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Response to request for review

Dear Sirs,

Please find below the joint response to the request for review for the CDM project number 1324. In case you have any further inquiries please let us know as we kindly assist you.

Yours sincerely,

Javier Castro
Carbon Management Service

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Response to request for review for Project 1324: Power Generation from waste heat of submerged arc furnaces

Comment No.1:

Further substantiation is required on the consideration of CDM to proceed with the project activity given the time lag between the start date of operation and submission for CDM registration.

Response by project proponent:

There has been no significant time lag between the start date of operation and submission for CDM registration. Jindal Stainless Limited (JSL) took the decision of carrying out the project activity, considering the incentive from the CDM, since its inception. The CDM process was started such that the date of commissioning of the project activity and the date of registration of the project activity as a CDM project are coincided.

The project activity is a part of a Greenfield Stainless steel plant integrated with ferrochrome manufacturing facility. Being one of the largest Greenfield stainless steel plant in India, there was a requirement of approvals from various state government and central government authorities which took a considerable time.

The various important stages of the installation of the plant are as follows:

17 th October 2003	Management's decision to set up an integrated 1,600,000 tpa stainless steel facility in the state of Orissa wherein the waste heat recovery project be taken as CDM project.
3 rd July 2004	Land allotment letter from the government of Orissa for setting up the plant at village Duburi, Jajpur, Orissa (Annexure-1)
5 th August 2005	Environmental Clearance from Ministry of Environment & Forests (MoEF) for the plant
11 th November 2005	Deed of delivery of land possession (Annexure-2)
8 th July 2006	Discussions with the CDM consultancy firms (Annexure-3)
9 th October 2006	Appointment of CDM consultants (Annexure-4)
23 rd January 2007	Appointment of DOE and start of validation (Annexure-5)
10 th January 2007	Submission to MoEF for host country approval (LoA) (Annexure-6)
2 nd April 2007	HCA obtained for the project
3 rd September 2007	Submission for registration

JSL started with the CDM process in July 2006 as ferrochrome based furnaces were scheduled for commissioning in December 2006 and subsequently the waste heat recovery based power



unit were to be commissioned in April 2007. Thus, anticipating a period of about 7-9 months in the whole CDM process, the commissioning of the project activity was aimed towards coinciding with the date of CDM registration.

However, there was a delay in getting necessary approvals (LoA) and presentation of requisite documents by the CDM consultant for the project activity resulting in a prolonged validation period against that expected. (Jan 2007 to August 2007)

Thus, there was no considerable time lag between the start of the operation and submission for registration of the project activity.

Response by TÜV SÜD:

The commissioning of the project activity was anticipated during April 2007 and hence the process to avail CDM benefits was started in July 2006 with discussions with CDM consultants for preparation of Project Design Document (PDD). It is required to understand that this is one of the major and time consuming steps before PDD is ready for applying for CDM validation process.

Eight-nine months is considered to be sufficient time for preparation of PDD, getting host country approval, getting validation, applying for CDM registration and finally getting project registered as CDM project. However, due to delay in finalisation of PDD by CDM consultant for validation process and then due to further delay in validation process, the project could be submitted in early September 2007 for registration.

Further, the audit team would like to inform that methodology on waste heat recovery for captive power generation was already submitted to Meth Panel during second half of 2003 (NM0031

<http://cdm.unfccc.int/methodologies/PAmethodologies/publicview.html?OpenNM=NM0031&single=1>) and decision to implement the project activity was taken taking CDM into consideration in October 2003.

Comment No.2:

Further clarification is required if the validated technological problems could not have been predicted when the project was being planned and whether expected costs due to downtime and repairs were higher than cost savings from waste gas power generation vs. coal captive power.

Response by project proponent:

JSL was fully apprised of the technological problems associated with the project activity. JSL was informed of the uncertainties involved in the project on account of completely new technology and varying nature of the waste gas from ferrochrome furnaces. Still JSL went ahead with the project activity taking CDM revenues into consideration as that would help in mitigating the various risks associated with the project activity. Because of lack of precedence and unavailability of any technical literature to predict the performance associated with such kind of project, the problems in integrating the systems (submerged arc furnace and waste heat recovery system) and response of boiler to the chromium laden flue gases could only be anticipated, the quantification of downtime and repair costs was not possible for this first of its kind project activity.

The letter from The Indian Ferro Alloy Producers' Association (IFAPA) also certifies that the project activity by JSL being a novel project has not been seen before and wants the other ferrochrome manufacturers to follow the same as an environmentally friendly initiative (Annex-

ure-7). This clearly implies that the project activity is the first and only of its kind implemented in India till date.

Response by TÜV SÜD:

Audit team is of the opinion that technological problems were already anticipated during project planning but they could not be quantified for carrying out investment analysis because there was no precedence for this kind of project activity in the ferro chrome industry in India. In absence of any precedence, the technological problems associated with integration of submerged arc furnace with waste heat recovery systems and impact of chromium laden gases on boiler tubes and fans could not be quantified in terms of costs of downtime and repairs. It was only possible to anticipate the problems but was not possible to anticipate the scale of problem. Hence project activity uses the barrier analysis for justifying additionality of the project. The contribution of CDM revenues to alleviate the barriers was considered during approval of the project from top management.

Comment No.3:

Further substantiation of the claim that most of the ferrochrome industries in India are in the Eastern region is required.

Response by project proponent:

As per the Department of Scientific and Industrial Research, Government of India, the estimated reserve of chromite ore in the country is about 140 million tonnes, and about 127 million tonnes (representing approximately 90.7%) are available in the Sukinda valley of Orissa state which falls in the eastern region in India. (Executive summary, page 6, <http://dsir.nic.in/reports/techreps/tsr079.pdf>)

IFAPA has certified the project activity to be first of its kind in India - novel technology (Annexure-7). It has also given the list of ferrochrome manufacturing units which clearly indicates that most of the ferrochrome manufacturing units are located in the eastern region, primarily Orissa, owing to the proximity of ore availability (Annexure-8). As per the list provided, it can be observed that about 75% of the manufacturing capacity is located in the states of Orissa and West Bengal.

Response by TÜV SÜD:

The discussion in the PDD has been revised now. A letter (Annexure 7) from Indian Ferro Alloy Producers' Association (IFAPA) has been obtained which states that the project activity is novel (unique) in the ferrochrome industry in India and other member manufacturing units should follow the example set by JSL project activity. It indicates that the project activity is the first of its kind and only project installed in ferrochrome industry in India till date.

Further, the list of ferrochrome manufacturing units available from IFAPA (Annexure 8) clearly indicates that most of the units are located in state of Orissa and West Bengal (states in Eastern Region) and these units account for almost 75% of the total manufacturing capacity installed in the country.