EXECUTIVE SUMMARY

In March 2009, RTB Bor decided to increase the technological utilization of Copper and Sulphur. Based on the proposal of the Serbian government, to decrease the operation costs, as well as resolving long-standing environmental problems, RTB Bor resolved to replace the outdated technology of melting (the standard procedure of obtaining copper) with a new, technology autogenously Flash Smelting by Outoteck Company and build a new plant for production of Sulphuric acid by SNC-Lavalin Inc.

RTB Bor retained the services of SNC-Lavalin Inc. to perform the feasibility studies of the project. During the project implementation phase, RTB Bor requested SNC-Lavalin to update the Environmental and Social Impact Assessment of the demolition and construction phase of the project in order to comply with the requirements of the Canadian agency Export Development Canada (EDC) and qualify for additional project financing.

RTB Bor Technical Managers and Ecology Directors collaborated with the team of experts composed by Professors and Doctors from the Faculty of Technology and Metallurgy of the University of Belgrade specialists in Metallurgy and Environment, and the Environmental team from SNC-Lavalin to elaborate the present SEIA according to EDC Environmental guidelines. This document summarizes the main aspects discussed in each Chapter of the SEIA.

VOLUME 1 – MAIN REPORT

Chapter 1, Introduction, presents the General Background and Historical perspective of the project as well as the project Objectives and Scope and presents the overview of the Government of Serbia Regional Development project, the RTB Copper Smelter Modernization and other RTB modernization and reconstruction initiatives.

This chapter includes a description of the project location, the existing documents on the area of the project, and the planning of the project, the Contributors and authors of the SEIA and a detail of the content of the Social and Environmental Impact Assessment which is presented in two volumes, Volume 1: Main SEIA Report and Volume 2: Technical Support Documents. **Figures E1 and E2** shows the project's regional and local setting.

Figure ES 1 - Project Regional Location

FIGURE ES 2 - Local Setting

Chapter 2, Policy, Legal and Administrative Framework, enumerates and summarizes the Environmental Laws and Regulations applying to the Environmental Impact Assessments, including the EIA Directive and related legislation at national and international level.

Serbian Law on environmental impact assessment (Off. Jour. of RS, No. 135/04 and 36/09) is in the process of being integrated with Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 97/11/EC and by Directive 2003/35/EC ("EIA Directive").

The EIA Directive has been fully transposed in Serbia through the Law on EIA No 135/04 implemented by the following: 1) Decree No. 114/2008 that prescribes list I-projects for which an impact assessment is mandatory (required); 2) list II-projects for which an impact assessment may be required; 3) as Regulation 69/2005 on the content of application for determining whether or not EIA is required, and of application for determining scope and content of EIA study.

General Environmental Regulations

General regulations are comprised of four important laws:

- **Environmental Protection Law** which regulates environmental issues.
- **Law on Environmental Impact Assessment** which regulates the environmental impact assessment process.
- **Law on Strategic Environmental Assessment** which regulates the conditions, methods and processes of how the impact assessment and programmes are to be executed.
- **Law on Integrated Pollution Prevention and Control** which regulates the conditions and process of granting permits for installations and activities that may have adverse effects on human health, environment or material resources.

General Regulations include:

- The Constitution of the Republic of Serbia (Off. Jour. of RS, No. 98/06).
- Law on environmental protection (Off. Jour. of RS, No. 135/04 and 36/09).
- Law on environmental impact assessment (Off. Jour. of RS, No. 135/04 and 36/09).
- Law on environmental protection fond (Off. Jour. of RS, No. 72/09).

- Law on strategic environmental impact assessment (Off. Jour. of RS, No. 135/04).
- Law on Integrated environmental pollution prevention and control (Off. Jour. of RS, No. 135/04).
- Convention on environmental impact assessment in a transboundary context (Off. Jour. of RS, No. 135/04 and 102/07).
- Regulation of content of Environmental impact assessment (Off. Jour. of RS, No. 69/05).
- Decree on content and content and manner of managing the information system of environmental protection, methodology, structure, common grounds, categories and levels of data collection, as well as the content of information that are regularly and mandatory presented to the public (Off. Jour. of RS, No. broj 112/09).
- Decree on establishing the list of projects for which impact assessment is mandatory and the list of projects that may require environmental impact assessment (Off. Jour. of RS, No. 84/05).
- Regulation of the request content for the necessity of impact assessment and content requirements for determining the scope and content of environmental impact assessment (Off. Jour. of RS, No. 69/05).
- Regulation of public access procedure, presentation and public discussion of the environmental impacts assessment of (Off. Jour. of RS, No. 69/05).
- Regulation of the content, format and manner of keeping public records of implemented procedures and adopted decisions on the environmental impacts assessment (Off. Jour. of RS, No. 69/05).
- Regulation on Technical Commission work for evaluation of environmental impacts assessment (Off. Jour. of RS, No. 69/05).
- Decree on contents of measures of adaptation of operation of existing facilities or activities by prescribed conditions (Off. Jour. of RS, No. 84/05).
- Decree on the types of activities and facilities for which integrated permit is issued (Off. Jour. of RS, No. 84/05).
- Decree on the criteria for determining best available techniques for the implementation of quality standards, as well as for determining the emission limit values in the integrated permit (Off. Jour. of RS, No. 84/05).

- Decree on establishing the dynamics of submitting requests for issuing integrated permit (Off. Jour. of RS, No. 108/08).
- Decree on establishing the criteria for determining the status of the endangered environment and priorities for restoration and remediation (Off. Jour. of RS, No. 22/10).
- National program for environmental protection (Off. Jour. of RS, No. 12/10).
- Decree on determination of activities which affect the environment (Off. Jour. of RS, No.109/09).

Air Pollution

The Law on Air Protection (Off. Jour. Of RS, No. 36/09) contains provisions relevant to air pollution, regulating the management of air quality and determines measures such as how to organize and control the implementation of protection and improvement of air quality.

Air Protection Laws and Regulations include:

- Law on air protection (Off. Jour. of RS, No. 36/09).
- Regulations on determining the Program of air quality control in years 2000 and 2001 (Off. Jour. Of RS, No. 19/00).
- Regulation on limit values, emission measuring methods, selection of sample spots criteria and data collecting (Off. Jour. of RS, No. 54/92, 30/99).
- Regulations on emission limit values, methods and timeframe for measuring and data collecting (Off. Jour. of RS, 30/97,35/97).
- Regulation on conditions and requirements for monitoring air quality (Off. Jour. of RS, 11/10).

Water Pollution

The Law on Waters (Off. Jour. Of RS, No. 30/10) regulates water protection, protection from harmful impact of waters, use and management of waters as goods of public interests, conditions and method of water management activities, and the organization and financing of water management activities.

Water Protection Laws and Regulations include:

- Law on waters (Off. Jour. of RS, No. 30/10.

- Law on water regime (Off. Jour. Of SRJ", No 59/98, and Off. Jour. of RS, No. 101/05).
- Regulations on categorization of water courses (Off. Jour. of SRS, No. 5/68).
- Regulations on systematic water quality monitoring in year 2000 (Off. Jour. of RS, No. 8/00).
- Regulations on contents of technical documentation submitted in the process of applying for water resources compliance and water resources permit (Off. Jour. of SRS, No. 3/78).
- Regulations on the method of determining and maintaining the zones and belts for sanitary protection of potable water supply facilities (Off. Jour. of SRS, No. 33/78).
- Regulations on harmful substances in waters (Off. Jour. of SRS, No. 3 1/82).
- Regulations on methods and minimum number of wastewater quality testing (Off. Jour. of SRS, No. 47/83, 13/84).
- Regulations on conditions for enterprises and other legal persons for performing specific types of superficial and groundwater quality investigations, including wastewater quality investigations (Off. Jour. of SRS, No. 49/90).
- Regulations on conditions and methods for potable water fluorising (Off. Jour. of RS, No. 6/97).
- Decree on determining enterprises and other legal persons that fulfil conditions for performing specific types of superficial, groundwater and wastewater quality investigations (Off. Jour. of RS, No. 16/91).
- Plan on water pollution protection (Off. Jour. of RS, No. 6/91).
- Guidelines on methods and procedures for determining acquired level of treatment for emitted polluted water (Off. Jour. of SRS, No. 9/67).

Soil Protection

There are two main laws pertaining to soil protection:

- **Law on Geological Investigations** (Off. Jour. Of RS, No. 44/95) which regulates conditions for geological research and the use of its results, programming of geological research, and its financing and inspection.

- **Law on Mining** (Off. Jour. Of RS, No. 44/95) which regulates conditions during mining activity on ground, underground, on river or lake bed or under it.

Soil Protection Laws and Regulations include:

- Law on geological investigations (Off. Jour. of RS, No. 44/95).
- Law on mining (Off. Jour. of RS, No. 44/95).
- Law on agricultural land (Off. Jour. of RS, No. 62/06, 65/08, 41/09).
- Law on agricultural and rural development (Off. Jour. of RS, No. 41/09).
- Regulations on permitted amounts of hazardous and harmful substances in soil and water for irrigation and methods of their testing (Off. Jour. of RS, No. 23/94).

Protection of Natural Resources

This law regulates the management of natural resources and is a component of EPL (Off. Jour. Of RS, No. 135/04 and 36/09).

Natural Resources Laws and Regulations include:

- The Law on noise protection (Off. Jour. of RS, No. 36/09)
- Regulations on permitted noise level in the environment (Off. Jour. of RS, No. 54/92)
- Decree on determining organizations that fulfill conditions for measuring noise in the human environment (Off. Jour. of SRS, No. 1/84, 44/84, 44/87, 51/91)

Noise Protection

This law regulates the conditions of noise protection, measurement of noise, access to information about noise, and supervision and other issues regarding noise.

Noise Protection Laws and Regulations include:

- The Law on noise protection (Off. Jour. of RS, No. 36/09).
- Regulations on permitted noise level in the environment (Off. Jour. of RS, No. 54/92).
- Decree on determining organizations that fulfill conditions for measuring noise in the human environment (Off. Jour. of SRS, No. 1/84, 44/84, 44/87, 51/91).

Protection from Waste and Harmful Substances

This law regulates the planning and organization of waste management, the means for handling of waste during its collection, transport, storage, reuse, treatment and dumping, management of specific kinds of waste, and supervision of waste management.

Waste and Harmful Substances Laws and Regulations include:

- Law on waste management (Off. Jour. of RS, 36/09).
- Strategy of waste management for period 2010-2019. Godine ((Off. Jour. of RS, No. 29/10).
- Law on chemicals (Off. Jour. of RS, No. 36/09).
- Regulation on the form required for the issuance the permits for storage, treatment and disposal of waste (Off. Jour. of RS, 72/09).
- Regulations on conditions and methods of selection, packing and keeping of secondary raw materials (Off. Jour. of RS, 55/01).
- Regulations on handling waste products of hazardous nature (Off. Jour. of RS, 12/95).
- Law on explosive substances, inflammable liquids and gases (Off. Jour. of SRS, No. 44/77, 45/85, 18/89, Off. Jour. of RS, No. 53/93,67/93,48/94).
- Regulations on criteria for determining location and disposition of waste materials deposit sites (Off. Sour. of RS, No. 54/92).
- Regulations on permitted amounts of hazardous and harmful substances in soil and water for irrigation and methods of their testing (Off. Jour. of RS, No. 23/94).
- Regulations on methodology for chemical accident risk and environmental pollution assessment preparatory measures and measures for remediation consequences (Off. Jour. of RS, No. 60/94).
- Regulations on handling waste products of hazardous nature (Off. Jour. of RS, No. 12/95).
- Decision on establishing the co-ordination team for chemical accidents of a larger scale (Off. Jour. Of RS, No. 47/97).
- Law on fire protection (Off. Jour. of RS, No. 53/93, 67/93, 48/94, 111/09).

- Regulation of the content of the policy for accident prevention and content of methodology of the Report on safety and Accident protection plan (Off. Jour. of RS, No. 41/10).

Health and Safety

The law regulates the application and improvement of security and health at work of participants working in the process. The law is aimed at prevention of injuries at work, professional diseases and diseases related to work.

- The Law on Security and Health at Work (Off. Jour. Of No. 101/05).
- Law on Health care (Off. Jour. of RS, No. 107/05 i 72/09).
- Regulation on means for personal protection at work and on personal protective equipment (Off. Jour. of SFRJ, No 35/69).
- Regulation on equipment and method in giving first aid in organization of rescue service in case of accidence at work (Off. Jour. of SFRJ, No 21/71).
- Regulation on measures and normative at work on working tools (Off. Jour. of SFRJ, No 18/91).
- Regulation on measures and normative for protection at work from the noise in working rooms (Off. Jour. of SFRJ, No 21/92).

Regulations on Spatial Organization and Construction

The Law on Spatial Plan of the Republic of Serbia (Off. Jour. Of RS, No. 13/96) regulates spatial organization and spatial use in Serbia.

Spatial Organization and Construction Laws include:

- Law on Planning and Construction (Off. Jour. of RS, No. 72/09 and 81/09).
- Law on spatial plan for Republic of Serbia (Off. Jour. of RS, No. 13/96).
- Law on special conditions for granting building permits and utilization permits for certain facilities (Off. Jour. of RS, No. 16/97).
- Energy Law (Off. Jour. of RS, No. 84/04).
- Law on general product safety (Off. Jour. of RS, No. 41/09).
- Law o n standardization (Off. Jour. of RS, No. 36/09).

- The decision on the development of the Regional Spatial Plan Timok, Off. Jour. of RS, No. 15/2009).

Environmental Assessment Procedure in Serbia

The environmental impact assessment law (Off. Jour. Of RS, No. 135/2004) regulates the following: the impact assessment procedure for projects that may have significant effects on the environment, the contents of the Environmental Impact Assessment (EIA) Study, the participation of authorities and organizations concerned, public participation, transboundary exchange of information for projects that may have significant impact on the environment of another country, supervision and other issues of relevance to impact assessment.

Export Development Canada (EDC) - Environmental Review Directive

The Environmental Review Directive sets out the process by which EDC will, before entering into a transaction that is related to a project, determine whether the project is likely to have adverse environmental effects despite the implementation of mitigation measures and, if so, whether EDC is justified in entering into the transaction.

The directive requires EDC to categorize relevant projects on the basis of their potential adverse environmental effects; and categorization determines the nature and extent of environmental information that will be required by EDC in conducting its environmental review of the project, as well as the extent of that review.

Where the directive requires that EDC conduct an environmental review of a project, EDC will use international standards as benchmarks. The directive establishes grounds upon which EDC is justified in entering into a transaction related to a project where that project, despite the implementation of mitigation measures, is likely to have adverse environmental effects.

Where EDC determines that it is unable to obtain sufficient environmental assessment information to conduct its environmental review of a project, EDC will decline to enter into a transaction related to such project.

In conducting environmental reviews, EDC will benchmark projects against one or more relevant environmental standards and guidelines published by the World Bank Group, the European Bank for Reconstruction and Development, the Asian Development Bank, the African Development Bank and the Inter-American Development Bank, any applicable safeguard policies published by the World Bank Group, or any higher international recognized environmental standards such as European Community standards.

IFC/World Bank

The International Finance Corporation (IFC) strives for positive development outcomes in the private sector projects it finances in emerging markets. An important component of positive development outcomes is the social and environmental sustainability of projects, which IFC expects to achieve by applying the Social and Environmental Performance Standards.

For this EIA project consideration has been given to the following IFC policy documents:

- International Finance Corporation, Policy on Social & Environmental Sustainability, April 30, 2006;
- International Finance Corporation Performance Standard 1, Social and Environmental Assessment and Management Systems, April 30, 2006.I
- International Finance Corporation, Guidance Note 1: Social and Environmental Assessment and Management Systems, July 31, 2007

Non-Governmental Organizations

There are many environmental non-governmental organizations in Serbia. Most of NGOs were established during the 1990s, concentrating on environmental awareness raising, environmental education and information dissemination.

Chapter 3, Current Copper Production – RTB BOR, presents a detailed description of the present activities of Copper production performed by RTB Bor. The current production facilities include:

- *Flotation plant Veliki Kirvelj* of the large open pit mine Kirvelj. Mine facilities are located approximately 4km from the town of Bor. The Veliki Krivelj flotation facility has an installed equipment for an annual processing capacity of 10.6 Mt of ore.
- *Flotation plant Bor* (processing of pit ore), is located in the complex RTB Bor. It was built in 1933 and it's the oldest facility for preparation and concentration. Bor flotation plant facilities are located close to the rest of metallurgical facilities. The installed equipment has a processing capacity of 2.5 Mt per year.
- *Flotation Plant Bor* (slag processing) This plant is used for the preparation and concentration of copper from the Jama Bor mine and from raw furnace slag that consists of waste from the process of metallurgical copper concentrate processing in the Bor Smelter. The installed equipment in flotation the plant Bor can meet the annual processing capacity of 900,000 tons of slag.

- *Plant PMS Cerovo and Flotation Bor* (Cerovo Ore Processing). This plant is used for preparation of copper ore from the ore pit Cerovo. This is where the prepared pulp is transferred by hydro-transport to the flotation plant Bor for further processing. The installed equipment in flotation plant Bor is processing capacity of 5.0 Mt per year.

- *Flotation Plant Majdanpek.* This flotation plant is located in the complex of Majdanpek mine, RBM, near open pits, and near the Town of Majdanpek. The Majdanpek mine is located approximately 72km by main road away from the Town of Bor and the RTB complex. The Majdanpek Mine operates fully independent preparation and concentration facilities from those associated with the RTB Bor Complex. The capacity of the installed equipment in flotation plant Majdanpek which is rated at 12.0 Mt per year.

RTB Bor Strategic Plan for Copper Concentrate Production

Strategic development of RTB Bor in the field of mining and copper production will be based on the mass exploitation of copper ore by surface mining method in Bor and Majdanpek mines, as follows:

- In Veliki Krivelj
- On-site Kraku Bugaresku (deposits Cerovo 1 and Cerovo 2)
- Cerovo primary; and
- In pits of the copper mine Majdanpek (Southern and Northern Revir).

A significant factor in the strategic development of RTB Bor will be ore production by pit mining from the existing ore bodies and future exploitation of the deposit 'Borska reka'. Processing ore from the open pit Veliki Krivelj in combination with mining in the bearing Kraku Bugaresku (Cerovo 1 and Cerovo 2) and bearing Cerovo-primary, could reach an annual capacity of the ore flotation of 15.5 × 106 t in Veliki Krivelj.

Study on ore reserves of the deposit 'Borska Reka' is made and certified and their amount is 319,969.179 tons of ore at 0.3% Cu contours with an average content of 0.53% Cu. In the future, this bearing will be a significant resource for obtaining the copper in RTB Bor Company.

Future Strategic Production Plan in RTB Bor Company

Production is planned to continue at the Veliki Krivelj Mine until 2033. Production capacity will be $8{,}5x10^6$ t/year until 2012, and from 2013 to the end of the mine life in

2033 the production rate and processing capacity is projected to increase to 12,5x10^6 t of ore annually.

When ore exploitation is renewed as planned, processing of ore from Cerovo will be carried out in the Veliki Krivelj flotation facilities. Ore excavated from the pit's surface on Cerovo would be crushed and milled in processing objects in Cerovo itself, so the ore (i.e. the pulp processed at Cerovo) will be transported to Veliki Krivelj flotation by a hydrotansport system, where further processing would be conducted on the new flotation concentration equipment. Production capacity in the period 2011-2014 year would be 2.5 x10^6 t of ore per year, and in the period 2015-2033 year would be 5.0 x 10^6 tons of ore per year

Processing of ore from the Bor pit will be conducted in Bor flotation. Processing capacities will grow from 0.264 x10^6 tons of ore per year in 2010, to 0.9 x10^6 t of ore per year during the period from 2013 to 2018.

Slag processing will proceed as before in the flotation Bor. Slag processing capacity will not change and will be at the level of 0.9 tons per year x10^6 in the 2010-2014 period.

Processing of ore from the mine in Majdanpek will take place in existing treatment plants whose capacity will be increased from 3.2 x 10^6 tons of ore per annum in the period 2010-2012 years to 5.0 x 10^6 tons of ore per annum in the 2013-2018 period and 5.5 x 10^6 tons of ore per annum in the 2019-2033 period.

It is planned that the total processing capacity of RTB Bor of 12.864 x 10^6 tons of ore per year in 2010 year will increase to 21.4 x10^6 tons of ore per year by 2015. Between 2016 and the end of production in 2033 the level of production will be maintained at a level of 21.0 x 10^6 tons of ore per year.

Chapter 4, Project Justification, describes the project alternatives including the Status Quo or Do Nothing Alternatives, the alternatives to the proposed Modernization Project and the Alternative Technologies considered for the modernization and Reconstruction of the Smelter and the Sulphuric Acid Plant.

Equipment in the smelter and the sulphuric acid plants is approximately 40 years old and the operations are characterized by high operating costs, non compliance of environmental standards, and under utilization of raw materials. As a result, the smelter is currently operating at a reduced capacity and the by-products produced exceed acceptable limits. During the period 1988 to 1997, 961,600 tons of sulphur or 58.64% was emitted into the atmosphere, 32,798 tons of sulphur or 2% went to the slag and 11,415 tons or 0.69% went to waste acid.

The “Do Nothing” alternative would mean that the metallurgic operation would cease in the spring of 2012 causing negative economic and social consequences for Bor and the

surrounding region. Closures of other facilities related to processing copper, permanent job loss and migration of the population from the Bor area are potential effects if the smelter is not rehabilitated. In addition, if the existing smelter stops production, copper concentrates produced in RTB mines will need to be transported for processing abroad resulting in annual transportation costs of $5.5 to $16 million USD annually. Moreover, recovery of gold, silver, selenium, platinum and palladium which nets $6 million per year will be lost.

The existing technological process of production of copper anode was considered and its limitations were identified. The process consists of roasting in FS batch reactors, smelting in the reverb furnaces, mate converting in standard PS converters, anode refining of blister copper to anode material and casting. Technological off gas that is generated in the process of roasting and converting is transported to the factory for the production of sulphuric acid. Other gases are emitted through the stack into the atmosphere. Such obsolete 'standard' procedures of obtaining copper are characterized by:

- low utilization of technological copper and other metals;
- high energy consumption;
- high operating costs;
- low use of sulphur; and
- non-compliance of environmental standards for emissions and ambient air quality.

New facilities will include a reconstructed smelter located in the area of technology that takes existing roasting and smelting line no. 2 of the smelter. Location for the reconstruction of a smelter and construction of a new sulphuric acid plant was carried out based on the following indicators:

- Lower level of investment because it is the reconstruction of the smelter rather than building new one, and building a new sulphuric acid plant at the location of old one;
- Preserves parts of the existing smelter (leave preparation section, converter department with four PS converters, section of anode refining furnaces with, two casting machines, three 75 ton capacity crane and two small capacity 50 tons);
- All new/modernized facilities are going to be built on the site owned by the company RTB Bor;

- Possession of a license on the site according to the law on planning and building of the Republic of Serbia;
- Proximity to already built infrastructure (road trip and railway), and built transportation infrastructure: two railway tracks in the converter hall and refining;
- Proximity to the factory for the production of technical oxygen, which is owned by Messer that is required to provide technical oxygen for smelting;
- Proximity to compressor department for smelter low and high pressure air supply;
- Storage of metallurgical slag;
- The possibility of easy supply of new units with water, electricity, fluxes;
- There is infrastructure for technological water supply, electricity, telephone communications, computer networks for data exchange, tanks for liquid fuels;
- Storage tanks of sulphuric acid;
- Storage space for fluxes;
- Spare parts warehouses, workshops;
- Built facilities for standard employee bathroom, dressing room, hospital ambulance, etc; and
- Constructed physical facilities for technical protection.

Several studies were undertaken to evaluate different primary smelting technologies. The different technologies evaluated, and alternatives were predominantly high intensity oxygen smelting technologies, namely;

- Outokumpu Flash Furnace Technology; and
- ISA/Ausmelt Top Submerged Lance (TSL) Technology.

Modernization of the existing facility involves replacing outdated technology with autogenic technology by Outotec to produce copper and in addition, build a new factory to produce sulphuric acid. The implementation of new technology is expected to:

- Increase production capacity to 400 000 tons of concentrate per year.

- Provide additional quantities of gold, silver, selenium, platinum and palladium.
- Drastically reduce emissions of sulphur dioxide, dust, arsenic, lead and other pollutants to below the emission limit values (ELV). The emission of sulphur dioxide will be below 125 ug/m3.
- Reduce levels of sulphuric acid, copper, arsenic, antimony, lead, selenium and other substances in treated wastewater to concentrations below the allowable limit.
- Increase recovery of copper in smelter from 93% to greater than or equal to 98%
- Increase production of sulphuric acid which is worth $9 million USD/year to 260,000 tons per year.
- Reduce consumption of coal and oil and reduce the total cost of energy by an average of 26%.

Chapter 5, Project Description, The current smelter modernization project and planned investment scope relates solely to those areas within the Bor smelter and concentrator complex from receipt of road and rail delivered concentrates up to the production of the primary blister copper product and sulphuric acid and steam by-products for export from the complex. Investment in or changes to the existing anode plant and refinery facilities are not included in the current project.

The new smelter project will involve closure of the old roaster / reverberatory furnace technologies and installation of new primary smelting by FSF technology. The existing copper smelter is to be modified to treat up to 400,000 tpa of copper concentrates using the Outotec FSF technology. The new production capacity will be equivalent to about 80,000 tpa of fine copper.

The modernization will also incorporate the installation of a new modern gas collection for the FSF and a single operating PSC, with sulphur dioxide in the process gases fixed to sulphuric acid in a new sulphuric acid plant.

The main process plant currently in operation was seen to be in a reasonable if run-down condition noting, however, that throughput remains substantially below the original plant capacity of about 125,000 t/y copper. Current copper production is about 40,000 tpa. Reverb gases pass via an ESP and fan system to an independent Reverb stack where they are currently vented to atmosphere without any sulphur fixation. The second roaster/reverb smelting line is in very poor condition such that substantial refurbishment and major investment would be required if it were ever intended to restart.

With regard to the gas treatment aspects, the No. 1 acid plant, which is of similar design and capacity to the currently operating No. 2 acid plant, is in a state of major disrepair and has been substantially cannibalised to maintain operation of the No. 2 plant. No. 3 acid plant is a more modern and larger facility with approximately 50% larger capacity however, it is also in a state of major disrepair and its refurbishment is not considered economically viable.

The facility has the following components:

Utilities

- Plant Air and Instrument Air
- Plant Water
- Potable Water
- Demineralised Water
- Steam
- Oxygen Supply

Material Handling and Blending

Material Off-Loading (Existing): Concentrates containing 10% moisture delivered by rail will occur using a rail tippler of 40 ton capacity.

Material Storage (Existing): A ground hopper will receive materials delivered by road. After off-loading, materials will be transferred by a series of conveyors and discharged into concrete bunkers in a covered storage area.

Charge Blending (Existing): There will be 2 blending beds, each with 12 000 t capacities.

Material Transfer: Material is transferred via front end loader, conveyor, diverter, reversible conveyor and weigh feeders.

Concentrate Drying

The drying process will comprise a single rotary steam dryer for indirect heating using saturated steam. The heat released will be conducted through the element wall and into the wet feed mixture bed.

Flash Smelting Furnace (FSF)

The FSF equipment consists of:

- FSF Feed Systems
- Flue Dust Feed to FSF
- Concentrate Burner
- Matte and Slag Tap Holes
- FSF Burners
- Process Air and Combustion Air Fans
- FSF Cooling Water System
- Primary Cooling Water Systems

Peirce-Smith Converter (PSC)

Converter Operation – There will be two PSC's - one converter will be hot and in operation and the second unit on cold/standby maintenance. There will be up to three converter charges per day producing a blister copper for subsequent fire refining in anode furnaces.

Metallurgical Off-Gas Handling

- FSF Off-Gas System
- PSC Off-Gas System

Acid Plant

The acid plant consists of:

- Wet Gas Cleaning System
- Gas Conversion & Absorption
- Preheater System
- Strong Acid Circulation
- Steam Generation System
- Acid Sample System
- Water Cooling Tower

Effluent Treatment Plant

The Effluent Treatment Plant is designed to treat contaminated process flows from the copper smelter and converter gas cleaning and cooling operations. Bleed streams from the respective scrubbers, FSF and PSC will be pumped to the effluent treatment plant raw waste water storage tank.

Slag Treatment Plant

Molten slag from the FSF and PSC's will be transferred to slag cooling pits to allow the slag to harden and for copper minerals to crystallize. The cooled slag will be ripped out of the beds, screened, loaded into the slag concentrator to be screened. Once screened, the slag will be crushed. The final product will be 25mm. Concentrate from the Bor Slag concentrator will be combined with that from the Bor Ore concentrator and be processed through the existing de-watering facility.

Electrical Supply and Distribution

The smelter will be powered from 110kV incoming line and the emergency power will be supplied from the emergency power generators. Emergency power diesel generator of 5.25 kV will provide power for feeding vital process equipment and UPS system of Smelter area. Automatic switchover to emergency system in case of main power failure is included.

Instrumentation and Controls

The control system requirements are developed to include the following:

- Process and Instrumentation Diagrams;
- Instrument List;
- Control Logic Narratives;
- Motor Logic Narratives;
- Instrument Loop Diagrams;
- Installation Details (field instrumentation only);
- Local Instrument Panels (LIP) Arrangements;
- Instrument Location Drawings;
- Junction Box Layouts; Cable List;

- Input/Output List; and
- Instrument Specifications data sheets.

Control rooms are required for operation. Operators will have the capability to safely operate, monitor, and shut down the process and critical equipment from the control room with minimal field operator assistance. Matte, slag and product acid quality and emissions standards will be maintained within specification limits by means of controls provided in the control room.

Building Services

Building Services includes HVAC, Blower Building and Compressor Room, Electrical Rooms, Control Room and Washrooms, Fire Protection and Plumbing & Drainage.

Heating, ventilating and air conditioning design was considered using the guideline fundamentals set out by ASHRAE codes. All heating, ventilating and air conditioning systems will be specified for heavy duty industrial service and the materials used in the construction of these systems will be suitable for corrosive service.

Fire Protection was considered to be tied to the existing facility to conform with the requirements of the project designated Risk Management Consultant, FM Global and NFPA.

Plumbing, sanitary drainage will be tied-up by RTB by utilizing the existing sanitary system of the running metallurgical plant.

Chapter 6 - Environmental Baseline, Provides a detailed description of the existing environment, includingn the local settings, the Physical, Natural Biological and Socio-economic and Cultural environment.

Bor is a town and municipality located in eastern Serbia, with one of the largest copper mines in Europe and it has been a mining centre since 1904, when a French company began operations there. It is the administrative center of the Bor District of Serbia.

TIR smelter complex is located in the Bor District around the municipality of Bor, approximately 160 km far from Belgrade and 20km from Zajecar.

Physical Environment

Physiography & Topography

Bor is located in the valley of the homonym river at elevation of 360m asl in the north (Karpate) half of the geographic coordinates of the region of $44^0$25’ north latitude and $22^0$06’ east longitude. The Bor complex is located in a predominantly hilly to

mountainous area, with elevations of 400-600 m asl. Due to mining works that took place during last century, the morphology has been changed significantly from its original setting.

Climatology & Meteorology

Bor and its surroundings are characterized by continental climate. Owing to its position which is widely open to Vlaska depression, very strong are climate influences from the east. Therefore, climate characteristics in Bor and its surroundings are often quite different from those prevailing in central Serbia. The mountains Crni vrh and Cestobrodica are special climate boundaries.

Meteorological data for the territory of Bor are continuously recorded in the meteorological station near the Copper Institute Bor, and on the mountain Crni Vrh. Annual results for meteorological parameters (air temperature, precipitation, humidity, atmospheric pressure, frequency of winds and wind rose) for period of 10 years, from 1998-2008 are presented.

There are a significant percentage of winds blowing westwards thus pushing smelter facility emissions and particulate towards Bor town. In particular there are several dwellings close to the western boundary of the old tailing ponds that can be affected by significant particulate emissions.

Regional Geology & Geomorphology

Bor region represents one of the most interesting regions in Serbia for its geodiversity. In northeastern Serbia, the Cu (Ag-Au) Bor district is part of the Carpathian-Balkan Arc, the famous metallogenic province that crosses Central Europe and continues on the other side of the Black Sea through the Caucasus and Iran, until western Pakistan as presented in geological maps.

Seismicity

Whole Serbia is in area of moderate seismic activity, with weakest and rarest earthquakes expected in the eastern Serbia. The region of Bor belongs to the zones of seismic intensity I=VII^{o} MCS scale for return period Tr =100 years and I = VIII^{o} MCS scale for return period Tr =1,000 years, according to the state seismic maps.

Soils

Based on available information mining of non-ferrous metals, copper and other, degraded an area of 1,110 ha in Bor. The area of damaged and degraded agricultural land in Municipality Bor is estimated to be about 60.6% of total agricultural land.

The main causes of land degradation are mining and metallurgy, mine pits, landfills for overburden disposal and flotation tailings ponds. Smelting of ore copper produces sulphur-dioxide emissions which lead to soil acidity, dust with high contents of heavy metals and arsenic, destroying vegetation and consequently caused soil erosion. Gas emission from smelter plant damaged soils in almost all villages in Bor municipality, to a lesser or bigger extent.

Soil samples were taken and submitted for chemical analyses to ascertain soil impact. The reported graphs show the results of heavy metal content in the soil samples taken from 10 different sites in the municipality of Bor (Bor, Brestovac, Krivelj, Ostrelj, Slatina, Bucje, Zlot, Sarbanovac, Metovnica and Gornjane-sorted according air distance from Bor). Recorded values of arsenic and copper are below Serbian soil quality standards in Bor. Soil acidity appeared to be a common problem in the whole investigated area. In particular, a pH below 5 was detected in Bor and Brestovac while at the other locations pH values are below 6.

Surface water

Based on available information, there is no significant hydro potential in the municipality Bor. Most of the streams and rivers belong to Timok catchment area, which belong to Danube basin. Terrains in the north- west belong to the catchment area of river Mlava, in the north to the catchment area of river Pek, and in north-east to the area of Veliki Timok (mostly investigated is Crni Timok catchmenet). Mountain massive Crni Vrh (1,027 m) is the watershed of these catchments.

The hydrological situation in the Bor mining region is complex due to the number of waste water discharge points from the three mines and the metallurgical complex combined with sanitary waste water from Bor town and several villages. The whole complex impacts on water streams as, with the exception of settlement of suspended solids at Cerovo mine, at the metallurgical complex there is no treatment of any waste water stream. Borska reka and Kriveljska reka are final destination of effluents of the Jama and Veliki Krivelj drilling activities and of wastewaters from flotation process undertaken in Veliki Krivelj waters from the smelting/refining complex and of untreated municipal wastewater. This resulted in extremly polluted and degraded surface water with respect of pH, suspended solids, copper and iron. Timok water quality decrease abruptly after the inflow of Crna river.

Groundwater

Wells located in the city of Bor are used by the public especially in the dry season. These wells are regularly monitored by the Bor Medical Centre according to their bacteriological status, but only a limited number of parameters are examined, and

according to the Serbian regulation and the EU regulation, no relevant quality problem was identified in groundwater.

Air Quality

Air quality in Bor town is extremely low. Concentrations of particulate are measured daily at the Copper Institute, but less frequently at other locations. Collected samples of particulate are analyzed for heavy metals: arsenic, lead, cadmium, manganese and mercury. Reports are issued monthly and annually. From the prsented data it sould be concluded that prevailing wind direction is from WNW for approximately 28% of the year while calm is for about 50% of the year. As a consequence, Bor town is upwind the industrial area for a significant part of the year.

Monitored data indicate that average sulphur dioxide and arsenic levels in the old town ambient air exceeded Serbian, World Bank and EU air quality standards.

Based on available documentation, Bor represents one of the places with highest air pollution in Serbia due to operation of RTB Bor.

Natural Environment

Natural environment presented in this Section of EIA represents off-site environment.

Out of the total surface of municipality Bor, 86% is under extensive anthropologic influence, and 14% is a surface of preserved nature, of which forests cover the 75% of all preserved nature surface. The municipality Bor is surrounded by natural and different habitats.

Flora and Fauna

The Lazar's Canyon is one of the most important centre of plant and tree diversity on Balkan, as well as tourist center that will not be affected by proposed project.. There are 720 kinds of plants registered in it, which represent 20% of Flora in Serbia and 11% of Flora on Balkan. It is a habitat of 57 endemic species and 50 relict species with their origin form different geological periods. Lazar's Canyon is the only habitat on Balkan where live the adventives plant Pearly Everlasting (Anaphalis margaritacea).

Biodiversity

Exceptional natural values are not well known to citizens of Bor and Serbia. Oriented towards exploitation of copper ore reserves and its processing, citizens of Bor forgot the possibilities of using the restored natural resources. Maybe, thanks to these relations, these resources stayed preserved and now represent the challenge and potential for

sustainable development of this area. Conscience development about natural resources and their importance is necessary for survival of future generations.

Socio-economic/Socio-cultural Environment

The Municipality of Bor is located in the Bor District area, in the southern Serbia. It covers a mostly mountainous area of 856 km^2 and has a population density of 67.2 citizens per km^2. Majority of local population is concentrated in urban areas, especially in the city of Bor, and smaller administrative centers.

Demographic Profile of Bor and Surrounding Area

As it can be noticed from presented data, human population in Bor in the last years is gradually and constantly decreasing. This negative trend, with a growth rate of -6% in Bor is mainly due to the negative economic situation of the area, which caused a migration from the city. In addiction, the recorded number of births is lower than the number of deaths (565 against 780 in Bor).

Employment and Economic Conditions

According to the 2003 census for employment, in Bor there were 290 employees per 1000 inhabitants, of which 95.9% work in private enterprises and public entities/institutions. Women participate with 38.3% of total employees.

The average monthly income in 2003 was 7,940 RSD (approximately 122 EUR), which is considerably lower than the national average monthly income for 2003 of 11,500 RSD (177 EUR). The predominant economic activities are mining and industry. At the beginning of last century, the city of Bor was a small and very poor village in the Bor river valley. Nowadays, approximately 4700 people work in the RTB and approximately 7,000 people are unemployed, facing economic problems.

A number of supporting metal processing industries were developed in Bor and Majdanpek, e.g. Gold factory in Majdanpek, factory of copper pipes, sulphuric acid factory in Bor, and chemical complex in Prahovo.

In the early 2010th there were a total of 4648 workers of the relatively favourable qualification structure (3744 or 80.55% professionals and 904 or 19.45% unqualified workers) employed in the RTB Bor company. However, the age structure was not favourable because there were many workers near retirement age. Therefore, it is necessary to receive younger and better qualified people in RTB Bor in the future. Such a strategy will be provided by the Smelter modernization and reconstruction project.

Human Health and Well-being

RTB Bor activity strongly affects air, water and soil quality and, as a consequence, may influence health of people who may come into contact with the dangerous substances emitted by the industrial activity. Air is certainly the most effective environmental pathway (i.e. the environmental route by which contaminant from the site can reach receptors) : emission from smelter, dust from tailing pond and landfill are transported by wind and may be inhalator by population leaving around and affect ifs health.

Education and Training

Bor town and educational center of the region and has 7 child care, 10 primary schools and 15 regional departments, a special school for handicapped and music school, 6 middle schools (high schools, technical, electro-mechanical and economic and trade) with 24 educational profile, Regional Center for Continuing Adult Education, Regional Center for work rehabilitation and employment invalids, Regional Center for working with young talent, and Technical faculty within the University of Belgrade.

The educational structure of the population is of particular importance for economic development, given the impact that has on the natural movement of population and migration.

Recreation and Tourism

In Bor area there are several recreation and tourism destinations, such as Brastovacka spa, Bora lake, Lazar's (Zlot) and Vernjikica cave. Several majestic mountains surround Bor, including Stol (1165 m) Veliki krš (1148 m) and Crni vrh (1043m).

Cultural or Heritage Features

At October 2009 restored palace of Prince Alexander Karadjordjevic from 19th century, in Brestovačkoj spa was opened. This building will house the Serbian-Romanian friendship and the in future will be the venue for numerous cultural and tourist events.

Bor's Museum of Mining and Metallurgy displays more than 15,000 articles on exhibit, more than any of its kind in Serbia.

Museum of Mining and Metallurgy is a contemporary, modern-equipped and complex museological institution.

Public Health and Environmental Concerns

Mining and metallurgy have the greatest effect on the environment and health of the people. Heavy metals and their compounds are constantly present in the air. Numerous studies in the world point out their harmful effect on health.

Chapter 7, Impact Assessment, describes the methodology and the analysis performed of environmental and social effects, as a result of the project activities, on the Physical, Biological and Socio-economic and cultural environment including the cumulative effects analysis, and the residual or "net" environmental effects that are expected to remain following the implementation of mitigation measures.

The assessment of environmental effects was conducted to be consistent with the Economic Development Canada (EDC), Environmental Review Directive (the "directive") under Section 10.1 of the Canadian *Export Development Act*, Current guidelines and policies of the Canadian Environmental Assessment Agency (CEAA); International Financial Corporation (IFC), World Bank Group Environmental, guidelines for Health, and Safety for Mining, Metal Smelting and Refining; Serbian Law on Environmental Impact Assessment (Off Jour of Republic of Serbia, No. 135/04 and 36/09); and accepted best management practices (BMPs) within the industry.

Factors Considered in the Environmental Effects Analysis

VECs (Valued Ecosystem Components) those aspects or elements of the existing environment that are considered valuable and important to protect against the potential effects of the Project, were used to focus the assessment on important elements of the physical, biological socio-economic and cultural environment that have the potential to be affected by the Project, or conversely might exert an effect on the Project. The VECs assessed in the environmental effects analysis for this Project were defined by the multi-disciplinary project team undertaking the assessment based on:

- Identified regulatory requirements;
- Consultation with regulatory authorities;
- Information derived from published and unpublished date sources;
- Information and comment received during the engagement of local communities;
- Traditional Knowledge surveys conducted within aboriginal communities in the study area– defining features of cultural importance and significance; and,
- Biophysical field surveys.

Methodology for the Environmental Effects Analysis

The environmental effects analysis conducted for this Project considered the Significance of potential environmental effects that are expected to occur based on the application of Best Available Technologies (BAT) in the design and development of the Project, and Best Management Practices being applied during the construction and

operations of the facility.

Environmental effects were categorized as follows:

- Physical environment – land (physiography, geology and soils), water (surface and groundwater resources), and air(climate, air quality, and noise);
- Natural (biological) environment – aquatic and terrestrial habitats;
- Socio-economic environment – present and planned land and resource uses and associated economic activities; and
    - Cultural environment – archaeological, cultural and heritage features including any site or feature of historical significance that could be affected by a physical aspect of the project.

Environmental Effects and Mitigation Measures

The effects analysis was conducted using the categories of VECs and those applied in determining the scope of the assessment and the environmental interactions that are identified under the following categories:

- Physical environment;
- Natural environment; and
- Socio-economic/socio-cultural environments.

Project-specific Best Management Practices will be further developed during detailed design and incorporated into the Construction Environmental Management Plan (CSEMP). A preliminary draft of the CSEMP is provided in Section 8. General environmental protection guidelines are included in the CSEMP.

Analysis of Environmental Effects

The effects analysis criteria were used to demonstrate the extent or severity of the potential change to the environment resulting from the Project activity being assessed based on BAT design principles, and construction and operational procedures based on the application of environmentally appropriate BMPs. The effects analysis criteria applied included:

- Ecological Context – the extent to which a Project activity is expected to affect the biological or physical environment.
- Geographic Extent – the distance which the effect is expected to extend from the footprint of the Project activity and/or the areal extent of the effect.

- Magnitude – the expected strength of the adversity of the effect.
- Duration – the expected temporal nature of the effect (i.e., how long it will last over time).
- Frequency – how often the effect expected to occur over the life of the Project (i.e. is it a one-time event, or does the event repeat)
- Permanence – the extent to which the effect is expected to permanently change the environment, or whether the environmental change that occurred can be reversed.
- Likelihood – the effects assessment conducted for the Project included an indication of the certainty of the effect occurring.

Environmental Effects on the Physical Environment

The analysis of environmental effects on the physical environment is summarized in Table 7-5-1 presented at the end of the Chapter.

The area is a completely disturbed industrial landscape and the smelter is located downslope from adjacent areas of the Town of Bor. The environmental effect on the local landscape and topography rated as low and the overall significance is low.

The effects of construction activities on surface and subsurface soils and bedrock will be limited to the immediate area of the footprint of the construction works required for the new smelter and acid plant and the associated effluent treatment plant. No environmental effect on local bedrock through construction or operation of the proposed plant.

Extent of contaminated surficial soils will be defined through a final geo-environmental report that is to be issued in mid-August. It is anticipated that a significant portion of these soils may be reprocessed with ore due to the high content of Cu. No special mitigation measures required.

Local site area drains to the Bor Pit, with no alteration of the existing surface drainage system. The surficial soils are reasonably permeable and most precipitation appears to infiltrate and there is no significant site runoff. No special mitigation required for construction or operation of the proposed smelter, acid plant and associated waste water treatment plant.

Construction of the proposed facilities will not affect the broader groundwater system that has been impacted by the larger scale historical operations of the RTB Bor - Bor

Complex. For details on groundwater see TSD # 8, Geo-environmental Investigations Report.

The demolition of portions of the existing smelter, acid plant and associated infrastructure facilities to accommodate the proposed improvements will generate construction wastes requiring disposal. The type of demolition waste may require special handling with respect to noise, dust, and health and safety procedures. The Construction Site Environmental Management Plan in Section 8 identifies the estimated amount and type of wastes requiring disposal. The final Geo-environmental Report will identify the extent of on-site contamination and provide recommendations on how it should be handled. Demolition and Construction Staging Plans must be developed to allow for smelter operations to continue smoothly during the demolition and construction phases.

The Local Action Plan detailed in TSD # 10 has established protocols for controlling and managing the air emissions from the smelter, acid(s), and power/heating plant located at the Bor Complex based on the current efficiency of pollution controls. The Air Quality Dispersion Model Assessment (TSD # 9) provides an assessment of the proposed new smelter and sulphuric acid plant compared against the historical and existing emissions levels. This study indicates the new smelter and acid plant will significantly reduce the emission of SO_2 to the atmosphere. During detailed design further air quality modeling needs to be undertaken to integrate information from the air quality monitoring stations that have been established and to develop a more comprehensive air quality management system.

Site demolition work and construction activities will be the principal source of noise and dust. As well as noise and vibration impacts that may result from foundation piling operations. Best management practices will be employed to minimize the impacts of construction noise and dust. This includes the use respirators and other dust control measures where site conditions or activities require. The smelter and acid plant includes dust and noise controls as part of the facility design.

Potential releases of hazardous substances (e.g. fuels, chemicals, etc) into the physical environment may occur due to demolition activities, construction, operations, or maintenance activities or unplanned spills. Spill prevention BMPs such as designated re-fuelling pads for construction and maintenance equipment, emergency spill kits, spill response plans will be employed.

Environmental Effects on the Natural Environment

The analysis of environmental effects on the natural environment is summarized in Table 7-6-1 presented at the end of the Chapter.

There is no vegetation (ground cover, shrubs, or trees, etc.) in the immediate area of the proposed new smelter, acid plant, or effluent treatment facility. There will, therefore, be no direct impact on terrestrial environment.

Impacts to off-site vegetation or habitats has occurred as result of the effects of air emissions from stacks and fugitive emissions affecting the ambient air quality of the air that in turn has affected sensitive vegetation in some areas surrounding Bor. The improvement in overall ambient air quality will have a positive effect on off-site vegetation, and this will contribute to a general increase in biodiversity of the environment with 1-2 km of the area affected by elevated ground level concentrations of $S0_2$ as shown by the dispersion modeling of Scenario 4 in TSD # 8.

Smelter site and acid plant does not have any definable vegetative habitat favouring the local bird habitats on site, but conditions in adjacent town areas are suitable to a variety of bird species. Improvement in air quality may lead to some modification and increase in the biodiversity of local vegetative habitats.

The proposed smelter and acid plant will have no effect on small or larger mammal populations since their habitats are not found in the immediate of the RTB Bor Complex.

Water resources contamination is a matter being addressed through the RTB Bor and Bor LEAP initiatives. The inclusion of the waste water treatment facility for the smelter and acid plant will constructively assist in minimizing the contamination of both local ground and surface waters that, in turn, affects fish habitat and the associated fisheries resources.

Environmental Effects on the Socio-economic/Socio-cultural Environment

The analysis of environmental effects on the socio-economic and cultural environment is summarized in Table 7-7-1 presented at the end of the Chapter.

The amount of potential waste to be generated during the demolition phase has been identified and a Detailed Health and Safety Plan(s) will be prepared appropriate for each of the Site Construction and Site Preparation, Construction, and Operations Phases

Material Data Safety Sheets should be used to advise workers of hazardous materials. Workers to be supplied with appropriate environmental and HSE training and supplied with appropriate protective equipment for tasks to be undertaken. The modernization of the smelter using BAT and BMPs reduces the $S0_2$ emissions to the environment and reduces risk to community health.

RTB Bor and the Town of Bor through the implementation of the Local Environmental Action Plan can further reduce the environmental effects associated with the historical operations of RTB Bor.

The modernization of the smelter within the Bor Complex will not directly affect the existing areas associated with agricultural, rural residential, forestry, and open space uses. Improvement in air quality resulting from the new smelter will reduce the historical effects on certain land uses. This represents a positive benefit to the community over the long-term.

At present there are approximately 7,000 unemployed people on the labour market in Bor and surrounding area and more than the half of them are professionals. The modernization of the smelter within the Bor Complex will require specific employment requirements that can be filled by RTB Bor personnel, new job hires, and specialized trades during the Site Demolition and Site Preparation, Construction Phase. RTB Bor will re-train staff to take on the operations/maintenance of the new smelter.

Training programs are being coordinated within the area through the cooperation of RTB Bor, the Town of Bor, and local educational institutions, to foster the training of younger unemployed workers who want to remain in the Bor area, and who can contribute to the long term growth of RTB Bor.

The proposed smelter modernization will not have any effect of local cultural features or activities such as the Castle of Prince Alexander Karadjordjevic in Brestovacka Spa area.

The disturbed state of the Bor Complex designated for the reconstruction and modernization of the existing smelter and acid plant will not effect local archaeological resources.

An improved local economy will potentially encourage spin-off growth for local tourism or recreational businesses or facilities.

Improved economic conditions resulting from the improvements at RTB Bor should promote additional growth and development within the community over the next 20 years.

Noise may be a localized impact to the community throughout the Site Demolition and Site Preparation, and Construction Phases of the Project. The facilities will be designed in accordance with IFC Noise level Guidelines.

The proposed Project will not change the existing supply source or significantly alter the requirements of the on-site water treatment facility.

The smelter modernization has the potential of having a very significant social impact on the Bor Community and the surrounding District that serves as a positive contribution to the Region and to Serbia. As an environmental hotspot on the Danube – attention has been focused on this area for some time and the LEAP Programs serve as a primary

vehicle for moving forward in a constructive manner to the benefit of the local community.

Improvements to the ambient air quality compared to the past and existing situation should contribute to an improvement in the health of individuals with existing respiratory problems. This will generally benefit the Residents of Bor, but it will particularly benefit the young children in the community or older residents.

The cumulative effects of the proposed new smelter and acid plant is most appropriately explained in regards to other environmental initiatives that are planned by RTB Bor over the 2010-2015 period.

The most significant cumulative effects associated with this Project involve:

- 135 million EUR loan contribution towards the construction of the Proposed Smelter Acid Plant; and
- Funding of the improvements of the Bor Regional Development Project based on a World Bank loan in the amount of Eur 24.3 million (US$33.0 million equivalent) and a proposed credit in the amount of SDR 6.6 million (US$10.0 million equivalent) to the Republic of Serbia.

The pooling of these funds allows for a number of complimentary environmental improvements that significantly benefits the local and regional community. This represents the critical seed money needed to advance the most significant environmental improvements. By committing to these projects, RTB Bor will be in a position to undertake subsequent improvements on their own or in concert with the Government of Serbia as RTB Bor's production and economic position improves in the next few years.

RTB Environmental Protection Plan (EPP)

In this plan major problems caused by long time work of mining and metallurgical operations are identified. The main environmental problems are related to permanent air and water pollution from past operations, and generation of large amounts of wastes that must be addressed on an on-going basis.

Chapter 8, Environmental Commitments, presents the environmental design principles, the requirements and permits for pre-construction, construction, commissioning and operation phases. It also describes details of the Construction Site Environmental Management Plan including the Demolition Waste Management Plan, Hazardous Materials and Waste Management Plan, Air Quality and Dust Management Plan for site decommissioning and Construction Activities and the Occupational Health and Safety Plan. The environmental monitoring during transitional and commissioning

and construction phases are considered as well as the audit and document control and reporting to Serbian authorities.

The Environment Design Principles are the basis for the project to comply with the Environmental commitments and regulations. The design principles are described in detail in TSD # 10 of this study.

The following permit requirements are required to facilitate project construction, commissioning, or operation:

- Building Permit for Smelter, Acid and Waste Treatment Plants;
- Transportation Permits - for delivering large equipment and heavy loads to site:
- Commissioning or Operations Permits
- Occupational Health and Safety Certifications;
- Training Certifications for Workers

Presently, RTB Bor has in place Air quality protocols for the smelter and sulphuric acid plant, including measures to control the proper functioning of the facilities. Copper Smelter and Refinery performs regular control of gas flows and emissions from the Smelter and Sulfuric acid plant. Control is performed by an authorized, independent, professional institution - the Institute of Mining and Metallurgy.

Monitoring of immision is performed by Department of Public Health 'Timok' Zajecar. The concentration of sulfur dioxide emissions are controlled at three measuring stations, which are selected in accordance with national and international recommendations and criteria.

Further increase in the number of automatic devices for air quality monitoring is necessary. Meteorological parameters are monitored by automatic measuring devices at places 'Brezonik', 'Gradski Park' and 'Institut'. On Site Institute, Institute of Mining and Metallurgy performs a classic meteorological measurements and observations, (a continuation of activities initiated 1986).

In order to establish cooperation with stakeholders (local communities, civic associations, trade and non-governmental organizations and individuals) a permanent telephone line was opened, where people can report increased air pollution, provide comments and suggestions. Copper Smelter and Refinery has provided technical, personnel and technical assistance in the formation of the Department of Environmental Protection in Municipal Administration.

TSD # 9 presents the preliminary air quality modeling assessment evaluating the proposed emissions from the proposed smelter and acid plant to historical and existing operational conditions. This preliminary assessment needs to be reviewed by design staff at SNC-Lavalin and Outotec, and operations staff at RTB Bor.

The following Environmental Management Plans have been identified and considered for development in order to address the potential effects of the demolition and construction phase identified in the analysis:

- Erosion and Sediment Control Management Plan. There is no need to implement an Erosion and Sediment control Management Plan.
- Demolition Waste Management Plan/Strategy**.** Different material will be generated as a result of the demolition activities. Some material will be recycled and part of the material will be considered waste. A demolition Waste Management Plan is required for the project area in order to comply with environmental national and international regulation. Included in Table 8.5.1 of Chapter 8.
- Hazardous Waste and Hazardous Material Management Plan. During the Demolition phase several infrastructures will be destroyed and different type of material will be generated in the project site. Some material will be considered general waste, other material will be treated as hazardous waste and part of the material will be recycled. The Hazardous Materials and Hazardous Waste Management Plan is presented in Table 8.5.2 of Chapter 8.
- Water Management Plan, including drainage and liquid effluents. The construction of the modernized smelter and new acid plant will not disturb normal plant operations and water use during the construction period. Overall. The installation of the water treatment plant will contribute to the improvement in water quality since there is no treatment of waste water from the existing smelter at present.
- Air Quality and Dust Management Plan. The demolition and construction activities will generate high volumes of dust and particulates in the air affecting the natural environment. The Air Quality Management Plan for demolition and construction is presented in Table 8.5.3 of Chapter 8.
- Occupational Health and Safety Plan (OHSP) An Occupational Health and Safety Plan (OHSP) had been prepared for the project and will be implemented during the demolition and construction phase. The OHSP is presented in Table 8.5.4.
- Emergency Preparedness and Response Plan (EPRP)

RTB Bor together with the Municipality of Bor have established emergency preparedness and response plans in the event accidents or other environmental incidents occur at the RTB Complex and nearby mine facilities.

Chapter 9, Community Engagement, presents the international, national and local initiatives that have been taken regarding the environmental issues of Bor Municipality.

A number of technical studies have been carried out resulting in the development of Local Environmental Action Plans (LEAPs) that have identified various means of addressing the environmental problems, and a prioritization of tasks that need to be implemented. TSD # 2 presents the Local Environmental Action Plan for the Municipality of Bor in 2003.

In 2006, the World Bank Funded an Environmental Assessment of the RTB Bor Operations in support of the proposed privatization initiatives, presented in TSD # 3. In reviewing the extensive documentation that has been assembled for the Bor area over the last 10 years, it is apparent that there is a clear awareness of the environmental problems among the various stakeholders.

TSD # 13 provides a summary of various community engagement activities that have occurred from 2006 to the present including examples of articles in the RTB Bor company newspaper the “Kolektiv” that address the recent progress in advancing the development of the new smelter and acid plant.

A public meeting was held on May 4, 2010 to present the development concept for the Project. The presentation was prepared by Faculty of Technology and Metallurgy, University of Belgrade and presented at the meeting was held in Bor Municipal Assembly.

There were 61 participants at the meeting, representing various stakeholders from State institutions, local government, local utility companies, scientific professional institutions, educational institutions, Health care institutions, NGOs, Unions, Business sector, Media, others.

As a final conclusion, the public presentation showed a strong support from all attendees in executing the proposed project, due to the fact that it will revitalize the city and contribute to a better and healthier quality of life in Bor.

Chapter 10, Conclusions and Recommendations, describes the issues related to the physical, natural biological and socio-economic cultural environment as well as the recommendations to manage the environmental aspects that may be potentially affected by the project.

During site demolition and the construction phases fugitive dust ladened with heavy metals (derived from either construction debris or excavated surficial soils), development of a coordinated demolition and construction staging plan and provide the workers with appropriate protective equipment can minimize the exposure to dust.

In comparison to historical scenarios, project scenario generates lower TSP concentrations. However, there is still the potential that high daily concentrations might occur for that pollutant. Accurate local meteorological data and process knowledge are needed in order to identify these periods.

The proposed project will have no direct impact upon the vegetation or the local bird and wildlife populations in the short-term since the Bor Complex presently offers no suitable habitats for these species.

The improvement in overall ambient air quality will have a positive effect on off-site vegetation, and this will contribute to a general increase in biodiversity of the environment with 1-2 km of the area affected by elevated ground level concentrations of $S0_2$ as shown by the dispersion modeling of Scenario 4 in TSD # 8.

Increased employment in RTB Bor will contribute positively to local population growth within the Bor District over time. Revitalization of RTB Bor will have a significant positive impact on the community population. An improved local economy created as a result of this project will potentially encourage spin-off growth for local tourism or recreational businesses or the establishment of new tourist facilities.

Improvements to the ambient air quality compared to the past and existing situation should contribute to an improvement in the health of individuals with existing respiratory problems. This will generally benefit the Residents of Bor, but it will particularly benefit the young children in the community or older residents.

The most significant cumulative effects associated with this Project involve: 135 million EUR loan contribution towards the construction of the Proposed Smelter Acid Plant; and funding of the improvements of the Bor Regional Development Project based on a World Bank loan in the amount of Eur 24.3 million (US$33.0 million equivalent) and a proposed credit in the amount of SDR 6.6 million (US$10.0 million equivalent) to the Republic of Serbia.

Based on the Conclusions stated above, the following Recommendations should be considered:

- Demolition and Construction Contractors are to maintain spill control and clean-up equipment at designated construction site area. Demolition and Construction Staging Plans must be developed to allow for smelter operations to continue

smoothly during the demolition and construction phases. This plan needs to address scheduling issues, and occupational health and safety matters.

- Material Data Safety Sheets should be used to advise workers of hazardous materials. Workers to be supplied with appropriate environmental and HSE training and supplied with appropriate protective equipment for tasks to be undertaken.
- A detailed Health and Safety Plan(s) should be prepared appropriate for each of the Site Construction and Site Preparation, Construction, and Operations Phases.
- The existing air quality monitoring stations should be validated and a network of air quality monitoring stations should be deployed in the region of the RTB complex.
- Prior to commissioning the new smelter, the existing air quality monitoring system should add 1 or more additional monitoring stations to address extended SO2 effects on villages such as Borska Slatina and the surrounding agricultural areas.
- A meteorological station, equipped with dispersion-grade instrumentation, is required to make site specific modeling as well as real-time modeling of the emissions.
- Installation of a Continuously Emissions Monitoring System (CEMS) to monitor the emissions of the main contaminants (particulate matter and SO_2).
- Development of a Real-time Air Dispersion Air Quality Modeling System
- Capture of Dust and SO_2 Fugitive Emissions. Captured emissions should be rerouted to a stack so that they can be released at a higher elevation
- During detailed design further air quality modeling needs to be undertaken to integrate information from the air quality monitoring stations that have been established.
- Best management practices will be employed to minimize the impacts of construction noise and dust.
- As part of the smelter modernization process, access roads in the area of the smelter and acid plant should be hard surfaced to control dust. Side panels on the concentrate storage shed should be repaired.
- Construction activities resulting in significant noise or vibration (e.g., pile driving) will be limited to the period 7am to 7 pm due to residential uses located within 500m of the construction area.

- Spill prevention BMPs such as designated re-fuelling pads for construction and maintenance equipment, emergency spill kits, spill response plans will be employed.
- General industrial/commercial waste generated by the smelter/acid plant and other RTB Bor facilities will be sent to the Bor municipal landfill.
- Waste water from modernized smelter and acid plant directed to polishing pond/tailings pond with no direct discharge to local natural watercourse.
- RTB Bor will continue the community engagement and existing communication with government and stakeholders.

VOLUME 2 – TECHNICAL SUPPORTING DOCUMENTS

TSD #1 – UNEP Assessment of Environmental Monitoring Capacities in Bor

The industrial activities in the Bor area have caused serious environmental problems and raised concerns about the health effects for the population in the area. The objective of the UNEP monitoring mission was to assess the status of environmental monitoring in Bor, then identify and recommend priority assistance in support of environmental monitoring. The monitor mission report presented several recommendations for improving the current monitoring capacities in the Bor area in the fields of air, water and soil monitoring.

- There is a need to provide equipment to Bor that would allow for continuous measurement of sulphur dioxide and other airborne particulate matter;
- A statistical review of respiratory issues, cancer and hospital admissions;
- Installation of emissions monitoring equipment;
- Assist in the application of environmental management and controls;
- Monitor the application and enforcement of environmental legislation ;
- Implementation of regular monitoring of all relevant parameters and international legislation;
- A stepwise approach should be implemented consisting of identifying, quantifying and characterizing wastewater discharges in Bor;
- Basic monitoring should be implemented to collect basic parameters, heavy metals, PCB's, PAH's, and pesticides;

UNEP indicated that it was prepared to assist BOR by providing monitoring equipment as well as training and capacity building on design and implementation of monitoring programmes.

TSD #2 – Local Environmental Action Plan (LEAP)

The Local Environment Action Plan (LEAP) for Bor was prepared in 2003 to address a multitude of problems created by a century of mining in the Bor area. The Municipality of Bor supported the development of this document as it is a first step in addressing the environmental crises in the area.

The plan was prepared with the support of the UNEPS/UNOPS mission together with the results of local experts. Grid Arendal provided technical advice and the Regional Environment Centre and the Ministry for Nature Resources and Environment Protection also provided financial and technical assistance.

The LEAP document establishes the path forward by looking at:

- The State of the Environment;
- Public Opinion in regard to the Environmental Problems;
- Environmental Regulations;
- The Community's Vision for the New Millenium with regard to:
    - Natural Environment,
    - Land Use and Demographics,
    - Citizen Involvement,
    - Infrastructure,
    - Education and Social Services,
    - Cultural Inheritance,
    - Social Life,
    - History, Tradition, and Culture,
    - Economic Strength, and
    - Specific Project and Programs
- Strengths, Weakness, Opportunities, and Threats Assessment

- The Basis for a Local Environmental Strategy
- Development of the LEAP Strategy

Since 2003 the Municipality of Bor, RTB BOR and its' associated companies, and interested government authorities have been working in concert with one another to advance the improvement of environmental conditions through this LEAP, and various other environmental initiatives through a combination of corporate, municipal, national, and international initiatives.

The LEAP document has served as a useful point of reference for developing the EIA for the Modernization and Reconstruction of the Smelter and New Acid Plant.

TSD #3 – Public Consultation

In support of the privatization process, a Consortium led by Environmental Resource

Management (ERM) Ltd, and supported by Fideco d.o.o. and CSA Group Ltd was commissioned by the Privatisation Agency of the Republic of Serbia (PA), to undertake the assignment "Environmental Assessment of the Environmental Damages from Past Operations of RTB Bor" in November 2005. The Project was specifically aimed at the preparation of an Environmental Assessment for RTB Bor operations including an assessment of environmental damages from past operations, determining the environmental issues and the required cleanup measures. In support of the Environmental Assessment public consultation initiatives were undertaken.

The initial consultation meetings served to inform the public about the privatization process and the environmental priorities that were established to address the environmental problems and damages that have developed over the years. These meetings serve as the foundation for advancing RTB Bor's modernization and reconstruction activities.

TSD # 4

The following presents excerpts from a study prepared by **SNC Lavalin UK Ltd (SNCL**)

Entitled, "*Smelter Modernization Study – Document No. 016591-1010-T-REP-0003*."

SNC-Lavalin UK Ltd (SNCL) were awarded a contract in December 2005 by the Serbia

Privatization Agency (PA) to undertake a smelter modernization study as part of an overall restructuring and privatization of RTB Bor's large mining, smelting and refining complex in eastern Serbia.

The overall objective of the Smelter Modernization Study was to provide expert opinion on smelter upgrading / modernization alternatives that might be undertaken to move the Bor Smelter to environmental compliance and develop preliminary cost and schedule estimates document was prepared by SNC-Lavalin.

This TSD provides a reprint of the following sections of the Smelter Modernization Study:

- **Executive Summary**;
- **Section 1 - Introduction**;
- **Section 2 - Assessment of Smelter Status**
- **Section 3 - Prioritised Improvements**

This documentation provides a technical baseline assessment used in the development of the Feasibility Study and for the Environmental Impact Assessment.

TSD # 5 Photos of the project area and surroundings

Provides a series photos showing site locations designated for new smelter and acid plant, the area surrounding the proposed site within the Bor Complex, and general views of the Town of Bor, the surrounding natural and agricultural landscapes.

TSD # 6 Air Quality Monitoring System

Includes 2 technical papers that outline the implementation and development of the existing air quality modelling system in Bor; and the equipment used in the monitoring stations. Also provides examples of the information air quality monitoring that the public has access to via local website(s).

TSD - #7 Water Quality

The following presents a general summary of the water balance for the RRB and RTB facilities located in the Bor Area.

It serves to summarize the following:

- Current state of consumption of fresh water in technical facilities of RBB associated with:
    - Flotation concentration processes in plants Bor and Veliki Krivelj;
    - industrial fresh water (from Bor Lake); and
    - technical water use for flotation tailings of Bor and Veliki Krivelj.

- Water needs of RBB plants for fresh and technical water in future production for:
    - "Bor" Complex;
    - Flotation "V. Krivelj "; and
    - Cerovo Mine
- Description of water distribution system for RTB plants that includes:
    - Bor Lake RTB and connecting pipeline;
    - Industrial water for cooling;
    - Treated industrial water – processed through softening and demineralization for use in power and heating plant
- Investments in water supply systems in the RBB to meet the 20 year production and business plan.

TSD #8 Geoenviornmental Investigations

Geoenvironmental investigations have been carried out in the area designated for the development reconstructed smelter and new sulphuric acid plant by the Faculty of Mining and Geology, University of Belgrade, in Belgrade, Serbia.

Geoenvironmental investigations provide information on the indication of the nature and extent of surficial soil contamination for consideration in the EIA. Preliminary results indicate that heavy metal contamination occurs in 1-3 m of the surface. The dominant metals are Cu, As, Hg, and Pb. The preliminary assessment suggests that the highest concentrations occurs within 1-2 m of the ground surface.

TSD # 9

The atmospheric dispersion study evaluates the historical, present and planned air quality around the RTB smelter of Bor. The pollutants of interest are the sulphur dioxide (SO2), the total suspended particles (TSP) and the nitrogen dioxide (NO2). The approach used in this study involved the evaluation of the atmospheric dispersion of pollutants emitted by the stack sources of the RTB complex through atmospheric emission modeling. The results obtained have been compared to the applicable air quality standards.

The study included four distinct emission scenarios as follows:

1. Historical base case scenario: this scenario is representative of the plant operating at full production (without any restriction based on meteorological

conditions), prior to 2009 and is considered a worst case where air quality standards are regularly exceeded. Key emission sources included are the acid plants, smelters, power plant and heating plant.

2. 2004-2005 operating period: this scenario is representative of the following emission points from the smelting process: roasting furnace, smelting furnace, converters furnaces and the sulfuric acid plant tail gas as defined in the Operations environmental assessment document.

3. Existing 2009-2010 condition: this scenario is representative of the normal operating condition of the current Bor complex facilities under full production without any limitations imposed by local meteorological conditions.

4. Modernized – Reconstructed plant condition: this scenario is representative of the normal operating condition of the Bor complex facilities after planned modernization and upgrade.

The emissions sources considered in scenario 4 generate ambient air SO2 concentrations higher than the hourly and daily air quality standards. SO2 concentrations above the hourly air quality standards can occur at specific sensitive receptors in the town of Bor. In comparison to scenario 1, 2 and 3, the emission sources of scenario 4, reconstructed plant condition, generate lower SO2 concentrations around the RTB complex. However, there is still the potential that hourly and daily concentrations above pollutant standards might occur for that pollutant, especially with the contribution of periodical fugitive emissions or process upset. The activity level described by scenario 4 should therefore be controlled to avoid or reduce emissions during periods when the dispersion potential is low. Accurate local meteorological data and process knowledge are needed in order to identify these periods.

TSD #10 – Environmental and Engineering Design Criteria

Outotec developed the design criteria for the process calculations for the engineering disciplines for the Feasibility Study for the Modernization of RTB Bor Smelter.

The scope of work includes the provision of a front-end technology and engineering for the following:

- Concentrate steam dryer area
    - Steam dryer with gas handling
    - Handling of the coarse materials from the screening after the dryer

    - Concentrate conveying to dry concentrate bins
- Flash furnace area
    - Concentrate feeding and burning
    - Flash furnace
- FSF gas handling and dust collection area
    - Waste heat boiler
    - Electrostatic precipitator
    - Process off-gas fan
    - Flue dust handling and transportation to flue dust bin
- Slag Concentrator area
    - Slag cooling (Area designed by SNCL)
    - Crushing and grinding
    - Flotation and dewatering
    - Reagent handling
- Fugitive gas handing system area
    - FSF
- Furnace cooling water area
    - Primary cooling water system

TSD # 11 - Bor Local Action Plan 2006 -2009

The "Action Plan for the air pollution from the Bor Copper Smelter reduction" was developed to create conditions for sustainable development of copper and precious metals production in Bor and Serbia and it was approved with record since 10. 05. 2006. by the Working Group in the Ministry of Science and Environmental protection, after which the Smelter started working. Copper Smelter and Refinery strictly apply the Action Plan with a permanent control by Republic inspection for environmental protection.

The value of the works needed for the Smelter, along with built-in equipment, was around 150 million RSD. The investment for the Sulphuric Acid plant involved an expenditure of 85 million RSD.

The effects of these works are reflected in the reduction of the sulfur dioxide concentration in the city and its surroundings, as well as in the number of days with exceeding of the emission limit values.

The technological process of the smelter is described in detail as well as the sulphuric acid plant and the quantity of gas emissions and Immissions from the smelter are presented. The distribution of emissions, i.e. SO_2 emission level depends on the current weather conditions (wind speed, atmospheric pressure, rose of winds, temperature inversions) and it could not be controlled. On the other hand, the process has its own inertia, limited capacity and the impact on the final effect - the amount of emission.

Because of the low content of sulphur dioxide, gas products, from the process of solid fuel melting during the burning of reverb furnace, can not be used to produce sulphuric acid and are discharged directly into the atmosphere. Due to the obsolete technology, that is certainly an important reason of increased aero pollution. It should be noted that only one technological line is operating, so the amount of gas that is discharged into the atmosphere is 50% reduced compared to the designed capacity of the Bor Copper Smelter, which involves working with two lines with roasting and smelting and three PS converter at the same time.

When it comes to delays in Smelter plant works (which can take several days), it is necessary to provide Sulphuric acid plant with the exact term-plan of the start of Smelter plant. Sulphuric acid plant is required to coordinate their term-plan of delay with a term-plan of Smelter and to provide Smelter with it. Sulfuric acid plant needs about 48 hours of technological preparations in order to be absolutely ready to accept the gas from the Smelter plant.

Monitoring procedures and communication with the government and local stakeholders are described in the Local Action Plan.

TSD # 12 Environmental Protection Plan

The Environmental Protection Plan (EPP) presented in this document was developed by RTB Bor for period 2010-2015. In this plan major problems caused by longtime work of mining and metallurgical operations are identified.

The main environmental problems are related to permanent air and water pollution from past operations, and generation of large amounts of wastes that must be addressed on an on-going basis. This EPP presents a series of mitigation measures designed to address specific issues or problems. These mitigation measures are described in

general terms, and where appropriate and estimate of the cost of specific mitigation measures are provided.

The plan also indicates the term of application or implementation and the authority or responsible institution responsible for the execution or specific mitigation measures or programs. Supplementary explanations of specific programs or measures are provides for additional clarity.

Apart from RTB Bor companies (RBB, TIR, Power plant, Sulfuric Acid Plant, etc.) responsibility for mitigation measures execution also have the support of the Municipality of Bor and Government of Serbia.

A table showing the Problem, mitigation measures, estimated cost, time and responsibility addressing General problems, General Planning issues, Protection of Air in TIR, Protection of Water in TIR, Solid and hazardous waste, Noise in TIR is presented in this TSD.

TSD # 13 Community Engagement

Presents a brief summary of the articles published in the Newspaper “Kolektiv”. The articles address the new smelter and ecology of Bor Area and were published from December 31, 2009 to July 15, 2010. The Kolektiv is RTB Bor’s Company Newspaper that is provided on-site to company employees, can be obtained from local newsstands in Bor, and are posted on the RTB Bor website.

It provides details of the public meeting held in regards to the preliminary Environmental Assessment on this project.