Kolwezi Tailings Project - A Case Study
September 15th 2004, UNESCO, Paris
Kolwezi – Key Features

• Third largest cobalt resource worldwide
• Potentially world’s largest and lowest cost cobalt producer (Estimated at $2.15/lb)
• Low cost copper producer (Estimated at 37c/lb)
• Anticipated very long resource life (>35 years)
• Low operating risks
• Established infrastructure
• Environmentally & socially enhancing
• Adastra owns 82.5% of this world class asset
Kolwezi - Project parameters

• Throughput: 3 million tons per annum
• Production: 42,000 tpy Copper, 7,000 tpy Cobalt
• Estimated total capital cost: $306.8 million
Key Project Components

- Resource of 112.8mt at 1.49% copper and 0.32% cobalt in two areas of tailings deposits,
- Mining using high pressure water
- New rail spur from existing line
- New Process plant, including sulphur burning acid plant
- Acid leach, Solvent Extraction and Electro Winning recovery methods
- Metal recoveries of 76% cobalt and 93% copper
- Metal qualities of >99.9% for copper and cobalt
- New tailings dam to be constructed
The Democratic Republic of Congo
DRC - New Mining Code now in effect
Environmental & Social Studies

- Environmental Audit to identify potential liabilities from past mining activities, Nov 2002
- Scoping report including Social Scan to identify likely issues for the Environmental and Social Impact Assessment (ESIA) process, Jan 2004
- Environmental and Social Policies approved by Board, April 2004
- Commencement of ESIA process, using World Bank Group (WBG) policies, guidelines and procedures.
Existing natural environment

- Legacy of 100 years of mining activity; extensive pits, waste rock dumps and tailings deposits
- Town of 200,000 in close proximity
- Several villages in Concession Area
- Human pressure on natural resources
- Shifting agriculture
- Main river valley filled with tailings
- Extensive air pollution from wind-blown tailings
Existing Social Environment

• Once good infrastructure now poorly maintained - roads, water supply and management, schools, hospitals
• State Mining company previously provided a high level of social support
• Very high unemployment
• Juxtaposition of municipal and traditional authorities, with different roles and responsibilities
• Skilled work force
• Very high expectations
Environmental & Social Policies

• Environmental Policy
• Community Development Policy
• Health & Safety Policy
• Employment Policy

• Each includes a Policy statement, a short section on Implementation and Specific Goals
• Can be viewed on our website, www.adastramin.com
ESIA Process

• Three main parts:
  • Biophysical environment
  • Social environment
  • Public Involvement

• Reports will be produced for Department for the Protection of the Mining Environment (DPEM) and as part of Feasibility Study
Biophysical studies

• Air quality, gaseous and particulate
• Surface water quality, flows
• Groundwater quality and hydrogeological model
• Flora and fauna, including ethnobotany
• Noise
• Archaeology and ethnology
• Geology
• Soils and landuse
Social Studies

• Surveys of villages within the Concession
• Census of affected people
• Inventory of assets and land holdings
• Collect and collate background socio-economic data
• No relocation of villages required
• Input to Resettlement Action Plan for fields and crops
Public Involvement

• A key theme of the proposed project is to keep local populations informed and to take into account their comments.
• A series of scoping meetings to identify interested and affected parties, May/June 2004.
• Three weeks of meetings with national, regional and local authorities, traditional chiefs, villagers, NGOs and other interested parties July/August 2004.
• Public Scoping Report currently being developed.
• Continual feedback via Community Liaison Officers.
Work in Progress

• Close liaison with Engineering Team
• Development of Environmental Design Criteria based on WBG policies, guidelines and procedures and industry best practice
• Input to siting, design and performance of operations
• Iteration with project design to optimise environmental, technical and economic solutions
Construction and beyond

• Adastra is committed to an Environmental Management Plan to cover the construction, operation and closure of the operation
• Periodic and systematic environmental audits will be carried out
• Awareness and preparedness for possible emergencies will be promoted
• Open and constructive communication and participation with employees, government and local communities
Kolwezi - Potential Ownership Structure

![Diagram showing ownership structure]

1 Option
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