (Ref: 17/2/3/9(1)N-6) issued 6 December 2011
5	Waste License Application (DEA Ref: 12/9/11/L7800/6) This process
6	Environmental Authorization Application (DEDET Ref: 17/2/3 N-84) This Process

3.2.3 Environmental Authorizations Required for this Project

Based on the Enviro-Legal framework and having regard to the relevant and specific project attributes, a number of authorizations will be applied for during the course of the Environmental Authorization Phase of this Project.

National Environmental Management Act, Act No. 107 of 1998		
Section 24	Environmental Authorisation Application	
GNR 544		
Identification of the competent authority	The competent authority in respect of the activities listed in this part of the schedule is the environmental authority in the province in which the activity is to be undertaken unless it is an application for an activity contemplated in section 24C(2) of the Act, in which case the competent authority is the Minister or an organ of state with delegated powers in terms of section 42(1) of the Act, as amended.	
Activity 27	<p>The decommissioning of existing facilities or infrastructure, for -</p> <ul style="list-style-type: none"> (i) electricity generation with a threshold of more than 10MW; (ii) electricity transmission and distribution with a threshold of more than 132kV; (iii) nuclear reactors and storage of nuclear fuel; (iv) activities, where the facility or the land on which it is located is contaminated ; (v) storage, or storage and handling, of dangerous goods of more than 80 cubic metres; <p>but excluding any facilities or infrastructure that commenced under an environmental authorisation issued in terms of the Environmental Impact Assessment Regulations, 2006 made under section 24(5) of the Act and published in Government Notice No. R. 385 of 2006, or Notice No. 543 of 2010.</p>	Decommissioning of Existing Northern Slimes Dam Facility at the Ferrometals Site

National Environmental Management: Waste Act, Act No. 59 of 2008		
NEMWA Section 19(3) and GN 718	Waste License Application	
CATEGORY A		
20	The decommissioning of activities listed in this Schedule.	Decommissioning of Existing Slimes Dam Facility at the Ferrometals Site
CATEGORY B		
9	The disposal of any quantity of hazardous waste to land.	Construction/Operation of New Slimes Dam Footprint at the Ferrometals Site
11	The construction of facilities for activities listed in Category B of this Schedule (not in isolation to associated activity).	Construction/Operation of New Slimes Dam Footprint at the Ferrometals Site

National Water Act, Act No. 36 of 1998		
NWA Section 40	Integrated Water Use License Application (Includes Registrations)	
Section 21(g)	Disposing of water containing waste in a manner which may detrimentally impact on a water resource.	Construction/Operation of New Slimes Dam Facility at the Ferrometals Site
GNR 1352	Water Use Registration	
	Included in Water Use License Application	

Note that the possible dispensation with the requirement for a licence for water use will be perused with the DWA and if the DWA is satisfied that the purpose of NWA will be met by the grant of a licence (Waste License) or other authorisation under any other law a water use license for the Slimes Dam will not be required but incorporated in the Waste License conditions.

3.3 PROJECT PROPONENT/APPLICANT

Project Applicant:	Ferrometals – a Business Unit of Samancor Chrome Limited
Business Registration No:	1926/008883/06
Contact Person:	Brian Gibson
Physical Address:	Moses Kotane Drive, Emalahleni (Witbank), Mpumalanga
Postal Address:	Private Bag X7228, Witbank, 1035
Telephone no:	013-693 7206
Fax no:	013 693 7558
E-mail:	Brian.Gibson@SamancorCr.com

3.4 PROJECT LOCATION/RELEVANT GOVERNING AUTHORITIES

3.4.1 Regional/Local Setting

Samancor Chrome, Ferrometals Works, (“Ferrometals”) is situated in Emalahleni (formerly called Witbank), Mpumalanga Province, and operates six charge chrome furnaces, (4 open and 2 closed), one metal recovery plant and an Intermediate Carbon Ferrochrome (IC3) converter. In addition, a Pellet and Sintering Plant (PSP) converts fine ore and UG2 (Upper Group 2 layer of the Rustenburg Layered Suite) into sintered pellets for use in the furnaces. The plant was established in 1959 and is currently the largest charge chrome producing operation in the world with an expected life in excess of 25 years.

Table 3.4.1(a): Locality of Site in relation to nearest Towns/Cities.

Town	Distance from Site (km)	Direction from Site
Emalahleni	4 km	East
Lynnville	1.3 km	South East
Ackerville	Directly Adjacent	South
Kwa-Guqa	2.2 km	WSW
Hlalanikahle	4 km	WNW

Figure 3.4.1(a) (below) indicates the regional locality of the Ferrometals Operations.

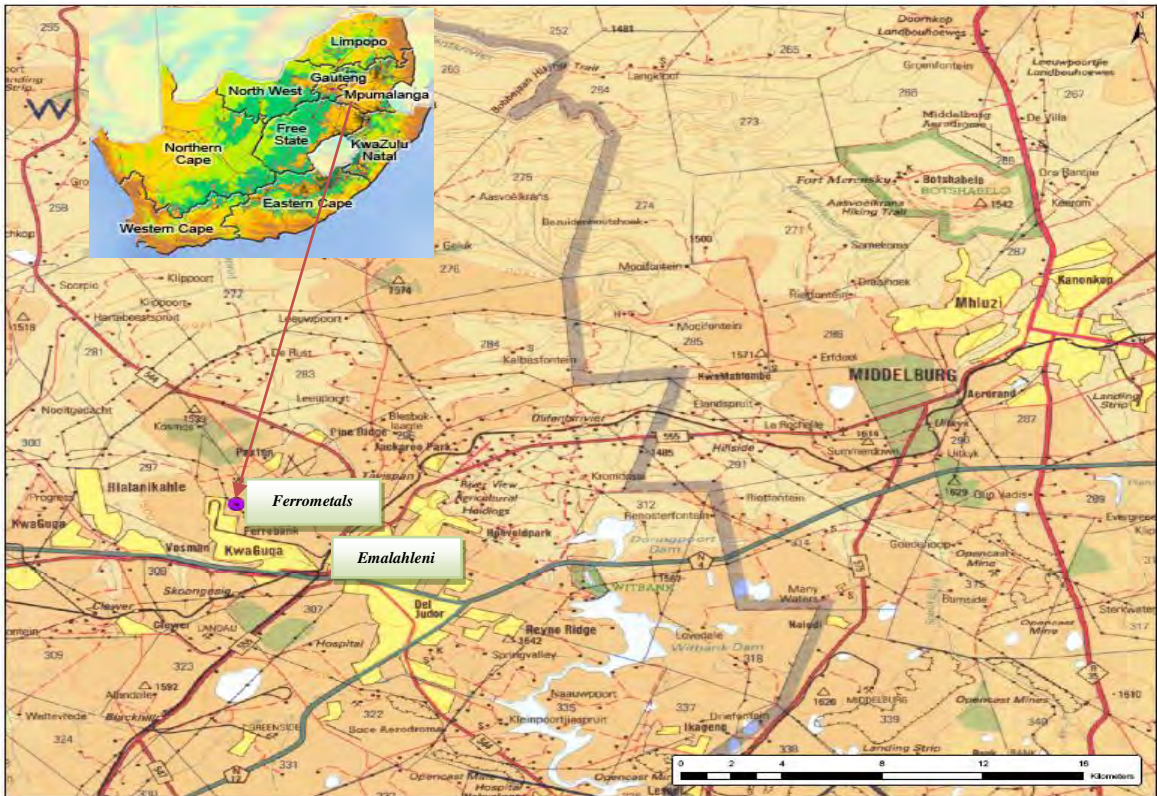


Figure 3.4.1(a): Regional Setting of the Project.

The Ferrometals site is located within the Ferrobank industrial area of Emalaheni, as depicted on the Figure 3.4.1(b & c) that follows. The current developed portion of the plant site covers about 195 ha, draining roughly from east to west.

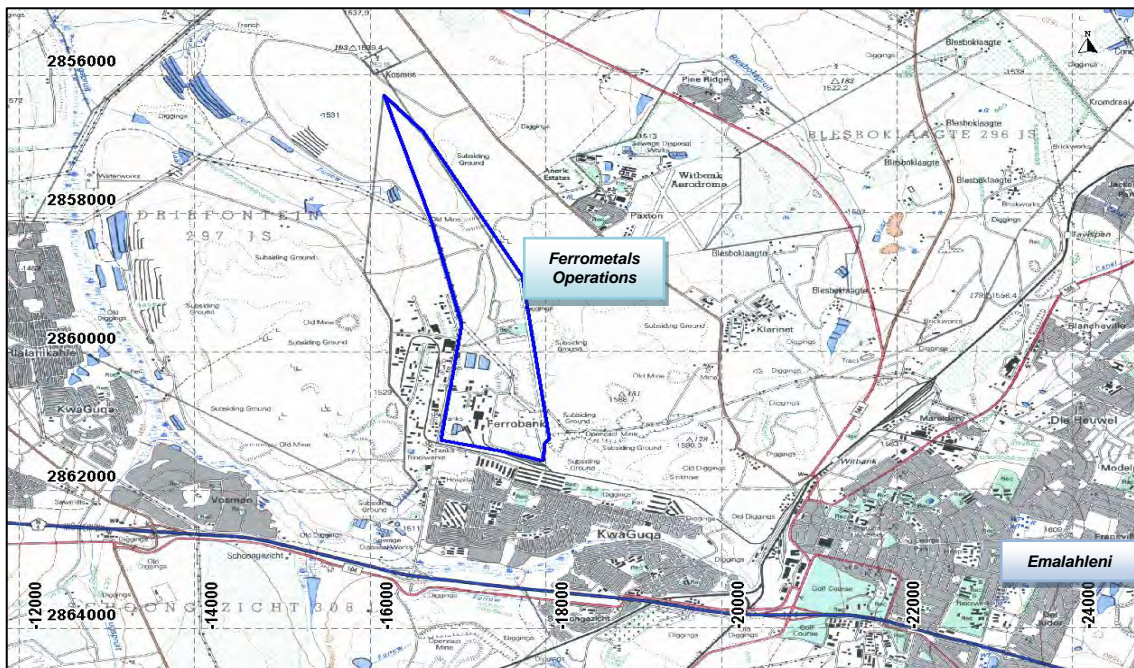


Figure 3.4.1(b): Ferrometals Operations Local Site Locality – Topographical Map 2529CC.



Figure 3.4.1(c): Ferrrometals Operations Local Site Locality (Photo 2529CC 9&14).

3.4.2 Relevant Authorities

The following national, regional and local authorities will be consulted during this Environmental Authorization Project.

3.4.2.1 National Authorities

Department of Environmental Affairs (DEA) – Hazardous Waste

National Department:	Department of Environmental Affairs
Directorate/Designation:	Authorisations and Waste Disposal Management
Contact Person:	Thizwikoni Ramavhona
Postal Address:	Private Bag X447, Pretoria, 0001
Telephone no:	(012) – 310 3142
Fax no:	(012) – 310 3753
Cellular Phone:	082 307 0747
E-mail:	tramavhona@environment.gov.za

3.4.2.2 Provincial/Regional Authorities

Department of Economic Development Environment & Tourism

Regional Department:	Nkangala District Office
Directorate/Designation:	Environmental Impact Management
Contact Person:	Musa Mondlane
Postal Address:	P.O. Box 7255, Witbank, 1035
Telephone no:	013 656 2595
Fax no:	013-690 3704
E-mail:	gmondlane@wit.mpu.gov.za

Department of Water Affairs (Regional Office)

Regional Department:	Bronkhorstspuit Regional Office
Directorate/Designation:	Water Sector Regulation and Use
Contact Person:	Ms M Musekene
Postal Address:	Private Bag X11259, NELSPRUIT, 1200
Telephone no:	(013) 759 7313
Fax no:	086 666 6217
Cellular Phone:	083 492 9690
E-mail:	MusekeneM@dwa.gov.za
Water Management Area	Olifants River Catchment

3.4.2.3 District/Local Authorities

Local Municipality:

Local Authority:	Emalahleni Local Municipality
Designation:	HOD-Environmental and Waste Management
Contact Person:	E. J. Nkabinde
Postal Address:	P.O. Box 3, Witbank, 1035
Telephone no:	013 690 6350
Fax no:	013 690 6295
Cellular Phone:	082 729 7488
E-mail:	nkabindeej@emalahleni.gov.za

District Municipality:

Directorate/Designation:	Nkangala District Municipality
Contact Person:	Mr M. Mogale
Postal Address:	PO Box 437, Middelburg, 1050
Cellular Phone:	078 007 4995

Ward 12 Councillor:

Local Authority:	Emalahleni Local Municipality
Designation:	Ward Councillor
Contact Person:	Taylor Pookgoadi
Cellular Phone:	083 400 9396
E-mail:	taylorp@vodamail.co.za

3.5 PROPERTY DESCRIPTION/LAND OWNER/ZONING STATUS

A detailed property assessment was performed by specialist Enviro-Legal Attorneys, for the purposes of this project. The full report, titled **Memorandum: Environmental-Legal Considerations in Respect of Certain Properties of Samancor Ltd**, will be attached as an **APPENDIX V** to the final Scoping Report.

The proposed project will be located on the following properties (Please refer to **Figure 3.5**):

No	Property Name	Deed of Transfer	Owner		Zoning Status	21 Digit Surveyor General ID Number
1.	Driefontein 297 JS (Portion 9)	T 39220/93	Name	Ferrometals – a Business Unit of Samancor Chrome Limited	Industrial 2	T0JS000000002970009
			Contact Person	Brian Gibson		
			Postal Address	Private Bag X7228, Witbank, 1035		
			Telephone	013-693 7206		
			Facsimile	013 693 7558		
e-mail	Brian.Gibson@SamancorCr.com					
2.	Driefontein 297 JS (Portion 12)	T 39220/93	Name	Ferrometals – a Business Unit of Samancor Chrome Limited	Industrial 2	T0JS0000000029700012
			Contact Person	Brian Gibson		
			Postal Address	Private Bag X7228, Witbank, 1035		
			Telephone	013-693 7206		
			Facsimile	013 693 7558		
e-mail	Brian.Gibson@SamancorCr.com					

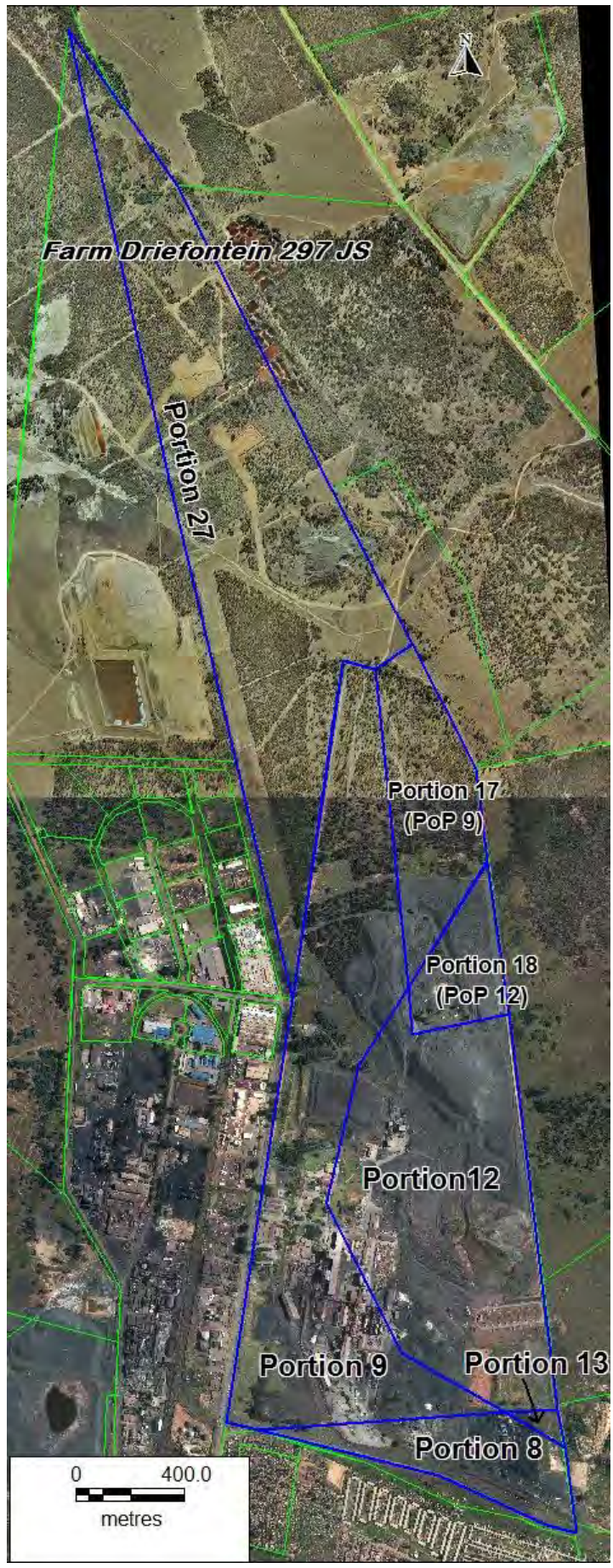


Figure 3.5: Ferrometals Property Delineation.

3.5.1 Ferrometals Property Description

3.5.1.1 Remaining Extent of Portion 9 (a portion of portion 2) of the farm Driefontein 297 JS

Description:

Remaining Extent of Portion 9 (a portion of portion 2) of the farm Driefontein 297
Registration Division JS, Transvaal
Measuring 126, 7112 hectares
Held under Deed of Transfer No T 39220/93

Owner:

Samancor Ltd

Relevant Servitudes:

Servitude 1

By Notarial Deed K 443/1963S, the right has been granted to the Town Council of Witbank to convey electricity across the property by means of overhead power lines and together with ancillary right, and subject to the conditions as will more fully appear on reference to the said Notarial Deed.

Servitude 2

By Notarial Deed K 1590/1976S, the right has been granted to the Eskom to convey electricity over the property together with ancillary right, and subject to the conditions as will more fully appear on reference to the said Notarial Deed.

Servitude 3

By Notarial Deed K 3861/2005S, the property is subject to an underground electric powerline servitude in favour of Highveld Steel and Vanadium Corporation Limited, together with ancillary rights, as will more fully appear on reference to the said Notarial Deed and diagram S.G No 8031/1999.

This servitude determines that during the construction process, the owner shall not construct any buildings, enclosures or other structures or plant any trees or place any materials on or over the servitude area without Highveld's prior written permission, which permission shall not be unreasonably withheld.

In respect of Mineral Rights the servitude determines that should the cables at any time, in any way at all, interfere with, limit or prevent the exploitation of the underlying or neighbouring mineral reserve, the owner shall give notice in writing to Highveld of such entrance and should Highveld not be in a position to offer an alternative solution which is reasonably acceptable to the owner within 90 days a new route over the property shall be agreed upon between the owner and Highveld.

Servitude 4

By Notarial Deed K 2871/1997S, a perpetual servitude has been granted to convey gas over the property by means of a gas pipeline and works, as will more fully appear on reference to the said Notarial Deed and diagram S.G No 5199/1995.

This servitude determines that the owner shall not construct any buildings, enclosures or other structures or plant any trees or place any materials on or over the servitude area without Gaskor's prior written permission. Furthermore, the top layer of soil may not be removed in the servitude area without prior written permission of Gaskor. The owner may use the land in the servitude area for agricultural purposes provided that the owner does not dig deeper than 0,50 meter and that no damage is caused to the pipeline or works.

In respect of Mineral Rights the servitude determines that should the pipeline at any time, in any way at all, interfere with, limit the exploitation of the underlying mineral reserve (excluding sand, rock or clay), the owner shall give notice in writing to Gaskor of such entrance and should Gaskor not be in a position to offer an alternative solution which is reasonably acceptable to the owner within 90 days a new route over the property shall be agreed upon between the owner and Gaskor.

Servitude 5

By Notarial Deed K 329/1999S, a perpetual servitude has been granted for the installation and erection of the gas pipeline and works over the property in favour of Afrox, as will more fully appear on reference to the said Notarial Deed and diagram S.G No 10706/1997.

This servitude determines that the owner shall not construct any buildings, enclosures or other structures or plant any trees or place any materials on or over the servitude area without Afrox's prior written permission, which permission shall not be unreasonably withheld.

This servitude determines that the owner may use the land in the servitude area for agricultural purposes provided that the owner does not dig deeper than 0,50 meter and that no damage is caused to the pipeline or works, without Afrox's prior written permission.

Zoning Status:

Portion 9 of the farm Driefontein 297 JS is zoned "Industrial 2" as per Zoning Certificate, in terms of the Emalahleni Town Planning Scheme 1991, which was issued on 19 September 2007.

The primary uses for which buildings may be erected and used or purposes for which land may be used are as follows:

- Commercial;
- Industries;
- Noxious Industries;

- Places of refreshment for own employees only; and
- Warehouses.

Development Parameters Applicable:

- Maximum Coverage: Other buildings 75%;
- Maximum FAR: - ;
- Maximum Height: 2 Storeys;

3.2.1.1 Portion 12 (a portion of portion 2 of the Farm Driefontein 297 JS)

Description:

Portion 12 (a portion of portion 2) of the Farm Driefontein 297
 Registration Division JS, Transvaal
 Measuring 95, 7921 hectares
 Held under Deed of Transfer No T 39220/93

Owner:

Samancor Ltd

Relevant Conditions:

Condition 1

The following restrictive condition is placed on the registered owner of the property, in favour of and enforceable by the Transvaal and Delagoa Bay Investment Company Ltd namely that –

- The transferee, its successors in title or assigns shall not be entitled to carry on coal mining operations on or beneath the property.

Servitudes:

Servitude 1

By Notarial Deed K 1307/1986S, the right has been granted to the Eskom to convey electricity over the property and subject to the conditions as will more fully appear on reference to the said Notarial Deed. The route determination of the said servitude fully appears in Notarial Deed K13/1997S.

Servitude 2

By Notarial Deed K 1590/1976S, the right has been granted to the Eskom to convey electricity over the property and to erect a distribution station together with ancillary right, and subject to the conditions as will more fully appear on reference to the said Notarial Deed.

Servitude 3

By Notarial Deed K 3316/2003S, Eskom has been granted a perpetual servitude of electric transmission lines over the property substantially in the servitude area subject to any existing servitude or other real right to convey electricity across the property by means of overhead power lines, as will more fully appear on reference to the said Notarial Deed and Diagram.

Zoning Status:

Portion 12 of the farm Driefontein 297 JS is zoned “Industrial 2” as per Zoning Certificate, in terms of the Emalahleni Town Planning Scheme 1991, which was issued on 19 September 2007 and attached hereto as Annexure G.

The primary uses for which buildings may be erected and used or purposes for which land may be used are as follows:

- Commercial;
- Industries;
- Noxious Industries;
- Places of refreshment for own employees only; and
- Warehouses.

Development Parameters Applicable:

- | | |
|------------------------------|--|
| • Maximum Coverage: | Other buildings 75%; |
| • Maximum FAR: | - |
| • Maximum Height: | 2 Storeys; |
| • Building lines: | Side – 0m (if no services) |
| • Rear – 0m (if no services) | - |
| • Street – 5m: | - |
| • Parking: | 1 parking space to 100m ² floor area. |

3.6 PROJECT RESOURCE ATTRIBUTES

3.6.1 Raw Materials Supply

All raw materials used at the Ferrometals Plant are sourced locally within South Africa:

- Chrome Ore
- Pellets (made UG2 fine ore material)
- Coal
- Coke
- Char
- Anthracite
- Quartzite
- Dolomite
- Limestone

3.6.2 Product Beneficiated

Ferrometals, the largest single ferrochrome producer in the western world, is situated just outside of eMalahleni (formerly known as Witbank) in Mpumalanga. The intermediate carbon ferrochrome (IC3) plant was constructed in 1986 and relies on the furnaces for a supply of charge chrome. The IC3 plant produces intermediate carbon ferrochrome for the foundry and special steel-producing markets. FMT also includes Ferroveld, a joint venture with Elkem.

Samancor Chrome produces three grades of ferrochrome: charge chrome, intermediate carbon ferrochrome and low carbon ferrochrome. Ferrochrome production is essentially a carbothermic reduction operation taking place at high temperatures. The ore – an oxide of chromium and iron – is reduced by coal and coke to form an iron-chromium alloy called ferrochrome.

Charge Chrome

Two decades ago South African chromite was not regarded as suitable for charge chrome production. Since then pioneering achievements have been made in the areas of raw material preparation, furnace design and operation, downstream beneficiation and optimisation. By means of upgrading and redesign, Samancor has grown to be one of the world's largest producers of charge chrome. Charge chrome is used in the stainless steel industry and as an additive in the steel industry. Charge chrome is used for the manufacture of more than 170 different types of stainless steels whose main properties include resistance to most types of wet and dry corrosion. For the manufacture of special steels, chromium imparts special properties to the steel, including an improvement in the tempering quality of steel, particular hardness and resistance to wear, and heat resistance.

To improve total ferrochrome recovery while maintaining a high-quality product, alloy recovery plants are utilised to recover the ferrochrome from the slag produced during the charge chrome process. The slag, which has a metallic content of approximately 4 present, is processed through a series of crushers and broken down to minus 15mm material. It then moves through a jigging plant where the chrome and slag are separated by means of gravity. The slag chips are sold for road building and concrete work.

Intermediate Carbon Ferrochrome

The intermediate carbon ferrochrome plant (IC3) erected at Ferrometals was the first of its kind in the world. With a capacity of 70 000 tons a year, IC3 produces a product range of ferrochrome with a 1,5 present to 6 present carbon content, supplementing the 6 present to 8 present carbon ferrochrome produced. The IC3 plant uses the liquid charge chrome from the East Plant at Ferrometals as its basic raw material. The process takes place in a pear-shaped convertor where the liquid charge chrome is bottom blown by oxygen and steam through tuyeres to a specific carbon content. The final product, an intermediate carbon ferrochrome, is produced in granulated form. The tailor-made alloy is used specifically in the foundry industry; as a trimming addition to certain stainless steels – specifically some ferritic grades; in tool steels; and in alloy steels such as beating, spring, high speed and valve steels.

Low Carbon Ferrochrome

Low carbon ferrochromium is produced at Middelburg Ferrochrome by means of a three-stage “dry” process whereby molten and solid ferrosilicon-chromium are added to the lime / chrome ore melt in a two-phase reaction. The typical products produced have chrome contents of between 59 present and 61 present respectively, with carbon content ranging from 0,02 present to 0,1 present. The alloy is used for trimming additions in stainless steel production as well as in other specialised applications.

3.6.3 Product Markets

Ferrochrome (FeCr) is an alloy of chromium and iron containing between 50% and 70% chromium. The ferrochrome is produced by melting of chromite/chromium ore. Most of the world's ferrochrome is produced in South Africa, Kazakhstan and India, which have large domestic chromite resources. Increasing amounts are coming from Russia and China. The production of steel is the largest consumer of ferrochrome, especially the production of stainless steel with chromium content of 10 to 20% is the main application of ferrochrome.

3.6.4 Product Price

Prices of ferrochrome are often quoted in terms of United States cents (¢) per pound (lb) of chrome contained, although producing companies will generally report production and sales in terms of metric tonnes FeCr sold. In order to calculate the value of a metric tonne of FeCr from a price quoted in US cents, the percentage of chrome within the ferrochrome must be known. In a simple example if 1 metric tonne of FeCr with 55% chrome contained is sold for 100¢ US (per lb of Cr contained) then the value would be: $55\% (1 \text{ metric ton FeCr}) = 550 \text{ kg Cr} = 1212.54 \text{ lb Cr (55\%)}$. Multiply 1212.54 lb times 100¢/lb = US\$1212.54, then round appropriately.

3.6.5 Planned Life of Operations

The operations at Ferrometals will continue as long as there is a market for its products. The plant is not dependant on any single mine for its raw materials and can continue with production with raw materials from any source.

3.7 PROJECT MOTIVATION (NEED AND DESIRABILITY)

3.7.1 Legal Standing

Samancor Chrome's history goes back as far as 1975, when it was established as a result of a merger between SA Manganese Ltd and Amcor Ltd. SA Manganese was formed in 1926 to mine manganese ore in the Northern Cape. Amcor was established in 1937 to exploit mineral deposits for the steel industry and to process those minerals into ferroalloys.

Samancor was listed on the Johannesburg Stock Exchange until 1998 when the minority shareholders were bought out by the then majority shareholders, Billiton and Anglo American. This resulted in the delisting of the company and shareholding of 60% African Metals Ltd (a BHPB Company) and 40% Anglo South Africa Capital (Proprietary) Ltd (an Anglo American company).

Samancor then consisted of chrome and manganese operations and stainless steel investments with marketing and distribution arrangements via structures held wholly and indirectly by BHPB and Anglo American. Towards the end of 2004, bids were invited for the purchase of Samancor Chrome. The successful bidder, the Kermas Group, effectively took over the operations from 1 June 2005. In November 2009 International Mineral Resources (IMR) became the majority shareholder in Samancor Chrome Limited with a 70% direct shareholding in the holding company, Samancor Chrome Holdings (Pty) Limited.

3.7.2 Need for Product

Over 80% of the world's ferrochrome is utilised in the production of stainless steel. In 2006 28 Mt of stainless steel were produced. Stainless steel depends on chromium for its appearance and its resistance to corrosion. The average chrome content in stainless steel is approximately 18%. It is also used when it is desired to add chromium to carbon steel. FeCr from Southern Africa, known as 'charge chrome' and produced from a Cr containing ore with a low Cr content, is most commonly used in stainless steel production.

Alternatively, high carbon FeCr produced from high grade ore found in Kazakhstan (among other places) is more commonly used in specialist applications such as engineering steels where a high Cr to Fe ratio and minimum levels of other elements such as sulfur, phosphorus and titanium are important and production of finished metals takes place in small electric arc furnaces compared to large scale blast furnaces.

3.7.3 Strategic Importance of the Resource/Product

Ferrochrome is a corrosion-resistant alloy of chrome and iron containing between 50% and 55% chrome. Over 80% of the world's ferrochrome is utilized in the production of stainless steel. The average chrome content in stainless steel is approximately 18%. Chrome alloys are used in stainless and special steels. In stainless steels, the chromium is chiefly responsible for improved corrosion resistance. In special steels, chromium imparts properties like heat resistance, hardness, and wear resistance.

3.7.4 Socio-Economic Benefits

Corporate Social Investment (CSI) is an integral part of Samancor Chrome, as we believe that every upliftment project implemented by our company contributes to creating a more prosperous country. With this in mind, we continuously strive to strengthen our commitment to sustainable development by building mutually beneficial relations with our stakeholders and contributing to the communities within which we operate.

Our Corporate Social Investment efforts are governed by the Samancor Chrome Foundation, which ensures that our contributions add value — now, and in the future. We are constantly working to better the execution and implementation of our corporate social and economic plans for the greater good of the communities surrounding our business units.

The Samancor Chrome Foundation's CSI initiatives span over a number of categories, including education, health, small business development and community infrastructure. Education is the primary focus area of our CSI initiatives as we believe in providing the leaders of tomorrow with every possible advantage. The majority of our projects therefore invest in the education of our communities, enabling them to create a brighter future for themselves while boosting our country's economic growth.

We are able to achieve these sustainable outcomes by consulting narrowly with a diverse range of stakeholders, ranging from unions, community agencies and NGOs to local government. These partnerships, forged for the benefit of our communities, enable us to have a greater understanding of the local social and environmental needs, giving us the opportunity to determine how we can make an effective and much needed contribution.

Uplifting the communities within which we operate gives them the ability to truly empower themselves. Projects, like providing necessary infrastructure, go a long way towards making a sustainable difference – something Samancor Chrome will remain committed to.

Chrome Foundation

Samancor Chrome's Corporate Social Investment efforts are governed by the Samancor Chrome Foundation. This foundation approves the CSI projects that are thereafter implemented, coordinated and managed by the different business units. The community relations professionals and their supporting CSI committees who coordinate the CSI efforts on the business units are part of the local communities. This means that they have a greater understanding of the local social and environmental needs, and are thus best-placed to determine how the company can make an effective contribution at this level. All projects undertaken by the Samancor Chrome Foundation are consistent with our business strategy and subscribe to the following set of operating principles:

- Adhering to the key pillars of the Mining Charter
- Aligned with the Community Relations Plan
- Subject to regular audits
- Achieving sustainable development
- Fostering community involvement

- Applying project management principles
- Sound corporate governance
- These principles ensure that all funds and projects committed to by the business units fall within the mission statement of the Samancor Chrome Foundation, which is “to improve the quality of life of people in communities around Samancor Chrome operations”.

3.8 DETAILED PROJECT DESCRIPTION

Ferrometals is a brown fields site and has been in operation since 1959. The authorizations sought in this application for which this EIA process is conducted, stem from the fact that Ferrometals requires a new Slimes Disposal Facility to be operation 2014 in order to continue with the Production Process. The new facility and closure of the existing requires environmental authorizations (Waste License (NEMWA) and Environmental Authorization in terms of the NEMA EIA Regulations, as well as water use authorizations in terms of the requirements of the NWA.

3.8.1 Site Inventory

Ferrometals is situated in Emalahleni (formerly called Witbank), Mpumalanga, and operates six charge chrome furnaces, (4 open and 2 closed), one metal recovery plant and an Intermediate Carbon Ferrochrome converter (IC3). In addition, a Pellet and Sintering Plant converts fine ore and UG2 (Upper Group 2 layer of the Rustenburg Layered Suite) into sintered pellets for use in the furnaces.

The following lists the activities/infrastructure at Ferrometals.

- Raw Material Storage
- Pelletising Plant
- Furnace Plant Area
- Final Product Storage Area
- ETP
- Northern Slimes Dam and PWD
- Slag dump
- Current Slag arising stockpile
- Storm Water channel & Process Water Dam
- IC3
- Elkem Ferroveld Plant
- Admin Buildings and HT yard
- Chrome Recovery Plant
- Security
- Parking
- Stores
- Workshops
- Office Buildings
- Security Fence
- Internal Roads
- Railway Lines
- Power Lines
- Change Houses

- Contractors Yard
- Electrical Substations
- Southern Historical Slimes Dam
- Eastern historical slimes dam
- Small historical slimes dam at



Figure 3.8.1(a): Infrastructure Layout Plan.

3.8.1.1 General Process Description

Ferrometals situated on the outskirts of Emalahleni, is a division of Samancor Chrome, which is a global producer and marketer of chrome ores and alloys. This plant dates back to 1959 when African Metals Corporation Limited (Amcors) purchased a ten-year old two-furnace ferrosilicon producing plant. In November 2009 International Mineral Resources (IMR) became the majority shareholder with a 70% direct shareholding in Samancor Chrome Holdings (Pty) Limited. Through the years more furnaces were added and the plant currently consists of four (4) open and two (2) closed furnaces. In addition Ferrometals operates one metal recovery plant and an Intermediate Carbon Ferrochrome (IC3) converter. With technological progress in specialised steel production, the need for intermediate carbon ferrochrome gave rise to the development of a new concept at Ferrometals. In 1986, the commissioning of IC3 took place. This plant concentrated on altering the chemical composition of the metal extracted by the furnaces. The resultant product of this plant is intermediate carbon ferrochrome. IC3 has a capacity of 70 000 tons per annum.

Figure 3.8.1(b) illustrates the general process flow at Ferrometals. All raw materials used at Ferrometals are sourced locally within South Africa. The existing pelletizing plant produce, pre-reduced pellets (utilising Outokumpu technology) for use in the furnaces as replacement for primarily concentrate as well as Lumpy Ores. The final product is conveyed to the Furnaces Raw Material storage. From here it is loaded together with the other furnace ores.

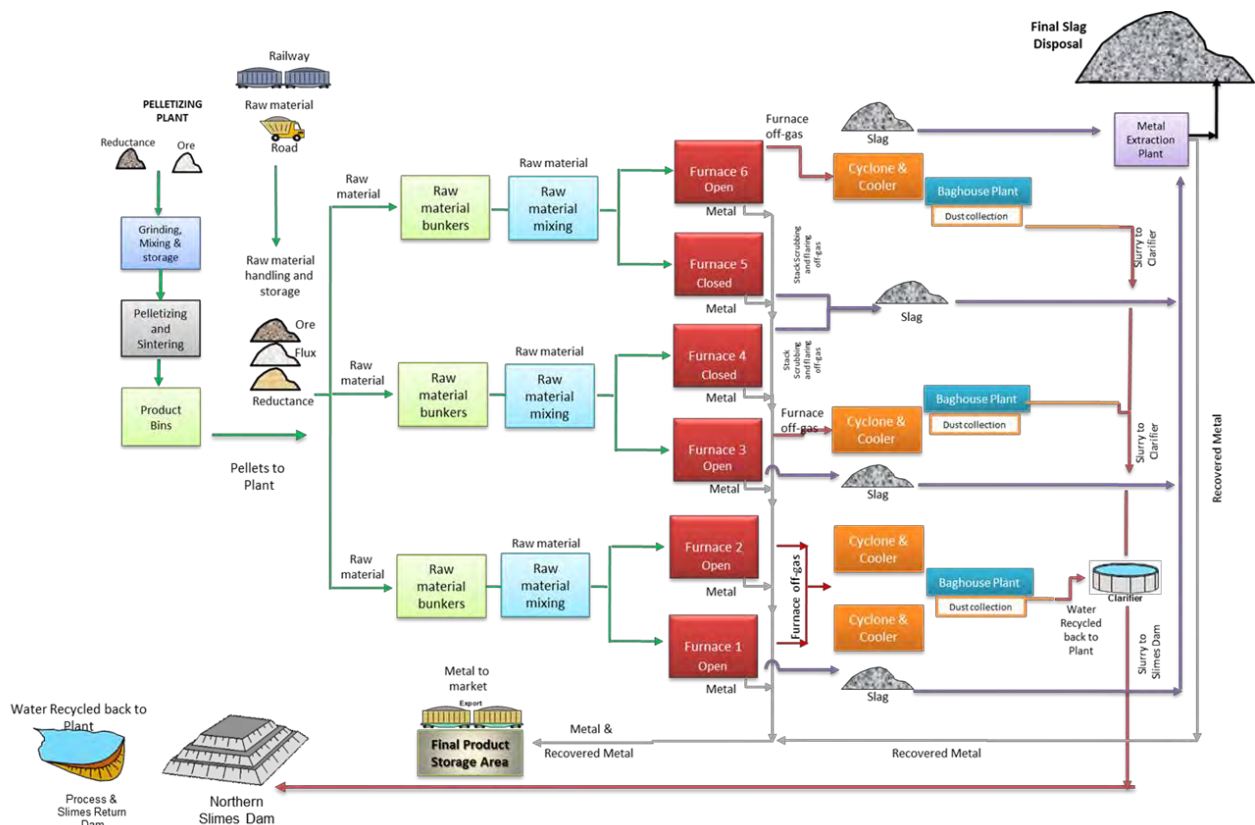


Figure 3.8.1(b): Process flow diagram.

The use of pellets holds several advantages for Ferrochrome production as a whole. It improves specific energy consumption through much improved chrome recovery, thereby increasing daily production for the same raw material throughput in the

furnaces. Furthermore it causes an inherent lowering in dust generation. Less slag is also generated, reducing dust generation due to slag handling to an absolute minimum. Very little dust is generated by handling of the pellets when loading or transporting due to its very high abrasion resistance. This is a direct result of the use of Bentonite, a high temperature binder used in the pelletizing process.

Each of the 6 Furnaces is charged by means of an automated Raw Material handling system. Electrical energy is fed to the Furnace by means of electrodes. Metal and slag are tapped concurrently from the Furnace into a separation point, utilizing a separator block and skimmer plate. The metal flows to the chill pans, while slag overflows to the slag pit, where it is withdrawn and further processed to extract trapped metal through the Chrome Recovery Plant. This process delivers clean slag suitable for concrete or road building applications. The Slag is then stored on the final Slag Dump from where it is sold for downstream use.

The liquid ferrochrome is cast into ingots or granulated in water or transferred to the IC3 Plant where it is converted into medium carbon ferrochrome. Once the metal has solidified, the metal ingots are removed, taken to mechanical break floors. The final products are stockpiles in final product storage area where is loaded and exported.

Gas Cleaning:

All four of the Open furnaces have a dedicated gas/air cleaning plant consisting of trombone coolers, dust cyclones and a high capacity bag filter plant.

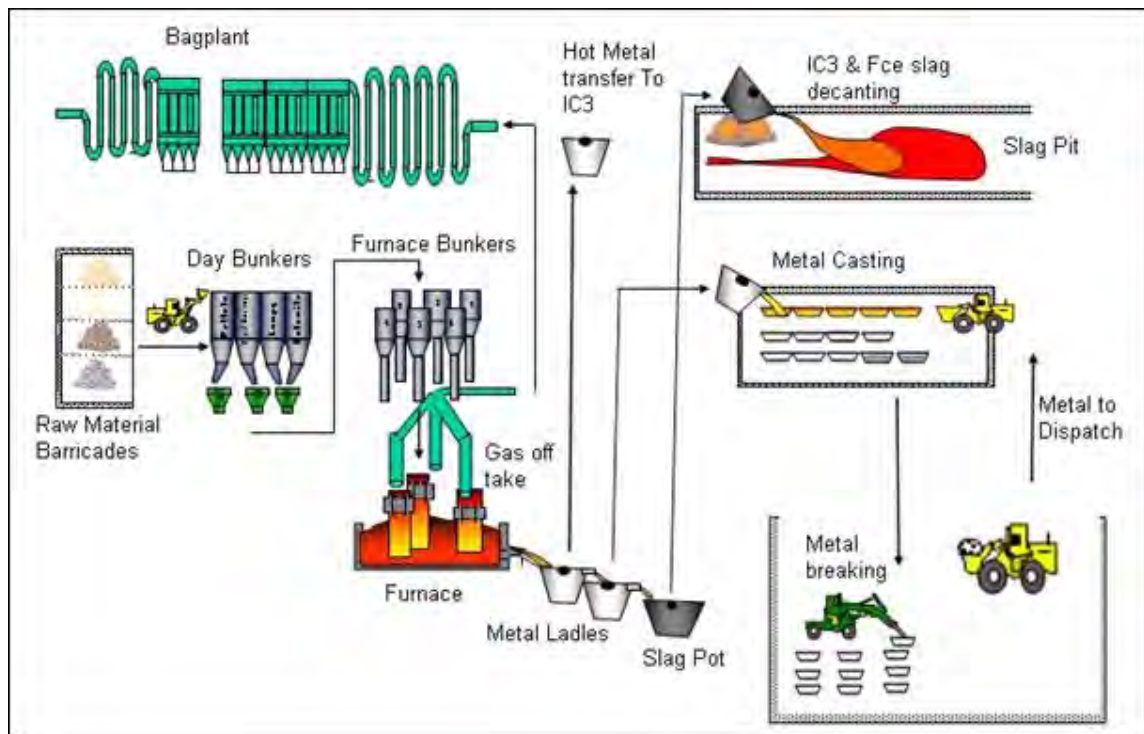


Figure 3.8.1(c): Open Furnace Process flow diagram.

The solid product from the air filtration operation is classified into two categories according to particle size. The Coarse particulate dust is separated from the main off-gas stream by high efficiency cyclones. This material is recycled to the furnaces. The stacks of the closed furnaces are scrubbed to clean and trap dust from the stack

(Figure 3.8.1(d). The Finer particulate matter is separated from the off-gas stream in a large bag filter complex. This material is then slurried to enable easy transport and minimize possible environmental impacts. The slurry is pumped to the ETP and the underflow from the ETP is pumped to the current existing Slimes Dam where deposition of the fine waste takes place. This equipment has been installed to ensure safe operation of the Furnace and conformance to air pollution standards.

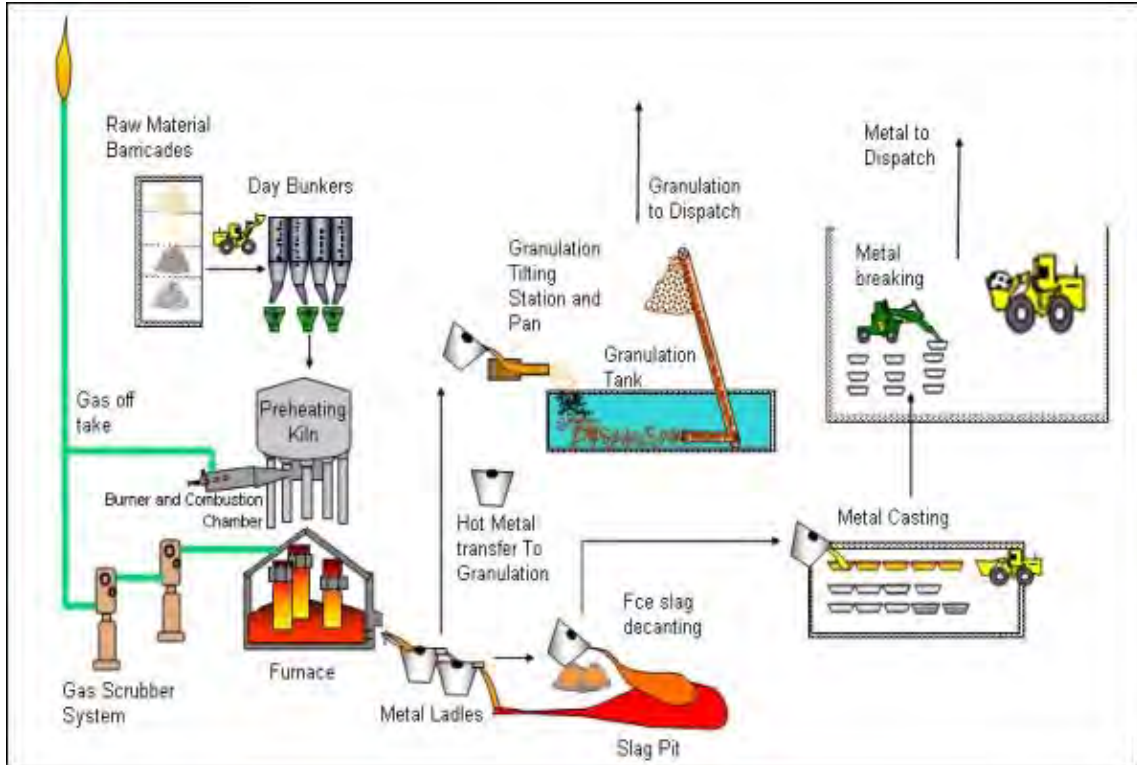


Figure 3.8.1(d): Open Furnace Process flow diagram.

Water is returned from the process water dam to slurry the solid particulates, collected in the furnace off-gas system and also to be used for cleaning and dust suppression.

3.8.2 Construction Phase

The Ferrometals Plant and associated infrastructure has developed progressively since 1959. As is typical for installations of this kind, the plant is in a constant process of maintenance, refurbishing, modernization and often expansion. The situation at Ferrometals is similar. The various projects conducted since 2008, has identified several upgrades that has to be performed to the existing Environmental Management Measures on the site, all of which will comprise some form of construction. In addition to these upgrading activities, **Ferrometals also intends to construct and commission a new Slimes Dam Facility and to decommission and close the current existing Slimes Disposal Facility.**

The measures contemplated, and the details related to the new Slimes Dam facility have been discussed in the previous sections. The main activities which could impact on the environment during the construction phases of the different activities are the following:

- Site clearance usually comprises the removal of vegetation and the stripping and stockpiling of topsoil.
- Site levelling could comprise cut and fill operations or even the import of external founding materials such as crushed stone aggregate.
- These preparations are followed by civil construction activities during which earth, steel and concrete construction activities occur.
- Construction sites are characterized by increased human activity as well as increased vehicular and construction equipment traffic.

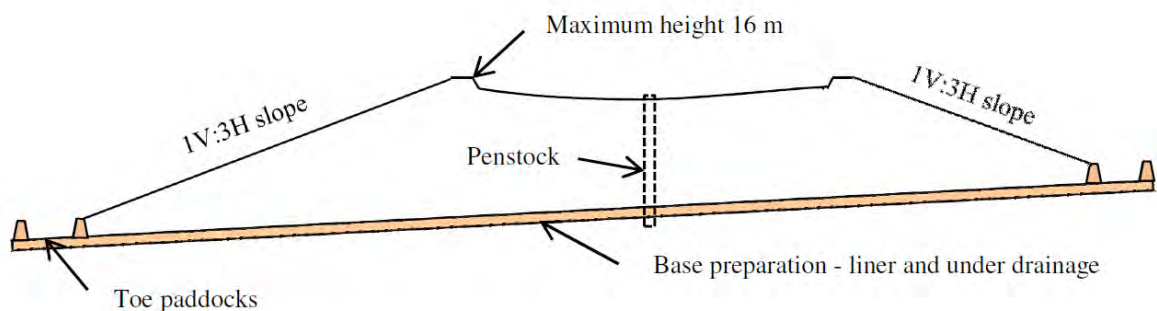
Apart from the obvious impacts on vegetation, animal life and plant life on these construction sites, impacts related to surface water run-off and quality, ground water quality, dust and noise are quite common during the construction phase if not managed properly. The construction phases of the different activities related to implementation of the EMP as well as the construction of the new Slimes Dam facility, will on an individual basis, not exceed 6 months.

Although construction will also be part of the decommissioning of the current Slimes Dam Facility the applicable construction actions will be covered under the closure phase.

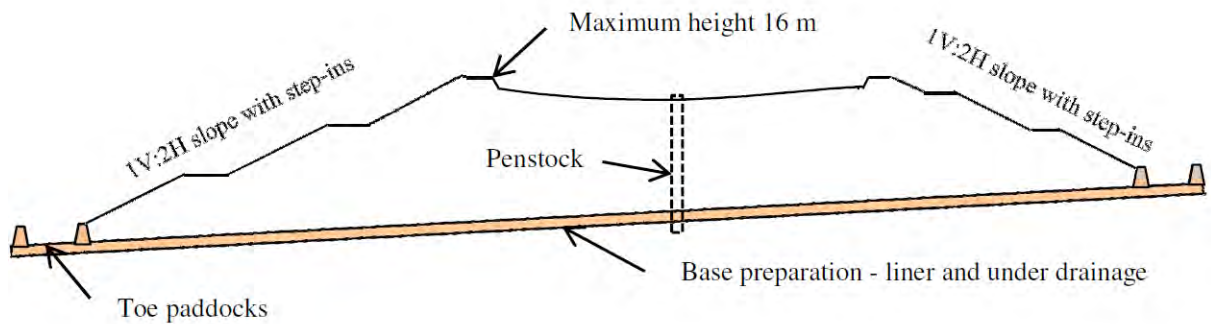
NEW PROPOSED SLIMES DAM

The current slimes production at Ferrometals is in the order of 3033 m³ per month but to be on the conservative and safe side allowance for 3100 m³ per month is made in the preliminary design phase. The expected remaining life of Ferrometals slimes production is 15 years from the year 2014 when the Northern Slimes dam will reach the end of its life. At an average slimes production rate of 3100 m³/month the minimum design capacity required is therefore 558000 m³, which is equivalent to a total volume of 741000 tonnes over a 15 year period.

Based on the production volumes for a 15 year design life, the characteristics of the slimes and the design parameters, it is calculated that a footprint area of about 7.85 ha will be required. With the side slopes at an average slope of 1V:3H the slimes dam will reach a maximum height of about 16 m at the end of its 15 year life time. The slimes dam can be constructed at either a constant side slope of 1V:3H or at a slope of 1V:2H with intermediate Ferrometals: step-ins to maintain an average slope of 1V:3H. The two possible cross sections of the proposed new slimes dam are shown in the figures below.



Option A: Typical Section through New Slimes Dam – Option A: Slope without Step-in.



Option B: Typical Section through New Slimes Dam – Option B: Slope with Step-in.

Either option A or Option B is acceptable from an environmental, economic and stability point of view. However, the final selection will depend on operational issues that will be finalised before the final design phase.

Due to the poor water quality in the slurry mix the footprint area of the slimes dam will be covered with an engineered hazardous waste lagoon liner consisting of the following layers in sequence from the top to the bottom as shown in Figure 3.8.2(a) below:

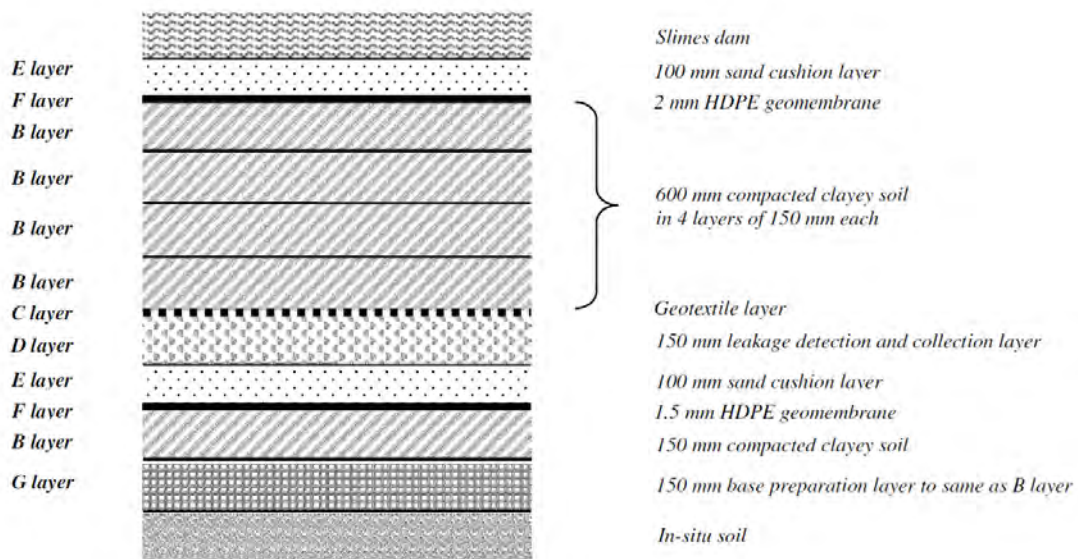


Figure 3.8.2(a): Proposed Lining System for New Slimes Dam.

Over and above the engineered lining and seepage detection, an under drainage system consisting of a toe drain along the perimeter of the day wall and a series of parallel collector drains across the width of the slimes dam will be installed. These drains will feed into a main collector drain, with manholes at appropriate intervals, on the lower western side of the slimes dam as shown in figure above. The main collector drain will then discharge into the collection/return water system to reticulate water back to the process.

3.8.3 Operational Phase

The activities related to the operation of the Ferrometals Ferrochrome Plant (including Slimes Disposal) have been described in some detail in the preceding sections. In general, however, the following activities during the operational phase should be considered for environmental impact assessment purposes:

- Air quality management measures generate large volumes of hazardous waste which has to be disposed of on the plant Slimes Dam (surface water pollution, ground water pollution and dust).

The operational phase management plans for land management, water management, waste management and air quality management are crucial in preventing significant impacts to the environment during the operational phase. The plant has been in operation since 1959 and will continue to operate for as long as there is a world market for ferrochrome.

CURRENT SLIMES DAM

The current operational Slimes Dam will be operated as per the operational procedures and standards until the new Slimes Dam facility has been constructed and able to be commissioned. The current indication is that this facility will run out of disposal by mid-2014.

NEW PROPOSED SLIMES DAM

Before the new slimes dam can be put into operation all the pre-deposition works need to be constructed. The pre-deposition works will entail the construction of the hazardous waste lagoon liner, including the seepage detection system, the internal drainage system, the paddock walls at the toe of the slimes dam, the penstocks with catwalk and decant system and the starter walls for the slurry deposition. It is proposed that the existing slurry pipelines be routed to the south-western end of the new slimes dam from where the slurry will be deposited from three or four discharge points situated initially on top of the western starter wall. The pool will be located close to the western starter wall from where excess water will be decanted via the first penstock to the new return water dam. Minimum freeboard of at least 800 mm plus allowance for the 1:50 year 24 hour storm needs to be maintained at all times.

The starter walls will be high enough to establish proper beaching and drying out of the slurry next to the starter walls. Dried out slimes will then be used to construct the day wall from the outer edge at the design slope in order to maintain the required freeboard and design geometry of the slimes dam. As the level of the slimes dam raises pre-cast concrete rings will be placed on the penstock in order to control the pool depth on top of the dam.

3.8.4 Decommissioning and Closure Phase

Final decommissioning and closure of a plant such as the Ferrometals plant, is a huge operation and comprise a host of activities which could impact on the environment. This phase should be carefully planned to ensure that the operational efficiency of various Environmental Management Systems active during the operational phase is not

compromised when the plant is shut down. This is particularly relevant to water management actions as the plant operation usually plays a significant role in the management of the plant effluent balance due to primarily cooling evaporation and consumption. For this process the focus is only on the Slimes Disposal aspects.

The following activities during the decommissioning and closure phase should be considered for environmental impact assessment purposes:

Decommissioning and Closure of the current Slimes Dam facility could take a number of years to complete. A realistic time frame would be somewhere between 2 and 3 years. The current indication is that the new proposed Slimes Dam will be operational for 15 years (depending on production and disposal volumes) after which a new facility will be required as part of expansion or the footprint will be closed.

CURRENT SLIMES DAM

The closure vision is to rehabilitate the current slimes dam in such a way that a sustainable post-closure land use is obtained through the application of BATNEEC principles. The objectives of rehabilitation and closure of the current Slimes Dam are to ensure that the site is:

- In a condition consistent with the post-closure land use objectives;
- Neither a danger to public health and safety nor animal health and safety;
- Not a source of on-going pollution of the environment;
- In an ecological and geophysical stable state;
- Aesthetically acceptable;
- Rehabilitated to the legal requirements and commitments stated in the EMP and
- Sustainable in the long term, with minimum post-closure intervention in the form of monitoring and remedial works.

The Northern Slimes Dam has been investigated and inspected and the following requirements for successful closure were identified:

- The side slopes need to be shaped and flattened for long term slope stability and erosion control;
- The top surface need to be filled with suitable material and contoured to prevent ponding of surface water;
- The penstocks need to be sealed off;
- A suitable capping liner needs to be installed to cover the whole slimes dam and footprint area;
- Storm water control measures i.e. drains, channels and down chutes need to be provided to accommodate the design rainfall event;
- Storm water channels need to be provided to discharge storm water into the receiving clean water drainage system;
- A seepage cut-off trench at the western toe of the slimes dam may be required to reduce ground water contamination through leachates;
- The existing solution trench needs to be modified to maintain the discharge of internal seepage water into the dirty water sump at the south-western corner;
- A suitable grass cover needs to be provided to minimise surface water erosion and dust blow-off;
- A maintenance system need to be implemented until grassing is established and

- A monitoring and control system needs to be implemented to verify improvement of ground water quality and cover integrity.

By addressing the closure requirements listed above the impacts related to dust blow-off and the contamination of surface water run-off and ground water pollution will be effectively mitigated. However, the footprint area of the rehabilitated slimes dam will not be available for industrial use as before the Ferrometals operations started.

Preliminary Design Criteria for the Current Slimes Dam

The following design criteria are applicable to the rehabilitation and capping of the slimes dam:

- The final footprint area after shaping and contouring of the dam must not impede existing buildings or infrastructure still in use – the final footprint area must thus be minimised to allow for other activities around the slimes dam to continue;
- Contouring and shaping of the slimes dam must be such that no ponding occurs;
- The capping/cover material must be able to prevent ingress of surface water and must be sufficiently erosion resistant against surface water run-off and wind;
- The side slopes of the slimes dam must have a Factor of Safety (FOS) of at least 1.50 against sliding and must not be steeper than 1V:3H;
- Storm water run-off resulting from the 1:100 year 24 hour storm duration must be accommodated through sufficient drains, canals, berms and chutes and discharged into the natural environment;
- Leachates through the foundation into the ground water must be continuously reduced and if required, a seepage trench at the toe of the slimes dam must be provided and;
- A suitable monitoring system must be provided to check the ground water quality around the slimes dam over a period of at least 30 years.

Proposed Capping of the current Slimes Dam

In terms of the H:H requirement the following capping as shown in Figure 8.3.4(a) is proposed:

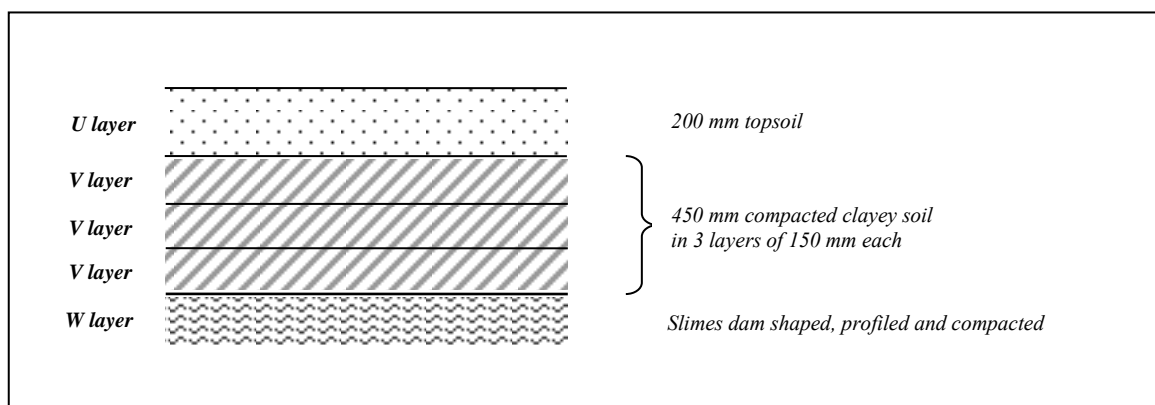


Figure 3.8.4(a): Proposed Capping for Current Slimes Dam.

The specification of the various layers is as follows:

- **U layer:** A 200 mm thick layer of topsoil planted with local grasses and shrubs. The layer must be lightly compacted after spreading.
- **V layer:** A compacted 150 mm soil cap layer. The soil used in the V layer must have a Plasticity Index of between 5 and 15 and a maximum particle size of 25 mm. This layer must be compacted to the maximum density reasonably attainable under the circumstances to ensure the required impermeability. The compaction must not be less than 85% of Proctor maximum dry density at a water content of Proctor optimum to Proctor optimum +2%. The saturated steady state infiltration rate into a compacted soil V layer must not exceed 0,5m/y, as measured by means of an in situ double ring infiltrometer test. The surface of every V layer must be graded initially at a minimum of 3% to shed precipitation.
- **W layer:** Shaped and compacted upper surface of the slimes dam.

Slope Stability

Due to the relatively steep side slopes of between 1:1.7 and 1:1.6 on the sides of the current slimes dam it is necessary to flatten the slopes and shape the dam to a suitable side slope of between 1V:3H and 1V:5H as per the minimum requirements and in order to control surface water run-off and erosion of the capping cover material.

At concept/preliminary stage it is proposed that the sides are worked off to a 1V:4H slope for easy construction access, erosion control and stability reasons, subject to the acceptability of the extended footprint area. The Factor of Safety against slope failure for the proposed profile with a 1V:4H slope is 1.99 which is higher than the required 1.50 for long term stability.

Surface water drainage control

In the conceptual/preliminary phase two possible options (A and B) were considered for the capping and closure of the current Slimes Dam (see Figures 8.3.4(b) and (c)).

In **Option A** the surface of the slimes dam is profiled and contoured at a slope of 1V:50H towards the penstock in order to utilise the penstock system to drain surface water from the top of the slimes dam to the external drainage system. The side slopes are profiled at a slope of 1V:4H and at the highest part of the slimes dam an intermediate bench is provided to reduce the flow path of surface water run-off along the side slopes. Storm water is collected in a channel along the bench and discharged via chutes to the storm water drain at the toe of the current Slimes Dam.

In **Option B** the surface of the slimes dam is filled up with imported material and contoured to have a rounded surface with slopes not exceeding 1V:50H. The penstock is to be sealed off and all surface water run-off is routed down the 1V:4H side slopes into a collection channel and then into the external drainage system. At the highest part of the slimes dam a bench is provided to intercept storm water run-off and discharge it via chutes to the storm water drain at the toe of the slimes dam.

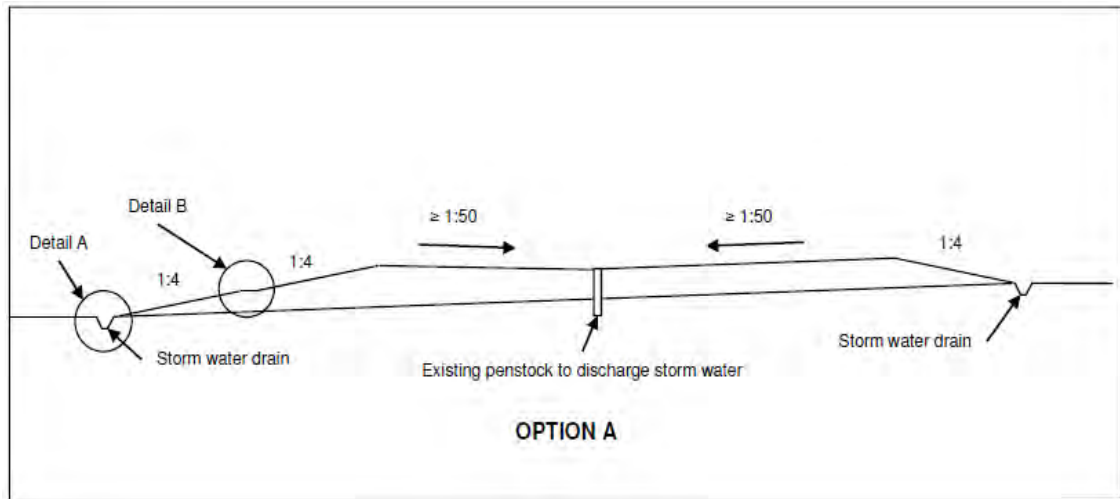


Figure 8.3.4(b): Option A – Discharge through Existing Penstock System.

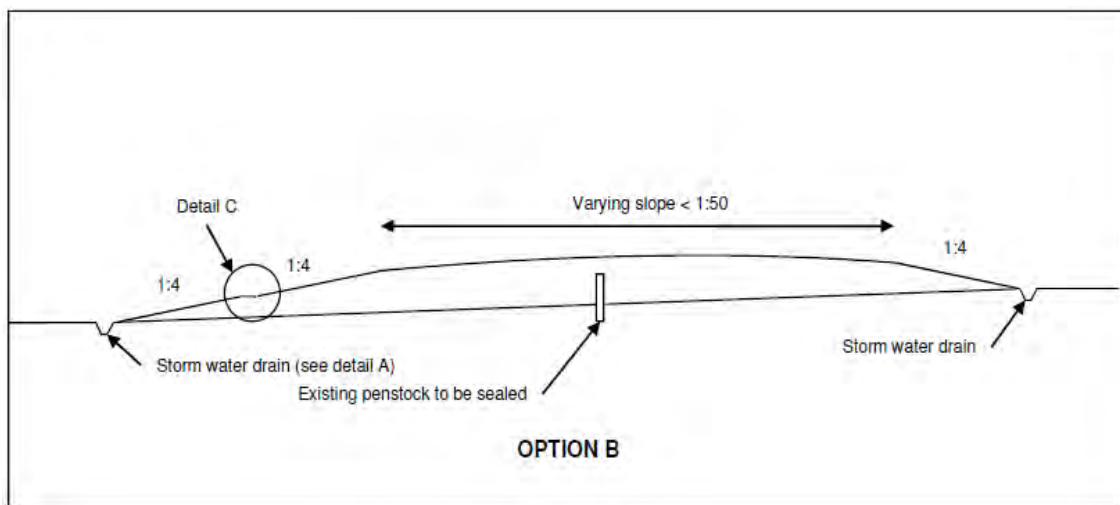


Figure 8.3.4(c): Option B – Discharge along Slopes of Rehabilitated Slimes Dam

The details of the storm water drain and the bench with storm water collection channel and chutes will be determined in the final design phase. From initial discussions held with the authorities it is evident that Option B is the preferred option as for Option A there is always the risk of blockages of the penstock, resulting in ponding and recharge of the slimes dam and an increase in leachates and seepage into the ground water system in the long term.

NEW PROPOSED SLIMES DAM

The new slimes dam will be rehabilitated by filling up the paddocks at the toe of the dam with a suitable inert waste rock or discard material. The material will be placed in layers not exceeding 500 mm at an external slope of 1V:3.5H against the slopes of the slimes dams as shown in Figure 3.8.4(a).

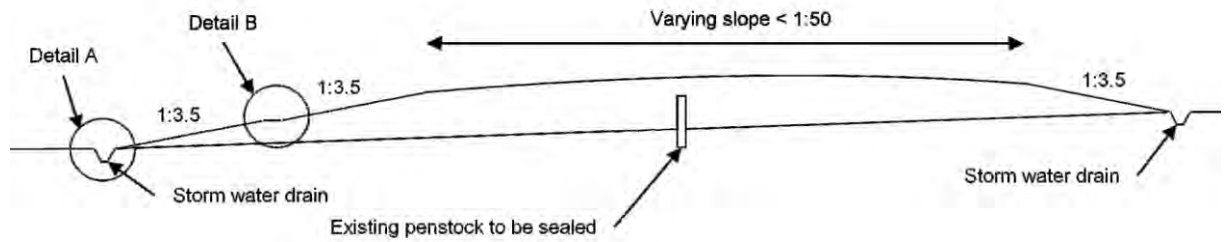


Figure 3.8.4(a): Details of Rehabilitation and Closure of the new Slimes Dam.

The current proposal is to construct a toe drain and benches and berms as shown in Details A & B respectively will be constructed at pre-determined levels in order to prevent erosion or instability problems. The outside surface of the fill material will be covered with a 450 mm layer of clayey soil, a further 200 mm layer of topsoil and then covered with a suitable grass. The area at the toes of the slimes dam will be contoured to prevent ponding and ensure proper run-off. All surface water from the slopes and toe area will be routed via a storm water drain as shown in Detail A to the clean water canal from where it can be discharged into the natural environment. The size of these canals will be determined and confirmed during the detail capping design phase at closure of the new proposed Slimes Dam.

3.8.5 Post Closure Phase

Indications at present (low level of operational phase impacts suggest very low level of residual post closure impacts) are that the post closure land use for the Ferrometals site, could resort back to industrial, recreational, business and even residential use. Apart from some modifications to the topography (like the rehabilitated Slimes Dams), a despite a slightly impaired agricultural potential and some slight impacts on ground water quality, the influence of the post closure environmental impact profile on post closure land use, is predicted to be low.

3.9 PROJECT ALTERNATIVES

3.9.1 Identification of Alternatives

Had the Ferrometals site represented a green fields locality, more alternatives would have been available for consideration. However, only the new Slimes Disposal Facility represents a new facility, the existing Slimes Disposal Facility to be decommissioned of course limits the alternatives especially in terms of site selection.

3.9.2 Assessment of Alternatives

Albeit somewhat belated, it was nevertheless decided to conduct an environmental **fatal flaw assessment** for the Ferrometals site and its immediate surrounds. It should be noted that the legal requirement for such an assessment did not exist when the site was first established in 1959.

The outcome of this assessment, although belated in the sense that existing facilities may not be able to be moved (e.g. existing slimes dam), would benefit the project in the sense that it could influence design considerations for activities if they were found to compromise any fatal flaw criteria.

The fatal flaw assessment was performed subject to guidance contained in the “Minimum Requirements for Waste Disposal by Landfill”. The assessment was performed by highlighting any potential fatal flaw from the list below, which was known to occur within the Ferrometals operational and immediate surrounding area, thereby ending up with a map that shows areas void of any fatal flaws.

In a green fields situation the map would be used to site activities within these fatal flaw free zones. In a brown fields situation the map would be used to identify activities for which the design criteria should be adapted to engineer for possible fatal flaw related complications.

The fatal flaw assessment for Ferrometals will be discussed with reference to the information shown on the map in Figure 3.9.2(a) below. This map was compiled based on information generated during the previous base line studies conducted for Ferrometals.

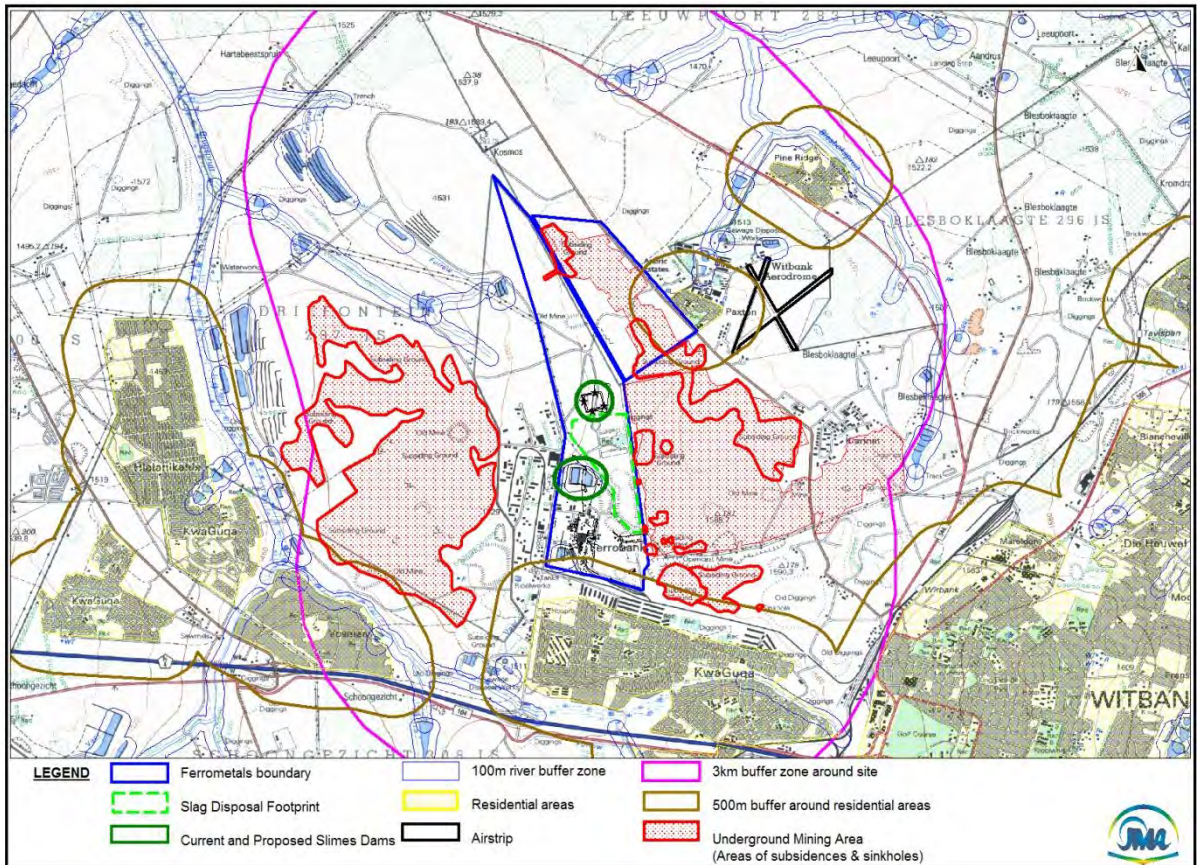


Figure 3.9.2(a): Fatal Flaw Assessment Map for Ferrrometals and Immediate Surrounds.

The following aspects representing potential fatal flaws, were considered for Ferrrometals:

- **3000 m from the end of any airport runway or landing strip in the direct line of the flight path and within 500 m of an airport or airfield boundary.** This is because certain activities could attract birds, creating the danger of aircraft striking birds.

Local Airfield is located some 3.94 km south-east from the site. The airfield is indicated with a green delineation on Figure 3.9.2(a). The site is not located in the direct line of approaching or departing aircraft.

- **Areas below the 1 in 50 year flood line.** This eliminates wetlands, vleis, pans and flood plains, where water pollution could result from certain activities.

Buffer zones were drawn along all the surface streams in the area and are shown as blue lines on Figure 3.9.2(a). No areas of concern exist.

- **Areas in close proximity to significant surface water bodies, e.g. water courses or dams.**

The Ferrrometals site is located in quaternary sub-catchment B11K. No surface water tributaries exist in the immediate surroundings of the Ferrrometals site.

- **Unstable areas. These could include fault zones, seismic zones and dolomitic or karst areas where sinkholes and subsidence are likely.**

The site does not have any natural unstable conditions related to geology or seismicity. However, extensive underground mining operations do occur along, and to the east of the Ferrometals site boundary. The underground mining areas are shown as a red highlighted zone on Figure 3.9.2(a). Underground mining does not represent a fatal flaw per se and provided that the relevant mining safety factor analyses is considered during the design phase.

- **Sensitive ecological and/or historical areas. These include nature reserves and areas of ecological and cultural or historical significance.**

No sensitive ecological areas, or sites of cultural or historical significance are present at Ferrometals. This has been confirmed during the various base line studies conducted in the past.

- **Catchment areas for important water resources. Although all sites ultimately fall within a catchment area, the size and sensitivity of the catchment may represent a Fatal Flaw, especially if it feeds a water resource.**

The Ferrometals site is located in quaternary sub-catchment B11K. The catchment feed into the Loskop Dam, a surface water reservoir located some 55 km downstream from Ferrometals. Although the catchment does feed into a surface water resource, the Ferrometals site being located here is not deemed as presenting a fatal flaw.

- **Areas characterized by flat gradients, shallow or emergent ground water, e.g. vleis, pans and springs, where a sufficient unsaturated zone separating the waste body and the ground water would not be possible.**

No areas with shallow or emergent ground water exist in the study area. Ground water levels in the area vary between 5 m and 12 m below surface with an average depth to the ground water table of about 5.5 m.

- **Areas characterized by steep gradients, where stability of slopes could be problematic.**

No such areas are present at Ferrometals.

- **Areas of ground water recharges on account of topography and/or highly permeable soils.**

Ground water recharge over the entire Ferrometals area is expected to be fairly uniform, except for areas in the plant where paving, concrete or tar surfaces have been put down. No special ground water recharge areas exist at Ferrometals.

- **Areas overlying or adjacent to important or potentially important aquifers.**

The ground water aquifers at Ferrometals can in general be classified as minor aquifer systems. However, areas with preferential ground water occurrence and flow could be associated with the contact zones of dykes and faults. These features have therefore all

been highlighted on the map in Figure 3.92(a). None of the mapped features appear to extend underneath the Ferrometals site.

- **Areas characterized by shallow bedrock with little soil cover. These are frequently also associated with steep slopes, which may be unsuitable.**

The entire Ferrometals site has an adequate soil cover which varies in thickness between 1m and 2m. No natural bedrock outcrops occur on site.

- **Areas in close proximity to land-uses which are incompatible with landfilling. Land-uses which are incompatible with landfilling would attract community resistance and would include residential areas, nature reserves and cemeteries.**

Residential areas have been delineated in yellow on the map in Figure 3.9.2(a). Although located within an industrial area, the Ferrometals site is surrounded by residential areas, the closest of which is some 230 m south of the site. The abundance of residential areas around Ferrometals, and proximity of the site to these areas, should be taken into consideration in the design of the EMP for the existing, as well as proposed new developments at Ferrometals.

- **Areas where adequate buffer zones are not possible.**

The buffer zone around the Ferrometals site is limited, especially towards the west, and south. The proximity of the residential and industrial/business areas should be recognized and provided for in the EMP for the various activities at Ferrometals.

- **Areas which, because of title deeds and other constraints, can never be rezoned to permit a waste disposal facility.**

The current zonings at Ferrometals are Industrial 2.

- **Areas immediately upwind of a residential area in the prevailing wind direction(s).**
- *Predominant wind directions for the study area appear to be northerly, westerly, east- and east-south-easterly.*
- **Areas over which servitudes are held that would prevent the establishment of a waste disposal facility; e.g. ESKOM or Road Department servitudes.**

All servitudes have been duly recorded as based on a detailed property base line assessment.

- **Any area characterized by any factor that would prohibit the development of a landfill except at prohibitive cost.**

This would be areas with specific engineering challenges. None identified.

- **Areas in conflict with the Local Development Objectives (LDO) process and the Regional Waste Strategy.**

Assumed that none would exist within the proclaimed municipal industrial area in which Ferrometals is located.

Fatal Flaw Assessment Conclusion

Three major aspects which should be considered based on the outcome of the fatal flaw assessment are:

- Adequate buffer zones around the Ferrometals site, with respect to residential land use, appears to be a concern. Being an existing facility, special care should therefore be taken to design the EMP to cater for this consideration.
- Zoning for areas where hazardous waste is currently deposited, might require rezoning.
- The civil engineering design for surface located features must take possible undermining into consideration.
- Based on the fatal flaw assessment a best proposed alternative footprint was identified directly north of the existing Slag Disposal Area. This footprint will be considered during the EIA phase of the project for the commissioning and construction of the new Slimes Disposal Facility (*Current indication the footprint needs to be designed for a life of 15 years*).



Figure 3.9.2(b): Best Alternative footprint (new Slimes Dam) and Existing Slimes Dam Footprint.

The following figure illustrates the two footprints (current slimes disposal to be closed and the new proposed Slimes Disposal Footprint area) on a photograph for visual orientation.



Figure 3.9.2(C): Best Alternative footprint (new Slimes Dam) and Existing Slimes Dam Footprint.

3.9.3 The No-Go Option

Ferrometals has been in operation since 1959 and contributes significantly to the socio-economic well-being of the area. The products produced are of strategic importance and contributes significantly towards foreign earnings for South Africa.

The activities related to this process for Ferrometals, and which are applied for in this application, are all designed to improve Environmental Management of the Site and to ensure continued operations. Should the operations not be allowed to be implement the new Slimes Disposal facility (no-go), Ferrometals will not be able to comply with its enviro-legal obligations but will also be required to close the operations as a Slimes Disposal facility is part of the overall process components.

The proposed new Slimes Disposal will contribute towards sustainable continuous growth for not only Ferrometals, but indeed also for Samancor Chrome as a whole, and as such also for the community at large. The no-go consequences for this project will seriously limit Ferrometals ability to implement continually improved technologies in support of sustainable growth and improved environmental management.

4. DESCRIPTION OF ENVIRONMENT

The EIA Regulations, published as GNR 544, in terms of NEMA (Act 107 of 1998), under the sub-heading of “Content of Scoping Reports”, specifies in section 28.(1):

A scoping report must contain all the information that is necessary for a proper understanding of the nature of issues identified during scoping, and must include -

(e) a description of the environment that may be affected by the activity and the manner in which activity may be affected by the environment;

4.1 CLIMATE

4.1.1 Current Status

The climate of the region is typical of the Eastern Highveld. During the summer the day time temperatures are in the upper twenties but cool down during the evening. In winter day time temperatures are in the upper teens dropping to near zero during the night. Frost occurrence during winter is common. The rainfall occurs mostly in summer – some 80% of the annual being recorded during this period. Although there is a distinct seasonal variation the evaporation is much more evenly spread during the year than the rainfall.

Ferrometals is located within the B11K quaternary sub-catchment, which has a Mean Annual Precipitation (MAP) of 684 mm and a Mean Annual Evaporation (MAE) of 1700 mm. The site is thus located in a moderate rainfall region with a Mean Annual Runoff (MAR) of about 60 mm, which equates to a runoff of approximately 9 % of the MAP. There is a considerable variation in MAP for rainfall stations in the catchment area, mainly due to different record lengths. However, the two nearest rainfall stations, Witbank Mag (0515382 - 58 years) and Witbank Mun (0515412 - 47 years), have a difference in MAP of only 18 mm or 2.5 %.

4.1.2 Manner of Potential Environmental Impacts

None of the activities forming part of the authorization process (Decommissioning and Closure of the current Slimes Dam or the new proposed Slimes Dam) will impact on the regional or local meteorology or climate of the area. However, the base line meteorological description is important in the sense that it does represent a critical environmental component for understanding and quantifying impacts related to inter alia surface water, ground water and air quality.

4.2 TOPOGRAPHY

4.2.1 Current Status

The site falls within the Mpumalanga Highveld region. The average elevation is 1,500 meters above mean sea level (mamsl). The topography is defined as moderately

undulating plains, and the landscape consists of gently rolling hills with scattered trees and grassland.

4.2.2 Manner of Potential Environmental Impacts

The activities occurring at Ferrometals have limited impact potential on the local topography. The buildings associated with the Ferrochrome Plant do alter the visual skyline but it cannot really be deemed to cause a topographical impact.

During construction of new facilities, the foundations are levelled. However, due to the flat topography of the site itself, even these cut and fill benching activities represent insignificant topographical impacts.

The only activities that do alter the topography to any significant degree, relate to the facilities used for Slimes Disposal, both of which represent landfill operations on site. These features start out on a dedicated footprint and then grow in height until they do represent “new” topographical features on site. The main impact associated with this relates to a change in surface drainage patterns around these areas, as well as a visual alteration evident to neighbouring or passing observers.

4.3 SOILS

4.3.1 Current Status

Both the old and new slimes dam sites are blanketed by brownish-maroon silty and clayey sand of various origins overlying residual soils derived from the in situ decomposition of shale and subordinate sandstone and coal measures of the Vryheid Formation, Ecca Group, Karoo Sequence. Percussion drilled monitor boreholes around the current slimes dam site provide the deep sedimentary section beyond that observed during the test pitting phase (< 3m) and the DPSH penetration tests.

The borehole data also provided the underlying geology which provided the basis for DPSH refusal – which was accepted to be hard sedimentary bedrock of either Vryheid shale or sandstone. The average soil and bedrock profile as estimated from the test pitting, penetration tests and monitor borehole data is given in the Table 4.3 below.

Table 4.3: Average Soil and Bedrock Profile.

Soil/Bedrock Profile	Origin	Ave. Thickness (m)	Depth Range from – to (m)
Loose to very loose brown-maroon recent soil	Silty/clayey sand of Various Origins	4	Surface to 4
Stiff brown-maroon clayey residuum grading into hard light beige-ivory sandy residuum	Derived from in situ decomposed shale	6	4 - 10
Beige shale intercalated with ivory coloured medium to coarse sandstone	Sediments of the Vryheid Formation	5	10 - 15
No. 2 Coal Seam,	Coal measures of the Witbank Coal Field	5	15 - 20
Beige to brown medium grained sandstone with grey shale lenses	Vryheid Formation sediments	5	20 - 25
No. 1 Coal Seam	Coal measures of the Witbank Coal Field	1	25 - 26

Beige – ivory sandstone	Vryheid Formation	4	26 - 30
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4.3.2 Manner of Potential Environmental Impacts

The extensive infrastructural developments required for the Ferrometals ferro-chrome smelting operations and associated activities, all imply that the existing soil profile could be compromised in a number of ways, during all the life cycle phases of the operations.

Soils stripping occur during the construction phases of all building activities. It is therefore reasonable to accept that the soils distribution profile for the entire Ferrometals works area has been, or will be, disturbed once all open areas have been developed. Construction of the storm water management infrastructure (canals and PCD's), construction of the Slimes Disposal Facilities, and even later extensions (not for current project) of the slimes disposal areas will result in soil stripping.

During the operational phase, soils are usually stockpiled or stored for later rehabilitation purposes. Unless storing is done properly, the soils could lose fertility, which will compromise their capacity for re-vegetation. Soil contamination as a result of spillages occurring during the operational phase, as well as due to poor storm water management, could also occur during the operational phase.

During rehabilitation, soils are used to topsoil rehabilitated areas. Aspects to consider during top-soiling relate to soil thickness, slope, compaction and moisture. Extensive erosion could result if the aforementioned are not dealt with adequately.

For the post closure phase, soils need to be re-vegetated as denudation will cause extensive erosion.

4.4 LAND CAPABILITY & LAND USE

4.4.1 Current Status

A detailed property assessment was performed by specialist Enviro-Legal Attorneys, for the purposes of this project. The full report, titled Memorandum: Environmental-Legal Considerations in Respect of Certain Properties of Samancor Ltd, will be attached as an **APPENDIX V** to the final Scoping Report.

The surrounding land use is predominantly industrial and residential. eMalahleni is a coal mining area with 22 collieries in an area no more than 40 km in any direction. There are also a number of power stations, a steel mill (Highveld Steel) and Vanadium Corporation nearby. The KwaQuqa residential areas are situated to the south and west of Ferrometals (approximately 6 km away). The village of Clewer is approximately 10 km to the south west of Ferrometals.

4.4.2 Manner of Potential Environmental Impacts

Ferrometals operations are all located on formally proclaimed industrial land. Certain areas especially to the north of the existing operation the land has not yet been altered

due to construction of infrastructure or for use of industrial purposes. The development of the proposed new Slimes Dam and related infrastructure (roads, canals), upgrades to the storm water and containment facilities / PCD's) will impact on the current land use in these, to now, undisturbed areas.

4.5 GEOLOGY

4.5.1 Current Status

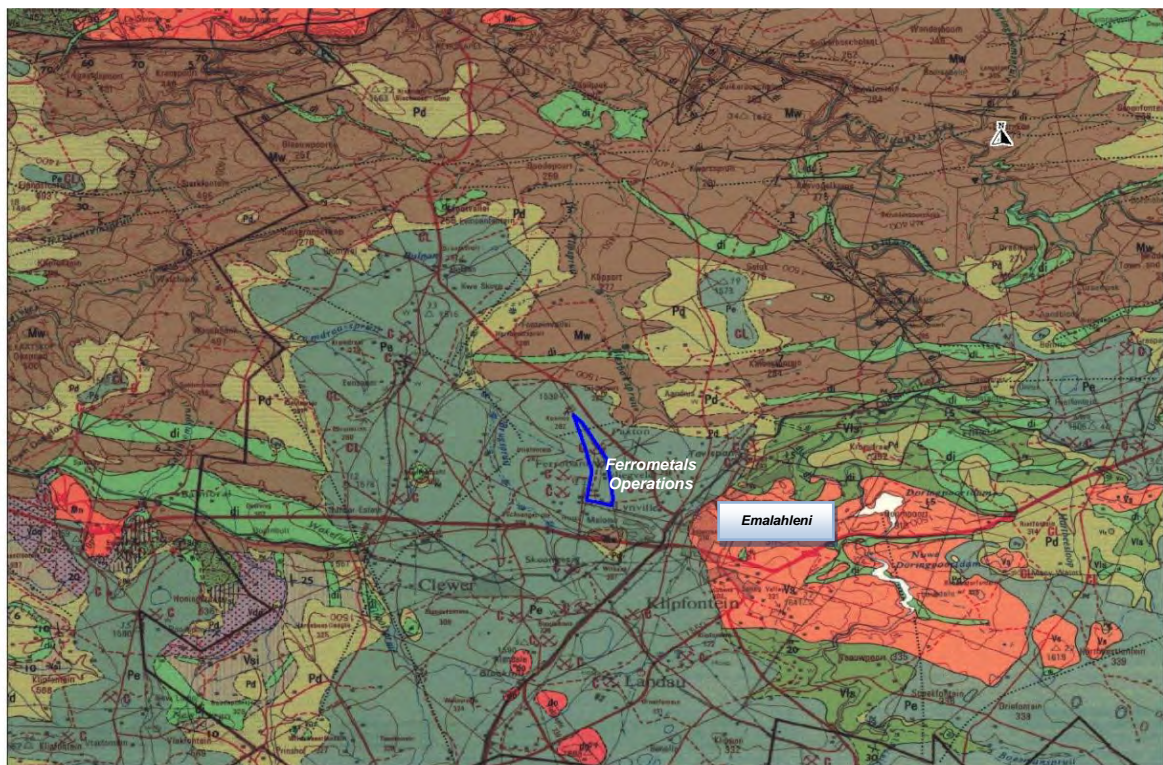
The regional geology is depicted on Figure 4.5(A). Ferrometals Plant falls within the Springs-Witbank Coalfield. A vast array of inoperative mines is situated around the Ferrometals Plant. The sediments of the coal bearing Ecca group of the Karoo sequence were deposited on an undulating pre-Karoo floor. This had a significant influence on the nature, distribution and thickness of many of the sedimentary formations, including the coal seams.

Ferrometals is close to the basement contact between rocks of the Bushveld Igneous Complex and sediments (sandstones, conglomerate) of the Waterberg Group. The basement rocks at Ferrobank are overlain by Karoo sediments of glacial origin (Dwyka Formation) which are themselves overlain by coal-bearing Ecca Group sediments. The so-called "No 1" and "No 2" coal seams occur throughout the vicinity.

The area around Ferrometals has been extensively mined for coal in the past and Ferrometals Plant is bounded by defunct coal mines. Middelbult Steam Coal Colliery lies just east of Ferrometals' eastern boundary while the T&DB Colliery is located approximately 1 km west of the western boundary of Ferrometals (Figure 4.5(b)).

It is important to note that portions of the Ferrometals site have been undermined (Figure 4.5(b)). From coal seam floor elevations presented in JMA (2004), the workings are 15 m to 20 m below surface.

According to JMA (2004), dolerite intrusions such as dykes, are not common in this part of the Witbank Coalfield and no known faults cross the Ferrometals site. Near the surface, the Ecca sedimentary rocks have been weathered to soil and clay (average thickness about 5 m, range 0 m to 16 m). The average depth of weathering is reportedly about 13 m (range 0 m to 28 m). Thick clay layers to a depth of 15 m below surface have been reported, especially in the south-west of the site.



do Dolerite	Mw Wilgerivier sandstone, quartzitic in places	Vsi Silverton: shale, carbonaceous in places
Pe Eccca: shale, shaly sandstone, grit, sandstone, conglomerate, coal in places	Mn Nebo granite: grey to pink coarse grained granite	Vdq Daspoort: Quartzite
Pd Dwyka: tillite, shale	Vls Loskop: shale, sandstone, conglomerate; volcanic rocks	Vs Selonsriver: Porphyritic amygdaloidal red rhyolite
di Diabase		

Figure 4.5(A): Regional Geological Map (1:250 000 Geological Map (2528 Pretoria)).

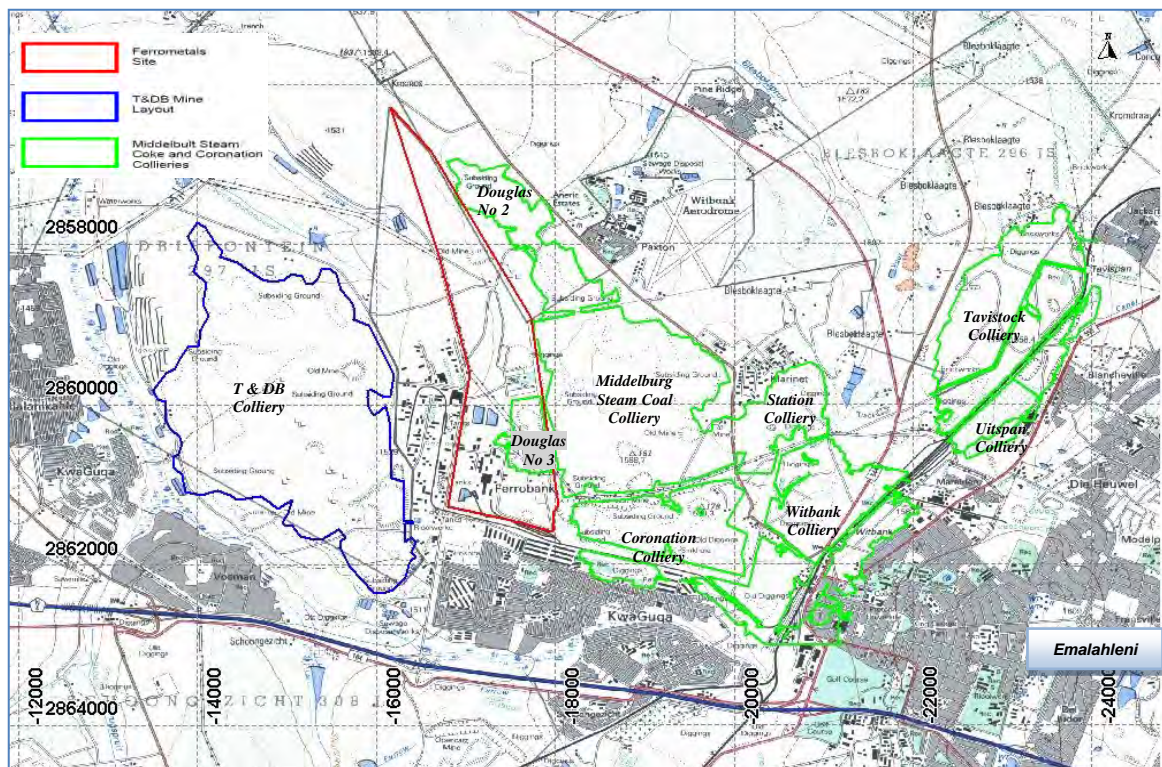


Figure 4.5(B): Historic defunct Underground Coal Mines layout map (Topographical Map 2529CC).

The discussion of the local geology of the area is based on a wealth of quantitative geological information. A number of studies have been conducted in the area over the years, of which the following serve as reference to the current geological description at the Ferrometals Plant:

- Department of Water Affairs, Directorate of Pollution Control, Report No. E B100/00/0290, Olifants River Catchment, Ferrobank, Report on Water Pollution Mitigation and Rehabilitation at T & DB Collieries, Report No. 1383/350/1/W, June 1990.
- Department of Water Affairs and Forestry, WQM/01/00, 2000, Blesbokspruit Catchment - Geohydrological Report for Acid Mine Drainage Collection and Conveyance System for Abandoned Mines.
- JMA, October 1997: Geohydrological Impact Assessment Ferrometals, Reference no. 10124.
- JMA, January 2004: Ground Water Baseline at Ferrometals (JMA/10243).
- Golder Associates, April 2006: Ground Water Situation Assessment at Ferrometals (8036/8305/1/G).
- Golder Associates, November 2007: Phase II Grounds Water Investigation at Ferrometals (8807/10801/1/G).

The Ferrometals Plant lies on the lower coal bearing layers of the Vryheid Formation that were deposited on the irregularly eroded northern margin of the Karoo Basin. Erosion has stripped off the upper Karoo rocks so that only the lower part of the Vryheid Formation is exposed at surface. Two major coal seams, namely the No.1 and No.2 Coal Seam are developed in the area. The geological setting as illustrated in the geological cross-sections, indicates the Ferrometals Plant to lie on a basal high between two depositional valleys and the interconnecting coal seams to pinch out.

Mining activities on the No.1 and No.2 coal seams in the Blesbokspruit and Brugspruit catchments, started some 100 years ago. Ferrometals is flanked to the west by the old Transvaal and Delgoa Bay Mine (T. & DB Colliery), is further partially underlain by the old Douglas No.3 Colliery and flanked to the east by the old Douglas No.1, and 2, Middelbult Steam, Coke and Coronation Collieries (Figure 4.5(b)).

Although underground mining ceased in the late 1940's and early 1950's, some mining activities of fringe coal took place between the mid-1970's and mid-1990's. Some mining activities are also currently taking place. The No.2 coal seam floor elevations for the greater Ferrometals area slopes from a northwest-southeast orientated ridge (1534 -1552 mamsl) along the central Middelbult Steam & Coke and Coronation Collieries, westwards in the direction of the old Transvaal and Delgoa Bay Mine (T. & D.B.), towards elevations ranging between 1467 and 1487 mamsl along the western bounds of this mine before eventually outcropping along the downslope to the Blesbokspruit.

This is clearly illustrated in the west-east orientated cross-sections that follow – Figure 4.5(c – g).

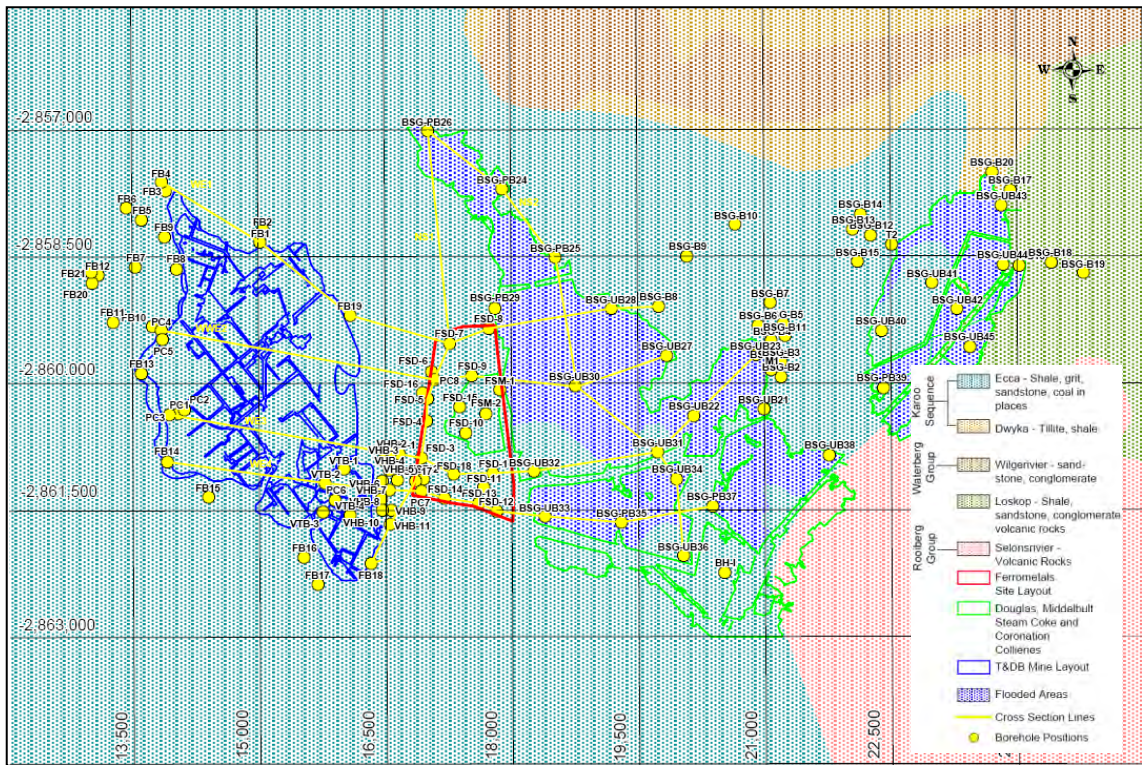


Figure 4.5(c): Local geology and east west cross-section line indication.

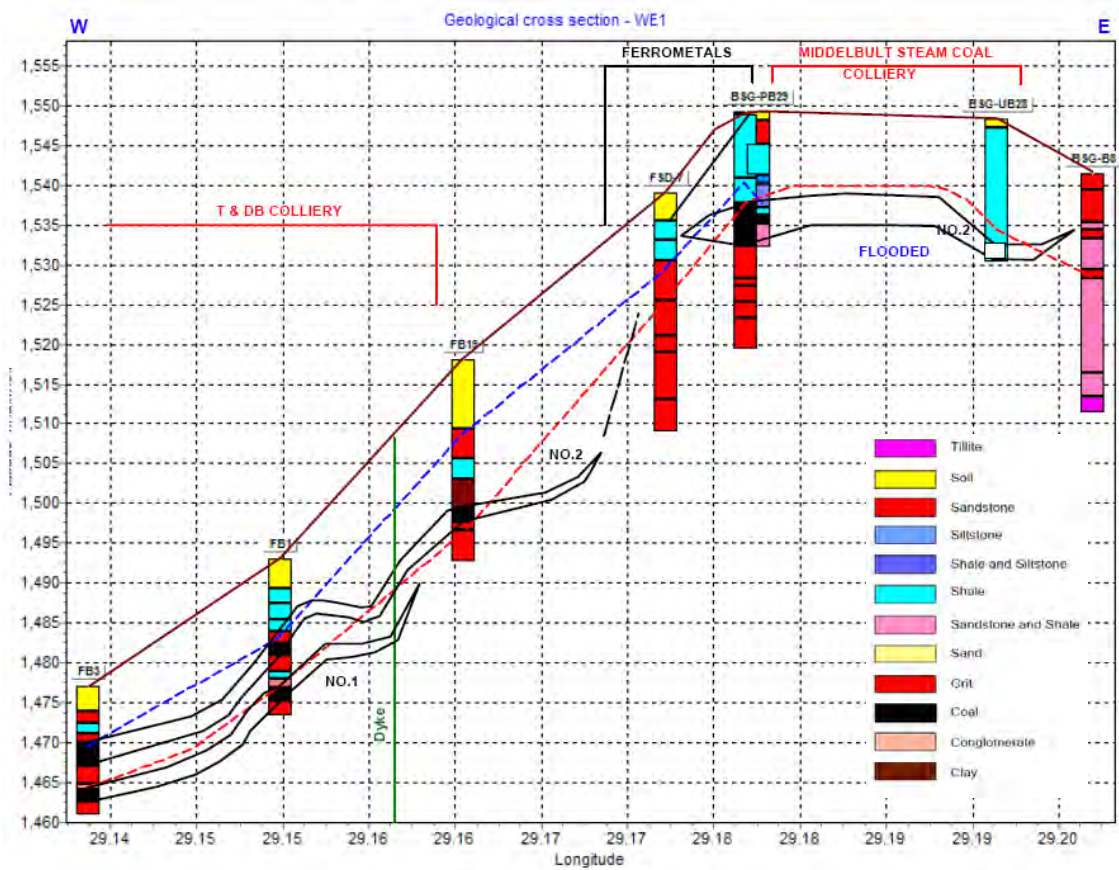


Figure 4.5(d): Cross Section West East – 1.

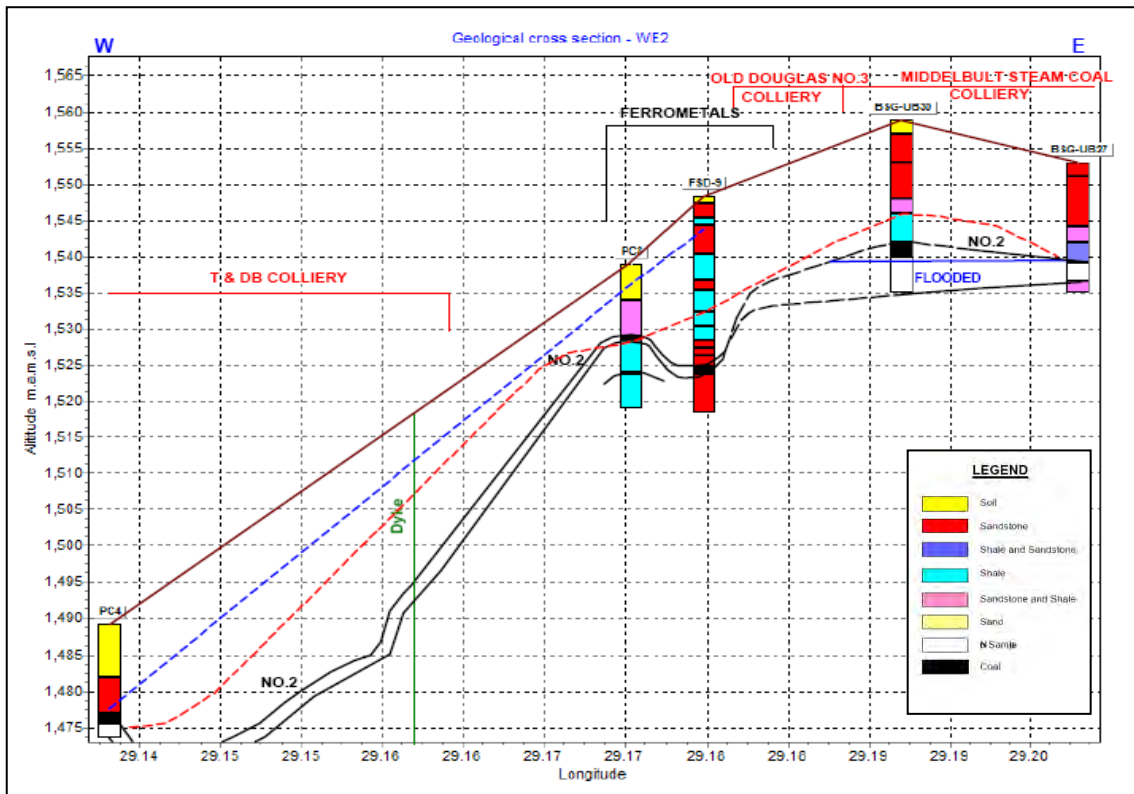


Figure 4.5(e): Cross Section West East – 2.

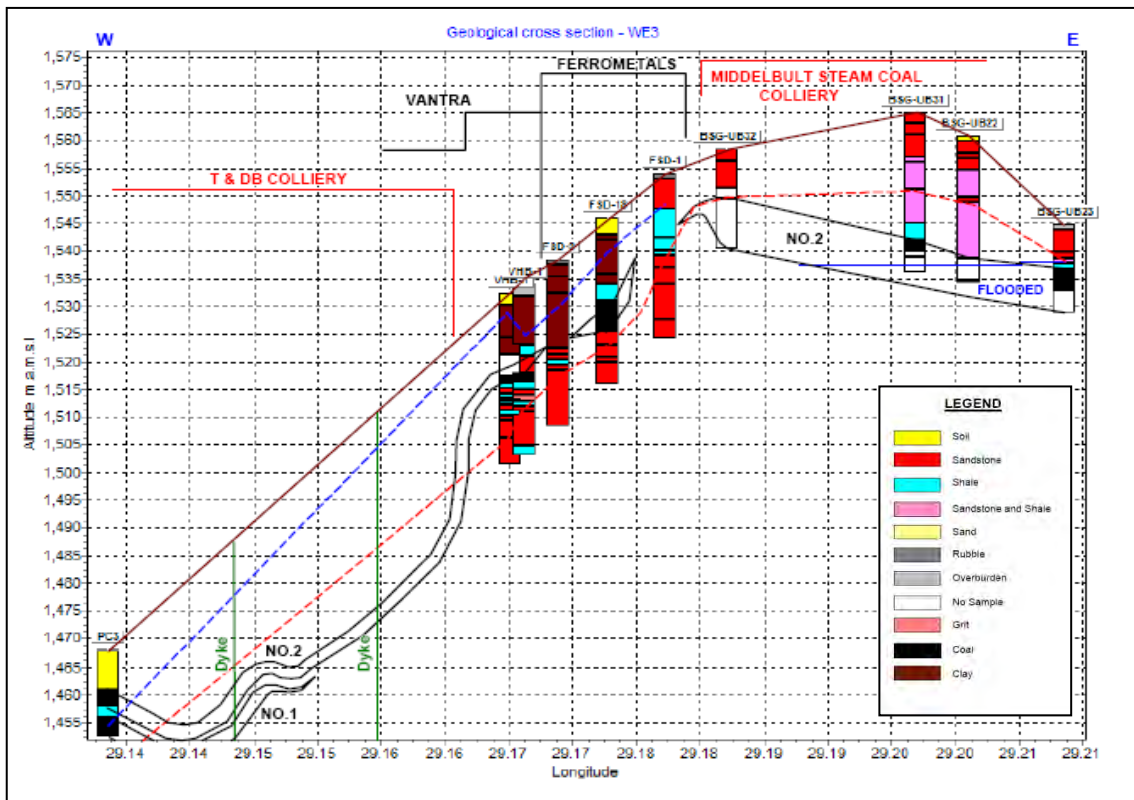


Figure 4.5(f): Cross Section West East – 3.

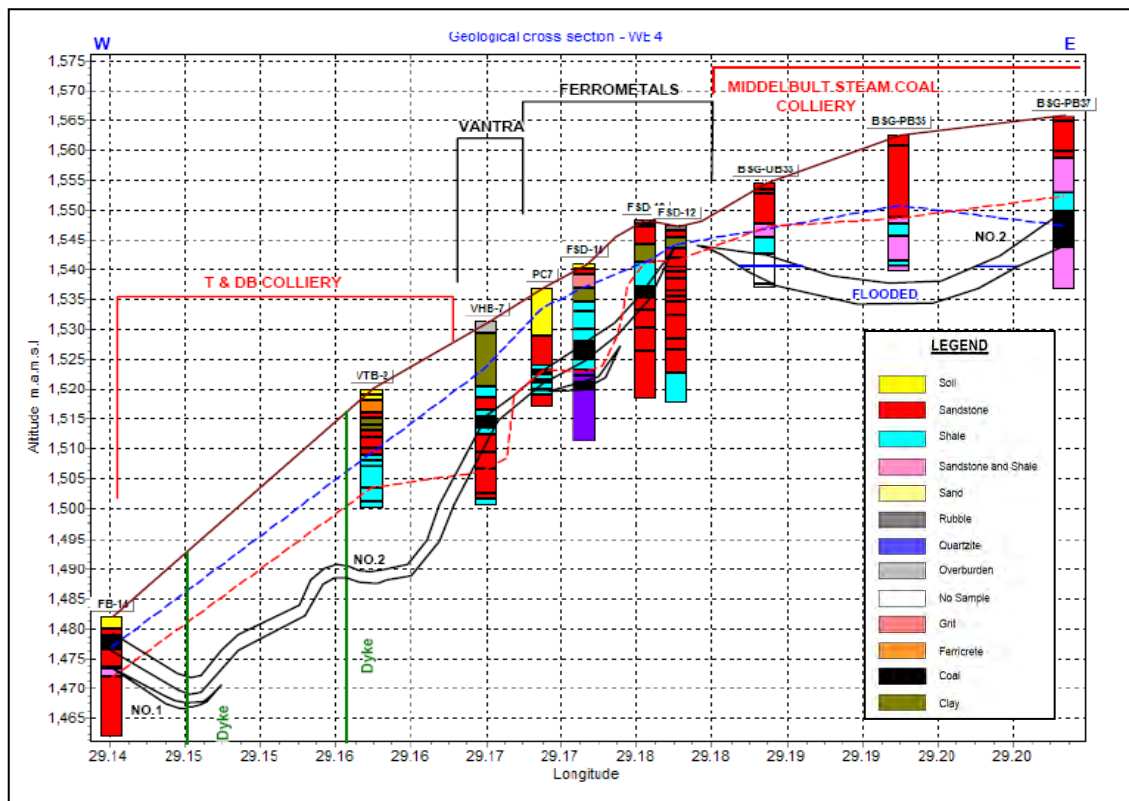


Figure 4.5(g): Cross Section West East – 4.

The geology underlying the Ferrometals Plant consists mainly of shales and sandstones belonging to the Ecca Group (Karoo Sequence). Underlying these are tillites / diamictites of the Dwyka Group, which represent the base of the Karoo sequence.

It is important to note that the coal seams were deposited right at the fringe of the Karoo basin. Being located right at the edge of the Karoo basin, dolerite intrusions are not as common as in the remainder of the Witbank Coal fields. No known faults occur in the area. A summary of the soil and clay profiles, based on the assessment conducted is given below:

	Profile Depth (m)		
	West of Site	East of Site	Underneath Site
Soil	4-16 Avg. 9,4	0,5-16 Avg. 6,72	0,5-15 Avg. 5,16
		Thick Clay: 2-16 Thins to the East: 1.13m	Thick Clay: 0,5-15
Weathering	3-22 Avg.11,91	5,5-21 Avg. 13,42	5,5-20 Avg. 12,86

4.5.2 Manner of Potential Environmental Impacts

Ferrometals is located within a stable geological environment. No disturbances due to Ferrometals activities will occur within the geological sequences underlying the site, neither is it expected that the underlying geology will influence any Ferrometals activity. The area is stable and it is not expected that neighbouring mining activities will cause any instability issues at Ferrometals.

However, of significance for waste management and the associated ground water quality management is the chemical composition of the weathered host rock underlying

the site. Percolation of surface recharge through the weathered geological horizons could dissolve metals from the geological host rock matrix and mobilize them towards the ground water table. Upon reaching the ground water table, these metals in solution could compromise the fitness for use of ground water resources.

4.6 GROUND WATER

4.6.1 Current Status

Regional Geohydrology

The regional aquifer host rock comprises primarily sediments (argillaceous and arenaceous) of the coal bearing Ecca group of the Karoo sequence that were deposited on an undulating pre-Karoo floor. The regional geological setting of the area indicates the possible existence of mainly two aquifer types in the study area:

- Shallow perched aquifer(s).
- Shallow weathered zone type aquifers.

The Department of Water Affairs' "Ground Water Resources of the Republic of South Africa, Sheets 1 & 2" indicates the following regional ground water aspects for the area under investigation:

- The probability of drilling a successful borehole (yielding more than 0,1 l/s) is 40 - 60 %.
- The probability of drilling a borehole yielding more than 2 l/s is 10 – 20 %.
- The mean depth to groundwater level is 10 m - 20 m.
- The storage coefficient for the area is < 0,002, and from 0,001 to 0,01, as is typical for compact sedimentary rocks, excluding dolomite and limestone.
- The mean annual recharge is indicated as 50 mm to 75 mm (7 - 10 % of the mean annual precipitation).
- The background groundwater quality in terms of TDS is < 300 mg/l.
- Based on Piper and Durov diagrams, the hydro-chemical type is indicated as Ca, Mg (HCO₃), with Ca and or Mg as the dominant cations and HCO₃ as the dominant anion.
- DWAF's, 1:500 000 "Hydro-geological Map Series of the Republic of South Africa", 1999,

Sheet 2526 is indicative of the following regional ground water aspects for the area under investigation:

- The mean annual precipitation is 600 mm - 800 mm per annum.
- The background groundwater quality is 0 - 70 mS/m.
- The borehole yield (excluding dry boreholes) is approximately 0,5 l/s - 2 l/s.

The aquifer(s) pertaining to the regional study area can be classified in accordance with "A South African Aquifer System Management Classification, Roger Parsons, December 1995. Further with reference to the "Aquifer Classification Map of South Africa" and "Definitions of Aquifer System Management Classes" the aquifers

Shallow Weathered Aquifer and 2 boreholes drilled into the underground mine workings underlying the site), sited, site or source specific, optimally to generate data pertaining to specific aquifer attributes. The site status has a historic component due to existing pollution from the surrounding mining area.

A total of 91 boreholes with geohydrological information surrounding the Ferrometals site, vary in depth (10.3 m – 42 m deep) with variable water strike, yield and permeability information were taken into account for the receiving environment description. The purpose of these boreholes are to generate geohydrological data, pertaining not only to the determination of local aquifer characteristics, but also to investigate/confirm the presence of any possible preferential flow zones as well as any sources that could have an impact on the ground water. The onsite disposal and storage facilities were used as guidance for the selection of borehole localities.

Perched Aquifer(s)

The interpretation of the geohydrological attributes of the perched water table aquifer(s) can be quantified at the hand of the information generated during the installation of 17 Perched Aquifer(s) monitoring boreholes, drilled to a depth of 5 m, in close vicinity (less than 5 m) of the Shallow Weathered Aquifer monitoring boreholes (30 m).



Figure 4.6(b): Shallow Perched Aquifer Monitoring Borehole localities.

Shallow Weathered Aquifer

The interpretation of the gehydrological attributes of the Shallow Weathered Aquifer can be quantified at the hand of the information generated during the installation of 26 Shallow Weathered Aquifer monitoring boreholes, drilled to a depth of 30.



Figure 4.6(c): Shallow Weathered Aquifer Ground Water Monitoring Localities.

Physical Aquifer Description

The following physical attributes of the aquifers underlying the Ferrometals Plant area will be discussed:

- Composition and physical attributes of the aquifer host rock.
- Aquifer types.
- Lateral aquifer boundaries.
- Aquifer thickness.

Composition and Physical Attributes of the Aquifer host rock

The following observations pertaining to physical attributes of the shallow weathered zone aquifer(s) within the receiving environment are of significance:

- The depth of the soil profile, varies between 0,00 m and 16,00 m, with an average of 3,55 m.

- The weathering depth of the formations, varies between 0,00 m and 28,00 m, with an average of 12,26 m.

Two aquifer zones exist underneath the Ferrometals site:

- (1) Perched Aquifer(s) Zone: The perched water table aquifer(s) present exist within the soft overburden zone and can therefore be described at the hand of the soil profiles observed during the drilling of the Perched Aquifer(s) monitoring boreholes (5 m) and the deeper Shallow Weathered Aquifer monitoring boreholes (30 m). The soil profile underlying the Ferrometals Plant ranges between 0,5 m - 15 m and has an average thickness of approximately 5,16 m, comprises a thick clay layer ranging in depth between 0,5 m and 15 m. When a low permeability layer forms the base of the soft overburden this horizon represents the perched aquifer zone. The clay layer is not common over the entire Ferrometals site.
- (2) Shallow Weathered Zone Aquifer: The shallow weathered zone aquifers present in the study area, comprise of the following geological formations: At depths 0,5 m and 15 m the aquifer consists mainly of a clay layer, including silt and shale layers, which forms the main aquifer and overlays the number 2 coal seam. A sandstone layer underlies the coal seam.

In summary therefore, the shallow weathered zone aquifers comprise of overburden material and highly weathered, weathered, fractured to fresh shale, coal and sandstone. The average weathering thickness observed in boreholes in the area, calculates to 12,45 m. These aquifers are hydraulically highly heterogeneous, as the varying degree of weathering of the different lithological units, result in a large variety of physical and hydraulic end products e.g. sand, clay and fractured shale etc. The old mine workings area also adds to the heterogeneity of flow in the aquifer.

Aquifer Types

The geological setting of the area, supplemented with the generated physical information, indicate the potential existence of two hydraulic aquifer types:

- Unconfined Aquifers, comprising of the Shallow Perched Aquifer(s).
- Semi-Unconfined Aquifers comprising of the Shallow Weathered Zone.

Lateral Aquifer Boundaries

Two types of lateral aquifer boundaries are anticipated to exist within the Ferrometals Plant property's zone of influence:

- Physical aquifer boundaries, such as impermeable dolerite/diabase dykes and sills, or other geological discontinuities, for example where layers pinch out or outcrop.
- Hydraulic aquifer boundaries, such as surface infiltration sources which usually represent constant head influx boundaries, streams which act as either ground water discharge boundaries (normal and low flow conditions) or as ground water infiltration boundaries (high flow and flood conditions), and ground water divides which act as no-flow boundaries.

Subject to all the aforementioned, the following observations pertaining to the delineation of lateral aquifer boundaries for the Ferrometals Plant property zone of influence are important:

- All surface water dams/ponds will most probably act as constant infiltration boundaries with ground water flow away from them within both the perched and shallow weathered zone aquifers. These boundaries are superimposed onto the regional ground water flow directions.
- The maximum lateral extent of the hydraulic influence radius associated with the Ferrometals Plant property and surrounding potential pollution sources, via their interaction with the perched and weathered zone aquifers, is delineated by the aquifer boundaries.

The Ferrometals Plant lies west of a watershed, where recharge from rainfall occurs in-between the Plant and this boundary. This does not form a no-flow boundary as the undermined area causes flow past the watershed towards the east in certain areas. A discharge aquifer boundary to the northwest is the unnamed tributary flowing into the Brugspruit. A non-perennial part of the Brugspruit form the southern boundary. The western boundary (discharge boundary) is the non-perennial Brugspruit. Towards the east the Blesbokspruit form the eastern boundary in the northern part, but since the area is undermined and a lot of subsidence and flooded areas occur in the southern part of the river, non-Ferrometals related pollution there have moved past the Blesbokspruit to the east.

Aquifer thickness/depth to Water Table and Fluctuations

The depths of the boreholes in the surrounding mining area are almost all drilled into the shallow weathered zone aquifer, ranging in depths from 10,3 m to 42 m. Water level information exists for the area east of the Ferrometals site (Blesbokspruit), as well as west of the Ferrometals site. At the time of the field survey, the depth to water table in the existing monitoring boreholes, ranged between 0 m and 24,11 m, averaging at 6,13 m below ground level.

Perched Aquifer(s) Zone:

The perched water table aquifer can be defined as representing one or more saturated zones perched within the soil profile, e.g. perched on pedogenic soils or at the contact between transported and residual soils, etc. or when a low permeability layer forms the base of the soft overburden, this horizon represents the perched aquifer zone.

The depth to the water table in the perched aquifer(s) zone, taking the holes considered to be basically dry out of the equation, ranged between 2,15 m and 5,00 m, averaging at 3,31 m below ground level. The perched aquifer water table may be attributed to recent rainfall and may not be observed during dry periods. The depths to the perched water table, as observed in the shallow boreholes in the area, are shown on Figure 4.6(d).

Figure 4.6(d) below shows the water level data gathered for 2012, measured in the FSS monitoring boreholes. Values indicated in red represent the measurements taken during the **February 2012** sampling run; the values in blue represent the measurements taken during the **May 2012** sampling run; values in green represent measurements for the

August 2012 sampling run and values in black represent measurements for the **November 2012** sampling run.



Figure 4.6(d): Ground water level data for 2012 – FSS monitoring boreholes.

Shallow Weathered Zone Aquifers:

The top of the unsaturated zone is defined by the original ground surface, while the bottom is defined by the water table, which represents a non-fixed boundary. The depths to water table for the weathered zone aquifers as observed in the boreholes on the Ferrometals site are shown on Figure 4.6(e). Depth to water table in all the newly drilled monitoring boreholes in the shallow weathered zone, ranged between 2,25 m and 11,75 m, averaging at 6,32 m below ground level.

The thickness of the saturated zone is defined by the water table at the top, and the depth of weathering at the bottom. Based on available information, the average depth of

weathering is 12,45 m. The saturated zone of the aquifer underlying the pollution sources at Ferrometals therefore varies between 2 m and 12 m. The thickness of the saturated zone is therefore taken as 10 m on average.

Figure 4.6(e) below shows the water level data gathered for the FSD monitoring boreholes (Values indicated in red represent the measurements taken during the **February 2012** sampling run; the values in blue represent the measurements taken during the **May 2012** sampling run; values in green represent measurements for the **August 2012** sampling run and values in black represent measurements for the **November 2012** sampling run).



Figure 4.6(e): Ground water level data for 2012 – FSD monitoring boreholes.

Aquifer Yielding Capacity

Twenty six out of sixty three boreholes on the Vantra industrial site and Blesbokspruit mining area yielded water ranging between 0,01 l/s and 25,5 l/s, the average yield being 2,14 l/s.

Water intersections ranged in depth between 2,5 m and 23 m, the average depth being 12,91 m. Nine of the thirty-seven boreholes drilled on the Ferrometals Plant property yielded water ranging between 0,13 l/s and 5 l/s, the average yield being 1,351 l/s.

Water intersections pertaining to these nine boreholes ranged in depth between 6 m and 27 m, the average depth being 13,5 m. The higher yields observed and recorded in boreholes FSD-6 and FSM-2, can mostly be associated with the pond being situated next to borehole FSD-6, and in the case of FSM-2, with the borehole being situated in the abandoned mine workings area, which is mostly filled up with water.

Details of the ground water impact will be provided during the EIA phase of the project.

4.6.2 Manner of Potential Environmental Impacts

Due to the fact that very limited abstraction of ground water occur at Ferrometals, the Ferrometals operations are not deemed to pose any significant threat to the availability of ground water in the area. The existing base line information also suggest a limited ground water quality impact to be associated with the Ferrometals activities.

However, several Ferrometals related activities do have the potential to impact on ground water quality. In each instance the ground water quality impact could occur if contaminants in solution percolate into the subsurface, through the unsaturated zone and then into the ground water resource. These impacts could occur at raw materials stockpiles, in plant areas due to spillages of raw materials, additives and process waters, at the slag disposal facility, at the slimes disposal facility and from storm water pollution control dams which contain affected storm water.

In order for these impacts to manifest, a number of conditions need to be present such as contaminants in solution, a permeable footprint interface with the sub-surface as well as a hydraulic driving force (head) from the source towards the ground water resource.

In the event that contamination of the ground water resource do occur, a ground water pollution plume could manifest that could impact on the surrounding ground water receptors and streams in the area.

4.7 SURFACE WATER

4.7.1 Current Status

Ferrometals is located within the B11K quaternary sub-catchment, which has a Mean Annual Precipitation (MAP) of 684 mm and a Mean Annual Evaporation (MAE) of 1 700 mm. The site is thus located in a moderate rainfall region with a Mean Annual Runoff (MAR) of about 60 mm, which equates to a runoff of approximately 9 % of the MAP.

Several rain gauges are located within the catchment area. The rain gauge situated at Witbank Municipality (0515412) covers the longest period and was used as a primary source of rainfall data. The recorded rainfall data indicates that the site is not prone to high rainfall intensities. Over the 47 years of daily rainfall analysed, the 1:50 year 24 hour storm rainfall event of 113 mm was exceeded on only three occasions, whereas the 100-year 24 hour storm rainfall event of 127 mm has never been exceeded.

The site is located within the Brugspruit sub-catchment but is buffered from the Brugspruit by the defunct Transvaal and Delegoa Bay (T&DB) Colliery. A local watershed between the Brugspruit and the adjacent Blesbokspruit is located just east of the eastern boundary of the Ferrometals plant site.

The Brugspruit mainly originates to the south of Ferrobank within the Highveld Steel, Clever agricultural holdings and Landau Colliery areas. One branch of the Brugspruit also originates from the KwaGuqa area, a suburb of Witbank just south of Ferrobank, next to the N4 highway. The Brugspruit flows northwards until its confluence with the Klipspruit. The Klipspruit flows in a north-easterly direction until its confluence with the Blesbokspruit, from where it flows into the Wilge River, upstream of Loskop Dam.

Detailed descriptions of the sub-catchments impacted by Ferrometals and Local Surface Water/Storm Water Characterisation at Ferrometals will be presented in the EIA reports.

Ferrometals is located within the Olifants Water Management Area (WMA) and, more specifically, in the Upper Olifants River catchment also known the Loskop Dam catchment (Figure 4.7(a)). The Upper Olifants River catchment comprises the large urban centres of Witbank and Middelburg, as well as several smaller towns associated with localised steel industries, coal fired power stations and coal mines.

The catchment comprises the drainage areas of the Olifants, Klein Olifants and Wilge rivers with tributaries down to the Loskop Dam. The headwaters of these rivers are located along the Highveld Ridge in the Secunda-Bethal area and the rivers then flow in a northerly direction towards Loskop Dam. The total catchment area is approximately 12 285 km², sub-divided into the drainage basins as summarised in Table 4.7(a).

Table 4.7(a): Catchment areas and runoff from drainage basins upstream of Loskop Dam.

Drainage basin	Catchment Area (km ²)	Naturalised Mean Annual Runoff (million m ³ /annum)
Olifants River, upstream of Witbank Dam	3 256	125.1
Olifants River, downstream of Witbank Dam and Middelburg Dam	2 905	180.4
Klein Olifants River, upstream of Middelburg Dam	1 401	43.8
Klipspruit	376	11.2
Wilge River	4 347	130.4
TOTAL	12 285	490.9

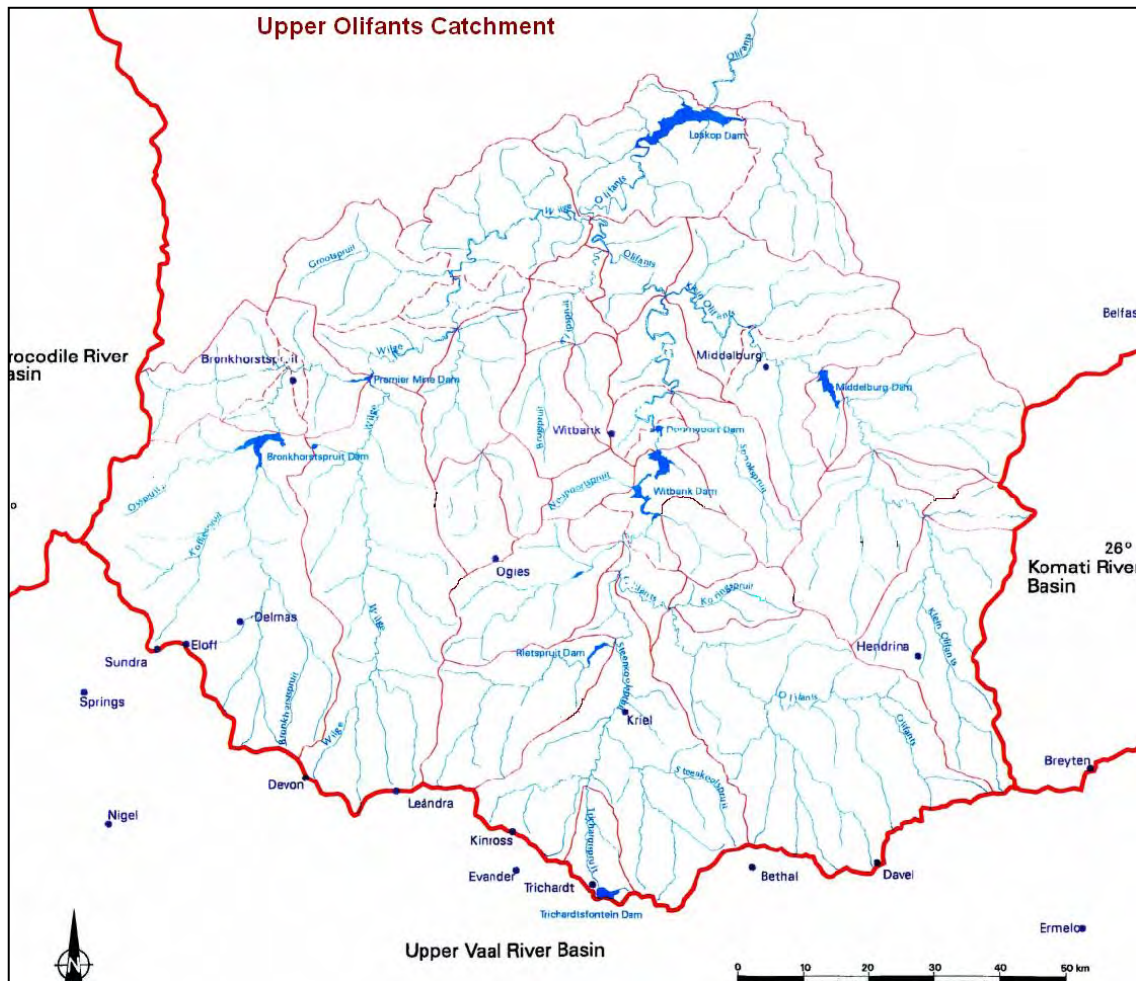


Figure 4.7 (a): Delineation of the Upper Olifants catchment.

The main catchment is further divided into the following sub-catchments:

- Witbank Dam sub-catchment;
- Middelburg Dam sub-catchment;
- Wilge River sub-catchment;

- Klipspruit sub-catchment; and
- Lower Loskop Dam sub-catchment.

The Upper Olifants River water resources are under constant pressure from both a supply/demand perspective as well as from a water quality perspective.

More detail regarding the Surface Water will be provided during the EIA phase of the project with specific reference to the activities applied for authorization.

4.7.2 Manner of Potential Environmental Impacts

The existing Slimes Dam and proposed new Slimes Dam facilities at Ferrometals can potentially impact on both the availability and quality of surface water. Impacts on surface water can occur during all the life cycles of a ferrochrome plant. The moment that soils stripping starts, the run-off characteristics of the surface water catchment will start to change, with potential impacts on both the availability and quality of surface water. During the operational phase, the plant will comprise clean and dirty storm water areas. If the operational plant storm water balance is not managed properly, contaminated surface water can spill from containment facilities and enter the surrounding surface streams as contaminated run-off.

The water captured and contained by the storm water management measures, will of course be isolated from the natural catchment and will represent an impact on surface water availability. Post closure the surface water impact will become very small provided that rehabilitation is optimized to ensure free draining run-off of good quality.

5. ENVIRONMENTAL ISSUES & IMPACTS

The manner of impacts that could possibly occur as a result of the decommissioning and rehabilitation of the existing Slimes Dam facility and the proposed construction of a new Slimes Dam footprint at Ferrometals have been listed in Chapter 4 of this report, and will now be summarized below.

The impacts listed below have been identified by the Environmental Impact Assessment Project Team in collaboration with the authorities and the public, during the scoping phase of this project.

The impacts and issues identified to date and reflected in the Table below, will only be finalized after comments have been received back from the IAP's on this Draft Scoping Report.

5.1 DESCRIPTION OF IDENTIFIED ISSUES AND IMPACTS

The range of impacts that have been identified to date and that could possibly occur during all the life cycle phases of the decommissioning and rehabilitation of the existing slimes dam facility and the proposed construction of a new slimes dam footprint, are listed in Table 5.1(a) below:

Manner of Potential Environmental Impacts		
Environmental Attribute	Decommissioning & Rehabilitation of Existing Slimes Dam Facility	Construction of New Slimes Dam Footprint
Meteorology	No Impact	No Impact
Topography	Change in local surface topography slopes due shaping and closure activities of the existing facility.	Local change in surface topography slopes due to foundations and levelling for Slimes Dam Construction.
Soils	Impact relates to possible residual soil contamination if facilities not rehabilitated properly. Sourcing of soil for rehabilitation purposes.	Disturbance of soil profiles for footprint construction of new Slimes Dam and storm water canals. Possible soil contamination if facilities spill during operational phase. Possible impact on soil fertility if not stored properly during operational phase.
Land Capability & Land Use	Zoned for Industrial use. No Impact as it will be used for industrial. Post closure it will still be viable for either industrial, business or even recreational. Not ideal for residential and will not support agricultural.	Zoned for Industrial. No Impact as it will be used for industrial. Post closure not ideal for residential and will not support agricultural.
Geology	No Impact	No Impact
Ground Water	No impact on availability of ground water. The decommissioning & rehabilitation activities to be authorized are all aimed at preventing ground water quality impacts. However, if these activities are not designed and constructed properly, they could contaminate the ground water resource.	No impact on availability of ground water. New Slimes Dam can only impact on ground water quality if the facility is not designed and constructed properly, it can contaminate the ground water resource.
Surface Water	Storm water management will isolate some run-off (dirty water initially and clean run off after implementation) from the initial decommissioned footprint, thus impacting on the availability of surface water. If facility is properly capped this impact can be reduced.	Storm water isolated from the new Slimes Dam facility (becomes part of the dirty water area) will be removed from the receiving catchment as it will be captured part of the storm water management system. If the process water PCD or the conveying canal should spill, the receiving surface water resource could be contaminated.
Plant Life	No Impact, existing footprint. Although the footprint once capped will be fully rehabilitated and re-vegetated after closure, the increase in weeds and invader species during the re-establishment period is a given if they are not monitored and controlled effectively. Depending on the success of the re-vegetation program, the post rehabilitation vegetative potential could be affected.	The vegetation within the footprints of the new Slimes Dam disposal area will of be fully destroyed during construction and operational activities. Dust fallout can of course also impact on vegetation in neighbouring and in downstream wetland areas. Although the footprint and adjacent areas will be fully rehabilitated and re-vegetated after closure, the increase in weeds and invader species during the re-establishment period is a given if they are not monitored and controlled effectively. Depending on the success of the re-vegetation program, the post rehabilitation vegetative potential could be affected.
Animal Life	The Ferrometals plant and adjacent waste disposal	The new Slimes Dam and adjacent areas will be fenced

	<p>areas are fenced in for security purposes and the majority of the surface vegetation within this area has been destroyed or disturbed by the production and associated activities. Large sections of the site have been lighted during night time. All these activities influence the availability and nature of habitat for the faunal life of the area. Currently the fencing will restrict the migration routes for larger animals in the area.</p>	<p>in for security purposes and the majority of the surface vegetation within this area will be destroyed or disturbed by the proposed new Slimes Dam and associated activities. All these activities will of course influence the availability and nature of habitat for the faunal life of the area. The fencing will restrict the migration routes for larger animals. Post closure, the situation could improve depending of course on the post closure land use.</p>
Aquatic Ecology	<p>The manner of potential impacts on the wetland systems relate to the availability and quality of the surface water and ground water which feed these systems. The interception of surface water during the operational/implementation phase activities will not impact significantly on these the aquatic features. No wetland or sensitive areas currently identified around the Slimes Dam Facility.</p>	<p>The manner of potential impacts on the wetland systems relate to the availability and quality of the surface water and ground water which feed these systems. The interception of surface water from the new Slimes Dam area during the operational phase activities will not impact these aquatic features. Any surface water and/or ground water pollution entering these systems will also impact their current status. No wetland or sensitive areas currently identified around the Slimes Dam Facility.</p>
Air Quality	<p>Due to the nature of activities at the current Slimes Dam (during closure), air quality impacts associated with the activities relates to fugitive sources, occur.</p> <ul style="list-style-type: none"> o Fugitive emissions comprising primarily as wind generated dust from roads, stockpiles, dumps and slimes dams. Dust is also generated during closure construction phase activities when shaping of the facility occurs. o Secondary gaseous emissions from vehicles. <p>Post closure the air quality impacts cease to exist, provided that rehabilitation and re-vegetation is completed satisfactorily.</p>	<p>Due to the nature of activities at the new Slimes Dam, air quality impacts associated relates to fugitive.</p> <ul style="list-style-type: none"> o Fugitive emissions comprising primarily dust occur from secondary sources such as wind generated dust from roads and stockpiles. Dust is also generated during construction phase activities when site clearing occurs. o Secondary gaseous emissions from vehicles. <p>Post closure the air quality impacts cease to exist, provided that rehabilitation and re-vegetation is completed satisfactorily.</p>
Noise	<p>Ferrometals and surrounding is a complex assembly of numerous processes and equipment, all of which contribute to the noise emission as a whole. The major noise sources which could contribute to a noise impact are:</p> <ul style="list-style-type: none"> • The furnaces and their associated fans; • The existing pelletizing plant; • The chrome recovery plant; • The road transport system; and • The rail transport system <p>The major external noise sources in the environment of Current Slimes Dam area:</p> <ul style="list-style-type: none"> • General road traffic in the industrial areas; <p>These noise sources will impact primarily during the closure implementation phase due to the construction vehicles. Post closure the closed Slimes Dam will not have any noise impact.</p>	<p>The new Slimes Dam will also contribute to the overall noise profile at Ferrometals. Ferrometals is a complex assembly of numerous processes and equipment, all of which contribute to the noise emission as a whole. The major existing Ferrometals noise sources which could contribute to a noise impact are:</p> <ul style="list-style-type: none"> • The furnaces and their associated fans; • The existing pelletizing plant; • The slag recovery plant; • The road transport system; and • The rail transport system <p>The major external noise sources in the environment of The new Slimes Dam are:</p> <p>General road traffic in the industrial area;</p> <p>These noise sources will impact primarily during the operational phase. Post closure the plant will not have any noise impact.</p>
Visuals	<p>Visual impacts at Ferrometals could manifest for any of the following visual attributes:</p> <ul style="list-style-type: none"> • Visibility • Visual Intrusion • Visual Exposure • Alterations to Landscape and Visual Character (Morphology, Topography, Vegetation, Hydrology, Visual Character and Sense of Place) <p>Visual impacts commence during the construction phase, continue during the operational phase, and some impacts may even persist after closure depending on the degree of site closure and rehabilitation.</p>	<p>Visual impacts at the new Slimes Dam could manifest for any of the following visual attributes:</p> <ul style="list-style-type: none"> • Visibility • Visual Intrusion • Visual Exposure • Alterations to Landscape and Visual Character (Morphology, Topography, Vegetation, Hydrology, Visual Character and Sense of Place) <p>Visual impacts will commence during the construction phase, continue during the operational phase, and some impacts may even persist after closure depending on the degree of site closure and rehabilitation.</p>
Heritage	<p>Based on the current assessment, it does not appear as if the decommissioning of the Slimes Dam will have any significant impacts on heritage resources in the area.</p>	<p>Based on the current assessment, it does not appear as if the new Slimes Dam facility will have any significant impacts on heritage resources in the area.</p>

The list above was compiled by the project Environmental Assessment Practitioner with due consideration of a list of generic Ferrochrome Plant impacts, subject to his professional experience, and based on consultations with authorities, specialists and

I&AP's during the scoping phase to date. The list will be reviewed after comments have been received on this Draft Scoping Report and will be appended if necessary to reflect the concerns of the I&AP's.

Any comments on the above should be submitted to JMA Consulting, or the relevant authorities, by the end of the Draft Scoping Report and Plan of Study review period – August 2013.

5.2 DESCRIPTION OF POTENTIAL CUMULATIVE IMPACTS

In areas where extensive mining and associated industrial activities occur, as is the case for the greater Witbank area, impacts experienced at individual mines and/or plants may combine, and whereas they may be of acceptable magnitude and significance on individual plant scale, could after they have accumulated, be fully un-acceptable on a regional scale.

Most of the identified biophysical impacts related to ferrochrome smelting have the potential to accumulate and therefore have to be considered. In this regard, however, it is important to separate those that would accumulate linearly and those that would accumulate exponentially.

Linear accumulation is defined for impacts for which the aerial extent and zone of influence is directly related to the extent of the surface area where the impact is generated and occurs, or impacts for which the time duration is short. Examples of environmental attributes for which this is the case are:

- Topography
- Soils
- Land Capability
- Geology
- Plant Life
- Heritage

Exponential accumulation is defined for impacts for which the aerial extent and zone of influence exist beyond the extent of the surface area where the impact is generated and which could therefore increase in significance as it combines with the manifestations of other external impacts generated by neighbouring or down-gradient/down-stream sources.

Examples of environmental attributes for which this is the case are:

- Land Use
- Ground Water
- Surface Water
- Animal Life
- Aquatic Ecosystems
- Air Quality
- Noise
- Visual Aspects

The specialist impact assessment reports commissioned for this Ferrometals EIA, will address the cumulative impacts related to the exponential accumulation attributes listed above. The information will be collated under a single heading for Cumulative Impacts in the EIA.

5.3 PROPOSED IMPACT ASSESSMENT METHODOLOGY

The impact assessment methodology to be used for the Ferrometals EIA, is based on a formal guideline from DEAT. Impact Assessment Tables will be compiled to support the formal DEAT Impact Assessment Protocol – *DEAT (2002) Specialist Studies, Information Series 4, Department of Environmental Affairs and Tourism (DEAT), Pretoria.*

The impact magnitude and significance should, as far as possible, be determined by referring to legal requirements, accepted scientific standards or social acceptability. If no legislation or scientific standards are available, the EIA practitioner may evaluate impact magnitude based on clearly described criteria. Except for exceeding standards set by law or from scientific knowledge, the description of significance is largely judgmental, subjective and variable.

However, generic criteria can be used systematically to identify, predict, evaluate and determine the significance of impacts resulting from project construction, operation and decommissioning. The suite of potential environmental impacts (to both the natural and human environments) identified in the EIA should as far as possible be quantified. The process of determining impact magnitude and significance should never become mechanistic.

The impact magnitude is determined by empirical prediction, whilst the impact significance should ideally involve a process of determining the acceptability of a predicted impact to society. Making the process of determining the significance of impacts more explicit and open to comment and public input would be an improvement of the EIA practice.

Generic Criteria

The following list of generic criteria has been drawn from the published literature and South African practice. It may be used to describe the magnitude and significance of the impacts in a systematic manner. The criteria are listed below:

- Extent or spatial scale of the impact
- Intensity or severity of the impact
- Duration of the impact
- Mitigatory difficulty
- Un-acceptability
- Degree of certainty
- Status of the impact
- Legal requirements

Describing the impacts in terms of the above criteria provides a consistent and systematic basis for the comparison and application of judgments. Ratings should be

assigned for each criterion. Specific examples are given below of the type of impact criteria that can be used and adapted for a variety of contexts and projects.

Extent or Spatial Scale of the Impact

A description should be provided as to whether impacts are limited in extent or affect a wide area or group of people. For example, impacts can either be site-specific, local, regional, national or international.

Rating	Comment
High:	Widespread. Far beyond site boundary. Regional/national/international scale.
Medium:	Beyond site boundary. Local area.
Low:	Within site boundary.

Intensity or Severity of the Impact

A description should be provided as to whether the intensity of the impact is high, medium, low or has no impact, in terms of its potential for causing either negative or positive effects. The study should attempt to quantify the magnitude of the impacts and outline the validation used. If legal or scientific standards are not available on a national scale, international standards should be used as a measure of the intensity of the impact.

Rating	Comment
High:	Disturbance of pristine areas that have important conservation value. Destruction of rare or endangered species.
Medium:	Disturbance of areas that have potential conservation value or are of use as a resource. Complete change in species occurrence or variety.
Low:	Disturbance of degraded areas that have little conservation value. Minor change in species occurrence or variety.

Duration of the Impact

It should be determined whether the duration of the impact will be short term (0 to 5 years), medium term (5 to 15 years), long term (more than 15 years, with the impact ceasing after the operational life of the development), or considered permanent.

Rating	Comment
High (Long term)	Permanent. Beyond decommissioning. Long term (more than 15 years).
Medium (Medium term)	Reversible over time. Lifespan of the project. Medium term (5 – 15 years).
Low (Short term)	Quickly reversible. Less than the project lifespan. Short term (0 – 5 years).

Mitigatory Difficulty:

The potential to mitigate the negative impacts and enhance the positive impacts should be determined. For each identified impact, mitigation objectives that would result in a measurable reduction in the impact should be provided. If limited information or expertise is available, estimates based on experience should be made. For each impact, practical mitigation measures that can affect the significance rating should be recommended. Management actions that could enhance the condition of the environment (i.e. potential positive impacts of the proposed project) should be identified. If no mitigation is considered feasible, this must be stated and the reasons provided. The rating both with and without mitigation or enhancement actions should be recorded. Quantifiable standards (performance criteria) for reviewing or tracking the effectiveness of the proposed mitigation measures should be provided where appropriate.

Rating	Comment
High:	Little or no mechanism to mitigate negative impacts.
Medium:	Potential to mitigate negative impacts. However, the implementation of mitigation measures may still not prevent some negative effects.
Low:	High potential to mitigate negative impacts to the level of insignificant effects.

Un-Acceptability

Criteria and standards that exist for acceptability are either emissions-based or relate to the receiving environment (e.g. air quality, water quality or noise). Establishing the acceptability of a potential impact is as important as determining its significance. An impact identified as being non-significant by a specialist may be unacceptable to a particular section of the community. On the other hand, a significant impact may be acceptable if, for example, adequate compensation is given. The level of acceptability often depends on the stakeholders, particularly those directly affected by the proposed project. Ratings that can be used for acceptability of a potential impact are given below:

Rating	Comment
High (Unacceptable)	Abandon project in part or in its entirety. Redesign project to remove impact or avoid impact.
Medium (Manageable)	With regulatory controls. With project proponent's commitments.
Low (Acceptable)	No risk to public health.

Degree of Certainty

A description of the degree of certainty should be provided with regards to the impact actually occurring, and should be classified as unsure, possible, probable, or definite (impact will occur regardless of prevention measures). There should be some cross-reference to key indices derived from a risk analysis study, where relevant.

Rating	Comment
Definite	More than 90% certainty of the likelihood that a specific impact will occur. Substantial supportive data exist to verify the assessment.
Probable	Over 70% certainty of the likelihood of that specific impact occurring.
Possible	Only over 40% certainty of the likelihood of that impact occurring.
Unsure	Less than 40% certainty of the likelihood of the specific impact occurring.

Additional Categories

The following additional categories can also be used:

Status of the impact

Specialists should describe whether the impact is positive (a benefit), negative (a cost) or neutral.

Legal requirements

Specialists should identify and list the specific legal and permit requirements that could be relevant to the proposed project.

Categories for the rating of Impact Magnitude and Significance

The significance of the proposed project's impacts should be assessed according to both, **with mitigation measures**, and **without mitigation measures**. The descriptions for the ratings are given below:

Impact Magnitude & Significance Rating	Comment
High	Of the highest order possible within the bounds of impacts that could occur. In the case of adverse impacts, there is no possible mitigation that could counteract the impact, or mitigation is difficult, expensive, time-consuming or a combination of these. Social, cultural and economic activities of communities are disrupted to such an extent that these come to a halt. In the case of beneficial impacts, the impact is of a substantial order within the bounds of impacts that could occur.
Medium	Impact is real, but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. In the case of adverse impacts, mitigation is both feasible and fairly easily possible. Social, cultural and economic activities of communities are changed, but can be continued (albeit in a different form). Modification of the project design or alternative action may be required. In the case of beneficial impacts, other means of achieving this benefit are about equal in time, cost and effort.
Low	Impact is of a low order and therefore likely to have little real effect. In the case of adverse impacts, mitigation is either easily achieved or little will be required, or both. Social, cultural and economic activities of communities can continue unchanged. In the case of beneficial impacts, alternative means of achieving this benefit are likely to be easier, cheaper, more effective and less time-consuming.
No Impact	Zero impact.

5.4 PROPOSED SPECIALIST STUDIES OR SPECIALIZED PROCESSES

During the course of the project to date, primarily during discussions and consultations with specialists prior to, and with authorities and I&AP's during the Scoping Phase, a number of specialist studies related to the assessment of impacts and the conceptualization of management measures, have been identified for detailed investigation and assessment. These studies will largely be conducted by the same specialists that compiled the base line studies. The specialist studies, which include assessments of impacts, conceptual designs of management measures and the design of monitoring plans, identified to date, are *inter alia* the following:

- Materials Characterization focussing on the chemical characterization of the Slimes material disposed on the footprints.
- Geotechnical\Soils Study focussing on Soils Stripping, Stability/Suitability of the footprints during construction and the operational phase and the Rehabilitation requirements during the rehabilitation phase.
- Plant Life Impact Assessment, Management Measures and Monitoring Plan.
- Animal Life Impact Assessment, Management Measures and Monitoring Plan.
- Aquatic Ecosystems Impact Assessment, Management Measures and Monitoring Plan.
- Ground Water Impact Assessment, Management Measures and Monitoring Plan.
- Surface Water Impact Assessment, Management Measures and Monitoring Plan.
- Air Quality Impact Assessment, Management Measures and Monitoring Plan.
- Heritage Impact Assessment and Management Measures.
- Visual Impact Assessment and Management Measures.

Once all the specialist studies have been completed, the findings of the studies will be combined and collated into a formal EIA report as well as into a formal EMP report.

The generated information will also be compiled into supporting documentation for the Water Use License Application, the Waste License Application.

6. PUBLIC PARTICIPATION PROCESS TO DATE

6.1 NEED FOR SCOPING PHASE PUBLIC PARTICIPATION

Public participation is one of the most important aspects of the environmental authorization process. This stems from the requirement that people have a right to be informed about potential decisions that may affect them and that they must be afforded an opportunity to influence those decisions. Effective public participation also improves the ability of the competent authority to make informed decisions and result in improved decision-making as the views of all parties are considered.

The public participation process:

- provides an opportunity for Interested and Affected Parties (I&APs) to obtain clear, accurate and comprehensible information about the proposed activity, its alternatives or the decision and the environmental impacts thereof;
- provides I&APs with an opportunity to indicate their viewpoints, issues and concerns regarding the activity, alternatives and/or the decision;
- provides I&APs with the opportunity of suggesting ways of avoiding, reducing or mitigating negative impacts of an activity and for enhancing positive impacts;
- enables an applicant to incorporate the needs, preferences and values of affected parties into the activity;
- provides opportunities to avoid and resolve disputes and reconcile conflicting interests; and
- enhances transparency and accountability in decision-making.

Public participation therefore allows I&AP's the opportunity to give their viewpoints, and influence the process and the decisions of the competent authority. This is of particular importance during the scoping phase of an EIA as this stage constitutes the timeframe where most of the planning and design for the EIA/EMP phase of the EIA is done. Inputs from I&AP's during this stage can therefore be addressed and incorporated in the planning of studies and investigations that are to follow.

6.2 PUBLIC PARTICIPATION FOR SCOPING PHASE

6.2.1 The Scope of the Public Participation Program (Scoping Phase)

The public participation program that was designed for the scoping phase of the Ferrometals Project, was derived from, and based on the regulations stipulated in regulation's 54 – 57 of Government Notice R 543 (GNR 543), which contains the EIA Regulations in terms of Chapter 5 of NEMA. The *Guideline 4: Public Participation in support of the EIA Regulations; 2005*, produced by the, then, Department of Environmental Affairs, was also used for guidance.

In the guideline document it is stated that the extent or scope of the public participation should be based on the extent of the envisaged impact, and not on the extent of the proposed development. Also, it states that minimum requirements set for one project will not necessarily be sufficient for another, and that each project should be considered on its own merit.

The above mentioned was taken into consideration and it was decided that for the scoping phase of the EIA all of the identified I&APs would be notified according to regulations stipulated in GNR 543 informing them of the proposed project and inviting them to attend the public meeting scheduled for the **12 June 2013** at Emalahleni Local Municipality, Rehearsal Room (Cultural Centre). Along with these notifications were sent a Background Information Document, a comments sheet on which the I&APs could raise any concern they might have, or comment on a specific issue, and a map indicating the location of the venue for the Public Meeting.

6.2.2 Identification/Registration of Authorities and I&AP's

During the pre-application phase of the EIA process, members of JMA sat down and discussed the proposed project, investigating all of the proposed actions and determining what environmental authorisations will be required, and who the relevant lead authorities will be. During this discussion it was concluded that the Department of Environmental Affairs (**DEA**) Head Office, the Department of Economic Development, Environment & Tourism (**DEDET**) and the Department of Water Affairs (**DWA**) will be the lead authorities on this project.

For the identification of the I&APs to the proposed project, members of JMA consulted the current Ferrometals I&AP databases of previous projects obtained from Ferrometals. Furthermore anybody that responded to the newspaper advertisement, or notices were added to the I&AP database for this project. At the Public Meeting the I&APs were asked to provide details of persons that they deem necessary to be registered as an I&AP to the project. The current I&AP data base for this project is attached as Appendix 6.1.1(A) in the Draft Public Participation Report (**APPENDIX IV**).

6.2.3 Notification of Authorities and I&AP's

As prescribed in GNR 543 written notices were compiled containing information on the proposed project, details of the Applicant, the appointed Consultant, and the Public Meeting that was scheduled for the 12 June 2013.

Along with this notification letter, sent to the I&APs, was a BID (Background Information Document) that contained additional information regarding the Ferrometals project, and a comment sheet on which the I&AP could raise issues or concerns that he/she may have regarding the project. A copy of the BID and a copy of the notification e-mail in Appendix 6.2.1(A) in the Draft Public Participation Report (**APPENDIX IV**).

Press advertisements were also compiled and published in the local newspaper being the Witbank News. The advertisements also contained some information regarding the project along with details and invitation to the public meeting. The advertisements were placed during the two weeks preceding the public meeting. Please see proof of these adverts in Appendix 6.2.1(A) in the Draft Public Participation Report (**APPENDIX IV**).

Various site notices were located at the site itself, and throughout the surrounding communities. These notices also contained information regarding the proposed project, its location, and an invitation to attend the public meeting. Please see proof of these Notices in Appendix 6.2.1(A) in the Draft Public Participation Report (**APPENDIX IV**).

6.2.4 Information to Authorities and I&AP's

The information that was sent to the I&APs contained details of the following:

- Background to the Project;
- Description of actions to be undertaken for the current proposed project;
- Environmental authorisations that is required for the proposed project;
- Location of the project;
- Invitation to the public meeting that was scheduled, and the role of the I&APs in the public participation process as a whole;

6.2.5 Meetings with Authorities and I&AP's

Focus Group Meetings are meetings that are scheduled for I&APs that have more or less similar issues pertaining to the proposed project. Such meetings are usually on a smaller scale than the I&AP Public Meeting and has the function of Providing additional opportunities for communication between the applicant and I&APs in order to prevent any misunderstanding and/or to address sensitive issues that may arise during the formal public participation process.

6.2.6 Obtaining Comments from Authorities and I&AP's

Contained in all of the notifications sent out, and advertisements that was placed, were the full contact details of JMA along with an invitation to contact them regarding any issue or concerns that they may have regarding the project. As mentioned in Section 6.2.3 a comment sheet was also attached to all notifications that was sent to the I&APs.

During the Public Meeting it was conveyed to the I&AP's, that the Draft Scoping Report will be made available as soon as JMA have finished compiling minutes of the Public Meeting. The draft scoping report was made available on 20 June 2013 for review at the following locations:

- Ferrometals Reception (At the Main entrance Gate)
- Ferrometals Environmental Department
- Public Library- Emalahleni

Furthermore the document was distributed to some of the I&AP's, that indicated that they will not be able to visit a library to review the document, in electronic format on a CD-ROM.

6.2.7 Responding to Comments from Authorities and I&AP's

JMA after the review period, will collated all of the issues raised and comments that were submitted, into an I&AP Comments Register, and addressed each and every one of them before submitting this final scoping report to the relevant competent authorities. The Comments Register is attached as Appendix 6.2.14(A) in the Draft Public Participation Report (**APPENDIX IV**).

7. PLAN OF STUDY

The plan of study for the Ferrometals Project's EIA & WLA, was compiled with due consideration of the requirements contained in the different sets of legislation and regulations, the existing guidance documents available, and finally in support of all aspects and issues documented during the Scoping Phase Public Participation. The Plan of Study is now available for review and comment by the I&AP's for a 60 day period, after which this Draft Scoping Report will be amended to reflect comments and then submitted to the authorities for approval.

7.1 TASKS TO BE UNDERTAKEN

7.1.1 Proposed Specialist Studies – Quantification and Prediction of Impacts

JMA Consulting was approached by Ferrometals to assist them with a process that would lead to the implementation of a new Slimes Disposal facility for continued operation.

Unless required as an outcome of the Scoping Process, additional base line studies are not foreseen for this project.

- Geochemical/Materials Assessment
- Topographical Assessment
- Soils Assessment
- Geological Assessment
- Geotechnical Assessment
- Ground Water Assessment
- Surface Water Assessment
- Ecological Assessment
- Land Capability and Use Assessment
- Visual Assessment
- Heritage Assessment

7.1.2 Compilation of the EIA Report

An EIA report will be compiled by **JMA** for the relevant Department. The report will be structured and compiled to give compliance with the NEMA EIA Regulations. Draft reports will be made available to the relevant authorities and I&AP's for comment prior to finalization for submission to the Competent Authority for consideration and approval. The document is also drafted in support of the Waste License Application requirements.

7.1.3 Compilation of the Water Use License Application Report (IWWMP)

An Integrated Water and Waste Management Plan (IWWMP) will be compiled by JMA in support of the Integrated Water Use License Application for submission to DWA.

7.1.4 Detailed Concept Civil Engineering Designs

Detailed concept Civil Engineering Designs of the closure of the existing Slimes Dam facility and new Slimes Dam infrastructure will be compiled by **ECOSYS** on behalf of

the JMA team in support of the Waste License Application and the Integrated Water Use License Application (amendment).

7.2 CONSULTATION TIME LINE WITH COMPETENT AUTHORITY

The following flow diagram illustrates the proposed consultation and project timeframe.

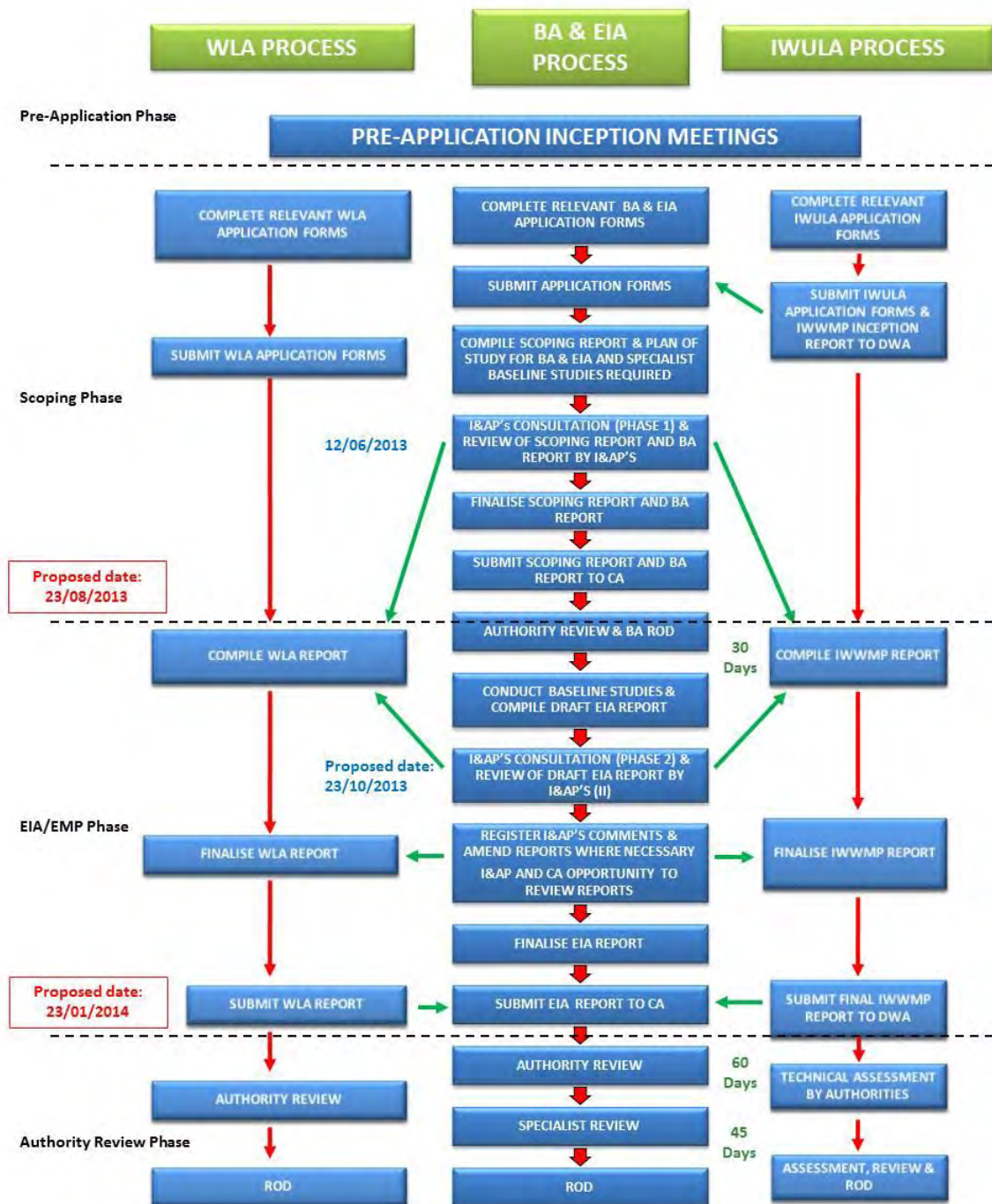


Figure 7.2(a): Proposed Timeline for the Project.

7.3 PROPOSED PLAN FOR EIA PHASE PUBLIC PARTICIPATION

Please refer to Section 6 of this document for details regarding the extent of the public participation process followed for the Scoping Phase of the EIA. The Public Participation Process for the EIA Phase will follow more or less the same route and be of similar dimensions and therefore no redundant repetition of facts, which have already been stated in Section 6, will be repeated in this section.

7.3.1 The Scope of the Public Participation Program (EIA Phase)

The scope of the Public Participation Programme during the EIA phase of the project will be along the same dimensions and considerations as the one that was conducted during the Scoping Phase of the EIA.

7.3.2 Identification/Registration of Authorities and I&AP's

An extensive list/register of I&APs and authorities will have been compiled by this phase and the same database will be used for communication with I&APs during the EIA phase.

However should any person identified, or should any person request to be registered as an I&AP to the project, at any stage of the project, he/she will be given the opportunity to do so and be notified of the project accordingly.

7.3.3 Notification of Authorities and I&AP's

Notification of I&APs and authorities on the progress of the project will be done according to the regulations 54 – 57 as set out in GNR 543 and will again include notification letters, press advertisements, and site notices. These notices and advertisements will inform the I&APs on details of the Public Meeting during the EIA phase and will provide an updated background description to the proposed project.

7.3.4 Information to Authorities and I&AP's

Information included in the correspondence and consultation with I&APs and authorities will include updated information generated for the proposed project. Also it will include information and details of the EIA phase public participation process.

7.3.5 Meetings with Authorities and I&AP's

Meetings with authorities during the EIA phase will be organized on request. The I&APs will be invited to attend a Public Meeting during which the results of the environmental impact assessment and proposed management and mitigation measures will be communicated to them. Should some of the I&APs wish to be consulted in a Focus Group format, such meetings will be scheduled and conducted.

7.3.6 Obtaining Comments from Authorities and I&AP's

All I&AP's will receive the opportunity to comment on any of the information generated during the EIA/EMP Process, in the review periods of the various

documentation, which will be submitted to the relevant authorities. This includes the draft EIA Report and EMP which will be submitted to DEDET & DEA.

The IWWMP which will be submitted to the DWA are not usually presented for formal public review due to the complex and technical nature of these reports, but should any I&AP wish to view these reports, they will be made available to them. Irrespective of this fact, the results of these studies will be discussed with the I&AP's during the Public Meeting and possible Focus Group Meetings.

7.3.7 Responding to Comments from Authorities and I&AP's

All comments that are raised by I&AP's will be incorporated into an I&AP Comments Register. JMA will then address each and every issue or comment raised. Once this is completed the I&APs will be notified of how their issue or comment have been addressed and the finalized report will be submitted to the relevant authorities.

7.3.8 Public Participation Report

A detailed Public Participation Report, containing information of all the actions that were undertaken with regard to the Public Participation Process (for both phases, Scoping and EIA), will be compiled for this project and be submitted along with the final reports to the relevant competent authorities.

Respectfully submitted

Final will be signed by R. Grobbelaar

Riaan Grobbelaar (Pr.Sci.Nat.)

APPENDIX I

CV's of EAP PROJECT TEAM

RIAN GROBBELAAR

Riaan Grobbelaar (Pr.Sci.Nat.)



Date of Birth: 13 September 1973
Nationality: S A Citizen
Position in firm: Director : Industrial Division
(Shareholder)

Qualification:

B. Sc.: Geology, UOFS, 1995
B. Sc. (Hons) : Geohydrology: UOFS, 1996
M. Sc. (Cum Laude) : Geohydrology, UOFS, 2001

Memberships:

South African Council for Natural Scientific Professions

Period employed:

1996 Geohydrologist/Researcher, Institute for Ground Water Studies, UOFS
2001 Project Geohydrologist with JMA

Riaan Grobbelaar received his training as geohydrologist at the Institute for Ground Water Studies (University of the Free State). He worked at IGS as Researcher/Lecturer, Specializing in coal mine impacts and inter mine flow between mines.

He left the IGS in 2001 and joined JMA, where he is involved in projects related to industrial ground water pollution impacts and risks.

Since 1996 Riaan Grobbelaar has been involved in projects related to water supply, aquifer management, ground water quality investigations, ground water monitoring, ground water impact and risk assessments.

E-mail: riaan@jmaconsult.co.za

GENEVIEVE CLOETE

Genevieve M Cloete (Pr.Sci.Nat.)



Date of birth: 13 December 1976
Nationality: S A Citizen
Position in firm: Scientist (ST 4)
Environmental Monitoring and Auditing

Qualifications:

B.Sc. Zoology, UP 1997
B.Sc. (Hons) Environmental Analysis and Management, UP

Period employed:

1995 Plant Reproduction/Mycological research assistant, University of Pretoria,
Department Botany.
1998 Typist/Graphical assistant, Modern Talking, Delmas
1999 General scientific assistant with JMA.

Genevieve Cloete completed her studies in the field of Environmental analyses & management at the University of Pretoria. During her time of study, she worked at the University of Pretoria as researcher in the field of Plant reproduction/Micological research.

After completing her studies she worked at Modern Talking - a computer & stationary shop - as a Typist/Graphical designer.

In 1999 she was appointed as a general scientific assistant with JMA. Her responsibilities included database management, assisting in GIS tasks and general office functions, including graphic designing.

At present she is responsible for impact studies in the field of natural vegetation and animal life. Apart from this, she is also involved in GIS/mapping tasks, as well as the compilation and management of ground water monitoring programs.

E-mail: genevieve@jmaconsult.co.za

SHANE TURNER

Shane Turner (Cand.Sci.Nat.)



Date of Birth: 7 October 1986

Nationality: S A Citizen

Position in firm: Junior Scientist (Geohydrology)

Qualification:

B. Sc. Geology: Earth Science, US, 2007

B. Sc. (Hons) Geology, US, 2008

Memberships:

South African Council for Natural Scientific Professions

Golden Key International Honour Society

Period employed:

2009 Junior Scientist at JMA

E-mail: shane@jmaconsult.co.za

KOBUS DU PLESSIS

Kobus Du Plessis



Date of birth: 10 December 1986
Nationality: S A Citizen
Position in firm: Junior Scientist (ST 3)
Qualifications: B.Sc. Conservation Ecology, US (2009)
FGASA Level 1 and 2 (Ulovane
Environmental Training)

Period employed:

April 2010 - Dec 2011: Manage Private Tented Camp at Amakhala Game Reserve, Eastern Cape.
Feb 2012 - May 2012: Environmental Assistant, GNEC, Paarl.
May 2012: Junior Scientist, JMA Consulting, Delmas.

Kobus Du Plessis completed his studies in the field of Conservation Ecology at the University of Stellenbosch. During his time of study (2005 – 2009), he conducted fieldwork all over the Western Cape concentrating on various aspects of the Fynbos biome. He also worked in the Southern Cape, where he drew up a management plan for Botlierskop Private Game Reserve.

After completing his studies he was employed as a manager at Amakhala Private Game Reserve in the Eastern Cape.

At the beginning of 2012, he started doing his part-time Masters in Environmental Management at University of Stellenbosch.

At present he is responsible for environmental impact assessment studies and reports.

E-mail: kobus@jmaconsult.co.za

JOHAN FOURIE

SHORT CV : JOHAN FOURIE

Personal Information

Name: Petrus Johannes (Johan) Fourie
Nationality: South African
Date of Birth: 27 July 1979
ID Number: 7907275018082
Physical Address: 4 Herbert St, Vanderbijlpark 1911, South Africa
Postal Address: PO Box 60333, Vaal Park, 1948, South Africa
Telephone no: 0027 78 300 4140
Fax no: 0027 86 647 3118
Email: johan@geostratum.co.za

Employment

Current Position: Consulting Geochemist/Geohydrologist
Sole Proprietor
Geostratum Groundwater and Geochemistry Consulting
September 2007 – Current

Previous Employment: JMA Consulting
January 2002 – August 2007
Geohydrologist: Mining Division

Professional Registration

Professional Natural Scientist (SACNASP, Reg. No. 400278/06)

Education

2000 B.Sc. Geology and Geochemistry (Cum Laude), UFS,
2001 B.Sc. (Hons) Geohydrology (Cum Laude), UFS,
2002 B.Sc. (Hons) Geology and Geochemistry (Cum Laude), UFS,
2007 M.Sc. Geohydrology (Cum Laude), UFS,

Experience

Specialist in the development of groundwater flow and geochemical models in the mining and industrial environments for more than 8 years.
Groundwater consulting include the compilation of groundwater impact assessments at mine workings of various commodities, mine residue dumps, sewage plants, industrial plants, and water abstraction schemes.
Geochemical specialisation includes the geochemical modelling of mine and waste water qualities as well as waste source characterisation and waste classification at industrial plants.

MELISSA GROBBELAAR

CURRICULUM VITAE

Name: **MELISSA GROBBELAAR**

Name of Firm: Cameron Cross Incorporated.

Position: Associate

Nationality: South African

Languages: Afrikaans and English

EDUCATIONAL QUALIFICATIONS

- Bachelor of Laws (LLB) (2001)
-

EMPLOYMENT EXPERIENCE

- **Associate : Cameron Cross Incorporated** (June 2006 - Present) - Tasks include:
 - Various issues pertaining to Environmental Law, including auditing, opinion writing, litigation for clients predominantly in the industrial and mining sectors;
 - Practical experience in interpretation and application in Environmental law as well as mining law; Environmental Legal Audits.
- **Junior Partner: Prinsloo & Koen Attorneys** (March 2004 – May 2006)
 - During this time Melissa obtained essential experience in Commercial Law, Family Law, as well as litigation and court work, laying a strong foundation in legal practice.
 - Specific tasks included:
 - Drafting of legal processes such as summons, particulars of claim, notices and affidavits;
 - Drafting and preparing commercial documentation;

- Drafting Wills
- Legal Research on various issues.

➤ **Candidate Attorney & Professional Assistant: Geldenhuys & Joubert Attorneys (2001 - 2004)**

- Melissa served her articles with Geldenhuys & Joubert Attorneys and was admitted as an attorney in February 2003.
- Specific tasks included:
 - Drafting of legal processes such as summons, particulars of claim, notices and affidavits;
 - Drafting and preparing commercial documentation;
 - Drafting Wills
 - Legal Research on various issues.

KOOS JONCK

CURRICULUM VITAE - JL Jonck

Name of Firm: Ecosys Consulting Engineers CC
Name of Staff: Kobus Jonck
Profession: Civil Engineer
Date of Birth: 6 July 1954
Years with Firm/Entity: >10 **Nationality:** South African

Membership in Professional Societies:

Engineering Council of South Africa, 860340
Approved Professional Engineer for Category II and III dams. An RSA requirement. (1987- date)
South African National Committee on Large Dams, membership no 2-009

Key Qualifications:

Kobus Jonck has extensive experience as Project Manager/Team Leader on various projects locally and internationally. Locally he acted as PM/TL on major Civil Engineering and water supply projects for Eskom, the Department of Water Affairs & Forestry, MTN and several Municipalities. He has acted as TL/Dam Engineer for the design review of 5 new dams and the rehabilitation of 10 existing dams in Yemen on a project funded by the World Bank and recently also acted as specialist Dam Engineer for the preliminary design of a dam wall in the Dead Sea Lagoon in Israel.

Education:

1991 MBL, Unisa
1984 BEng (Hons) (Struct), University of Pretoria
1978 BEng (Civil), University of Stellenbosch

Publications:

Co-author and presenter of a paper on the cost of dam safety inspections at the ICOLD symposium on Dam Safety held in Pretoria in 1990.

Employment History:

2009 - present **Self Employed: Ecosys Consulting Engineers CC**
Managing Member

2008 - 2009 **SSI Engineers & Environmental Consultants (Pty) Ltd, South Africa**
Principal: Water Division

2003 - 2008 **BKS (Pty) Ltd, Global**
Technical Director/Team Leader/Dam Engineer

1994 - 2002 **Self Employed: Ecosys Consulting Engineers CC**
Contracts Manager/Team Leader/Design Engineer/Project Manager

1991 - 1993 **ESKOM**
Chief Engineer: Civil & Building Division

1981 - 1990 **Consultburo (in 1995 merged with BKS)**
Director/Associate/Team Leader/Resident Engineer/Design Engineer

1979 - 1980 **South African Defence Force**
Project Officer, Engineering Corps

Employment Experience:

2010 **Stuart South Block Coal Mines EMPR/EMP, South Africa**
Position: Dam/Civil Engineer
Client: Stuart Coal
Brief Description: Conceptual and preliminary designs and impact assessment for the storm water management infrastructure, water balances, clean, process and pollution control dams for the expected life of the mines.
Assigned Tasks: Conceptual and preliminary designs of all dams and storm water management infrastructure and the environmental impact assessment of these.

CURRICULUM VITAE - JL Jonck

- 2009 Rustenburg and Wonderkop Coal Mines EMPR/EMP, South Africa**
Position: Dam/Civil Engineer
Client: Xstrata Coal
Brief Description: Conceptual and preliminary designs for the storm water management, water balance, clean, process and pollution control dams and slimes dams for the remaining life of the mines.
Assigned Tasks: Conceptual and preliminary designs of all dams and storm water management systems
- 2009 Weza Dam, Kwa-Zulu Natal, South Africa**
Position: Dam/Civil Engineer
Client: Ugu Municipality
Brief Description: Conceptual and feasibility designs and report for a 20 m high off-channel storage dam in a tributary of the Weza River as part of the Weza/Harding Bulk Water Supply Scheme.
Assigned Tasks: Conceptual and feasibility designs of alternative dam types and spillway arrangements at the preferred site.
- 2009 Assessment of Dams, Kwa-Zulu Natal, South Africa**
Position: Dam/Civil Engineer
Client: Ugu Municipality
Brief Description: Assessment of 7 dams for asset register.
Assigned Tasks: Visual inspection and assessment of the condition of 7 dams and weirs in the Ugu district to determine the replacement value of each dam and appurtenant works. The dams included 3 concrete gravity walls, 1 earthfill embankment wall, 1 concrete arch dam and 2 reinforced concrete retaining walls.
- 2009 Inyanda Dam, Witbank, South Africa**
Position: Dams Engineer
Client: Exxaro Mine
Brief Description: Design of a new storage dam at Inyanda mine.
Assigned Tasks: Design, technical specifications, drawings, cost schedules and design report for an for a 7.5 m high earthfill dam and side channel spillway, including flood hydrology and registration and liaison with the Dam Safety Office of DWAF.
- 2009 Mothae Diamond Mine, Lesotho**
Position: Dams Engineer
Client: ADP Projects
Brief Description: Conceptual designs and report for the storm water management, clean, process and pollution control dams and slimes dams for the remaining life of the mine.
Assigned Tasks: Conceptual designs of all dams and storm water management systems.
- 2009 Jozini Dam, Feasibility Study for Hydropower Generation, South Africa**
Position: Design Engineer
Client: Umhlosinga Development Agency
Brief Description: Feasibility investigation and report for the development and implementation of a hydropower generating facility at Jozini Dam.
Assigned Tasks: Feasibility study and conceptual designs of civil engineering works and infrastructure.
- 2008 St Helens Rock Weir, South Africa**
Position: Design Engineer
Client: Ugu District Municipality
Brief Description: Feasibility investigation, design and construction of a Weir across the Umzimkulu River at St Helens Rock raw water abstraction point for Ugu District Municipality

CURRICULUM VITAE - JL Jonck

Assigned Tasks: Feasibility study and preliminary design of the weir.

- 2008 Project Management Support to Rand Water, South Africa**
Position: Project Principal
Client: Rand Water
Brief Description: Short term Project Management Support to Rand Water
Assigned Tasks: Development of an interactive GIS platform linked to MS Project for management of shutdown projects on Rand Water pipelines.
- 2008 Percy Stewart Wastewater Treatment Plant: Improved Performance, South Africa**
Position: Design Engineer
Client: Mogale City Local Municipality- Vendor No: 2210
Brief Description: Refurbishment of failed civil structures, non-operational mechanical equipment (aerator, screens, pumps), provision of emergency equipment (generator) and storage/balancing facilities, accessibility problems and limited operational and maintenance manuals, funds and staffing. Extension of existing works with 20 Ml/day.
Assigned Tasks: Design and compilation of specifications, drawings and tender documents for civil and structural works.
- 2008 Mooi Mgeni Transfer Scheme (Phase2) Review of Costs, South Africa**
Position: Project Manager
Client: TCTA
Brief Description: Review and update of previous cost estimates for MMWTS2
Assigned Tasks: Team Leader & Compilation of revaluation report for composite rollcrete and earthfill dam, pumping station, transfer pipeline and outfall works.
- 2007 Vaal Outlet Works Hydropower Scheme, South Africa**
Project Principal
Client: Rand Water
Brief Description: Design, tender preparation, adjudication, construction supervision and bid preparation for the Rand Water Hydro Power Scheme as part of Eskom's National Cogeneration Programme.
Assigned Tasks: Overall management responsibility for project and compilation of tender documentation for civil component of works.
- 2005 - 2007 Supply Management and Recharge Improvement: Sana'a Basin Water Management Project, Sana'a Basin, Yemen**
Position: Team Leader/Dam Engineer
Client: Ministry of Water and Environment, Republic of Yemen
Brief Description: Rehabilitation of 10 existing dams and the construction of 5 new dams to improve groundwater recharge. Work includes the review and coordination of geotechnical investigations, topographical survey's, social and environmental studies, final designs, bidding documents, procurement and construction supervision.
Assigned Tasks: Directing all members of the team and liaise with the client; coordinate and provide guidance all investigations; analyses, design aspects, construction supervision and O & M of the project an interface with all members of the tem; lead, ensure and oversee quality control of field data collection, processing and analysis and safety aspects; ensuring the technical suitability and quality of all design aspects of the project in terms of World Bank Dam Safety Policies and internationally accepted standards; developing and delivering technical presentations to the client; provide on-the-job training to counterpart staff.
- 2004 – 2005 Wadi Al-Khalij and Wadi Al-Muallaq Dams**
Position: Senior Dame Engineer
Client: General Water Authority, Libya
Brief Description: Feasibility study and design of two new dams.
Assign Tasks: Responsible for the feasibility studies to determine the optimum dam types to

CURRICULUM VITAE - JL Jonck

be constructed at two identified dam sites in Libya; responsible for and ensuring the quality of the preliminary and final design of the 29 m high rollcrete dam option at Wadi Al-Khalij, including preparation of cost estimates, drawings, technical specifications and tender documentation for construction of the dam; responsible for the final design and tender documentation for an 11 m high embankment dam at Wadi-Al-Muallaq; presentation of the designs to the Client in Tripoli, Libya.

2004 Bridging Study into the Utilisation of the Low Level Storage at Vanderkloof Dam

Position: Team Leader

Client: Department of Water Affairs and Forestry, RSA, Orange River

Brief Description: Investigation of feasibility of utilizing the low storage at Vanderkloof Dam.

Assigned Tasks: Coordinating and leading the evaluation of the economic and technical feasibility and determination of impacts on water users (irrigation and generation of hydro-electricity) when utilizing the low level storage at Vanderkloof Dam. Made use of a computerized program "Water Resources Planning Model" to simulate and analyse the system. Responsible for the final report for the study and for the presentation to the client.

2003 Study into the Raising of Clanwilliam Dam

Position: Team Leader

Client: Department of Water Affairs and Forestry, Western Cape, RSA

Brief Description: Feasibility and preliminary design of raising the Clanwilliam dam by 15,0 m.

Assigned Tasks: Coordinating and leading the compilation of a final report regarding the economic viability the mass concrete dam wall by different heights of 15,0 m high. The activities included cost estimates hydrology (yield analysis), water use, environmental assessment, and preliminary design and stability analyses for various heights. Responsible for quality assurance.

2003 De Hoop Dam in Steelpoort River

Position: Team Leader

Client: Department of Water Affairs and Forestry (DWAF), Steelpoort River, RSA

Brief Description: Feasibility study, cost estimates and preliminary design for a dam in the Steelpoort River, RSA

Assigned Tasks: Review of the preliminary design by DWAF and the evaluation of various alternative dam types and spillways for a dam in the Steelpoort River. Activities included cost estimates, review of design criteria, hydraulic and stability analyses, preliminary drawings, specification and Schedule of Quantity.

2003 Study into the Joint Utilisation of the Nkomati, Umbeluzi and Maputo Rivers in Mozambique

Position: Task Leader

Client: Department of Water Affairs Forestry (DWAF), Mozambique, RSA

Brief Description: Pre-feasibility study of several options for the inter-basin transfer of water.

Assigned Tasks: The activities include the route selection, preliminary design and costing of abstraction works, pumping stations and steel pipeline options of either 2 x 1000 mm pipelines constructed in two phases or 1 x 1500 mm diameter pipeline constructed in a single phase. The pipelines varied in length from 35 km to 113 km.

2002 New Pollution Control Dam at Arnot Power Station

Position: Senior Dam Engineer

Client: Eskom

Brief Description: Design and construction of new pollution control dam at Arnot P/S.

Assigned Tasks: Planning, geotechnical investigations, design and preparation of technical specifications, drawings and Schedule of Quantities for the construction of a new dam 12 m high at Arnot Power Station. Activities also included the preparation of operating and maintenance procedures and the coordination of the construction supervision of the dam.

CURRICULUM VITAE - JL Jonck

- 2001** **Rehabilitation of Existing Dam at Arnot Power Station, RSA**
Position: Senior Dam Engineer
Client: Eskom
Brief Description: Design and construction supervision of rehabilitation works for an existing pollution control dam at Arnot P/S.
Assigned Tasks: Investigation and report on the causes of failure of the existing 10m high earthfill dam. Design, drawings, cost estimate and technical specifications for the rehabilitation works recommended for the dam.
- 1995 - 1996** **Contract Manager at Majuba Power Station, Volksrust, RSA**
Position: Contracts Manager
Client: Eskom
Brief Description: Construction supervision of various civil engineering works.
Assigned Tasks: Responsible for the construction supervision of new infrastructure at Majuba P/S. Works included ash handling, roads, concrete structures, pollution control dams, pipelines and storm water drains. Handled all contractual issues, such as quality control, site meetings, claims and payment of monthly certificates.
- 1994** **Office Manager at Majuba Power Station**
Position: Contract Manager
Client: Eskom
Brief Description: Management and mentoring of Design Office at Majuba P/S.
Assigned Tasks: Management and mentoring of the design office staff consisting of several engineers, technicians, draughtsmen and administration staff. Providing guidance regarding technical issues, designs and report writing.
- 1993 - 1994** **Evaluation of Existing Ash Dams and Designs of new Ash Dams, Megawatt Park, RSA**
Position: Chief Engineer Eskom
Client: Eskom
Brief Description: Designs of new Ash Dams at Hendrina and Duvha Power Stations.
Assigned Tasks: Evaluation and monitoring of the existing ash dams at Hendrina and Duvha Power Stations and the designs of new extensions to the existing ash dams.
- 1991 - 1993** **Chief Engineer, Eskom**
Management of the Coal & Ash Division within the Civil & Building Department. Development of layout plans, designs, life cycle cost estimates, licence applications and construction management of Solid Waste landfill sites at Arnot, Lethabo and Hendrina Power Stations. Evaluation and monitoring of the existing ash dams at Hendrina and Duvha Power Stations and designs of new extensions to the existing ash dams. Preliminary design of 90 km emergency transfer steel pipeline of 1100 dia from Duvha pumping station to Blesbok Spruit. Activities included route selection, optimization of pipe size and lining, geotechnical assessment, hydraulic design, preparation of drawings, cost estimates and liaison with affected parties.
- 1987 - date** **Dam Safety Inspections, RSA**
Position: Approved Professional Person in terms of Water Act
Client: Department of Water Affairs and Forestry
Brief Description: Dam safety for various dams in the RSA.
Assigned Tasks: Compilation of several dam safety evaluation reports (more than 12) for category 2 dams in terms of the water act for the Department of Water Affairs and Forestry. Activities included review of designs physical inspection and evaluation of stability and performance of various dams, including operating and maintenance issues.
- 1987** **Damani Dam, Venda, RSA**
Position: Dam Design Engineer

CURRICULUM VITAE - JL Jonck

Client: Venda Government

Brief Description: Design and tender documentation for the construction of Damani Dam.

Assigned Tasks: Planning, design, drawings and technical specifications and preparation of Schedule of Quantities for a 28 m high, zoned earthfill dam with reinforced concrete side channel spillway, including a weir, pipelines and channels for irrigation and water reticulation in Venda.

1988 Raising of Vondo Dam, Venda, RSA

Position: Dam Design Engineer

Client: Venda Government

Brief Description: Design and tender documentation for the raising of Vondo Dam.

Assigned Tasks: Planning, design drawings and technical specification and preparation of Schedule of Quantities for the raising of a zoned earthfill dam with 17 m to a final height of 49 m. Structural design of the inlet tower and "morning glory" spillway shaft.

1984 – 1986 Arabie Dam (Flag Boshielo), Olifants river, RSA

Position: Resident Engineer

Client: Department of Water Affairs and Forestry

Brief Description: Construction supervision of a composite rollcrete/earthfill dam.

Assigned Tasks: Construction supervision for a 36 m high composite mass concrete and zoned earthfill dam in Lebowa, RSA. Activities included quality control, contract administration, handling of claims, technical evaluation of alternative working methods, monthly payments to the contractor, progress reports, site meetings and control of supervisory staff. The works included supervision of the construction of 15 pre-fabricated houses, including all services for construction personnel at Arabie dam, and 14 km access roads to the construction site.

1981 – 1983 Arabie Dam (Flag Boshielo), Olifants River, RSA

Position: Dam Design Engineer

Client: Department of Water Affairs and Forestry

Brief Description: Planning and design of a composite concrete/earthfill dam

Assigned Tasks: Planning, design drawings and technical specifications and preparation of Schedule of Quantities for a 36 m high composite mass concrete and zoned earthfill dam in Lebowa, RSA. Developed and designed rollcrete alternative. Associated structures include reinforced concrete inlet and outlet works, wing walls and flood diversion structures.

Languages:

	Speak	Read	Write
Afrikaans	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent



Signature: JL Jonck (PrEng)

APPENDIX II

ENVIRO-LEGAL FRAMEWORK

BY E-MAIL

To: JMA Consulting (Pty) Ltd
Attention: Mr. Riaan Grobbelaar

Ref: JC/MG

14 September 2012

Dear Riaan,

RE: PROPOSED LEGAL FRAMEWORK – APPLICATION FOR AUTHORISATION TO UNDERTAKE LISTED ACTIVITIES

We refer to the abovementioned matter as well as your request to compile a generic proposed Legal Framework which identified all the legislation and guidelines that should be considered in the preparation of a Basic Assessment Report or a Scoping Report, as the case may be.

We drafted the Legal Framework in order to specifically incorporate the legislation and guidelines that may find application to Xstrata Merafe Boshhoek Smelter and Mine (“Xstrata Boshhoek”) and which must be identified in the Scoping Report as contemplated in regulation 28(1)(f) of GNR 453 of 18 June 2010.

1. LEGAL FRAMEWORK

1.1. INTRODUCTION AND CONSTITUTIONAL PERSPECTIVE

This is an application for authorisation to undertake an activity identified in the National Environmental Management Act 107 of 1998 (NEMA) as a listed activity requiring consideration of the environmental impacts and the authorisation thereof. In addition to the statutory provisions in the NEMA more fully referred to herein below, other legislation and guidelines that have been considered in the preparation of this application for authorisation includes relevant legislation on all levels including the constitutional, national, provincial and local level.

www.cameroncross.co.za

Specialising in Environmental Health and Safety Law

Pretoria Offices: 1 Amethyst Avenue Lyttelton Manor | t: +27 (0) 12 664 6429 | f: +27 (0) 12 664 8180

Cape Town Offices: 3rd Floor, Business Partners, 60 Sir Lowry Road, 8002 | t: +27 (0) 21 461 3586 | f: +27 (0) 21 461 8923

Postal Address: PO Box 8867, Centurion, 0046, South Africa

Company Registration No.: 2002/016360/21 | VAT No.: 4310199528

Directors: James Cross BA LLB LLM, Kenneth Cameron BProc, Melissa Grobbelaar LLB

Senior Associates: Janse Rabie BComm LLB LLM, Caroline Pepermans BSc LLB LLM, Tandina Charters BComm LLB

Associates: Stéfanie Viljoen LLB LLM, Sune Meyer LLB, Christie Briel BProc

Professional Assistant Attorneys: Elizabeth Goldberg LLB, Candice Gibson LLB Office Manager: Chantal Sebastiao

Section 2 of the Constitution Act 108 of 1996 (CA) states that: “This Constitution is the supreme law of the Republic; law or conduct inconsistent with it is invalid, and the obligations imposed by it must be fulfilled.” Section 24 of the CA, states that everyone has the right to an environment that is not harmful to their health or well-being and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:

- *prevent pollution and ecological degradation;*
- *promote conservation; and*
- *secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.*

Section 24 guarantees the protection of the environment through reasonable legislative (and other measures) and such legislation is continuously in the process of being promulgated. Section 33(1) concerns administrative justice which includes the constitutional right to administrative action that is lawful, reasonable and procedurally fair.

This application was accordingly prepared, submitted and considered within the constitutional framework set by inter alia section 24 and 33 of the Constitution.

1.2. NATIONAL ENVIRONMENTAL MANAGEMENT ACT 107 OF 1998

1.2.1. National Environmental Management Principles

Section 2(1) states that the national environmental management principles apply throughout the country to the actions of all organs of State that may significantly affect the environment and:

- *apply alongside all other appropriate and relevant considerations, including the State’s responsibility to respect, protect, promote and fulfil the social and economic rights in Chapter 2 of the Constitution, and in particular the basic needs of categories of persons disadvantaged by unfair discrimination;*
- *serve as the general framework in terms of which environmental management and implementation must be formulated;*

- *serve as guidelines by reference to which any organ of State must exercise any function when taking any decision in terms of NEMA or a statutory provision concerning the protection of the environment;*
- *serve as principles by reference to which a conciliator appointed under NEMA must make recommendations; and*
- *guide the interpretation, administration and implementation of NEMA and any other law concerned with the protection or management of the environment.*

The principle of sustainable development is further elaborated on in sections 2(4)(a)(i-viii). These subsections can be summarised as follows:

- *that the disturbance of ecosystems and loss of biological diversity are avoided, or, wherever they cannot altogether be avoided, are minimised and remedied;*
- *that pollution and degradation of the environment are avoided, or where they cannot be altogether avoided, are minimised and remedied;*
- *that the disturbance of landscapes and sites that constitute a nations cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;*
- *that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible, otherwise disposed in a responsible manner;*
- *that the use and exploitation of non-renewable and natural resources are responsible and equitable and takes into account the consequences of the depletion of the resource;*
- *that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;*

- *that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and*
- *that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and when they cannot be altogether prevented, are minimised and remedied.*

The abovementioned principles accordingly guided the preparation of the application for authorisation in terms of section 24 of the NEMA and bind the relevant department of State, tasked with the assessment of this application.

1.2.2. Environmental Authorisations and Environmental Assessments

With effect from 2 August 2010, the Environmental Impact Assessment (EIA) Regulations, 2010 (GN R. 543 of 18 June 2010 ("GN R. 543")) and three Listing Notices promulgated in terms of the NEMA and as set out in detail below, commenced (save for those listed activities in respect of prospecting, mining, exploration, production, and reconnaissance which will commence at a date to be published). As a result, the relevant notices promulgated in terms of the NEMA pertaining to identified activities (GN R. 386 and 387 of 21 April 2006) and the Environmental Impact Assessment (EIA) Regulations, 2006 (GN R. 385 of 21 April 2006) have been repealed.

Section 24 of the NEMA, headed "Environmental Authorisations" sets out the provisions which are to give effect to the general objectives of Integrated Environmental Management (IEM), and laid down in Chapter 5 of the NEMA. In terms of section 24(1), the potential consequences for or impacts on the environment of inter alia listed activities must be considered, investigated, assessed and reported on to the competent authority or the Minister of Minerals and Energy (now the Minister of Mineral Affairs and the Minister of Energy Affairs, respectively), as the case may be, except in respect of those activities that may commence without having to obtain an environmental authorisation in terms of the NEMA.

*Accordingly, the listed activities have been promulgated in three different government notices, namely Government Notice R. 544 of 18 June 2010 ("GN R. 544"), which identifies those activities for which a **basic assessment** must be undertaken in accordance with the procedure set out in regulation 21 to 25 of GN R. 543; Government Notice R. 545 of 18 June 2010 ("GN R. 545"), which identifies those activities for which a*

scoping and environmental impact assessment must be undertaken in accordance with the procedure, set out in regulations 26 to 35 of GN R. 543; and Government Notice R. 546 of 18 June 2010 (“GN R. 546”), which identifies those activities for which a **basic assessment** must be undertaken in accordance with the procedure set out in regulation 21 to 25 of GN R. 543, based on the activities being undertaken in specific identified geographical areas.

The Schedules to GN R. 544, GN R. 545, and GN R. 546 set out those activities that have been identified in terms of section 24(2)(a) of the NEMA which may not commence without environmental authorisation from the competent authority and for which the investigation, assessment and communication of potential impacts of the activities must follow the procedure described in regulation 21 to 25 of the regulations in respect of those activities that require a “basic assessment” or in terms of regulation 26 to 35 of the regulations in respect of those activities that require “scoping and an environmental impact assessment”.

In accordance with regulation 76 of the transitional arrangements provided for in GNR. 543, applications submitted in terms of the previous NEMA Regulations (GNR. 385 of 21 April 2006) which are pending at the time of commencement of the EIA Regulations, 2010 must be dispensed with in terms of the previous Regulations as if they were not repealed.

1.3. OTHER RELEVANT LEGISLATION

1.3.1. Introduction

Whilst an authorisation in terms of section 24 is a fundamental requirement in order for the activity to proceed, other key environmental statutes in South Africa should also be considered by the Applicant within the context of this project. These statutes are:

- Environment Conservation Act 73 of 1989 (ECA);
- National Water Act 36 of 1998 (NWA);
- National Heritage Resources Act 25 of 1999 (NHRA);
- National Environmental Management: Air Quality Act 39 of 2004 (NEMAQA);
- Atmospheric Pollution Prevention Act 45 of 1965 (APPA);
- National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA);

- *National Environmental Management: Waste Act 59 of 2008 (NEMWA);*
- *National Forests Act 84 of 1998 (NFA);*
- *Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA);*
- *National Environmental Management: Integrated Coastal Management Act 24 of 2008 (NEMICMA);*
- *National Building Regulations and Building Standards Act 103 of 1997 (NBRBSA);*
- *Conservation of Agricultural Resources Act 43 of 1983 (CARA);*
- *Draft Guideline: Companion Document on the Environmental Impact Assessment Regulations, 2010;*
- *Draft Guideline: Public Participation in the EIA Process, 2010;*
- *Draft Guideline: Environmental Management Framework Guideline in support of the Environmental Management Framework Regulations, 2010;*
- *White Paper on Integrated Pollution and Waste Management for South Africa.*

The legislation and guidelines referred to above have been considered in preparation of this application for authorisation. A detailed discussion of all the abovementioned legislation and guidelines is not provided and only reference to key statutes is made.

1.3.2. Environment Conservation Act 73 of 1989 (ECA)

The authorisation process as well as the listed activities referred to in section 24 of the NEMA read with GNR 385, 386 and 387, as repealed by GNR 454, 455 and 456, replaces the authorisation of listed activities under the ECA. In addition, the provisions relating to waste management in the ECA have been repealed and waste management is now dealt with in terms of the NEMWA. Whilst other sections in the ECA have also been repealed, the provisions in the ECA relating to noise, vibration and shock are still in force.

The provisions of the ECA relating to noise have been considered as far as they may be applicable to the undertaking of the proposed activities and in preparation of this report.

1.3.3. National Water Act 36 of 1998 (NWA)

In terms of the NWA, the national government, acting through the Minister of Water Affairs and Forestry, is the public trustee of South Africa's water resources, and must ensure that water is protected, used, development, conserved, managed and controlled in a sustainable and equitable manner for the benefit of all persons (section 3(1)).

*In terms of the NWA a person may only use water without a license under certain circumstances. All other use, provided that such use qualify as a use listed in section 21 of the Act, require a water use license. A person may only use water **without a license** if such water use is permissible under Schedule 1 (generally domestic type use) if that water use constitutes a continuation of an existing lawful water use (water uses being undertaken prior to the commencement of the NWA, generally in terms of the Water Act of 1956), or if that water use is permissible in terms of a general authorisation issued under section 39 (general authorisations allow for the use of certain section 21 uses provided that the criteria and thresholds described in the general authorisation is met)¹.*

It should be noted that the general authorisations allowing for the use of section 21(a) and (b) water uses has been extended for a further period until it is withdrawn by notice in the Government Gazette.²

It should further be noted that the general authorisations allowing for the use of section 21 (e), (f), (g), (h) and (j) water uses have been extended for a further period until the 3rd of September 2013.³

*Permissible water use furthermore includes water use authorised **by a license** issued in terms of the NWA.*

Section 21 of the NWA indicates that "water use" includes:

- *taking water from a water resource (section 21(a));*
- *storing water (section 21(b));*
- *impeding or diverting the flow of water in a water course (section 21(c));*
- *engaging in a stream flow reduction activity contemplated in section 36 (section 21(d));*
- *engaging in a controlled activity which has either been declared as such or is identified in section 37(1) (section 21(e));*

¹ Section 22 (1) (a) (iii)

² GNR 498 of 28 June 2012.

³ GNR 702 of 29 August 2012.

- *discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit (section 21(f));*
- *disposing of waste in a manner which may detrimentally impact on a water resource (section 21(g));*
- *disposing in any manner of water which contains waste from, or which has heated in, any industrial or power generation process (section 21 (h));*
- *altering the bed, banks, course or characteristics of a water course (section 21(i));*
- *removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people (section 21(j)); and*
- *using water for recreational purposes (section 21(k)).*

The NWA has been identified in this application as legislation bearing possible relevance to the undertaking of the proposed activities. As such, the relevant provisions and obligations have been considered in the preparation of this report.

In addition to the above and in terms of section 26 of the NWA, Regulations on the Use of Water for Mining and Related Activities Aimed at the Protection of Water Resources were published in GNR. 704 of 4 June 1999 (GN R. 704). The aforesaid GNR 704 provides for inter alia the capacity requirements of clean and dirty water systems (regulation 6), the protection of water resources by a person in control of a mine (regulation 7), security and addition measures (regulation 8) and temporary or permanent cessation of a mine or activity (regulation 9).

The statutory requirements in GNR 704 have been considered as far as they may be applicable to the undertaking of the proposed activities and in preparation of this report.

1.3.4. National Heritage Resources Act 25 of 1999 (NHRA)

The NHRA established the South African Heritage Resources Agency (SAHRA) as well as provincial heritage resources agencies. In terms of the NHRA, no person may destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority responsible for the protection of such site.

No person may damage, disfigure, alter, subdivide or in any other way develop any part of a protected area unless, at least 60 days prior to the initiation of such changes, he/she/it has consulted with the relevant heritage resources authority. Section 34 of the NHRA provides for the protection of immovable property by providing for a prohibition on altering or demolishing any structure or part of any structure, which is older than 60 years, without a permit issued by the relevant provincial heritage resources authority. Accordingly, should the proposed activities, prospecting or mining activities or the closure and rehabilitation of mined land involve the altering or demolishing of any structure or part of any structure, which is older than 60 years, a permit issued by the relevant provincial heritage resources authority is required.

No person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite; destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite; trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

No person may, without a permit issued by SAHRA or a provincial heritage resources authority destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves; destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or bring onto or use at the burial ground or grave referred to above any excavation equipment or any equipment which assists in the detection or recovery of metals.

Section 38 of the NHRA states that any person who intends to undertake developments categorised in Section 38 of the NHRA must at the very earliest stages of initiating such development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development. By way of example, the developments referred to in Section 38 of the NHRA include:

- *the construction of a road, wall, power-line, pipeline, canal or other similar form of linear development or barrier exceeding 300 metres in length;*
- *the construction of a bridge or similar structure exceeding 50 metres in length;*
- *any development or other activity which will change the character of a site as specified in the regulations;*
- *any other category of development provided for in regulations by SAHRA or the provincial heritage resources authority.*

However, the abovementioned provisions are subject to the exclusion that section 38 does not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act 73 of 1989 (now presumably the NEMA in view of the repeal of the listed activities under the ECA): Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent.

The abovementioned provisions of the NHRA have been considered in preparing this report.

1.3.5. Atmospheric Pollution Prevention Act 45 of 1965 (APPA)

Air quality in South Africa was until recently regulated by the APPA. The APPA was administered by the Department of Water and Environmental Affairs and provided for the control of four different categories of air pollution.

- *Part II: Control of noxious or offensive gases;*
- *Part III: Atmospheric pollution by smoke;*
- *Part IV: Dust control; and*
- *Part V: Air pollution by fumes emitted by vehicle emissions.*

The abovementioned statutory aspects were considered as far as they may have been applicable to the undertaking of the proposed activities and in preparation of this report.

The APPA was, however, widely recognized to be out of date with respect to approaches to air quality management and measurement. Furthermore, it must be noted that the effect of the commencement of the remaining provisions of the National Environmental Management: Air Quality Act (NEMAQA) on 1 April 2010 is that the APPA and more specifically, the scheduled processes identified in the Second Schedule to APPA are now repealed.

1.3.6. National Environmental Management: Air Quality Act 39 of 2004 (NEMAQA)

The NEMAQA is seen as a modern approach in addressing air quality problems in a sustainable manner. The Act is to allow for the protection of the environment by providing reasonable measures for:

- the protection and enhancement of the quality of air in the Republic;*
- the prevention of air pollution and ecological degradation; and*
- securing ecologically sustainable development while promoting justifiable economic and social development; and*
- to give effect to section 24(b) of the Constitution in order to enhance the quality of ambient air for the sake of securing an environment that is not harmful to the health and well-being of people.*

Section 5 deals with the application of the NEMA and states that the NEMAQA must be read with any of the applicable provisions of the NEMA. The interpretation and application of this Act must also be guided by the principles set out in section 2 of the NEMA. Although the NEMAQA came into force as from 11 September 2005, all of its sections did not commence on this date.

Certain remaining sections of the NEMAQA that were to still enter into force only commenced on 1 April 2010. These included sections relating to the listing of activities resulting in atmospheric emissions, sections relating to the licensing of listed activities and sections relating to offences in respect of atmospheric emission licenses.

The listed activities which have or may have a detrimental effect on, among others, the environment and the minimum emission standards for these listed activities as contemplated in section 21 of the NEMAQA also commenced on 1 April 2010.

Accordingly, the processes in the Second Schedule to APPA are no longer applicable. In terms of section 22(2) of the NEMAQA, a provisional atmospheric emission licence or an atmospheric emission licence is required for the conducting of the listed activities.

National ambient air quality standards have also been established by the Minister of Water and Environmental Affairs (GN 1210 of 24 December 2009).

A list of activities which result in atmospheric emissions which have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage was published in GNR 248 of 31 March 2010.

The principles of the NEMAQA pertaining to environmental impacts associated with emissions to air have been considered during the preparation of this application for authorisation in terms of section 24 of the NEMA, insofar as the undertaking of the proposed listed activity concerns impacts to air.

1.3.7. Conservation of Agricultural Resources Act 43 of 1983 (CARA)

The CARA provides for the control over the utilization of natural agricultural resources in order to promote the conservation of soil, water resources and vegetation and to combat weeds and invader plants. Section 6 of the Act makes provision for control measures including cultivation of virgin soil, utilization and protection of wetlands, marshes, water sponges, water courses, regulation of run-off water, utilization and protection of vegetation, control of weeds and invader plant and the restoration or reclamation of eroded land or land which is disturbed or denuded.

The abovementioned areas of regulation have implications for development to which the CARA specifically applies and accordingly the provisions will only be relevant to projects where the Act finds application. In this regard the Act states that the CARA shall not apply to any land which is situated in an urban area, with an "urban area" meaning land which:

- is under the control of a local authority, but excluding any commonage or any other land under the local authority's control which in the opinion of the executive officer is utilised for agricultural purposes; or*

- *is sub-divided into erven or lots and public open spaces and streets which are bounded by such erven or lots and public open spaces (section 2(1)).*

With regard to the present application for authorisation and the locality of the site within Rustenburg, it is submitted that the provisions of the CARA will not find application to the proposed project. Notwithstanding the aforementioned, the relevant statutory principles have been considered as principles of best practice in preparation of this report.

1.3.8. National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA)

The NEMBA was promulgated in June 2004 and most of its provisions came into effect on 1 September 2004. The purpose of the NEMBA is to provide for the management and conservation of South Africa's biodiversity within the framework of the NEMA so as to protect species and ecosystems that warrant national protection. The NEMBA gives effect to ratified international agreements affecting biodiversity to which South Africa is a party, and which bind the Republic. The NEMBA must be read together with the NEMA and in particular, must be guided by the principles set out in Section 2 of the NEMA, as set out above.

The NEMBA provides for the publishing of various lists of species and ecosystems by the Minister of Environmental Affairs and Tourism (now the Minister of Water and Environmental Affairs) as well as by a Member of the Executive Council responsible for the conservation of biodiversity of a province in relation to which certain activities may not be undertaken without a permit. In terms of Section 57 of the NEMBA, no person may carry out any restricted activity involving any species which has been identified by the Minister as "critically endangered species", "endangered species", "vulnerable species" or "protected species" without a permit. The NEMBA defines "restricted activity" in relation to such identified species so as to include, but not limited to, "hunting, catching, capturing, killing, gathering, collecting, plucking, picking parts of, cutting, chopping off, uprooting, damaging, destroying, having in possession, exercising physical control over, moving or translocating".

The Minister has made regulations in terms of section 97 of the NEMBA with regards to Threatened and Protected Species which came into effect on 1 June 2007. Furthermore, the Minister published lists of critically endangered, endangered, vulnerable and protected species in terms of section 56(1) of the NEMBA.

The provisions of the NEMBA have been identified and considered in this report.

1.3.9. National Environmental Management: Waste Act 59 of 2008 (NEMWA)

The NEMWA commenced on 1 July 2009,⁴ and, as a result of its commencement the relevant provisions in the Environment Conservation Act 73 of 1989 in respect of waste management, were repealed.

The NEMWA sets out to reform the law regulating waste management and deals with waste management and control more comprehensively than was dealt with in the ECA. It also introduces new and distinct concepts never before canvassed within the realm of waste management in South Africa, such as the concept of contaminated land and extended producer responsibility. It also provides for more elaborate definitions to assist in the interpretation of the Act.

Section 19 of the NEMWA provides for listed waste management activities and states in terms of section 19(1), the Minister may publish a list of waste management activities that have, or are likely to have a detrimental effect on the environment. Such a list was published in GNR 718 of 3 July 2009⁵ (GN 718).

In accordance with section 19(3), the Schedule to GN 718 provides that a waste management licence is required for those activities listed therein prior to the commencement, undertaking or conducting of same. In addition, GNR 718 differentiates between Category A and Category B waste management activities. Category A waste management activities are those which require the conducting of a basic assessment process as stipulated in the EIA Regulations⁶ promulgated in terms of the NEMA as part of the waste management licence application and Category B waste management activities are those that require the conducting of a scoping and environmental impact assessment process stipulated in the EIA Regulations as part of the waste management licence application.

Section 20 of the NEMWA pertains to the consequences of listing waste management activities and states that no person may commence, undertake or conduct a waste management activity, except in accordance with the requirements or standards for that activity as determined by the Minister or in accordance with a waste management licence issued in respect of that activity, if a licence is required.

⁴ The then Minister of Environmental Affairs and Tourism (now the Minister of Water and Environmental Affairs) determined 1 July 2009 as the date on which the NEMWA will come into operation save for section 28(7)(a), section 46 and Part 8 of the Act in GN 34 of 30 April 2009 in Government Gazette No. 32189.

⁵ In Government Gazette No. 32368 of 3 July 2009.

⁶ GNR 453 of 18 June 2010

In terms of the current statutory framework with regards to waste management, a waste management licence is required for those waste management activities identified in the Schedule to GNR 718. Certain of the waste management activities listed in the Schedule are governed by specific thresholds. Where any process or activity falls below or outside the thresholds stipulated, a waste management licence is not required.

The abovementioned statutory aspects have been considered as far as they may be applicable to the undertaking of the proposed activities and in preparation of this report.

1.3.10. Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA)

Previously South African mineral rights were owned either by the State or the private sector. This dual ownership system represented an entry barrier to potential new investors. The current Government's objective is for all mineral rights to be vested in the State, with due regard to constitutional ownership rights and security of tenure.

The MPRDA was passed in order to make provision for equitable access to and sustainable development of the nation's mineral and petroleum resources, and to provide for matters connected therewith. The Preamble to the MPRDA inter alia affirms the State's obligation to:

- *protect the environment for the benefit of present and future generations;*
- *ensure ecologically sustainable development of mineral and petroleum*
- *resources; and*
- *promote economic and social development.*

The aforesaid preamble affirms the general right to an environment provided for in section 24 of the Constitution (as set out hereinabove).

The objects of the MPRDA, as set out in section 2 thereof serve as a guide to the interpretation of the Act. The objects of the MPRDA are as follows:

- *recognise the internationally accepted right of the State to exercise sovereignty over all the mineral and petroleum resources within the Republic;*
- *give effect to the principle of the State's custodianship of the nation's mineral and petroleum resources;*

- *promote equitable access to the nation's mineral and petroleum resources to all the people of South Africa;*
- *substantially and meaningfully expand opportunities for historically disadvantaged persons, including women, to enter the mineral and petroleum industries and to benefit from the exploitation of the nation's mineral and petroleum resources;*
- *promote economic growth and mineral and petroleum resources development in the Republic;*
- *promote employment and advance the social and economic welfare of all South Africans;*
- *provide for security of tenure in respect of prospecting, exploration, mining and production operations;*
- *give effect to section 24 of the Constitution by ensuring that the nation's mineral and petroleum resources are developed in an orderly and ecologically sustainable manner while promoting justifiable social and economic development; and*
- *ensure that holders of mining and production rights contribute towards the socio-economic development of the areas in which they are operating.*

The national environmental management principles provided for in section 2 of the NEMA (as set out hereinabove) apply to all prospecting and mining operations and any matter relating to such operation.⁷ These principles apply throughout the Republic to the actions of all organs of state including inter alia the Department of Mining (previously known as the Department of Minerals and Energy), that may significantly affect the environment.

Any prospecting or mining operation must be conducted in accordance with generally accepted principles of sustainable development by integrating social, economic and environmental factors into the planning and implementation of prospecting and mining projects in order to ensure that exploitation of mineral resources serves present and future generations.⁸

⁷ Section 37(1) of the MPRDA.

⁸ Section 37(2) of the MPRDA.

The abovementioned statutory aspects have been considered as far as they may be applicable to the undertaking of the proposed activities and in preparation of this report.

1.3.11. National Environmental Management: Integrated Coastal Management Act 24 of 2008 (NEMICMA)

The National Environmental Management: Integrated Coastal Management Act, 24 of 2008, commenced on 1 December 2009, with the exception of certain sections. The Act, among other objects, establishes a system of integrated coastal and estuarine management, defines rights and duties in relation to coastal areas, controls dumping at sea, pollution in the coastal zone, inappropriate development of the coastal environment and other adverse effects on the coastal environment.

While the provisions of the NEMICMA will not find application to the proposed project, the relevant statutory principles have been considered in preparation of this report.

1.4. PROVINCIAL LEGISLATION

1.4.1. Nature Conservation Ordinance 12 of 1983 (NCO) and the Transvaal Nature Conservation Regulations of 14 December 1983 (TNCR)

Both the NCO and the TNCR have been identified as potentially relevant, requiring consideration in this report. Furthermore, in terms of section 97(2) of the NCO a list of Endangered and Rare Species of Fauna and Flora was published on 3 February 1984 which list has been identified as potentially relevant, requiring consideration in this report.

1.5. LOCAL LEGISLATION

1.5.1. Various by-laws published by the Rustenburg Local Municipality

The following local by-laws have been considered as far as they may be applicable to the undertaking of the proposed activities and in preparation of this report:

- *Standard Water Supply By-laws of 5 January 1977*
- *Cleansing Services By-laws of 16 October 1985*
- *Drainage By-laws of 21 September 1994*
- *Water Supply and Waste Water By-laws of 24 November 2006*
- *Air Pollution Control By-laws of 3 July 2008*

- *Fire Brigade Services By-laws No 1 of 2008*

1.6. WHITE PAPERS AND GUIDELINES

1.6.1. *White Paper on Integrated Pollution and Waste Management of South Africa, 2000*

This White Paper on Integrated Pollution and Waste Management of South Africa contains various principles now incorporated into the NEMWA. The Integrated Pollution and Waste Management Policy is a subsidiary policy of the overarching environmental management policy which is supported by NEMA. Three principles specific to pollution and hazardous waste management have been adopted. These principles are the principles of transboundary movement of waste, the duty of care principle as well as the universal applicability of regulatory instruments.

The White Paper has been considered during the assessment process and in the compilation of this report.

1.6.2. *Guidelines*

The Guidelines which have been considered during the undertaking of this assessment and the preparation of this report have been referred to above. The details of these Guideline Documents are not repeated.

We provide the abovementioned legal framework in a generic sense. It is recommended that once the full application and the Scoping Report have been prepared, the abovementioned wording be amended to better reflect the project and the application of the legislation in relation thereto.

We trust that you find the above in order and await you further instructions.

Yours faithfully

Melissa Grobbelaar

CAMERON CROSS INC.

APPENDIX III

EXISTING AUTHORIZATIONS

- **ECA Section 20 Permit (12/9/11/P106) issued 30 June 2009**
- **Air Quality: APPA Certificate (Ref 47) issued 30 March 2010**
- **Water Use License (04/B11K/709) issued 2 April 2011**
- **Environmental Authorization (Ref: 17/2/3/9(1)N-6) issued 6 December 2011**

ECA Section 20 Permit (12/9/11/P106) issued 30 June 2009



environmental
& tourism

Department:

Environmental Affairs and Tourism

REPUBLIC OF SOUTH AFRICA

Private Bag X 447 · PRETORIA · 0001 · Fedsure Building · 315 Pretorius Street · PRETORIA

Tel (+ 27 12) 310 3911 · Fax (+ 2712) 322 2682

Ref: 12/9/11/P106

Enquiries: Ms K. Ntoampe

Tel. 012 310 3920 Fax: 12 310 3753 Email Address: kntoampe@deat.gov.za

Samancor Chrome Ferromentals
Private Bag X 7228
Witbank
1035

Fax: 013 249 4405

Dear permit holder

Please find hereto attached a permit issued in terms of S.20 of the ECA (act 73 of 1989) as amended.
The Department hereby notifies you that future permit amendment applications should be addressed to:

The Director: Authorisations and Waste Disposal Management
Department of Environmental Affairs
Private Bag X447
Pretoria
0001

This is also to advise you that applications for authorization of permit amendment, exemptions, waste delisting, emergency and or once off authorizations will be processed only if the Department of Water and Environmental Affairs is in receipt of the latest external audit report, annexure III of the permit or any other documents specified in the permit/ authorisation that needs to be submitted to the Department annually or at frequencies stipulated in the permit.

Furthermore, please note that the **minimum** time for processing any application regardless of details required is four and half months. You are therefore advised to apply well in advance.

Yours Sincerely


Ms Nosipho Ngcaba
Director-General

Department of Environmental Affairs

Letter signed by Ms K Ntoampe

Designation: Director: Authorisations and Waste Disposal Management

Date: 30 JUNE 2009



environment & tourism

Department:
Environmental Affairs and Tourism
REPUBLIC OF SOUTH AFRICA

Private Bag X447, Pretoria, 0001 • Fedsure Building, 315 Pretorius Street, Pretoria, 0002. Tel: (+27 12) 310 3911 Fax: (+27 12) 322 2682

Ref. 12/9/11/106

Enquiries: Kelello Ntoampe

Tel: (012) 310-3920 Fax: (012) 320-3753 Email: kntoampe@deat.gov.za

www.deat.gov.za

PERMIT NUMBER: 12/9/11/P106

CLASS: H:H

WASTE DISPOSAL SITE: SAMANCOR FERROMETALS SLAG SITE

LOCATION: PORTION 9, 12 AND 27 OF THE FARM DRIEFONTEIN 297 JS,
AT FERROMETALS WITBANK, MPUMALANGA PROVINCE

PERMIT HOLDER: SAMANCOR CHROME-FERROMETALS

ADDRESS: P/ BAG X 7228, WITBANK, 1035

PERMIT IN TERMS OF SECTION 20 OF THE ENVIRONMENT CONSERVATION ACT, 1989 (ACT NO. 73 OF 1989) AS AMENDED

I, Joanne Yawitch, in my capacity as Deputy Director-General: Environmental Quality Protection of the National Department of Environmental Affairs and Tourism (hereinafter referred to as "the Department"), in terms of section 20(1) of the Environment Conservation Act, 1989 (Act No. 73 of 1989) (as amended), hereby authorise the abovementioned permit holder to operate the abovementioned waste disposal site, subject to the conditions specified herein.



H:H Permit – Samancor Ferrometals Slag Site

PERMIT CONDITIONS

In this permit, "Director" means the Director: Authorisations and Waste Disposal Management of the National Department of Water and Environmental Affairs who may be contacted at the address below:

Director: Authorisations and Waste Disposal Management
Department of Water and Environmental Affairs
Private Bag X447
PRETORIA
0001

In this Permit, "Director: RPW" means the Director: Resource Protection and Waste of the National Department of Water and Environmental Affairs who may be contacted at the address below:

The Director: Resource Protection and Waste
Private Bag X313
PRETORIA
0001

1. SITE DETAILS

1.1 LOCATION

1.1.1 This permit authorises the operation of a waste disposal site on, Portion ,9,12 and 27 of the Farm Driefontein 297 JS, at Ferrometals Witbank, Emalaheni Local Municipality, Nkangala Magisterial District, Mpumalanga Province (hereinafter referred to as "the Site") according to the Samancor Chrome Slag Permitting of FMT Slag Dump, Ferrometals Permit Motivation Report compiled Kwezi V3 Engineers, dated September 2007 (hereinafter referred to as "the Report") and the Environmental Impact Assessment Record of Decision (RoD), issued by Mpumalanga Department of Agriculture and Land Administration with authorisation registration number: 17/2/1/25MP-5, dated 14 February 2008.

1.1.2 The location of the site must be according to the co-ordinates indicated on the permit application form, submitted by the permit holder which is defined as follows:

NUMBER OF CORNER	LATITUDE X	LONGITUDE Y
1	25° 50' 41.0"	29° 10' 37.2"
2	25° 51' 29.6"	29° 10' 43.9"
3	25° 51' 21.9"	29° 10' 33.7"
4	25° 51' 12.3"	29° 10' 33.6"
5	25° 50' 49.3"	29° 10' 13.3"
6	25° 50' 43.5"	29° 10' 14.1"



H:H Permit – Samancor Ferrometals Slag Site

1.2 DOCUMENTS CONSIDERED

1.2.1 Samancor Chrome Slag Permitting of FMT slag dump, Ferrometals Permit Motivation Report, compiled by Kwezi V3 Engineers, dated September 2007.

1.2.2 Permit application form, dated 11 September 2007

“Hereafter referred as the report “

1.2.3 Environmental Authorisation issued by the Mpumalanga Department of Agriculture and Land Administration with authorisation registration number 17/2/1/25MP-5, dated 14 February 2008.

1.2.4 Record of Decision (RoD) issued by the Department of Water Affairs and Forestry, dated 07 May 2008.

1.3 SITE SECURITY AND ACCESS CONTROL

1.3.1 The permit holder must ensure effective access control on the site by having it fenced to a minimum height of 1.8 metres fence, with gates of the same height at all entrances, to reasonably prevent unauthorised entry.

1.3.2 The permit holder must ensure that all entrance gates are manned during the hours of operation and locked outside the hours of operation.

1.3.3 The permit holder must prevent the acceptance of waste not authorised at the site as per condition 3.1 below.

1.3.4 Notices prohibiting unauthorised persons from entering the disposal Site, as well as an internationally acceptable sign indicating the risks involved in unauthorised entry must be displayed at the gate and at practicable intervals along the boundary of the disposal Site.

1.3.5 Weatherproof, durable and legible notices in at least three official languages applicable in the area, shall be displayed at each entrance to the site. These notices shall prohibit unauthorised entry and state the hours of operation, the name, address and telephone number of the permit holder and the person responsible for the operation of the site



H:H Permit – Samancor Ferrrometals Slag Site

2. MANAGEMENT

2.1 GENERAL MANAGEMENT

2.1.1 The activities must be managed and operated:

- a) in accordance with a documented environmental management system, and an updated site operating plan that inter alia identifies and minimises risks of pollution, including those arising from operations, accidents, incidents and non-conformances and those drawn to the attention of the permit holder as a result of complaints;
- b) in accordance with the relevant minimum requirements (where applicable);
- c) in accordance with an updated Environmental Management Plan drawn from Samancor Chrome Slag Permitting of FMT slag dump, Ferrrometals Permit Motivation Report compiled by Kwezi V3 Engineers, dated September 2007.
- d) in accordance with conditions of this permit;
- e) in accordance with any other written instruction by the Director; and
- f) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.

2.1.3 Any persons having duties that are or may be affected by the matters set out in this permit must have convenient access to a copy of it, kept at or near the place where those duties are carried out.

2.2 EMERGENCY PREPAREDNESS PLAN

2.2.1 The Permit Holder must maintain and implement a documented emergency preparedness plan and review it annually and after each emergency and or major accident. The plan must, amongst others, include:

- a) Vehicle/Machinery Fire & Malfunction
- b) Landfill Site Fire
- c) Spillage on route
- d) Slope Failure
- e) Natural disaster such as floods
- f) Industrial action



H:H Permit – Samancor Ferrometals Slag Site

3. PERMISSIBLE WASTE

- 3.1 Any portion of the Site, which has been constructed or developed according to condition 4, may be used for the disposal of ferrochrome slag.
- 3.2 Any other waste generated as part of the operation at Samancor Ferrometals may be stored in leak proof containers and away from the rain for disposal at permitted waste disposal sites.

4. CONSTRUCTION

- 4.1 The site or any portion thereof may only be used for the disposal of permissible waste if the site or any such portion has been constructed or developed according to the conditions listed under condition 4 of this permit.
- 4.2 Construction at the site must be carried out under the supervision of a registered professional engineer appointed by the permit holder according to the drawing numbers 221030PWO-D04-0 and 221030PWO-D05-1, dated June 2007 (Annexure V hereafter) and to ensure stability.
- 4.3 The Construction of the site must be carried out under the supervision of an Environmental Practitioner who should submit a declaration to the Director upon completion of each phase that all possible mitigation measures have been put in place and highlight likely deficiencies.
- 4.4 Waste deposition on areas where slag has been previously deposited may continue only to the nearest stable formation and height.
- 4.5 Waste deposition on areas where slag has been previously deposited may continue only on condition that there is no impact on the ground water.
- 4.6 Construction of the new disposal areas or cells must be in line with the 1998 DWAF minimum requirements design for high hazardous waste disposal sites.
- 4.7 A registered professional engineer must supervise construction and submit a certificate or alternatively a letter to the Director that the construction of the site, has been in accordance with recognised civil engineering practice and the plan number stipulated 4.2.
- 4.8 Works must be constructed and maintained on a continuous basis by the permit holder to divert and drain from the Site in a legal manner, all runoff water arising from land adjacent to the site, which could be expected as a result of the estimated maximum precipitation during a period of 24 hours with an average frequency of once in fifty years (50) (hereinafter referred to as the "estimated maximum precipitation"). Such works must, under the said rainfall event, maintain a freeboard of half a metre.



H:H Permit – Samancor Ferrometals Slag Site

- 4.9 Works shall be constructed and maintained on a continuous basis by the permit holder to divert and drain from the working face of the site, all runoff water arising from the site, which could be expected as a result of the estimated maximum precipitation and to prevent such runoff water from coming into contact with leachate from the site. Such works shall, under the said rainfall event, maintain a freeboard of half a metre.
- 4.10 Runoff water referred to in condition 4.9 that does not comply with national water quality guidelines for the natural environment must be collected for treatment prior to disposal or channelled to sewer provided permission is granted by the relevant local municipality.
- 4.11 Permit Holder must ensure a generic 500 metres "buffer zone" around the foot print of the waste body as recommended in the Air Quality Impact Assessment Report compiled by Margot Saner & Associates (Pty) Ltd.
- 4.12 The permit holder shall make provision for sanitation facilities on site in line with the Occupational Health and Safety Act, 1993 (Act 85 of 1993).

5. GENERAL OPERATION AND IMPACT MANAGEMENT

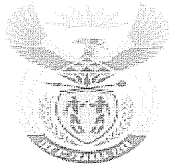
5.1 OPERATION

- 5.1.1 Permit holder must ensure that records in terms of volume, source and the nature of all the wastes received and landfilled are maintained and reported as per Annexure III hereafter on an annual basis;
- 5.1.2 Permit holder must ensure that fugitive emissions of substances (excluding odour and noise) shall not cause pollution.
- 5.1.3 Permit holder must ensure that litter and mud arising from the activities shall not cause pollution.
- 5.1.4 Permit holder must ensure that all liquid wastes, whose emissions to water or land could cause pollution, shall be provided with secondary containment and or diverted to sewer only after receiving approval from the relevant municipality;
- 5.1.5 Permit holder must ensure that emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Department and interested and affected parties;
- 5.1.6 Permit holder must ensure that emissions from the activities shall be free from noise at levels likely to cause annoyance, harm or disturb the peace of interested and affected parties;



H:H Permit – Samancor Ferrrometals Slag Site

- 5.1.7 Permit holder must ensure that scavenging animals, scavenging birds and other pests shall not cause pollution.
- 5.2 IMPACT MANAGEMENT
- 5.2.1 Permit Holder must ensure that the site is operated in such a manner that nuisance conditions or health hazards, or the potential creation of nuisance conditions or health hazards, are prevented.
- 5.2.2 Permit Holder must ensure the health and safety of workers and employees on site, in terms of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).
- 5.2.3 Waste deposited on the site may not be allowed to burn and fire prevention measures must be implemented to prevent fires on the site or extinguish fires which may occur; paying attention to blending with the natural environs of the area.
- 5.2.4 Suitable fencing and indigenous vegetation must be established around the site to effectively screen the site from nearby roads and residential areas.
- 5.2.5 All storm water runoff from the plant and disposal site must be collected into lined stormwater drains and be diverted to the pollution control dams for treatment and reuse in the process.
- 5.2.6 Uncontaminated runoff water must under no circumstances be used to dilute leachate emanating from the Site.
- 6. MONITORING**
- 6.1 MONITORING METHODS AND PARAMETERS
- 6.1.1 Permit Holder must carry out all tests required in terms of this permit in accordance with methods prescribed by and obtainable from the South African Bureau of Standards (SABS), referred to in the Standards Act, 1982 (Act 30 of 1982).
- 6.1.2 The Permit Holder must put in place a monitoring and measurement plan that must amongst others include:
- a) Ground water, Storm water and leachate quality monitoring;
 - b) Leak detection;
 - c) Air Space;
 - d) Tonnages and type of waste received, landfilled and transferred;
 - e) Noise assessment;
 - f) Air quality monitoring; and
 - g) Assessments of potential exposure to employees in terms of OHS Act.



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- 6.2 WATER MONITORING
- 6.2.1 A monitoring borehole network for the site must be maintained by the permit holder accordingly and to the satisfaction of the Director and the Director: RPW so that unobstructed sampling, as required in terms of this permit, can be undertaken. The monitoring borehole network for the site must be according to the co-ordinates indicated in Annexure VI hereafter, submitted by the permit holder.
- 6.2.2 Permit Holder must install additional shallow and deep monitoring boreholes to monitor the shallow perched aquifer and deep weathered sandstone aquifer at the following locations:
- Two boreholes along the southern end of the dump area.
 - One borehole along the western boundary of the dump site.
 - Two boreholes along the northern boundary of the dump site.
 - One borehole along the eastern boundary of the dump area near the current sport fields.
- 6.2.3 Monitoring boreholes must be equipped with lockable caps. The Department reserves the right to take water samples at any time and to analyse these samples or have them analysed.
- 6.2.4 Surface water monitoring must be performed within the first hour of rain in all storm water drains outlets that discharges to the natural environment.
- 6.2.5 Additional samples must be taken and analysed for the most common elements involved in ferrochrome processing (potential harmful elements like Hexavalent Chrome etc) at the following points:
- The first sample must be outside any potential area of the Samancor Plant.
 - The second sample must be taken just before the water enters the Brug spruit Water treatment Plant.
 - The third sample must be taken at the point of exit at the Water Treatment Plant.
- 6.2.6 Quality and quantity of treated leachate must be monitored and there must be written approval from the Director: RPW before discharging into a water course.
- 6.2.7 Groundwater and surface water monitoring must be conducted for the water quality variables listed in Annexure II below.
- 6.2.8 Monitoring for treated leachate, including contaminated runoff water, which is discharged into sewer according to condition 4.10, must be conducted at the following locations:
- at the point where the leachate exits the treatment facility; and or
 - at the point just before the point where the leachate enters the sewer network, according to requirements of condition 4.10 .
- 6.2.9 Permit Holder must conduct geohydrological investigation detailing historical water quality in the



H:H Permit – Samancor Ferrrometals Slag Site

area within six months in order to determine pollution emanating from the site and where there is evidence implement corrective action.

6.3 BACKGROUND MONITORING

6.3.1 Samples from the borehole as required above, where the groundwater in the borehole is at an expected higher hydraulic pressure level as the hydraulic pressure level of the groundwater under the site, must be considered as background monitoring. Background groundwater monitoring must be conducted for the water quality variables listed in Annexure I or Annexure II.

6.4 DETECTION MONITORING

6.4.1 Monitoring must be conducted bi-annually or such frequency as may be determined by the Director for the water quality variables listed in Annexure II (a and b).

6.5 INVESTIGATIVE MONITORING

6.5.1 If, in the opinion of the Director, a water quality variable listed under the detection monitoring programme, as referred to in condition 6.4, shows an increasing trend, the permit holder must initiate a monthly monitoring programme for the water quality variables listed in Annexure I.

6.6 AIR QUALITY AND DUST MONITORING

6.6.1 Permit Holder must install ambient air monitoring stations within 6 months of the date of this permit to monitor the following pollutants: metals chrome, manganese, cobalt, nickel and especially PM10 as part of air quality management plan to confirm that compliance with ambient air quality standards is achieved.

6.6.2 In the event that the outcome of the monitoring conducted in accordance with condition 6.6.1 above, indicates the concentration of the pollutants to be above the ambient air quality standards, the permit holder must submit an air quality and dust monitoring program to the Department for approval by the Director that must address the following aspects:

- a) location of air quality and dust monitoring positions
- b) on and off site monitoring of air quality variables including dust
- c) a monitoring procedure for the effective and accurate monitoring of air quality on the site ;
- d) frequency of monitoring ; and
- e) post closure monitoring.



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7. INVESTIGATIONS

- 7.1 If, in the opinion of the Director, environmental pollution, nuisances or health risks may be or is occurring on the Site, the Permit Holder must initiate an investigation into the cause of the problem or suspected problem.
- 7.2 If, in the opinion of the Director and Director: RPW, water pollution may be or is occurring the permit holder must initiate an investigation into the cause of the problem or suspected problem. Such investigation must include the monitoring of the water quality variables, at those monitoring points and such frequency as may be specified by Director.
- 7.3 Investigations carried out in terms of conditions 7.1 and 7.2 above must include the monitoring of the relevant environmental pollution, nuisance and health risk variables, at those monitoring points and such frequency to be determined in consultation with the Director.
- 7.4 Should the investigation carried out as per conditions 7.1 and 7.2 above reveal any unacceptable levels of pollution, the Permit Holder must submit mitigation measures to the satisfaction of the Director.

8. AUDITING

8.1 INTERNAL AUDITS

- 8.1.1 Internal audits must be conducted quarterly by the permit holder and on each audit occasion an official report must be compiled by the relevant auditor to report the findings of the audits, which must be made available to the external auditor specified in condition 8.2.1.

8.2 EXTERNAL AUDITS

- 8.2.1 Permit Holder must appoint an independent external auditor to audit the site annually and this auditor must compile an audit report documenting the findings of his audit, which must be submitted by the permit holder according to condition 10.9, below.
- 8.2.2 The audit report must:
- a) specifically state whether conditions of this permit are adhered to;
 - b) include an interpretation of all available data and test results regarding the operation of the site and all its impacts on the environment;
 - c) Specify target dates for the implementation of the recommendations by the permit holder to achieve compliance;



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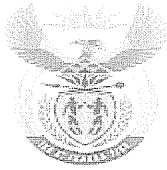
- d) contain recommendations regarding non-compliance or potential non-compliance and must specify target dates for the implementation of the recommendations by the permit holder and whether corrective action taken for the previous audit non conformities was adequate; and
- e) show monitoring results graphically and conduct trend analysis.

8.3 DEPARTMENTAL AUDITS AND INSPECTIONS

- 8.3.1 The Department reserves the right to audit and/or inspect the site at any time and at such a frequency as the Director may decide, or to have the site audited or inspected.
- 8.3.2 Permit Holder must make any records or documentation available to the Director upon request, as well as any other information the Director may require.
- 8.3.3 The findings of these audits or inspections must be made available to the permit holder within 30 days of the end of the audit or inspection. Information from the audits must be treated in accordance with the Promotion of Access to Information Act, 2000 (Act 2 of 2000).

9. RECORDING

- 9.1 Permit Holder must keep records in terms of volume and reported as per Annexure III and submit this information to the Director and the Director: RPW on an annual basis.
- 9.2 All records required or resulting from activities required by this permit must:
 - (a) be legible;
 - (b) be made as soon as reasonably practicable and should form part of the external audit report;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible and are easily retrievable; and
 - (d) be retained in accordance with a documented procedures which is approved by the Department.
- 9.3 Permit Holder must record all borehole data and chemical analyses in the format attached as Annexure IV.
- 9.4 Records demonstrating compliance with condition 2.1.1 must be maintained.



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10 REPORTING

- 10.1 Permit Holder must, within 24 hours notify the Director and the Director: RPW of the occurrence or detection of any incident on the Site, or incidental to the operation of the site, which has the potential to cause, or has caused pollution of the environment, health risks, nuisance conditions or water pollution.
- 10.2 Permit Holder must, within 14 days, or a shorter period of time, if specified by the Director and/or the Director: RPW, from the occurrence or detection of any incident referred to in condition 10.1, submit an action plan, which must include a detailed time schedule, and resource allocation signed off by top management, to the satisfaction of the Director and/or the Director: RPW of measures taken to –
- a) correct the impact resulting from the incident;
 - b) prevent the incident from causing any further impact; and
 - c) prevent a recurrence of a similar incident.
- 10.3 In the event that measures have not been implemented within 21 days of the incident to address impacts caused by the incident referred to in condition 10.1, or measures which have been implemented are inadequate, the Director and/or the Director: RPW may implement the necessary measures at the cost and risk of the Permit Holder.
- 10.4 Permit Holder must keep an incident report and complaints register, which must be made available to external auditor, Departmental auditors for the purpose of audit.
- 10.5 The Department must be notified without delay in the case of the following:
- a) any malfunction, breakdown or failure of equipment or techniques, accident or fugitive emission which has caused, is causing or may cause significant pollution;
 - b) the breach of this permit; and
 - c) any significant adverse environmental and health effects.
- 10.6 Prior written notification must be given to the Director of the following events and in the specified timescales:
- a) as soon as practicable prior to the permanent cessation of any operational activities;
 - b) full or partial cessation of the operational activities for a period likely to exceed 3 months;
 - c) full or partial resumption of the operation of all or part of the activities after a cessation notified under (b) above; and
 - d) the professional engineer appointed by the permit holder in line with condition 4.2 must make a signed declaration that condition 4.2, above have been adhered to.



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- 10.7 The Department must be notified within 7 days of any changes to the management of the site including the name of the incoming person together with evidence that such person has the required technical competence.
- 10.8 The Department must be notified within 14 days of the following changes:
- a) Permit holder's trading name, registered name or registered office address;
 - b) Particulars of the permit holder's ultimate holding company (including details of an ultimate holding where a permit holder has become a subsidiary);
 - c) steps taken with a view to the permit holder, or any one of them, going into bankruptcy, entering into composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 10.9 Each external audit report referred to in condition 8.2 must be submitted to the Director within 30 days from the date on which the external auditor finalised the audit.
- 11. MONITORING COMMITTEE**
- 11.1 Permit Holder must establish and take all reasonable steps to maintain and ensure the continued functioning of a Monitoring Committee for the normal operative lifetime of the site and for a period of at least two years after the closure of the site, or such longer period as may be determined by the Director.
- 11.2 The Monitoring Committee must formulate a terms of reference and code of conduct, according to the Minimum Requirements, Second Edition 1998 by DWAF.
- 11.3 The Monitoring Committee must be representative of relevant interested and affected persons as recommended in the Minimum Requirements and must have representatives elected by the local community.
- 11.4 The Monitoring Committee must meet at least twice a year and not later than 30 days after the external audit report specified in condition 8.2 has been submitted according to condition 10.9.
- 11.5 Permit Holder must keep minutes of all meetings of the Monitoring Committee and distribute these minutes to all members of the Monitoring Committee within 14 days after the meeting.



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12. REHABILITATION AND CLOSURE OF THE SITE

12.1 CLOSURE OF THE SITE

12.1.1 Immediately following the cessation of operations with the intention to close the site, or any portion thereof, the surface of the site must be covered and the site must be maintained in such a way that:

- a) the formation of pools due to rain is prevented;
- b) free surface runoff of rain-water is ensured;
- c) contamination of storm water is prevented;
- d) no objects or material which may hamper the rehabilitation of the site are present; and
- e) little or no erosion occurs, until the approved end use plan referred to in condition 12.3 below is completely implemented.

12.2.2 The permit holder shall remain responsible for the site, or any of its impacts on the environment, after operations on the site have ceased.

12.2 POST-CLOSURE MONITORING

12.2.1 Groundwater monitoring by the permit holder, in accordance with condition 6.3 or 6.4 above, must continue after closure of the Site and be maintained for a period of 30 years, or such lesser period as may be determined by the Director.

12.3 REHABILITATION PLAN

12.3.1 Permit Holder must rehabilitate the site and water pollution control dams or any portion thereof, in accordance with a closure report and the approved end use layout plan to be submitted for approval by the Director.

12.3.2 Permit Holder must ensure that the final rehabilitated slopes are covered by 450mm of natural clay and 300mm topsoil.

12.3.3 Permit Holder must ensure that once the site is rehabilitated, all storm water from the top of the site is controlled via control berms on the crests of the site to flow into the concrete water channels from where clean water will be released into the natural environment in consultation with the Director RPW

12.3.4 Permit Holder must ensure that the inspection and subsequent maintenance of the topsoil layer is undertaken after every thunderstorm to maintain the integrity of the capping system for all capped areas during operation and post closure of the site.



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13. LEASING AND ALIENATION OF THE SITE

- 13.1 Should the permit holder want to alienate or lease the site, he/she shall notify the Director in writing of such an intention at least 120 days prior to the said transaction.
- 13.2 Should the permit holder want to transfer holder-ship of this, he/she shall notify and obtain approval from the Director for such a transfer, at least 120 days prior to the said transfer.
- 13.3 Any subsequent permit holder shall be bound by the conditions of this permit.

14. GENERAL

- 14.1 This permit shall not be transferable unless such transfer is subject to condition 13.2.
- 14.2 This permit shall not be construed as exempting the permit holder from compliance with the provisions of the National and Provincial Legislation and any relevant Ordinance, Regulation, By-laws and relevant National Standards and norms.
- 14.3 Transgression of any condition of this permit could result in the validity of the permit being terminated by the Department.
- 14.4 This permit is valid for a period of twenty (20) years. The permit holder must initiate a permit review process five years from the date of this permit. However, any time before or after that date the Department may amend or withdraw this permit based on compliance to permit conditions, recommendations from audit reports and or changing legislation.

J. Yawitch

Ms Joanne Yawitch
DEPUTY DIRECTOR- GENERAL

DATE: *25/06/2009*



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ANNEXURE I

WATER QUALITY VARIABLES REQUIRED FOR BACKGROUND MONITORING
AND INVESTIGATIVE MONITORING: CONDITIONS 6.3 and 6.5

Alkalinity (P.AIk)	Free & saline ammonia as N (NH ₄ -N)
Calcium (Ca)	Boron (B)
Chromium (hexavalent) (Cr ⁶⁺)	Magnesium (Mg)
Chromium (Total) (Cr)	Cadmium (Cd)
Chemical oxygen demand (COD)	Chloride (Cl)
Cyanide (CN)	Fluoride (F)
Mercury (Hg)	pH
Lead (Pb)	Sodium (Na)
Nitrate (as N) (NO ₃ -N)	Electrical conductivity (EC)
Phenolic compounds (Phen)	Sulphate (SO ₄)
Potassium (K)	
Total dissolved solids (TDS)	



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ANNEXURE II

WATER QUALITY VARIABLES REQUIRED FOR BACKGROUND MONITORING AND DETECTION
MONITORING: CONDITIONS 6.3 AND 6.4

- (a) Bi-annually for:
- Alkalinity (P.Alk)
 - Chemical oxygen demand (COD)
 - pH
 - Total dissolved solids (TDS)
 - Chlorides (Cl)
 - Nitrate (NO₃-N)
 - Potassium (K)
- (b) Annually for:
- Electrical conductivity (EC)
 - Calcium (Ca)
 - Magnesium (Mg)
 - Sodium (Na)
 - Sulphate (SO₄)
 - Fluoride (F)



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ANNEXURE III: INFORMATION TO BE SUBMITTED ON AN ANNUAL BASIS: CONDITION 5.1.1 & 9.1

NAME OF SITE: _____ DATE OF REPORT: _____ (y/m/d)

1. Registered owner(s) of property on which disposal site is situated:

Name	Telephone	
Postal Address	Fax	
	Postal Code	

2. Operator in control of storage site:

Name	Telephone	
Identity number	Tel. After hours	
Educational Qualifications		
Other Relevant competencies:		

3. Indicate quantities of waste produced by the company as a whole:

Type of waste	Quantity (m ³ annum ⁻¹)	reused, recycled, recovered, treated, or disposed
TOTAL		

5. Attach Emergency preparedness & business Continuity plan for the current year.

6. Attach summarised water and air quality monitoring reports for the year.

7. Attach Risk assessment matrix for the site.

I, the undersigned, declare that the information stated above and the risk assessment below is to my knowledge a true reflection of the status at the _____ waste disposal site.

Signature: _____
Name: _____
Capacity: _____
Place: _____
Date _____



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ANNEXURE IV

FORM TO BE USED FOR CHEMICAL INFORMATION:
CONDITION 9.3

Name of Site				
Borehole/observation- point name/number				
Sampling date (y-m-d):		Method:	Bail	
Sampling Time			Pump	
Time after start of pump:	h min	Depth of sample		m
Date of analysis (y-m-d)		Laboratory		

General chemistry

Constituent	Unit	Required standard	Value	Constituent	Unit	Required standard	Value
pH	(-log[H ⁺])			As (III)	(mg/l)		
EC	(mS/m)			B	(mg/l)		
TDS	(mg/l)			Cd	(mg/l)		
Ca	(mg/l)			Free CN	(mg/l)		
Mg	(mg/l)			Cr (Total)	(mg/l)		
Na	(mg/l)			Cr (VI)I	(mg/l)		
K	(mg/l)			Cu	(mg/l)		
Alkalinity	(mg CaCO ₃ /l)			Mn	(mg/l)		
Cl	(mg/l)			Pb	(mg/l)		
SO ₄	(mg/l)			Hg	(mg/l)		
NO ₃ -N	(mg/l)			S-	(mg/l)		
F	(mg/l)						
COD	(mg/l)						
NH ₄ -N	(mg/l)						
Phenol	(mg/l)						
PO ₄	(mg/l)						
TOX	(μg/l)						
TOC	(mg/l)						
Ba	(mg/l)						



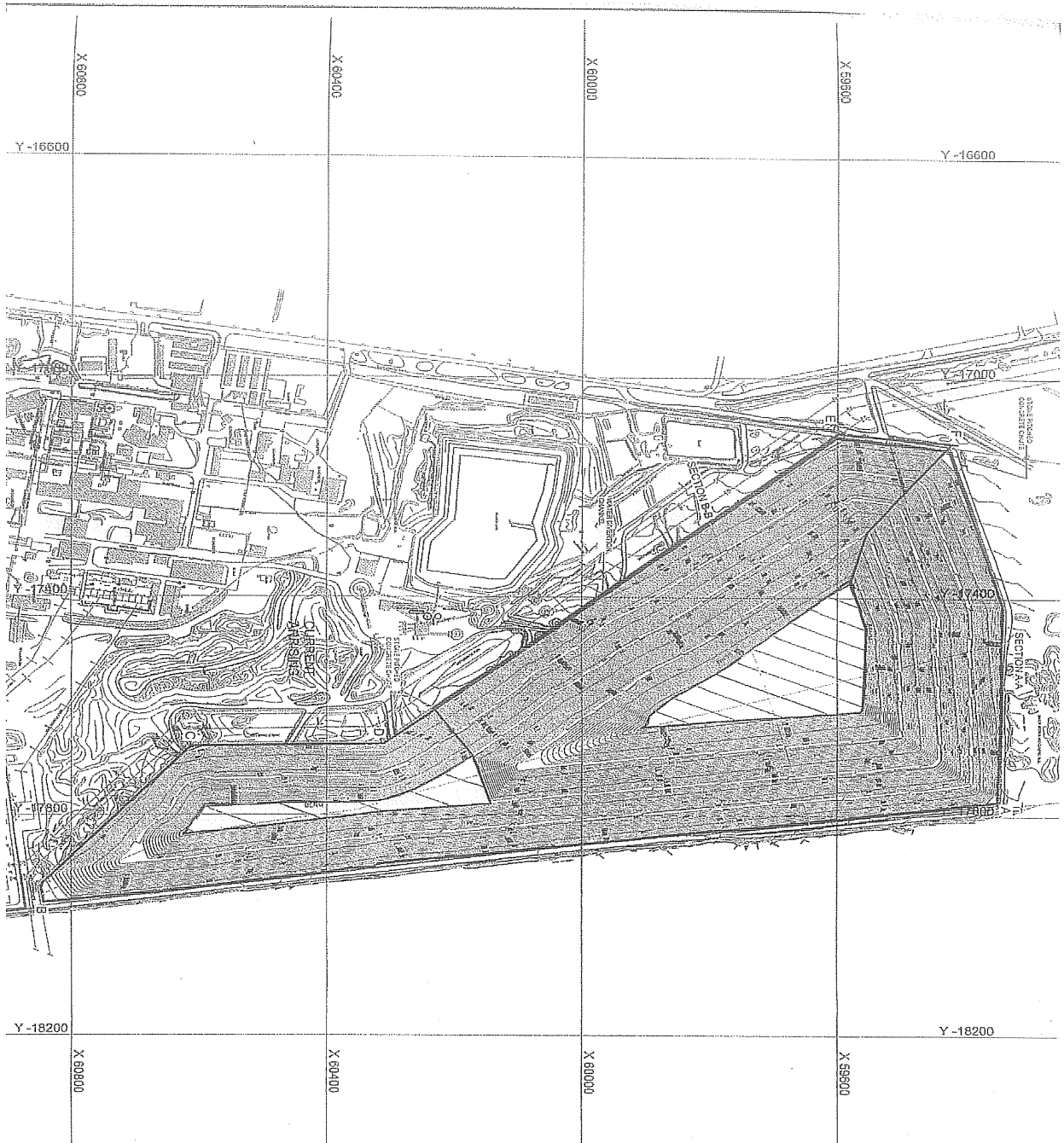
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ANNEXURE V: LAYOUT PLAN CONDITION: 4.2





H:H Permit – Samancor Ferrometals Slag Site



<p>PROJECT INFORMATION</p> <p>PROJECT NAME: SAMANCOR FERROMETALS SLAG SITE PERMITTING</p> <p>CLIENT: SAMANCOR FERROCHROME</p> <p>DATE: 27:10:2010</p> <p>PROJECT NO: 221:030P/WO-005-1</p>		<p>CLIENT INFORMATION</p> <p>NAME: SAMANCOR FERROCHROME</p> <p>ADDRESS: [REDACTED]</p> <p>CONTACT: [REDACTED]</p>		<p>ENGINEER INFORMATION</p> <p>NAME: KVS ENGINEERS</p> <p>ADDRESS: [REDACTED]</p> <p>CONTACT: [REDACTED]</p>		<p>SCALE</p> <p>1:1000</p>		<p>DATE</p> <p>27:10:2010</p>	
<p>PROJECT LOCATION</p> <p>ADDRESS: [REDACTED]</p> <p>CITY: [REDACTED]</p> <p>PROVINCE: [REDACTED]</p>		<p>PROJECT DESCRIPTION</p> <p>PROJECT TYPE: [REDACTED]</p> <p>PROJECT PHASE: [REDACTED]</p>		<p>PROJECT STATUS</p> <p>PROJECT STATUS: [REDACTED]</p>		<p>PROJECT CONTACT</p> <p>CONTACT NAME: [REDACTED]</p> <p>CONTACT PHONE: [REDACTED]</p> <p>CONTACT EMAIL: [REDACTED]</p>		<p>PROJECT APPROVAL</p> <p>APPROVAL STATUS: [REDACTED]</p>	



H:H Permit – Samancor Ferrometals Slag Site

ANNEXURE VI
WATER MONITORING CO-ORDINATES: CONDITION 6.2.1

EXISTING WATER MONITORING BOREHOLES

Borehole Number	Latitude	Longitude	Borehole locality
FSS 6	25.84929	29.16974	Downstream
FSD6	25.84934	29.16974	Downstream
FSS 7	25.84639	29.17196	Downstream
FSD7	25.84635	29.17194	Downstream
FSS 8	25.84474	29.17649	Upstream
FSD 8	25.84474	29.17655	Upstream
FSS 10	25.85591	29.17377	Downstream
FSD 10	25.85592	29.17383	Downstream
FSS 23	25.84994	29.17167	Downstream
FSD 23	25.84996	29.17172	Downstream
FSS 24	25.84479	29.17361	Downstream
FSD 24	25.84473	29.17362	Downstream
FSD 25	25.84845	29.17732	Upstream
FSD 25	25.8484	29.17734	Upstream
FSS 26	25.8582	29.17646	Upstream
FSD 26	25.85821	29.1765	Upstream

Air Quality: APPA Certificate (Ref 47) issued 30 March 2010



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Enquiries: Mazwi Lushaba Tel: (012) 310 3163 Fax: (012) 320 0488 Email: MLushaba@deat.gov.za

AIR QUALITY MANAGEMENT DIRECTORATE

The Head
Ferrometals
Private Bag X7228
Emalahleni
1035

Attention: Brian Gibson/ Roark Rawheath

ATMOSPHERIC POLLUTION PREVENTION ACT NO: 45 OF 1965: APPLICATION FOR REGISTRATION CERTIFICATE FOR SCHEDULED PROCESSES

Enclosed, please receive the Atmospheric Pollution Prevention Act Registration Certificate document for Ferrometals as per the table below.

Name of Operation	Registration Certificate Reference Number	Date of Issue
Ferrometals	47	30/03/2010

Outstanding information

- 1) All sections bearing the following symbol (-) indicate areas where information is required.
- 2) During the process of renewal/ review of the Registration Certificates the information required in 1) must be submitted to the licensing authority in a prescribed application form as per the Air Quality Act number 39 of 2004.
- 3) The prescribed application form may be downloaded from the SAAQIS website: www.saaqis.org.za

Yours sincerely

Mazwi Lushaba
DIRECTOR: AIR QUALITY MANAGEMENT
DATE: 06 April 2010



DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM
R E P U B L I C O F S O U T H A F R I C A

ATMOSPHERIC POLLUTION
PREVENTION ACT, 1965

REGISTRATION

CONCERNING SCHEDULING PROCESSES

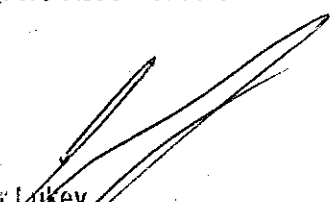
FERROMETALS

Is authorized to continue the processes listed below, with the equipment and plant as detailed in document number 47 on the premises at Driefontein 297 JS 9, 12 and 27, Emalahleni Municipality Nkangala District Municipality Mpumalanga Province.

1. GAS AND COKE PROCESSES [PROCESS No. 34 OF THE SECOND SCHEDULE].
2. CHROMIUM PROCESSES [PROCESS No. 50 OF THE SECOND SCHEDULE].
3. METALLURGICAL SLAG PROCESSES [PROCESS No. 66 OF THE SECOND SCHEDULE].

This certificate is valid until 12 September 2011.

Cert No: 47


Peter Lukey
CHIEF AIR POLLUTION CONTROL OFFICER
DATE: 30/03/2010


**Atmospheric Pollution Prevention Act, No.45 of 1965
Registration Certificate for Scheduled Processes**

This Registration Certificate issued to **FERROMETALS** in terms of section 10 of the Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965) ("the Act"), in respect of Schedule **Process No. 34, 50 and 66, Gas and Coke, Chromium and Metallurgical Slag processes** respectively of the Second Schedule to the Act. The Registration Certificate has been issued on the basis of information provided in the company's application dated **29 October 2007** and information that became available during processing of the application. The Registration Certificate is valid from the date of issue to **12 September 2011**.

The Registration Certificate is issued subject to the conditions set out below which form part of the Registration Certificate and which are binding on the holder of the Registration Certificate ("the holder").
SAMANCOR LTD TRADING AS FERROMETALS - FEROBANK EMALAHLENI


1. REGISTRATION CERTIFICATE ADMINISTRATION

Registration Certificate Number:	47
Registration Certificate Issue Date:	Date of signature by Chief Air Pollution Control Officer
Review Number:	47
Review Date:	To be determined by the Licensing Authority
Renewal Number:	47
Renewal Date:	Before 12 September 2011
Chief Air Pollution Control Officer:	Peter Lukey
Registration Certificate Fee Class:	N/A
Control Class:	N/A
Review Date, not later than:	12 September 2011
Expiry Date:	12 September 2011


Chief Air Pollution Control Officer's Signature:
Date: 30 03 10
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2. REGISTRATION CERTIFICATE HOLDER DETAILS

Company/Entity Name:	Samancor Ltd
Trading as:	Ferrometals
Company/Close Corporation/Trust Registration Number (Registration Numbers if Joint Venture):	1926/08883/06
Registered Address:	Moses Kotane Drive, Ferrobank, Emalaheni, 1035
Postal Address:	Private Bag X7228, Emalaheni, 1035
Telephone Number (General):	013 693 7000
Website Address:	www.samancorcr.com
Industry Type / Nature of Trade:	Ferrochrome
Contact Person Name:	Brian Gibson
Contact Person Post:	General Manager
Telephone Number:	013 693 7205
Cell Phone Number:	082 467 2145
Fax Number:	013 696 2800
Email Address:	Brian.Gibson@samancorcr.com
After Hours Contact Details:	082 467 2145
Name of Safety, Health and Environmental Official:	Johann Kirsten
Name of Responsible Officer:	Roark Rawheath
Name of the Landowner/s or Landlord/s:	Kermas
Name of Mortgage Bondholder (if any):	N/A
Deeds Office Registration Number of Mortgage Bond:	N/A
Land Use Zoning as per Town Planning Scheme:	Industrial 2


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3. SITUATION AND EXTENT OF PLANT

3.1 Location and Extent of Plant

Physical Address of the Licenced Premises:	Moses Kotane Drive, Ferrobank, Emalahleni, 1035
Description of Site (Where No Street Address):	N/A
Property Registration Number (Surveyor-General Code)	Driefontein 297 JS 9 (T39220/1993) Driefontein 297 JS12 (T39220/1993) Driefontein 297 JS 27 (T39220/1993)
Coordinates (Latitude, Longitude) of Approximate Center of Operations (Decimal Degrees)	Latitude: 25°50'55.0" S Longitude: 29° 10'39.2" E
Extent (km ²):	3.75
Elevation Above Mean Sea Level (m)	1550
Province:	Mpumalanga
District/Municipality:	Nkangala District Municipality
Local Municipality:	Emalahleni Municipality
Designated Priority Area (If Applicable):	Highveld Priority Area

3.2 Description of Surrounding Land Use (within 5 km radius)

Figure 3.1 is an aerial photograph of the plant and surrounding land use. The Bergspruit is located approximately 3.5km to the west of the site and the Blesbokspruit approximately 3.5km to the east. The site is surrounded by the following collieries, the T&DB Colliery to the west, underlain by the old Douglas No.3 Colliery and flanked to the east by the old Douglas No.1 and 2, Middelbult Steam, Coke and Coronation Collieries. The Kwaguqua Township lies directly south of the site, while sewerage works and Vantra are directly south-west of the site. Witbank is approximately 3km south-east from the site.


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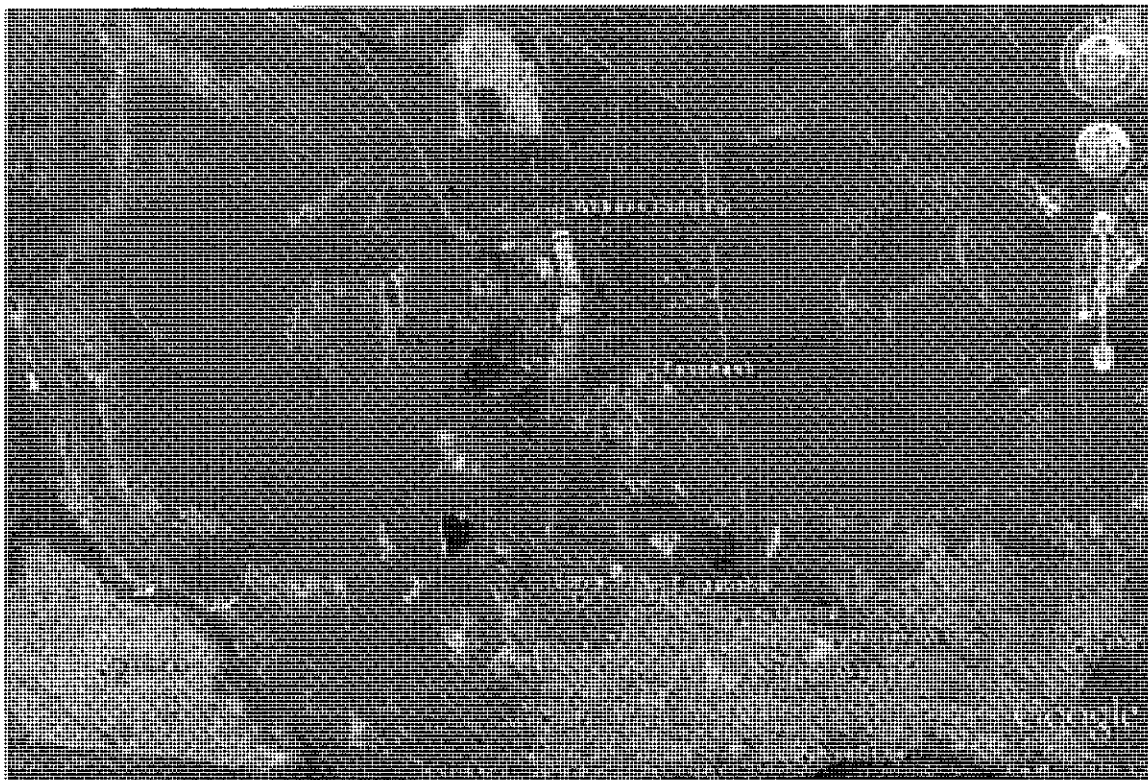


Figure 3.1: Ferrometals site and surrounding land use


4. GENERAL CONDITIONS

4.1 Process and Ownership Changes

All plant and apparatus used for the purpose of carrying out the scheduled process in question and all appliances for preventing or reducing to a minimum the escape into the atmosphere of noxious or offensive gases, shall at all times be properly maintained and operated and the holder shall ensure that all other necessary measures are taken to prevent the escape into the atmosphere of noxious or offensive gases.

No building, plant or works used, for a schedule process, by the holder shall be materially extended, altered or added to and no changes in process or significant production increases that will significantly alter impacts may be undertaken without the prior approval of the permitting authority.

The holder must apply in writing to the Chief Air Pollution Control Officer (CAPCO) if it proposes to make any changes to the type and quantities of input materials and products, or to production equipment and treatment facilities.


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The Registration Certificate ceases to be of effect upon change of ownership of the entity or cessation of operations and the CAPCO shall be advised of any such changes within.

On cessation of operations, the CAPCO must be notified and decommissioning of the plant and substances used shall be managed to prevent environmental impacts in terms of relevant legislation.

4.2 Duty to Evaluate Substances and Use Lower Hazard Substitutes

The holder must consider substituting chemicals and raw materials whose properties and application in the process could lead to environmental hazard with alternative substances posing less risk of environmental impact or side effects. In such cases, the holder shall select these alternatives as long as this can be done without any undue expense or inconvenience. The holder is not permitted to use a more hazardous substance in the place of a less hazardous substance.

4.3 General Requirements for Sampling and Compliance

Measurement, calculation and/or sampling and analysis shall be carried out in accordance with any nationally or internationally acceptable standard. A different method may be acceptable to the department as long as it has been consulted and agreed to the satisfactory documentation necessary in confirming the equivalent test reliability and quality and equivalence of analyses.

The holder is responsible for quality assurance of methods and performance. If the holder uses external laboratories or consultants for sampling or analysis, accredited laboratories and service shall be used whenever possible.

The holder is responsible for ensuring compliance with the conditions of this Registration Certificate by any person acting on his, her or its behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the holder. The processes that are authorised may only be carried out at the premises indicated.


This Registration Certificate does not negate the holder's responsibility to comply with any other statutory requirements that may be applicable to the carrying on of the scheduled process.

A copy of this Registration Certificate must be kept at the premises where the scheduled process will be carried on. The Registration Certificate must be produced to any authorised official of the CAPCO who requests to see it and must be made available for inspection by authorised officials.

Where any of the holder's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, the holder must notify the CAPCO as soon as the new contact details become known to the holder.

4.4 Variation of Registration Certificate

The CAPCO reserves the right to, by notice in writing, set and adjust the emission limit values or standards after consultation with the holder.


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4.5 Non-Compliance with Conditions

If the holder fails to comply with the conditions or requirements of the Registration Certificate, the CAPCO may by notice in writing call upon such holder to comply with such conditions or requirement within a reasonable period specified in the notice, and in the event of failure on the part of such holder to comply with the said conditions or requirement within the period so specified, the CAPCO may cancel the Registration Certificate or suspend the operation thereof for such period as he or she may deem fit.

5. NATURE OF PROCESS

5.1 Process Description

The plant currently consists of three 63 MVA and three smaller furnaces. Ferrometals also has a pelletising and sintering plant, utilizing Outokumpu technology with a pre-heating kiln, a chrome recovery plant, an intermediate carbon ferrochrome plant and a carbon paste producing plant, which forms part of a joint venture with Elkem.

Ferrometals uses more than 23 different types of raw materials that are received by road and rail transport. The logistics section is responsible for obtaining and supplying the required quality and quantity of raw materials to the production units. Raw materials and products produced are analysed in Ferrometals laboratory. The laboratory is equipped with sophisticated and modern equipment and uses international standards and methods to deliver the service.

The ferrochrome furnaces at Ferrometals produce high carbon charge chrome. The most important form in which chrome is used is in stainless steel production. Chrome ore, which contains oxides of chrome and iron, is reduced by the carbon in the form of coke and coal to form a chrome-iron alloy called ferrochrome.

Ferrochrome production is a carbo-thermic reduction process, which takes place at very high temperatures of up to 1750°C. The liquid ferrochrome is cast into ingots or granulated in water or transferred to the IC3 plant where it is converted into medium carbon ferrochrome. With technological progress in specialised steel production, the need for intermediate carbon ferrochrome gave rise to the development of a new concept at Ferrometals. In 1986, the commissioning of IC3 took place. This plant concentrated on altering the chemical composition of the metal extracted by the furnaces. The resultant product of this plant is intermediate carbon ferrochrome. Originally the IC3 plant was commissioned to produce 50 000 tons per annum, IC3 now has a capacity of 70 000 tons per annum; which highlights Ferrometals dedication to continuous process optimisation.

The process of metal extraction from the ore results in losses of metal still trapped in slag that has accumulated on site. A recovery plant was commissioned in 1995, which crushes material from the slag dumps and through a process of jigging recovers 95% of the metal contained in the slag. This process delivers clean slag suitable for concrete or road building applications. More importantly, it delivers clean ferrochrome that can be exported.

In June 1998 the pelletising and sintering plant was commissioned. In mining chrome ore, a large percentage of ore fines are generated. Pelletising technology agglomerate the ore fines to form pellets. Chrome recovery on the furnaces improves and stabilises the furnace operation. Early in 1974, a joint venture between Ferrometals and Highveld Steel & Vanadium Corporation led to the building of a carbon paste producing plant at the Ferrometals site. This plant was to supply paste requirements for

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the furnaces of both joint venture partners, and was called Elkem Ferroveld Joint Venture. In 2006 Highveld Steel & Vanadium Corporation sold their share to Elkem and the plant is now known as Elkem Ferroveld. Elkem Ferroveld also exports carbon paste to various global destinations such as Japan, Australia, New Zealand, Iran, Saudi Arabia and a number of European countries. Carbon products include Söderberg electrode paste in various shapes and sizes.

Process flow diagrams and a site layout plan are provided below (Figure 5.1 – 5.6)



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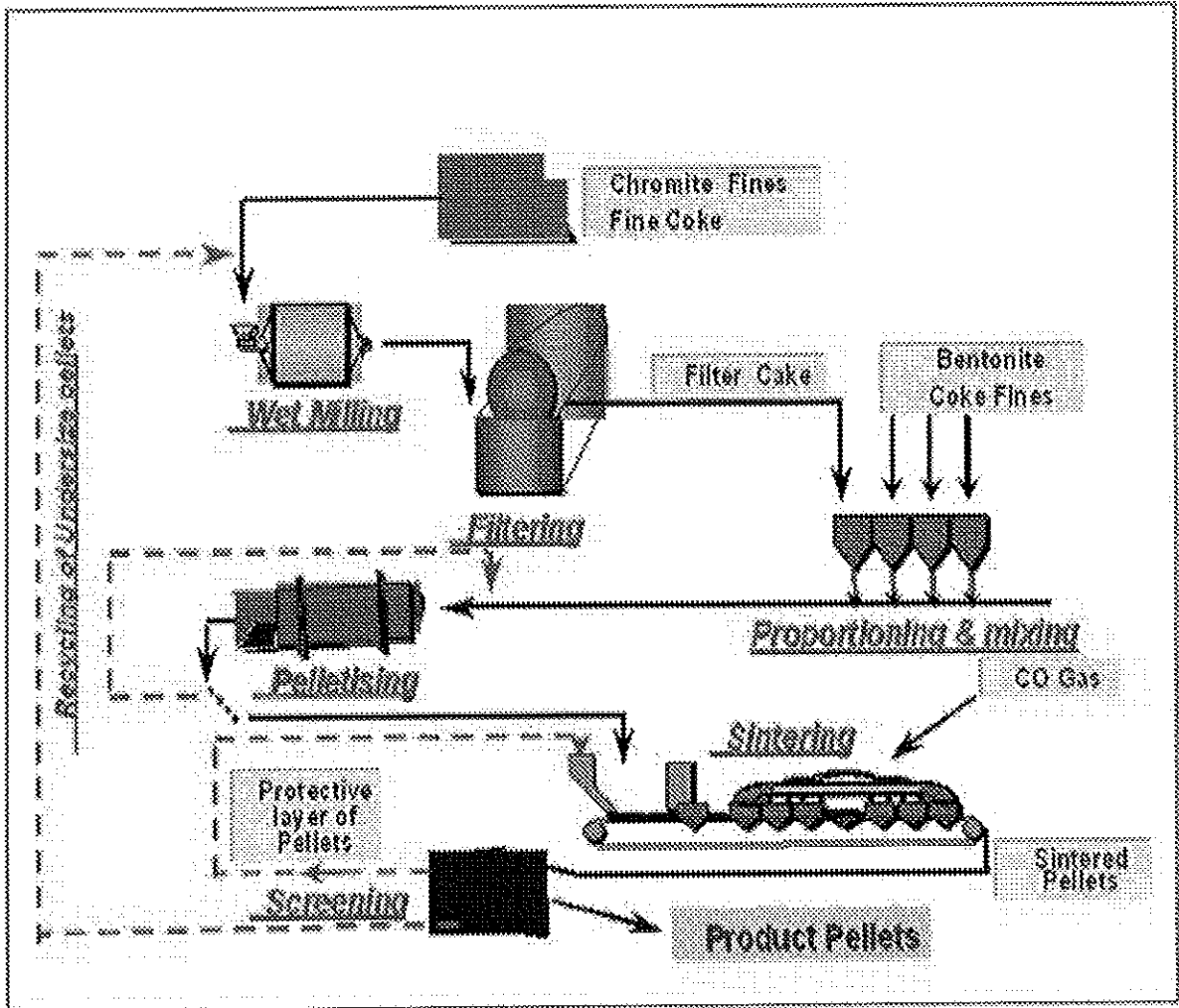


Figure 5.1: Pelletising and Sintering Process


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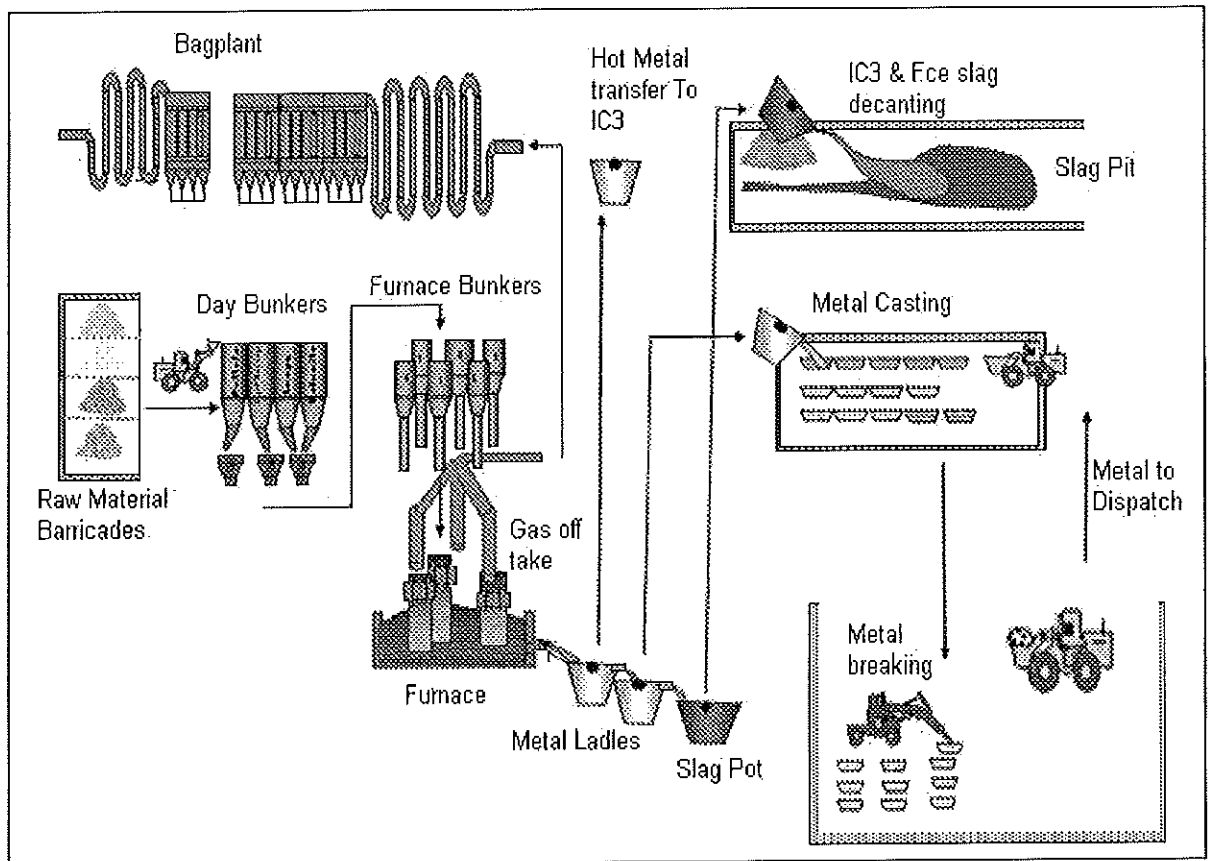


Figure 5.2: Ferrochrome Process: Open Furnaces - 1, 2, 3 & 6


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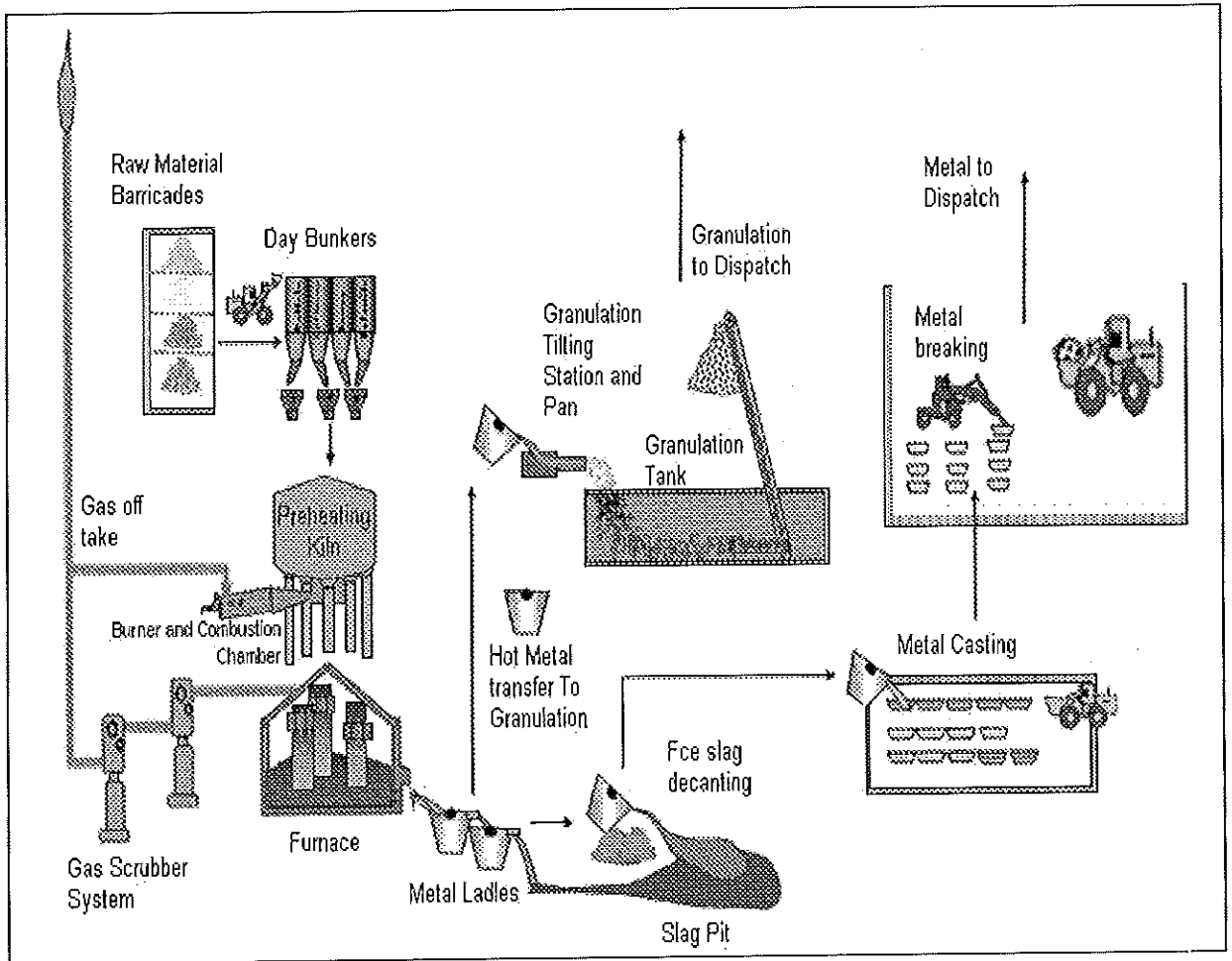


Figure 5.3: Ferrochrome Process: Closed Furnaces- 4 & 5


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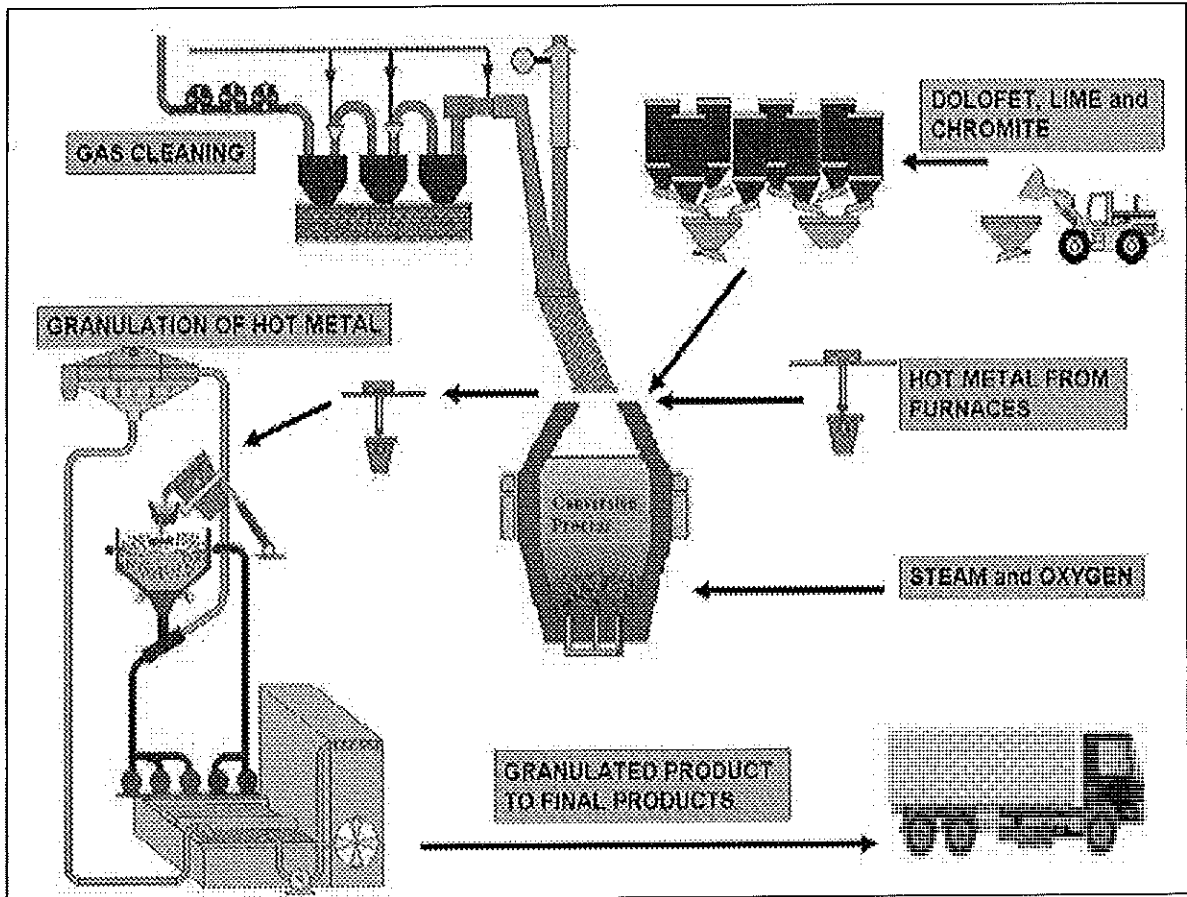


Figure 5.4: Intermediate Carbon Charge Chrome Process -IC3


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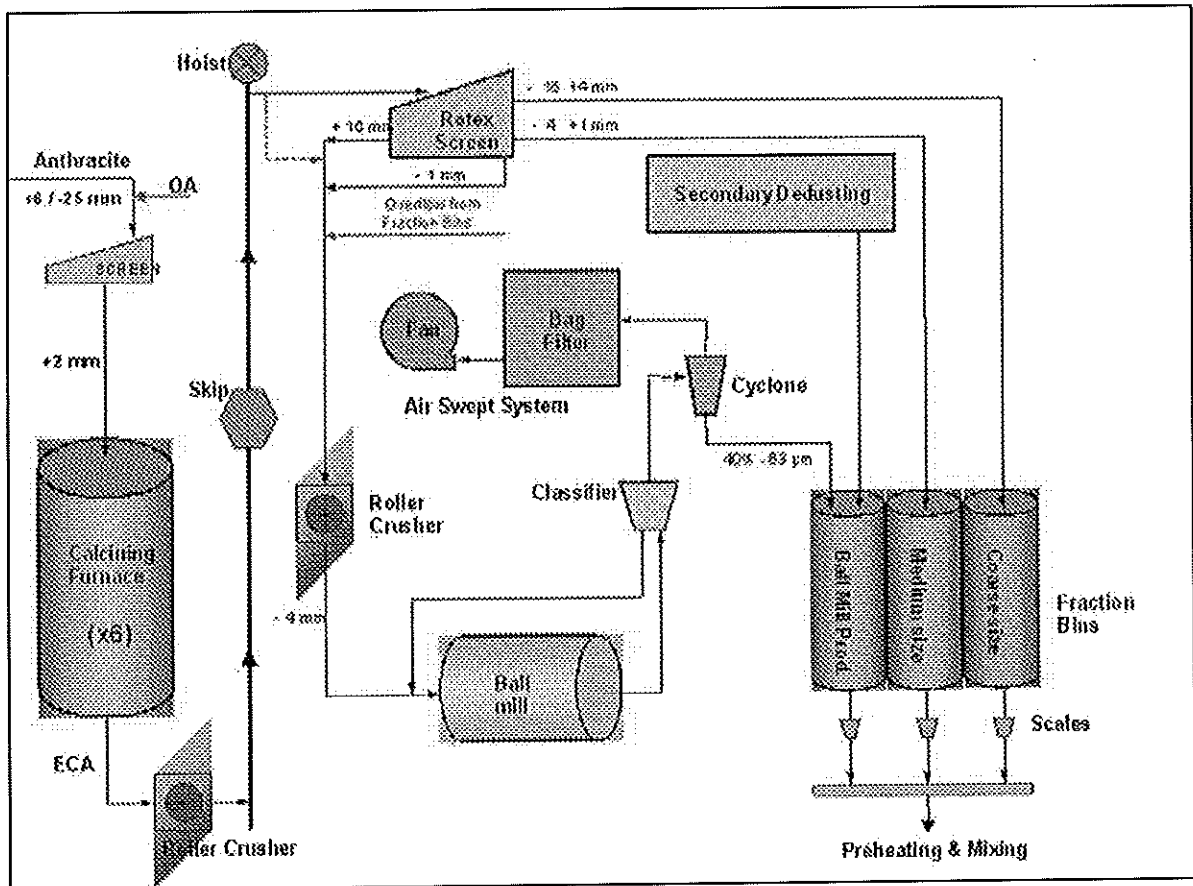
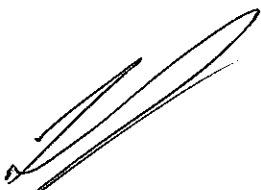


Figure 5.5: Elkem Ferrovelde Process


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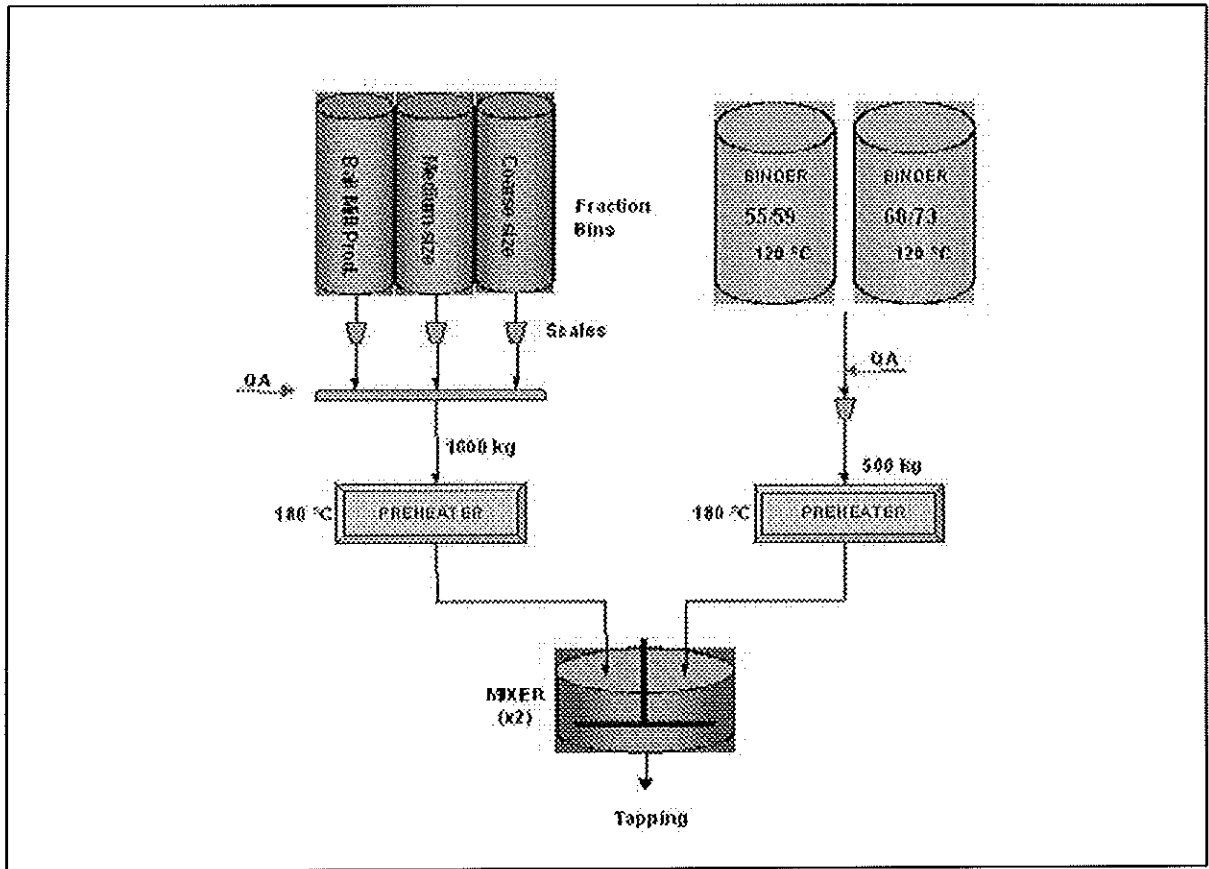
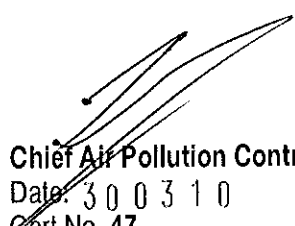


Figure 5.6: Elkem Ferroveld Process


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Emission Sources at Ferronmetals



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Fig.5.7: Layout of the operation

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5.2 Scheduled Processes

List of Scheduled Processes, as specified in the Second Schedule of the APPA, conducted at the premises by the holder:

Scheduled Process Number:	Schedule Process Description
34	Coke, Gas and Charcoal Processes
66	Metallurgical Slag Processes
50	Chromium Processes

5.3 Unit Processes

List of all unit processes in operation at the premises by the holder:

Unit Process	Function of Unit Process	Batch or Continuous Process?
Raw Material Handling	The storage and handling of all raw materials	Continuous
Pelletising / Sintering	Sintering of Pellets for Furnace Charge	Continuous
Furnace 1	Smelting of Chrome Ore	Continuous
Furnace 2	Smelting of Chrome Ore	Continuous
Furnace 3	Smelting of Chrome Ore	Continuous
Furnace 4	Smelting of Chrome Ore	Continuous
Furnace 5	Smelting of Chrome Ore	Continuous
Furnace 6	Smelting of Chrome Ore	Continuous
Intermediate Carbon Charge Chrome (IC3)	Smelted material placed in converter to reduce carbon content	Continuous
Crusher Plant	Crushing and Screening of Product	Continuous
CRP	Metal Recovery Processes from slag	Continuous
Elkem Ferroveld	Calcining anthracite to produce electrode paste	Continuous

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5.4 Hours of Operation

The Scheduled Processes may only be undertaken during the hours set out in the table below.

Unit Process / Plant	Operating Hours (e.g. 07h00 – 17h00)	No. Days Operation per Year
Raw Material Handling	24 hours	365
Pelletising / Sintering	24 hours	365
Furnace 1	24 hours	365
Furnace 2	24 hours	365
Furnace 3	24 hours	365
Furnace 4	24 hours	365
Furnace 5	24 hours	365
Furnace 6	24 hours	365
Intermediate Carbon Charge Chrome (IC3)	24 hours	365
Crusher Plant	24 hours	365
CRP	24 hours	365
Elkem Ferroveld	24 hours	365



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6. RAW MATERIALS AND PRODUCTS

6.1 Raw Materials Used

Pelletising and Sintering

Raw Material Type	Maximum Consumption (Volume)	Permitted Rate	Units (quantity/period)
Chrome Ore Fines	528 000		Ton/annum
Bentonite	9 800		Ton/annum
Fine Coke	5 100		Ton/annum

Furnace 1, 2 & 3

Raw Material Type	Maximum Consumption (Volume)	Permitted Rate	Units (quantity/period)
Chrome Ore	324 442		Ton/annum
Char	13 158		Ton/annum
Coke	50 055		Ton/annum
Coal	34 134		Ton/annum

Furnace 4

Raw Material Type	Maximum Consumption Rate (Volume)	Permitted Rate	Units (quantity/period)
Chrome Ore	275 000		Ton/annum
Fluxes	44 000		Ton/annum
Reductants	68 000		Ton/annum

Furnace 5

Raw Material Type	Maximum Consumption Rate (Volume)	Permitted Rate	Units (quantity/period)
Chrome Ore	275 000		Ton/annum
Fluxes	44 000		Ton/annum
Reductants	68 000		Ton/annum


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Furnace 6


Raw Material Type	Maximum Consumption Rate (Volume)	Permitted	Units (quantity/period)
Chrome Ore	230 000		Ton/annum
Coke	26 000		Ton/annum
Char	14 000		Ton/annum
Coal	22 000		Ton/annum
Quartzite	37 000		Ton/annum
Dolomite	12 000		Ton/annum

Intermediate Carbon Charge Chrome Plant (IC3)

Raw Material Type	Maximum Consumption Rate (Volume)	Permitted	Units (quantity/period)
Charged Chrome	85 000		Ton/annum
Ferro silicon	128		Ton/annum
Dolomite	9500		Ton/annum
Lime	7300		Ton/annum
Chrome Ore	5500		Ton/annum
Scrap	4800		Ton/annum
Oxygen	4260956		m ³ /annum
Nitrogen	1443500		m ³ /annum

Chrome Recovery Plant (CRP)

Raw Material Type	Maximum Consumption Rate (Volume)	Permitted	Units (quantity/period)
Slag	46800		Ton/annum


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6.2 Production Rates

Pelletising and Sintering

Product Name	Maximum Capacity (Volume)	Production Permitted	Units (quantity/period)
Sintered Pellets	520 000		Ton/annum

Furnace 1, 2 & 3

Product Name	Maximum Capacity (Volume)	Production Permitted	Units (quantity/period)
Ferrochrome	132 495		Ton/annum

Furnace 4

Product Name	Maximum Capacity (Volume)	Production Permitted	Units (quantity/period)
Ferrochrome	125 000		Ton/annum

Furnace 5


Product Name	Maximum Capacity (Volume)	Production Permitted	Units (quantity/period)
Ferrochrome	125 000		Ton/annum

Furnace 6

Product Name	Maximum Capacity (Volume)	Production Permitted	Units (quantity/period)
Ferrochrome	100 000		Ton/annum

Intermediate Carbon Charge Chrome Plant (IC3)

Product Name	Maximum Capacity (Volume)	Production Permitted	Units (quantity/period)
Intermediate Carbon FeCr	82125		Ton/annum


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Chrome Recovery Plant (CRP)

Product Name	Maximum Capacity (Volume)	Production Permitted	Units (quantity/period)
Recovered FeCr	41975		Ton/annum

6.3 Energy Sources Used

Energy Source	Max Sulphur Content of Fuel (%)	Ash Content of Fuel (%) (if applicable)	Maximum Permitted Consumption Rate (Volume)	Units (quantity/period)
Coal	1.0 %	25 %	40 000	Ton/annum
Coke	1.0 %	20 %	150 000	Ton/annum
Char	1.0 %	25 %	55 000	Ton/annum
Anthracite	1.0 %	20 %	22 000	Ton/annum

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6.4 Sources of Atmospheric Emission

6.4.1 Point Source Parameters

Point Source code	Source name	Latitude (decimal degrees)	Longitude (decimal degrees)	Height of Release Above Ground (m)	Actual Gas Exit Velocity (m/s)
P1	Furnace 1,2 & 3 Baghouse	25°51.548 S	29°10.386 E	36.65	0.7
P2	Furnace 6 Baghouse	25°51.462 S	29°10.353 E	45	0.6
P3	Flow Seps Ferroveld	25°51.668 S	29°10.372 E	70	5.7
P4	Ferroveld PDDS & SDDS Baghouses	25°51.629 S	29°10.383 E	70	10.5
P5	IC3 Scrubber Stack	25°51.620 S	29°10.295 E	29	27.5
P6	IC3 Boiler Stack	25°51.614 S	29°10.282 E	29	4.3
P7	Pelletising Plant Scrubber Stack	25°51.499 S	29°10.213 E	37	10.0
P8	Pelletising Plant Scrubber Stack	25°51.502 S	29°10.208 E	37	17.9
P9	Final Product Crusher Baghouse	25°51.722 S	29°10.322 E	10	18.6
P10	Chemplant Scrubber Stack	25°51.496 S	29°10.217 E	70	13.4
P11	Furnace 4 & 5	-	-	-	-
P12	Furnace 4 & 5	-	-	-	-

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7. APPLIANCES AND MEASURES TO PREVENT AIR POLLUTION

7.1 Appliances and Control Measures

Associated source code	Appliances					Air Pollution Control Technology				
	Appliance / Process Equipment Number	Appliance Type / Description	Appliance Serial Number	Appliance Manufacture Date	Product Name and Model	Technology Type	Design Capacity	Permitted Minimum Control Efficiency (%)	Permitted Minimum Utilization (%)	
P1	Furnaces 1, 2 & 3	Furnaces	n/a	1959	Baghouse	Trombone cooler and bag filter	-	98	99	
P2	Furnace 6	Furnaces	n/a	2005 (upgrade)	Baghouse	Bag Filter	-	98	99	
P3	Flow Seps Ferroveld	-	-	-	-	-	-	-	-	
P4	Ferroveld PDDS & SDDS Baghouses	-	-	-	-	-	-	-	-	
P5	IC3	Furnaces	n/a	1986	Venturi	Scrubber	-	98	99	
P6	IC3 Boiler Stack	-	-	-	-	-	-	-	-	
P7 & P8	Pelletising and Sintering	Pelletiser	n/a	1997	Venturi	Scrubber	-	98	99	
P9	Final Product Crusher Baghouse	-	-	-	-	-	-	-	-	

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P10	Chemplant Scrubber Stack	-	-	-	-	-	-	-	-	-	-	-
11	Furnaces 4 &	Furnaces	n/a	-	-	Venturi	Scrubber	-	98	99		
12	Furnaces 5	Furnaces	-	-	-	Venturi	Scrubber	-	98	99		

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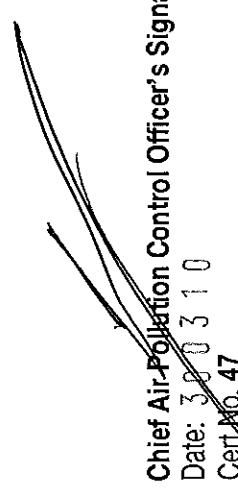
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7.2 Point Source – Permissible Emission Rates

Point Source code	Pollutant Name	Release Rate			Permitted Duration of Emissions
		(mg/Nm ³)	(g/s) Averaging Period	Date to be Achieved By	
P1, P2, P5, P6, P7, P8, P9, P10, P11 & P12	Particulate Matter	50/30*	- 24-hours	Immediate/ *by 12/9/2011	Continuous
	NO _x	350	- 1-hour	Immediate	Continuous
	SO ₂	500	- 1-hour	Immediate	Continuous
P3 and P4	Particulate Matter	50	- 24-hours	Immediate	Continuous
	TVOC	40	- 24-hours	Immediate	Continuous
	NO _x	350	- 1-hour	Immediate	Continuous
	SO ₂	500	- 1-hour	Immediate	Continuous


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7.3 Point Source – Emission Monitoring and Reporting Requirements

Point Source code	Emission Sampling / Monitoring Method	Sampling Frequency	Parameters to be Measured	Parameters to be Reported	Reporting Frequency	Conditions under which Monitoring could be Stopped
P1, P2, P5, P6, P7, P8 & P10, P11 & P12	Monitoring as per standard reference method	Continuous	Particulate Matter	Particulate Matter	Quarterly & Annual	Upon written approval by the Licensing Authority
	Sampling as per standard reference method	Bi-annual	SO ₂ , NO _x , Cr ⁶⁺	SO ₂ , NO _x , Cr ⁶⁺	Annual	Upon written approval by the Licensing Authority
P9	Sampling as per standard reference method	Bi-annual	Particulate Matter	Particulate Matter	Annual	Upon written approval by the Licensing Authority
P3, P4	Monitoring as per standard reference method	Continuous	Particulate Matter	Particulate Matter	Quarterly & Annual	Upon written approval by the Licensing Authority
	Sampling as per standard reference method	Bi-annual	SO ₂ , NO _x , VOCs	SO ₂ , NO _x , VOCs	Annual	Upon written approval by the Licensing Authority

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7.4 Area Source – Management and Mitigation Measures

The holder will submit a fugitive dust management plan within 12 months of the issue of this registration certificate. The plan must identify all significant sources of fugitive dust and measure that will be implemented to address these fugitive sources. The plan must include detailed methodologies, timeframes for implementation, assessment of efficiency and regular reporting criteria.

7.5 Abnormal Releases and Emergency Responses

The holder must prevent deviations from normal operating conditions that would result in pollution exceeding specified limit values, and shall scale back or halt its operations under excessive emissions if it is likely that the permitted levels of pollution would otherwise be exceeded.

7.6 Ambient Air Quality Monitoring

Ambient air quality monitoring as per information submitted in the application dated 29 October 2009. Information to be reported on an annual basis or as requested.

7.7 Energy Conservation Measures

The holder shall evaluate its activities to improve energy utilization and efficiency. This information should be provided to the Licensing Authority upon request

7.8 Cleaner Production Targets

The holder must investigate cleaner production processes and practices that are relevant to its operations with a view towards reducing energy consumption and atmospheric emissions related to the process. This information should be provided to the Licensing Authority upon request

7.9 Routine Reporting and Record-Keeping

Complaints Register

An official air quality complaints register must be maintained and made available for inspections. The air quality complaints may include noise, dust and offensive odours. The complaints register must include the following information on the complainant, namely, the name, physical address, telephone number of the complainant, date and the time when the complain was registered.

Furthermore, the holder is to investigate and report to the CAPCO in a summarised format on the total number of complaints logged and indicate the number of complaints attributable to it. The CAPCO must also be provided with a copy of the air quality complaints register. The record of a complaint must be kept for at least five (5) years after the complaint was made.


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Cert No. 47

Non-Compliance Recording and Reporting

Non-compliance with permitted emission limits must be recorded and reported to the CAPCO on a monthly basis in the manner and format required by the CAPCO, within fifteen (15) working days of reporting month end, including:

- Source code / name
- Emission limit exceeded
- Root cause analysis
- Calculation of impacts/emissions associated with the non-compliance incidents and dispersion modelling of pollutants where applicable
- Measures implemented or to be implemented to prevent recurrence
- Date by which measure will be implemented

Annual Reporting


An annual report must be completed by submitting information for the year under review in the manner and format required by the CAPCO. In the event that no manner or format has been specified, the annual report must be supplied to the CAPCO by registered post no later than sixty (60) days after the end of each reporting period.

The holder must retain a copy of the annual report supplied to the CAPCO for a period of at least five (5) years.

7.10 Notification of Abnormal Releases

The holder is to notify the CAPCO within twenty-four (24) hours of any significant incidences (i.e. spillages, fires, leakages or other similar situations). Should such incidences pose a significant health risk or nuisance, notification of the incident is to be immediate. This notification is to be made via the emergency incidents call centre number 0860 205 005 twenty-four (24) hrs.

Where excessive emissions occur, which could cause adverse health or environmental impacts or nuisance, urgent corrective measures must be taken, by the holder, to contain or minimise the emissions through operational interventions. Remediation, if required shall be carried out to the satisfaction of the permitting authority and/or any other governmental agencies. Any incident that has the potential to create significant health, safety or environmental risk or nuisance needs to be reported immediately to the relevant authority.



Chief Air Pollution Control Officer's Signature:
Date: 30/03/10
Cert No: 47

7.11 Investigations and Reviews

The following investigations are required:

Location	RC Conditions	Minimum Requirements	Timeframe
Plant Wide	Fugitive dust management	Fugitive dust implementation management plan developed, approved and under implemented as per the schedule agreed in the plan, to minimise nuisance impacts off-site	6 months from the date of issue.

8. DISPOSAL OF WASTE AND EFFLUENT ARISING FROM AIR POLLUTION MITIGATION MEASURES

The disposal of any waste and effluent arising from any air pollution mitigation measure must comply with the applicable regulations and requirements of the relevant authorities.

Source code/name	Waste/Effluent Type	Hazardous Components Present	Method of Disposal	Registration/Permit/Licence Status
P1 & P2	Bag filter dust	Heavy metals & salts	Enviroserv contract	Holfontein and on-site (IWWMP & IWULA in progress)
P5, P8 and P10	Scrubber sludge	Heavy metals and salts	Slimes dams	On-site (IWWMP & IWULA in progress)

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Chief Air Pollution Control Officer's Signature:

Date: 30 03 10

Cert No. 47

Water Use License (04/B11K/709) issued 2 April 2011



water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X313, Pretoria, 0001, Sedibeng Building, 185 Schoeman Street, Pretoria, Tel: (012) 336-7500 Fax: (012) 323-4472/ (012) 326-2715

LICENCE IN TERMS OF CHAPTER 4 OF THE NATIONAL WATER ACT, 1998 (ACT NO. 36 OF 1998) (THE ACT)

I, **Deborah Gabaakelwe Mochotlhi**, in my capacity as Project Manager: Letsema in the Department of Water Affairs and acting under authority of the powers delegated to me by the Minister of Water and Environmental Affairs, hereby authorise the following water use in respect of this licence.

SIGNED: 

DATE: 2011-04-02

LICENCE NO: 04/B11K/709
FILE NO: 16/2/7/B100/B49

1. **Water User:** Samancor Chrome Ferrometals (Pty) Ltd
Postal Address of applicant: Private Bag X7228
Emalahleni
1035
2. **Water Uses**
 - 2.1 Section 21(g) of the Act: Disposing of waste in a manner which may detrimentally impact on a water resource, subject to the conditions as set out in Appendices I and II.
3. **Properties on which the use will be exercised**
 - 3.1 Section 21(g) of the Act: Driefontein Erf 297 JS
4. **Registered owners of the Properties**
 - 4.1 Samancor Chrome Ferrometals (Pty) Ltd
5. **Licence and Review Period**
 - 5.1 This licence is valid for a period of ten (10) years from the date of issuance and it will be reviewed every five (5) years.

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6. Definitions

“ Any terms, words and expressions as defined in the National Water Act, 1998 (Act 36 of 1998) shall bear the same meaning when used in this licence.”

“The Regional Head” means the Regional Head: Mpumalanga Region, Department of Water Affairs, Private Bag X11259, Nelspruit, 1200.

“Report” refers to the report entitled “Integrated Water and Waste Management Plan Volume I and Volume II” dated December 2008 and the Integrated Water and Waste Management Application dated February 2009 for “Samancor Chrome Ferrometals” as compiled by Golder Associates for Samancor as well as all other related documentations and communication (emails, letters, verbal, etc) thereto.

7. Description of Activity

Samancor Chrome Ferrometals has been in operation since 1959 as a manufacturer of steel making products. The industry produces a waste such as slag and slimes, arising from the manufacturing processes

APPENDIX I

General Condition for the licence

1. This licence is subject to all applicable provisions of the National Water Act, 1998 (Act 36 of 1998).
2. The responsibility for complying with the provisions of the licence is vested in the Licensee and not any other person or body.
3. The Licensee must immediately inform the Regional Head of any change of name, address, premises and/or legal status.
4. If the property in respect of which this licence is issued is subdivided or consolidated, the Licensee must provide full details of all changes in respect of the properties to the Regional Head of the Department within sixty (60) days of the said change taking place.
5. If a water user association is established in the area to manage the resource, membership of the Licensee to this association is compulsory.
6. The Licensee shall be responsible for any water use charges or levies imposed by a responsible authority.
7. While effect must be given to the Reserve as determined in terms of the Act, where a desktop determination of the Reserve has been used in issuance of a licence, when a comprehensive determination of the Reserve has finally been made; it shall be given effect to.
8. When compulsory licensing is implemented for the water resource in respect of which this licence was issued, the water use authorized in this licence could be subject to appropriate reduction.
9. The licence shall not be construed as exempting the Licensee from compliance with the provisions of any other applicable Act, Ordinance, Regulation or By-law.
10. The licence and amendment of this licence are also subject to all the applicable procedural requirements and other applicable provisions of the Act, as amended from time to time.
11. The Licensee shall conduct an annual internal audit on compliance with the conditions of licence. A report on the audit shall be submitted to the Regional Head within one month of the finalisation of the audit.
12. The Licensee shall appoint an independent external auditor to conduct an annual audit on compliance with the conditions of this licence. The first audit must be conducted within three (3) months of the date this license and a report on the audit shall be submitted to the Regional Head within one (1) month of finalisation of the report.
13. Flow metering, recording and integrating devices shall be maintained in a sound state of repair and calibrated by a competent person at intervals of not more than two years. Calibration certificates shall be available for inspection by the Regional Head or his representative upon request.
14. Any incident that causes or may cause water pollution shall be reported to the Regional Head or his/her designated representative within twenty four (24) hours.

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APPENDIX II

Section 21(g) of the Act: Disposing of waste in a manner which may detrimentally impact on a water resource

1. CONSTRUCTION AND OPERATION

1.1 The shall carry out and complete all the activities, including the construction and/or upgrading and operation of the following water and waste management facilities:-

- 1.1.1 Coal discard dump with the secondary area;
- 1.1.2 Ferrochrome slag at old village;
- 1.1.3 Southern historical slimes dam;
- 1.1.4 Small historical slimes dam at stores;
- 1.1.5 Historical processed slag dump;
- 1.1.6 Historical manganese dump;
- 1.1.7 Eastern historical slimes dam;
- 1.1.8 Washed slag dump;
- 1.1.9 Slag (fine) being recovered;
- 1.1.10 Fine washed slag – Afrigrit dump;
- 1.1.11 Historical co-disposal dump;
- 1.1.12 Slag from furnaces and other fine waste;
- 1.1.13 Northern slimes dam and process water dam;
- 1.1.14 Stormwater channel (lean and dirty) and process water dam.

According to the Report and according to the engineering designs to be submitted within 6 months of the issuance of this license for approval by the Regional Head.

- 1.2 The construction of the facility mentioned in 1.1 must be carried out under the supervision of a professional Civil Engineer, registered under the Engineering Profession of South Africa Act, 1990 (Act 114 of 1990), as approved by the designer.
- 1.3 Within 30 days after the completion of the activities referred here in accordance with the relevant provisions of this licence, the Licensee shall in writing, under reference 16/2/7/B100/B45 inform the Regional Head thereof. This shall be accompanied by a signature of approval from the designer referred to above that the construction was done according to the design plans referred to in the Report.
- 1.4 The Licensee must ensure that the disposal of the Slag waste and the operation and maintenance of the system are done according to the provisions in the Report.
- 1.5 The Licensee shall as well submit a set of as-built drawings to the Regional Head after the completion of the waste and waste water management facility mentioned in 1.1.
- 1.6 The waste and waste water management facilities mentioned in 1.1 shall be operated and maintained to have a minimum freeboard of 0.8 metres above full supply level and all other water systems related thereto shall be operated in such a manner that it is at all times capable of handling the 1:50 year flood-event on top of its mean operating level.
- 1.7 The Licensee shall use acknowledged methods for sampling and the date, time and sampler must be indicated for each sample.

2. STORAGE OF WATER CONTAINING WASTE

2.1 The is authorised to dispose the following:

Water Uses	Activity	Quantity (per
2.1 Section 21(g)	Coal discard dump within secondary area	700000 tons
2.2 Section 21(g)	Ferrochrome slag at old village	Has been cleared of all rubble
2.3 Section 21(g)	Southern historical slimes dam at stores	40 000 tons
2.4 Section 21(g)	Small historical slimes dams at stores.	20 000 tons
2.5 Section 21(g)	Northern slimes dam and process water dam	101 610 tons
2.6 Section 21(g)	Historical processed slag dump	3 million tons
2.7 Section 21(g)	Stormwater channel (clean & dirty) and process water dam	12 000 m ³
2.8 Section 21(g)	Raw materials and final product stockpile	848 408 tons
2.9 Section 21(g)	Historical Manganese dump	15 000 tons
2.10 Section 21(g)	Eastern historical slimes dam	33 000 tons
2.11 Section 21(g)	Washed slag dump	898 277 tons
2.12 Section 21(g)	Fine washed slag-Afrigrit dump	35 425 tons
2.13 Section 21(g)	Slag from furnace and other fine waste	510 997 tons

3. QUALITY OF WASTE WATER TO BE DISPOSED

3.1 The quality of storm water (clean and dirty) disposed of into the Storm water channel shall not exceed the following limits of the general standards indicated below:

Table 1

Variables and substances	General Effluent Standards
Chemical oxygen demand	65 mg/l
Colour, odour or taste	No substance capable of producing the variables listed
Cyanide (as Cn)	0,03 mg/l
Dissolved oxygen concentration	At least 75% saturation
Fluoride (as F)	1,0 mg/l
Increase in electrical conductivity	Not by more than 75 milli-Siemens/m above that of the receiving water
Increase in sodium (as Na) concentration	Not by more than 90 mg/l above the receiving water
Ionised and unionised ammonia (free and saline ammonia)	3,0 mg/l
Nitrate (as N)	15 mg/l
Oil or grease	0 mg/l
PH	Between 5,5 and 9,5
Phenol index	0,1 mg/l
Residual chlorine (as Cl)	0,1 mg/l
Soap or detergents	0 mg/l
Soluble ortho phosphate (as P)	1,0 mg/l
Sulphides (as S)	1,0 mg/l
Suspended solids	18 mg/l
Temperature	Not more than 25°C
Total aluminium	0,05 mg/l

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Total arsenic (as As)	0,06 mg/l
Total boron (as B)	0,5 mg/l
Total cadmium (as Cd)	0,008 mg/l
Total chromium III (as Cr _{III})	0,11 mg/l
Total chromium VI (as Cr _{VI})	0,02 mg/l
Total copper (as Cu)	0,006 mg/l
Total iron (as Fe)	0,3 mg/l
Total lead (as Pb)	0,01 mg/l
Total manganese (as Mn)	0,4 mg/l
Total mercury (as Hg)	0,002 mg/l
Total selenium (as Se)	0,05 mg/l
Total zinc (as Zn)	0,05 mg/l
Typical faecal coli per 100 ml	0

4. MONITORING

4.1. GROUNDWATER MONITORING

- 4.1.1 The Licensee shall compile a groundwater monitoring programme within twelve (12) months after the issuance of this licence. A report shall be submitted to the Regional Head within one month of finalisation of the report for evaluation and approval.
- 4.1.2 Monitoring boreholes shall be clearly marked and numbered, and must be equipped with lockable caps. The Department reserves the right to sample monitoring boreholes at any time and to analyse these samples, or to have samples taken and analysed.
- 4.1.3 The shall maintain the groundwater quality monitoring network to the satisfaction of the Regional Head, so that unobstructed sampling, as required in terms of this Licence, can be undertaken.
- 4.1.4 Groundwater monitoring shall be conducted at a quarterly basis and report the outcome to the Regional Head.
- 4.1.5 Groundwater monitoring results shall be compiled in a report and submitted to the Department within one month of its finalisation.
- 4.1.6 Monitoring boreholes shall be established around the defunct Duiker shaft for estimating mine fill-up and possible decant rates in the other shafts.
- 4.1.7 Monitoring boreholes shall be established around the plant infrastructure and workshop areas

Table 2: Groundwater Monitoring Points

Monitoring point	X Co-ordinate	Y Co-ordinate
FSD/FSS-1	25.857478	28.822804
FSD/FSS-5	25.849490	28.830453
FSD/FSS-6	25.846601	28.829949
FSD/FSS-7	25.843701	28.827723
FSD/FSS-9	25.847092	28.825165
FSD/FSS-10	25.823231	28.825919
FSD/FSS-15	25.850460	28.826705
FSD/FSS-16	25.848913	28.831004
FSD/FSS-17	25.858347	28.831919

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Monitoring point	X Co-ordinate	Y Co-ordinate
8807-01D	25.83979	29.17078
8807-02S	25.83937	29.17081
8807-03D	25.84392	29.17473
8807-04D	25.83784	29.17062
8807-05D	25.85170	29.16939
8807-06D	25.85390	29.17835
8807-07S	25.85427	29.17847
8807-08S	25.86446	29.17607
8807-09D	25.86291	29.16998
8807-10S	25.86290	29.16995
8807-11D	25.86288	29.16992
8807-12S	25.83785	29.17068
8807-13S-	25.85164	29.16941
FSMS3	25.857553	29.178631
FSM3	25.857533	29.178674
FSM4	25.855089	29.173032
FSM4-1	25.855138	29.173026
FSD23	25.849959	29.171717
FSS23	25.849937	29.171665
FSS24	25.844733	29.173615
FSD24	25.844788	29.173612
FSS25	25.848445	29.177321
FSD25	25.848401	29.177337
FSD26	25.858215	29.176501
FSS26	25.858203	29.176456

Water Quality

Physical

Constituent	Unit	Frequency
Electrical conductivity	mS/m	Quarterly
pH	pH units	Quarterly

Chemical

Constituent	Unit	Frequency
Total Dissolved Solids	mg/l	Quarterly
Suspended solids(SS)	mg/l	Quarterly
Sulphates(as S04)	mg/l	Quarterly
Chlorine (as Cl)	mg/l	Quarterly
Nitrate(as N)	mg/l	Quarterly
Ortho-phosphate (as P)	mg/l	Quarterly
Boron (as B)	mg/l	Quarterly
Ammonia(as N)	mg/l	Quarterly
Fluoride(as F)	mg/l	Quarterly
Aluminium(Soluble)	mg/l	Quarterly
Manganese(soluble)	mg/l	Quarterly
Vanadium (soluble)	mg/l	Quarterly
Iron (soluble)	mg/l	Quarterly

4.2 SURFACE WATER QUALITY MONITORING

4.2.1 The Licensee shall monitor water resources at Brugspruit and Blesbokspruit to determine the impact of the facility and other activities on the water quality by taking samples at the monitoring points described in Table 3:

Table 3: Surface Water Monitoring points

Locality	Description	X Co-ordinate	Y Co-ordinate
SW 1	Spillway at new north-eastern stormwater dam	25.845685	29.170704
SW 2	Water contained within the new north eastern stormwater dam	25.847082	29.171106
SW 3	Spillway at new south-eastern stormwater dam	25.862132	29.168024
SW 4	Water contained within the new south eastern stormwater dam	25.861525	29.168395
SW 5	Water contained within the process water dam	25.848958	29.170408
SW 6	Municipal stormwater network, located at the south eastern plant boundary	25.862653	29.168034
SW 7	Stormwater network, located outside the eastern plant boundary	25.851088	29.169573

Water Quality

Physical

Constituent	Unit	Frequency
Electrical conductivity	mS/m	Weekly
pH	pH units	Weekly

Chemical

Constituent	Unit	Frequency
Total Dissolved Solids	mg/l	Monthly
Suspended solids(SS)	mg/l	Monthly
Sulphates(as SO ₄)	mg/l	Monthly
Chlorine (as Cl)	mg/l	Monthly
Nitrate(as N)	mg/l	Monthly
Ortho-phosphate (as P)	mg/l	Monthly
Boron (as B)	mg/l	Monthly
Ammonia(as N)	mg/l	Monthly
Fluoride(as F)	mg/l	Monthly
Aluminium(Soluble)	mg/l	Monthly
Manganese(soluble)	mg/l	Monthly
Vanadium (soluble)	mg/l	Monthly
Iron (soluble)	mg/l	Monthly

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- 4.2 The date, time and monitoring point in respect of each sample taken shall be recorded together with the results of the analysis.
- 4.3 Monitoring points shall not be changed prior to notification to and written approval by the Regional Head.
- 4.4 An Aquatic Scientist approved by the Regional Head must establish a monitoring programme for the following indices: Invertebrate Habitat Assessment System (IHAS) and the latest SASS (South African Scoring System). Sampling must be done once during the summer season and once during the winter season, annually, to reflect the status of the river upstream and downstream of the mining activities.
- 4.5 Toxicity testing to be performed on the waste and waste water facilities on a quarterly basis in order to determine the risks to the receiving environment. The data gathered in the investigation must be reported annually during March of each year to the Regional Head. If any toxicity levels as specified is exceeded, the Licensee must institute an investigation to determine the cause of toxicity.
- 4.6 Toxicity testing must be conducted quarterly on the wastewater stream from the waste and waste water facilities when returned back to the mine for use as process water.
- 4.7 The Licensee shall participate in any initiative such as Direct Estimation of Ecological Effect Potential (DEEEP) to determine the toxicity of complex tailings waste discharges. Both acute and chronic toxicity must be addressed and at least three taxonomic groups must be present when toxicity tests are performed.
- 4.8 Analysis shall be carried out in accordance with methods prescribed by and obtainable from the South African Bureau of Standards (SABS), in terms of the Standards Act, 1982 (Act 30 of 1982).
- 4.9 The methods of analysis shall not be changed without prior notification to and written approval by the Minister.

5. WATER RESOURCE PROTECTION

- 5.1 The impact of the activities of the industry on the Brugspruit and Blesbokspruit shall not exceed the following in-stream water quality objectives (or resource quality objectives) for the area:

Table 4

Parameter	RQOs
pH	6 - 9.5
Electrical conductivity (Ec) in mS/m	98.40
Sodium (Na) in mg/l	32.01
Magnesium (mg) in mg/l	78.76
Calcium (ca) in mg/l	41.46
Chloride (mg/l)	47.94
Sulphate (mg/l)	32.10
Nitrate (mg/l)	7.17
Fluoride (mg/l)	0.14

6. REPORTING

- 5.1 The Licensee shall update the water balance annually and calculate the loads of waste emanating from the activities. The Licensee shall determine the contribution of their activities to the mass balance for the water resource and must furthermore co-operate with other water users in the catchment to determine the mass balance for the water resource reserve compliance point.
- 5.2 The Licensee shall submit the results of analysis for the monitoring requirements to the Regional Head on a quarterly basis under Reference number 16/2/7/B100/B45.

7. STORM WATER MANAGEMENT

- 7.1 Storm water leaving the 's premises shall in no way be contaminated by any substance, whether such substance is a solid, liquid, vapour or gas or a combination thereof which is produced, used, stored, dumped or spilled on the premises.
- 7.2 Increase runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that storm water does not lead to bank instability and excessive levels of silt entering the stream.
- 7.3 Storm water shall be diverted from Samancor complex site and roads and shall be managed in such a manner as to disperse runoff and concentrating the storm-water flow.
- 7.4 Where necessary works must be constructed to attenuate the velocity of any storm-water discharge and to protect the banks of the affected watercourses.
- 7.5 Storm water control works must be constructed, operated and maintained in a sustainable manner throughout the impacted area.
- 7.6 Increased runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that storm-water does not lead to bank instability and excessive levels of silt entering the streams.
- 7.7 All storm water that would naturally run across the pollution areas shall be diverted via channels and trapezoidal drains designed to contain the 1:50 year flood.
- 7.8 The polluted storm water system shall be designed and implemented to provide suitable routing and pumping capacity for contaminated storm water from the individual facilities to the respective storm water dams in accordance with the design specifications as contained in the Report to be submitted within six month for approval.
- 7.9 The polluted storm water captured in the storm water control dams shall be pumped to the process water treatment plant for reuse and recycling.

8. PLANT AREAS AND CONVEYANCES

- 8.1 Pollution caused by spills from the conveyances must be prevented through proper maintenance and effective protective measures especially near all stream crossings.
- 8.2 All reagent storage tanks and reaction units must be supplied with a bunded area built to the capacity of the facility and provided with sumps and pumps to return the spilled material

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back into the system. The system shall be maintained in a state of good repair and standby pumps must be provided.

- 8.3 Any hazardous substances must be handled according to the relevant legislation relating to the transport, storage and use of the substance.
- 8.4 Any access roads or temporary crossings must be:
- 8.4.1 non-erosive, structurally stable and shall not induce any flooding or safety hazard; and
 - 8.4.2 be repaired immediately to prevent further damage.

9. ACCESS CONTROL

- 9.1 Strict access procedures must be followed in order to gain access to the property. Access to the slimes dam, slag dumps, processed water dam, storm water channel must be limited to authorised people only.
- 9.2 Notices prohibiting unauthorised persons from entering the areas referred to in condition 9.1, as well as internationally acceptable signs indicating the risks involved in case of an unauthorised entry must be displayed along the boundary fence of these areas.

10. CONTINGENCIES

- 10.1 Accurate and up-to-date records shall be kept of all system malfunctions resulting in non-compliance with the requirements of this licence. The records shall be available for inspection by the Regional Head upon request. Such malfunctions shall be tabulated under the following headings with a full explanation of all the contributory circumstances:
- 10.1.1 operating errors;
 - 10.1.2 mechanical failures (including design, installation or maintenance);
 - 10.1.3 environmental factors (e.g. flood);
 - 10.1.4 loss of supply services (e.g. power failure); and
 - 10.1.5 other causes.
- 10.2 The Licensee must, within 24 hours, notify the Regional Head of the occurrence or potential occurrence of any incident which has the potential to cause, or has caused water pollution, pollution of the environment, health risks or which is a contravention of the licence conditions.
- 10.3 The Licensee must, within 14 days, or a shorter period of time, as specified by the Regional Head, from the occurrence or detection of any incident referred above, submit an action plan, which must include a detailed time schedule, to the satisfaction of the Regional Head of measures taken to: –
- 10.3.1 correct the impacts resulting from the incident;
 - 10.3.2 prevent the incident from causing any further impacts; and
 - 10.3.3 prevent a recurrence of a similar incident.

11. AUDITING

- 11.1 The Licensee shall conduct an annual internal audit on compliance with the conditions of this licence. A report on the audit shall be submitted to the Regional Head within one month of finalisation of the report, and shall be made available to an external auditor should the need arise.
- 11.2 The Licensee shall appoint an independent external auditor to conduct an annual audit on compliance with the conditions of this licence. The first audit must be conducted within 3 (three) months of the date this licence was issued and a report on the audit shall be submitted to the Regional Head within one month of finalisation of the report.

12. INTEGRATED WATER AND WASTE MANAGEMENT

- 12.1 The Licensee must update an Integrated Water and Waste Management Plan (IWWMP), which must together with the Rehabilitation Strategy and Implementation Programme (RSIP), be submitted to the Regional Head for review and approval within one (1) year from the date of issuance of this licence.
- 12.2 The IWWMP and RSIP shall thereafter be updated and submitted to the Regional Head for approval, annually.
- 12.3 The Licensee must, at least 180 days prior to the intended closure of any facility, or any portion thereof, notify the Regional Head of such intention and submit any final amendments to the IWWMP and RSIP as well as a final *Closure Plan*, for approval.
- 12.4 The Licensee shall make full financial provision for all investigations, designs, construction, operation and maintenance for a water treatment plant should it become a requirement as a long-term water management strategy.
- 12.5 The Licensee must implement the Integrated Water and Waste Management Plan Volume I and Volume II dated December 2008 most important the measures envisaged to mitigate the existing unacceptable pollution at the works.
- 12.6 The Licensee must submit the engineering design for all dams and storm water management including the upgrading of the existing facilities/dams within 6 months from the date of the issuance of this licence.
- 12.7 The Licensee must work towards contributing to the need to redress the results of the past racial and gender discrimination, including the equitable access to the water resources and the benefits derived from the use of such resources.

END OF LICENCE

Environmental Authorization (Ref: 17/2/3/9(1)N-6) issued 6 December 2011

MPUMALANGA PROVINCIAL GOVERNMENT

Building No. 4
No. 7 Government Boulevard
Riverside Park Extension 2
Nelspruit
1200
South Africa



Private Bag X 11215
Nelspruit, 1200
Tel: 013 766 4004
Fax: 013 766 4614
Int: +27 13 766 4004
Int: +27 13 766 4614

Department of Economic Development, Environment and Tourism

Litiko Letekufufukiswa
Kwetemnofo, Simondzwe netekuVakasha

Unngango WezokuThuthukiswa
KoMnotho, iBhoduluko nezamaVakatjho

Departement van Ekonomiese
Ontwikkeling, Omgewing en Toerisme

Enquiries : Thulisile Nkonyana
Telephone : (013) 690 2595
Ref. No. : 17/2/3/9 (1) N-6

Mr. Roark Rawheath
Samancor Chrome
Ferrometals
Private Bag X 7228
Witbank
1035

Fax : (013) 693 7460

Dear Sir

AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED CONSTRUCTION OF STORMWATER DAMS AT FERROMETALS, ON PORTIONS 9, 12, 19 AND 27, DRIEFONTEIN 297-JS, EMALAHLENI LOCAL MUNICIPALITY.

With reference to the abovementioned application, please be advised that the Department has decided to grant authorisation. The environmental authorisation and reasons for the decision are attached herewith.

In terms of regulation 10(2) of the Environmental Impact Assessment Regulations, 2010, you are instructed to notify all registered interested and affected parties, in writing and within 7 (SEVEN) calendar days of the date of this letter, of the Department's decision in respect of your application as well as the provisions regarding the making of appeals that are provided for in the regulations.

Your attention is drawn to Chapter 7 of the Regulations, which regulates appeal procedures. Should you wish to appeal any aspect of the decision, you must, inter alia, lodge a notice of intention to appeal with the MEC, within 10 days of receiving this letter, by means of one of the following methods:



By facsimile: (013) 7668 4614
By post: Private Bag x 11215
Nelspruit
1200

By hand: Building 6, Government Boulevard,
Riverside Park Extension 2
Nelspruit
1200

Should you decide to appeal, you must serve a copy of your notice of intention to appeal on all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection.

Yours faithfully,

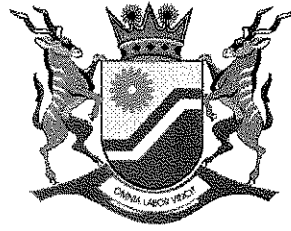


MR. S.S. MALULEKA
CHIEF DIRECTOR: ENVIRONMENTAL SERVICES
DATE: 06.12.2011

Copy: Dr. P.J. Aucamp
Ptersa Environmental Management Consultant
Fax: 0866 48 3149
E-mail: pjaucamp@iafrica.com

MPUMALANGA PROVINCIAL GOVERNMENT

Building No. 4
No. 7 Government Boulevard
Riverside Park Extension 2
Nelspruit
1200
South Africa



Private Bag X 11215
Nelspruit, 1200
Tel: 013 766 4004
Fax: 013 766 4614
Int: +27 13 766 4004
Int: +27 13 766 4614

Department of Economic Development, Environment and Tourism

Litiko Letekulufukiswa
Kwetemnofo, Simondzwo netekuVakasha

Umgango WezokuThuthukiswa
KoMnotho, iBhoduluko nezamaVakatjho

Departement van Ekonomiese
Ontwikkeling, Omgewing en Toerisme

ENVIRONMENTAL AUTHORISATION

Authorization register number : 17/2/3/9(1) N-6

Holder of Authorization : Samancor Chrome

Location of activity : Portions 9, 12, 19 and 27 Driefontein 297- JS



1. Decision

The Department is satisfied on the basis of the information available to it and subject to compliance with the conditions of this Environmental Authorisation, that the applicant should be authorised to undertake the activity as specified below.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

2. Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act 107 of 1998) and the Environmental Impact Assessment Regulations 2006, the Department hereby authorises:

Samancor Chrome
Ferrometals
Private Bag X 7228
Witbank
1035

Tel: (013) 693 7273
Fax no: (013) 693 7460

Attention: Roark Rawheath

To undertake the following activity (hereafter referred to as "the activity"): The proposed construction of a proper stormwater control system consisting of dams, berms and channels located at Ferrometals, on portions 9, 12, 19 and 27, Driefontein 297-JS. The proposal will result in the construction of three (3) stormwater control dams. The site falls within the eMalahleni Local Municipality at the following Co-ordinates:

25° 50' 55, 0 S 29° 10' 39, 2 E

Listed as Item 12, 13 and 55 as identified in terms of Chapter 5 of the National Environmental Management Act, 1998 and Government Notice R 544 of 18 June 2010.

The project will entail the following:

- Construction and upgrading of storm water channels and storm water diversions
- Modification of the current storm water channels and berm/cut-off trenches
- Construction and upgrading of existing storm water dams and the construction of new storm water dams



The granting of this environmental authorisation is subject to the conditions set out below.

3. Conditions of Authorization

Scope of authorization

- 3.1 Authorization of the activity is subject to the conditions contained in this authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.
- 3.2 The holder of the authorisation must ensure compliance with the conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the holder of the authorization.
- 3.3 The activity which is authorized may only be carried out at the property indicated above.
- 3.4 Any changes to, or deviations from, the project description set out in this authorisation 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 and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.
- 3.5 This activity must commence within a period of two (2) years from the date of issue. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.
- 3.6 This authorization does not negate the holder of the authorization, responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.

Appeal of authorization

- 3.7 The holder of the authorisation must notify every registered interested and affected party, in writing and within 10 (Ten) calendar days, of receiving notice of the Department's decision to authorize the activity.
- 3.8 The notification referred to above must –
 - 3.8.1 Specify the date on which the authorisation was issued;
 - 3.8.2 inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the regulations; and
 - 3.8.3 Advise the interested and affected party that a copy of the authorisation and reasons for the decision will be furnished on request.

Management of the activity

- 3.9 The holder of the authorization must submit a post-construction environmental audit report to the department. The audit report must be compiled by an independent auditor.



- 3.10 The Department retains the right to monitor and/or inspect the proposed project during both construction and operational phases.

Commissioning and Operation of the activity

- 3.11 Fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence.
- 3.12 All construction activities must be limited to the said sites and only stated listed activities may be undertaken as according to this Environmental Authorisation.
- 3.13 The applicant is responsible for compliance with the provisions for "Duty of Care" and remediation of damage contained in Section 28 of the National Environmental Management Act
- 3.14 The Contractor must protect areas susceptible to erosion by installing necessary temporary or permanent drainage works and take suitable measures to prevent surface water concentration.
- 3.15 Storm water dams must be lined and be able to hold sufficient capacity and a return water system must be constructed.
- 3.16 Silt and oil traps must be constructed before the entrance of the water into the storm water dams.
- 3.17 Storm water berms must be constructed on the Northern and Southern boundaries of the site.
- 3.18 To prevent pollution on site, separate clean and dirty water where possible.
- 3.19 Minimise impacts by keeping dirty areas as small as possible.
- 3.20 Do not contain more clean water that can be used in a reasonable time; storm water must be recycled as much as possible

General

- 3.21 A copy of this authorization must be kept at the property where the activity will be undertaken. The authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.
- 3.22 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 applicant knows the new details.
- 3.23 The holder of the authorisation must notify the Department, in writing and within 24 (twenty four) hours, if conditions of this authorisation are not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.
- 3.24 Non-compliance with a condition of this authorization may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the regulations.



3.26 National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

Environmental Authorisation approved by:

MR. S.S. MALULEKA
CHIEF DIRECTOR: ENVIRONMENTAL SERVICES
DATE: 06.12.2011



Annexure 1: Reasons for the Decision

1. Background

The applicant, Samancor Chrome applied for authorization to continue with the following activity:

To undertake the following activity (hereafter referred to as "the activity"): The proposed storm water dams at Ferrometals, on Portions 9, 12, 19 and 27 Driefontein 297-JS. The site falls within the Emalahleni Local Municipality at the following Co-ordinates:

25^o 50' 55, 0" S 29^o 10' 39, 2" E

Listed as Item 12, 13 and 55 as identified in terms of Chapter 5 of the National Environmental Management Act, 1998 and Government Notice R 544 of 18 June 2010.

The project will entail the following:

- Construction and upgrading of storm water channels and storm water diversions
- Modification of the current storm water channels and berm/cut-off trenches
- Construction and upgrading of existing storm water dams and the construction of a new storm water dams

1.2 The applicant appointed the following Environmental Assessment Practitioner to Undertake the Basic Assessment Report:

Ptersa Environmental Management Consultants
P.O. Box 915751
Faerie Glen
0043

Contact person: Dr. P.J Aucamp

Tel: (012) 365 1025
Fax: 086 648 3149

2. Information considered in making the decision.

In reaching its decision, the Department took the following into consideration:

- a) The requested changes in the Environmental Authorisation issued on the 12-06-2011
- b) The information contained in the Basic Assessment Report.
- c) The comments received from interested and affected parties as included in the Basic Assessment Report.
- d) The layout plan that properly indicates the proposed location of the dams



- e) The objective and requirements of relevant legislation, policies and guidelines, including Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998); and

3. Key factors considered in making the decision.


All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues, which, in the Department's view, were of the utmost significance, is set out below:

- a) The problems that the surrounding communities and industries experience with storm water runoff from Ferrometals site will cease.
- b) The construction of storm water dams and channels will reduce ground water contamination.
- c) The proposed activities will reduce overall water use since more water will be recycled.

4. Findings

After consideration of the information and factors listed above, the Department made the following findings:

- a) No significant detrimental environmental impacts are anticipated, should the mitigation measures stipulated in the Basic Assessment report and conditions of the amended environmental authorisation be implemented and adhered to.
- b) The site is currently used for industrial activities.

In view of the above, the Department is of the opinion that the amendments would not result in a negative environmental impact that would conflict with the general objectives of integrated environmental management as laid down in Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998). It is accordingly decided to amend the environmental authorisation. 

APPENDIX IV

SPECIALIST REPORT - DRAFT PUBLIC PARTICIPATION REPORT

**DRAFT REPORT
SUBMITTED WITH DRAFT SCOPING
REPORT FOR I&AP REVIEW**

FERROMETALS

**PUBLIC PARTICIPATION
PROGRAMME REPORT**

**Date: 18 June 2013
Project Reference: JMA / 10396
JMA File Reference: Prj5683
DEA Ref: 12/9/11/L670/6
DEA Ref: 12/9/11/L700/6
DEDET Ref: 17/2/3 N-84**

COMPILED FOR

Samancor Chrome Ltd.
Ferrometals Operations

COMPILED BY



JMA Consulting (Pty) Ltd
*Sustainable Environmental Solutions
through
Integrated Science and Engineering*

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EXECUTIVE SUMMARY

JMA Consulting (Pty) Ltd was commissioned by Samancor Chrome Ltd. – Ferrometals Operations to compile and submit an Environmental Impact Assessment (EIA) Application to the Department of Economic Development, Environment and Tourism (DEDET) in terms of the provisions of the National Environmental Management Act 107 of 1998 (NEMA) Regulations as well as a Waste Licence Application (WLA) to DEA in terms of the National Environmental Management: Waste Act 59 of 2008 (NEM: WA) Regulations and an Integrated Water Use Licence Application (IWULA) to DWA in terms of the National Water Act 36 of 1998 (NWA). JMA Consulting is currently conducting a comprehensive Public Participation Programme in support of the Scoping and Environmental Impact Assessment process. In order to support the overall process this Public Participation Programme Report was generated. The report provides the required public participation related information and summarises and outlines the details of the Public Participation Programme that was and will be followed for this project.

Chapters 1 through 3 of the report deal with an Introduction, Project Team, and Terms of Reference for the study.

Chapter 4 synoptically describes the Site History and Project Activities.

Chapter 5 explains the Public Participation Programme **Plan** for the project.

Chapter 6 describes the Engagement Process and contains references to proof of actions performed.

Chapter 7 deals with the Issues and Concerns that was raised by I&AP's throughout the process and also contains responses by the EAP and Applicant on how these issues will be addressed.

Chapter 8 provides information about the Issues and Response Register.

Chapter 9 provides information on references.

Respectfully submitted

Riaan Grobbelaar (Pr.Sci.Nat.)

Kobus du Plessis (Cand.Sci.Nat.)



1. INTRODUCTION

This Report comprises the **Public Participation Programme (PPP) Report** compiled in support of the Scoping and EIA Process followed for the relevant Applications for Environmental Authorisation in terms of the provisions of the NEM: WA and NEMA Regulations as relevant to Samancor Chrome Ltd. – Ferrometals Operations. The process also supports the IWULA process required by the NWA.

The NEM: WA Regulations together with NEMA Regulations contain a list of requirements specifically relating to the Public Participation Process (please refer to Chapter 3 of this report). These regulations were strictly adhered to during the public participation conducted for this project.

Several guideline documents are currently available to assist persons when conducting a public participation process and all of these documents were extensively studied and incorporated into the planning for this report. However, JMA consulted the *DEAT (2005) Guideline 4: Public Participation, in terms of the EIA Regulations, 2005, Integrated Environmental Management Guideline Series, Department of Environmental Affairs and Tourism (DEAT), Pretoria* as the primary source.

These guideline documents describe the public participation process as follows:

- Provides an opportunity for interested and affected parties (I&AP's), EAPs and the Competent Authority (CA) to obtain clear, accurate and understandable information about the environmental impacts of the proposed activity or implications of a decision;
- Provides I&AP's with an opportunity to voice their support, concerns and questions regarding the project, application or decision;
- Provides I&AP's with the opportunity of suggesting ways of reducing or mitigating any negative impacts of the project and for enhancing its positive impacts;
- Enables an applicant to incorporate the needs, preferences and values of affected parties into its application;
- Provides opportunities for clearing up misunderstandings about technical issues, resolving disputes and reconciling conflicting interests;
- It is an important aspect of securing transparency and accountability in decision-making;
- It contributes towards maintaining a healthy, vibrant democracy.

This report will continually be updated during the Ferrometals Operations EIA process to reflect and address all comments that are received during the I&AP Review periods. The final PPP Report will be submitted to the relevant authorities as an **APPENDIX** to the **Final Environmental Impact Assessment Report**.

2. PROJECT TEAM

The following persons were directly involved with the compilation of this Public Participation Programme Report for the Ferrometals Operations:

- Riaan Grobbelaar (Pr.Sci.Nat.)
- Kobus du Plessis (Cand.Sci.Nat.)

2.1 DETAILS AND EXPERTISE OF PPP TEAM

Synoptic CV's of Riaan Grobbelaar and Kobus du Plessis are attached as APPENDIX 2.1 (A).

DECLARATION OF INDEPENDENCE

<p>I, Riaan Grobbelaar, acting as independent Environmental Practitioner on this project, declare that:</p> <ul style="list-style-type: none"> • I act as the independent environmental practitioner in this application • I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant • I declare that there are no circumstances that may compromise my objectivity in performing such work; • I have expertise in conducting environmental impact assessments, including knowledge of the National Environmental Management Act (107 of 1998), the Environmental Impact Assessment Regulations of 2010, and any guidelines that have relevance to the proposed activity; • 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 8 of the regulations when preparing the application and any report relating to the application; • I have no, and will not engage in, conflicting interests in the undertaking of the activity; • I undertake to disclose to the applicant 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 application 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 application; • 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 keep a register of all interested and affected parties that participated in a public participation process; and • I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not • all the particulars furnished by me in this form are true and correct; • will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and • I realise that a false declaration is an offence in terms of regulation 71 and is punishable in terms of section 24F of the Act. <p>Disclosure of Vested Interest</p> <ul style="list-style-type: none"> • 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 the Environmental Impact Assessment Regulations, 2010.
<p>_____ Signature of the environmental practitioner:</p> <p><u>JMA CONSULTING (PTY) LTD</u> Name of company:</p> <p>_____ Date:</p>
<p>_____ Signature of the Commissioner of Oaths:</p> <p>_____ Date:</p> <p>_____ Designation:</p>

3. TERMS OF REFERENCE

To overall terms of reference is to conduct a Public Participation and Stakeholder Engagement Program in terms of the NEMA, NEM: WA and NWA Provisions and Regulations.

- NEMA EIA Regulations in GNR 543 of 18 June 2010
- NEM: WA 59 of 2008
- NWA 36 of 1998

3.1 LEGAL TERMS OF REFERENCE

The EIA, NEM: WA and NWA Regulations specifically relating to Public Participation are given below:

3.1.1 NEMA Regulations GNR 543 of 18 June 2010:

PUBLIC PARTICIPATION PROCESS (CHAPTER 6)

Public participation process

54. (1) *This regulation only applies in instances where adherence to the provisions of this regulation is specifically required.*

(2) *The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated' in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by-*

(a) *fixing a notice board at a place conspicuous to the public at the boundary or on the fence of-*

(i) *the site where the activity to which the application relates is or is to be undertaken; and*

(ii) *any alternative site mentioned in the application;*

(b) *giving written notice to-*

(i) *the owner or person in control of that land if the applicant is not the owner or person in control of the land;*

(ii) *the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;*

(iii) *owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;*

- (iv) *the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;*
 - (v) *the municipality which has jurisdiction in the area;*
 - (vi) *any organ of state having jurisdiction in respect of any aspect of the activity; and*
 - (vii) *any other party as required by the competent authority;*
- (c) *placing an advertisement in-*
- (i) *one local newspaper; or*
 - (ii) *any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;*
- (d) *placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official Gazette referred to in paragraph (c)(ii); and*
- (e) *using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to-*
- (i) *illiteracy;*
 - (ii) *disability; or*
 - (iii) *any other disadvantage.*
- (3) *A notice, notice board or advertisement referred to in subregulation (2) must-*
- (a) *give details of the application which is subjected to public participation; and*
 - (b) *state-*
 - (i) *that the application has been submitted to the competent authority in terms of these Regulations;*
 - (ii) *whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;*

- (iii) *the nature and location of the activity to which the application relates;*
 - (iv) *where further information on the application or activity can be obtained; and*
 - (vi) *the manner in which and the person to whom representations in respect of the application may be made.*
- (4) *A notice board referred to in subregulation (2) must-*
 - (a) *be of a size at least 60cm by 42cm; and*
 - (b) *display the required information in lettering and in a format as may be determined by the competent authority.*
- (5) *Where deviation from subregulation (2) may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the competent authority.*
- (6) *Where a basic assessment report, scoping report or environmental impact assessment report as contemplated in regulations 22, 28 and 31 respectively is amended because it has been rejected or because of a request for additional information by the competent authority, and such amended report contains new information, the amended basic assessment report, scoping report or environmental impact assessment report must be subjected to the processes contemplated in regulations 21, 27 and 31, as the case may be, on the understanding that the application form need not be resubmitted.*
- (7) *When complying with this regulation, the person conducting, the public participation process must ensure that-*
 - (a) *information containing ail relevant facts in respect of the application is made available to potential interested and affected parties; and*
 - (b) *participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.*
 - (c) *Unless justified by exceptional circumstances, as agreed to by the competent authority, the applicant and EAP managing the environmental assessment process must refrain from conducting any public participation process during the period of 15 December to 2 January.*

Register of interested and affected parties

55. (1) *An EAP managing an application must open and maintain a register which contains the names, contact details and addresses of-*
- (a) *all persons who, as a consequence of the public participation process conducted in respect of that application in terms of regulation 54, have submitted written comments or attended meetings with the applicant or EAP;*
 - (b) *all persons who, after completion of the public participation process referred to in paragraph (a), have requested the applicant or the EAP managing the application, in writing, for their names to be placed on the register; and*
 - (c) *all organs of state which have jurisdiction in respect of the activity to which the application relates.*
- (2) *An EAP managing an application must give access to the register to any person who submits a request for access to the register in writing.*

Registered interested and affected parties entitled to comment on submissions

56. (1) *A registered interested and affected party is entitled to comment, in writing, on all written submissions, including draft reports made to the competent authority by the applicant or the EAP managing an application, and to bring to the attention of the competent authority any issues which that party believes may be of significance to the consideration of the application, provided that-*
- (a) *comments are submitted within-*
 - (i) *the timeframes that have been approved or set by the competent authority; or*
 - (ii) *any extension of a timeframe agreed to by the applicant or EAP;*
 - (b) *a copy of comments submitted directly to the competent authority is served on the EAP; and*
 - (c) *the interested and affected party discloses any direct business, financial, personal or other interest which that party may have in the approval or refusal of the application.*
- (2) *Before the EAP managing an application for environmental authorisation submits a final report compiled in terms of these Regulations to the competent authority, the EAP must give registered interested and affected parties access to, and an opportunity to comment on the report in writing.*

- (3) *The report referred to in subregulation (2) include-*
- (a) *basic assessment reports;*
 - (b) *basic assessment reports amended and resubmitted in terms of regulation 24 (4);*
 - (c) *scoping reports;*
 - (d) *scoping reports amended and resubmitted in terms of regulation 30(3);*
 - (e) *specialist reports and reports on specialised processes compiled in terms of regulation 32;*
 - (f) *environmental impact assessment reports submitted in terms of regulation 31;*
 - (g) *environmental impact assessment reports amended and resubmitted in terms of regulation 34(4); and*
 - (h) *draft environmental management programmes compiled in terms of regulation 33.*
- (4) *The draft versions of reports referred to in subregulation (3) must be submitted to the competent authority prior to awarding registered interested and affected parties an opportunity to comment.*
- (5) *Registered interested and affected parties must submit comments on draft reports contemplated in subregulation (4) to the EAP, who should record it in accordance with regulations 21, 28 or 31.*
- (6) *Registered interested and affected parties must submit comments on final reports contemplated in subregulation (3) to the competent authority and provide a copy of such comments to the applicant or EAP.*
- (7) *The competent authority must, in order to give effect to section 240 of the Act, on receipt of the draft reports contemplated in subregulation (5), request any State department that administers a law relating to a matter affecting the environment to comment within 40 days.*
- (8) *The timeframe of 40 days as contemplated in subregulation (7) must be read as 60 days in the case of waste management activities as contemplated in the National Environmental Management: Waste Act, 2008 {Act No. 59 of 2008}, on which the Department of Water Affairs must concur and issue a record of decision in terms of section 49(2) of the National Environmental Management: Waste Management Act, 2008 (Act No. 59 of 2008).*

- (9) (a) *When a State department is requested by the competent authority to comment, such State department must, within 40 days or in the case of Department of Water Affairs, 60 days for waste management activities, of being requested to comment by the competent authority, provide comments to the competent authority.*
- (b) *If a State department fails to submit comments within 40, or 60 days for waste management activities, from the date on which the Minister, MEC, Minister of Mineral Resources or identified competent authority requests such State department in writing to submit comment, it will be regarded that there are no comments.*

Comments of interested and affected parties to be recorded in reports submitted to competent authority

57. (1) *The EAP managing an application for environmental authorisation must ensure that the comments of interested and affected parties are recorded in reports and that such written comments, including records of meetings, are attached to the report, submitted to the competent authority in terms of these Regulations.*
- (2) *Where a person is desiring but unable to access written comments as contemplated in subregulation (1) due to-*
- (i) *a lack of skills to read or write;*
 - (ii) *disability; or*
 - (iii) *any other disadvantage, reasonable alternative methods of recording comments must be provided for.*

3.1.2 NEM: WA 59 of 2008, Chapter 8, Section 72 - 73

COMPETENT AUTHORITY

Public participation process: Consultative Process

72. Consultation

- (1) *Before exercising a power which, in terms of this Act, must be exercised in accordance with this section and section 73, the Minister or MEC must follow such consultative process as may be appropriate in the circumstances.*
- (2) *When conducting the consultations contemplated in subsection (1), the Minister must-*
- (a) *consult all Cabinet members whose areas of responsibility will be affected by the exercise of the powers;*

- (b) *in accordance with the principles of co-operative governance as set out in Chapter 3 of the Constitution and subject to the Intergovernmental Relations Framework Act, 2005 (Act No. 13 of 2005), consult the MEC responsible for waste management in each province that will be affected by the exercise of the power; and*
 - (c) *conduct a public participation process in accordance with section 73.*
- (3) *When conducting the consultations contemplated in subsection (1), the MEC must-*
- (a) *consult all members of the Executive Council whose areas of responsibility will be affected by the exercise of the powers;*
 - (b) *in accordance with the principles of co-operative governance as set out in Chapter 3 of the Constitution and subject to the Intergovernmental Relations Framework Act, 2005 (Act No. 13 of 2005), consult the Minister and all other national organs of state that will be affected by the exercise of the power; and*
 - (c) *conduct a public participation process in accordance with section 73.*

73. Public participation

- (1) *Before exercising a power that, in terms of this Act, must be exercised in accordance with this section, the Minister or MEC, as the case may be, must give notice of the proposed exercise of the relevant power-*
- (a) *in the Gazette; and*
 - (b) *in at least one newspaper distributed nationally or, if the exercise of power will only affect a specific area, in at least one newspaper distributed in that area.*
- (2) *The notice must-*
- (a) *invite members of the public to submit to the Minister or MEC, as the case may be, within no less than 30 days of publication of the notice in the Gazette, written representations on or objections to the proposed exercise of power; and*
 - (b) *contain sufficient information to enable members of the public to submit representations or objections.*
- (3) *The Minister or MEC, as the case may be, may, in appropriate circumstances, allow any interested person or community to present oral representations or objections to the Minister or MEC, or a person designated by the Minister or MEC.*

- (4) *The Minister or MEC, as the case may be, must give due consideration to all representations or objections received or presented before exercising the relevant power.*

The above relates to the responsibility of the Competent Authority. The PPP conducted by JMA for this process will support the above.

3.1.3 NWA 36 of 1998, Chapter 4, Section 41(4)

- (4) *A responsible authority may, at any stage of the application process, require the applicant -*
- (a) *to give suitable notice in newspapers and other media -*
 - (i) *describing the licence applied for;*
 - (ii) *stating that written objections may be lodged against the application before a specified date, which must be not less than 60 days after the last publication of the notice;*
 - (iii) *giving an address where written objections must be lodged; and*
 - (iv) *containing such other particulars as the responsible authority may require;*
 - (b) *to take such other steps as it may direct to bring the application to the attention of relevant organs of state, interested persons and the general public; and*
 - (c) *to satisfy the responsible authority that the interests of any other person having an interest in the land will not be adversely affected.*

3.2

PUBLISHED GUIDELINES FOR PUBLIC PARTICIPATION

JMA Consulting referred extensively to the following guidelines during the design and planning of the Public Participation Programme for the Ferrometals project:

- DEAT (2002) *Stakeholder Engagement, Integrated Environmental Management, Information Series 3*, Department of Environmental Affairs and Tourism (DEAT), Pretoria.
- DEAT (2005) *Guideline 4: Public Participation, in support of the EIA Regulations, 2005, Integrated Environmental Management Guideline Series*, Department of Environmental Affairs and Tourism (DEAT), Pretoria.
- DEA (2010), *Public Participation 2010, Integrated Environmental Management Guideline Series 7*, Department of Environmental Affairs, Pretoria, South Africa.
- DMR (2012) *Guideline for the compilation of an Environmental Impact Assessment and an Environmental Management Programme*, in terms of the Mineral and Petroleum Resource Development Act 28 of 2002.
- DMR (2012) *Guideline for the compilation of a Scoping Report*. As required in terms of Section 10(1)(b), 22(4)(b) and 39, read together with Regulation 49 (2) of in the Mineral and Petroleum Resource Development Act 28 of 2002.

4. SITE HISTORY AND PROJECT DESCRIPTION

4.1 SITE HISTORY

Ferrometals situated on the outskirts of Emalahleni, is a division of Samancor Chrome, which is a global producer and marketer of chrome ores and alloys. This plant dates back to 1959 when African Metals Corporation Limited (Amcor) purchased a ten-year old two-furnace ferrosilicon producing plant. In November 2009 International Mineral Resources (IMR) became the majority shareholder with a 70% direct shareholding in Samancor Chrome Holdings (Pty) Limited. Through the years more furnaces were added and the plant currently consists of four (4) open and two (2) closed furnaces. Ferrometals also has a Pelletising and sintering plant, utilising Outokumpu technology with a preheating kiln, a chrome recovery plant, an intermediate carbon ferrochrome (IC3) plant.

The Product

Most of the mined ore is converted into ferrochrome at Samancor Chrome's alloy plants while some ores and concentrates are exported to international customers. The range of products includes chemical grade, refractory grade, foundry grade and metallurgical grade chrome ores as well as high carbon charge chrome, medium carbon ferrochrome, low carbon ferrochrome alloys and electrode paste. Globally around 85% of chrome production is used for metallurgical applications (primarily the production of stainless steels) with 8% used in chemical applications and 7% in refractory and foundry application. Samancor Chromes chromite resources are expected to support their mining activity for more than 200 years at the current rate of extraction.

The Process

Ferrometals uses more than 23 different types of raw materials that are received by road and rail transport. The logistics section is responsible for obtaining and supplying the required quality and quantity of raw materials to the production units.

Raw materials and products produced are analysed in Ferrometals laboratory. The laboratory is equipped with sophisticated and modern equipment and uses international standards and methods to deliver the service. The ferrochrome furnaces at Ferrometals produce high carbon charge chrome. The most important form in which chrome is used is in stainless steel production. Chrome ore, which contains oxides of chrome and iron, is reduced by the carbon in the form of coke and coal to form a chrome-iron alloy called ferrochrome.

Ferrochrome production is a carbo-thermic reduction process, which takes place at very high temperatures of up to 1750°C. The liquid ferrochrome is cast into ingots or granulated in water or transferred to the IC3 plant where it is converted into medium carbon ferrochrome.

With technological progress in specialised steel production, the need for intermediate carbon ferrochrome gave rise to the development of a new concept at Ferrometals. In 1986, the commissioning of IC3 took place. This plant concentrated on altering the chemical composition of the metal extracted by the furnaces. The resultant product of this plant is intermediate carbon

ferrochrome. IC3 has a capacity of 70 000 tons per annum; which highlights Ferrometals dedication to continuous process optimisation.

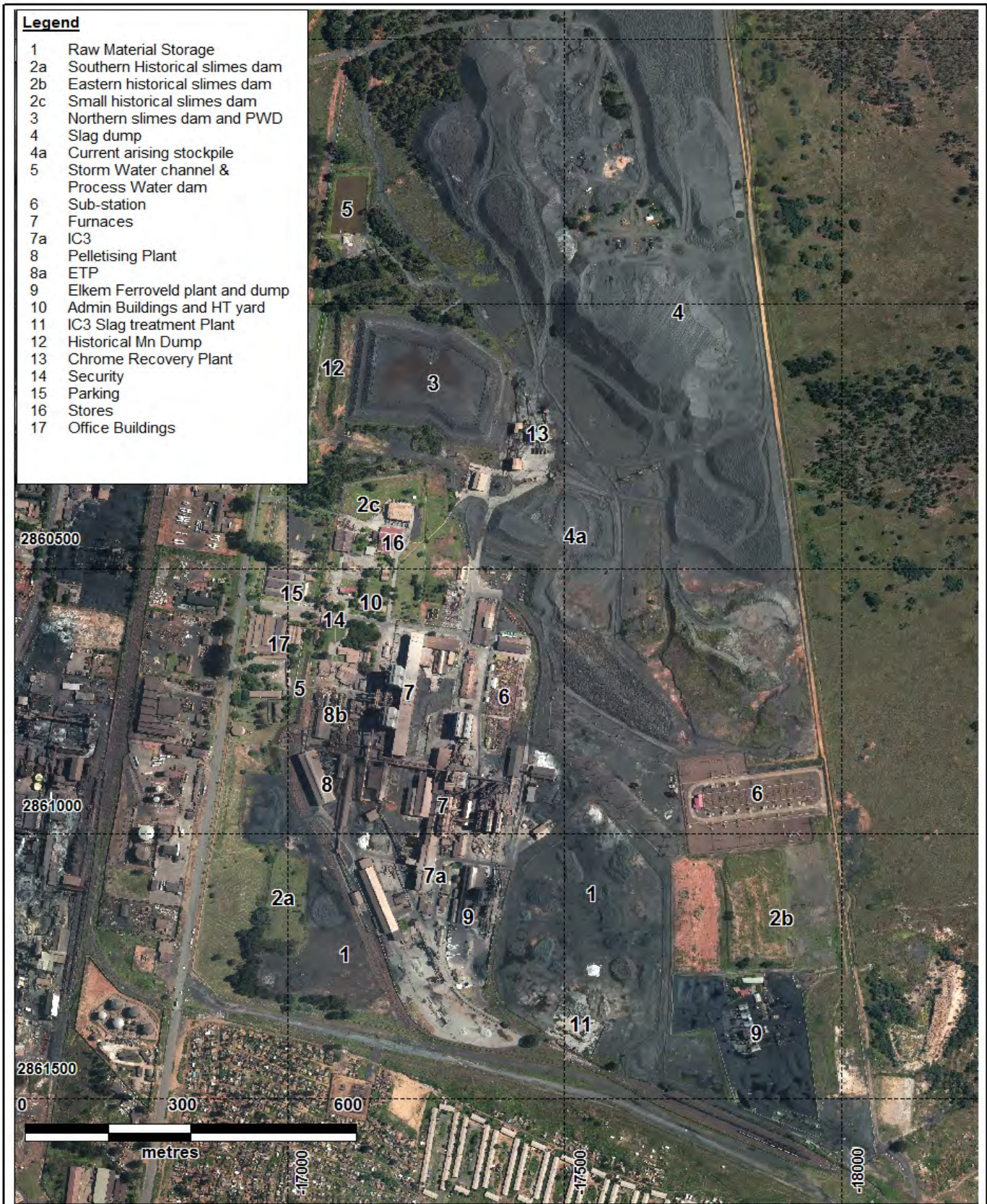
The process of metal extraction from the ore results in losses of metal still trapped in slag that has accumulated on site. A recovery plant was commissioned in 1995, which crushes material from the slag dumps and through a process of jigging recovers 95% of the metal contained in the slag. This process delivers clean slag suitable for concrete or road building applications. More importantly, it delivers clean ferrochrome that can be exported.

In June 1998 the Pelletising and sintering plant was commissioned. In mining chrome ore, a large percentage of ore fines are generated. Pelletising technology agglomerate the ore fines to form pellets. Chrome recovery on the furnaces improves and stabilises the furnace operation.

4.2 PROJECT DESCRIPTION


The Ferrometals Operations consist of the following main components:

- Decommissioning and Closure of the current existing Slimes Dam Facility
- Construction of a new Slimes Dam Facility



- Legend**
- 1 Raw Material Storage
 - 2a Southern Historical slimes dam
 - 2b Eastern historical slimes dam
 - 2c Small historical slimes dam
 - 3 Northern slimes dam and PWD
 - 4 Slag dump
 - 4a Current arising stockpile
 - 5 Storm Water channel & Process Water dam
 - 6 Sub-station
 - 7 Furnaces
 - 7a IC3
 - 8 Pelletising Plant
 - 8a ETP
 - 9 Elkem Ferroveld plant and dump
 - 10 Admin Buildings and HT yard
 - 11 IC3 Slag treatment Plant
 - 12 Historical Mn Dump
 - 13 Chrome Recovery Plant
 - 14 Security
 - 15 Parking
 - 16 Stores
 - 17 Office Buildings

Client: Ferrometals
 Project: Ground Water Monitoring
 Map Status: Final
 Compiled by: G. Cloete
 Checked by: R. Grobbelaar



JMA Consulting (Pty) Ltd

Project no: 20011	Date: June 2013
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LEGEND

Scale: 1: 9 000

**Ferrometals
 Management Units**

Figure 4.2.2 (a): Layout Plan for the Proposed Samancor Chrome - Ferrometals Operations

5. DESIGNING THE PUBLIC PARTICIPATION PROGRAMME

Having considered the legal and practical attributes of the Ferrometals project, having due regard for the terms of reference, and having consulted the relevant guidelines for public participation referenced in section 3.2, JMA designed a Public Participation Programme for the Ferrometals Operations.

Three proposed categories of variables were taken into account when deciding on the level of public participation and process to be followed:

- The scale of anticipated impacts of the proposed impacts;
- The sensitivity of the affected environment and the degree of controversy of the project; and
- The characteristics of the potentially affected parties.

The Environmental Assessment Practitioner (EAP) JMA, took cognisance of the above mentioned guidance criteria when the public participation programme was developed, but also made the decision early on in the process to be adaptable to the situation on the ground. Thus being open to suggestion from I&AP's, with no part of the pre-planned public participation programme set in stone.

5.1 PUBLIC PARTICIPATION PROGRAMME PLAN

The PPP Plan for the Ferrometals Project comprises the following actions:

Pre-Application Phase

- Compile Stakeholder Data Base
- Compile and Submit Application Forms - Obtain Reference Numbers
- Pre-Application Meetings with Authorities
- Pre-Application Focus Group Meetings with Ward Councillor

Scoping Phase

- Compile BID, Notifications, Adverts, Site Notices
- Distribute BID through Notifications
- Place Advertisements in Newspapers
- Put up Site Notices
- Prepare for Scoping Phase Public Meeting (Venue, Agendas, Response Forms, Presentation)
- Conduct Scoping Phase Public Meeting
- Compile Minutes and Circulate
- Conduct Focus Group Meetings
- Compile Minutes and Circulate
- Prepare Draft Scoping Report for I&AP Review
- Distribute Draft Scoping Report for I&AP Review (Authorities & I&AP's)
- Capture I&AP Comments and Issue Acknowledgements
- Recover Draft Reports after Review
- Compile Issues and Response Register
- Prepare Final Scoping Report for Submission to Authorities

- Submit Final Scoping Report to Authorities and I&AP's
- Conduct Authority Site Visit
- Notify I&AP's of Scoping Report Approval

EIA Phase

- Compile Notifications, Adverts, Site Notices - EIA Phase
- Distribute Notifications
- Place Advertisements in Newspapers
- Put up Site Notices
- Prepare for EIA Phase Public Meeting (Venue, Agendas, Response Forms, Presentation)
- Conduct Public Meeting
- Compile Minutes and Circulate
- Conduct Focus Group Meetings
- Compile Minutes and Circulate
- Prepare Draft EIA/EMP Report for I&AP Review
- Distribute Draft EIA/EMP Report for I&AP Review (Authorities & I&AP's)
- Capture I&AP Comments and Issue Acknowledgements
- Recover Draft Reports after Review
- Compile Issues and Response Register
- Compile Public Participation Programme Report
- Prepare Final EIA/EMP Report for Submission to Authorities
- Submit Final EIA/EMP Report to Authorities and I&AP's

Consideration, Decision and Appeal Phase

- Continuous Follow Up
- Obtain Decision and Review
- Notify I&AP's of Decision and Inform on Appeal Process

6. DETAILS OF ENGAGEMENT PROCESS

6.1 PRE-APPLICATION PHASE

6.1.1 Compile Stakeholder Data Base

At the start of any public participation process a formal I&AP Data Base has to be compiled and which need to be updated/expanded as the process continues. The relevant regulations define I&AP's as:

- Any person, group of persons or organisation interested in, or affected by an activity
- Any organ of state that may have jurisdiction over any aspect of the activity

In the DMR guidelines for Scoping, I&AP's are defined as:

- Host Communities
- Traditional Land Owners
- Title Deed Land Owners
- Traditional Authority
- Land Claimants
- Lawful Land Occupier
- Any other person on adjacent or even non-adjacent land whose socio-economic conditions may be directly affected by the proposed project
- The Local Municipality
- The Regional Municipality
- The Department of Rural Development and Land Reform
- The Department of Economic Development, Environment and Tourism
- The Department of Water Affairs
- The Department of Mineral Resources
- The Department of Environmental Affairs
- The relevant Government Agencies and Institutions responsible for the various aspects of the environment and for infrastructure

Having full regard for the above, a formal I&AP Data Base was compiled for the Ferrometals project. This data base was continually updated throughout the process. A copy of the current I&AP data base is attached as APPENDIX 6.1.1(A).

6.1.2 Compile and Submit Application Forms - Obtain Reference Number

The EIA application forms were completed and submitted to the Department of Economic Development, Environment and Tourism (MP DEDET) on 15 August 2011 and to the Department of Environmental Affairs (DEA) on 12 August 2011 and 25 August 2011. This was accepted by MP DEDET on 19 September 2011 and by DEA on 15 August 2011 and 29 August 2011.

Proof of submission of the application forms are attached as APPENDIX 6.1.2 (A). An existing DEA Reference Number: 12/9/11/L670/6 for Closure of the Existing Facility and Reference Number: 12/9/11/L700/6 for Construction and

Operation - New Facility and DEDET Reference Number: 17/2/3 N-84 is used on all documentation.

Copies of Proof of receipt of the different forms from MP DEDET and DEA is attached as APPENDIX 6.1.2 (A)

6.1.3 Pre-Application Meetings with Authorities

A Pre-Application Consultation Meeting and Site Visit were held with the Department of Economic Development, Environment and Tourism of Mpumalanga on 04 October 2011.

The purpose of the meeting was therefore to provide feedback of the Ferrometals project to DEDET by explaining and discussing the background to the project as well as the different components that were identified for the proposed project. The meeting also had the function of obtaining inputs from DEDET's side on the project and to conduct a site visit so that Mr Musa Mondlane (MM) could orientate and familiarise himself with the Ferrometals site.

Minutes of this meeting are attached as APPENDIX 6.1.3 (A).

6.1.4 Pre-Application Focus Group Meeting

A Pre-Application Focus Group Meeting was held with the relevant Ward Councillor of Ward 12 in which the Ferrometals site is located.

The purpose of the meeting was to discuss:

- Synoptic Project Description of Ferrometals Project.
- Meet the applicable ward councillor and get him involve in the process
- Explain the process to present parties at the meeting
- Answer any questions that they may have

Minutes of this meeting are attached as APPENDIX 6.1.4 (A).

During this meeting the I&AP's requested a formal letter stating that JMA Consulting (Pty) Ltd. is appointed by Samanchor Chrome Ltd. This letter is attached as APPENDIX 6.1.4 (B)

6.2 SCOPING PHASE

6.2.1 Compile BID, Notifications, Adverts, Site Notices

A Background Information Document (BID) for distribution to I&AP's, notification letters to I&AP's, newspaper advertisements as well as site notices, were compiled by JMA Consulting.

Copies of the BID, the notifications, the newspaper advertisements as well as the site notices are attached as APPENDIX 6.2.1 (A).

6.2.2 Distribute Notifications and BID

BID documents, notification letters, comment page and the advertisement placed in the Witbank News were e-mailed, faxed and posted to I&AP's in cases where relevant details were available to notify I&AP's of the upcoming Public Meeting. BID documents were distributed to I&AP's during the public meetings and focus group meetings.

6.2.3 Place Advertisements in Newspapers

During the Scoping Phase, advertisements were placed two weeks prior to the Scoping Phase Public meeting to appear on Wednesday, 29 May 2013 in the Witbank News. This advertisement notified I&AP's of the first Public Meeting to be held 12 June 2013 at the Emalahleni Local Municipality, Rehearsal Room. Proof of the placement of the advertisement in the local newspaper is attached as APPENDIX 6.2.3 (A).

6.2.4 Put up Site Notices

Site Notices were put up two weeks in advance of the Scoping Phase Public meeting at the following sites:

- Emalahleni Public Library
- Emalahleni Local Municipality
- Venue for Public Meeting
- Entrance of Ferrometals
- Proposed new slimes dam facility
- Current slimes dam facility

Proof of the site notices at the localities where they were placed is attached as APPENDIX 6.2.4 (A).

6.2.5 Prepare for Scoping Phase Public Meeting (Venue, Agendas, Response Forms, Presentation)

During the preparation for the Scoping Phase Public Meeting, the Emalahleni Local Municipality, Rehearsal Room was arranged as venue as it was the closest neutral venue available.

The following Agenda was drawn up for the meeting:

- Welcome
- Background of Project
- Details of the Applicant
- Regional Locality
- Properties Affected
- Legal Framework
- Scoping & EIA Process
- Different Phases of the EIA
- Scoping Report & Plan of Study
- Discussion

Response Forms were designed to be handed out to I&AP's at the Public Meeting to capture any comments. A copy of the response form is attached as APPENDIX 6.2.5 (A). A formal Slide Show presentation was also compiled – attached with the minutes of the meeting in APPENDIX 6.2.7 (A).

6.2.6 Conduct Scoping Phase Public Meeting

The Scoping Phase Public Meeting was held on 12 June 2013 at the Emalahleni Local Municipality, Rehearsal Room. During this meeting the EAP made use of Mr Johannes Mahlanga who acted as a translator in order to ensure that the majority of I&AP's present at the meeting was accommodated with regards to their native language preference. Mr Johannes Mahlanga can act as translator for all of the 11 official languages in South Africa.

The EAP addressed the full agenda in the format of a slide show and explained what was proposed by the Ferrometals project. Opportunity was provided to I&AP's to ask questions and to raise concerns regarding the proposed project. The contents of the Draft Scoping Report and Plan of Study were discussed with the I&AP's and the opportunity to comment on aspects related to the Current Environment and Potential Impacts of the project was explained. I&AP's were informed that the Draft Scoping Report and Plan of Study would be available for public review as from 18 June 2013 for a time period of 60 days. After consultation, it was agreed by the meeting that copies of the reports would be made available at the following localities:

- Emalahleni Public Library
- Samancor Chrome – Ferrometals Entrance/Reception
- Ferrometals Environmental Department

I&AP's were consulted on their preferred venues.

6.2.7 Compile Minutes and Circulate

The proceedings were recorded on a voice recorder. This recording was used to compile comprehensive Minutes of the Meeting. After completion, the minutes were distributed via e-mail, fax and post to I&AP's in cases where relevant details were available. A copy of the Scoping Phase Public Meeting minutes is attached as APPENDIX 6.2.7 (A).

6.2.8 Conduct Focus Group Meetings

Up to date no Focus Group Meeting was requested.

6.2.9 Compile Minutes and Circulate

Up to date no Focus Group Meeting was requested.

6.2.10 Prepare Draft Scoping Report for I&AP Review

Using all available information generated during the Scoping Phase, which included base line studies for a number of environmental aspects, as well as the comments received from the I&AP's, a Draft Scoping Report and Plan of Study was compiled. This report was compiled in strict compliance with the EIA Regulations, as well as Guidelines provided by DMR.

6.2.11 Distribute Draft Scoping Report for I&AP's Review

During the various meetings that were conducted it was ensured that I&AP's knew when and where draft documents/reports would be made available for review. Electronic copies of the reports on CD disk were also available and distributed to I&AP's on request. Notifications were e-mailed, faxed and posted to all Registered I&AP's after distribution of reports in cases where relevant details were available. Timeframe for commenting was clearly indicated to I&AP's and was set for a 60 days period as required by NEMA Act 107 of 1998.

The report was made available for comment on 18 June 2013 to I&AP's and relevant authorities for a 60 day time period – until 19 August 2013.

The Draft Scoping Report will be available for I&AP review at the following sites:

- Emalahleni Public Library
- Samancor Chrome – Ferrrometals Entrance/Reception
- Ferrrometals Environmental Department

I&AP's were consulted on their preferred venues. Proof of sub missioning of reports will be attached in APPENDIX 6.2.11(A).

6.2.12 Capture I&AP Comments

I&AP's have 60 days' time to comment and give feedback to JMA Consulting regarding the Draft Scoping Report and Plan of Study.

During the various consultations, guidance was given to I&AP's on the review and comment process, and also where they would be able to find information relating to the different aspects of the project.

Details of the different available formats in which comments can be submitted were provided to the I&AP's along with the relevant contact information. It was clearly indicated to all I&AP's that all comments received would be recorded and dealt with in an Issues & Response Register.

The EAP also explained the function of the Issues and Response Register and what responsibility it generates for each of the affected parties.

6.2.13 Recover Draft Reports and Written Comments after Review

After the available 60 days for commenting expired, the reports and comments will be collected from the relevant distribution localities on 19 August 2013.

6.2.14 Compile Issues and Response Register

All the comments and feedback gathered from the I&AP's, throughout the Public Participation Process will be compiled into the Issues and Response Register. Each comment will be reviewed by the EAP and responded to either by the EAP, or else by the relevant specialist.

The responses are therefore contained in the Issues and Response Register, which is attached as APPENDIX 6.2.14(A).

6.2.15 Prepare Final Scoping Report for Submission to Authorities

The Draft Scoping Report and Plan of Study will be updated to include the comments and responses thereto and will be reprinted as a Final Scoping Report and Plan of Study.

6.2.16 Submit Final Scoping Report to Authorities and I&AP's

To be conducted

6.2.17 Conduct Authority Site Visit

To be conducted

6.2.18 Approval of Scoping Report

To be received

- 6.3 EIA PHASE**
To be conducted
- 6.3.1 Update BID and Compile Notifications, Adverts and Site Notices**
To be conducted
- 6.3.2 Distribute Notifications**
To be conducted
- 6.3.3 Place Advertisements in Newspapers**
To be conducted
- 6.3.4 Put up Site Notices**
To be conducted
- 6.3.5 Prepare for EIA Phase Public Meeting (Venue, Agendas, Response Forms, Presentation)**
To be conducted
- 6.3.6 Conduct EIA Phase Public Meeting**
To be conducted
- 6.3.7 Compile Minutes and Circulate**
To be conducted
- 6.3.8 Conduct Focus Group Meetings**
To be conducted
- 6.3.9 Compile Minutes and Circulate**
To be conducted
- 6.3.10 Prepare Draft EIA/EMPr Report for I&AP Review**
To be conducted
- 6.3.11 Distribute Draft EIA/EMPr Report for I&AP Review**
To be conducted
- 6.3.12 Capture I&AP Comments**
To be conducted

6.3.13 Recover Draft EIA/EMPr Reports after Review

To be conducted

6.3.14 Compile Issues and Response Register

To be conducted

6.3.15 Prepare Final EIA/Draft EMPr Report for Submission to Authorities

To be conducted

6.3.16 Compile Public Participation Programme Report

To be conducted

6.3.17 Submit Final EIA/Draft EMPr Report to Authorities and I&AP's

To be conducted

6.4 CONSIDERATION, DECISION AND APPEAL PHASE

6.4.1 Continuous Follow-up

To be conducted

6.4.2 Obtain Decision and Review

To be conducted

6.4.3 Notify I&AP's of Decision and Inform on Appeal Process

To be conducted

7. I&AP CONSULTATION CONFIRMATION

A comprehensive Public Participation Programme are been conducted for the Ferrometals Project. In the DMR Guidelines relating to the compilation of a Scoping Report and Plan of Study, as well as the Guidelines relating to the compilation of the Environmental Impact Assessment, specific requirements are listed for confirmation that I&AP's have been consulted.

Although these confirmations have been dealt with in the Scoping Report and will be dealt with in the EIA Report, as well as in the proceeding sections of this Public Participation Programme Report, this section 7 was included to specifically provide information on the confirmation process and outcome.

7.1 ASPECTS LISTED FOR I&AP CONFIRMATION

Pertinent aspects related to the Stakeholder Engagement Process and which are listed in the relevant guidelines, include the following:

- State whether or not the Department of Land Affairs been identified as an interested and affected party.
- Confirm that evidence that the landowner or lawful occupier of the land in question, and any other interested and affected parties including all those listed above, were notified, has been appended hereto.
- Confirm that the identified and consulted interested and affected parties agree on the description of the existing status of the environment.
- Specifically confirm that the community and identified interested and affected parties have been consulted and that they agree that the potential impacts identified include those identified by them.
- Provide a description of the information provided to the community, landowners, and interested and affected parties to inform them in sufficient detail of what the prospecting or mining operation will entail on the land, in order for them to assess what impact the prospecting will have on them or on the use of their land.
- Provide a list of which of the identified communities, landowners, lawful occupiers, and other interested and affected parties were in fact consulted.
- Provide a list of their views in regard to the existing cultural, socio-economic or biophysical environment, as the case may be.
- Provide a list of their views raised on how their existing cultural, socio-economic or biophysical environment potentially will be impacted on by the proposed prospecting or mining operation.
- Provide a list of any other concerns raised by the aforesaid parties.
- Provide the applicable minutes and records of the consultations.
- Provide information with regard to any objections received.
- Confirm which specialists were consulted with regard to any aspect related to the proposed project.

7.2 CONFIRMATION METHODOLOGY

JMA designed a confirmation methodology which contained the following elements:

- **Provide I&AP's with information** to empower them to understand the project, the EIA process and how they should participate, as well as with information related to the current environment, how the project could impact the environment and which measures could be adopted to manage the expected impacts.

This was achieved through:

- Compilation and distribution of BID documents.
 - Slide show presentations during all public and focus group meetings covering all the information required by I&AP's, including but not limited to, a project description, the EIA process description and how the I&AP's could participate, the contents of the Scoping and EIA/EMP reports, the current base line conditions, potential impacts identified by the EAP and Project Team, possible management measures, etc.
 - Compilation and distribution of Scoping and EIA/EMP reports.
 - Site visit to the mine for property owners upon request.
 - Telephonic discussions and explanations.
- **Provide I&AP's with user friendly tools** through which to submit their concerns, issues, responses and confirmations.

This was achieved through:

- Compilation and distribution of comment sheets designed to allow for feedback on all required aspects as per the DMR guidelines.
- Explanation of the purpose of the comment sheets and how to complete and submit them.
- Assistance with the completion of the comment sheets during all the meetings.
- I&AP's could complete the comment sheets in their mother language and JMA provided translation services to translate the comments into English.

- **Provide I&AP's with the opportunity** to voice and submit their concerns.

This was achieved through:

- Allowing for discussions and questions at all public and focus group meetings.
- Providing details on comment feedback addresses (telephone, SMS, e-mail, fax and postal addresses).
- Written comments could be submitted to central local points from where they were collected by JMA.

- **Provide I&AP's with feedback** through a simple and structured methodology.

This was achieved through:

- The compilation and continual updating of a formal Issues and Response Register into which all comments and issues were captured and in which all comments and issues were answered by the EAP and the relevant specialists.

8. ISSUES AND RESPONSE REGISTER

All questions asked, issues raised, concerns expressed, and comments made by Authorities and I&AP's throughout the project, either by way of verbal statement, written comment and/or formal letters addressed to the EAP or Applicant, were captured in the Issues and Response Register.

The formal responses to each of these were compiled by the EAP in collaboration with the relevant Specialists and the Applicant. The responses are fully recorded in the Issues and Response Register.

The updated Issues and Response Register is attached as APPENDIX 6.2.14 (A).

9. REFERENCES

DEAT (2002) *Stakeholder Engagement, Integrated Environmental Management, Information Series 3*, Department of Environmental Affairs and Tourism (DEAT), Pretoria.

DEAT (2005) *Guideline 4: Public Participation, in support of the EIA Regulations, 2005, Integrated Environmental Management Guideline Series*, Department of Environmental Affairs and Tourism (DEAT), Pretoria.

DEA (2010), *Public Participation 2010, Integrated Environmental Management Guideline Series 7*, Department of Environmental Affairs, Pretoria, South Africa.

DMR (2012) *Guideline for the compilation of a Scoping Report*, as required in terms of Section 10(1)(b), 22(4)(b) and 39, read together with Regulation 49 (2) of in the Mineral and Petroleum Resources Development Act 28 of 2002.

DMR (2012) *Guideline for the compilation of an Environmental Impact Assessment and an Environmental Management Programme*, in terms of the Mineral and Petroleum Resources Development Act 28 of 2002.

APPENDIX 2.1 (A)

SYNOPTIC CV'S OF

RIAAN GROBBELAAR AND KOBUS DU PLESSIS

Riaan Grobbelaar

Riaan Grobbelaar (Pr.Sci.Nat.)



Date of Birth: 13 September 1973
Nationality: S A Citizen
Position in firm: Director : Industrial Division
(Shareholder)

Qualification:

B. Sc.: Geology, UOFS, 1995
B. Sc. (Hons) : Geohydrology: UOFS, 1996
M. Sc. (Cum Laude) : Geohydrology, UOFS, 2001

Memberships:

South African Council for Natural Scientific Professions

Period employed:

1996 Geohydrologist/Researcher, Institute for Ground Water Studies, UOFS
2001 Project Geohydrologist with JMA

Riaan Grobbelaar received his training as geohydrologist at the Institute for Ground Water Studies (University of the Free State). He worked at IGS as Researcher/Lecturer, Specializing in coal mine impacts and inter mine flow between mines.

He left the IGS in 2001 and joined JMA, where he is involved in projects related to industrial ground water pollution impacts and risks.

Since 1996 Riaan Grobbelaar has been involved in projects related to water supply, aquifer management, ground water quality investigations, ground water monitoring, ground water impact and risk assessments.

E-mail: riaan@jmaconsult.co.za

Kobus du Plessis

Kobus Du Plessis (Cand.Sci.Nat.)



Date of birth: 10 December 1986
Nationality: S A Citizen
Position in firm: Junior Scientist (ST 3)

Qualifications:

B.Sc. Conservation Ecology, US (2009)

FGASA Level 1 and 2 (Ulovane Environmental Training)

Period employed:

April 2010 - Dec 2011: Manage Private Tented Camp at Amakhala Game Reserve, Eastern Cape.

Feb 2012 - May 2012: Environmental Assistant, GNEC, Paarl.

May 2012: Junior Scientist, JMA Consulting, Delmas.

Kobus Du Plessis completed his studies in the field of Conservation Ecology at the University of Stellenbosch. During his time of study (2005 – 2009), he conducted fieldwork all over the Western Cape concentrating on various aspects of the Fynbos biome. He also worked in the Southern Cape, where he drew up a management plan for Botlierskop Private Game Reserve.

After completing his studies he was employed as a manager at Amakhala Private Game Reserve in the Eastern Cape.

At the beginning of 2012, he started doing his part-time Masters in Environmental Management at University of Stellenbosch.

At present he is responsible for environmental impact assessment studies and reports.

E-mail: kobus@jmaconsult.co.za

APPENDIX 6.1.1 (A)

I&AP DATA BASE FOR THE FERROMETALS PROJECT

Name & Surname	Position	Company	Telephone	Fax	Cell	Email	Postal Address	Physical Address
JMA Consulting (Pty) Ltd								
Riaan Grobbelaar		JMA Consulting (Pty) Ltd	Tel no: 013 – 665 1788	Fax no: 013 – 665 2364	Cell no:	riaan@jmaconsult.co.za	P.O. Box 883 Delmas 2210	16 Vickers Street Delmas 2210
Kobus du Plessis		JMA Consulting (Pty) Ltd	Tel no: 013 – 665 1789	Fax no: 013 – 665 2365		kobus@jmaconsult.co.za	P.O. Box 883 Delmas 2212	17 Vickers Street Delmas 2210
Ferrometal								
Heather Booyen	Group Environmental Specialist	Samanacor Chrome	+27 (0)13 2494407		+27 (082) 4173889	heather.booyen@samanacor.com		
Premisha Chetty	SHEQ Specialist: Environment & Quality	Ferrometals	+27 13 693 7438		+27 72 575 2957	Premisha.Chetty@SamanacorCr.com		
Community I&AP's								
S Akhalwaya	Environmental Officer	Bhp Billiton	013 249 3279	086 6222 2459	082 747 7474	shaakira.akhalwaya@bhpbilliton.com	PO Box 1969 Witbank 1035	
Kim Webb	Wildlife and Environment Society of South Africa		011 462 5663	011 462 8364	072 880 1722	kwebb@wessnorth.co.za	PO Box 435 Ferndale 2160	
TJ Makgilla	SHEQ Manager	Vanchem	013 696 6080	013 696 6056	083 649 1846	josephm@vanchem.co.za	PO Box 567 Witbank 1035	
KF Beamish	Environmental Scientist	Randcarbid	013 690 8263	013 690 8384	082 894 5856	kerrvh@randcarbid.co.za	PO Box 8634 Die Heuvel 1042	
Deon Broodryk	Environmental Scientist	Transalloys	013 693 8119	013 659 7173	083 697 4025	deontb@transalloys.co.za	PO Box 856 Witbank 1035	
A van der Sandt	Environmental Manager	Xstrata Carbon	013 696 8000	013 696 8029	082 451 9700	avdsandt@xstrata.co.za	PO Box 17070 Witbank 1035	
E. Prinsloo	Environmental Co-ordinator	Greenside Colliery	013 690 4332	013 690 4313	083 784 2341	epriuslo@anglocoal.co.za	PO Box 1969 Witbank 1035	
J. Hayes	Environmental Co-ordinator	Anglocoal	013 693 0256	013 691 9415	082 418 8505	jhayes@anglocoal.co.za	PO Box 2851 Witbank 1035	
Y Bezuiden	Environmental Manager	Highveld	013 690 8880	013 690 9680	082 562 3621	volandib@hiveld.co.za	PO Box 111 Witbank 1035	
A. Germishuizen	HOD-Sustainable Development	Xstrata Carbon	013 696 8000	013 696 8029	083 231 9288	agermishuizen@xstrata.co.za	PO Box 17070 Witbank 1035	
D Phillips		Xstrata Alloys			082 324 8598	dphillips@xstrata.co.za		
M. Hlabane	Member	Environmental Justice Networking Forum	None	None	082 707 9860	mhlabane@mweb.co.za	P O Box 986 Witbank 1035	
Cathie Lewis	Unit Manager- Legal Services	Highveld Steel and Vanadium Corporation Ltd	013 690 8888	013 690 9192	082 418 3791	cathie@hiveld.co.za	P O Box 111 Witbank 1035	
Jacob Mashigo	Managing Director	Ikemeling Engineering Services	013 699 1058	013 699 1058	072 648 5119		No 9098, Kcoali Str Witbank	
Spekkies van der Merwe	Manager	Scaw Metals South Africa	013 699 9044	013 699 9197	082 415 7037	svandermerwe@scaw.co.za	P O Box 2669 Witbank 1035	
E de Beer		Witbank Development Forum	013 653 5017	013 656 3211		peretmal@social.mpu.gov.za		
NL Bosman		Agri Mpumalanga	017 819 1295			mlo@megaweb.co.za		Emmelo
Peter Gunther	Section Hydrologist	Anglo Coal	013 691 5451	013 651 5459	083 231 9629	pgunther@anglocoal.co.za		
Guy Mokoena	Secretary General	NAFCOC	013 752 2300	013 752 3496	082 688 5148	gavmokoena@icon.co.za	PO Box 2270 Nelspruit 1035	
Johan Dempsey	The President	Rotary Club of Coal Fields	013 690 2980	013 656 1192	082 743 9780	dempsey@mweb.co.za		Witbank

Given Mabaso	Co-ordinator	South African Green Revolutionary Council	013 656 3264	013 656 3117	083 987 5669	sagrccadm@global.co.za		Witbank
Alex Ochmen	General Manager	Vanchem Vanadium	013 696 6001	013 696 6015	083 781 7121	alexo@vanchem.co.za	P O Box 567 Witbank 1035	Witbank
Sary Koertzen	Director Production Marketing	Witbank Chamber of Commerce and industry	013 690 2288	013 656 3812	082 809 8509	sary@emalahlenbiz.info	P O Box 2180 Witbank 1035	Witbank
Chris Ferreira	Executive Member	Witbank Chamber of Commerce and industry	013 656 1711	013 656 5977	082 891 6403	chris@efalaw.com		
Nico Dooge	Group Environmental Manager	Xsira Coal South Africa	013 690 5079	013 690 5225	083 456 7422	ndooge@xsira.co.za		Witbank
Dudu Makena			013 695 4630	013 695 4630	072 196 6197			Witbank
M Van Aswegen	Director	Seven Billion Thoughts	013 650 2067		082 570 2002	gehard@hamandi.co.za	334 Atrin Avenue, Thushanang	Witbank
Bafana Masango					076 786 7040	Zibillon@gmail.com	PO Box 2425	Witbank
Fidel Mlombo	Provincial Secretary	COSATU	013 656 0289	013 656 0291	083 950 7992	fidel@cosatu.org.za	1035	Witbank
Henk Janse Van Vuuren	Environmental Officer	ABI – Coca Cola	013 699 9880	013 699 9113	079 892 6216	hjansevanvuuren@ccsb.co.za	P O Box 54 Witbank 1035	Witbank
Kenneth Nkabinde	Financial Director	Brickor Isisfina	None	None	None		P O Box 259 Witbank 1035	Witbank
Orapeleng	Managing Member	Agangang Personal Protective Equipment	None	086 600 1496	076 528 8884	agangang.ppe@webmail.co.za	P O Box 3117 Witbank 1035	Witbank
Timus Scholtz	Works Manager	African Carbon Products	013 696 8000	013 696 8029	083 271 2936	tscholtz@xsira.co.za	P O Box 17070 Witbank 1035	Witbank
Bongani Hlophe	Executive Director	Patrines Business Concept	(013) 690 6643		082 794 6537		PO BOX 4000 Emalahleni 1039	
Jacob Thoba Masheso	Director	Ikemeng Engineering Services		086 668 4657	072 648 5119		1998 Kooli Street, Ackerville Emalahleni 1039	
David Petrus Mahlangu	Director	Izandla Zazhe Zana Construction cc		086 668 4657	072 848 5262		620 Mahabane Street, Lynnville Emalahleni 1039	Witbank
Sunday Mahlase	Director	MDM Trading and Enterprise cc	(013) 696 3229	086 668 4657	072 150 4277		2224 Mafokane Street, Ackerville Emalahleni 1039	Witbank
Ronny Motau	marketing manager	ikemeng cc		086 668 4657	072 636 0846		2209 Louis Dlamini Street Emalahleni 1039	Witbank
Jacob Mantshe	Managing Member	Nkamj Construction	(013) 699 9420	(013) 699 9420	082 879 2886		PO BOX 6450 Emalahleni 1039	Witbank
Christine Gwebu		Sentimental Trade	(013) 696 1963	082 748 5914	082 672 6189		4623 Mafokane Street, Ackerville Emalahleni 1039	Witbank
N Gakwehu						ngakwehu@telkomsat.net		Witbank
Orapecheng Mangoenyane	Managing Member	Agangang PPE		086 600 1496	076 5288 884	agangang.ppe@webmail.co.za	PO BOX 3117 Witbank 1035	Witbank
Somekile Mduli	Community member	Community Member			079 428 8234/072 431 2233		891 Mangosi Street, Lynnville Emalahleni 1039	Witbank
Vusi Mashaba	Community Member	Community Member			073 471 2233/079 428 8234		891 Mangosi Street, Lynnville Emalahleni 1039	Witbank
Mpumi Maphithela	Community Member	Community Member			(071) 216 7077		3092 Mkabela Street Ackerville 1039	Witbank

Promise		(079) 646 7812					
Local Municipality							
MJ Makena	Sectional Head- Environmental Management	Emalehleri Municipality	013 692 4021	013 692 8045	082 371 9945	parks1@web4us.co.za	PO Box 3 Witbank 1035
Erald Nkabinde	HOD-Environmental and Waste Management	Emalahleni Municipality – Environmental Section – Main office	013 690 6350	013 690 6295	082 729 7488	nkabindeej@emalahleni.gov.za	PO Box 3 Witbank 1035
Linah Malatji	Mayor	Emalehleri Municipality	013 690 6234/ 013 690 6556	013 690 6430		malatjilm@emalahleni.gov.za	PO Box 3 Witbank 1035
AJ Engelbrecht	Acting Municipal Manager	Emalahleni Municipality	013 690 6208/ 013 690 6479	013 690 6479		langaam@emalahleni.gov.za	PO Box 3 Witbank 1035
Cecilia Maraba	Ward Councillor	Emalehleri Municipality			082 579 8894		PO Box 3 Witbank 1035
Cassin	Ward Councillor	Emalehleri Municipality			082 775 1304		PO Box 3 Witbank 1035
Regional / District Municipality							
Charles Makula	Municipal Manager	Nkangala District Municipality	013 249 2006	013 249 2050		nkosinn@nkangaladm.org.za	PO Box 437 Middelburg 1050
SK Mashilo	Mayor	Nkangala District Municipality	013 249 2008	013 249 2056	082 419 0929	vanbuurensmp@nkangaladm.org.za	PO Box 437 Middelburg 1051
Pierre Rossouw	Environmental Health Officer	Nkangala District Municipality	013 249 2127	086 536 0378		rossouw@nkangaladm.org.za	PO Box 437 Middelburg 1052
Ward Councillors							
Taylor Pookgoudi	ELMC	Witbank - Ward 12			083 400 9396	taylorp@vodanet.co.za	Witbank
Sipho Masuku	ELMC				0823653714	siphomsk@gmail.com	
Government Authorities							
DWA							
DWA B ronkhorstspuit			013) 932 2061	013) 932 2071			Private Bag X10580 Bronkhorstspuit 1020
Miss Halalitse Mdletshe		Department of Water Affairs (DWA)	Tel no: 034 212 1158		082 325 9741	mdletsheh@dwaf.gov.za	Private Bag X 2015 Dundee 3000
Pieter Ackerman	Environmental Officer	Department of Water Affairs	012 336 8217	012 336 6608	082 087 3512	ackermanp@dwaf.gov.za	Private Bag X313 Pretoria 0001
Busi Mahlangu	Environmental Officer	Department of Water Affairs	013 759 7317	013 759 7533	082 803 7652	mahlangu@dwaf.gov.za	Private Bag X11259 Nelspruit 1250
DMR							
Maashile Ramovha		Department of Mineral Resources (DMR)	Tel no: 013) 653 0500		082 447 2400	maashile.ramovha@dmr.gov.za	Witbank
Martha Makonyane		DMR	Tel no: 013) 653 0500		082 447 2400	Martha.Makonyane@dmr.gov.za	Witbank
Helen Maumela		DMR	Tel no: 013) 653 0500			helen.maumela@dmr.gov.za	Witbank
Themba Mazibuko		DMR	Tel no: 013) 653 0500			Themba.mazibuko@dmr.gov.za	Witbank
DEDET - Witbank (Local)							
DEDET Office		DEDET	013) 690 2595	013) 690 3704			Pavillion Building Cnr. Botha Avenue & Northey Street Witbank 1035

Musa Mondlane	DEDET	013) 690 2596	013) 690 3705	073 049 3110	gmmondlane@wil.mpu.gov.za	P.O. BOX 383 Witbank 1035	Pavillion Building Cnr.Botha Avenue & Northey Street Witbank 1035
DEDET - Ermelo (Regional)							
Surgeon Marebane	DEDET	Tel no: 017 811 4815 / 017 819 1155		079 841 9582 / 072 408 3138	stmarcbane@mpg.gov.za	Ermelo	Ermelo
Bulelwa Shabalala	DEDET	Tel: 017 811 4830		Cell: 076 213 6874	shabalalabw@mpg.gov.za	Ermelo	Ermelo
Nelisiwe Mlangeni	DEDET	Tel: 017 811 4830		Cell: 076 481 7250	mlangerinm@mpg.gov.za	Ermelo	Ermelo
DEA							
Lucas Mahlangu	Department of Environmental Affairs	012) 310 3536	012) 310 3753		lmahlangu@environment.gov.za	Private Bag X447 Pretoria 0001	
Dumisani Mthembu	Director: Environmental Impact Evaluation	012 310 3230	012 310 7539		dumthembu@deat.gov.za	Private Bag X447 Pretoria 0001	
Sandile Vilakazi	Department of Environmental Affairs	012 310 3891			svilakazi@deat.gov.za	Private Bag X447 Pretoria 0001	
Mazwi Lushaba	Department of Environmental Affairs	012 310 3263		078 192 7237	MLushaba@deat.gov.za	Private Bag X447 Pretoria 0001	
MTPA							
Brain Morris	Mpumalanga Tourism & Parks Agency			Cell: 084 579 7979	enviroesq@gmail.com	Nelspruit	Nelspruit
Mervyn Lotter	MTPA		Fax: 013) 235 2395		mervyn@mpa.co.za	Nelspruit	Nelspruit
Frans Krige	MTPA	Tel no: 013 254 0279			franskrige@telkomsa.net	Dullstroom	Dullstroom
Vanno Prinsloo	MTPA			Cell no: 082 468 5447	vanno@vodamail.co.za	Ermelo	Ermelo
Ronell Niemand	MTPA	Tel no: 013 759 5573			ronell@mpa.co.za	Nelspruit	Nelspruit
Andre Hoffman	Mpumalanga Tourism and Park Agency	013 262 4845	013 262 4858	082 412 5756	achoffman@lanitc.net	PO Box 1250 Groblersdal	Groblersdal
SAHRA							
Jenna Lavin	South African Heritage Resources Agency (SAHRA)	Tel no: (021) 462 4502	Fax: (021) 462 4509		ilavin@sahra.org.za	PO Box 4637 Cape Town 8000	111 Harrington Street Cape Town
Mokwena Peter	Provincial Heritage Authority Gauteng (PHRA-G) (previously SAHRA)	011 355 2630		083 704 5397	kgereshi.mokwena@gauteng.gov.za	38 Rissik St, Nedbank Building, 8th Floor	Johannesburg
Other							
Frans Mashabela	Department of Agriculture	Tel no: 013 754 0730			fransmas@nda.agric.za	Nelspruit	Nelspruit
Careen Swart	Department of Health	Tel no: 013 766 3448	Fax : 086 5492 969	082 820 7950	Careens@social.mpu.gov.za	Private Bag X 11285 Nelspruit	Nelspruit
Angelina Makmela	Department of Health	013 653 2349	086 666 0920	083 719 2095	anamakela@xstratacoal.co.za	306, Nedbank Centre, Diederich Str	Witbank
Themba Richard Mlanzi	Department of Labour	013 655 8700	013 655 8890	082 882 3692	temba.mlanzi@labour.gov.za	Private Bag X7263 Witbank 1035	Witbank
James Msweni	Department of Local Government and Housing	013 656 1066	013 656 5752		vjamesmsweni@mpg.gov.za	Witbank	Witbank
Sonia Chipu	DME	013 656 1448	013 6902 0923	073 207 1816	sonia.chipu@dme.gov.za	Witbank	Witbank
Prisca Khoza	Department of Economic Development & Planning	013 690 2595	013 690 3704	072 457 5495	pkkhoza@mpg.org.za	P O Box 383 Witbank 1035	Witbank

Musa Mondlane	Director: Environmental Management	Mpumalanga Department of Agriculture and Land Affairs	013 690 1279	086 511 1726	072 911 1472	gmmmondlane@wil.mpu.gov.za	Private Bag X7255 Wibank 1035
Ndlafti Patrick Tuwani	Evaluation	Department of Energy: Designated National Authority	012 444 4114	012 444 4501	072 318 4354	ndlafti.tuwani@energy.gov.za	Private X19 Arcadia
Lindiwe Olga Chauke	Authority for Clean Development	Department of Energy: Designated National Authority	012 444 4116	012 444 4501	082 465 0160	Lindiwe.Chauke@energy.gov.za	Private X19 Arcadia
Lorry Mphoreng	Procurement Officer	Department of Health and Social Services	013 656 6251	013 656 3883	No cellphone	lorryp@social.mpu.gov.za	P O Box 520 Wibank 1035

APPENDIX 6.1.2(A)

COPIES OF THE EIA APPLICATION FORMS

DEDET

MPUMALANGA PROVINCIAL GOVERNMENT

Cnr Botha & Northey Str
Pavilion Building
Next to Bostn College
WITBANK
1035
E-mail: gmmondlane@wit.mpu.gov.za



P.O. Box 383
WITBANK
1035
Tel: (013) 690 2595
International Tel: +27 13 690 2595
Fax: (013) 690 3704
International Fax: +27 13 690 3704

Department of Economic Development, Environment and Tourism

Litiko letekutfufukiswa kwemotto
nekuhlelwa

UmNyango wezokuthuthukiswa
konntho nezokutanywa

Department Ekonomieseontwikkeling en
beplanning

Enquiries: Musa Mondlane

Attn: Riaan Grobbelaar
JMA Consulting (Pty) Ltd
P.O Box 883
Delmas
1035

Tel No: 013 665 1788
Fax No: 013 665 2364

Dear Sir or Madam,

RE: ACKNOWLEDGEMENT FOR THE PROPOSED DECOMMISSIONING AND CLOSURE OF THE CURRENT EXISTING NORTHERN SLIMES DAM AND THE CONSTRUCTION OF A NEW SLIMES DAM FACILITY AT FERROMETALS OPERATION, EMALAHLENI.

We confirm having received the abovementioned application for Environmental Authorisation on 15 August 2011.

The application has been assigned reference number 17/2/3 N-84. Kindly quote this reference number in any future correspondence in respect of the application.

Please draw the applicant's attention to the fact that the activity may not commence prior to an Environmental Authorisation being granted by the Department.

Yours faithfully

Dineo Tswai
Deputy Director
Environmental Impact Management

2011/09/19
Date

DEA



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447, PRETORIA, 0001 · Fedsure Building, 315 Pretorius Street, PRETORIA

Ref No.: 12/9/11/L670/6

Enquiries: Mr. Lucas Mahlangu Tel: (012) 310 3536 Fax: (012) 310 3753.

Email: lmahlangu@environment.gov.za

www.environment.gov.za

JMA Consulting
P.O Box 883
Delmas
2210

Fax No. (013) 665 2364

Attention : Riaan Grobbelaar

APPLICATION FOR A WASTE MANAGEMENT LICENCE IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (NO. 59 OF 2008): PROPOSED WASTE DISPOSAL SITE BY FERROMETALS, MPUMALANGA PROVINCE.

The Department confirms having received waste licence application form for the abovementioned activity on 25 August 2011.

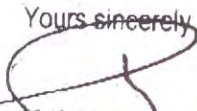
You are hereby reminded to comply with the requirements: **Regulations 67 of GN No. R 543** with regard to the period allowed for complying with the requirements of the regulations, and **Regulations 56 and 57 of GN No. R 543** with regard to the allowance of a commenting period for interested and affected parties on all reports submitted.

Your application has been assigned with a reference number (12/9/11/L670/6). Kindly quote this reference number in any future correspondence in respect of your application. The responsible officer for the processing of your application is Ms Thizwi Ramavhona who can be contacted on (012) 310 3142.

Please draw the applicant's attention to the fact that the activity may not commence prior to a waste licence being granted by the Department.

Should you require further detailed information, please do not hesitate to contact this office.

Yours sincerely


Mr. Ishaam Abader.

Deputy Director-General

Environmental Quality and Protection

Letter signed by: Mr. Lucas Mahlangu

Designation: Deputy Director: Systems

Date: 2011/08/29



environmental affairs

Department
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447, PRETORIA, 0001· Fedsure Building, 315 Pretorius Street, PRETORIA

Ref No.: 12/9/11/L700/6

Enquiries: Mr. Lucas Mahlangu Tel: (012) 310 3536 Fax: (012) 310 3753.

Email: lmahlangu@environment.gov.za

www.environment.gov.za

JMA Consulting
P.O Box 883
Delmas
2210

Fax No. (013) 665 2364

Attention : Riaan Grobbelaar

APPLICATION FOR A WASTE MANAGEMENT LICENCE IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (NO. 59 OF 2008); PROPOSED WASTE DISPOSAL SITE BY FERROMETALS, MPUMALANGA PROVINCE.

The Department confirms having received waste licence application form for the abovementioned activity on 25 August 2011.

You are hereby reminded to comply with the requirements: **Regulations 67 of GN No. R 543** with regard to the period allowed for complying with the requirements of the regulations, and **Regulations 56 and 57 of GN No. R 543** with regard to the allowance of a commenting period for interested and affected parties on all reports submitted.

Your application has been assigned with a reference number (12/9/11/L700/6). Kindly quote this reference number in any future correspondence in respect of your application. The responsible officer for the processing of your application is Ms Thizwi Ramavhona who can be contacted on (012) 310 3142.

Please draw the applicant's attention to the fact that the activity may not commence prior to a waste licence being granted by the Department.

Should you require further detailed information, please do not hesitate to contact this office.

Yours sincerely

Mr. Ishaam Abader.
Deputy Director-General
Environmental Quality and Protection
Letter signed by: Mr. Lucas Mahlangu
Designation: Deputy Director: Systems

Date: 29/08/2011



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447, PRETORIA, 0001· Fedsure Building, 315 Pretorius Street, PRETORIA

Ref No.: 12/9/11/L691/6

Enquiries: Mr. Lucas Mahlangu Tel: (012) 310 3536 Fax: (012) 310 3753

Email: lmahlangu@environment.gov.za

www.environment.gov.za

JMA Consulting (Pty) Ltd
P O Box 883
DELMAS
2210

Fax No. 013 665 2364
Attention: Riaan Grobbelaar

APPLICATION FOR A WASTE MANAGEMENT LICENCE IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (NO. 59 OF 2008): LICENCE CLOSURE FOR THE DECOMMISSIONING OF SLIMES DAM FACILITY FOR FERROMETALS, MPUMALANGA PROVINCE.

The Department confirms having received waste licence application form for the abovementioned activity on 12 August 2011.

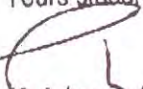
You are hereby reminded to comply with the requirements: **Regulations 67 of GN No. R 543** with regard to the period allowed for complying with the requirements of the regulations, and **Regulations 56 and 57 of GN No. R 543** with regard to the allowance of a commenting period for interested and affected parties on all reports submitted.

Your application has been assigned with a reference number (12/9/11/L691/6). Kindly quote this reference number in any future correspondence in respect of your application. The responsible officer for the processing of your application is Mr. Richard Moseki who can be contacted on (012) 310 3209

Please draw the applicant's attention to the fact that the activity may not commence prior to a waste licence being granted by the Department.

Should you require further detailed information, please do not hesitate to contact this office.

Yours sincerely


Mr. Ishaan Abader.
Deputy Director-General
Environmental Quality and Protection
Letter signed by: Mr. Lucas Mahlangu
Designation: Deputy Director: Systems
Date: 15/08/2011

APPENDIX 6.1.3(A)

MINUTES OF PRE-APPLICATION MEETING WITH

DEDET



Sustainable Environmental Solutions
through integrated
Science and Engineering

NOTE FOR THE RECORD

DEDET SITE VISIT MEETING

DATE: 4 OCTOBER 2011

VENUE: VISITOR'S BOARDROOM NO. 3

FERROMETALS – A BUSINESS UNIT OF SAMANCOR CHROME LTD

TIME: 14:00

PRESENT:

Name	Company	Telephone number	Fax number	Cell phone number	E-mail address
Riaan Grobbelaar	JMA Consulting	013 665 1788	013 665 2364	082 452 1231	riaan@jmaconsult.co.za
Riaan Fourie	JMA Consulting	013 665 1788	013 665 2364	082 866 4123	r.fourie@jmaconsult.co.za
Brian Gibson	Ferrometals		013 693 2507	082 467 2145	Brian.Gibson@SamancorCr.com
Sonja Pickering	Ferrometals		013 693 7666	082 457 2147	sonja.pickering@samancorCR.com
F Janse van Vuuren	Ferrometals		013 693 7314	082 418 3748	Fires.JansevanVuuren@samancorCR.com
Musa Mondlane	DEDET		013 690 3704	073 049 3110	gmmondlane@wit.mpu.gov.za
Andrew Tshabalala	Ferrometals		013 693 7511	082 873 3778	andrew.tshabalala@samancorcr.com
Roark Rawheath	Ferrometals		013 693 7460	082 512 7202	Roark.rawheath@samancorcr.com
H van As	Ferrometals	013 693 7267			Henriette.vanas@samancorcr.com
P. Chetty	Ferrometals			072 575 2957	Preisha.chetty@samancorcr.com

APOLOGIES:

Name	Company	Telephone number	Fax number	Cell phone number	E-mail address
I Cilliers	Ferrometals	013 693 7235	013 693 7558	082 552 4001	Ignatius.cilliers@samancorcr.com

PURPOSE:

A site visit was requested by the Department of Economic Development, Environment & Tourism (DEDET) regarding the Ferrometals - Samancor Chrome EIA application (Ref: 17/2/3 N-84).

The purpose of the meeting was therefore to provide feedback of the Ferrometals project to DEDET by explaining and discussing the background to the project as well as the different components that were identified for the proposed project. The meeting also had the function of obtaining inputs from DEDET's side on the project and to conduct a site visit so that Mr Musa Mondlane (MM) could orientate and familiarise himself with the Ferrometals site.

DISCUSSION:

Riaan Grobbelaar (RG) introduced himself and welcomed everybody to the meeting after which he explained the purpose of the meeting. RG stated that this meeting was organised as a result of the request received from MM and continued to outline what will be discussed during the meeting. RG also asked MM to please provide inputs from DEDET's side regarding procedural requirements.

RG explained the regional locality of Ferrometals and also indicated the extent of the surrounding mining activities in the area. RG then indicated where the Northern Tailings Facility, the one that will be decommissioned, is located. RG then provided feedback on the enviro-legal framework for this project by indicating that both an EIA and Waste License Application will be required.

RG then briefly provided an explanation of production process at Ferrrometals. RG mentioned that the current Northern Tailings Facility has another life expectancy of approximately 3 to 4 years after which a new footprint will be required. RG then discussed the two different rehabilitation options for the tailings facility by indicating pros and cons of each option.

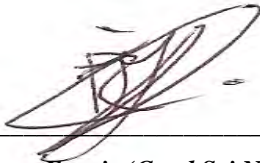
RG then discussed the listed activities triggered in GNR 718 for the Waste License Application and in GNR 544 for the EIA Component. RG then continued to provide an outline of the process to be followed and asked MM if there was anything that he would like to add.

MM asked what reports will be made available for public review, whether only Draft reports or Final reports will be available. RG explained that the Draft reports will be compiled and presented to I&AP's for review. All comments received during this period will be incorporated into the Draft report and the report will then be finalised. RG indicated that the Final Reports will then be submitted to DEDET. I&AP's will however be informed on how their comments/concerns were addressed. MM indicated that an agreement on this can be made with I&AP's during the I&AP Public meeting.

MM asked RG about the capping of the Tailings Facility and RG explained in detail how that will happen and what will be done.

The aerial photograph of the Ferrrometals site was then discussed after which involved parties departed on the site visit.

This note for the record was compiled by:

A handwritten signature in black ink, appearing to read 'Riaan Fourie', written over a horizontal line.

Riaan Fourie (Cand.Sci.Nat.)

Signed attendance register – 4 October 2011



JMA Consulting (Pty) Ltd

15 Vickers Street
 Delmas
 P.O. Box 883
 Delmas, 2210
 Tel (013) 665 1788
 Fax (013) 665 2364

Sustainable Environmental Solutions through Integrated Science and Engineering

ATTENDANCE REGISTER


PROJECT : Ferrometals - A Business Unit of Samancor Chrome Ltd DEDET EIA Site Visit & Project Introduction Meeting		VENUE : Ferrometals - Witbank	DATE & TIME : 04 October 2011 @ 14:00				
Nr	Name	Representing	Postal Address	Fax number	Contact Details	E-mail address	Sign
1	R Grobbelaar	JMA	PO Box 883, Delmas, 2210	013 665 2364	Tel: 013 665 1788 Cell: 082 452 1231	riaan@jmaconsult.co.za	
3	Riaan Fourie	JMA	PO Box 883, Delmas, 2210	013 665 2364	Tel: 013 665 1788 Cell: 082 866 4123	r.fourie@jmaconsult.co.za	
4	S. Pickering	FMT	WITBANK	013 693 7666	0824572147		
5	D. Gibson	FMT	"	013 693 3507	0824672145		
6	F. Jase van Jaarsveld	FMT	"	013 693 226	082483768		
7	M. Mordant	MINEDAT	"	013 640 2595	073 0493110	gmondland@wit. mpo.gov.za	
8	H. van Rys	FMT	"		013 693 7267	@samancor.co.za henriette.vanras	
9	A. Ismael	FMT	"	013 693 7511	082 8733 778	andrew.establish	
10	P. Chetty	FMT	"		012 5152457	@samancor.com p.chetty@samancor.com	
11	R. Boshoff	FMT	"	013 693 7460	082 5167262	Rosaleen@samancor.com	
12							



**SAMANCOR CHROME
FERROMETALS
TAILINGS DISPOSAL
PROJECT
CLOSURE/NEW**

DEDET Ref:17/2/3 N-84
4 OCTOBER 2011
14:00

Sustainable Environmental Solutions through
Integrated Science and Engineering

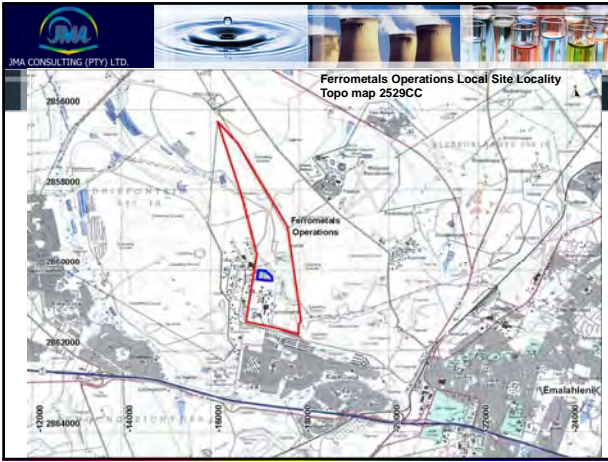


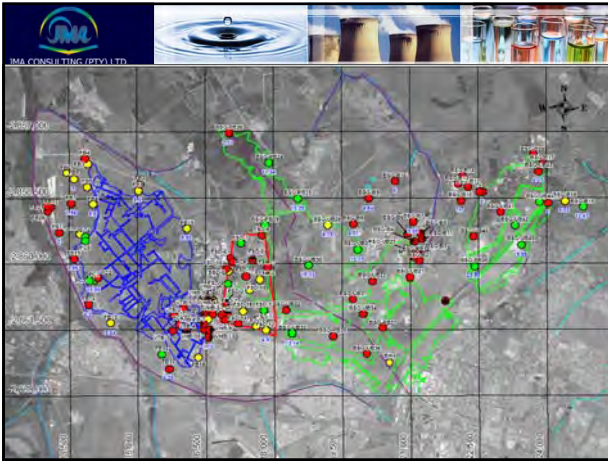
DISCUSSION:

- Project Background
- General Discussion
- Authority Scope
- Way forward

Sustainable Environmental Solutions through
Integrated Science and Engineering







JMA CONSULTING (PTY) LTD.

No.	Property Name	Deed of Transfer	Owner	Zoning Status
1.	District 27 JS (Partia 9)	T 39228/93	Name: Ferrometal - a Business Unit of Sasolmin Chrome Limited Contact Person: Brian Gibson Postal Address: Private Bag 5224, Witbank, 1035 Telephone: 011 489 726 Facsimile: 011 489 7016 Cellular: 082 467 2145 Email: brian.gibson@ferrometal.com	Industrial 2
2.	District 27 JS (Partia 12)	T 39228/93	Name: Ferrometal - a Business Unit of Sasolmin Chrome Limited Contact Person: Brian Gibson Postal Address: Private Bag 5224, Witbank, 1035 Telephone: 011 489 726 Facsimile: 011 489 7016 Cellular: 082 467 2145 Email: brian.gibson@ferrometal.com	Industrial 2

Sustainable Environmental Solutions through Integrated Science and Engineering

JMA CONSULTING (PTY) LTD.

Water Recycled back to Plant
Phos & Sulfur
Northia Slime Filtration Facility

Sustainable Environmental Solutions through Integrated Science and Engineering

JMA CONSULTING (PTY) LTD.

Sustainable Environmental Solutions through Integrated Science and Engineering

APPENDIX 6.1.4(A)

MINUTES OF PRE-APPLICATION FOCUS GROUP

MEETING



SAMANCOR CHROME LTD. - FERROMETALS

Focus Group Meeting

DATE: 28th May 2013

TIME: 10:00

VENUE: Emalahleni, SPUR

Notes for the Record

NAME	COMPANY	CONTACT DETAILS
Riaan Grobbelaar	JMA Consulting (Pty) Ltd.	013 665 1788 riaan@jmaconsult.co.za
Kobus Du Plessis	JMA Consulting (Pty) Ltd.	013 665 1788 kobus@jmaconsult.co.za
Taylor Pookgoadi	Ward 12 & ELMC	083 400 9396 taylorp@vodamail.co.za
Sipho Masuku	ELMC	082 365 3714 siphomsk@gmail.com

Riaan Grobbelaar (RG) opened the discussions by introducing himself and the others parties present at the meeting. RG then gave a description of the proposed project and discussed the different environmental authorisations that are required for this project.

RG explained the process to be followed by JMA Consulting (JMA) regarding the decommissioning and closure of the current existing slimes dam as well as the construction of a new slimes dam facility. RG explained that an application has been lodge in terms of NEMA Act 107 of 1998, GNR 544 for Activity 27 as well as a Waste Licence Application in terms of the National Environmental Management Waste Act (NEM:WA) 59 of 2008, Section 19(3) and GNR 718, Category A, Activity 20. He also stated that for the Construction of a New Slimes Dam, JMA has lodge an application in terms of NEM:WA Act 59 of 2008, Section 19(3) and GNR 718, Category A, Activity 9 and 11.

The Scoping Phase, EIA Phase together with the Public Participation Process was explained to the parties present at the meeting.

Taylor Pookgoadi (TP) then requested JMA to provide the necessary documentation to proof that JMA Consulting is indeed appointed by Ferrometals for the project. RG explained that the process does not require the Local Municipality to buy in on it and that it is a standalone project with a certain process and requirements to follow, however JMA will request such a letter from Ferrometals and add it to the available documentation.

TP then mentioned his concern that the Venue for the Scoping Phase Public Meeting does not fall within Ward 12, as the Ferrometals Site is located within this ward. He also wanted to know who needs to be involved in the Public Participation Process. RG responded by explaining that legally JMA are required to advertise in one Local Newspaper and that Site Notices needs to be put up in the surrounding community.

Sipho Masuku (SM) then also raised the concern that the venue for the Public Meeting are far from the site and that the local community now needs to arrange transport to get to the venue

which involves extra costs which some of them do not have. He suggested that transport must be arranged for the people who are interested to attend the meeting. He also suggested that the different ward councillors must be used to get the public involved in the process.

After some discussion it was agreed by all parties present at the Focus Group Meeting that the Scoping Phase Public Meeting will continue as arranged and that if requested, by the I&AP's involved in the process, another meeting can be arranged at a different venue at a later stage.

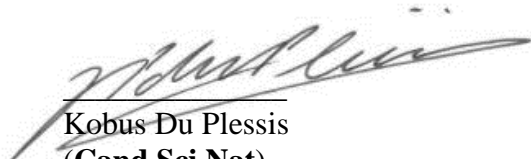
SM then requested JMA to approach Ferrometals and initiate a meeting and discussion between the ELMC and Ferrometals regarding the re-use of Slag. RG responded that they have to send him the request in writing, and then he will see what he can do and try to arrange the requested meeting.

After no more questions were asked RG concluded that the Scoping Phase Public Meeting arranged for 12 June 2013 will continue as planned. At this meeting the venue for the next meeting will be discussed.

JMA thanked TP and SM for their time and comments and indicated that JMA looked forward to getting some feedback from them.

Notes for the Record were compiled by:

Kobus du Plessis (JMA Consulting (Pty) Ltd.)



Kobus Du Plessis
(Cand.Sci.Nat)



JMA Consulting (Pty) Ltd

15 Vickers Street
 Delmas
 P O Box 883
 Delmas, 2210
 Tel (013) 665 1788
 Fax (013) 665 2364

Sustainable Environmental Solutions through integrated Science and Engineering

ATTENDANCE REGISTER

PROJECT: Samancor Chrome Ltd. - Ferrometals
 Scoping Phase Focus Group Meeting

VENUE : Emalaheni Local Municipality
 DATE & TIME : 28 May 2013 @ 10:00

Nr	Name	Representing	Postal Address	Fax number	Contact Details	E-mail address	Sign
1	Riaan Grobbelaar	JMA	PO Box 883, Delmas, 2210	013 665 2364	Tel: 013 665 1788	riaan@jmaconsult.co.za	
2	K du Plessis	JMA	PO Box 883, Delmas, 2210	013 665 2364	Tel: 013 665 1788	kobus@jmaconsult.co.za	
3	K. T. POEKROADI	ELMC	P. O. Box 3772 WITSIE		0834009396	kt.p@witsie.co.za	[Signature]
4	Siphiso Masekela	ELMC			0823653714 0769596501	siphomsk@gmail.com	[Signature]
5							
6							
7							
8							
9							
10							
11							

APPENDIX 6.1.4(B)

FORMAL APPOINTMENT LETTER

Ferrometals

*A business unit of
Samancor Chrome Limited*

Ferrometals

Address:
Moses Kotane Drive
Ferrobank, eMalahleni, 1035
Private Bag X7228
eMalahleni, 1035
Telephone number: +27 (0) 13 693 7000
Facsimile number: +27 (0) 13 696 2800
www.Samancorcr.com

Registered Address:
Block B, Cullinan Place, Cullinan Close
Morningside, Sandton, 2196
PostNet Suite 803, Private Bag X9
Benmore, 2010
Telephone number: +27 (0) 11 245 1000
Facsimile number: +27 (0) 11 245 1200
www.Samancorcr.com

Mr. Taylor Pookgoadi
EMalahleni Local Municipality
P.O. Box 7227
Witbank
1035

10th June 2013

Dear Mr. Pookgoadi


Re: Appointment of JMA to conduct the environmental processes involved with closure and decommissioning of waste facilities.

Ferrometals, a division of Samancor Chrome Limited has appointed JMA to commence with the application for the decommissioning and closure of the existing Northern Slimes dam as well as the construction of a new slimes dam facility.

Should you have any queries, please do not hesitate to contact me:

Mr. Brian Gibson
Tel: +27 13 693 7205
Email: brian.gibson@samancorcr.com

Regards,



Brian Gibson
General Manager
Ferrometals



Date

APPENDIX 6.2.1 (A)

COPIES OF SCOPING PHASE BID,

NOTIFICATION LETTERS,

NEWSPAPER ADVERTISEMENTS

AND

SITE NOTICES

SCOPING PHASE BID



JMA Consulting (Pty) Ltd

"Sustainable Environmental Solutions through Integrated Science and Engineering"

SAMANCOR CHROME - FERROMETALS DIVISION BACKGROUND INFORMATION DOCUMENT

INTRODUCTION & BACKGROUND TO THE PROPOSED PROJECT

This document has the function of providing the various Interested & Affected Parties (I&APs) with some background information regarding the proposed developments at the Samancor Chrome, Ferrometals Operations as well as information on the various formal legal processes that will need to be followed in order to obtain the required environmental authorizations.

This document therefore forms part of the official Public Participation documentation as prescribed in the Environmental Impact Assessment (EIA) Regulations published in National Environmental Management (NEMA) Act 107 of 1998, Government Notice Regulations 543, whereby all I&APs must be notified and informed on proceedings regarding the EIA process. Attached to this document also find a Comment Page whereupon all concerns or objections by the I&APs can be stipulated to be reviewed by JMA Consulting (Pty) Ltd (**JMA**).

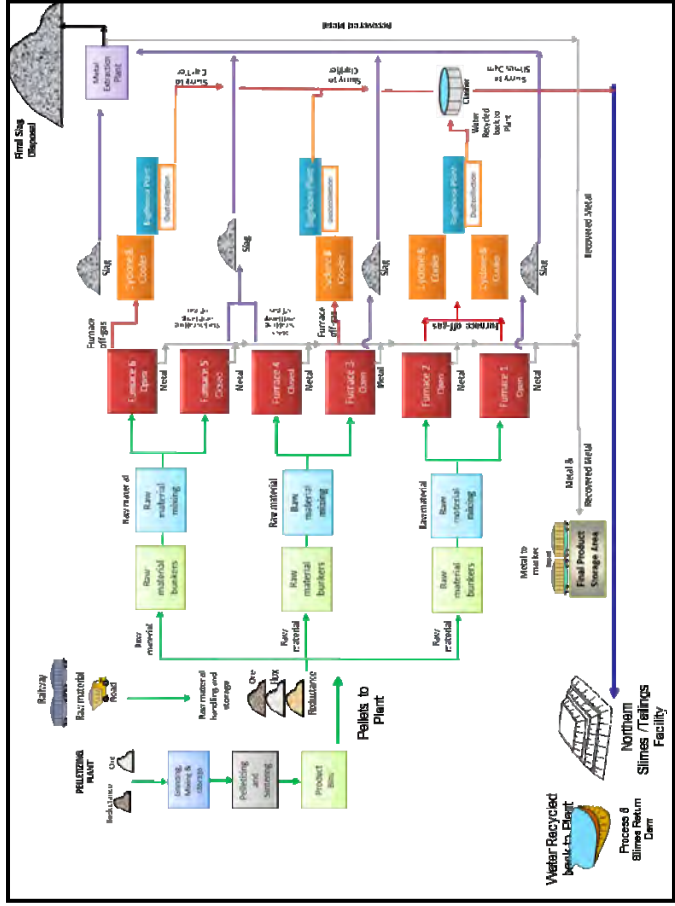
The Ferrometals Operations site is located within the Ferrobank industrial area of Witbank, to the east of Moses Kotane Drive. The current developed portion of the plant site covers about 200 ha, draining roughly from east to east, hence towards Moses Kotane Drive.

The plant produces charged ferrochrome. However, related industries namely Ferroveld and IC3 that respectively produce electrodes and converts charged ferrochrome to intermediate carbon charged ferrochrome are also located within the plant site. The plant site comprises a four (4) open and two (2) closed furnaces for the production of the above mentioned ferrochrome product (see **Figure 3**).

IN THIS BID:

1	INTRODUCTION & BACKGROUND TO THE PROPOSED PROJECT
2	OUTLINE OF THE ENVIRONMENTAL AUTHORIZATION PROCESSES TO BE FOLLOWED
2	ENVIRONMENTAL EVALUATIONS THAT WERE CONDUCTED
3	ROLE OF THE I&AP'S
3	PROJECT TIMELINE
4	CONTACT DETAILS
4	LOCALITY MAP OF XSTRATA ALLOYS FERROMETALS OPERATION

Figure 3 - Outline of industrial processes at the Ferrometals Site



CONTACT INFORMATION

In order to ensure that you are identified/listed as an Interested and Affected Party, please submit your name, contact information and interest in the matter on the provided registration form or contact:

JMA Consulting (Pty) Ltd

Contact: Kobus du Plessis (Cand.Sci.Nat)
Tel: 013 665 1788
Fax: 086 646 8400
Email: kobus@jmaconsult.co.za
Postal: P.O. Box 883
 Delmas
 2210

LOCALITY MAP OF SAMANCOR CHROME - FERROMETALS DIVISION

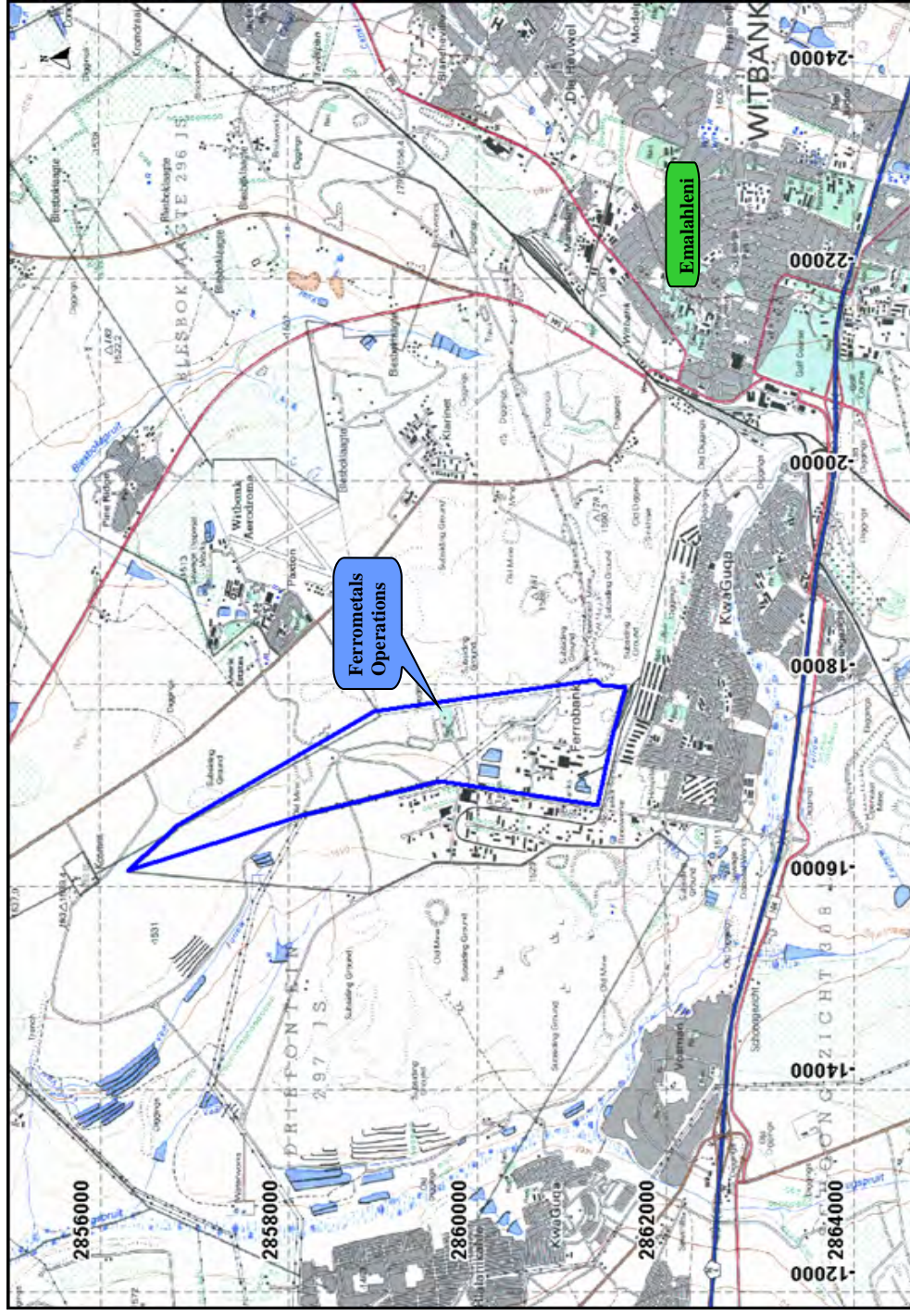


Figure 4: Local Map indicating Ferrometals boundary and also indicating the different

The formal residues/wastes from the ferrochrome production are disposed on the plant site. Ferrometals also has a Pelletising and sintering plant, utilising Outokumpu technology with a preheating kiln, a chrome recovery plant, an intermediate carbon ferrochrome (IC3) plant.

For this project JMA will apply for the decommissioning and closure of the current existing northern Slimes dam as well as the construction of a new slimes dam facility. For the Decommissioning of the Existing Slimes Dam Facility JMA will lodge an application in terms of NEMA Act 107 of 1998, GNR 544 for Activity 27 as well as a Waste Licence Application in terms of the National Environmental Management Waste Act (NEM:WA) 59 of 2008, Section 19(3) and GNR 718, Category A, Activity 20.

For the Construction of a New Slimes Dam, JMA will lodge an application in terms of NEM:WA Act 59 of 2008, Section 19(3) and GNR 718, Category A, Activity 9 and 11.

For the Decommissioning of the Slimes Dam a basic assessment will be lodged and for the construction of the new Slimes dam facility a full EIA will be lodged. However the same Public Participation Process will be done for both processes as well as the IWULA and WLA.

In terms of the National Water Act 36 of 1998, an Integrated Water Use License Application (IWULA) will be lodged for the construction of 5 new dams; as well as for the Storm Water Management Facility. All water uses will be applied for under NWA section 21.

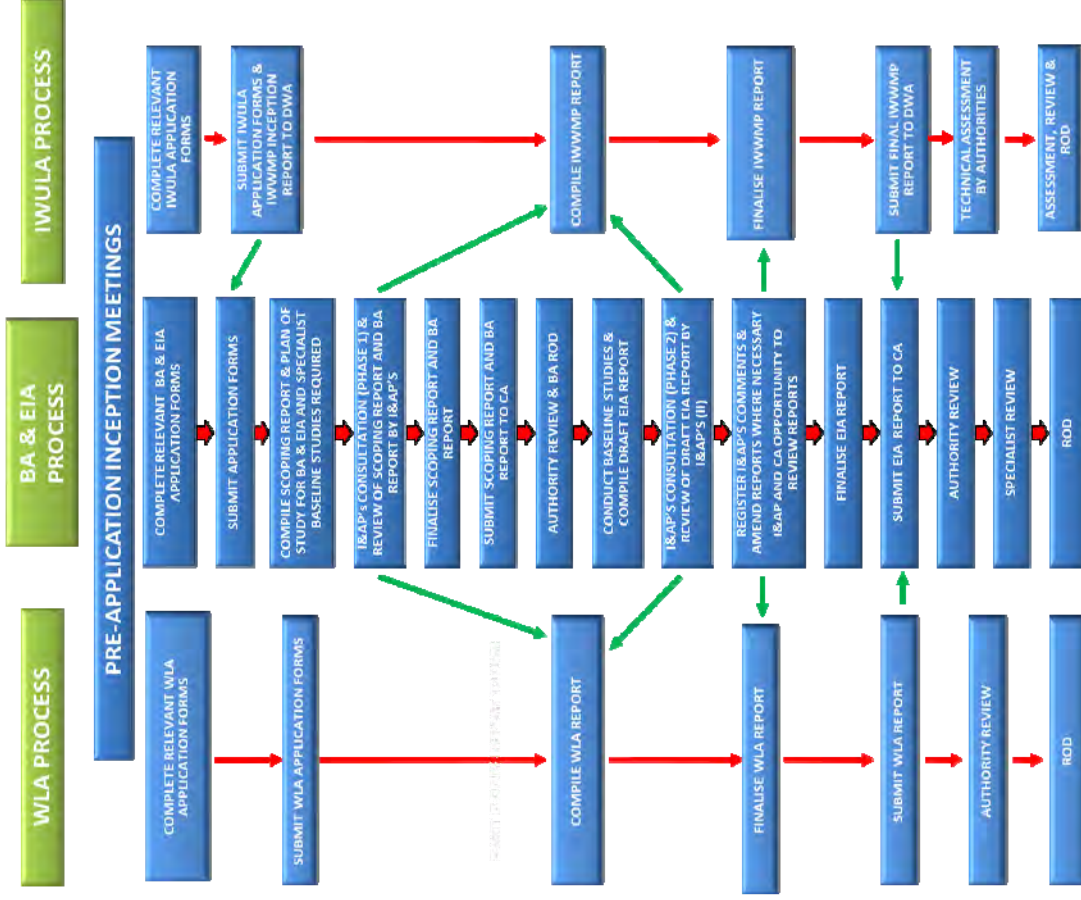
OUTLINE OF ENVIRONMENTAL AUTHORIZATION PROCESSES TO BE FOLLOWED

For this project four formal Environmental Authorization Processes will be run concurrently with each other. These formal processes include:

- ⇒ A **Basic Environmental Impact Assessment (BEIA) Process** as prescribed by the National Environmental Management Act (Act 107 of 1998).
- ⇒ An **Full Scoping Environmental Impact Assessment (EIA) Process** as prescribed by the National Environmental Management Act (Act 107 of 1998).
- ⇒ An **Integrated Water Use License Application (IWULA) Process** as prescribed by the National Water Act (Act 36 of 1998).
- ⇒ A **Waste Licence Application (WLA) Process** as prescribed by the National Environmental Management: Waste Act (Act 59 of 2008).

Please Note that although only a Basic Assessment is required for listed activities in the NEMA legislation, a Scoping & EIA process is indicated on the Flow Diagram to the right. This is because the WLA process and the associated listed activities in the NEMWA requires that a Scoping & EIA Process must be followed.

Thus a Scoping & EIA process will be conducted to fulfill the WLA requirements as indicated, and the Basic Assessment will be conducted as part of the Scoping Phase according to the relevant requirements as set out in the NEMA EIA Regulations.



ENVIRONMENTAL EVALUATIONS THAT WERE CONDUCTED

Several extensive Environmental Baseline Evaluations were conducted in order to establish the current situation at hand at the Ferrometals site. These Specialist studies will serve as the supporting documentation during the compilation of Reports for the various Environmental Authorizations processes as described above.

Environmental Baseline Evaluations included the following Study Areas:

- Ground Water
- Surface Water
- Plant Life
- Soils
- Geology
- Air Quality
- Archaeology

ROLE OF THE I&AP'S

Interested and Affected Parties (I&AP's) have the right to raise any issue that they may deem as important and that they feel, needs to be investigated prior to approval being granted with regards to this application. These issues raised, must then be formally registered by the Environmental Assessment Practitioner (EAP), and be subsequently investigated. The EAP must respond to all issues raised during the Public Participation Process.

The roles of I&AP's in a Public Participation Process include *inter alia* one or more of the following:

- ⇒ Provides an opportunity for interested and affected parties (I&AP's), EAP's and the Competent Authority (CA) to obtain clear, accurate and understandable information about the environmental impacts of the proposed activity or implications of a decision;
- ⇒ Provides I&AP's with an opportunity to voice their support, concerns and questions regarding the project, application or decision;
- ⇒ Provides I&AP's with the opportunity of suggesting ways of reducing or mitigating any negative impacts of the project and for enhancing its positive impacts;
- ⇒ Enables an applicant to incorporate the needs, preferences and values of affected parties into its application;
- ⇒ Provides opportunities for clearing up misunderstandings about technical issues, resolving disputes and reconciling conflicting interests;
- ⇒ It is an important aspect of securing transparency and accountability in decision-making;
- ⇒ It contributes towards maintaining a healthy, vibrant democracy.

AUTHORITY PARTICIPATION

In conjunction with the formal Public Participation Process the EAP will also meet with the Relevant Authorities in a series of identified Focus Group Meetings throughout the project application process. The Relevant Authorities in this case being amongst others the Department of Environmental Affairs (DEA) in Pretoria, the Department of Water Affairs (DWA) in Emalahleni and the Department of Economic Development, Environment, and Tourism (DEDET) in Ermelo.

TIMELINE FOR THE PROJECT

As can be seen in the outline of the processes to be followed (see page 2) there are two scheduled I&AP public meetings. At these meetings, the status of the project will be explained. On completion of the different stages of the project, the I&AP's will be able to review documentation drawn up, and raise any issue, comment, and/or concern that they may have with regards to the proposed project.

The first I&AP public meeting will be held on **12 June 2013**, where the Draft Scoping Report & Plan of Study for the Environmental Impact Assessment will be discussed together with the Waste Licence Application, IWULA and Draft Basic Assessment Report. I&AP's will then have an opportunity to react to the proposed planning and raise any issues, comments, and/or concerns that they may have during the meeting and the formal review period that will follow after the meeting for a specified time period.

After the review period has expired and the comments of the I&AP's have been incorporated into the document, the Final Scoping Report & Plan of Study and Final Basic Assessment Report will be submitted to the relevant authorities.

The second I&AP public meeting is currently proposed to be held in **October 2013** where the Draft Environmental Impact Assessment Report (EIA) & Basic Impact Assessment Report (BA) as well as the Integrated Water and Waste Management plan will be discussed and presented for I&AP review.

The updated Final EIA Report along with the Integrated Water Use Licence Application (IWULA Process), and the Waste Licence Application (WLA Process), will then be submitted to the relevant authorities for review & approval.

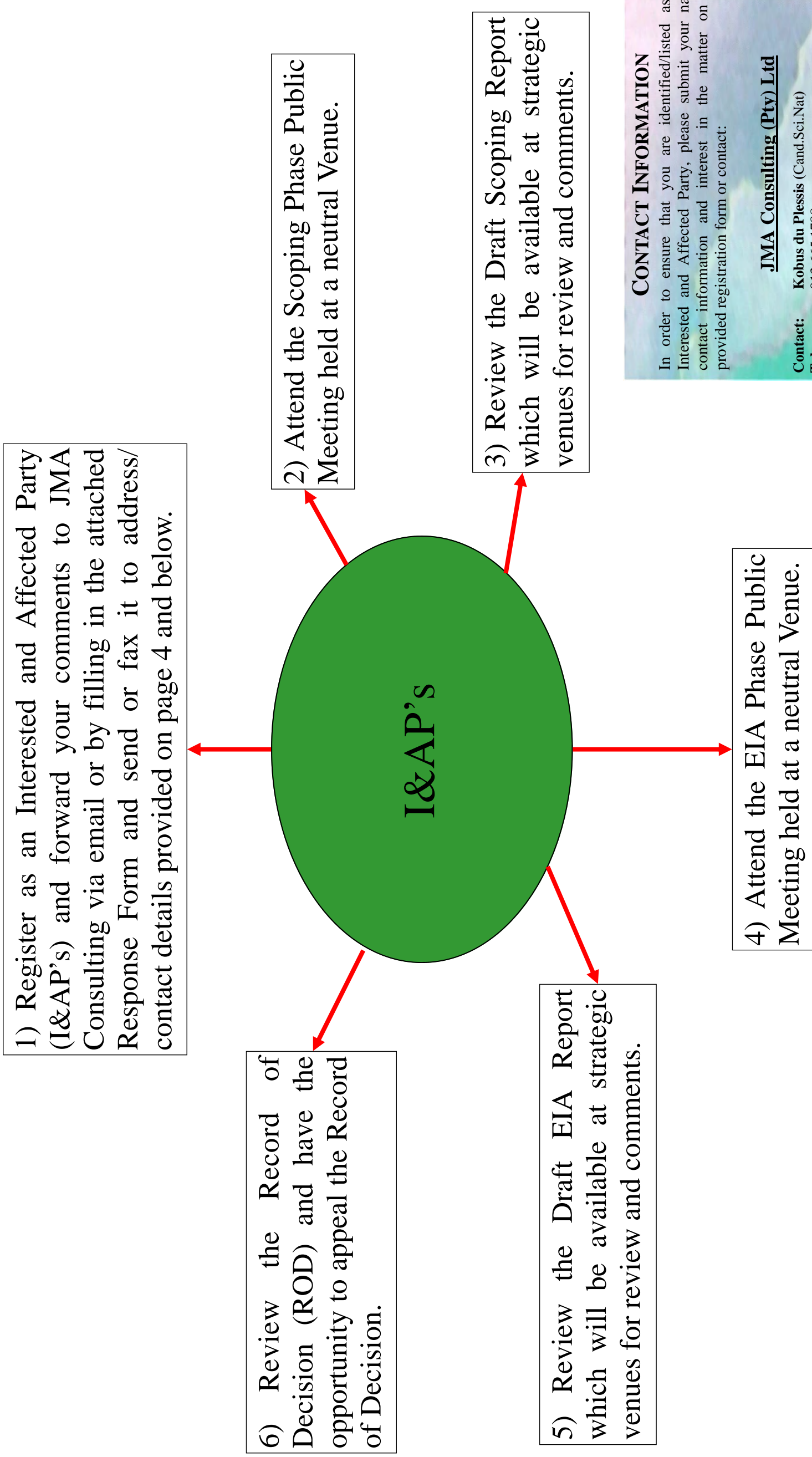


Figure 1: Aerial photograph of the Ferrochrome Smelter Division and Slimes dam.



Figure 2: Aerial photograph of the Mine Management Area (Infrastructure at the bottom left hand of photograph). New Slimes Dam Facility footprint at top-right (Grey Square).

HOW TO GET INVOLVE IN THE EIA PROCESS



CONTACT INFORMATION

In order to ensure that you are identified/listed as an Interested and Affected Party, please submit your name, contact information and interest in the matter on the provided registration form or contact:

JMA Consulting (Pty) Ltd

Contact: Kobus du Plessis (Cand.Sci.Nat)
Tel: 013 665 1788
Fax: 086 646 8400
Email: kobus@jmaconsult.co.za
Postal: P.O. Box 883
 Delmas
 2210



NOTIFICATION LETTER

From: Kobus Du Plessis
To: "shaakira.akhalwaya@bhpbilliton.com"; "kwebb@wessanorth.co.za"; "josephm@vanchem.co.za"; "kerryb@randcarbide.co.za"; "deonb@transalloys.co.za"; "avdsandt@xstrata.co.za"; "eprinsloo@anglocoal.co.za"; "jhayes@anglocoal.co.za"; "yolandib@hiveld.co.za"; "agermishuizen@xstrata.co.za"; "dphillips@xstrata.co.za"; "mhlabane@mweb.co.za"; "cathie@hiveld.co.za"; "svandermerwe@scaw.co.za"; "petermal@social.mpu.gov.za"; "mlu@megaweb.co.za"; "pgunther@anglocoal.co.za"; "gaymokoena@icon.co.za"; "dempseyj@mweb.co.za"; "sagrcadmin@global.co.za"; "alexo@vanchem.co.za"; "sary@emalahlenibiz.info"; "chris@efalaw.com"; "ndooge@xstratacoal.co.za"; "gerhard@jamandi.co.za"; "7billion.t@gmail.com"; "fidel@cosatu.org.za"; "hjansevanvuuren@ccsb.co.za"; "aganang.ppe@webmail.co.za"; "tscholtz@xstrata.co.za"; "ngakwethu@telkomsa.net"; "aganang.ppe@webmail.co.za"; "parks1@web4us.co.za"; "nkabindeej@emalahleni.gov.za"; "malatjilm@emalahleni.gov.za"; "langaam@emalahleni.gov.za"; "nkosinm@nkangaladm.org.za"; "vanbuurensmp@nkangaladm.org.za"; "rossouw@nkangaladm.org.za"; "mdletsheh@dwaf.gov.za"; "ackermanp@dwaf.gov.za"; "mahlangul@dwaf.gov.za"; "matshilele.ramovha@dmr.gov.za"; "Martha.Mokonyane@dmr.gov.za"; "helen.maumela@dmr.gov.za"; "Themba.mazibuko@dmr.gov.za"; "gmmondlane@wit.mpu.gov.za"; "stmarebane@mpg.gov.za"; "lmahlangu@environment.gov.za"; "dmthembu@deat.gov.za"; "svilakazi@deat.gov.za"; "MLushaba@deat.gov.za"; "enviroteq@gmail.com"; "mervyn@mtpa.co.za"; "frankrige@telkomsa.net"; "ronell@mtpa.co.za"; "achoffman@lantic.net"; "Jlavin@sahra.org.za"; "kgereshi.mokwena@gauteng.gov.za"; "fransmas@nda.agric.za"; "Careens@social.mpu.gov.za"; "amakamela@xstratacoal.co.za"; "temba.milanzi@labour.gov.za"; "vjamesmtsweni@mpg.gov.za"; "sonia.chipu@dme.gov.za"; "kpkhoza@mpg.org.za"; "ndiafhi.tuwani@energy.gov.za"; "Lindiwe.Chauke@energy.gov.za"; "Jorrym@social.mpu.gov.za"; "taylorp@vodamail.co.za"; "siphomsk@gmail.com"
Cc: "heather.booyesen@samancorcr.com"; "Prenisha.Chetty@SamancorCr.com"; Riaan Grobbelaar
Subject: Ferrometals - Preparation to Enter Formal Authorization Process
Date: 30 May 2013 09:11:00 AM
Attachments: [image002.png](#)
[Ferrometals_BID.pdf](#)
[Ferrometals_I&AP_CommentPage.pdf](#)
[Directions to Venue.pdf](#)
[Ferrometals_PublicMeeting_PressAdvert_Final.pdf](#)
[Venue.jpg](#)

Dear Interested and Affected Party

Please find the following attached documentation that relates to Samancor Chrome Ltd. Ferrometals entering the formal process regarding the decommissioning and closure of the current existing slimes dam as well as the construction of a new slimes dam facility:

- Advert in Witbank News
- Background Information Document (BID)
- Directions to Venue for the Public Meeting to be held on 12 June 2013, 10h00.
- I&AP's Comment Page

For any further information please do not hesitate to contact me.

Regards

Kobus du Plessis

JMA CONSULTING (PTY) LTD

P O BOX 883

DELMAS

2210

Tel No.: 013-665 1788

Fax No.: 013-665 2364

E-mail: kobus@jmaconsult.co.za

SCOPING PHASE NEWSPAPER ADVERTS

NOTICE OF PUBLIC MEETING

TO BE HELD IN FULFILMENT OF THE REQUIREMENTS OF THE PROCESSES RELATED TO AN BASIC ASSESSMENT, ENVIRONMENTAL IMPACT ASSESSMENT, WASTE LICENSE APPLICATION AND AN INTEGRATED WATER USE LICENSE APPLICATION

Notice is hereby given of the intent to hold a Public Meeting as required in terms of the provisions contained in *inter alia* the EIA Regulations, GNR 543 of 18 June 2010 published in terms of the National Environmental Management Act, (Act No 107 of 1998), the National Environmental Management: Waste Act (Act 59 of 2008) section 73 as well as in terms of the provisions contained in section 41 (4) of the National Water Act (Act No 36 of 1998) as they relate to applications for the Ferrometals Operations Project.

The following activities/water uses related to the above are being applied for:

NEMA Activities:

1. GNR 544 – Activity 27

NWA Water Uses:

1. Section 21 applications

NEM: WA Activities:

1. GNR 718, Category A – Activity 20
2. GNR 718, Category B – Activities 9 and 11

The following topics will be discussed:

- **The Environmental Legal Authorisation Requirements relevant to the project;**
- **The Basic Assessment Report and the Draft Scoping Report for the EIA;**
- **The Integrated Water Use License Application (IWULA);**
- **The Waste Licence Application (WLA);**
- **The way forward in the EIA, Waste Licence Application & IWULA processes.**

Applicant: Samancor Chrome Ltd. – Ferrometals

Process Description: The proposed project will include applications for authorisation for the decommissioning of the existing slimes dam facility, the construction of a new slimes dam facility, as well as the decommissioning of an old historical tailings facility and a Storm Water Management Facility at Ferrometals – A Business Unit of Samancor Chrome Ltd, in Emalahleni.

Project Location: The Ferrometals Operations site is located within the Ferrobank industrial area of Witbank, to the east of Moses Kotane Drive. The current developed portion of the plant site covers about 200 ha, draining roughly from east to west, hence towards Moses Kotane Drive.

Consultant: Kobus Du Plessis
JMA Consulting (Pty) Ltd
Tel: (013) 665 1788
Fax: (013) 665 2364
Email: kobus@jmaconsult.co.za
Postal: P.O. Box 883, Delmas, 2210



JMA Consulting (Pty) Ltd
*Sustainable Environmental Solutions
through
Integrated Science and Engineering*

Date of Publication: 29 May 2013

Public Participation: In accordance with EIA regulations you are hereby then cordially invited to attend the Public Meeting scheduled for **10:00 on 12 June 2013** at the Emalahleni Local Municipality Rehearsal Room which is located at 66 Mandela Street on the corner of Mandela and Hoffman Street, Witbank.

It is important to note that this Environmental Impact Assessment Process, as prescribed by the National Environmental Management Act (Act 107 of 1998), will be conducted in conjunction with an Integrated Water Use Licence Application Process, as prescribed by the National Water Act (Act 36 of 1998) and a Waste Licence Application in turns of the National Environmental Management: Waste Act (Act 59 of 2008), during which all Interested and Affected Parties must be informed and consulted.

In order to ensure that you are identified and registered as an Interested and Affected Party please submit your name, contact information and interest in the matter, in writing, to the consultant, Mr Kobus Du Plessis, as given above by means of **fax, e-mail or post.**

If any further information is required please do not hesitate to contact us.

SCOPING PHASE SITE NOTICES

NOTICE OF PUBLIC MEETING

TO BE HELD IN FULFILMENT OF THE REQUIREMENTS OF THE PROCESSES RELATED TO AN BASIC ASSESSMENT, ENVIRONMENTAL IMPACT ASSESSMENT, WASTE LICENCE APPLICATION AND AN INTEGRATED WATER USE LICENSE APPLICATION

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THE FOLLOWING ACTIVITIES/WATER USES RELATED TO THE ABOVE ARE BEING APPLIED FOR:

- NEMA Activities:
 - 1. GNR 544 – Activities 27
- NWA Water Uses:
 - 1. Section 21(g);
- NEM:WA Activities:
 - 2. GNR 718, Category A – Activity 20
 - 3. GNR 718, Category B – Activity 9 and 11

I&AP MEETING (12 JUNE 2013 – 10:00)

The I&AP meeting will take place at the Emalahleni Local Municipality Rehearsal Room which is located at 66 Mandela Street on the corner of Mandela and Hoffman Street, Witbank where the following topics will be under discussion:

- The Environmental Legal Authorisation Requirements relevant to the project;
- The Basic Assessment Report and the Draft Scoping Report for the EIA;
- The Integrated Water Use Licence Application (IWULA);
- The Waste Licence Application (WLA);
- The way forward in the EIA, Waste Licence Application & IWULA processes.

APPLICANT:
Samancor Chrome Ltd. – Ferrometals

PROPOSED ACTIVITY

The proposed project will include applications for authorisation for the decommissioning of the existing slimes dam facility, the construction of a new slimes dam Facility, as well as the decommissioning of an old historical tailings facility and a Storm Water Management Facility at Ferrometals – A Business Unit of Samancor Chrome Ltd, in Emalahleni.

PROJECT LOCATION

The Ferrometals Operations site is located within the Ferrobank industrial area of Witbank, to the east of Moses Kotane Drive. The current developed portion of the plant site covers about 165 ha, draining roughly from east to west, hence towards Moses Kotane Drive.

DATE OF THIS ADVERTISEMENT
29 May 2013

CONSULTANT

JMA Consulting (Pty) Ltd
Contact: Kobus du Plessis
Tel: (013) – 665 1788
Fax: (013) – 665 2364
Email: kobus@jmaconsult.co.za
Postal: P.O. Box 883
Delmas, 2210



JMA Consulting (Pty) Ltd
Sustainable Environmental Solutions
through
Integrated Science and Engineering

It is important to note that this Environmental Impact Assessment Process, as prescribed by the National Environmental Management Act (Act 107 of 1998), will be conducted in conjunction with an Integrated Water Use Licence Application Process, as prescribed by the National Water Act (Act 36 1998) and a Waste Licence Application in terms of the National Environmental Management: Waste Act (Act 59 of 2008), during which all Interested and Affected Parties must be informed and consulted.

In order to ensure that you are identified and registered as an Interested and Affected Party please submit your name, contact information and interest in the matter, in writing, to the consultant, Mr Kobus Du Plessis, as given above by means of fax, e-mail or post. You are also cordially invited to attend the Interested & Affected Party Meeting scheduled for

10:00am on 12 June 2013,

at the Emalahleni Local Municipality Rehearsal Room which is located at 66 Mandela Street on the corner of Mandela and Hoffman Street, Witbank, where further registration as I&AP can be done.

If any further information is required please do not hesitate to contact us.

APPENDIX 6.2.3 (A)

PROOF OF SCOPING PHASE NEWSPAPER

ADVERTISEMENTS

Witbank News

classifieds

Vanchem Vanadium Products

Duferco GROUP

GRANTING OF ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED DECOMMISSIONING AND CLOSURE OF AN INTERCEPTOR DAM AT VANCHEM VANADIUM PRODUCTS ON ERF 94, FERROBANK TOWNSHIP, EMALAHLENI, MPUMALANGA PROVINCE REFERENCE: 17/2/3N-138

All stakeholders are hereby notified that the Mpumalanga Department of Economic Development, Environment and Tourism (MDEDET) has, on the 23rd of May 2013, granted environmental authorisation to Vanchem Vanadium Products to proceed with the above-mentioned project. Please note that a copy of the environmental authorisation can be obtained upon request by contacting **HydroScience cc** at details below.

Formal appeals regarding this authorisation can be directed to the MEC of MDEDET in terms of Chapter 7 of the Environmental Impact Assessment Regulations of 18 June 2010 under the National Environmental Management Act of 1998 (Act 107 of 1998), which must take place within 10 days of the placement of this notice (before 9 June 2013).

An appeal can be lodged with the MEC at the following address:

The Member of the Executive Council
Mpumalanga Department of Economic Development, Environment and Tourism
Private Bag X11215, Nelspruit, 1200

Or by facsimile: (013) 766 4614

Or by hand to: Building 4, No.7 Government Boulevard, Riverside Park Extension, Nelspruit, 1200



Tel: 082 850 5482
Fax: 086 692 8820
paulette@hydroscience.co.za

QUEEN SOEK HUISWERK
3/5 Dae n week. Slaap uit.
078 950 4207
MD020248

SARAH MADONSELA
Is looking for domestic work, sleep in for 5 days or office work cleaning.
076 101 1013
MD020186

0871
Trade

FIELD-MECHANIC
Construction Plant Hire Company seeks a field-mechanic in Witbank. Experience in small plant and knowledge of petrol and diesel engines are essential. Good package start A.S.A.P in Witbank.
E-mail a short CV to: andrew@performanceplanthire.co.za
MD020175

0900
LEGALS

0910
Public / Legal Notices

ESTATE NOTICE
In the estate of the late **GRACE REIKEN JANSEN** (ID. 160316 0005 08 8) a widow of Edenpark Retirement Village; Theunis Jansen Street, Witbank, 1034, Mpumalanga, who died on 6 November 2011 Master's Reference: 5982/2012

Master of the South Gauteng High Court
Notice is hereby given that the First and Final Liquidation and Distribution Account in the above estate will lie for inspection at the office of the Master of the South Gauteng High Court, Johannesburg and at the office of the Magistrate, Witbank, for a period of twenty one (21) days from Thursday 14 June 2013. Andrew Du Toit Burger Executor
Francois Pieter Booysen

Executor
PIET BURGER AND ASSOCIATES
Chartered Accountants
138 Marimann Street,
GEORGE
P.O. BOX 2365
GEORGE
6530
MD020188

LIKWIDASIE- EN DISTRIBUSIE REKENINGS IN BESTORWE BOEDELS WAT TER INSLAE LE
Ingevolge artikel 35(5) van Wet 66 van 1965 word hierby kennis gegee dat duplikate van die likwidasie- en distribusierekenings (eerste en finale, tensy anders vermeld) in die boedels hieronder vermeld, in die kantore van die Meesters en Landdroste soos vermeld en gedurende n tydperk van 21 dae (of langer indien spesiaal vermeld) vanaf gemelde datums van vanaf datum van publikasie hiervan, as dit later is, ter insae lê vir alle persone wat daarby belang het. Indien binne genoemde tydperk geen besware daarteen by die betrokke Meesters ingedien word nie,

gaan die eksekuteur oor tot die uitbetaling ingevolge gemelde rekenings.
Registrasienommer van boedel:
13752/2011
Van:
TROLLIP
Voornam:
WILLIAM JOHANNES
Identiteitsnommer:
390823 5041 085
Laaste adres:
20 ESTELLE STRAAT, DEL JUDOR, WITBANK
Beskrywing van rekening anders as Eerste en Finale Tydperk van insae indien anders as 21 dae
Landdrostskantoor: **WITBANK Meesterskantoor**
PRETORIA
Adverteerder en adres
ERASMUS, FERREIRA & ACKERMANN, WCMAS GEBOU, HV OR TAMBO & SUSANNA STRATE, WITBANK
Datum:
29 APRIL 2013
TEL:
013 656 1711
Kennisgewing vir publikasie in die Staatskoerant op:
31 Mei 2013
VP009487

LIQUIDATION AND DISTRIBUTION ACCOUNTS IN DECEASED ESTATES LYING FOR INSPECTION

In terms of section 35(5) of Act 66 of 1965 notice is hereby given that copies of the liquidation and distribution accounts (first and final, unless otherwise stated) in the estates specified below will be open for the inspection of all persons with an interest therein for a period of 21 days (or shorter or longer if specially stated) from the date specified or from the date of publication hereof, whichever may be the later, and at the offices of the Masters and Magistrates as stated. Should no objection thereto be lodged with the Masters concerned during the specified period, the executors will proceed to make payments in accordance with the accounts.
Registered number of estate: 8048/2012
Surname: MAHLANGU
Christian names: RENSBURG KRUGER
Identity number: 6406145351089
Christian names and surname of surviving spouse: **MONICCA ANSIE MAHLANGU**
Identity Number: 6708090316086
Magistrate's Office: **WITBANK**
Master's Office: **PRETORIA**
Advertiser and address: **M DAVEL c/o VAN RENSBURG KRUGER RAKWENA PO BOX 5 WITBANK, 1035 (REF: MAT10235)**
Date: 17 MAY 2013
Tel: 013 656 9600
Notice for Publication in the Government Gazette on 24 MAY 2013
DD010056

NOTICE OF PUBLIC MEETING

TO BE HELD IN FULFILMENT OF THE REQUIREMENTS OF THE PROCESSES RELATED TO AN BASIC ASSESSMENT, ENVIRONMENTAL IMPACT ASSESSMENT, WASTE LICENSE APPLICATION AND AN INTEGRATED WATER USE LICENSE APPLICATION

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The following activities/water uses related to the above are being applied for:

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1. GNR 544 – Activity 27

11

NWA Water Uses:

1. Section 21 applications

The following topics will be discussed:

- Ø The Environmental Legal Authorisation Requirements relevant to the project;
- Ø The Basic Assessment Report and the Draft Scoping Report for the EIA;
- Ø The Integrated Water Use License Application (IWULA);
- Ø The Waste Licence Application (WLA);
- Ø The way forward in the EIA, Waste Licence Application & IWULA processes.

Applicant:

Samancor Chrome Ltd. – Ferrometals

Process Description:

The proposed project will include applications for authorisation for the decommissioning of the existing slimes dam facility, the construction of a new slimes dam facility, as well as the decommissioning of an old historical tailings facility and a Storm Water Management Facility at Ferrometals – A Business Unit of Samancor Chrome Ltd, in Emalahleni.

Project Location:

The Ferrometals Operations site is located within the Ferrobank industrial area of Witbank, to the east of Moses Kotane Drive. The current developed portion of the plant site covers about 200 ha, draining roughly from east to west, hence towards Moses Kotane Drive.

Consultant:

Kobus Du Plessis
JMA Consulting (Pty) Ltd
013 665 1788
013 665 2364
kobus@jmaconsult.co.za
P.O. Box 883, Delmas, 2210



JMA Consulting (Pty) Ltd
Sustainable Environmental Solutions through Integrated Science and Engineering

Date of Publication:

29 May 2013

Public Participation:

In accordance with EIA regulations you are hereby then cordially invited to attend the Public Meeting scheduled for **10:00 on 12 June 2013** at the Emalahleni Local Municipality Rehearsal Room which is located at 66 Mandela Street on the corner of Mandela and Hoffmeyer Street, Witbank.

It is important to note that this Environmental Impact Assessment Process, as prescribed by the National Environmental Management Act (Act 107 of 1998), will be conducted in conjunction with an Integrated Water Use Licence Application Process, as prescribed by the National Water Act (Act 36 of 1998) and a Waste Licence Application in terms of the National Environmental Management: Waste Act (Act 59 of 2008), during which all Interested and Affected Parties must be informed and consulted.

In order to ensure that you are identified and registered as an Interested and Affected Party please submit your name, contact information and interest in the matter, in writing, to the consultant, Mr Kobus Du Plessis, as given above by means of **fax, e-mail or post**.

If any further information is required please do not hesitate to contact us.

Put the
ROARRRRR
back in your
business!

Call one of our representatives now to book an ad on 013 656 2490 or e-mail: adverts@witbanknews.co.za

Witbank High School
Tel: 013 656 6444 Cnr. Beatty & Woltemade Witbank

Need tenders for the provision of following services:

- General plumbing
- Electrical work
- General building and construction

All applicants must be BEE compliant, BIDB and proof of COC certificate, CK Documents and Company Profile.
Ref: 2013/05/WH51
All quotes must be on an official document.

Contact Celia Henning for an appointment at 013 656 6444 not later than 6 June 2013.

w31may@witbankhighlms

Notice in respect of a licence application in terms of the Petroleum Products Act, 1977 (Act No 120 of 1977)
This notice serves to inform parties that may be interested or affected that **VERITAS FUEL LOGISTICS (PTY) LTD** hereinafter referred to as "the applicant", has submitted an application for a **SITE** licence, applications number **G/2011/10/28/0001 J50-00287-0032-M401 MORKEL STREET RAILWAY SITE MIDDLEBURG**

The purpose of the application is for the applicant to be granted a licence to undertake petroleum **retailing** activities as detailed in the application. Arrangements for viewing the application documentation can be made by contacting the Controller of Petroleum by:

- Telephone 013 653 0500
- Fax: 086 607 0735
- E-mail: sponono.ntull@energy.gov.za

Any objections to the issuing of a licence in respect of this application, which **must clearly quote the application number** above, must be lodged with the controller of Petroleum Products within a period of twenty (20) working days from the date of publication of this notice. Such objections must be lodged at the following physical or postal address

POSTAL ADDRESS
THE REGIONAL DIRECTOR
DEPARTMENT OF ENERGY (MP REGION)
PRIVATE BAG X7279
WITBANK
1035

PHYSICAL ADDRESS
THE REGIONAL DIRECTOR
DEPARTMENT OF ENERGY
THE PROVINCE HOUSE 3RD FLOOR
CNR BOTHA & KRUGER STREET
WITBANK

NOTICE TO CREDITORS IN DECEASED ESTATES

All persons having claims against the undermentioned estate must lodge it with the Executor concerned within 30 (THIRTY) days (or as indicated) from date of publication hereof.
A. Estate No: 915/2011
Master's Office: **PRETORIA**
Surname: **MASEKO**
Christian names: **TINY POPPLE**
NONHLANHLA
Date of Birth: 1957-06-16
Identity No: 570616 0880 081
Last address: 2833 YAVILLE, WITBANK
Date of Death: 2010-10-03
Only applicable if deceased was married (in community of property/subject to the accrual system):
wbs:UNMARRIED
Christian names and surname of surviving spouse: N/A
Date of birth: N/A
Identity No: N/A
Name and (only one) address of Executor or authorised agent: **CHRIS JOHAN FERREIRA, C/O ERASMUS FERREIRA & ACKERMANN, WCMAS BUILDING, CNR OR TAMBO & SUSANNA STREETS, WITBANK**
Period allowed for lodgement of claims, if other than 30 days:
Advertiser, and address: **ERASMUS, FERREIRA & ACKERMANN, PO BOX 686, WITBANK, 1035**
Date: 2013-04-18
Tel No: 013 656 1711
Publish in the Government Gazette of: **31st MAY 2013**
VP009495

KENNISGEWING EMALAHLENI LANDELIKSE GEBRUIKS SKEMA 2010

Aansoek vir 'n Spesiale toestemming op **ERF 2118, UITBREIDING 16, WITBANK**
Ingevolge Klousule 6(4) van die bogenoemde skema word hierby kennis gegee dat ek, die ondergetekende van voornoemde terrein aansoek te doen by die van Emalahleni Plaaslike Munisipaliteit vir toestemming om bogenoemde grond aan te wend vir

APPENDIX 6.2.4 (A)

PROOF OF SCOPING PHASE SITE NOTICES

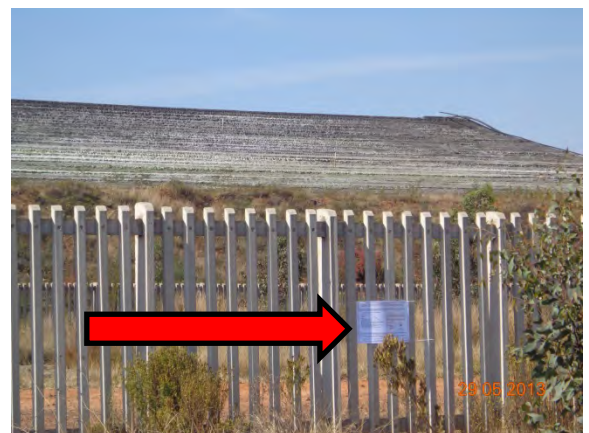
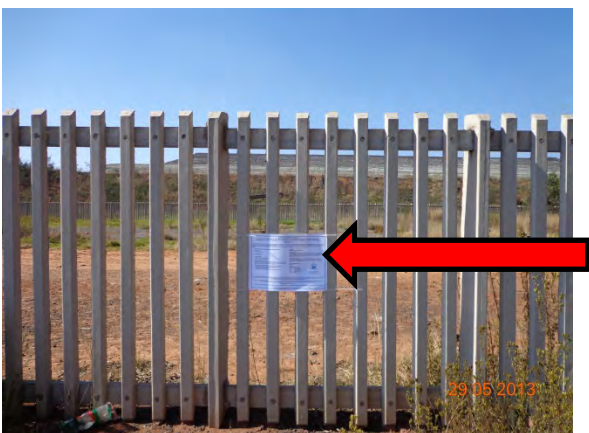
Site Notices were put up at the Ferrometals Information Desk



Site Notices were put up at the entrance of Proposed New Slimes Dam Facility.



Site Notices were put up on the fence line of the current Slimes Dam Facility.



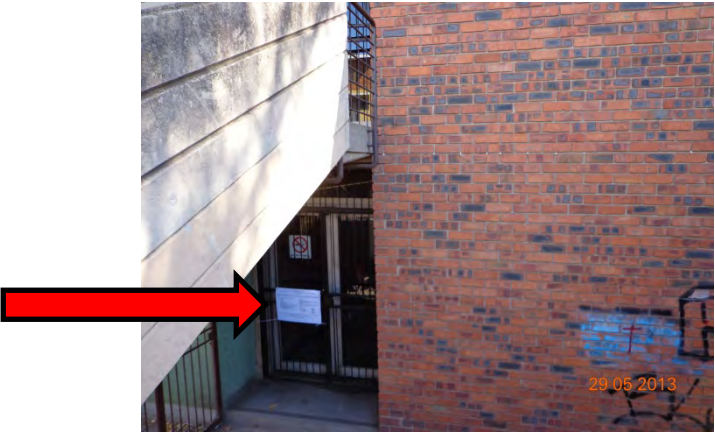
Site Notices were put up on the Emalahleni Local Municipality Notice Board.



Site Notices were put up on the Emalahleni Public Library Notice Board.



Site Notices were put up at the venue for the Public Meeting scheduled for 12 June 2013.



Ferrometals Site Notices – Scoping Phase Public Meeting		
Site Notice	Longitude	Latitude
Ferrometals Information Desk	29.172059°	-25.856002°
Entrance of Proposed New Slimes Dam Facility	29.169914°	-25.851693°
Current Slimes Dam Facility	29.170442°	-25.846390°
Emalahleni Local Municipality Notice Board	29.213996°	-25.874146°
Emalahleni Public Library Notice Board	29.215967°	-25.873835°
Public Meeting Venue	29.216931°	-25.872425°

Ferrometals Proposed new Slimes Dam - Site Notice 3

Ferrometals Existing Slimes Dam - Site Notice 2

Ferrometals Main Gate - Site Notice 1

Ferrometals

Emalahleni Public Library - Site Notice 6

Scoping Phase Public Meeting Venue - Site Notice 5

Emalahleni Local Municipality - Site Notice 4

Image © 2013 DigitalGlobe

APPENDIX 6.2.5 (A)

COPY OF SCOPING PHASE I&AP RESPONSE FORM

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

**SAMANCOR CHROME LTD.
FERROMETALS**

**Contact: Kobus du Plessis
JMA Consulting (Pty) Ltd
P.O. Box 883
Delmas, 2210**



**Phone: (013) 665 1788
Fax: (013) 665 2364**

**INTERESTED AND AFFECTED PARTY REGISTRATION
& INVITATION TO COMMENT
JUNE 2013**

E-mail: kobus@jmaconsult.co.za

Please complete and return to the Address indicated above.

TITLE		FIRST NAME	
INITIALS		SURNAME	
ORGANISATION		E-MAIL ADDRESS	
POSTAL ADDRESS			
POSTAL CODE		CELL PHONE NO	
TEL NO		FAX NO	

REGISTRATION AS INTERESTED AND AFFECTED PARTY (Please tick the applicable box)

Please formally register me as an Interested and Affected Party (I&AP) so that I may receive further information and notifications during the Environmental Impact Assessment Process	<input type="checkbox"/>	<input type="checkbox"/>
I would like notifications by	<input type="checkbox"/> Letter (Mail)	
	<input type="checkbox"/> Email	
	<input type="checkbox"/> Fax	
	<input type="checkbox"/> SMS	
In Terms of Regulation 56(1) c, of GNR 543 (EIA process regulations) I disclose below any direct business, financial, personal, other interest that I may have in the approval or refusal of this application:		

COMMENTS (Please make use of the additional sheet if more space is needed for comments)

I suggest that the following issues be addressed during the Scoping Phase of the Environmental Impact Assessment

Any other comments

Please ask the following friends/colleagues to register as I&APs for this Environmental Impact Assessment

Signature

WE THANK YOU FOR YOUR CONTRIBUTION

Date

Please be assured that your comments will be formally registered and be included as part of the Final Documentation that will be submitted to Relevant authorities.

APPENDIX 6.2.7 (A)

SCOPING PHASE PUBLIC MEETING MINUTES



**SAMANCOR CHROME LTD.
FERROMETALS**

Scoping Phase Public Meeting

DATE: 12th JUNE 2013

TIME: 10:00

VENUE: EMALAHLENI LOCAL MUNICIPALITY, REHEARSAL ROOM

MINUTES OF THE MEETING

1. Opening and Welcome

Andrew Tshabalala (AT) from Ferrometals welcomed everyone to the meeting.

2. Presentation to Meeting

Riaan Grobbelaar (RG) introduced everybody and then gave a formal presentation to the attendees. A copy of the attendance register and presentation slides is attached as Annexure A to the minutes.

The following was covered in the presentation:

- The Purpose of the Meeting
- Meeting Rules
- Agenda
- The Project Background
- Details of the Applicant
- The Ferrometals Operation
 - Regional Location
 - Properties Affected
 - Legal Framework
- The EIA Process
 - 5 Phases
 - Pre-Application Phase
 - Appointment of EAP by Applicant
 - Determination of Type of Application
 - Identification of the Competent Authority
 - Pre-application Consultation with the Competent Authority
 - Identify and Notify Property/Land Owners

- Submit Application to Competent Authority
- Notification of Decision on Application
 - *DEA Ref: 12/9/11/L670/6 (Closure of the Existing Facility)*
 - *DEA Ref: 12/9/11/L700/6 (Construction and Operation - New Facility)*
 - *MP DEDET Ref: 17/2/3 N-84 (Decommissioning of the Existing Facility)*
- Scoping Phase
 - Initiate and Conduct Public Participation Process
 - Compile Notification and Information Documents
 - Notify all I&AP's of Project and Meetings (Newspapers, Site Notices, Letters, etc.)
 - Written Notification to Relevant Regulating Authorities
 - Compilation of Scoping Report and Plan of Study as per Regulations and Guidelines
 - Scoping Public Meeting (12 June 2013)
 - Make Scoping Report available for Review (18/19 June 2013)
 - Capture and Consider Comments from I&AP's and Relevant Authorities
 - Finalize and Submit Scoping Report and Plan of Study to I&AP's and Authorities
 - Authority Review & Decision
 - Notification of Decision on Scoping Report
- Environmental Impact Assessment Phase
 - Commence to Implement Plan of Study
 - Continue Public Participation Process
 - Conduct Specialist Studies
 - Prepare EIA Report (EIAR comprising EIA, EMP as per Regulations and Guidelines)
 - EIA/EMP Public Meeting
 - Make EIAR available for Review
 - Capture and Consider Comments from I&AP's and Relevant Authorities
 - Finalize and Submit EIAR to I&AP's and Authorities
- Consideration and Decision Phase
 - Authority Review & Decision
 - Notification of Decision on the EIAR
 - Granting of Environmental Authorization
 - Inform I&AP's of Decision/Approval and of Opportunity to Appeal
- Appeal Phase
 - Appellant to give notice of intention to Appeal to Authority and Applicant
 - Consultation between Applicant and Appellant to Resolve Issues
 - Submission of appeal to Authority and Applicant
 - Submission of Responding Statement from Respondent/Applicant to Authority and Appellant
 - Submission of Answering Statement by Appellant to Authority and Applicant
 - Acknowledgment of all by Authority within 10 days
 - Processing of Appeal
 - Decision on Appeal

- Notification of Decision on Appeal to Appellant and Respondents by Authority
- The Scoping Report and Plan of Study
 - The Scoping Report and Plan of Study is being compiled in support of the process.
 - The contents of the Scoping Report and Plan of Study are prescribed in the NEMA EIA Regulations and guidelines.
 - The Draft Scoping Report will now be submitted to all relevant stakeholders for review and consideration for a period of 30 Days.
 - After the review period has expired all comments that were received will be included and addressed in the Final Scoping Report.
 - The Final Scoping Report will then be submitted to the DEA and Regional Office for review and approval.
 - The Final Scoping Report will at the same time also be made available to all Registered I&AP's.
 - This Public Participation process is intended to facilitate your inputs into this process.
- Scoping Report Chapter 1
 - Introduction to project
 - Methodology applied to Scoping
- Scoping Report Chapter 2
 - detailed description of the EIA Process as required by the relevant legislation (NEMA/NEMWA/NWA)
 - Details of the Environmental Assessment Practitioner and the Project Team
- Scoping Report Chapter 3
 - Project Description
 - Project Applicant
 - Project Location
 - Properties Affected
 - Project Resource Attributes
 - Project Enviro-Legal Framework
 - Project Motivation
 - Synoptic Project Description for:
 - Construction Phase
 - Operational Phase
 - Decommissioning Phase
 - Closure Phase
 - Post Closure Phase.
 - Project Alternatives
- Scoping Report Chapter 4
 - Describes the Current Environment that could be impacted on by the proposed activity.
 - Manner of Potential Environmental Impacts
- Scoping Report Chapter 5
 - Environmental Issues and Impacts
 - Description of Identified Issues and Impacts
 - Potential Cumulative Impacts
 - Proposed Impact Assessment Methodology

- Proposed Specialist Studies required during the EIA Phase.
- Scoping Report Chapter 6
 - Public Participation Process conducted to date in the Scoping Phase
 - Need for Public Participation
 - The Scope of the Scoping Phase Public Participation
 - Identification/Registration of Authorities and I&AP's
 - Notification of Authorities and I&AP's
 - Information to Authorities and I&AP's
 - Meetings with Authorities and I&AP's
 - Obtaining comments from Authorities and I&AP's
 - Responding to comments from Authorities and I&AP's
- Scoping Report Chapter 7
 - Plan of Study
 - Proposed Specialist Studies to be undertaken
 - Proposed Project and Consultation Time Line with the Authorities.

3. Discussion, Comments, Questions

The following interactions were minuted from the voice recording of the meeting:

Question: Andrew Tshabalala (AT):

What happened to ECA (Environmental Conservation Act 73 of 1989).

Response by JMA:

The authorisation process as well as the listed activities referred to in section 24 of the NEMA read with GNR 385, 386 and 387, as repealed by GNR 454, 455 and 456, replaces the authorisation of listed activities under the ECA. In addition, the provisions relating to waste management in the ECA have been repealed and waste management is now dealt with in terms of the NEM:WA 59 of 2008 (National Environmental Management: Waste Act) in July 2009.

Question: Johannes Mahlangu (JM):

The current footprint of the slimes dam, will it stay there?

Response by JMA:

Yes the current footprint will remain. After the footprint is successfully closed, it needs to be shaped, lined and made safe and managed till closure of the total operations.

Question: Johannes Mahlangu (JM):

Out of a Geotechnical perspective, what about underground mining in the area in the past, was that considered?

Response by JMA:

This is where site selection comes in; we did consider it as it was a concern. From a geotechnical perspective the groundwater and geology of the site is very important. We talked about site selection in the presentation. We specifically looked at the underground mining areas, because the area is surrounded by historical underground coal mines. We cannot construct a facility like this on top of an area where historical underground mining took place because of the risk subsidence. It would be a safety risk and an environmental failure component. We looked at different areas that could

be suitable for the construction of the new slimes dam but found that the areas to the eastern side of the mine is undermined as well as to the west. These areas were thus excluded. The property to the North has not been undermined in the past and in terms of stability the selected site to the north supports this. The northern site however is underlined with a layer of clay. During a Geotechnical investigation it was indicated that when constructing the new slimes dam this clay layer must be removed where after a lining must be constructed below the facility before construction of the slimes dam can start because it can potentially cause instability. We have addressed this concern and will provide more detailed information in the Scoping Report.

Question: Johannes Mahlangu (JM):

What impact does the current slimes dam have on the environment?

Response by JMA:

Monitoring boreholes have been commissioned around the facility. Two aquifers have been identified; the one is a shallow perched aquifer and the shallow boreholes which were drilled to 5 meters into the clay and the deeper shallow weathered aquifer borehole which was drilled up to 30 meters. These monitoring boreholes monitor the quality in the different aquifers. Based on the monitoring data the perched aquifer is more impacted than the deeper shallow weathered aquifer. Monitoring will continue during the closure phase to see if additional aquifer measures will be required in the long term to address the observed impact. In terms of the design there is currently a cut-off trench in the front to take out the seepage water that will come from the slimes facility and to then pump it back to the process.

Question: Johannes Mahlangu (JM):

Is there Chrome 6 in the system?

Response by JMA:

Chrome 6 is managed at the ETP process. It reduces the Chrome 6, to Chrome 3. In terms of monitoring we do not find Chrome 6 in the groundwater.

Question: Johannes Mahlangu (JM):

Are they going to plant anything on the old slimes dam?

Response by JMA:

Yes, they are going to plant grass on it to help with the rehabilitation of the footprint.

After no more questions were asked JMA thanked the I&AP's present for their time and comments and indicated that JMA looked forward to getting some feedback from them.

Minuted by Kobus du Plessis
(JMA Consulting (Pty) Ltd)


Kobus Du Plessis



JMA Consulting (Pty) Ltd

15 Vickers Street
Delmas
P O Box 883
Delmas, 2210
Tel (013) 665 1788
Fax (013) 665 2364

Sustainable Environmental Solutions through integrated Science and Engineering

ATTENDANCE REGISTER

PROJECT: Samancor Chrome Ltd. - Ferrometals
Scoping Phase Public Meeting

VENUE : Emalaheni Local Municipality
DATE & TIME : 12 June 2013 @ 10:00


Nr	Name	Representing	Postal Address	Fax number	Contact Details	E-mail address	Sign
1	Riaan Grobbelaar	JMA	PO Box 883, Delmas, 2210	013 665 2364	Tel: 013 665 1788	riaan@jmaconsult.co.za	
2	K du Plessis	JMA	PO Box 883, Delmas, 2210	013 665 2364	Tel: 013 665 1788	kobus@jmaconsult.co.za	
3	A. Tsimbalanga	FMT	X 7228, Ferredibana, 1035	013 693 7514	Tel 013-693 7133	andrew.eshakaba@samancor.com	
4	P Chetty	FMT	"	013 693 7460	013 693 7432	premsivi.chetty@samancor.com	
5	D. Seke A Cassidy Sol	Cassidy Sol	P.O. Box 1638 Noordhoek, 756	011 680 2283	011 433 0230	bunjinkosim@bunjinkosim.co.za	
6	R. Tshishe	STO	P.O. Box 1638 Noordhoek, 756	011 982 8197	0974 69 5657	Mony SA: burst.co.za	
7	P. Tshishe	FMT	P.O. Box 8146		082 826 1948	johannes.tshishe@samancor.com	
8							
9							
10							
11							

Annexure A

Copy of Presentation Slide Show



Sustainable Environmental Solutions
through integrated
Science and Engineering




**SAMANCOR CHROME LIMITED
FERROMETALS**

**ENVIRONMENTAL AUTHORIZATIONS
NEW SLIMES DAM
CLOSURE OF THE CURRENT SLIMES
DAM**

SCOPING PUBLIC MEETING
12 JUNE 2013, 10:00

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WELCOME



BY:

Andrew Tshabalala
on behalf of

FERROMETALS

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WELCOME




BY:

Riaan Grobbelaar
on behalf of

PROJECT TEAM

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MEETING RULES



1. Formal process - please take part;
2. Project team are independent consultants;
3. Language – free to communicate in own language;
4. Introduction presentation only - questions directly after presentation;
5. Opportunity for written comments
6. Make sure your question is well understood
7. Opportunity to write down concerns after discussion
8. Write name & designation with questions / concern

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FERROMETALS




AGENDA

- Welcome
- Background to Project
- Details of the Applicant
- Regional Locality
- Properties Affected
- Legal Framework
- Scoping & EIA Process
- Different Phases of the EIA
- Scoping Report & Plan of Study
- Discussion

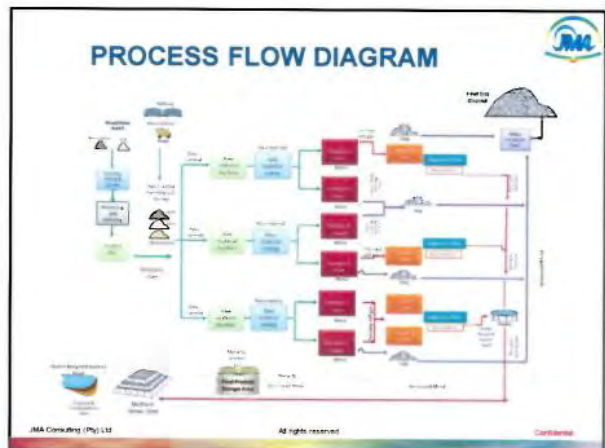
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BACKGROUND TO PROJECT



- Ferrometals is situated in Emalahleni (formerly called Witbank), Mpumalanga, and operates six charge chrome furnaces, (4 open and 2 closed), one metal recovery plant and an Intermediate Carbon Ferrochrome converter.
- In addition, a Pellet and Sintering Plant converts fine ore and UG2 (Upper Group 2 layer of the Rustenburg Layered Suite) into sintered pellets for use in the furnaces.
- The plant was established in 1959 with an expected life in excess of 25 years.

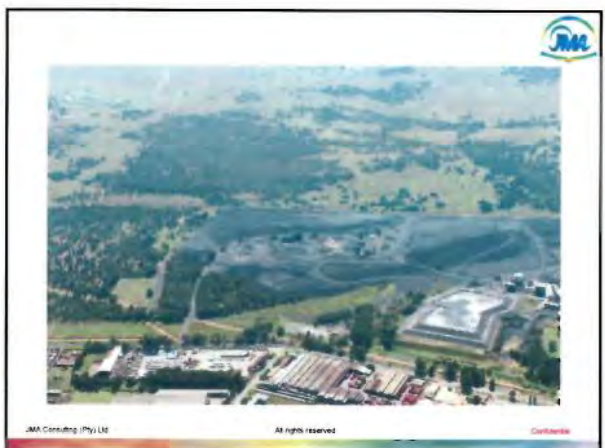
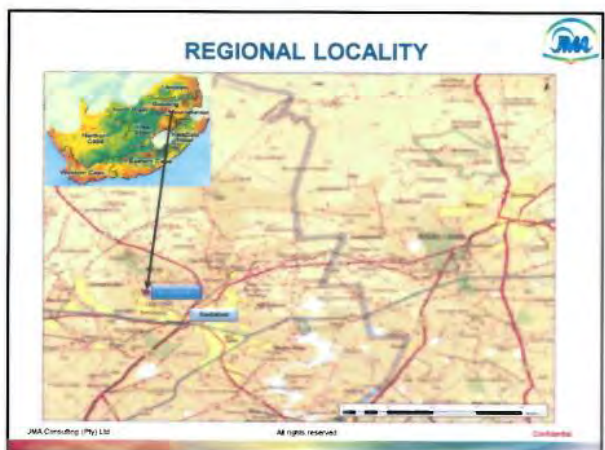
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DETAILS OF THE APPLICANT

Project Applicant: Ferrometals – a Business Unit of Samancor Chrome Limited
Business Registration No: 1926/008883/06
Contact Person: Brian Gibson
Physical Address: 1 Moses Kotane Drive, Emalaheni (Witbank), Mpumalanga
Postal Address: Private Bag X7228, Witbank, 1035
Telephone no: 013-693 7206
Fax no: 013 693 7558
E-mail: Brian.Gibson@SamancorCr.com

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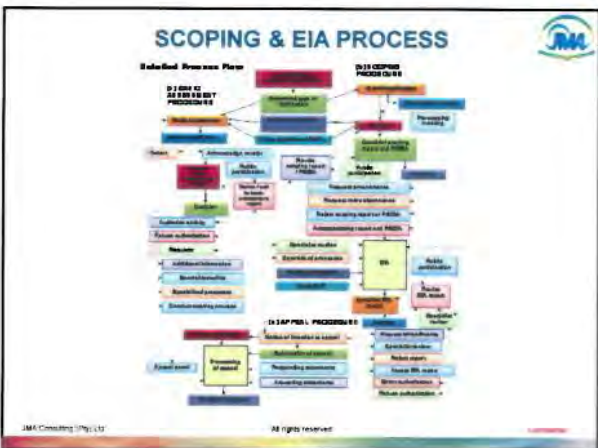


LEGAL FRAMEWORK

Environmental Authorization Processes regulated by the following parts of legislation may potentially be triggered by the abovementioned amendment:

- National Environmental Management Act, Act 107 of 1998 – NEMA.
- National Environmental Management: Waste Act, Act 59 of 2008 – NEMWA.
- National Water Act, Act 36 of 1998 – NWA.

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DIFFERENT PHASES OF THE EIA

In the EIA Process there are 5 Phases:

- Pre-Application Phase
- Scoping Phase
- Environmental Impact Assessment Phase
- Consideration and Decision Phase
- Appeal Phase

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DIFFERENT PHASES OF THE EIA

Pre-Application Phase:

- Appointment of EAP by Applicant
- Determination of Type of Application
- Identification of the Competent Authority
- Pre-application Consultation with the Competent Authority
- Identify and Notify Property/Land Owners
- Submit Application to Competent Authority
- Notification of Decision on Application
 - DEA Ref 13/9/11/L670/6 (Closure of the Existing Facility)
 - DEA Ref 13/9/11/L700/6 (Construction and Operation - New Facility)
 - MP DEDET Ref 17/2/3 N-84 (Decommissioning of the Existing Facility)

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DIFFERENT PHASES OF THE EIA

Scoping Phase:

- Initiate and Conduct Public Participation Process
- Compile Notification and Information Documents
- Notify all I&AP's of Project and Meetings (Newspapers, Site Notices, Letters, etc)
- Written Notification to Relevant Regulating Authorities
- Compilation of Scoping Report and Plan of Study as per Regulations and Guidelines
- Scoping Public Meeting (12 June 2013)
- Make Scoping Report available for Review (18/19 June 2013)
- Capture and Consider Comments from I&AP's and Relevant Authorities
- Finalize and Submit Scoping Report and Plan of Study to I&AP's and Authorities
- Authority Review & Decision
- Notification of Decision on Scoping Report

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DIFFERENT PHASES OF THE EIA




Environmental Impact Assessment Phase

- Commence to Implement Plan of Study
- Continue Public Participation Process
- Conduct Specialist Studies
- Prepare EIA Report (EIAR comprising EIA, EMP (draft) as per Regulations and Guidelines
- EIA/EMP Public Meeting
- Make EIAR available for Review
- Capture and Consider Comments from I&AP's and Relevant Authorities
- Finalize and Submit EIAR to I&AP's and Authorities

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DIFFERENT PHASES OF THE EIA




Consideration and Decision Phase:

- Authority Review & Decision
- Notification of Decision on the EIAR
- Granting of Environmental Authorization
- Inform I&AP's of Decision/Approval and of Opportunity to Appeal

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DIFFERENT PHASES OF THE EIA




Appeal Phase:

- Appellant to give notice of intention to Appeal to Authority and Applicant
- Consultation between Applicant and Appellant to Resolve Issues
- Submission of appeal to Authority and Applicant
- Submission of Responding Statement from Respondent/Applicant to Authority and Appellant
- Submission of Answering Statement by Appellant to Authority and Applicant
- Acknowledgment of all by Authority within 10 days
- Processing of Appeal
- Decision on Appeal
- Notification of Decision on Appeal to Appellant and Respondents by Authority

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THE SCOPING REPORT & PLAN OF STUDY



- The Scoping Report and Plan of Study is being compiled in support of the this process.
- The contents of the Scoping Report and Plan of Study are prescribed in the NEMA EIA Regulations and guidelines.
- The Draft Scoping Report will now be submitted to all relevant stakeholders for review and consideration for a period of 30 Days.
- After the review period has expired all comments that were received will be included and addressed in the Final Scoping Report.
- The Final Scoping Report will then be submitted to the DEA and Regional Office for review and approval.
- The Final Scoping Report will at the same time also be made available to all Registered I&AP's.
- This Public Participation process is intended to facilitate your inputs into this process.

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THE SCOPING REPORT & PLAN OF STUDY



- **Chapter 1** gives an Introduction to the project and explains the Methodology that was applied to Scoping.
- **Chapter 2** gives a detailed Description of the EIA Process as required by the relevant legislation (NEMA/NEMWA/NWA) and also gives Details of the Environmental Assessment Practitioner and the Project Team appointed to undertake the EIA.
- **Chapter 3** discusses the overall Project Description and gives details on the Project Applicant, Project Location, Properties Affected, Project Resource Attributes, Project Enviro-Legal Framework, Project Motivation and a Synoptic Project Description for the Construction Phase, Operational Phase, Decommissioning and Closure Phase, as well as the Post Closure Phase. The chapter also deals with the identification and consideration of Project Alternatives.

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THE SCOPING REPORT & PLAN OF STUDY



- **Chapter 4** describes the Current Environment that could be impacted on by the proposed activity. The Manner of Potential Environmental Impacts on the environment is also summarized in this chapter.
- **Chapter 5** deals with Environmental Issues and Impacts. It contains a summarized description of Identified Issues and Impacts, a listing of Potential Cumulative Impacts, a discussion on the proposed Impact Assessment Methodology and concludes with a listing of Proposed Specialist Studies required during the EIA Phase.

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THE SCOPING REPORT & PLAN OF STUDY

- **Chapter 6** provides a detailed description of the Public Participation Process conducted to date in the Scoping Phase. It contains details on:
 - Need for Public Participation
 - The Scope of the Scoping Phase Public Participation
 - Identification/Registration of Authorities and I&AP's
 - Notification of Authorities and I&AP's
 - Information to Authorities and I&AP's
 - Meetings with Authorities and I&AP's
 - Obtaining comments from Authorities and I&AP's
 - Responding to comments from Authorities and I&AP's
- **Chapter 7** represents the **Plan of Study** which details the Proposed Specialist Studies to be undertaken and also proposes the Project and Consultation Time Line with the Authorities.

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DISCUSSION

- Please state your name and affiliation prior to asking your question.
- Your name and question will be minuted.
- If possible your question will be answered at the meeting.
- If you are satisfied with the answer it will be minuted, captured in the Issues and Response Register and your query will be considered as settled/concluded.
- If your question cannot be answered at the meeting, it will be minuted, captured in the Issues and Response Register, and will be formally attended to during the finalization of the scoping report or alternatively during the EIA/EMP phase.
- You can also submit your query in writing at the end of the meeting or post it to JMA, P O Box 883, Delmas, 2210, or alternatively,
 - Fax to (013) 665 2364 or;
 - e-mail to: kobus@jmaconsult.co.za
- All written queries/concerns/comments received will be acknowledged and will then be captured and responded to in the Issues and Response Register.
- The Issues and Response Register will be amended as the project continues and will be appended as an APPENDIX to the Final Scoping Report as well as to the EMPR amendment as a separate Public Participation Report.

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THANK YOU FOR YOUR
ATTENDANCE
YOUR CONTRIBUTION AND INPUT
IS VALUED

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Sustainable Environmental Solutions
through integrated
Science and Engineering

CONTACT DETAILS

JMA CONSULTING (PTY) LTD
P.O. BOX 883
DELMAS 2210
TEL: 013 665 1788
FAX: 013 665 2364

E-MAIL: kobus@jmaconsult.co.za

Attention: Mr Kobus Du Plessis

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END OF MEETING



Photos of Scoping Phase Public Meeting – 12 June 2013

Presentation by EAP



Welcome by Ferrometals



Presentation by EAP



Presentation by EAP



Venue



Venue



PPENDIX 6.2.14 (A)
ISSUE AND RESPONSE REGISTER

SAMANCOR CHROME LTD. FERROMETALS

ISSUES, COMMENTS AND RESPONSE REGISTER

Authority Meetings			
Department of Economic Development Environment & Tourism (DEDET)			
04 October 2011			
NAME	COMPANY	ISSUES/CONCERNS RAISED	RESPONSE FROM EAP
Riaan Grobbelaar Riaan Fourie Brian Gibson Sonja Pickering F. Janse van Vuuren Andrew Tshabalala Roark Rawheath H van As P. Chetty I Cilliers Musa Mondlane	JMA Consulting JMA Consulting Ferrometals Ferrometals Ferrometals Ferrometals Ferrometals Ferrometals Ferrometals DEDET	<p>A site visit was requested by the Department of Economic Development, Environment & Tourism (DEDET) regarding the Ferrometals - Samancor Chrome EIA application (Ref: 17/2/3 N-84).</p> <p>The purpose of the meeting was therefore to provide feedback of the Ferrometals project to DEDET by explaining and discussing the background to the project as well as the different components that were identified for the proposed project. The meeting also had the function of obtaining inputs from DEDET's side on the project and to conduct a site visit so that Mr Musa Mondlane (MM) could orientate and familiarise himself with the Ferrometals site.</p> <p>Riaan Grobbelaar (RG) introduced himself and welcomed everybody to the meeting after which he explained the purpose of the meeting. RG stated that this meeting was organised as a result of the request received from MM and continued to outline what will be discussed during the meeting. RG also asked MM to please provide inputs from DEDET's side regarding procedural requirements.</p> <p>RG explained the regional locality of Ferrometals and also indicated the extent of the surrounding mining activities in the area. RG then indicated where the Northern Tailings Facility, the one that will be decommissioned, is located. RG then provided feedback on the enviro-legal framework for this project by indicating that both an EIA and Waste License Application will be required.</p> <p>RG then briefly provided an explanation of production process at Ferrometals. RG mentioned that the current Northern Tailings Facility has another life expectancy of approximately 3 to 4 years after which a new footprint will be required. RG then discussed the two different rehabilitation options for the tailings facility by indicating pros and cons of each option.</p> <p>RG then discussed the listed activities triggered in GNR 718 for the Waste License Application and in GNR 544 for the EIA Component. RG then continued to provide an outline of the process to be followed and asked MM if there was anything that he would like to add.</p> <p>MM asked what reports will be made available for public review, whether only Draft reports or Final reports will be available. RG explained that the Draft reports will be compiled and presented to I&AP's for review. All comments</p>	<p>Noted for the record.</p> <p>Noted for the record.</p> <p>Noted for the record.</p> <p>Noted for the record.</p> <p>Noted for the record.</p> <p>Noted for the record.</p> <p>Noted for the record.</p> <p>Noted for the record.</p>

		received during this period will be incorporated into the Draft report and the report will then be finalised. RG indicated that the Final Reports will then be submitted to DEDET. I&AP's will however be informed on how their comments/concerns were addressed. MM indicated that an agreement on this can be made with I&AP's during the I&AP Public meeting.	
		MM asked RG about the capping of the Tailings Facility and RG explained in detail how that will happen and what will be done.	Noted for the record.
		The aerial photograph of the Ferrometals site was then discussed after which involved parties departed on the site visit.	Noted for the record.
Scoping Phase Public Meeting 12 June 2013			
NAME	COMPANY	ISSUES/CONCERNS RAISED	RESPONSE FROM EAP
Andrew Tshabalala (AT)	Ferrometals	What happened to ECA (Environmental Conservation Act 73 of 1989).	The authorisation process as well as the listed activities referred to in section 24 of the NEMA read with GNR 385, 386 and 387, as repealed by GNR 454, 455 and 456, replaces the authorisation of listed activities under the ECA. In addition, the provisions relating to waste management in the ECA have been repealed and waste management is now dealt with in terms of the NEM:WA 59 of 2008 (National Environmental Management: Waste Act) in July 2009.
Johannes Mahlanga (JM)		The current footprint of the slimes dam, will it stay there?	Yes the current footprint will remain. After the footprint is successfully closed, it needs to be shaped, lined and make safe and managed till closure of the total operations.
		Out of a Geotechnical perspective, what about underground mining in the area in the past, was that considered?	This is where site selection comes in; we did consider it as it was a concern. From a geotechnical perspective the groundwater and geology of the site is very important. We talked about site selection in the presentation. We specifically looked at the underground mining areas, because the area is surrounded by historical underground coal mines. We cannot construct a facility like this on top of an area where historical underground mining took place because of the risk subsidence. It would be a safety risk and an environmental failure component. We looked at different areas that could be suitable for the construction of the new slimes dam but found that the areas to the eastern side of the mine is undermined as well as to the west. These areas where thus excluded. The property to the North has not been undermined in the past and in terms of stability the selected site to the north supports this. The northern site however is underlined with a layer of clay. During a Geotechnical investigation it was indicated that when constructing the new slimes dam this clay layer must be removed where after a lining must be constructed below the facility before construction of the slimes dam can start because it can potentially cause instability. We have addressed this concern and will provide more detailed information in the Scoping Report.
		What impact does the current slimes dam have on the environment?	Monitoring boreholes have been commissioned around the facility. Two aquifers have been identified; the one is a shallow perched aquifer and the shallow boreholes which were drilled to 5 meters into the clay and the deeper shallow weathered aquifer borehole which was drilled up to 30 meters. These monitoring boreholes monitor the quality in the different aquifers. Based on the monitoring data the perched aquifer is more impacted than the deeper shallow weathered aquifer. Monitoring will continue during the closure phase to see if additional aquifer measures will be required in the long term to address the observed impact. In terms of the design there is currently a cut-off trench in the front to take out the seepage water that will come from the slimes facility and to then pump it back to the process.

		Is there Chrome 6 in the system?	Chrome 6 is managed at the ETP process. It reduces the Chrome 6, to Chrome 3. In terms of monitoring we do not find Chrome 6 in the groundwater.
		Are they going to plant anything on the old slimes dam?	Yes, they are going to plant grass on it to help with the rehabilitation of the footprint.
Focus Group Meetings Ward 12 - Emalahleni 28 May 2013			
			RESPONSE FROM EAP
NAME	COMPANY	ISSUES/CONCERNS RAISED	
Riaan Grobbelaar (RG) Kobus Du Plessis Taylor Pookgoadi (TP) Sipho Masuku (SM)	JMA JMA Ward 12 & ELMC ELMC	Riaan Grobbelaar (RG) opened the discussions by introducing himself and the others parties present at the meeting. RG then gave a description of the proposed project and discussed the different environmental authorisations that are required for this project. RG explained the process to be followed by JMA Consulting (JMA) regarding the decommissioning and closure of the current existing slimes dam as well as the construction of a new slimes dam facility. RG explained that an application will be lodge in terms of NEMA Act 107 of 1998, GNR 544 for Activity 27 as well as a Waste Licence Application in terms of the National Environmental Management Waste Act (NEM:WA) 59 of 2008, Section 19(3) and GNR 718, Category A, Activity 20. He also stated that for the Construction of a New Slimes Dam, JMA will lodge an application in terms of NEM:WA Act 59 of 2008, Section 19(3) and GNR 718, Category A, Activity 9 and 11. The Scoping Phase, EIA Phase together with the Public Participation Process was explained to the parties present at the meeting.	Noted for the record.
		Taylor Pookgoadi (TP) then requested JMA to provide the necessary documentation to proof that JMA Consulting is indeed appointed by Ferrometals for the project.	Noted for the record.
		TP then mentioned his concern that the Venue for the Scoping Phase Public Meeting does not fall within Ward 12, as the Ferrometals Site is located within this ward. He also wanted to know who needs to be involved in the Public Participation Process.	RG explained that the process does not require the Local Municipality to buy in on it and that it is a standalone project with a certain process and requirements to follow, however JMA will request such a letter from Ferrometals and add it to the available documentation.
		Sipho Masuku (SM) then also raised the concern that the venue for the Public Meeting are far from the site and that the local community now needs to arrange transport to get to the venue which involves extra costs which some of them do not have. He suggested that transport must be arranged for the people who are interested to attend the meeting. He also suggested that the different ward councillors must be used to get the public involved in the process.	RG responded by explaining that legally JMA are required to advertise in one Local Newspaper and that Site Notices needs to be put up in the surrounding community.
		After no more questions were asked RG concluded that the Scoping Phase Public Meeting arranged for 12 June 2013 will continue as planned. At this meeting the venue for the next meeting will be discussed. JMA thanked the I&AP's present for their time and comments and indicated that JMA looked forward to getting some feedback from them.	RG responded that unfortunately the venue and the newspaper advertisement have already been paid but that another meeting can be arranged at a later stage where a venue can be suggested by the I&AP's involved in the process.

APPENDIX 6.2.14 (B)

ORIGINAL COMMENTS RECEIVED FROM I&AP'S

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

**SAMANCOR CHROME LTD.
FERROMETALS**

Contact: Kobus du Plessis
JMA Consulting (Pty) Ltd
P.O. Box 883
Delmas, 2210

Phone: (013) 665 1788
Fax: (013) 665 2364



**INTERESTED AND AFFECTED PARTY REGISTRATION
& INVITATION TO COMMENT
JUNE 2013**

E-mail: kobus@jmaconsult.co.za

Please complete and return to the Address indicated above.

TITLE	Mev. C Swart	FIRST NAME	Careen
INITIALS	CS	SURNAME	Swart
ORGANISATION	Dep of Health	E-MAIL ADDRESS	careens@social-
POSTAL ADDRESS	P/Bag X 11285		Mpu. 900.29 -
POSTAL CODE	Nelspruit 1200	CELL PHONE NO	082 820-7950.
TEL NO	03-7663448	FAX NO	

REGISTRATION AS INTERESTED AND AFFECTED PARTY (Please tick the applicable box)

Please formally register me as an Interested and Affected Party (I&AP) so that I may receive further information and notifications during the Environmental Impact Assessment Process	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
	I would like notifications by	
	<input type="checkbox"/> Letter (Mail)	
	<input checked="" type="checkbox"/> Email	
	<input type="checkbox"/> Fax	
	<input type="checkbox"/> SMS	
In Terms of Regulation 56(1) e, of GNR 543 (EIA process regulations) I disclose below any direct business, financial, personal, other interest that I may have in the approval or refusal of this application:		
None		

COMMENTS (Please make use of the additional sheet if more space is needed for comments)

I suggest that the following issues be addressed during the Scoping Phase of the Environmental Impact Assessment

Ground + Surface water + Air Pollution studies to be made available to above office

Any other comments

Please ask the following friends/colleagues to register as I&APs for this Environmental Impact Assessment

Mr. M. Mogale, Mankgala district
078-00704995

Swart
Signature

2/6/2013
Date

WE THANK YOU FOR YOUR CONTRIBUTION

Please be assured that your comments will be formally registered and be included as part of the Final Documentation that will be submitted to Relevant authorities.

APPENDIX V

SPECIALIST REPORT – PROPERTY ASSESSMENT



1 Amethyst Ave
Lyttelton Manor
PO Box 8867
Centurion, 0046
Tel: +27 12 664 6429
Fax: +27 12 664 8180
mail@cameronscross.co.za
www.cameronscross.co.za

**MEMORANDUM: ENVIRONMENTAL-LEGAL CONSIDERATIONS IN RESPECT OF
CERTAIN PROPERTIES OF SAMANCOR LTD**

**LEGALLY PRIVILEGED AND CONFIDENTIAL
PREPARED FOR THE RENDERING OF LEGAL ADVICE**

Prepared for: JMA Consulting (Pty) Ltd

SPECIALISING IN ENVIRONMENTAL HEALTH AND SAFETY LAW

Directors: James Cross BA LLB LLM, Kenneth Cameron B Proc
Associates: Tandina Charters BComm LLB, Melissa Grobbelaar LLB, Janse Rabie BComm LLB LLM
Professional Assistant: Stéfanie Vijoën LLB LLM
Office Manager: Liezl Sterne
Co.Nr: 2002/016360/21 **VAT Nr:** 4310199528

Cape Town Office: Tel: + 27 21 526 0468 Fax: + 27 21 526 0311

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1. INTRODUCTION

The purpose of this Memorandum is to assess and consider conditions of title for the properties within the boundaries of Samancor Limited (“Samancor”) in order to determine whether there are any specific environmental-legal prohibitions on the property or properties which may affect the present or future use of the properties by Samancor.

Ownership status and the concomitant right to use such properties, as prescribed in terms of conditions of title and zoning, are important considerations from an environmental planning and management perspective. As such, we trust that the information contained in this document will serve to inform future strategic decision making with regard to environmental issues. For purposes of this Memorandum, and by way of clarification, we will commence with a general discussion on relevant concepts in property law followed by a detailed analysis of the respective properties as listed herein below which are presently owned by Samancor.

2. GENERAL BACKGROUND

2.1 Introduction

Ownership of a property is never absolute, but is always limited in the interest of other holders of rights, either by means of statutory provisions, or by limited real rights against the owner of a property. Limited real rights provide the holder of the right with one or more entitlements in respect of the property¹.

“*Conditions of title*” is a term often used in a wide sense, referring to **all limitations on ownership or title of land**. It therefore includes all conditions, whether inserted into the title deed or not, such as town planning conditions, restrictive covenants, servitudes and conditions of title (proper)².

Conditions of title are usually noted in the relevant title deed. Where these are noted against the title deed, they appear in the conditional clause. However, this is not always the case. Praedial and personal servitudes³ must be noted against the title deed, but certain conditions, for example some of the conditions enumerated in the wide sense above, imposed in terms of legislation, are not.

¹ Van der Walt, AJ & Pienaar, GJ *Introduction to the law of property 3rd Edition* Juta & Co 1999, p 254

² Referred to in more detail at paragraph 2.2

³ Referred to in more detail at paragraph 2.3

Apart from conditions of title as statutory restrictions, which are discussed more fully below, there are several conditions which may be registered in title deeds. These conditions include the following:

2.1.1 Subdivision Conditions

Subdivision conditions arise out of an agreement, and usually occur where large erven in an existing township are subdivided. The person who is subdividing inserts certain conditions into the title deed of the subdivision⁴. This type of condition does not appear to be relevant under the present circumstances.

2.1.2 Conditions Imposed in Terms of a Will

Conditions restricting land use may be imposed in terms of a will and may or may not be inserted into the title deed. The usual form of these conditions is that of a “*modus*”, a device by which an obligation can be imposed upon a beneficiary without making his or her right conditional⁵. The *modus* imposes a personal obligation on the heir or legatee subject to the *modus* and it does not constitute a real right over the immovable property concerned. This type of condition does not appear to be relevant under the circumstances.

2.1.3 Restrictive Covenants

The word “*covenant*” means agreement. This term is therefore explanatory of those limitations on the exercise of ownership which result from an agreement between parties.

Entering into covenants was a common pre-statutory practice. Township owners entered into agreements or covenants with the purchasers of erven in the township in terms of which limitations were imposed on the use of the land. They therefore form a category of non-statutory limitations. The various provincial ordinances which superseded the usage of restrictive covenants were not applicable to townships already established at their commencement, and the covenants can remain in force and effect. The legal construction of restrictive covenants has always been that they are servitudes, praedial if in favour of other erven and personal if in favour of a specific person⁶.

A detailed assessment of restrictive covenants falls outside the scope of this document.

⁴ Van Wyk J *Planning Law* Juta & Co Ltd 1999 par 1.7.3.1

⁵ Van Wyk supra par 1.7.3.2

⁶ Van Wyk supra par 1.7.3.3

2.2 Conditions of Title (Proper)

Conditions of title are **statutory restrictions** imposed on a landowner in pursuance of township (or agricultural holding) establishment procedures and inserted into the title deed of the land. They are therefore the statutory successors to restrictive covenants mentioned above. However, unlike restrictive covenants, they are not constituted in terms of a contract. Just as restrictive covenants are often classified as servitudes, so too are conditions of title. The weight of opinion holds that this interpretation is not correct.

The area comprising conditions of title has developed a set of unique principles, based on specific case law. Should conditions of title be regarded as servitudes, this would imply that a purchase of all the erven in a development would extinguish the conditions through merger. This is not the case. Furthermore there is no specific dominant and/or servient tenement, nor is the requirement of usefulness of the servient tenement applicable, as the purpose of conditions of title is the retention of the specific character of the neighbourhood or area. In addition, conditions of title are constituted through specific legislative provisions regulating land use, and not through agreement⁷.

2.2.1 Non-compliance with Conditions of Title

The local authority⁸ must generally observe a condition imposed relating to an erf in a township⁹. Where a condition relating to an erf in a township has been imposed, the local authority or premier may enforce a condition and the local authority is compelled to refuse any building plan in conflict with any condition relating to an erf in a township¹⁰.

In the same way a local authority must observe and enforce the provisions of the town-planning scheme¹¹. Any person contravening the provisions of an approved town-planning scheme is guilty of an offence¹². The local authority may in writing direct any person who builds or uses any land in conflict with the provisions of an approved town-planning scheme to discontinue such work and, at his own expense, to remove any building erected contrary to the provisions of the town-planning scheme¹³. Anyone found guilty is

⁷ Van Wyk supra par 1.7.3.4

⁸ In this memorandum where reference is made to local authority, such reference refers to the Rustenburg Local Municipality.

⁹ Transvaal Town-Planning and Townships Ordinance 15 of 1986 Section 93 (1) (a) and 115 (1) (a).

¹⁰ Section 93 (2) & 133 of the Ordinance referred to above.

¹¹ Section 40 (1) of the Ordinance referred to above

¹² Section 40 (2) of the Ordinance

¹³ Section 42 (1) of the Ordinance

liable to either a fine or imprisonment¹⁴. Failure to adhere to the directive constitutes an offence¹⁵.

2.2.2 Conflict between Plans to Manage Land Use and Conditions of Title¹⁶

The type of situation where a provision in a land use management plan conflicts with a condition in a title deed can be illustrated by the following examples:

- A condition of title, (for example a condition that no subdivision is possible), may exist in a title deed. On the subsequent coming into operation of a zoning scheme the erf in question may be zoned “*special residential*”, permitting the erection of a dwelling of a certain size on an erf. If, in terms of the zoning schemes, the original erf could be divided into at least 4 erven, the question arises as to the validity of the condition of title.
- A condition of title could provide that an erf should be used for residential purposes only. However, consent of the municipality could provide for use for other purposes, for example an industry. In granting the application for the consent use, a condition would be attached that the use should not conflict with existing title deed restrictions.

The principles laid down by the courts are unambiguous:

- There can be no automatic removal of title deed restrictions¹⁷.
- A subsequent Town Planning Scheme does not override the conditions of title where there is conflict between the two¹⁸.
- A consent given by a local authority in conflict with a condition in a title deed is of no force and effect and a local authority would be compelled to refuse a building plan in conflict with a title deed condition¹⁹.

¹⁴ Section 133 of the Ordinance

¹⁵ Section 43 95) of the Ordinance

¹⁶ Van Wyk supra par 1.7.5

¹⁷ *Ex Parte Nader Tuis (Edms) Bpk* 1962 (1) SA 751 (T) as referred to by *Van Wyk* Supra par 1.7.5

¹⁸ *Kleyn v Theron* 1966 (3) SA 264 (T) as referred to by *Van Wyk* Supra par 1.7.5

¹⁹ *Enslin v Vereenigin Town Council* 1976 (3) SA 443 & *Shell South Africa (Pty) Ltd v Alexene Investments (Pty) Ltd* 1980 (1) SA 683 (W) as referred to by *Van Wyk* Supra par 1.7.5

- Before an owner can implement or take advantage of the terms of the Town Planning Scheme, he or she has to remove any legal impediment which may exist. Removal would have to take place by one of numerous methods²⁰.

Restrictive conditions must be distinguished from town-planning conditions in that town-planning conditions are rights originating from public law for the benefit of the local government²¹. They are not real rights and therefore not registerable.

2.3 The Law of Servitudes

There are two types of servitudes: praedial and personal. Both are considered to be limited real rights in law, as they are enforceable against the owner of the servient tenement, whether he is the original owner who concluded the agreement of servitude or a successor-in-title.

2.3.1 Praedial Servitudes

A praedial servitude attaches to the two pieces of land themselves. The dominant tenement has, by virtue of the registered document, a right over the servient tenement, irrespective of the identity of the owners of the two tenements at any given time. Thus both the benefit and the burden are said to “*run with the land*”. Clearly, however, rights can only be exercised by persons, and it is the prerogative of the owner of the dominant tenement to enforce the servitude. Praedial servitudes are in principle perpetual, unless a limited duration is specified in the document. A praedial servitude must offer some permanent advantage or benefit to the owner of the dominant land as owner and must not merely serve his personal pleasure.

Praedial servitudes are indivisible. Such servitude attaches to every part of the dominant land and encumbers every part of the servient land. This means that a co-owner of dominant land cannot abandon the servitude only in respect of his undivided share in the tenement, nor can the co-owner of a tenement acquire a servitude for his undivided share only. This does not affect the description and limitation in size of the servitude area as described in the documents and related surveyor-general diagrams.

If the dominant land is physically subdivided between different co-owners, the servitude continues to be attached to each subdivided portion of the land in so far as it can benefit

²⁰ *Enslin v Vereeniging Town Council* 1976 (3) SA 443 & *Ex Parte SE One (Pty) Ltd* 1974 (4) SA 159 (T)

²¹ *Stadsraad van Vanderbijlpark v Uys* 1989 (3) SA 528 (A)

from the servitude, provided, however, that it does not increase the burden on the servient land.

If the servient land is sub-divided between different owners, a servitude which is not locally defined continues to burden each subdivided portion of the land in so far as the exercise or enjoyment of the servitude requires it. A servitude which is locally defined continues to attach to the area affected. The remaining area is released.

2.3.2 Personal Servitudes

A personal servitude, on the other hand, is always constituted in favour of a particular individual on whom it confers the right to use and enjoy another's property. It is not, therefore, transferable by the holder, although it remains enforceable against any new owner of the servient tenement. A personal servitude held by a corporation is extinguished after 100 years, while a servitude that attaches to an individual is extinguished by his death. Since a personal servitude is not linked to ownership of land, any person can acquire it.

2.3.3 Strict Interpretation

The rights and duties of the parties are dependant on agreement and are contained in the document, but several well-established principles relate specifically to servitudes and govern the construction, or interpretation, of the agreement. As such if an agreement conflicts with the freedom of the owner of the servient tenement to use the property as he or she deems fit, it will be interpreted strictly. Thus the servitude must be exercised as carefully as possible so as to cause the least inconvenience to the servient owner, but the holder of the servitude is entitled to perform all acts which are necessary for the proper exercise of the servitude. The holder of the servitude may not increase the burden on the servient land beyond the express or implied terms contained in the document.

Either party is entitled to claim damages if the other exceeds his rights, provided there is patrimonial loss. Other possible litigation in this regard would be an interdict and declaration of rights.

The owner of the servient land may exercise all powers of ownership that are not inconsistent with the servitude. He or she may in particular grant further servitudes, providing the existing servitude is not infringed thereby.

2.3.4 Attachment to Land/Person

As the benefits of a praedial servitude cannot be severed from the land to which it is attached, the dominant owner is not permitted to assign the servitude or otherwise allow it to be utilised for the benefits of a tenement other than the dominant tenement. There may be no “*servitude on servitude*”. Equally, a person cannot obtain a personal servitude over his own land. A praedial servitude is alienated together with the sale of the land, while a personal servitude is bound to the person and cannot be alienated.

2.3.5 Positive Duty

Another principle that is applicable is that a servitude cannot impose the performance of an act or positive duty (i.e. a duty to do something) upon the servient owner. There are exceptions, for example, the duty to maintain the wall common to neighbours, but any provision that imposes a duty on an industry to maintain the equipment necessary for the exercise of another’s right would, *prima facie*, not be enforceable. Section 63 of the Deeds Registries Act 47 of 1937, has, however, been amended to allow conditions imposing a positive duty to be registerable if they are complimentary or ancillary to an already registerable condition or right.

2.3.6 Positive and Negative Servitudes

A positive servitude entitles the owner of the dominant land to do certain acts on the servient land, while a negative servitude entitles him to require the owner of the servient land to refrain from doing certain acts on the servient land.

2.3.7 Prescription

A servitude is acquired by prescription if that person has openly and as if he or she were entitled to do so, exercised the rights of the holder of the servitude for an uninterrupted period of 30 years. This common law provision has been codified in section 1 of the Prescription Act 68 of 1969. In the case of praedial servitudes, the 30 year period may include predecessors in title.²² Registration of a servitude acquired in this way is unnecessary to render it effective against third parties²³, although it is nevertheless advisable to register it. One cannot acquire a negative servitude merely because an

²² Carey Miller DL *Land Title in South Africa* Juta & Co Ltd 2000 p 178. This principle was also accepted in *Morkels Transport (Pty) Ltd v Melrose Foods (Pty) Ltd & another* 1972 (2) SA 464 (W) at 467-8

²³ Land Title in SA p 196

owner has not made use of his right of ownership. The degree of use of a servitude necessary to establish a title by prescription depends on the circumstances.

A positive servitude is extinguished by prescription if it has not been exercised for an uninterrupted period of 30 years. A negative servitude is extinguished by prescription if the owner of servient land acts adversely to the servitude with the result that the servitude cannot be exercised for a period of 30 years.

2.3.8 Extinction

Abandonment of a servitude may be express or implied. An express abandonment may be effected unilaterally or by agreement. An implied abandonment is considered to have taken place when the owner of the dominant land allows the servient owner to do something on the servient land that is contrary to the servitude. The dominant owner must have knowledge of this activity. To be valid against third parties the abandonment of this servitude must be published by cancellation of its registration. If the owner of the dominant land has bound himself by contract not to abandon it, it cannot be extinguished in this manner.

A servitude is extinguished when it becomes permanently impossible to exercise it. It is not, however, extinguished by the destruction of a building on the dominant or servient tenement. If the building is rebuilt the servitude can again be exercised, even if the period of prescription has meanwhile run its course. A servitude is obviously also extinguished by agreement, or by merger as referred to above.²⁴

2.4 Zoning of properties

Zoning and Town-Planning schemes form part of land-use management plans as instruments to indicate specific land uses or documents. Land-use management has been defined as *'government activity which seeks to influence or control change in the ways in which individuals use their land including maximising benefits and minimising negative impacts.'*²⁵

²⁴ Van der Merwe CG *Sakereg* Butterworths 2nd edition p 538

²⁵ Investigation into Land Use Management mechanisms (Tender No DPLG 73/96) Report on Stage 5: Land Use Management in Gauteng into the New Century 2

oning may be described as *'the creation of districts within a city where different building regulations are applied (affecting the height, bulk and coverage of buildings) and within which different use activities are permitted or prohibited.'*²⁶

The sources of town planning legislation include the Emalaheni Town Planning Scheme 1991, Local Authority Notice 3120 dated 16 September 1992. The original motivation behind the introduction of town-planning legislation was predominantly the creation of urban environments in which the differing land uses could be arranged so as to provide the minimum conflict and maximum harmony. These aims were to be achieved by a suitable pattern of use zones. In broad outline, the aim of a town-planning scheme is to provide, within an existing town, for planning and control over the spatial utilisation of land²⁷.

2.4.1 Zoning Status of Properties Owned by Samancor in the Witbank District

CCI was provided with the zoning certificates for the following properties:

- Portion 19 of the Farm Driefontein 297 JS;
- Portion 27 of the Farm Driefontein 297 JS;
- Portion 9 of the Farm Driefontein 297 JS; and
- Portion 12 of the Farm Driefontein 297 JS.

CCI requested the zoning certificates for the following properties:

- Portion 8 of the Farm Driefontein 297 JS; and
- Portion 13 of the Farm Driefontein 297 JS.

CCI have been advised that the various abovementioned properties are located within the area of jurisdiction of the District of Witbank, Mpumalanga Province.

2.5 Confirming Ownership of Certain Properties

CCI was requested to confirm the ownership of the following properties:

- Portion 19 of the Farm Driefontein 297 JS;
- Portion 8 of the Farm Leeuwpoort 283 JS; and

²⁶ Miton 'Planning and property' 1985 *Acta Juridica* 267
²⁷ Van Wyk supra par 1.8.2.4

- Portion 122 of the Farm Leeuwpoot 283 JS.

2.5.1 Portion 19 of the Farm Driefontein 297 JS

During the property search at the Deeds Office, it was found that Portion 19 of the farm Driefontein 297 JS does not exist yet as it has not been registered. The portion was only created in the Deeds Office, but has not yet been registered in anybody's name. See Annexure A attached hereto. CCI requested further details on this specific portion from the Town Planning Division of the Emalahleni Local Municipality in order to confirm who the owner of the portion is. We were informed by the Municipality that portion 19 is a consolidation of portions 17 and 18 of the farm Driefontein 297 JS.

Upon further deed searches, the searches should that neither portion 17 nor portion 18 has been registered and therefore portion 19 could not be registered. The deed searches did however show that portion 17 is a portion of portion 9 and portion 18 is a portion of portion 12. The searches did however not indicate who the owner(s) of these portions are. However, as discussed in more detail below portions 9 and 12 is owned by Samancor Ltd.

Although portions 17 and 18 have been subdivided it has not yet been registered and therefore portion 19 could not yet be registered. Therefore, it is recommended that Samancor finalise the registration process by registering portion 17 (a portion of portion 9) and portion 18 (a portion of portion 12). Subsequently, Samancor may proceed with the registration of the consolidation of portion 19.

The Office of the Surveyor General has already approved and registered all the necessary diagrams. The only thing that is still outstanding to complete the registration process is the necessary consents by the Municipality. In this regard, the input and assistance of a conveyancer is recommended.

2.5.2 Portion 8 of the Farm Leeuwpoot 283 JS

Portion 8 of the Farm Leeuwpoot 283 JS has been registered and is held by deed of transfer T62094/2001 by Billy's Trust. See Annexure B attached hereto.

2.5.3 Portion 122 of the Farm Leeuwpoot 283 JS

Portion 122 of the Farm Leeuwpoot 283 JS has been registered and is held by the Republic of South Africa with Title Deed T86940/1996. See Annexure C attached hereto.

3. SAMANCOR PROPERTIES

3.1 Property - Remaining Extent of portion 8 (a portion of portion 3) of the Farm Driefontein 297

3.1.1 Description

Remaining Extent of portion 8 (a portion of portion 3) of the Farm Driefontein 297

Registration Division JS, Transvaal

Measuring 20, 9096 hectares

Held under Deed of Transfer No T 39220/93

3.1.2 Owner

Samancor Ltd

3.1.3 Relevant Servitudes

3.1.3.1 Servitude 1

By Notarial Deed K 443/1963S, the right has been granted to the Town Council of Witbank to convey electricity across the property by means of overhead power lines and together with ancillary right, and subject to the conditions as will more fully appear on reference to the said Notarial Deed.

3.1.3.2 Servitude 2

By Notarial Deed K 1590/1976S, the right has been granted to the Eskom to convey electricity over the property together with ancillary right, and subject to the conditions as will more fully appear on reference to the said Notarial Deed.

3.1.3.3 Servitude 3

By Notarial Deed K 3816/2000S, the right has been granted to Eskom to convey electricity over the property, as will more fully appear on reference to the said Notarial Deed and Diagram.

3.1.3.4 Servitude 4

By Notarial Deed K 3860/2005S, the property is subject to an underground electric powerline servitude in favour of Highveld Steel and Vanadium Corporation Limited, together with ancillary rights, as will more fully appear on reference to the said Notarial Deed and Diagram.

3.1.3.5 Servitude 5

By Notarial Deed K 2870/1997S, a perpetual right has been granted to convey gas over the property, as will more fully appear on reference to the said Notarial Deed and Diagram.

3.1.3.6 Servitude 6

By Notarial Deed K 328/1999S, a perpetual servitude has been granted in favour of Afrox to convey gas over the property, as will more fully appear on reference to the said Notarial Deed and Diagram.

3.1.4 Zoning Status

Portion 8 of the farm Driefontein 297 JS is zoned "Industrial 2" as per Zoning Certificate, in terms of the Emalahleni Town Planning Scheme 1991, which was received on 9 March 2010 and attached hereto as Annexure D.

The primary uses for which buildings may be erected and used or purposes for which land may be used are as follows:

- Commercial;
- Industries;
- Noxious Industries;
- Places of refreshment for own employees only; and
- Warehouses.

Development Parameters Applicable:

- Maximum Coverage: Other buildings 75%;

- Maximum FAR: - ;
- Maximum Height: 2 Storeys;
- Building lines: Side – 0m (if no services)
Rear – 0m (if no services)
Street – 5m
- Parking: 1 parking space to 100m² floor area.

3.2 Property – Remaining Extent of Portion 9 (a portion of portion 2) of the farm Driefontein 297

3.2.1 Description

Remaining Extent of Portion 9 (a portion of portion 2) of the farm Driefontein 297
Registration Division JS, Transvaal
Measuring 126, 7112 hectares
Held under Deed of Transfer No T 39220/93

3.2.2 Owner

Samancor Ltd

3.2.3 Relevant Servitudes

3.2.3.1 Servitude 1

By Notarial Deed K 443/1963S, the right has been granted to the Town Council of Witbank to convey electricity across the property by means of overhead power lines and together with ancillary right, and subject to the conditions as will more fully appear on reference to the said Notarial Deed.

3.2.3.2 Servitude 2

By Notarial Deed K 1590/1976S, the right has been granted to the Eskom to convey electricity over the property together with ancillary right, and subject to the conditions as will more fully appear on reference to the said Notarial Deed.

3.2.3.3 Servitude 3

By Notarial Deed K 3861/2005S, the property is subject to an underground electric powerline servitude in favour of Highveld Steel and Vanadium Corporation Limited, together with ancillary rights, as will more fully appear on reference to the said Notarial Deed and diagram S.G No 8031/1999.

This servitude determines that during the construction process, the owner shall not construct any buildings, enclosures or other structures or plant any trees or place any materials on or over the servitude area without Highveld's prior written permission, which permission shall not be unreasonably withheld.

In respect of Mineral Rights the servitude determines that should the cables at any time, in any way at all, interfere with, limit or prevent the exploitation of the underlying or neighbouring mineral reserve, the owner shall give notice in writing to Highveld of such entrance and should Highveld not be in a position to offer an alternative solution which is reasonably acceptable to the owner within 90 days a new route over the property shall be agreed upon between the owner and Highveld.

3.2.3.4 Servitude 4

By Notarial Deed K 2871/1997S, a perpetual servitude has been granted to convey gas over the property by means of a gas pipeline and works, as will more fully appear on reference to the said Notarial Deed and diagram S.G No 5199/1995.

This servitude determines that the owner shall not construct any buildings, enclosures or other structures or plant any trees or place any materials on or over the servitude area without Gaskor's prior written permission. Furthermore, the top layer of soil may not be removed in the servitude area without prior written permission of Gaskor. The owner may use the land in the servitude area for agricultural purposes provided that the owner does not dig deeper than 0,50 meter and that no damage is caused to the pipeline or works.

In respect of Mineral Rights the servitude determines that should the pipeline at any time, in any way at all, interfere with, limit the exploitation of the underlying mineral reserve (excluding sand, rock or clay), the owner shall give notice in writing to Gaskor of such entrance and should Gaskor not be in a position to offer an alternative solution which is reasonably acceptable to the owner within 90 days a new route over the property shall be agreed upon between the owner and Gaskor.

3.2.3.5 Servitude 5

By Notarial Deed K 329/1999S, a perpetual servitude has been granted for the installation and erection of the gas pipeline and works over the property in favour of Afrox, as will more fully appear on reference to the said Notarial Deed and diagram S.G No 10706/1997.

This servitude determines that the owner shall not construct any buildings, enclosures or other structures or plant any trees or place any materials on or over the servitude area without Afrox's prior written permission, which permission shall not be unreasonably withheld.

This servitude determines that the owner may use the land in the servitude area for agricultural purposes provided that the owner does not dig deeper than 0,50 meter and that no damage is caused to the pipeline or works, without Afrox's prior written permission.

3.2.4 Zoning Status

Portion 9 of the farm Driefontein 297 JS is zoned "Industrial 2" as per Zoning Certificate, in terms of the Emalahleni Town Planning Scheme 1991, which was issued on 19 September 2007 and attached hereto as Annexure E.

The primary uses for which buildings may be erected and used or purposes for which land may be used are as follows:

- Commercial;
- Industries;
- Noxious Industries;
- Places of refreshment for own employees only; and
- Warehouses.

Development Parameters Applicable:

- Maximum Coverage: Other buildings 75%;
- Maximum FAR: - ;
- Maximum Height: 2 Storeys;

- Building lines: Side – 0m (if no services)
Rear – 0m (if no services)
Street – 5m
- Parking: 1 parking space to 100m² floor area.

3.3 Property – Portion 13 (a portion of portion 3) of the Farm Driefontein 297

3.3.1 Description

Portion 13 (a portion of portion 3) of the Farm Driefontein 297
Registration Division JS, Transvaal
Measuring 1, 4042 hectares
Held under Deed of Transfer No T 39220/93

3.3.2 Owner

Samancor Ltd.

3.3.3 Relevant Conditions

3.3.3.1 Condition 1

The following restrictive condition is placed on the registered owner of the property, in favour of and enforceable by the Transvaal and Delagoa Bay Investment Company Ltd namely that –

- The transferee, its successors in title or assigns shall not be entitled to carry on coal mining operations on or beneath the property.

3.3.4 Servitudes

3.3.4.1 Servitude 1

By Notarial Deed K 1307/1986S, the right has been granted to the Eskom to convey electricity over the property and subject to the conditions as will more fully appear on reference to the said Notarial Deed. The route determination of the said servitude fully appears in Notarial Deed K13/1997S.

3.3.4.2 Servitude 2

By Notarial Deed K 1590/1976S, the right has been granted to the Eskom to convey electricity over the property together with ancillary right, and subject to the conditions as will more fully appear on reference to the said Notarial Deed.

3.3.5 Zoning Status

Portion 13 of the farm Driefontein 297 JS is zoned “Industrial 2” as per Zoning Certificate, in terms of the Emalahleni Town Planning Scheme 1991, which was received on 9 March 2010 and attached hereto as Annexure F.

The primary uses for which buildings may be erected and used or purposes for which land may be used are as follows:

- Commercial;
- Industries;
- Noxious Industries;
- Places of refreshment for own employees only; and
- Warehouses.

Development Parameters Applicable:

- Maximum Coverage: Other buildings 75%;
- Maximum FAR: - ;
- Maximum Height: 2 Storeys;
- Building lines: Side – 0m (if no services)
Rear – 0m (if no services)
Street – 5m
- Parking: 1 parking space to 100m² floor area.

3.4 Property – Portion 12 (a portion of portion 2) of the Farm Driefontein 297

3.4.1 Description

Portion 12 (a portion of portion 2) of the Farm Driefontein 297
Registration Division JS, Transvaal

Measuring 95, 7921 hectares
Held under Deed of Transfer No T 39220/93

3.4.2 Owner

Samancor Ltd

3.4.3 Relevant Conditions

3.4.3.1 Condition 1

The following restrictive condition is placed on the registered owner of the property, in favour of and enforceable by the Transvaal and Delagoa Bay Investment Company Ltd namely that –

- The transferee, its successors in title or assigns shall not be entitled to carry on coal mining operations on or beneath the property.

3.4.4 Servitudes

3.4.4.1 Servitude 1

By Notarial Deed K 1307/1986S, the right has been granted to the Eskom to convey electricity over the property and subject to the conditions as will more fully appear on reference to the said Notarial Deed. The route determination of the said servitude fully appears in Notarial Deed K13/1997S.

3.4.4.2 Servitude 2

By Notarial Deed K 1590/1976S, the right has been granted to the Eskom to convey electricity over the property and to erect a distribution station together with ancillary right, and subject to the conditions as will more fully appear on reference to the said Notarial Deed.

3.4.4.3 Servitude 3

By Notarial Deed K 3316/2003S, Eskom has been granted a perpetual servitude of electric transmission lines over the property substantially in the servitude area subject to

any existing servitude or other real right to convey electricity across the property by means of overhead power lines, as will more fully appear on reference to the said Notarial Deed and Diagram.

3.4.5 Zoning Status

Portion 12 of the farm Driefontein 297 JS is zoned "Industrial 2" as per Zoning Certificate, in terms of the Emalaheni Town Planning Scheme 1991, which was issued on 19 September 2007 and attached hereto as Annexure G.

The primary uses for which buildings may be erected and used or purposes for which land may be used are as follows:

- Commercial;
- Industries;
- Noxious Industries;
- Places of refreshment for own employees only; and
- Warehouses.

Development Parameters Applicable:

- Maximum Coverage: Other buildings 75%;
- Maximum FAR: - ;
- Maximum Height: 2 Storeys;
- Building lines: Side – 0m (if no services)
Rear – 0m (if no services)
Street – 5m
- Parking: 1 parking space to 100m² floor area.

3.5 Property – Portion 27 (a portion of portion 24) of the Farm Driefontein 297

3.5.1 Description

Portion 27 (a portion of portion 24) of the Farm Driefontein 297

Registration Division JS, Transvaal

Measuring 125, 7749 hectares

Held under Deed of Transfer No T 39220/93

3.5.2 Owner

Samancor Ltd

3.5.3 Relevant Servitudes

3.5.3.1 Servitude 1

By Notarial Deed K 1590/1976S, the right has been granted to the Eskom to convey electricity over the property together with ancillary right, and subject to the conditions as will more fully appear on reference to the said Notarial Deed.

3.5.5 Zoning

Portion 27 of the farm Driefontein 297 JS is zoned “Industrial 2” as per Zoning Certificate, in terms of the Emalahleni Town Planning Scheme 1991, which was issued on 19 September 2007 and attached hereto as Annexure H.

The primary uses for which buildings may be erected and used or purposes for which land may be used are as follows:

- Commercial;
- Industries;
- Noxious Industries;
- Places of refreshment for own employees only; and
- Warehouses.

Development Parameters Applicable:

- Maximum Coverage: Other buildings 75%;
- Maximum FAR: - ;
- Maximum Height: 2 Storeys;
- Building lines: Side – 0m (if no services)
Rear – 0m (if no services)
Street – 5m
- Parking: 1 parking space to 100m² floor area.

4. CONCLUSION

4.1 Conditions of Title

The property is subject to various servitudes concerned with electricity distribution and gas pipelines. Note should also be taken of the restrictive condition which is placed on the registered owner which determines that the transferee, its successors in title or assigns shall not be entitled to carry on coal mining operations on or beneath the property.

Furthermore, Samancor must take note of the fact that in certain instances, as discussed hereinabove, prior written permission is required from the person/company in favour of which the servitude has been granted if Samancor wants to construct any buildings, enclosures or other structures or plant any trees or place any materials on or over the specific servitude areas.

It is therefore recommended that the person or company in whose favour the above servitudes have been registered are contacted in order to ascertain whether the said servitudes are still in use, alternatively to obtain their permission for the removal of the restrictive condition. It is recommended that the specialist input of a conveyancer be used in this regard.

4.2 Zoning

The zoning certificates received indicate the purposes for which buildings and land may be erected and used or purposes for which land may be used on the various properties. The zoning for all the abovementioned properties are in order.

4.3 Ownership

During the property search at the Deeds Office, it was found that Portion 19 of the farm Driefontein 297 JS does not exist yet as it has not been registered. The portion was only created in the Deeds Office, but has not yet been registered in anybody's name. I was informed by the Municipality that portion 19 is a consolidation of portions 17 and 18 of the farm Driefontein 297 JS.

It is recommended that Samancor finalises the registration process by registering portion 17 (a portion of portion 9) and portion 18 (a portion of portion 12). Thereafter Samancor

may proceed with the registration of the consolidation of portion 19. The Office of the Surveyor General has already approved and registered all the necessary diagrams. The only thing that is still outstanding to complete the registration process is the necessary consents by the Municipality. In this regard, the input of a conveyancer is recommended.

MARCH 2010

INDEX TO ANNEXURES

- Annexure A – Deed search confirming ownership of portion 19 of the Farm Driefontein 297 JS
- Annexure B – Deed search confirming ownership of portion 8 of the Farm Leeuwpoort 283 JS
- Annexure C – Deed search confirming ownership of portion 122 of the Farm Leeuwpoort 283 JS
- Annexure D – Zoning Certificate for the Remaining Extent of portion 8 (a portion of portion 3) of the Farm Driefontein 297 JS
- Annexure E – Zoning Certificate for Remaining Extent of Portion 9 (a portion of portion 2) of the farm Driefontein 297
- Annexure F – Zoning Certificate for Portion 13 (a portion of portion 3) of the Farm Driefontein 297
- Annexure G – Zoning Certificate for Portion 12 (a portion of portion 2) of the Farm Driefontein 297
- Annexure H – Zoning Certificate for Portion 27 (a portion of portion 24) of the Farm Driefontein 297

ANNEXURE A

Deed search confirming ownership of portion 19 of the Farm Driefontein 297 JS

Property	Owner	Deed/Document	LPI Enquiry	Interdict	Document Request	Transfers	Bulk Properties	User Admin	Billing	
Property Enquiry Details										

Property enquiry results for "JS, 297, DRIEFONTEIN, 19" in the Deeds Registry at "MPUMALANGA "

Property detail:

Deeds registry	MPUMALANGA
Property type	FARM
Farm name	DRIEFONTEIN
Farm number	297
Portion	19
Province	MPUMALANGA
Registration division/Administrative district	JS
Local authority	MBOMBELA LOCAL MUNICIPALITY
Previous description	-
Diagram deed number	DU1000/800 - Municipality [↑]
Extent	800.0000 DUM
LPI Code	T0JS00000000029700019

• net ge-create

Title Deeds detail:

No data found for this query!

Owners detail:

No data found for this query!

Endorsements / Encumbrances:

Endorsement / Encumbrance	Holder	Amount	Microfilm reference	Document copy?
CL-WITBANK CC	-	-	-	Not available
CL-WITBANK TC	-	-	-	Not available
INFO FROM PRETORIA DEEDS REGIS	-	-	-	Not available
JS,297,19	-	-	-	Not available

History:

No data found for this query!

[Back to top of page](#)

Requested by **A0020781** with user reference **None** on: **Monday, 01 February 2010 12:34**

DeedsWeb Version 4.0.1

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ANNEXURE B

Deed search confirming ownership of portion 8 of the Farm Leeuwpoot 283 JS

Enquiry by Property

as at 10:10 on 08/03/2010

Deeds Registry	Mpumalanga
Property Type	Farm
Registration Division	JS
Farm Number	297
Portion Number	8 (Remaining Extent)
Farm Name	Driefontein

Information

Province	Mpumalanga
Registration Division	JS
Local Authority	Mbombela Local Municipality
Previous Description	PTN3-LG619/69
Diagram Deed Number	T28543/947
Extent	20.9096h

Owners

Number of 1	
Person Type	Company
Name	Samancor Ltd
ID Number	192600888306
Title Deed	T39220/1993
Registration Date	19930525
Purchase Price	NIL
Share	
Purchase Date	
Microfilm Reference	2005 1317 1018
Multiple Properties	No
Multiple Owners	No

Endorsements

Number of 10	
Document	K1590/1976S (Contract Servitudes/Minerals/Leases/Pc)
Amount	Unknown
Microfilm Reference	Awaiting Mfilm
Number of 10	
Document	K2870/1997S (Contract Servitudes/Minerals/Leases/Pc)
Amount	Unknown
Microfilm Reference	1997 0560 4070
Number of 10	
Document	K328/1999S (Contract Servitudes/Minerals/Leases/Pc)
Amount	Unknown
Microfilm Reference	1999 0212 1901
Number of 10	
Document	K3816/2000S (Contract Servitudes/Minerals/Leases/Pc)
Amount	Unknown
Microfilm Reference	2000 0791 1448
Number of 10	
Document	K3860/2005S (Contract Servitudes/Minerals/Leases/Pc)
Amount	Unknown
Microfilm Reference	2005 1317 1033
Number of 10	
Document	K443/1963S (Contract Servitudes/Minerals/Leases/Pc)
Amount	Unknown
Microfilm Reference	1986 1431 2097
Number of 10	
Document	CL-WITBANK CC ()
Amount	Unknown
Microfilm Reference	Awaiting Mfilm
Number of 10	
Document	CL-WITBANK TC ()
Amount	Unknown
Microfilm Reference	Awaiting Mfilm
Number of 10	
Document	INFO FROM PRETORIA DEEDS REGIS ()

Amount	Unknown
Microfilm Reference	Awaiting Mfilm
0 of 10	
Document	JS,297,8 ()
Amount	Unknown
Microfilm Reference	1988 1070 0420

History

0 of 1	
Document	T24607/1952 (Transfer)
	Ferrometals Ltd
Amount/Price	Unknown
Microfilm Reference	1993 0508 1504

End of Report

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by Stefv of Cameron Cross Inc.

ANNEXURE C

Deed search confirming ownership of portion 122 on the Farm Leeuwoort 283 JS

Property	Owner	Deed/Document	LPI Enquiry	Interdict	Document Request	Transfers	Bulk Properties	User Admin	Billing	
Property Enquiry Details										

Property enquiry results for "JS, 283, LEEUWPOORT, 122" in the Deeds Registry at "MPUMALANGA "

Property detail:

Deeds registry	MPUMALANGA
Property type	FARM
Farm name	LEEUWPOORT
Farm number	283
Portion	122
Province	MPUMALANGA
Registration division/Administrative district	JS
Local authority	MBOMBELA LOCAL MUNICIPALITY
Previous description	-
Diagram deed number	T86927/1996
Extent	159.6469 H
LPI Code	T0JS0000000028300122

Title Deeds detail:

Document	Registration date	Purchase date	Amount	Microfilm reference	Document copy?
T86940/1996	19960916	-	NIL	1996 1065 3933	<u>Yes</u>

Owners detail:

Document	Full name	Identity Number	Share	Person Enquiry?
T86940/1996	REPUBLIC OF SOUTH AFRICA	-	-	<u>Yes</u>

Endorsements / Encumbrances:

Endorsement / Encumbrance	Holder	Amount	Microfilm reference	Document copy?
CL-HIGHVELD RSC	-	-	-	Not available
INFO FROM PRETORIA DEEDS REGIS	-	-	-	Not available

History:

Document	Holder	Amount	Microfilm reference	Document copy?
T86927/1996	DOUGLAS COLLIERY LTD CRT	CRT	1996 1031 4034	<u>Yes</u>

[Back to top of page](#)

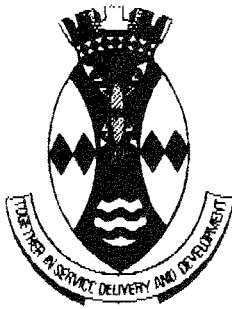
Requested by **A0020781** with user reference **None** on: Monday, 01 February 2010 12:34

DeedsWeb Version 4.0.1

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ANNEXURE D

Zoning Certificate for the Remaining Extent of portion 8 (a portion of portion 3) of the Farm
Driefontein 297 JS



EMALAHLENI

Local Municipality

P.O. BOX 3,
WITBANK
MPUMALANGA
1035

TEL.: 013 690 6911
FAX: 013 690 6207

www.emalahleni.gov.za

Emalahleni, Mandela Street
Tel.: 013 690 6911

Ga-Nala, Quintin Street
Tel.: 017 648 2241

Ogles, Hoofweg
Tel.: 013 643 1027

Refer to: S.SEREPO
Date: 04 MARCH 2010

ZONING CERTIFICATE

This is to certify that Portion 8 of the farm Driefontein-297 JS, is zoned "*Industrial 2*" (Primary uses: Commercial, Industries, noxious industries, places of refreshment for own employees only, warehouses.)

Height : 2 Storeys

Coverage : Other buildings 75%

F.A.R. : -

Building lines : Side - 0m (if no services)
Rear - 0m (if no services)
Street - 5m

Parking : 1 parking space to 100m² floor area

This zoning certificate is issued in terms of the Emalahleni Town Planning Scheme 1991, Local Authority Notice 3120 dated 16 September 1992.

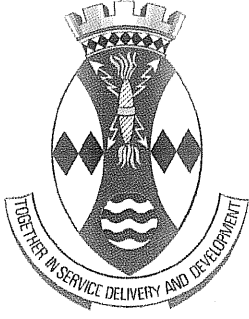

E.G. PARKER

HEAD: SPATIAL PLANNING

VISION: "Striving Together To Be An Excellent Centre For
Service Delivery And Development"

ANNEXURE E

Zoning Certificate for Remaining Extent of Portion 9 (a portion of portion 2) of the Farm
Driefontein 297



EMALAHLENI

Local Municipality

P.O. BOX 3,
WITBANK
MPUMALANGA
1035

TEL.: 013 690 6911
FAX: 013 690 6207

www.emalahleni.gov.za

Emalahleni, Mandela Street
Tel.: 013 690 6911

Ga-Nala, Quintin Street
Tel.: 017 648 2241

Ogies, Hoofweg
Tel.: 013 643 1027

Refer to: S.SEREPO
Date: 19 SEPTEMBER 2007

ZONING CERTIFICATE

This is to certify that Portion 9 of the farm Driefontein-297 JS, is zoned "**Industrial 2**" (Primary uses: Commercial, Industries, noxious industries, places of refreshment for own employees only, warehouses.)

Height : 2 Storeys

Coverage : Other buildings 75%

F.A.R. : -

Building lines : Side – 0m (if no services)
Rear – 0m (if no services)
Street – 5m

Parking : 1 parking space to 100m² floor area

This zoning certificate is issued in terms of the Emalahleni Town Planning Scheme 1991, Local Authority Notice 3120 dated 16 September 1992.


J. BÖTHMA
ACTING CHIEF CITY PLANNER

ANNEXURE F

Zoning Certificate for Portion 13 (a portion of portion 3) of the Farm Driefontein 297

Enquiry by Property

as at 10:14 on 08/03/2010

Deeds Registry	Mpumalanga
Property Type	Farm
Registration Division	JS
Farm Number	297
Portion Number	13
Farm Name	Driefontein

Information

Province	Mpumalanga
Registration Division	JS
Local Authority	Mbombela Local Municipality
Previous Description	PTN3-LG619/69
Diagram Deed Number	T20492/950
Extent	1.4042h

Owners

1 of 1	
Person Type	Company
Name	Samancor Ltd
ID Number	192600888306
Title Deed	T39220/1993
Registration Date	19930525
Purchase Price	NIL
Share	
Purchase Date	
Microfilm Reference	2005 1317 1018
Multiple Properties	No
Multiple Owners	No

Endorsements

1 of 7	
Document	K13/1997S (Contract Servitudes/Minerals/Leases/Pc) Roetebepaling K1307/86s
Amount	Unknown
Microfilm Reference	1997 0095 2309
2 of 7	
Document	K1307/1986S (Contract Servitudes/Minerals/Leases/Pc)
Amount	Unknown
Microfilm Reference	1997 0095 2301
3 of 7	
Document	K1590/1976S (Contract Servitudes/Minerals/Leases/Pc)
Amount	Unknown
Microfilm Reference	Awaiting Mfilm
4 of 7	
Document	CL-WITBANK CC ()
Amount	Unknown
Microfilm Reference	Awaiting Mfilm
5 of 7	
Document	CL-WITBANK TC ()
Amount	Unknown
Microfilm Reference	Awaiting Mfilm
6 of 7	
Document	INFO FROM PRETORIA DEEDS REGIS ()
Amount	Unknown
Microfilm Reference	Awaiting Mfilm
7 of 7	
Document	JS,297,13 ()
Amount	Unknown
Microfilm Reference	1988 1070 0425

History

1 of 1	
Document	T24607/1952 (Transfer)

Amount/Price
Microfilm Reference

Ferrometals Ltd
Unknown
1993 0508 1504

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by Stefy of Cameron Cross Inc.



EMALAHLENI

Local Municipality

P.O. BOX 3,
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MPUMALANGA
1035

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Emalahleni, Mandela Street
Tel.: 013 690 6911

Ga-Nala, Quintin Street
Tel.: 017 648 2241

Ogies, Hoofweg
Tel.: 013 643 1027

Refer to: S.SEREPO
Date: 04 MARCH 2010

ZONING CERTIFICATE

This is to certify that Portion 13 of the farm Driefontein-297 JS, is zoned "*Industrial 2*" (Primary uses: Commercial, Industries, noxious industries, places of refreshment for own employees only, warehouses.)

Height : 2 Storeys
Coverage : Other buildings 75%
F.A.R. : -
Building lines : Side – 0m (if no services)
Rear – 0m (if no services)
Street – 5m
Parking : 1 parking space to 100m² floor area

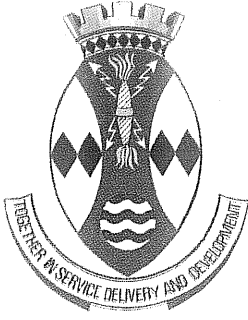
This zoning certificate is issued in terms of the Emalahleni Town Planning Scheme 1991, Local Authority Notice 3120 dated 16 September 1992.


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ANNEXURE G

Zoning Certificate for Portion 12 (a portion of portion 2) of the Farm Driefontein 297



EMALAHLENI

Local Municipality

P.O. BOX 3,
WITBANK
MPUMALANGA
1035

TEL.: 013 690 6911
FAX: 013 690 6207

www.emalahleni.gov.za

Emalahleni, Mandela Street
Tel.: 013 690 6911

Ga-Nala, Quintin Street
Tel.: 017 648 2241

Ogies, Hoofweg
Tel.: 013 643 1027

Refer to: S.SEREPO
Date: 19 SEPTEMBER 2007

ZONING CERTIFICATE

This is to certify that Portion 12 of the farm Driefontein-297 JS, is zoned "**Industrial 2**" (Primary uses: Commercial, Industries, noxious industries, places of refreshment for own employees only, warehouses.)

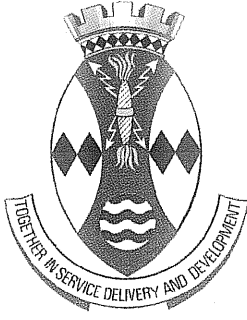
Height : 2 Storeys
Coverage : Other buildings 75%
F.A.R. : -
Building lines : Side – 0m (if no services)
Rear – 0m (if no services)
Street – 5m
Parking : 1 parking space to 100m² floor area

This zoning certificate is issued in terms of the Emalahleni Town Planning Scheme 1991, Local Authority Notice 3120 dated 16 September 1992.


J. BOTHMA
ACTING CHIEF CITY PLANNER

ANNEXURE H

Zoning Certificate for Portion 27 (a portion of portion 24) of the Farm Driefontein 297)



EMALAHLENI

Local Municipality

P.O. BOX 3,
WITBANK
MPUMALANGA
1035

TEL.: 013 690 6911
FAX: 013 690 6207

www.emalahleni.gov.za

Emalahleni, Mandela Street
Tel.: 013 690 6911

Ga-Nala, Quintin Street
Tel.: 017 648 2241

Ogies, Hoofweg
Tel.: 013 643 1027

Refer to: S.SEREPO
Date: 19 SEPTEMBER 2007

ZONING CERTIFICATE

This is to certify that Portion 27 of the farm Driefontein-297 JS, is zoned "**Industrial 2**" (Primary uses: Commercial, Industries, noxious industries, places of refreshment for own employees only, warehouses.)

Height : 2 Storeys

Coverage : Other buildings 75%

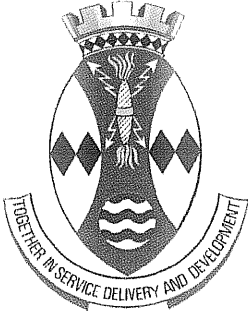
F.A.R. : -

Building lines : Side – 0m (if no services)
Rear – 0m (if no services)
Street – 5m

Parking : 1 parking space to 100m² floor area

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Ogies, Hoofweg
Tel.: 013 643 1027

Refer to: S.SEREPO
Date: 19 SEPTEMBER 2007

ZONING CERTIFICATE

This is to certify that Portion 19 of the farm Driefontein-297 JS, is zoned "**Industrial 2**" (Primary uses: Commercial, Industries, noxious industries, places of refreshment for own employees only, warehouses.)

Height : 2 Storeys

Coverage : Other buildings 75%

F.A.R. : -

Building lines : Side – 0m (if no services)
Rear – 0m (if no services)
Street – 5m

Parking : 1 parking space to 100m² floor area

This zoning certificate is issued in terms of the Emalahleni Town Planning Scheme 1991, Local Authority Notice 3120 dated 16 September 1992.


J. BOTHMA
ACTING CHIEF CITY PLANNER