Proposed Aluminium Pechiney Smelter within the Coega IDZ
Draft Environmental Impact Report

Public Participation Process
Agenda

- Welcome & Introduction
- Purpose of this Meeting & Procedure
- Brief Project Background
- Overview of the EIA & Public Participation Process
  - Questions and Clarity on Input
- Feedback on the Draft Environmental Impact Report (EIR)
- Update from the Coega Development Corporation
  - Questions and Clarity on Input
- Issues & Comments from the Floor
Meeting Procedure

- Put cell phones off
- The facilitator chairs the meeting
- Only one person speaks at a time
- Raise your hand and wait for the facilitator to acknowledge you before you speak
- A speaking order will be followed
- State your name clearly before you speak
- Everyone is entitled to an opinion - Be tolerant
- Use the language of your choice
- No arguing
- Express your feelings don’t demonstrate them
Objectives of the Meeting

- To update I&APs on the project and EIA Process
- To provide an overview of the Public Participation Process for the Draft EIR
- To provide I&APs with a summary on the key findings of the Draft EIR
- To obtain comments from I&APs on the Draft EIR
Aluminium Pechiney’s proposed project
Introduction and Background

- **Who** - Aluminium Pechiney, French based company
- **What** - Proposal to Construct & Operate an aluminium smelter
  - Import raw materials & export approx. 485 000 tons of aluminium
- **Where** - Metallurgical Cluster, Coega Industrial Development Zone, PE
Project rationale & site selection

- Anticipated global increase of 2.5% per annum for the demand for aluminium
- Identified and assessed 11 potential sites internationally
  - Energy Supply
  - Site - topography, port & road infrastructure
  - Ecological and social site sensitivity
  - Raw Materials & Metal logistics
  - Risks inherent to the country - political stability
Outcome of site selection

- Three shortlisted sites: South Africa (Coega), Australia & Argentina
- Further engineering, planning and environmental studies underway at Coega & the Australian site
# Project overview

| **Technology** | AP50 technology  
Single potline: 336 pots |
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<tr>
<td><strong>Production capacity</strong></td>
<td>485 000 tonnes Al/yr</td>
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| **Primary raw materials** | Alumina, aluminium fluoride,  
petroleum coke, liquid pitch, heavy fuel oil |
| **Electricity demand** | Approx. 860 MW |
| **Water usage** | Approx. 600 000 m³/year |
| **Direct employment** | Construction: 6000 peak  
Operation: 1000 (including 200 – 300 permanent subcontractors) |
| **Project schedule** | Construction: 2003 – 2005  
Operation: 2006 onwards |
EIA and Public Participation Process

Sandy & Mazizi Consulting
Framework for the EIA Process

- SA Constitution Act No 108 of 1996
- Environment Conservation Act No 73 of 1989
  - EIA Regulations R1182-R1184 in terms of Sections 21, 22 & 26 of Environment Conservation Act.
- National Environmental Management Act No 107 of 1998
- Guidelines and manuals issued by the Government
- International Best Practice
In terms of the Scheduled Processes listed in Appendix 8 of the *Guideline Document* for the EIA Regulations (DEAT, 1998), the main process applicable to the proposed project is:

- (32) **Aluminium processes**: That is to say, processes in which:
  - (a) aluminium is produced from its oxide by means of an electrolytic furnace.
Environmental Impact Assessment (EIA) Process

- Scoping
- Specialist studies
- Environmental Impact Report
- Public review
- Decision-making
Responsibilities of the various roleplayers in the EIA process

- **Aluminium Pechiney (Applicant):**
  - Appoints suitable, independent consultants and provide Consultants with the relevant information to conduct the EIA effectively.

- **CSIR & Sandy & Mazizi Consulting (Consultant):**
  - Be independent with no vested interest and ensures that all issues raised are addressed or responded to.

- **Interested and Affected Parties (I&APS):**
  - Identify issues and alternatives, comment review reports during various stages of the process.

- **Relevant Environmental Authority (Provincial DEAE&T):**
  - Compliance with regulatory requirements, evaluation/review and decision-making.
PUBLIC PARTICIPATION PROCESS

STAGE ONE: Consultation with I&APs & Public Meeting
- Advertisement to Register (14 Days)
- Distribute Briefing Paper & Question & Answer Book
- Identification of & Consultation with I&APs
- Draft Issues Trail
- April - May 2002

STAGE TWO: Draft ESR and Public Meeting
- Inclusion of I&AP issues Trail in Draft Scoping Report
- Public Meeting
- Distribution of Draft Scoping Report to public places for comment (21 Days)
- May - July 2002

STAGE THREE: Draft EIR for Comment & Public Meetings & Open Days
- Development of I&AP Response trail for inclusion in the Draft EIA
- Release of Draft EIA for Public Comment (28 Days)
- July - Dec 2002

STAGE FOUR: Focus Group Meetings for Draft EIR
- Focus Group Meetings with I&APs to review impacts and mitigatory measures
- I&AP comments on Draft EIR
- July - Dec 02

STAGE FIVE: Final EIA and Public Participation Report
- Final Public Participation Report and EIA submitted to authorities for their response
- December 2002

Ongoing Communication and Capacity Building with I&APs

Tracking of Issues and Concerns
EIR PHASE
(July 2002 - November 2002)

Public Participation

• I&AP comment period till 21 October (28 days)
• Open Days, Public Meetings & Focus Group Meetings
• Comments Report
• Finalise Environmental Impact Report
• Submit Final EIR to authorities
• Record of Decision (ROD)
• Opportunity to appeal ROD
Draft Environmental Impact Report (EIR)
Aim of the EIA:
Promote sustainable development

ECONOMIC GROWTH

BIOPHYSICAL INTEGRITY

SOCIAL EQUITY

- Materials handling & solid waste
- Air quality & human health
- Air emission impacts on plants & agriculture
- Water use & liquid waste
- Water discharges to the marine environment

- Traffic & transportation
- Noise
- Visual impacts
- Social Impacts

SUSTAINABLE DEVELOPMENT

- Macro-economics
Significance of negative impacts:
Determined by specialists

- “High” – exceeds regulations/guidelines, potential show-stopper/fatal flaw
- “Medium” – within legal limits; where possible must be mitigated
- “Low” – measurable, well within limits, little change in status quo
Materials handling and solid waste

Key findings:
- Best available technology applied in materials handling
- Minimisation of waste generation through internal recycling of by-products
- Negligible impact on spare landfill capacity (general and hazardous waste sites)

Key recommendations:
- Processing of spent potlinings in cement or limekilns
- Recycling of solid waste to be promoted during operations – opportunity for SMMEs.
MATERIALS HANDLING EQUIPMENT:

Alumina being unloaded
Air quality

**Key findings (worst case scenarios):**
- Best available technology used in emissions abatement.
- Air emissions do not exceed international, South African or IDZ guidelines.
- $\text{SO}_2$ emissions (near smelter) are 30% of allowable emissions as gazetted in December 2001.
- Potential impacts on human health are negligible or of low significance.

**Key recommendations:**
- Use of low sulphur petroleum coke (acceptable quality).
- Replacement of heavy fuel oil with gas if option is available in future.
Air dispersion modelling results for SO$_2$
Air emission impacts on vegetation and animals

Key findings (worst case scenarios):
- $SO_2$ and HF do not exceed tolerance thresholds for vegetation beyond IDZ boundary.
- Impact of air emissions on vegetables, citrus and livestock is negligible and of low significance.
- Medium impact on indigenous vegetation in IDZ (near smelter) – implications for fauna e.g. rare butterflies

Key recommendations:
- Limited potential for practical mitigation.
Water use and liquid waste

Key findings:
- Smelter will not significantly reduce spare capacity of the Nooitgedacht Water Treatment Works (6%).
- Onsite stormwater management plan reflects best practicable environmental option: lined interceptor pond and attenuation dam.
- Levels of fluoride in process wastewater and stormwater will exceed DWAF water quality guidelines (1mg/l).
- Uncertainty regarding groundwater resources onsite.

Key recommendations:
- Combined process wastewater and stormwater should be discharged directly to the marine environment.
Proposed stormwater management system
Water discharge to the marine environment

Key findings:

- Compliance with DWAF marine water quality guidelines achieved for most constituents within 200m mixing zone from discharge point.
- Exceptions are Al, Cu, Zn. Significance of impacts is low due to expected biogeochemical behaviour of constituents.
- Sediment quality thresholds for CN, Cd and Zn exceeded in a short time period.

Key recommendations:

- Discharge combined process wastewater and stormwater into the Port of Ngqura.
- Dredging of surface sediments before sediment quality guidelines are exceeded.
Dispersion modelling of wastewater discharge to sea
**Traffic and transportation**

**Key findings:**
- Potential negative impacts generally of low significance.
- Some capacity constraints at critical road sections and intersections during construction. Upgrades planned and need to be implemented by CDC.

**Key recommendations:**
- Investigation of feasibility of larger trucks and the rail option for transporting ingots to the port.
Noise

Key findings:
- With mitigation noise during construction is of low-medium significance.
- Smelter incorporates best available technology for reducing noise during operations.
- Noise emissions during operations within South Africa and World Bank (70 dBA) noise guidelines for industrial areas.

Key recommendations:
- Retention of vegetated buffer zone (approx 70-100m) within boundary of the smelter site to reduce sound propagation.
Comparative noise levels (dBA)

- **Threshold of pain**: 140 dB
- **Jet aircraft 250m overhead**
- **Hazard to hearing**: 120 dB
- **Heavy truck at 40km/h**
- **Communication becomes difficult**: 100 dB
- **Passenger car at 60km/h**
- **General office**: 80 dB
- **Quiet bedroom**: 60 dB
- **60 dB**
- **40 dB**
- **20 dB**
Visual impacts

Key findings:
- Smelter will be visually prominent due to its location and size.
- Negligible negative impact on the Greater Addo National Park due to the distance (16 km).
- Impact significance reduced in the context of future IDZ development.

Key recommendations:
- Review of final layout and architectural design of the smelter (including colour) to ensure inclusion of EIA mitigation measures and compliance with CDC’s visual guidelines.
Modelled view of the smelter from the N2 bridge (2.5 km from smelter)
Social impacts

Key findings:
- Positive impacts of high significance: employment creation (lower during operations), use of local labour, skills development and opportunities for SMME development.
- Negative impacts of high significance: inmigration of job-seekers and spread of HIV/AIDS.
- Negative impacts are not solely attributable to the Aluminium Pechiney development.

Key recommendations:
- A Corporate Social Investment Programme should be developed in consultation with stakeholders.
- Develop opportunities for SMME development in conjunction with existing institutions and initiatives.
Macro-economics

**Key findings:**
- Total direct investment of approx $1 billion (construction)
- Total investment approx $2 billion (includes financing costs etc)
- Approx 36% of total investment to be financed by South Africa.
- Construction: 36 000-57 000 direct, indirect, induced jobs (SA)
- Operations: 9 000-16 000 direct, indirect, induced jobs (SA)
- Positive contribution to national GDP (0.25% - 0.3%) and government revenues

**Key recommendations:**
- For authorities: An actuarial study is required to fully understand and manage the financial flows on the SA economy.
- For Pechiney: Triple-bottom line accounting and reporting.
Other environmental issues

Emissions from electricity generation:
- Additional generation capacity would be required to meet the electricity demands of the smelter.
- Electricity generation for the smelter will contribute 2% to national greenhouse gas emissions.

Construction of conveyor corridor:
- Clearance of conveyer belt corridor will have a negative impact of medium significance on Mesic Succulent Thicket.
- Recommendation for CDC: Minimise loss of sensitive vegetation during cut-and-fill operations.
# AP permit & licence requirements

<table>
<thead>
<tr>
<th>Permit/licence</th>
<th>Details</th>
<th>Govt dept</th>
<th>Legislation</th>
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<tbody>
<tr>
<td>Waste disposal site permit</td>
<td>Onsite storage of SPLs</td>
<td>DWAF</td>
<td>ECA, 1989</td>
</tr>
<tr>
<td>MHI permit <em>(may be required)</em></td>
<td>Determination of MHI status via risk assessment</td>
<td>Dept. of Labour</td>
<td>OHSA, 1993</td>
</tr>
<tr>
<td>Registration certificate for air emission</td>
<td>Required for scheduled processes</td>
<td>DEAT</td>
<td>APPA, 1965</td>
</tr>
<tr>
<td>Water licence</td>
<td>Interceptor pond and attenuation dam</td>
<td>DWAF</td>
<td>NWA, 1998</td>
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Summary: Environmental costs and benefits

- Preferential employment of local labour (+)
- Development through Corporate Social Investment programme (+)
- Visual impact on scenic quality (-)
- Induced migration during construction (-)
- Potential spread in HIV/AIDS (-)
- Greenhouse gas emissions from smelter operations & electricity generation (-)
- Impacts of fluoride emissions on vegetation within the IDZ (-)
- Possible need for dredging of surface sediment in port to remove accumulated contaminants (-)
- Impact on balance of payments (+/-)
- Contribution to local and national government revenues (+)
- Contribution to local and national GDP (+)
- Increased investor confidence (+)
- Income generation and employment (+)
- Opportunities for training and skill development (+)
- Opportunities for SMME development (+)
- Noise and traffic impacts from trucking of ingots (-)
- Impacts of water usage (-)
Aluminium Pechiney’s response to the findings of the EIA
Pechiney’s key follow-up actions to fully establish the project

- Finalise local agreements with Coega Development Corporation (CDC) and National Ports Authority (NPA)
- Obtain Record of Decision (ROD) and necessary environmental permits/licences
- Secure project financing
- Establish stakeholder communication programme
THANK-YOU