We are subject to a wide range of governmental regulations in all the jurisdictions in which we operate worldwide. Set out below is a summary of the types of regulations that have the most significant impact on our operations.

Regulation of mining activities

We are subject to numerous regulations, which differ according to the jurisdiction in which we operate. Our operations depend on legislation and regulations that apply to mining activities, which include in many countries, state and local laws, and federal laws. Moreover, most of our concessions, especially for large operations, impose additional obligations on the concessionaire.

The jurisdictions in which we operate generally have government agencies responsible for granting mining licences and supervising compliance with mining laws and regulations. For example, in Brazil, the exploration activities are supervised by the National Mineral Production Department (Departamento Nacional de Produção Mineral) (**DNPM**) an agency of the federal Ministry of Mines and Energy (**MME**).

The DNPM grants exploration permits (*alvará de pesquisa*) to a requesting party, after submission of an application, which grants to the requesting party the priority to develop activities in a given area, for an initial period of a maximum of three years. Exploration permits can be granted for a period of one to three years, which can, at the DNPM's discretion, be extended upon request of the licence holder, provided that the requesting party is able to show that renewal is necessary for proper conclusion of exploration activities. On-site exploration activities must start within 60 days as of the official publication of the issuance of the corresponding exploration permit.

Upon completion of the geological exploration at the site, the grantee must submit an exploration final report (**EFR**) to the DNPM. If the geological exploration reveals the existence of a mineral deposit that is economically exploitable, the grantee will have one year (which the DNPM may agree to extend) from approval of the EFR by the DNPM to apply for a mining concession.

When a mining concession is granted, the holder of the concession must begin on-site mining activities within six months. Mining concessions are granted for an indeterminate period of time lasting until the exhaustion of the mineral deposit. Extracted minerals that are specified in the concession belong to the holder of the concession.

Subject to prior approval of the DNPM, the holder of a mining concession can transfer it to a third party that is qualified to own concessions.

Before issuance of the mining concession, the mining right holder will lose priority to explore and exploit the area in the following cases: (i) the EFR is not sufficient to demonstrate the existence of economically exploitable reserves; (ii) the EFR or the mining concession request and the corresponding economic exploitation plan (**EEP**) are not filed before the due date; (iii) the exploration activities are not commenced when due or are not performed in accordance with the exploration permit, despite previous notification and penalty; and (iv) the corresponding annual tax per hectare is not paid when due, despite previous notification and penalty.

Once granted, a mining concession is subject to forfeiture in case (i) exploitation activities are not commenced or recommenced before the due date despite previous notification and penalty; (ii) three repeated failures to address observations made by inspections occur within a one-year period; (iii) exploitation of mineral substances not permitted by the corresponding mining rights or exploitation activities carried out in discordance with the EEP approved by the DNPM, irrespective of any prior notification or (iv) the mine is formally declared as abandoned.

Under Brazilian law, if a discovery of radioactive mineral substance is found, the holder of the mining title must notify the National Commission of Nuclear Energy (Comissão Nacional de Energia Nuclear) (**CNEN**). In this case, the mining concession will only prevail if the value of the mineral deposit covered by such mining concession is higher than the economic or strategic value of the

radioactive mineral substance existing in the area. If the mining concession is revoked, its holder is entitled to fair compensation for investments made in the area.

Changes in mining legislation may significantly affect our operations. Among the jurisdictions in which we currently operate, there are certain proposals to change the legislation (some of them have recently been adopted), which can affect us significantly. These include:

- The Brazilian Government is planning to propose changes to the Brazilian Mining Code. The MME has sent to the Civil House (Executive Office) of the Presidency of the Federative Republic of Brazil a proposal for the text of a new Mining Law. The Civil House is examining this text and also collecting comments from other ministerial areas. After completing its evaluation, the Presidency may then submit to the National Congress of Brazil a bill of law whose text may contain marginal or substantial changes compared to the MME proposal. The National Congress of Brazil may then make further changes. One of the most important changes contained in the proposal submitted by the MME is the limitation of the exploitation concession, which is currently valid until the exhaustion of the mineral deposit, to a 35-year period, renewable to an additional 35-year period.
- In Indonesia, a new Mining Law came into effect in January 2009 that introduces a new licensing regime. In 2010, certain government regulations implementing the Mining Law were promulgated, but some remain outstanding. PTI, in collaboration with its Indonesian legal advisers, is investigating the impact that the new Mining Law and regulations may have on PTI's current operations and its future prospects in Indonesia. PTI is in discussion with the Department of Energy and Mineral Resources of the Republic of Indonesia as to the effect of the new Mining Law on its existing rights, but until all of the implementing regulations are promulgated, we will be unable to assess how and to what extent PTI's Contract of Work and operations will be affected.
- In New Caledonia, a new mining law was passed in March 2009 requiring new mining projects to obtain formal authorisation rather than a declaration. On 30 October 2009, Vale Nouvelle-Calédonie S.A.S. obtained from the Southern Province of New Caledonia renewal of its personal mining authorisation, which remains valid until 31 March 2014. It does not have the personal mining authorisation issued by the Northern Province of New Caledonia. Therefore, Vale Nouvelle-Calédonie S.A.S. will not have the possibility of applying for new prospecting permits or new concessions in the Northern Province of New Caledonia until it obtains this authorisation. However, this lack of authorisation does not affect the rights conferred by the concessions it holds.

Environmental regulations

We are also subject to environmental regulations that apply to the specific types of mining and processing activities we conduct. We require approvals, licences or permits from governmental authorities to operate, and in most jurisdictions the development of new facilities requires us to submit environmental impact statements for approval and often to make additional investments to mitigate environmental impacts. These environmental impact statements involve the holding of public hearings, when community activist groups and other stakeholders might interfere and express their opinion about our projects. We must also operate our facilities in compliance with the terms of the approvals, licences or permits.

Environmental regulations affecting our operations relate, among other matters, to emissions into the air, soil and water; recycling and waste management; protection and preservation of forests, coastlines, natural caverns, watersheds and other features of the ecosystem; water use; and decommissioning and reclamation. In many cases, the mining concessions or environmental permits under which we operate impose specific environmental requirements on our operations. Environmental regulations can sometimes change and ongoing compliance can require significant

costs for capital expenditures, operating costs, reclamation costs and compliance. For example, in Brazil, a suit challenging a Brazilian environmental decree that permits mining in certain subterraneous areas may adversely affect our ability to conduct our mining operations or even prevent access to our reserves.

In Brazil, the federal constitution assigns to the federal government, the states, the federal district and the municipalities the responsibility for environmental protection and preservation of Brazilian fauna and flora. The authority to enact laws and issue regulations with respect to environmental protection is exercised concurrently by the federal government, the states and the municipalities. The municipalities have authority to enact laws and issue regulations only with respect to matters of local interests or to supplement federal and state laws.

The National Environmental Policy provides that the conduct of any activities on a regular basis that cause actual or potential pollutants or involve the exploitation of natural resources, or in any manner, result or may result in environmental degradation, is subject to environmental licensing procedure. This procedure is necessary both for the initial installation of the facility or the project and for any expansion implemented thereon, and the licences issued must be renewed periodically.

For activities with regional environmental impact or those regulated by the federal government, the *Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis* (the Brazilian Environment and Renewable Natural Resources Institute) (**IBAMA**) is responsible for issuing the environmental permit. In other cases, state or municipal environmental agencies are responsible for the analysis of the activities and issuance of environmental permits, as well as for the imposition of pertinent control conditions, restrictions and measures.

The process for environmental licensing normally comprises the issuance of three licences, all of which have established terms of validity: the preliminary licence, the installation licence and the operating licence. Each of the licences is issued according to the stage of implementation of the project, and their ongoing validity is contingent on compliance with conditions prescribed by the licensing authority. When an environmental licence permit is required but not obtained, then irrespective of whether any damage is caused to the environment, it would still constitute an offence under Brazilian law if the Company continues to perform the activity without the environmental licence, which could result in the imposition of administrative penalties, such as monetary penalty and closure or suspension of a facility for which the permit was not obtained.

The preparation of an environmental impact study and its corresponding environmental impact report is required for the purposes of the licensing of activities with significant environmental impact. In any such event, investments are required in order to compensate for the environmental impact. Any application for the licensing of projects causing significant environmental impact after July 2000 is subject to the requirement that not more than 0.5% of the total cost estimated for implementation of the project has to be allocated for the establishment and maintenance of a preservation unit, as required under the *Sistema Nacional de Unidades de Conservação* (or National System of Preservation Units).

Any delay or refusal by environmental licensing agencies in issuing or renewing licences, as well as any inability on our part to comply with the requirements established by environmental agencies in the process of environmental licensing, can jeopardize or hinder the implementation and ongoing operation of our projects.

Environmental legislation is becoming stricter worldwide, which could lead to greater costs for environmental compliance. For instance, if we are required to modify installations, develop new operational procedures or purchase new equipment, our environmental compliance costs could increase. In particular, we expect increased attention from various government bodies at federal

and state levels on reducing greenhouse gases emissions (**GHG**) as a result of concern over climate change. Some of the recent legal developments are described below:

- Brazilian Federal Congress recently enacted the National Policy on Climate Change (Federal Law No. 12,187, of 29 December 2009). One of the most relevant provisions of the National Policy is the reduction goals to be followed within Brazil. Pursuant to Article 12 of this Law, Brazil is adopting some mitigation actions to reduce its GHG emissions projected for 2020. Mining activities are ranked tenth in terms of GHG emissions in Brazil and mining companies are expected to be subject to measures for reducing emissions pursuant to the National Policy on Climate Change. The expected reductions may be attained through improvements on industrial processes or taking part in the emissions trading market to be established in Brazil.

- Our operations in Canada and Indonesia are subject to air emission regulations that address, among other things, sulphur dioxide, particles and metals. We will be required to make significant capital expenditures to ensure compliance with these emission standards. The imposition of more stringent standards in the future, especially for sulphur dioxide and nickel, could further increase our costs.

- In 2007, the Canadian Government launched its "Turning the Corner" plan. The plan proposed "greenhouse gases" emissions reduction targets for each industrial sector. The final targets are expected to align with the United States' objective of reducing emissions by 17%, below 2005 levels, by 2020. In addition, several provinces, including Ontario, have introduced mandatory emission reduction targets and compliance mechanisms including emissions trading. Although the Government of Manitoba has made a commitment, as a province, to achieve compliance with the emissions reduction targets established under the Kyoto Protocol, it has not yet imposed mandatory emission reduction targets on emitters (expected to apply to annual emitters of 25,000 tons or more of carbon dioxide equivalent) nor has it yet adopted specific compliance mechanisms. Industry consultation on the subject is expected to begin soon. Compliance with the targets will require investment in our Canadian operations or the purchase of carbon allowances or offsets. At this stage in the legislative process, however, it is unclear whether additional operating or capital expenditures will be required to comply with enacted amendments or what effect these regulations will have on our business, financial results or cash flow from operations.

- In Canada, a number of studies have been completed or are in progress in Sudbury and Port Colborne related to contamination of soil and water from past and continuing activities. We are taking steps, in partnership with other stakeholders, to remediate the ecological impact of our activities.

- The Australian Government is seeking to introduce a Carbon Pollution Reduction Scheme (**CPRS**) as part of an overall strategy to address climate change and its impact, both within Australia and globally. The Australian Government has committed to certain reductions in greenhouse gas emissions by 2020, and draft legislation was released in the first quarter of 2009. However, it was rejected by the Australian Parliament. The draft legislation was re-introduced to the Australian Parliament in February 2010. Currently, it is under review by the Australian Senate. The scheme proposes to put a price on carbon in a systematic way throughout the economy by employing a "cap and trade" mechanism. Under the proposed CPRS, we will be required to acquire a permit for every metric ton of greenhouse gas emitted per year. The number of permits issued by the Australian Government each year will be limited and will decrease every year. We will be required to compete in the market to purchase the number of permits required, either through an auction process or on a secondary trading market. We are taking steps to manage our greenhouse gas emission exposure, including improving systems to monitor, measure and report greenhouse gas

emissions, including the cost of emissions in modeling for decision-making purposes and identifying opportunities to reduce our carbon emissions.

- In October 2009, Indonesia adopted new legislation on environmental protection and management. It sets out a broad regulatory structure and provides that many important details will be clarified in later implementing regulations, which the law provides should be issued within one year of its effective date.

Environmental Liability

Our operations are subject to various environmental laws and regulations, including those relating to air emissions, effluent discharges, solid waste, odor and reforestation. In Brazil, individuals or legal entities that violate environmental laws may be punished by criminal sanctions that range from fines, imprisonment and confinement, in the case of individuals, or dissolution, in the case of legal entities, in addition to the obligation to remedy the environmental damages caused. Administrative sanctions may also be imposed, which include, among others:

- imposition of penalty fines of up to R$50 million, depending on the economic capacity and criminal record of the violating party, as well as on the gravity of the offence and any record of previous offences, which may result in the penalty fine being doubled or tripled in the case of repeated offence;
- partial or total suspension or closure of facilities;
- forfeiture or restriction of tax incentives or benefits; and
- forfeiture or suspension of credit lines with official credit establishments.

In addition to criminal and administrative sanctions, pursuant to Brazilian environmental laws, the offending party must also provide compensation and reimbursement for the damage that was caused to the environment and third parties. At the civil level, there is joint and strict liability for environmental damages. This means that the obligation to compensate for the damage caused to the environment may affect each and every individual or legal entity directly or indirectly involved, regardless of the extent of their fault. As a consequence, the engagement by any party of any contractor to carry out any operations, such as the disposal of waste, would not absolve such party from damages to the environment caused by the contractor. In addition, environmental laws provide for the possibility of "piercing the corporate veil", in relation to any Controlling Shareholder, whenever such corporate veil is an obstacle for the reparation or indemnification of damages caused to the environment.

Areas of Permanent Preservation and Legal Forestry Reserve

The Código Florestal Brasileiro, or Brazilian Forestry Code, does not permit any type of land use in certain permanently protected rural areas, including areas bordering streams and rivers and areas surrounding water springs and reservoirs. However, activities may be performed in these areas, known as permanent preservation areas, or APP, if they are determined to be in the social interest, public utility or not to adversely affect the environment. In addition, the Brazilian Forestry Code obligates us to maintain and register a forestry reserve in each of our rural landholdings covering from 20% to 80%, depending on the natural environment, of the total area of such land, excluding APPs. This legal forest reserve must be registered under the enrollment number of the relevant land, and its use cannot be changed.

In those properties where the legal forest reserve does not meet the legal minimum, the Brazilian Forestry Code establishes the gradual reforestation of at least one-tenth of the total legal forestry reserve area every three years until 100% of the legal forestry reserve (20% to 80% of the whole property) is restored. In addition, we may offset non-contiguous land against the reserve

requirement, including land that is collectively-owned (*condominio*), other land owned in the same hydrological region of the state, leased land that is subject to a preservation easement or servitude or ownership interests (quotas) purchased in specific preservation areas. However, these alternatives may be adopted only if pre-approved by the competent agency.

Deforestation Permits

Any interference or removal of native vegetation is subject to authorisation issued by the competent governmental environmental agency. This authorisation is known as a Deforestation Permit and must be obtained before any deforestation takes place.

Conservation Units

Federal Law No. 9.985, dated June 18, 2000 (Law No. 9.985/00), authorises the federal, state and municipal government of Brazil to establish any area of natural resources for environmental conservation, known as unidades de conservação, (environmental conservation Units or UCs). UCs may be of Unidades de Proteção Integral, (Full Protection or UPI), where no human interference is allowed, or of Unidades de Uso Sustentável, (Sustainable Use or UUS), in which sustainable use of natural resources is authorised. Our operations may be subject to certain restrictions if they are developed or undertaken within or in the vicinity of some UCs.

Residues and Hazardous Substances

Final disposal of residues is a subject that directly affects both the environment and public health. Brazilian legislation determines that transportation, management and final disposal of residues must neither cause any damage to the environment, nor any adverse impact on public health and welfare. Brazilian legislation regulates the segregation, collection, storage, transportation, treatment and final disposal of residues and also states that parties outsourcing such activities are jointly and severally liable with any contracted third parties.

Specific kinds of residues, such as industrial by-products, require special designation. The improper designation of residues may subject the offending party to environmental liability of a civil, criminal or administrative nature.

The Brazilian Congress recently enacted the Solid Waste National Policy (Federal Law No. 12,305/10), which establishes principles and mechanisms concerning solid waste management. One of the main guidelines of the Policy is shared responsibility over residues management. Parties involved in the product and residues chain are required to bear respective liability for implementing measures to communicate risks, minimise residues and avoid damages to the environment.

According to Resolution CONAMA No. 237/1997, activities related to the final disposal and management of industrial residues are subject to environmental licensing procedures. Only entities that hold environmental licences may undertake the transport, disposal and treatment of specific kinds of residues.

The Environmental Crime Act (Law No. 9.605/98) provides that causing any kind of pollution that results or may result in harm to public health is a crime, which is to be punished by penalties ranging from fines to imprisonment.

Use of Water Resources

According to the Water Resources National Policy (as outlined by Federal Law No. 9.433/1997), it is mandatory to obtain permits for the use of water resources for activities such as water drilling and impounding (including the impounding of water of private artesian wells for industrial purposes), or for the discharge of effluents. The failure to obtain permits may result in the imposition of fines and prohibition of activity.

Cultural Heritage

Article 216 of the Federal Constitution of Brazil contains a definition of cultural heritage, which includes both artistic and technological inventions, as well as general cultural, historical and archeological areas, documents, and other aspects. Interferences in areas of cultural and historical relevance require authorisations issued by the Instituto do Patrimônio Histórico e Artístico Nacional, the National Historical and Artistic Heritage Institute, or IPHAN.

Royalties and other taxes on mining activities

We are required in many jurisdictions to pay royalties or taxes on our revenues or profits from mineral extractions and sales. These payments are an important element of the economic performance of a mining operation. The following royalties and taxes apply in some of the jurisdictions in which we have our largest operations:

- In Brazil, we pay a royalty known as the CFEM (Compensação Financeira pela Exploração de Recursos Minerais) on the revenues from the sale of minerals we extract, net of taxes, insurance costs and costs of transportation. The current rates on our products are: 2% for iron ore, copper, nickel, fertilizers and other materials; 3% on potash and manganese ore; and 1% on gold. The Brazilian Government is considering changes in the CFEM regime and rates. These changes will only be enforceable once a final proposal is issued by the MME and approved by the National Congress. We are currently engaged in several administrative and legal proceedings alleging that we have failed to pay the proper amount of CFEM. Please refer to the section in this Listing Document headed "Business — Legal proceedings" for more details. In the case of mining in private lands, mining companies must also pay, pursuant to the applicable law, an amount equivalent to 50% of the CFEM to landowners, in case there is no agreement with such landowner determining a different value.

- The Canadian provinces in which we operate charge us a tax on profit from mining operations. Profit from mining operations is generally determined by reference to gross revenue from the sale of mine output and deducting certain costs, such as mining and processing costs and investment in processing assets. The statutory mining tax rates are 10% in Ontario; 17% in Manitoba; and 15% in Newfoundland and Labrador.

- In Indonesia, our subsidiary PTI pays a royalty fee on, among other items, its nickel production on the concession area and has made certain other commitments. As of April 2008, the royalty payment has been an amount based on sales volume (up to US$78 per metric ton).

Regulation of other activities

In addition to mining and environmental regulation, we are subject to comprehensive regulatory regimes for some of our other activities, including rail transport, electricity generation, and oil and gas. We are also subject to more general legislation on workers' health and safety, safety and support of communities near mines, and other matters.

Our Brazilian railroad business is subject to regulation and supervision by the Brazilian Ministry of Transportation and the transportation regulatory agency (Agência Nacional de Transportes Terrestres), or ANTT, and operates pursuant to concession and subconcession contracts granted by the federal government. Such contracts impose certain shareholder ownership limitations. The notice to bid (*edital de licitação)* for the FCA concession contract limits shareholder ownership to 20% of the voting capital of the concessionaire, unless such limit is waived by ANTT. We own 99.9% of FCA, which ANTT has authorised. The 20% ownership limitation does not apply to our EFVM, EFC and FNS railroads. ANTT also sets different tariff limits for railroad services for each of the

concessionaires and each of the different products transported. So long as these limits are observed, the actual prices charged can be negotiated directly with the users of such services.

The MRS concession contract provides that each shareholder can only own up to 20% of the voting capital of the concessionaire, unless otherwise permitted by ANTT. As a result of our acquisitions of Mineração e Metalurgia S.A. and Ferteco Mineração S.A., our share in the voting capital of MRS surpassed this threshold. As a result, our Company waived our voting and veto rights with respect to MRS shares in accordance with ANTT resolution no. 1,394 of 11 April 2006. We continue to have some voting rights through the shareholdings of a subsidiary.

Our railroad concession contracts have a duration of 30 years; the FCA, MRS, EFC and EFVM concessions contracts are renewable for an additional 30-year period at the discretion of the grantor of the concession, pursuant to express contractual provisions. The FNS subconcession contract provides that it can be renewed in accordance with applicable legislation. The FCA and MRS concessions expire in 2026, and the concessions for EFC and EFVM expire in 2027. We also own the subconcession for commercial operation for 30 years of a 720-kilometre segment of the FNS railroad, in Brazil. This concession expires in 2037.

Our oil and natural gas exploration and production business in Brazil is subject to regulation, control and supervision of the Brazilian Petroleum National Agency (*Agência Nacional do Petróleo, Gás Natural e Biocombustíveis* — ANP) linked Ministry of Mines and Energy — MME, an independent regulatory body, whose function consists of granting concession rights for the exploration, development and production of oil and natural gas in Brazil's sedimentary basins through a transparent and competitive bidding process, among others. Our concession agreements regarding the exploration of oil and natural gas reserves were preceded by a competitive bidding procedure in accordance to Federal Law No. 9,478/1997 (Oil Law).

The electric energy generation activities in Brazil carried on by us is under regulation of the National Electric Energy Agency (*Agência Nacional de Energia Elétrica* — ANEEL), an independent federal agency linked to the MME whose function consists of regulating, controlling and supervising the activities of generation, transmission and distribution of electricity.

In connection with the approval in 2006 of our acquisition of Vale Canada, we made a number of undertakings to the Canadian Minister of Industry under the Investment Canada Act. We believe we are substantially in compliance with these undertakings, which include locating our global nickel business in Toronto, Canada; accelerating the Voisey's Bay development project; enhancing investments in a number of areas in Canada; and honouring agreements with provincial governments, local governments, labour unions and aboriginal groups.

Some of our products are subject to regulations applicable to the marketing and distribution of chemicals and other substances. For example, the European Commission has adopted a European Chemicals Policy, known as REACH (Registration, Evaluation, and Authorisation of Chemicals). Under REACH, manufacturers and importers will be required to register new substances prior to their entry into the European market and, in some cases may be subject to an authorisation process. A company that does not meet the REACH standards could face restrictions to commercialise its products in Europe. We have complied with registration requirements for the substances we import into or manufacture in the European Union and continue to take measures to manage our exposure to the authorisation process.