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Att: CDM Executive Board

Your ref.:  
CDM Ref 1027

Our ref.:  
RAFI/MLEH

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**Validation opinion - Request for revision of monitoring plan for project activity 1027  
“Transalloys Manganese Alloy Smelter Energy Efficiency Project”**

We refer to the procedure for revising monitoring plans adopted at EB 26, we herewith request a revision of the monitoring plan for project activity 1027 titled “Transalloys Manganese Alloy Smelter Energy Efficiency Project”.

The project activity was registered as a CDM activity on 19 October 2007 with a crediting period starting from 01 October 2004 to 30 September 2014 (fixed).

A total of 22 3073 CER have been issued for the project activity on 6 November 2008 covering the monitoring period from 01 October 2004 to 31 March 2008. The verification task was carried out by TÜV SÜD Industrie Service GmbH. On 7 November 2008, the project proponent was informed<sup>1</sup> by the CDM team through verifying DOE that the secretariat has noted that the monitoring plan of project activity was not in accordance with the methodology. It was stated that the monitoring plan does not contain monitoring frequency information for several parameters that include: (QPy,monitored, EFpcoal, EFppaste,y, Quality of Coalp, Quality of SiMnp). It was further stated that while the applied monitoring methodology has specified monitoring frequencies for all of the required parameters, the PP/DOE is requested to submit a request for revision of the monitoring plan (as per Annex 34 EB26) to include the monitoring frequency information prior to submitting the next request for issuance.

In this regards, EcoSecurities Ltd. has commissioned Det Norske Veritas Certification AS (DNV) to provide a validation opinion on the revision of the monitoring plan for “Transalloys Manganese Alloy Smelter Energy Efficiency Project” and submit the revision of the monitoring plan request to the UNFCCC.

The revision of the monitoring plan is related to request to changes of “Description of measurement methods and procedures to be applied” and “the source of data to be used” as described below. Please note that the monitoring frequency information for these parameters is included either in the “Description of measurement methods and procedures to be applied” or the “the source of data to be used” as further explained.

**1. Project Description**

The “Transalloys Manganese Alloy Smelter Energy Efficiency Project”, developed by Highveld Steel and Vanadium Corporation, is an industrial energy efficiency project that reduces the

<sup>1</sup> Email to the representative of TÜV SÜD on 7 November 2008 from Mr. Chunyu Liang on behalf of the CDM Team

electricity consumption in the production of silicomanganese (SiMn) alloy (a key component in steel making) at its Witbank facility in South Africa. The project involved a retrofit of furnaces with new design of electric arc furnaces, electrode assemblies and new control and peripheral systems. The target was to reduce the specific electricity consumption of the alloy production by approximately 10-20% to between 4.5 - 4 MWh per tonne of alloy produced. This would result in a reduction of the specific electricity consumption at approximately 0.4 MWh/ton.

The project had thus displaced electricity from the South African grid, which is mostly generated from coal combustion. The amounts of coal and coke used as reductants and paste (mostly made of carbon) used as electrodes in the submerged electric arc furnaces in the alloy production were not expected to be affected by the project. The project comprises 5 furnaces with a step-wise implementation over 5 years.

## 2. Revision to the Monitoring Plan

The project uses approved methodology AM0038 (“Methodology for improved electrical energy efficiency of an existing submerged electric arc furnace used for the production of SiMn”), version 01, dated 29 September 06. In line with the EB requirements, a revision to original monitoring plan of the registered PDD in order to correct the mistake and remove any doubt is initiated, the proposed revision to the monitoring plan are as following:

(a) The recording frequency of the Quantity of SiMn production in year y during the project activity (i.e.  $QP_{y,monitored}$ ) was not clearly mentioned in the registered PDD. The following table summarizes the revisions made to the parameter.

Symbol	Description (unit)	Description of measurement methods and procedures to be applied:	Reference
$QP_{y,monitored}$	Quantity of SiMn production in year y during the project activity  (Tonnes of SiMn/year)	Data will be monitored at each tapping of the furnace by weighing metal ladles on a weighing platform. The weighing platform will be maintained and calibrated regularly in line with the manufacturer’s requirements.	Monitoring plan as registered PDD (page 42/43)
		Data will be monitored at each tapping of the furnace <b>i.e. at each “production run”</b> by weighing metal ladles on a weighing platform <b>and aggregated daily</b> . The weighing platform will be maintained and calibrated regularly in line with the manufacturer’s requirements.	Revised monitoring plan

The proposed above revision to the monitoring plan clearly states the frequency of monitoring by adding that the parameter  $QP_{y,monitored}$  will be monitored **at each “production run” and would be done by weighing metal ladles on a weighing platform and aggregated daily** as required by the methodology AM0038, version 01.

(b) The recording frequency of the annual consumption of electrode paste used as electrode in the submerged electric arc furnace (i.e.  $Q_{\text{paste},y}$ ) was not clearly mentioned in the registered PDD. The following table summarizes the revisions made to the parameter.

Symbol	Description (unit)	Description of measurement methods and procedures to be applied:	Reference
$Q_{\text{paste},y}$	Annual consumption of electrode paste used as electrode in the submerged electric arc furnace	The number of paste cylinders put into the electrode is logged each time a new cylinder is used. The average weight of each cylinder is calculated based on weighing paste trucks (arriving at the facility) on a weighbridge and dividing total weight by number of cylinders.	Monitoring plan as registered PDD (page 44)
	(Tonnes of paste/year)	The number of paste cylinders put into the electrode is logged each time a new cylinder is used. The average weight of each cylinder is calculated based on weighing paste trucks (arriving at the facility) on a weighbridge and dividing <b>on a monthly basis the</b> total weight by number of cylinders <b>delivered to the facility</b> . <b>The annual figure is obtained by summing the daily product of number of cylinders used and monthly average weight.</b>	Revised monitoring plan

The proposed above revision to the monitoring plan clearly states the frequency of monitoring by adding “**on a monthly basis**” the total weight by number of cylinders **delivered to the facility**, and **the annual figure is obtained by summing the daily product of number of cylinders used and monthly average weight**.

(c) The recording frequency of the emission factor applied for the coal consumed as reductant in year y (i.e.  $EF_{\text{pcoal},y}$ ) was not mentioned in the registered PDD since the IPCC 2006 value was used. As per the methodology, the preferred option is to monitor the carbon content furnished by the supplier or independent laboratory on a monthly basis. Nonetheless, AM0038 allows the use of an IPCC default value.

Symbol	Description (unit)	Description of measurement methods and procedures to be applied:	Reference
EF <sub>pcoal,y</sub>	emission factor applied for the coal consumed as reductant in year y (tCO <sub>2</sub> /t coal)	The 2006 IPCC value of 3.1tCO <sub>2</sub> /t coal will be used in the project.	Monitoring plan as registered PDD (page 45)
		The 2006 IPCC value of 3.1tCO <sub>2</sub> /t coal will be used in the project. <b>If new IPCC guidelines are released, this value may be updated according to latest relevant EB guidance.</b>	Revised monitoring plan

The proposed above revision to the monitoring plan now states that **if the new IPCC guidelines are released, this value may be updated according to latest relevant EB guidance.**

The project proponent has clarified that the IPCC data will be used to ensure consistency with the emission factor used in the baseline. It has also been stated that each coal type used has a historically measured emission factor that is lower than the IPCC values, and therefore taking project-specific values for EF<sub>pcoal,y</sub> would not be conservative. It has been further clarified that the project specific value is not available since the amount of each type of coal used in the project is not monitored at the entrance of each project furnace and hence a weighted average of EF<sub>pcoal,y</sub> is impossible to obtain under the current operating conditions.

DNV is of the opinion that since the methodology allows using the IPCC values (only project specific values are preferred), it is not necessary to monitor the project specific values on a monthly basis as established by the supplier or an independent laboratory. It should be noted that the project specific values have not been monitored in the past and are not currently being monitored as well. Therefore, adding to the monitoring plan that “if the new IPCC guidelines are released, this value may be updated according to latest relevant EB guidance” seems reasonable and to monitor the project specific values on a monthly basis is not required.

(d) The source of the data for the Emission factor applied for the electrode paste consumed as electrode in year y (i.e. EF<sub>ppaste,y</sub>) was not mentioned in the registered PDD as per the requirement of the methodology. The following table summarizes the revisions made to the parameter.

Symbol	Description (unit)	Source of data to be used:	Reference
EF <sub>ppaste,y</sub>	Emission factor applied for the electrode paste consumed as electrode in year y (tCO <sub>2</sub> /t of carbon paste)	Supplier (and IPCC/external literature reference)	Monitoring plan as registered PDD (page 46)
		<b>Supplier or independent laboratory</b> (and IPCC/external literature reference)	Revised monitoring plan

The proposed above revision to the monitoring plan clearly states the source of the data by adding **“or independent laboratory”** as per the requirements of the methodology AM0038, version 01. In addition, it is also added under the comments that the parameter will be **monitored on a monthly basis**.

It has also been added for parameters “Quality of coal<sub>p</sub>” and “Quality of coke<sub>p</sub>” that the monitoring will be done on a monthly basis.

### **3. Validation opinion**

As per the requirements of para 5(a) Annex 34 of EB26, since the revisions to the monitoring plan are related to including monitoring frequencies for several parameters as per the requirements of the methodology AM0038 (that were not previously included in the monitoring plan), DNV confirms that the proposed revisions of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revisions.

As per the requirements of para 5(b) Annex 34 of EB26, it is DNV’s opinion that the above revision to the monitoring plan are as per the requirements of the methodology AM0038, version 01 and as per the CDM Secretariat’s request of 7 November 2008.

As per the requirements of para 5(c) Annex 34 of EB26, DNV also confirms that the finding of the previous verification report have been taken into account.

Therefore, DNV recommends the approval of the request for revision of monitoring plan to include the above mentioned corrections as stated in the revised updated monitoring plan that is submitted by the project proponent.

Yours faithfully

for DET NORSKE VERITAS CERTIFICATION AS



Micheal Lehman

*Technical Director*

Climate Change Services