

CURRENT NEWS

September, 2008

ArcelorMittal, Posco seek faster allocation of iron ore mines

New Delhi September 30, 2008: World's leading steel makers including Posco and ArcelorMittal have asked government to speed up allocation of iron ore mines, saying they are critical for their greenfield projects planned in India. The steel majors also want the Centre to ensure mineral linkages and fast statutory clearances for timely completion of their billion-dollar steel projects. "Among the major impediments that the investors including Posco and ArcelorMittal want to be addressed include mineral linkages, allotment of captive iron ore mines and land acquisition," Steel Secretary P K Rastogi told PTI.

The secretary had yesterday convened a meeting of mega steel investors to take stock of their problems in setting up greenfield projects, which are essential to meet government's target of adding 124 million tonnes of steel capacity by 2012. "We have heard from major steel investors their concerns and requirements for setting up greenfield projects. Ministry will put forth the points before the inter-ministerial group soon," Rastogi said. Besides the representatives of ArcelorMittal and Posco, senior officials from Tata Steel, Essar, JSW Steel and Ispat Industries apprised the ministry of the bottlenecks being faced by them in execution of greenfield projects.

"We have applied for prospecting licence for mining in Orissa and are waiting for a response from the government," ArcelorMittal India CEO Vijay Bhatnagar said. The company, however, plans to commence the steel plant by 2012, he added.

[Source: <http://www.business-standard.com>]

Sterlite Niyamgiri mine in a year

Kolkata/ Bhubaneswar September 30, 2008: Sterlite Industries (India) Limited (SIIL), whose proposal to source bauxite from Niyamgiri hills in Kalahandi district for its Rs 4000 crore refinery at Lanjigarh got the clearance of the Supreme Court recently, hopes to start mining of bauxite within a year. "We are in the process of obtaining the forest clearance and environmental clearance from the ministry of environment and forests (MoEF). The mining of bauxite can go into full scale in about a year", P K Panda, vice-president (mining), Vedanta Aluminium Limited (VAL), told Business Standard.

The mining plan, meanwhile, has been approved by the Indian Bureau of Mines (IBM), Nagpur. After receiving the MoEF clearance, the company will go for construction of conveyer belt, approach roads, infrastructure at the hill top and the provisions for power and water before the start of mining. Combinedly this will require an investment of Rs 250 crore making Niyamgiri ready for mining.

The investment includes about Rs 120 crore for Forest Diversion Proposal (FDP), Rs 35 crore for construction of roads and Rs 80 crore for construction of a new conveyer belt to carry bauxite from the mine at the hilltop to the plant at the foothill. Besides, about Rs 15 crore will be spent on making provisions for electricity and water. The Supreme Court in its judgment on 8 August this year had given clearance for diversion of 660.749 hectares of forest land for mining of bauxite at the Niyamgiri hills.

The length of Niyamgiri hill range is about 20 kms and it is spread over an area of about 250 square kms. Out of this, the mining lease is given for an area of 7 square kilometre, while the actual mining activity will be taken up over 3.5 square kilometres. On the possibility of displacement of tribals belonging to Dongria community, a senior company official said that there will not be any displacement in the mining site. "Some people were shifted for the refinery and all of them have been rehabilitated", he added.

It may be noted, 118 families belonging to 7 villages were displaced to make way for the refinery project at Lanjigarh. But the total size of affected population, which includes people who lost their land for the project, is 1236 families belonging to 27 villages. Meanwhile, the company has chalked out an expansion plan for the Lanjigarh refinery in Kalahandi district of Orissa at an estimated investment of about Rs 9000 crore. Under it, the capacity of the refinery is proposed to

be increased to 5 million tonne per annum (mtpa) from existing 2 mtpa. The expanded capacity will be in phases and is expected to be complete by 2012, company sources said.

Similarly, the company is also expanding its smelter capacity to 0.5 million tonne by 2010 from 0.25 mtpa at present at an investment of Rs 4000 crore. Besides, it will have a captive power plant (CPP) of 1215mw at an investment of Rs 4400 crore.

[Source: <http://www.business-standard.com>]

After ONGC, Oil India looks to mine country's uranium

Nuclear Power Corp. estimates India has some 78,000 tonnes of uranium, about 0.8% of the world's reserves

New Delhi, September 29, 2008: Anticipating a big push in nuclear power, state-owned Oil India Ltd, or OIL, may mine uranium, close on the heels of state-run explorer Oil and Natural Gas Corp. Ltd, or ONGC, tying up with Uranium Corp. of India Ltd, or UCIL, to explore for the mineral. "We have encountered radioactive logs while drilling wells. Getting into uranium exploration is a good idea. We have looked at this and spoken to ONGC about how they want to go about it," a person close to the matter, who didn't wish to be named, said. He didn't disclose further details.

ONGC has signed a uranium exploration agreement with UCIL, which was reported by Mint on 29 July. According to existing guidelines, atomic energy is the exclusive preserve of the Union government. While nuclear power plants can be set up only by the Nuclear Power Corp. of India Ltd, or NPCIL, another public-sector firm under the department of atomic energy, uranium can be mined only by UCIL. "ONGC has already gone forward. As far as Oil India is concerned, I cannot comment on it at this point of time," said M.R. Pasrija, chairman and managing director of OIL.

NPCIL estimates India's uranium reserves to be some 78,000 tonnes, around 0.8% of the world's reserves. Oil India also plans to tap the capital markets and got approval from market regulator Securities and Exchanges Board of India on 11 September for its initial public offering. The company is yet to float the offer due to uncertainties in the financial markets; it is required to float the offer within 90 days of securing approval.

Out of India's installed power generation capacity of more than 140,000MW, nuclear energy accounts for only 4,120MW. The country's 17 nuclear reactors are facing a fuel crunch with uranium in short supply, and are operating at 50% of capacity. "Oil India would have to get a technology arrangement in place as uranium mining will be a new area for them," said Ravi Mahajan, partner at audit and consulting firm Ernst and Young.

According to audit and consulting firm KPMG's India Energy Outlook report, India's department of atomic energy hopes to build 250,000MW of nuclear capacity by 2050 to meet the country's long-term power requirements.

Oil India's domestic interests are in Assam, Rajasthan and Arunachal Pradesh. It is also present overseas in Libya, Gabon, Nigeria, Yemen and Iran. The company is actively pursuing opportunities for acquiring hydrocarbon assets, exploration in Africa, West Asia, South-East Asia, South America, Russia and other countries.

[Source: <http://www.livemint.com>]

Indian miners to help thwart China steel crisis

New Delhi September 29, 2008: Indian mining industry has assured adequate supply of iron ore to Chinese steel mills, which are reported to have boycotted the raw material's supply from Brazilian mining major Vale after it asked for a price revision in the contracted prices for 2008-09. Indian miners have requested the government to abolish the 15 per cent export duty and reduce freight charges so as to facilitate the trade. "We are ready to do our bit to relieve the Chinese mills and will try to fill the gap created after the steel association there decided not to import iron ore from Vale," said Federation of Indian Minerals Associations Secretary General R K Sharma.

Chinese steel body CISA Executive Secretary-General Shan Shanghua was quoted by country's online news portal Chinastakes.com, as saying, "China will not import any iron ore from Vale as the Brazilian company was in unilateral breach of the contract." Earlier this year, Vale had agreed on a long-term contract with Chinese steel companies for supply of iron ore for the present year. However, it recently asked for an upward price revision in the contracted prices,

which sparked discontent in the Chinese steel sector. "Chinese steel makers won't accept Vale's price hike," he said and added they would look for domestic miners and other alternate options.

Indian miners exported over 90 million tonnes of iron ore to Chinese steel mills in the spot market in the last financial year. However, with the government imposing a 15 per cent ad valorem duty on iron ore exports in June, miners say the shipments have declined by nearly 30 per cent. "If the iron ore industry is to be given a fillip, the government will have to withdraw the export duty and lower freight charges," said an Indian merchant miner not willing to be quoted.

According to FIMI, the apex body of domestic iron ore miners, removal of export duty would add foreign reserves to the tune of about \$5 billion to the government coffers by the end of this fiscal. Chinese steel companies import about 100 million tonnes iron ore from Brazil every year.

[Source: <http://www.business-standard.com>]

Public hearing on bauxite mining rights on Oct 3

Visakhapatnam, September 28, 2008: In the face of stiff opposition from tribals, voluntary organisations and Opposition parties, the State Government is setting the stage for a public hearing on Oct 3 at Chintapalli in the district for leasing out bauxite mining rights to a private company. The district administration, Integrated Tribal Development Agency (ITDA) and the police have made elaborate arrangements for the public hearing for which over 5000 people are expected to attend.

The State Government has decided to lease bauxite mining rights from this area and signed an MoU with a private company 'An RAK Minerals' last year. According to Geological Survey of India 189.26 million tonnes of bauxite reserves are there in 833 hectares of forest area covering 66 villages in the State and eight villages in Malkangiri district of Orissa.

[Source: <http://www.expressbuzz.com>]

SAIL eyeing iron ore mines in Kanjamalai hill

Salem, September 28, 2008: The run for the resource-rich Kanjamalai, a hill located near Salem, has acquired a new dimension with Union Steel Minister Ram Vilas Paswan appealing to the Tamil Nadu Government to allocate the iron ore mines in the hills to the public sector Steel Authority of India Limited (SAIL). Mr. Paswan, participating at the foundation stone laying ceremony for the Salem Steel Plant's (SSP) modernisation and expansion project recently, said "the mines at the hills are at the core of the current expansion plan of Salem Steel". The project, once completed, will make the SSP an integrated steel plant, enabling it to produce high quality stainless steel. If the plant is able to source iron ore locally, it will benefit the SSP in many ways. The supply of iron ore from Kanjamalai is a key to the growth of the SSP, industry sources here point out.

The Tamil Nadu Iron Ore Mining Company (TIMCO), a joint venture between Jindal Vijayanagar Steels and the Tamil Nadu Industrial Development Corporation (TIDCO), which is already in the race for the iron ore at the hill, has planned to invest about Rs. 400 crore to take up mining in Kanjamalai, where an area of over 635 acres has been earmarked with a potential for about 75 million tonnes of iron ore. TIMCO will supply the iron ore to JSW Steel's Salem facility. But people and the industrial community here insist that the public sector SSP, which is on an expansion mode, should also be given the opportunity to mine iron ore from the hill.

With the fresh request from Mr. Paswan, the demand has gained more support. SAIL also planned a Special Economic Zone exclusively for steel at the SSP premises. Meanwhile, people in the villages, in and around the hill, are strongly opposing any mining activity in the Kanjamalai reserve forests, as it, they claim, will affect their livelihood and the environment.

[Source: <http://www.hindu.com>]

UCIL to invest Rs1,000 cr in Meghalaya

The company has begun preparatory work like roads for the project but was waiting for government approvals to begin operation

Kolkata, September 28, 2008: Uranium Corporation of India Ltd (UCIL) said it will invest around Rs1,000 crore in development of Meghalaya uranium mines and processing plant and was hopeful to get consensus and clearance from the government soon. UCIL sources said the

company has begun preparatory work like roads for the project but was waiting for government approvals to begin operation. "UCIL is ready with an investment plan of up to Rs1,000 crore in Meghalaya, where a 2,200-tpd plant has been proposed. The Detailed Project Report is ready," a senior company official said. In the north-east State, about 10,000 tonnes of uranium ore deposits have been established by the Atomic Minerals Division (AMD), way back in 1992. Beside, North East, Karnataka and Rajasthan and expansion in Andhra Pradesh are on the immediate radar of the UCIL, which hopes to take up mining for uranium resources estimated to be around 1.2 lakh tonne from about 65,000 tonne now.

However, UCIL was facing protests from political parties and NGOs. The state emphasised the need for evolving a consensus among all stakeholders, including political parties on the issue of uranium mining in the state, which is crucial to country's nuclear power programme, in the face of environmental and health concerns on radiation.

[Source: <http://www.livemint.com>]

SAIL to get iron ore from chiria mines

Sep 26, 2008: Jharkhand Government and the union steel ministry on Wednesday in-principle agreed to sort out a logjam in the allotment from the iron ore-rich Chiria Mines to the Steel Authority of India limited (SAIL) by October. "Priority in allotting Iron Ore from the Chiria Mines will be given to the SAIL...And a decision to this effect will be taken by next month," Union Minister, Mr Ram Vilas Paswan and Jharkhand Chief Minister, Mr Shibu soren told a joint press conference here.

"That does not mean that we will ignore the private sector. After allotting to the SAIL, we will decide later on private sectors" Mr Soren said while urging the Steel Minister to create job opportunities for the people of Jharkhand.

[Source: <http://www.yourminingnews.com>]

ArcelorMittal Seeks to Mine 100 Million Tons of Ore in India

Sept. 19, 2008: ArcelorMittal, the world's largest steelmaker, submitted a bid to mine 100 million tons of iron ore in India's Chhattisgarh state, aiming to augment supplies of the main raw material. The winner must build a steel plant in Chhattisgarh, according to terms set by the provincial government, said P.S. Yadav, senior manager at Chhattisgarh Mineral Development Corp. ArcelorMittal is one of the many bidders that have offered to form a venture with the state-run organization, Yadav said. "The decision is likely to be taken within the next month," he said by telephone from Raipur, in central India. Officials at the Indian unit of ArcelorMittal declined to comment. Delays in receiving land and mining permits has prevented ArcelorMittal from implementing projects in Orissa and Jharkhand. The company is competing with international rivals including Posco to set up steel projects in India, home to the world's fifth biggest iron-ore deposit.

JSW Steel Ltd., India's third-largest producer, today secured government approval to mine iron ore in Jharkhand, almost a year after winning a permit to search for ore for its planned \$8 billion factory in the state. Tata Steel Ltd., the world's sixth-largest steelmaker, has said it plans to set up a \$2.3 billion plant in Chhattisgarh. The states of Jharkhand, Orissa and Chhattisgarh account for 70 percent of India's coal reserves and 55 percent of iron ore, according to McKinsey & Co.

ArcelorMittal may spend \$3 billion to set up a 6 million ton steel plant in Chhattisgarh, the Economic Times reported today, without citing anyone. Vijay Kumar Bhatnagar, the chief executive officer of ArcelorMittal's Indian operations, didn't give details about the project, saying nothing had been finalized, the newspaper reported. India produced 55 million tons of steel in the year ended March 31. China's output reached 535 million tons last year.

[Source: <http://www.bloomberg.com>]

Railways gear up to transport coal in Mozambique

New Delhi, September 14, 2008: Railways for the first time will be extending its expertise in coal transportation in foreign shores. RICON, a joint venture by IRCON and RITES, has been given a 25 year concession to rehabilitate, operate and upgrade 850 km long rail line in Central Mozambique including Beira Port to carry 12 million tons of coal annually at an estimated cost of

about USD 440 million. IRCON and RITES are two leading PSUs of Indian Railways. While the upgradation of the rail line, required to sustain the coal movement, is to cost about USD 260 million, while the rehabilitation and operation of the line will cost USD 180 million. "This is a first concession awarded to an Indian consortium for coal transportation in a foreign country," a senior Railway Ministry official said. The southeastern African country of Mozambique has one of the largest coal reserves in the world. Indian companies including Coal India, SAIL are keen to bag the mining rights in Mozambique. However, currently a Brazilian company has been given the mining rights.

There will be a high-level meeting at Railway Board on September 15 to decide the issue relating to the coal mining rights and upgradation of railway network in Mozambique. The meeting is to be attended by senior officials from Ministry of External Affairs, IRCON, RITES, Coal India and SAIL among others.

[Source: <http://economictimes.indiatimes.com>]

Coal reserves may be over by 2040: CIL

India is likely to run out of its 60-70 billion tonne of coal reserves

New Delhi, September 8, 2008: Stressing the need to employ new mining technologies, Coal India Ltd chairman Partha S. Bhattacharyya said India is likely to run out of its 60-70 billion tonne of coal reserves by 2040-41 if the demand continues to grow at the present pace. "The demand for coal will reach two billion tonnes mark by 2016-17. We need to grow at the rate of 17-18% from present 6-7% to meet this growing demand," Bhattacharyya said at the ICC Coal Summit here.

"The demand (for coal) by power sector for 2011-12 has been pegged at around 730 million tonnes but the production target for the 11th Plan is at around 680 million tonnes," he said. However, minister of state for coal Santosh Bagrodia felt there was no shortage it could be unearthed at the rate of 12% by this year itself.

[Source: <http://www.livemint.com>]

Rio bets on rising Indian ore demand

Matt Chambers | September 08, 2008

RIO Tinto expects little fall in demand for Australia's iron ore and has been approached by Indian steel mills, eager to secure alternative supplies to meet the needs of the nation's booming economy. The mining giant, which has long-term ambitions to triple iron ore production, also plans to make the way it sells its iron ore more consistent. It is looking at a "global blend" that would mix ultra-high-grade ore from the planned Simandou mine in Guinea with lower grades from expanded Pilbara production.

India is seen by both Rio and its predator, BHP Billiton, as having potential for commodity demand growth of the kind delivered by China this decade as it spurred a global commodities boom. Rio expects India, which currently exports about 80 million tonnes of iron ore a year to China, to eventually become an importer of both iron ore and steel some time after 2012. Ian Bauert, the company's managing director of iron ore sales and marketing, said signs of that were already emerging. "We're getting interest from Indian steel mills who are saying they would like to try it (Rio's iron ore) for their plants," Mr Bauert said in an interview with The Australian in Perth. Mr Bauert said Indian steel production could take off like China's and, while there were still reforms needed, many mills were already being planned near the coast, which would give them easier access to seaborne iron ore.

Iron ore growth is key in BHP's \$US150 billion bid to create a global mining giant and Rio's more easily expanded Pilbara ports are a major factor when the target says BHP needs to further boost its 3.4-for-1 scrip bid. Despite market concerns about a global slowdown and reports of growing Chinese stockpiles, Rio and BHP have remained confident there will be little reduction in longer-term demand growth for their iron ore. Mr Bauert said there was thought to be about 68 million tonnes of iron ore, or about a month's supply, stockpiled at Chinese ports after as much as 3 million tonnes of steel production a month was stopped for the Olympics. Production is expected to pick up again after the national holidays at the start of October. As well as faith in China's continued demand, Mr Bauert pointed to local supply risks, with almost half the 840 million tonnes of import quality equivalent iron ore used by China each year produced

domestically.

Body: Much of this is by high-cost private operations that need to heavily concentrate their grades and for which Mr Bauert said Rio saw little future. To put the size of Chinese production in perspective, Australia, which is forecast to be the world's biggest iron ore exporter this year, is expected to deliver 328 million tonnes of iron ore in 2008, less than China as a whole. Building on last year's successful introduction of a "Pilbara blend", which reduced its products sold from a potential 13 to five, Rio Tinto is planning a global blend for its eventual 600 million tonne a year production ambitions. The blend would use high-grade ore from Guinea, if the Simandou project there comes to fruition, and mix it with lower Australian grades, enabling greater expansion here. Blends allow Rio to supply a consistent product to steel mills rather than ore types that vary and would require plant reconfiguration as new mines are brought on and others run out. "We're looking at two options, either stockpiles where blending is done close to the customer, or virtual blends," Mr Bauert said. Virtual blends would involve steel mills receiving packages of ore from different mines that they could blend themselves.

Pilbara blend products developed for Asian steel mills contain about 62 per cent iron ore, while Simandou's resources are close to 67 per cent. Rio Tinto is in the process of boosting its operated Australian production to a rate of 320 million tonnes a year by 2012, from around 200 million now, with further ambitions to lift that to 420 million tonnes. BHP is looking to boost its production from a rate of about 120 million tonnes a year to 240 million tonnes in 2012 and 300 million tonnes by 2015. If Rio Tinto can get the massive Simandou project past the Guinean government and other development hurdles, it plans to eventually produce 170 million tonnes from that region as part of a plan to move total iron annual production to 600 million tonnes.

[Source: <http://www.theaustralian.news.com.au>]

Centre proposes corpus fund for mine closure

September 08, 2008: The Centre has proposed a separate "corpus fund" to ensure the execution of mine closure in India. The fund can be generated from the start of a coal mining project to be calculated on the basis of peak mine capacity and actual coal production. The minimum rate of this fund would be Rs. 6 per tonne of coal produced. The mining company will deposit this amount in a scheduled bank with the coal controller organizations under the coal ministry as exclusive beneficiary. This was envisaged in the draft policy on mine closures. However, the Centre will soon formulate separate guidelines for the closure of coal and lignite mines based on the draft policy.

Top sources told FE that a three-tier mechanism may be adopted for maintenance of mine closure account involving the bank, the deputed government authority and the mine operator. The mine closure guidelines will apply both to new and old operators. The cost for mine closure will be deposited by the beneficiaries of coal as well as lignite from the start of production. The actual nature of restoration would change from block to block. The mine closure plan will be prepared and approved under Mineral Concession Rules 1960. Detail about the existing surface and ground water bodies available in the lease area and the measures to be taken for their protection, including control of erosion, sedimentation, siltation, water treatment, diversion of water, would have to be highlighted in the closure plan.

According to the draft policy, mine closure plan should be reviewed periodically, depending upon progress of mining operation, completion of closure activities and maturity of investment. A responsible authority should be identified and held accountable to vet such closures. Moreover, once the completion criteria have been met, the company should be allowed to relinquish their tenement without further obligations. The approval of mine closure plan will be mandatory for all coal mines. Meanwhile, Coal India (CIL), which supplies 85% of coal in India and proposes to import 4 million tonne to tackle ever increasing coal demand, has suggested that the mine closure plans should bear relationship with depth of the mine and condition of the mine.

The Central Mine Planning and Design Institute Limited (CMPDIL) suggested that the prevailing guidelines may be re- assessed after 5 years of implementation and CIL may also be involved during the preparation of the guidelines then.

[Source: <http://www.financialexpress.com>]

CIL to import coal for the first time

New Delhi September 06, 2008: Coal India, the country's largest coal producer, is set to import about four million tonnes of coal in the current financial year ending March 2009, even as coal ministry claims that the country has sufficient coal to meet its need. "We will buy about four million tonnes of coal from overseas. This (import) is a totally uncharted territory for us," said Partha S Bhattacharya, chairman of the company, on the sidelines of the India Coal Summit 2008 in Delhi.

He did not elaborate why Coal India was resorting to import for the first time. Bhattacharya also said that the company is planning to acquire some coal mines in Indonesia, Mozambique and Australia. The company's wholly-owned subsidiary Coal Videsh Ltd (CVL) is reviewing four mining blocks with reserves of 150 million tonnes in Indonesia. Apart from CVL, Coal India has forged alliance with four other state-run companies, Steel Authority of India, Rashtriya Ispat Nigam, NMDC and NTPC, to acquire coal mines overseas, as India's demand for coal in future is expected to outstrip projected supply by a wide margin.

Even as Coal India has drawn up plans to import coal, Santosh Bagrodia, minister of state for coal, claimed that country is having surplus coal. "We have a surplus coal stock of about 31 million tonnes and the shortage of coal is a myth," he said. He blamed the Indian Railways for the unavailability of enough coal to the consumers. "Wagons are not available", he added. However, the power ministry said that the import of coal by CIL is a part of the government's plan to import 20 million metric tonnes of coal from overseas in the current year. "Actually, this coal import is a requirement that was fixed earlier this year by the government. This is nothing new. Since the beginning, there were some allotted figures for coal import of about 20 million tonnes," said Anil Razdan, Power Secretary.

He also added that he has asked state bodies to expedite the import of coal and CIL is a part of it. "We are improving the plant load factor (PLF) of our power stations and making sure of the availability of fuel to meet the shortages," he added. Razdan also revealed in a separate statement that about two per cent of India's installed capacity remains unutilised due to coal shortage.

[Source: <http://www.business-standard.com>]

Indian Mine Monitors Workers and Toxic Gases

PervCom's active 2.4 GHz RFID tags, attached to cap lamps, track miners' locations and contain sensors for measuring temperature, humidity and air quality.

By Dave Friedlos

Sept. 5, 2008—Indian startup company PervCom Consulting has developed a combined real-time location system (RTLS) and real-time sensing system (RTSS) able to simultaneously track persons and assets, as well as monitor environmental conditions. The combined system, PervTrack, utilizes battery-powered RFID tags, routers and sensors compliant with the IEEE 802.15.4 standard to create a wireless mesh network. The Central Institute of Mining and Fuel Research (CIMFR) Dhanbad is currently piloting the system in the Bagdigi coal mine to monitor workers underground and in potentially dangerous environment conditions, while the Indian aluminum mining company Vedanta is trialing the system, minus the sensors, to track vehicles and other mobile assets. CIMFR's deputy director, Laxmi Bandyopadhyay, says the institute received backing from India's Ministry of Information Technology to develop an underground tracking application. "It can be difficult to track miners underground, and we felt that RFID would give us the best solution," he explains. "So we approached PervCom to develop a mine-specific RFID system."

CIMFR and PervCom are devising the system together, with CIMFR providing the mining expertise and system requirements, while PervCom focuses on software and hardware. PervCom developed the PervTrack RTLS, which employs active RFID tags operating at 2.4 GHz, attached to miners' cap lamps. Six R-101 routers were then placed at strategic locations throughout the mine, forming a wireless mesh network compliant with the IEEE 802.15.4 standard, and two miners were issued tags to test the system. The routers receive and forward data transmitted by WiTrak Tags, and serve as nodes in the wireless mesh network formed by other routers, tags and gateways within their vicinity. The location of the miner and tag is determined by the tag's position relative to the nearest router, which has a transmission range of up to 1.3 kilometers (0.8 miles). The tags also act as a communications device, with miners able to send pre-coded messages to

a central station by pressing a button on the tag. In addition, they can receive alerts from remote monitoring stations.

It was then decided, Bandyopadhyay says, that the system could also monitor environmental data, including the detection of potentially poisonous gases, such as carbon dioxide or methane. PervCom developed the RTSS, in which the company's WiSense WiS-101 sensor-actuator nodes were embedded into PervCom's existing WiTrak WiT-101 RFID tags. The wireless nodes contain temperature, humidity and air-contaminant sensors capable of detecting smoke and fire, and of monitoring the air quality in buildings. Information is transmitted in multi-hops to a remote monitoring station, where it is then transferred to bespoke PervTrack software. The data is sent at specified intervals to software that analyzes the information and automatically generates an alert if the measurements exceed specified levels.

The system could be vital in detecting the emission of toxic gases, Bandyopadhyay says, and in tracking and rescuing miners during emergency situations. "We are in the earliest stage of the trial," he states, "but it is working well and has shown some promising results in terms of improved safety." In the coming months, CIMFR and PervCom hope to expand the areas of the mine in which the system operates, as well as extend the parameters for monitoring mine gases. The companies are presently awaiting clearance from the nation's Directorate General of Mines Safety to deploy a larger pilot involving 100 tags and 30 routers. According to Bandyopadhyay, the technology could also be utilized to monitor conditions in hilly regions, and to warn of impending landslides.

Vedanta, meanwhile, is also trialing PervTrack RTLS to monitor industrial vehicles and other mobile assets entering and leaving its factory. Each asset will be fitted with a WiT-101 tag, which communicates its current location through the wireless mesh network to the nearest R-101X router, placed at strategic locations. PervCom is presently implementing 25 routers and 20 tags ahead of the pilot. The asset's location can then be viewed through the PervTrack software running at the control station. PervTrack software provides map-based views, alert notification and reporting from a single, scalable unified platform. The Web-based application enables Vedanta to monitor the location data online, in real time.

The pilots are essential, says PervCom director Somprakash Bandyopadhyay, in addressing the number of challenges and issues involved when deploying RFID in an underground environment. "We had to confront issues such as power consumption and how long the tags can operate in a mine environment," he says. "There are also issues around dust, moisture and humidity, which are found underground. The tags, routers and other equipment have to be able to withstand the environment."

Furthermore, it was necessary to determine the optimal frequency for operating underground. PervCom opted for 2.4 GHz active tags compliant with the IEEE 802.15.4 standard. The system also complies with the ZigBee standard (which is also based on IEEE 802.15.4). Somprakash Bandyopadhyay, however, says testing revealed systems operating only on the ZigBee standard had limitations in terms of the number of hops the signal could make. With PervTrack, an RFID tag's signal can hop as many as 15 times, from tag to tag or router, and on to gateway.

When the pilots are completed, Somprakash Bandyopadhyay says, PervCom plans to move to a full-scale rollout, beginning locally before targeting the overseas market. The company intends to specifically target mining and chemical companies that have the greatest need to monitor assets and environmental conditions.

"These can be dangerous environments," he says, "and if there is an emergency, such as gas or toxic leak, this system will detect the leak and alert staff, and ensure the company knows where its people are. We are just at the beginning of our journey, but when we are finished, companies will be able to have an integrated RTLS and RTSS system, and will be able to see the position of their miners and the status of environment conditions—all online."

[Source: <http://www.rfidjournal.com>]

Sterlite to expand capacity of copper smelter in Tuticorin

Plans to reach ultimate capacity of one million tonnes at Silvassa and Pearl City

Chennai, Sept 02, 2008: Sterlite Industries India Limited (SIIL), a leading non-ferrous metals and mining company and the flagship of Vedanta Resource of London, is planning to increase the

installed capacity of its copper smelter at Tuticorin (Tamil Nadu) to 4.20 lakh tonnes by implementing a de-bottlenecking programme.

Addressing visiting presspersons at the company's plant at Tuticorin, R. Kishore Kumar, CEO, Sterlite Copper, said the last expansion at the Tuticorin smelter to four lakh tonnes from three lakh tonnes also involved de-bottlenecking of operations. Mr. Kishore Kumar said the capacity addition from 60,000 tonnes to four lakh tonnes happened in just a decade.

In its copper smelting operations, the company is turning out by-products such as sulphuric acid, phosphoric acid and hydrofluoric acid. It also produces bismuth and selenium as value added products. The electrolytic process employed in refining leaves out anode slimes, which contain precious metals such as gold and silver. Mr. Kishore Kumar said there were no systems in place to recover these metals from the slime.

Tatas eye iron ore mines in Laos

Kolkata September 01, 2008: The group is also keen on investing in hydro-power sector in the Republic. Tata Steel, the world's sixth largest steel-maker, is looking at acquiring iron ore deposits in Laos, officially the Lao People's Democratic Republic (PDR). The Tata group-owned steel company has already started prospecting some mines in Communist-ruled Laos.

Speaking to Business Standard, Soulivong Daravong, minister of planning and investment, Lao PDR, said that though there was no formal proposal from the Indian company as yet, "they were prospecting some iron ore deposits quietly". A Tata Steel spokesperson refused to comment. Daravong was part of a delegation that accompanied the southeast Asian country's President Choummaly Sayasone on a five-day visit to India that concluded on Saturday.

The minister also said that the Tata group was keen on investing in the hydro power sector in the country. Laos is welcoming private investment in the mining and hydro power sectors. Even though 100-per cent foreign direct investment was allowed in most sectors, a foreign company would have to form a joint venture with the government for projects related to natural resources.

B Muthuraman, managing director, Tata Steel, met Sayasone in Kolkata on Friday. Sizeable deposits of iron ore are known to exist in Laos, which is bordered by Myanmar and China to the northwest, Vietnam to the east, Cambodia to the south, and Thailand to the west. If the acquisition materialises, then it would be the third foreign iron ore deposit in Tata Steel's portfolio.

Last year, Tata Steel entered into a joint venture with Sodemi, a government-owned mineral development company in Africa, for development of Mount Nimba iron ore deposits in Ivory Coast. The iron ore from the project would be supplied to the Corus facilities in the UK and the Netherlands. Tata Steel also has a greenfield steel project in Vietnam, which includes a 30-per cent stake in Thach Khe Iron Ore joint stock company. The joint stock company would undertake mining in the Thach Khe iron ore mine.

The move to step up raw material security was due to soaring prices. In the last 12 months, annual iron ore contract prices have increased 70 per cent, while spot prices have increased 117 per cent. While Tata Steel meets all of its iron ore requirements from its own mines for Indian operations, for the group, which includes Corus and other foreign acquisitions, it stands at 22 per cent. The company has set a target of 40 per cent raw material security over the next three-five years.

To achieve its target, Tata Steel has chalked out a two-pronged strategy of participation in the early stage of a project, i.e. in exploration/pre-feasibility stage or to look for opportunities which could give the group immediate off-take.

[Source: <http://www.business-standard.com>]