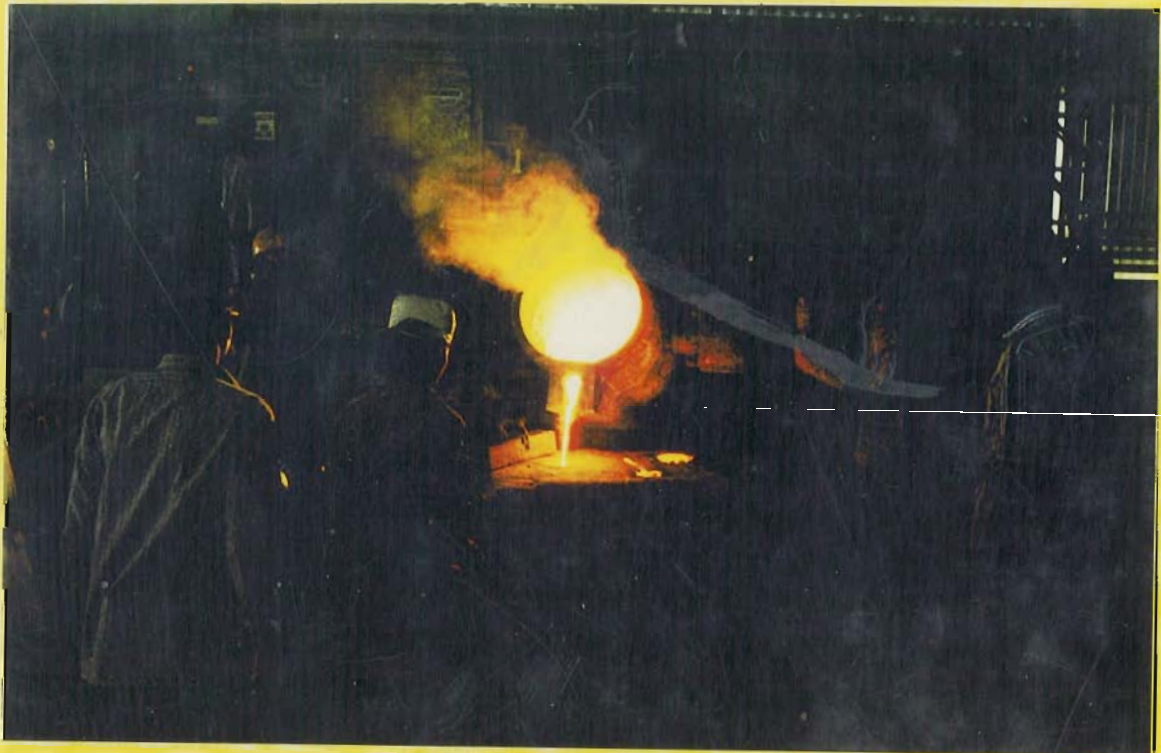


PR22

EIA-TR/11/OCT1998

RAPID ENVIRONMENTAL IMPACT ASSESSMENT OF ULTIMATE ALLOYS (P) LTD COIMBATORE



**Salim Ali Centre For Ornithology & Natural History
Coimbatore, Tamil Nadu
1998**

SACON Library



PR22

RAPID ENVIRONMENTAL IMPACT ASSESSMENT OF ULTIMATE ALLOYS (P) LTD COIMBATORE



Project team

P. A. Azeez, R Sivakumar, S Bhupathy, D Stephen, R Mohanraj

and

P Kannan



**Salim Ali Centre For Ornithology & Natural History
Coimbatore, Tamil Nadu
1998**

Chapter 1

BACKGROUND

| | |
|------------------|-----|
| 1.1 Introduction | - 1 |
|------------------|-----|

Chapter 2

THE PROJECT

| | |
|---|-----|
| 2.1 Location of the plant | - 3 |
| 2.2 Layout of the plant | - 3 |
| 2.3 Production facilities and equipment | - 3 |
| 2.4 Production Capacity | - 5 |
| 2.5 Raw material | - 5 |
| 2.6 Manufacturing process | - 7 |

Chapter 3

THE STUDY

| | |
|---------------------------------|------|
| 3.1 Scope | - 10 |
| 3.2 Study area and its environs | - 10 |
| 3.3 General methodology | - 10 |
| 3.3.1 Hydro-meteorology | - 11 |
| 3.3.2 Air quality | - 11 |
| 3.3.3 Noise | - 12 |
| 3.3.4 Water quality | - 12 |
| 3.3.5 Soil quality | - 14 |
| 3.3.6 Flora | - 14 |
| 3.3.7 Fauna | - 15 |

Chapter 4.0

ENVIRONMENTAL STATE OF THE AREA

| | |
|---|------|
| 4.1 Topography | - 17 |
| 4.2 Hydro-meteorology | - 17 |
| 4.3 Ambient air quality | - 19 |
| 4.4 Noise | - 21 |
| 4.5 Water quality | - 22 |
| 4.6 Geology and soil quality | - 23 |
| 4.7 Floristic composition in the study area | - 25 |
| 4.7.1 The project site | - 25 |
| 4.7.2 The environs | - 25 |
| Plains | |
| Road sides | |

| | |
|---|------|
| Cultivated fields | |
| Aquatic vegetation | |
| 4.8 Fauna in the project site and environs | - 29 |
| 4.8.1 Amphibians and reptiles | - 29 |
| 4.8.2 Birds and Mammals | - 31 |
| 4.8.3 Bird species diversity | - 32 |
| 4.8.4 Endangered species | - 33 |
| <u>Chapter 5</u> | |
| IMPACT OF THE PROPOSED PROJECT | |
| 5.1 Impact identification | - 35 |
| 5.2 Project operation | - 35 |
| 5.2.1 Conventional foundry operation | - 36 |
| Pattern, mould and core making | |
| Metal melting and pouring | |
| Shakeout - fettling stage | |
| 5.2.2 Impact of the UAL operation | - 38 |
| Impacts on abiotic environment | |
| Impacts on biotic environment | |
| <u>Chapter 6</u> | |
| MITIGATORY MEASURES AND ENVIRONMENTAL MANAGEMENT PLAN | |
| 6.1 Construction phase | - 42 |
| 6.2 Operation phase | - 42 |
| <u>Chapter 7</u> | |
| SUMMARY, CONCLUSIONS AND RECOMMENDATIONS | - 47 |
| REFERENCES | - 49 |
| ACKNOWLEDGEMENTS | - 53 |
| APPENDICES | - 54 |



Chapter 7

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

1. The Ultimate Alloys (Private) Limited (UAL) is a SSI unit located in Kannampalayam village, Palladum thaluk, Coimbatore. They manufacture castings of various grades of ferro-alloys. The moulds are made of silica sand, bonded with CO₂ cured Sodium silicate.
2. The major raw materials for UAL are foundry returns, scraps of stainless and high carbon steel, turnings and borings from other industries and, used and damaged metal items suitable for recycling. Large quantity of high silica sand (sea sand), refractory materials such as fireclay and sodium silicate is also required.
3. The area falling within ten kilometer radial distance from the project site, assumed as the impact zone of this project were studied intensively. The area is mostly agricultural land, human habitations, fallow lands and built-up area. The dominant vegetation is plantations and agricultural lands. The faunal species found in the study area are highly adaptable and have wider distribution elsewhere in India.
4. No wildlife sanctuary is present in the environs of UAL. No perennial water body is also present in the immediate vicinity.
5. The UAL production unit is not expected to release gaseous emissions in a level which may affect the fauna, flora and people inhabiting the vicinity.
6. The project is not expected to release any liquid effluents. The major waste generated during operation is solid wastes, mainly used sand moulds. Approximately 5 tonnes of solid waste is generated everyday. No economically viable method is available for the re-use of the sand from Na₂SiO₃ - CO₂ bonded moulds and cores in founding activities. The use of wasted moulds for land filling is not expected to pose any serious environmental problems.
7. The major pollutants emanating from the operation are metal fumes and NO_x. SO_x is expected from the generator and oil fired heat treatment furnace.

Fume hoods for the induction furnaces, chimneys for the oil fired furnace and air-shot blasting machine are installed. However, installation of a better chimney for the generator and metal fume capture mechanism is suggested.

8. In a long-term perspective, the project does not pose any notable environmental problems. However, it is suggested i) to identify and document the solid waste disposal site and ii) chemical monitoring of the solid waste for leachables.
- 9) To better the environment development of a green belt is suggested. In view of the limited availability of land, a belt extending 3m width may be earmarked along the boundary of the campus. This belt may be planted with trees interspersed with shrubs.