SIAM CEMENT BIOMASS PROJECT VERIFICATION REPORT 1ST MARCH 2011 – 31ST DECEMBER 2012

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Summary:

- The Siam Cement Project is a combination of five GHG reduction projects located in five different cement manufacturing units including Ta Luang, Khao Wong, Lampang, Thung Song, and Kaeng Khoi sites. All the five projects involved partial replacement of fossil fuels by alternative fuel in cement manufacture. This project categorized as large-scale project on sectoral scope No.4 “Manufacturing Industries” with application of ACM0003 version 7.2.
- The verification conducted by Bureau Veritas Certification Holding SAS has been performed for three cement sites (Ta Luang, Khao Wong, and Kaeng Khoi) in order to verify GHG emission reduction claimed by project proponents in period of 1st March 2011 to 31st December 2012. The overall verification, from Contract Review to verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.
- The criteria according to ACM0003 version 7.2, Tool to calculate baseline, project and/or leakage emission from electricity consumption, Tool to calculate project or leakage CO_2 emission from fossil fuel combustion and underlining principles stipulated in VCS standard version 3.3 have been applied as scope and guidance in completion of this verification process.
- During the verification process, verification team had issued 24 CARs (Corrective Actions Requests) and 31 CLs (Clarification Request) including 4 FARs (Forward Action Requests) from previous verification period had been reviewed. At the end of verification, all issues were closed except FAR01 and FAR02, and project proponent had revised its Monitoring Report Document and other related document. As result of pending FAR01 and FAR02, these forward actions will be carried over to next verification period and subjected to be checked by next verifier.
- The Bureau Veritas Certification Holding SAS performed as verification body satisfied in all clarifications and corrections responded by project proponent as consequences of CARs and CLs raised in verification process. As detail provided in the report, verification body concluded that project proponents correctly quantified emission reduction during this current verification period at 419,655 tons CO2e

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1 INTRODUCTION

1.1 Objective

Verification is the periodic independent review and ex-post determination by the verification body of the monitored reductions in GHG emissions during defined verification period

The verification serves as project description verification and its requirement of all VCS projects. The verification is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant VCS version 3 and host country criteria are validated in order to confirm that the project description, as documented, is sound and reasonable, and meet the stated requirements and identified criteria. Verification is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation voluntary carbon units (VCUs).

1.2 Scope and Criteria

The verification scope is defined as an independent and objective review of the project design document/ project description document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against VCS version 3.3, Validation and Verification Manual version 3.0 requirements, and associated interpretations. The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvements of the project monitoring towards reductions in the GHG emissions.

1.3 Level of assurance

The verification report is based on VCS PD, monitoring report, supporting documents made available to the verifier and information collected through performing interviews and during the on-site assessment. The verification opinion is assured to provide the credibility of all above with reasonable level of assurance.

1.4 Summary Description of the Project

The project is a combination of five GHG reduction projects located in five different cement manufacturing units of SCG Cement Co., Ltd., in Thailand. All project activities in this group involve partial replacement of fossil fuels by alternative fuels or less carbon intensive fuels, including biomass, in kiln processing of cement manufacture. In order to implement the project activities a complete system for receiving, storing, and feeding alternative fuels and less carbon intensive fuels needs to be introduced.

The proposed grouped project has been implemented at The Siam Cement (Ta Luang) Co., Ltd. (Ta Luang Cement Plant and Khao Wong Cement Plant), The Siam Cement (Kaeng Khoi) Co., Ltd., The Siam Cement (Thung Song) Co., Ltd., and The Siam Cement (Lampang) Co., Ltd. SCG Cement Co., Ltd. has 100% shareholding in these five companies. Although there are 5 different sites, the primary site appeared in the VCS project database is 'The Siam Cement (Kaeng Khoi) Co., Ltd.' with unique coordinate at 14°36'33.59" N 100°59'46.88" E.

According to Voluntary Carbon Standard Program Guidelines, clause 5.2 (Group Projects), the central GHG information system and controls associated with the project and its monitoring will response by SCG Cement Co. Ltd. As per VCS program guidelines (18 November 2008), the proposed grouped project is expected to reduce anthropogenic emissions by sources within 5,000 – 1,000,000 tonnes of carbon dioxide equivalent annually. It can be categorised in sectoral scope No.4 "Manufacturing Industries" under UNFCCC guideline.

To implement of the project activities is able to reduce the GHG emission from fossil combustion in kiln processing with amount of VCUs expected over 10 year crediting period: 6,102,304 tCO2e.

2 VALIDATION PROCESS, FINDINGS AND CONCLUSION

2.1 Validation Process

The validation process has been conducted by Bureau Veritas Certification Holding SAS with issued date as of 3 November 2009. This report is publicly available on v-c-s.org website at link https://vcsprojectdatabase2.apx.com/myModule/ProjectDoc/Project_ViewFile.asp?FileID=3563&IDKEY=0097809fdslkjf09rndasfufd098asodfjlkduf09nm23mrn87k4913377

2.2 Validation Findings

2.2.1 Gap Validation

Not Applicable.

2.2.2 Methodology Deviations

Not Applicable.

2.2.3 Project Description Deviations

Not Applicable.

2.2.4 New Project Activity Instances

Not Applicable.

2.3 Validation Conclusion

As stated in validation report, validation team gave opinion that the project correctly applies and meets the relevant VCS requirements and the relevant host country criteria. The validation was based on the information made available to validation team and the engagement conditions detailed in validation process.

3 VERIFICATION PROCESS

3.1 Method and Criteria

The overall verification process, from Contract review to Verification report & Opinion, was conducted using Bureau Veritas Certification Holding SAS's internal procedures.

The verification process consisted of the following steps:

- A desk review of the VCS PD and supporting documents with the use of the requirements of CDM methodology ACM0003 version 7.2 and related tools, in accordance with VCS standard version 3.3.
- A desk review of monitoring report and supporting documents submitted by the project proponent.
- On-site inspections, review of performance records, interviews with project proponents and on-site operators, collection of measurements, observation of established practices and testing of the accuracy of monitoring equipment
- Review of monitoring results and verification of the correct application of monitoring methodologies
- Follow-up responses to Clarification, Corrective Action Requests, and Forward Action Requests
- Verify calculation formula and results and crosscheck data from original sources as appropriate
- Determination of the reductions in GHG emissions

3.2 Document Review

The document review has been conducted based on latest version of these following documents.

#	Title
1	180_MR_3rd ver_rev01 dated 12/03/13
2	180_MR_3rd ver_rev02 dated 30/04/13
3	180_MR_3rd ver_rev03 dated 03/06/13
4	180_MR_3rd ver_rev04 dated 14/06/13
5	180_MR_3rd ver_rev05 dated 28/06/13
6	180_MR_3rd ver_rev06 dated 04/07/13
7	180_ER calculation_3rd_rev01 dated 12/03/13
8	180_ER calculation_3rd_rev02 dated 30/04/13
9	180_ER calculation_3rd_rev03 dated 03/06/13
10	180_ER calculation_3rd_rev04 dated 14/06/13
11	180_ER calculation_3rd_rev05 dated 28/06/13
12	180_ER calculation_3rd_rev05 dated 04/07/13
13	180_WJ for NCV_rev01 dated 12/03/13
14	180_WJ for NCV_rev02 dated 30/04/13
15	180_WJ for NCV_rev03 dated 03/06/13
16	180_WJ for NCV_rev04 dated 14/06/13
17	180_Biomass potential 2011_rev01 dated 30/04/13
18	180_Biomass potential 2011_rev02 dated 13/06/13
19	KW_EE Biomass report dated 04/07/13
20	TL,KW_AF stock_rev01 dated 13/06/13
21	TL,KW_AF stock_rev02 dated 25/06/13
22	TL,KW_AF stock_rev03 dated 28/06/13
23	TL,KW_AF stock_rev04 dated 03/07/13

3.3 Interviews

The verification team interviewed the following persons as part of verification process.

#	Name	Title	Organization
1	Santi Popijan	Operator	SCG Khao Wong
2	Pacharachat Trothong	Electrical	SCG Khao Wong
3	Nunthaporn Aumphirat	Production Promotion Engineer	SCG Khao Wong
4	Kumpol Meemongkol	Test Product (Chemical)	SCG Khao Wong
5	Pratuan Siriban	Test Product (Chemical)	SCG Khao Wong
6	Rawikon Jinanuruk	Electrical	SCG Khao Wong
7	Nawee Kusonlaue	Electrical Maintenance	SCG Khao Wong
8	Suranon Kanokbanpot	STL Engineer	SCG Ta Luang
9	Pollaphat Pornpitakthum	Product Engineer	SCG Kaeng Khoi
10	Voramet Suwanchomppoo	Product Engineer	SCG Kaeng Khoi
11	Suwet Kosintarakul	Energy Engineer	SCG Kaeng Khoi

3.4 Site Inspections

Site inspections for five SCG locations have been performed according to the following schedule.

#	Date	Site Inspection
1	4 April 2013	SCG Khao Wong, Saraburi province
2	4 April 2013	SCG Ta Luang, Saraburi province
3	5 April 2013	SCG Kaeng Khoi, Saraburi province

The three sites out of five sites are chosen due to its covering of 63% of the total emission reduction claimed in the current crediting period with objective to verify the authentic and credibility of data used in calculation of emission reduction. For inspection in each site, interviewing with key operational staff has been conducted in order to confirm consistency of data received from project proponent and to monitor project implementation particularly in biomass handling system, at which has been detailed in registered VCS Project Description.

3.5 Resolution of Any Material Discrepancy

As per ACM0003 version 7.2, it was requested by methodology that quantity of alternative fuel and fossil fuel consumption have to be cross-checked with annual energy balance that is based on purchased quantities and stock change.

It was found by verification team that there are material discrepancies of quantity of alternative fuel and fossil fuel consumption for data used in Emission Reduction (ER) calculation spreadsheet and stock checking report among 3 SCG sites. As indicated in CAR10, CAR11, CAR13, CAR14, CAR15 in verification protocol (annex 1), that inconsistency larger than 5% for amount of fossil fuel consumption between ER calculation and stock checking report were found. In response to these CARs, project proponent revised fossil fuel data at Ta Luang, Khao Wong, Kaeng Khoi, and Thung Song sites in order to keep ER calculation the most conservative. Therefore these CARs are closed.

As stated in CAR16 – CAR24 in verification protocol (annex 1), discrepancy for amount of alternative and less carbon intensive consumption between data used in ER calculation and stock checking report were found during verification process. In response to these CARs, project proponent revised this data in ER calculation in the way that contribute less benefit to proponent. This resulting in the CARs mentioned earlier closed.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

As result of verification process, combined with evidence submitted and site inspection finding, verification body able to confirm that implementation of biomass handling system has been

operated as described in registered VCS Project Description. Fossil fuel, which is common fuel in cement manufacture, has been partially replaced by biomass such as, wood chip, bark, rice husk, etc., which are locally available around the site. In term of equipment calibration, it is found that there is some equipment which we not able to calibrate according to the monitoring plan as described in verification protocol annex 1 below. Availability of data since from March 2011 to December 2012 (22 months) are available at verification process without missing data gap while good corporation from key operational staff and project proponents have been constantly provided throughout verification process. However, verification discovered some discrepancy and error in calculation of emission reduction in stage of desk review and site inspection. These have been described in following detail.

Verification team found that fluidized bed gasifier has been installed in Lampang site since 2009. The implementation of this new system leads to difficulties in consideration of emission reduction from this new system. Moreover, it is found that the solid waste pretreatment plant has been installed at Kaeng Khoi site by SCI Eco Services Company. The objective of this project is for increasing the amount of solid waste to be fired at cement kiln. This project has been commissioned at the end of year 2010 and fully operated in 2011. These additional units are also considered as design change. Project proponents decided to neglect any amount of emission reduction possibly generated from Lampang site and Kaeng Khoi site during this current verification period (March 2011 – December 2012) in order to preserve principle of conservativeness. With reference to Validation and Verification standard version 3.3, verification team had verified the impact of these deviations to the applicability of the methodology, additionally or the appropriateness of the baseline scenario consistent with Guidelines on assessment of different types of changes from the project activity as described in the registered PDD (Annex 67 EB48) as shown in Table 1 and 2 below.

Table 1: Assessment on impact of deviations to the applicability of the methodology

Applicability	**Justification in Registered PD**	**Verification team's opinion for these deviations**
A significant investment is required to enable the use of the alternative fuels and/or less carbon intensive fossil fuels	A significant investment is required for new machinery installation, including storage, handling and transporting systems to enable the use of alternative fuels and/or the less carbon intensive fossil fuels.	The installation of fluidized bed gasifier and the solid waste pre-treatment plant required significant investment to enable the use of the alternative fuels and/or less carbon intensive fossil fuels.
During the last three years prior before the start of the project activity, no alternative fuels have been used in the project plant.	According to the fuel consumption work journal during the last three year period, before the start of the project activities, no alternative fuels and biomass were consumed. However a small amount of alternative fuels was used in the testing	Not Applicable to this deviation due to this activity occurred in 2009 and 2010. Hence, it does not relate to the last three year prior before the start of project activity.

	phase of the projects.	
The CO2 emission reduction relates to CO2 emission generated from fuel combustion only and is unrelated to the CO2 emissions from decarbonisation of raw materials.	The CO2 emission reductions are only related to the CO2 generated by fuel burning requirement and not by decarbonisation of raw material.	The CO2 emission reductions are only related to the CO2 generated by fuel burning requirement. The installation of fluidized bed gasifier and the solid waste pretreatment plant has no process on decarbonisation of raw materials.
The methodology is applicable only for installed capacity that exists by the time of validation of the project activity.	The installed capacity has not changed at each site during the time of validation and is presented in Table 2.	The installation of fluidized bed gasifier and the solid waste pretreatment plant do not related to the change of installed capacity of project activity.
The biomass is not chemically processed (e.g. esterification to produced biodiesel, production of alcohols from biomass, etc) prior to combustion in the project plant but it may be processed mechanically or be dried at the project site. Moreover, any preparation of the biomass, occurring example, methane emissions from anaerobic treatment of waste water or from char coal production.	The biomass residues used in the project plants are not chemically processed prior to combustion in the project plant.	The installation of fluidized bed gasifier and the solid waste pretreatment plant do not related to the biomass residue.
The biomass used by the project facility is stored under aerobic condition.	All biomass residues used in the project plants are stored under aerobic condition and it is stored for not more than one year.	The installation of fluidized bed gasifier and the solid waste pretreatment plant do not related to the biomass residue or biomass facility.

Table 2: Assessment on impact of deviations to plausible baseline scenario

Alternative Scenario	**Description**	**Justification in Registered PD**	**Verification team's opinion for these deviations**
F2	Continuation of current practice, i.e., a scenario in which the company continues cement production using the existing technology,	The cement manufacturing industry in Thailand is mainly using coal. In the absence of the project activities the usage of lignite and other	The installation of fluidized bed gasifier and the solid waste pretreatment plant does not affect to alternative scenario.

	materials and fuel mix.	carbon intensive fuels in cost effective way would have continued without involving any major capital investments.	The justification in Registered PD is still valid.
F3	The continuation of using only fossil fuels and no alternative fuels; however, with a different fuel mix portfolio, taking into account relative prices of fuels available. The scenario(s) may be based on one fuel or a different mixes of fuels.	The cement manufacturing industry in Thailand is mainly using coal. In this regard, continuing utilization of fossil fuels is most likely to happen in the absence of the project activities. In Thailand formal permission from government is required to start alternative fuel usage in cement manufacturing. This requires a significant amount of effort on part of project proponent. Then in the absence of the project activities the usage of lignite and other carbon intensive fuels in a cost effective way would have continued.	The installation of fluidized bed gasifier and the solid waste pretreatment plant does not affect to alternative scenario. The justification in Registered PD is still valid.
W1	Incineration of the waste in a waste incinerator without utilizing the energy from the incineration.	In the absence of the project activities, most wastes have gone to the incinerator without utilizing the energy from the incineration.	The installation of fluidized bed gasifier and the solid waste pretreatment plant does not affect to alternative scenario. The justification in Registered PD is still valid.
W3	Disposal of the waste at a managed or unmanaged landfill.	Some of the waste has gone to the landfill in the absence of the project activities.	The installation of fluidized bed gasifier and the solid waste pretreatment plant does not affect to alternative scenario. The justification in Registered PD is still valid.

B3	The biomass residues are burnt in an uncontrolled manner without utilizing them for energy purposes.	Most of the biomass used in project plants is burnt in an uncontrolled manner without utilizing them for energy purposes.	The installation of fluidized bed gasifier and the solid waste pretreatment plant does not affect to alternative scenario. The justification in Registered PD is still valid.

As per the justification above, the most plausible baseline scenario is still F2 or F3 all project activities in this grouped project. At the same time, W1 or W3 is still the most plausible baseline scenario for wastes originating from fossil sources (alternative fuels), and B3 is still the most plausible baseline scenario for biomass residues. Thus, it is confirmed that there is no impact to the applicability of the methodology and the appropriateness of the baseline scenario. Both deviations did not effect to the main process of project activities. Meanwhile, the deviations also did not affect to the production capacity of project activity. Hence, there is no change in the scale of project activity.

In order to check the impact to additionality, verification team found that according to registered PD, the investment barrier was considered due to the high investment cost of new technology. In other words, the additionality was demonstrated that due to high investment cost in new technology causing the project is not economically attractive and need revenue from carbon credit. Thus, verification team had re-assessed the additionality by considering of newly added investment cost for installation of fluidized bed gasifier and solid waste pretreatment plant as shown in Table 3 below.

Table 3: Approximate investment to implement the use of biomass residue in Lampang and Kaeng Khoi site

Project site	**Total Investment as in Registered PD (million Baht)**	**Verification team's opinion on these deviations**
The Siam Cement (Lampang)	8.2	It is found that project proponent found difficulty to separate the cost of installing fluidized bed gasifier, because it is included in the budget of engineering department which mix with the budget for other project. However, with reference to verifier who conducted on site visit last year at Lampang site, it is confirmed that there is fluidized bed gasifier system installed at Lampang site. This also conforms to the evidence 'LP_Gasifier.pdf' which showed the pictures that the equipment had been

		installed and tested at Lampang site since 2009. In light of above, verification team confirmed authentically existing of this new unit.
The Siam Cement (Kaeng Khoi)	89.44	With reference to attached document No.3 of SCG Cement's management committee meeting no. 8/2552 dated 13 August 2009; the investment cost of the new solid waste pretreatment plant is 152.3 million Baht.

Both deviations activity would make higher investment cost to this project activity than expected in register PD which would make the project more risky in business point of view. Hence, these deviations would make additionality of the project even stronger, but these would also make difficulty in ER calculation.

Therefore, verification team had confirmed that the installation of fluidized bed gasifier at Lampang site and the solid waste pretreatment plant at Kaeng Khoi site do not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in compliance with the applied methodology. Moreover, it is also accepted the exclusion of emission reduction from these two sites for this verification period as requested following the given rational.

There are 4 FARs from previous verification;

- FAR01, the quantity of fossil fuel consumption for biomass handling will be monitored by PP at all SCG sites and to ensure that the monitoring procedure would be in line with tool to calculate project or leakage CO2 emission from fossil fuel combustion.

Verification team had checked the procedure of getting fossil fuel consumption for biomass handling and found that the biomass handling process had been outsourced to service contractor. Hence it is difficult for PP to directly monitor the fossil fuel consumption. Nevertheless, the calculation of fossil fuel consumption had been revised following conservative approach according to the new evidence received and using maximum ratio to calculate other site (as indicated in verification protocol annex 1). Even though, verification team was satisfied for the calculation which is following the conservative approach, this is still not in line with the tool to calculate project or leakage CO2 emission from fossil fuel combustion, Thus, FAR01 from previous verification period will still remain open for the next verification period.

- FAR02, The acceptance tolerance has been set up for P_{Fister} calibration. The standard weight that used to calibrate the P_{Fister} has been set up to be traceable back to National/International Standard. The calibration plan and record for next monitoring period have been set up.

Verification team found that there still have gap of calibration certification of meters which are not following the monitoring plan (i.e. CL09, CL10, CL11, CL12, CL13, and CL14 - as described in verification protocol annex 1). Hence, FAR02 from previous verification will still remain open for the next verification period.

- FAR03, Calibration plan and procedure for flow meter has been set up following manufacturer guidance, All flow meters used to monitor fuel/bunker oil consumption have been calibrated according to the plan

Verification team accepted the justification that the temperature of fossil fuel would affect to the quantity of fossil fuel measured by flow meter which installed after pre-heater unit and will have an error. Moreover, the calculation of fuel/bunker oil consumption in ER calculation spreadsheet had been periodically adjusted following invoice from fuel supplier which is monitored using calibrated truck scale. This is also in line with evidence and interview result during onsite visit that there is monthly adjustment of WJ to be in line with actual fuel stock availability. Thus, this was accepted and FAR03 from previous verification was closed.

- FAR04, the completeness of biomass consumption measurement in Kaeng Khoi to be in line with its monitoring description indicated in registered VCS PD.

Verification team had reviewed the evidence for installation of new biomass feeder at Kaeng Khoi site and also confirmed during onsite visit that the installation of biomass feeder would be completed soon according to the evidence provided. Hence, FAR04 was closed.

4.2 Accuracy of GHG Emission Reduction or Removal Calculations

a) Baseline Emission

In accordance with ACM003 version 7.2, verification verified accuracy of data used in estimation of Baseline Emission in year y, which is result of summation between Baseline emission from fossil fuel displaced by alternative fuel or less carbon intensive fuel ($BE_{FF,y}$) and Baseline methane emission avoided ($BE_{CH4,biomass,y}$). As indicated in equation (8) to (17) of ACM0003 version 7.2, these following parameters are stipulated in monitoring plan in registered VCS project description and needed for calculation of baseline emission. Verification team verified completion of data collection and its required QA/QC procedures to justify its accuracy as detail below;

I. <u>Quantity of fossil fuel type i fired in the project plan in year y (tons), $FC_{PJ,I,y}$</u>

Verification team raised 6 CARs and 1 CL (i.e., CAR10, CAR11, CAR12, CAR13, CAR14, CAR15, CL24 – see detail in annex 1) for project proponent to further clarify on why inconsistency of fossil fuel consumption data occurred in five SCG sites between data used in VER calculation and stock checking report. In response to these CLs, project proponent has clarified its basis of weight presented in stock checking report. In case of some inconsistency that larger than 5%, project proponent revised emission reduction calculation in the way that contribute less benefit to project proponent. In other words, emission reduction was calculated from whether data provided in Work Journal or Stock Checking Report which would made the most conservative ER results. Therefore, these 6 CARs and 1 CL were closed.

II. Quantity of alternative fuel or less carbon intensive fuel type k used in the project plant in year y (tons), $FC_{PJ,k,y}$

As brief detail provided earlier in section 3.5, reasons for raising CAR16, CAR17, CAR18, CAR19, CAR20, CAR21, CAR22, CAR23, and CAR24 (detail in verification protocol – annex 1) are based on the finding that discrepancy of biomass consumption larger than 5% found between data used in ER calculation and stock checking report. In response to these, project proponents revised emission reduction calculation in the way that contribute less benefit or being in conservative principle except consumption at Kaeng Khoi site which ER result is not considered. The revision in emission reduction calculation is satisfied and these CARs were closed.

III. Net calorific value of fossil fuel type I in year y (GJ/ton), $NCV_{i,y}$

Verification team raised CAR04 (see detail in annex 1) for project proponent based on inconsistency of NCVs for fossil fuel which is consumed at the project site between ER calculation spreadsheet and actual analysis record from SCG laboratory. In response to this CAR, project proponent corrected emission reduction calculation. The revision in emission reduction calculation is satisfied and CAR04 was closed.

IV. Net calorific value of the alternative or less carbon intensive fuel type k in year y (GJ/ton), $NCV_{k,y}$

Verification team raised CAR09, and CL15 (see detail in annex 1) for project proponent based on inconsistency of NCVs for alternative or less carbon intensive fuel which is consumed at the project site between ER calculation spreadsheet and actual analysis record as well as incomplete calculation of NCV within Work Journal were found. In response to these, project proponent corrected emission reduction calculation following proper evidences according to registered PD. The revision in emission reduction calculation is satisfied and CAR09 and CL15 were closed.

V. Production of clinker in year y, $P_{clinker,y}$

Verification team found that the calculation of $P_{clinker,y}$ is following the work instruction. The consistency between daily log sheet and Work Journal (used in ER calculation spreadsheet) has been cross-checked during site inspection. There was no discrepancy larger than 5% found between these two sources of data. Verification team confirmed that amount of clinker production is reliable and supported by objective evidences.

VI. Baseline methane emission avoided during the year y from preventing disposal or uncontrolled burning of biomass residues (tCO2e)

As of desk review, verification team verified its correctness and conservativeness of this calculation in ER calculation spreadsheet and found that the parameters used in calculation were taken from reliable sources and correctly applied in calculation.

b) Project Emission

As per equation (1) to equation (6) in ACM0003 version 7.2, the accuracy of project emission data from all five SCG sites have been verified against monitoring plan and methodology. The verification finding has been detailed as below.

I. Project emission from the use of alternative fuels and/or less carbon intensive fossil fuel

As indicated in CL21, CL28, CL29, and CL30 in verification protocol annex 1, these corrective action requests are raised base on that some of alternative fuel shown in Stock Checking Report did not taken into account of project emission in ER calculation spreadsheet. In response to these CLs, project proponent revised ER calculation spreadsheet by taking account of all alternative fuel except aqueous waste and waste water which would not generate heat but consume heat from kiln (see detail in Annex1). This made estimation of emission reduction to be more conservative. Therefore, these CLs were closed.

II. Project emission from additional electricity and/or fossil fuel consumption as a result of project activity

With reference to CL06, the consistency between daily log sheet and Work Journal (used in ER calculation spreadsheet) has been cross-checked for Ta Luang, Kaeng Khoi, and Thung Song site. There was no discrepancy larger than 5% found between these two sources of data. Verification team confirmed that calculation of electricity consumption is reliable and supported by objective evidences.

However, in the absence of evidence for cross-checking of 2 meter reading from total of 4 meters at Khao Wong site, project proponent had re-calculated the electricity consumption from these 2 meters by multipling the running hour of kiln with the maximum ratio figure in each year in order to preserve principle of conservativeness. Verification team had reviewed and confirmed its correctness and conservativeness of this calculation in ER calculation spreadsheet.

III. Project emission from combustion of fossil fuel for transportation of alternative fuels to the project plant

As of desk review, CL01 and CL04 were raised due to the deviation of the FCi,j,y unit changed from 'Litre/day' in registered PD to 'Litres/ton biomass' and its applicability for this verification period. In response to this CL, project participants provided the evidence and revised assumption value applied in ER calculation spreadsheet for Khao Wong and Tung Song site. For Ta Luang site which have no evidence, the maximum of specific value ratio from other site is used for calculating $FC_{i,j,y}$. Verification team confirmed its correctness used in calculation and found that this parameter was taken from reliable sources and correctly applied in calculation. Moreover, this provided more accuracy in ER calculation. Hence, CL01 was accepted and closed.

c) Leakage

As per CL08 in verification protocol (annex 1) issued during desk review, it was found by verification team that the calculation of the biomass residues that are utilized in the region which including project plant as described in L_2 approach in ACM0003 version 07.2 by including the utilization amount from other activities. In response to this, project proponent explained that the consumption of biomass residues by other activities had been considered in the calculation through the biomass potential data which is referenced from Department of Alternative Energy Development and Efficiency of Thailand (DEDE). Verification team had confirmed the justification with the officer (Name undisclosed) from DEDE on Thursday 13 June 2013 by phone interview. Therefore, the justification was accepted and CL08 was closed.

d) Emission Reduction

According to CAR07 and CAR08 in verification protocol annex 1, verification requested project proponents to revise incomplete calculation in "BE_step2" of ER calculation

spreadsheet and incorrect calculation formulae in sheet "BE_step3" of ER calculation spreadsheet which is not following equation (17) of ACM0003 version 7.2. Likewise, CL17 was issued due to incorrect emission factor for alternative fuel. The project proponents made appropriate response and corrected the calculation with reference accordingly. This correction has been verified and its correctness was confirmed. Then CAR07, CAR08, and CL17 were closed.

4.3 Quality of Evidence to Determine GHG Emission Reductions or Removals

In term of quality of evidence, verification team did verify reliability and credibility of evidences submitted for verification such as, Work Journal, Stock Checking Report, and Heating value analysis report from internal SCG laboratory. As per indicated in CL19, CL23, CL25, CL26 and CL27 in verification protocol annex 1, project proponents are requested to submit more evidences to verify amount of fuel, amount of clinker production, used in ER calculation spreadsheet. To close these CLs, project proponents provided more evidences (i.e. fuel purchased invoice, Work instruction, original records), then verification team verified its reliability this data by cross-checking with document submitted during onsite visit and able to confirm its reliability. As consequence of these evidences, the CL19, CL23, CL25, CL26 and CL27 were closed.

During verification process, operational staff and project management were interviewed. Based on their responses during interview process, verification team verified their claims with physical onsite inspection as per stated in section 3.4 above, theirs credibility and reliability in term of quality of evidence and consistency of data can be confirmed.

4.4 Management and Operational System

Verification team found that cell head is key personal responsible for data collection from data control room with closed corporation with operation staff in each SCG site and report in Work Journal. In regard to biomass handling system and fossil fuel consumption activities, relevant data from data control room were transferred to daily report file and continuously recorded in data log sheet for future verification process. To ensure consistency between data log sheet and daily report, verification team performed cross-checking between these two sources of data in period of March 2011 to December 2012. As shown in CAR05 and CAR06 in verification protocol annex 1, these CARs were raised based on inconsistency of fossil fuel's heating value at Khao Wong site and Ta Luang site between daily report and data log sheet due to transferring of data. Project proponents rechecked these data and made revision in ER calculation to be in line with heating value from SCG laboratory. This revision was satisfied and accepted, thus CAR05 and CAR06 were closed.

Moreover, according to section 4.2 (b) II above, it is found that even though there is no invoice or daily log sheet record's evidence for 2 meters at Khao Wong site, the calculation method following principle of conservativeness had been accepted. Verification team noticed that the absence of evidence for cross-checking could not be overlooked. The role of internal audits and

management review process would play a major role on help preventing this issue. Therefore, it is opened for the next verification period to ensure that apart all cross-checking evidence should be well managed and ready for verification.

5 VERIFICATION CONCLUSION

Conclusion of verification process for period of 1st March 2011 to 31st December 2012 is based on verification finding from desk review and onsite inspection process including interviewing with key operational staff from five SCG sites during period of 4-5 April 2013. Verification team confirms that calculation of greenhouse gas emission reduction is in accordance with registered VCS project description and principle of VCS standard version 3.3. The emission reduction as stated below was correctly calculated in accordance with ACM0003 version 7.2 and related tools. The emission reduction generated from five SCG sites during 1st March 2011 – 31st December 2012 and conclusion of net GHG emission reduction are exhibited in following tables.

Site/Year	**2011 (1st Mar to 31st Dec)**	**2012 (1st Jan to 31st Dec)**	**Total**
Ta Luang	47,540	70,649	118,189
Khao Wong	105,052	96,257	201,309
Kaeng Khoi	0	0	0
Thung Song	10,399	89,758	100,157
Lampang	0	0	0
Total	162,991	256,664	419,655

Reporting period: From 1st March 2011 to 31st December 2012

Verified GHG emission reductions or removals in the above reporting period:

GHG Emission Reductions or Removals	tCO_2e
Baseline Emissions	498,005
Project Emissions	78,350
Leakage	0
Net GHG emission reductions or removals	**419,655**

ANNEX 1: VERIFICATION PROTOCOL

Table 1 Verification requirements based on the Verified Carbon Standard version 3.3, Validation and Verification Manual version 3, ACM0003 Version 7.2, Tool to calculate baseline, project and/or leakage emission from electricity system and Tool to calculate project or leakage CO_2 emission from fossil fuel combustion

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
1 Project implementation in accordance with the registered project document			
a Are all physical features of the proposed VCS project proposed in the registered Project Description (PD) in place?	**Yes.** After conducting onsite visit for 3 sites, Ta Luang, Khao Wong, and Kaeng Khoi. Bureau Veritas (hereafter referred as verification team) able to confirm that system related to biomass utilization/handling are in placed as per stated in registered VCS PD.	OK	OK
b Have the project proponents operated the proposed VCS project as per the registered PD?	**No.** With confirmation at onsite visit, verification team confirms that SCG utilizes biomass as partial replacement of fossil fuel as per the registered VCS PD. However, it was found on desk review that there is installation of fluidized bed gasifier at Lampang site. Furthermore, the installation of the solid waste pre-treatment plant at Kaeng Khoi site had been discussed during verification process. Verification team had verified these deviations the applicability of the methodology, additionality or the appropriateness of the baseline scenario and confirmed that there is no impact of applicability of the methodology, additionality or the appropriateness of the baseline scenario from these activities.	OK	OK
c Was an on-site visit conducted?	**Yes.**	OK	OK

	CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
		Verification team had conducted onsite visit for three SCG plants as detail below; • 04/04/2013 : SCG Ta Luang, Saraburi Province • 04/04/2013 : SCG Khao Wong, Saraburi Province • 05/04/2013 : SCG Kaeng Khoi, Saraburi Province The three sites are chosen due to its covering of 63% of the total emission reduction claimed in the current crediting period.		
d	If not, justify the rationale of the decision.	Not Applicable.	OK	OK
e	Does the implementation or operation of VCS project conform with the description contained in the registered PD?	**No.** With physical observation during onsite visit for 3 sites, verification team confirmed that biomass utilization system has been implemented and operated by SCG conforming with description in registered VCS PD. However, except Lampang site at which fluidize bed gasifier was implemented since 2009. The application of this system aimed to utilize low grade coal which typically left as waste because of its low heating value. In response to this change, PPs decided to not include any possible emission reduction generated from Lampang site since from October 2009 to December 2012 (previous verification period and current verification period).	OK	OK
f	If not, which are the potential impacts due to these changes?	This new fluidized bed gasifier leads to difficulties in consideration of baseline and emission reduction generated from Lampang site because of its amount of specific energy consumption (SEC) which is higher than what was primarily estimated in baseline at time of project validation. Combined with confirmation from PPs that this new system could be defined as change in project design in term of energy	OK	OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	consumption and this could interferes integrity of emission reduction possibly generated from Lampang site. Therefore, PPs decided to neglect any ER from Lampang during this current verification period.		
2 Compliance of the monitoring plan with the monitoring methodology			
a Is the validated monitoring plan in accordance with the approved methodology applied by the proposed VCS project?	**Yes.** All monitoring parameters indicated in registered VCS PD version 2 dated on 24/09/2009 have been reviewed against ACM0003 Version 7.2 and its related tools. This is in line with the applied methodology and its related tools.	OK	OK
b Are there any monitoring aspects of the project that are not specified in the methodology (e.g. additional monitoring parameters, monitoring frequency and calibration frequency)?	**YES.** After completion of desk review and onsite visit for three SCG sites, verification team found that monitoring procedure for quantity of electricity consumed by project activity ($EC_{PJ,j,y}$) was not specified in both ACM0003 version 7.2 and tool to calculate baseline, project and/or emission from electricity consumption. Likewise, this parameter was not described in registered VCS PD version 2 dated on 24/09/2009. Under calculation by equation (1) of tool to calculate baseline, project and/or emission from electricity consumption, this parameter shall be used to estimate project emission from electricity consumption from biomass utilization/handling system of SCG project, and will finally affect total amount of emission reduction generated by project throughout 10-year crediting period. However, $EC_{PJ,y}$ is already added in the monitoring report (MR) version 1 dated 12/03/2013. Hence, this is line with the applied methodology and its related tools.	OK	OK

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td>3 Compliance of monitoring with the monitoring plan</td><td></td><td></td><td></td></tr>
<tr><td>a Have the monitoring plan and the applied methodology and registered VCS PD been properly implemented and followed by the project proponents?</td><td>The Project proponents (PP) actions reporting in MR version 01 dated 12/03/2013 have been checked against monitoring plan specified in registered VCS PD version 02 dated on 24/09/2009, and also further re-checked with ACM0003 version 7.2, as follow;

1) $FC_{PJ,k,y}$ and $FC_{PJ,i,y}$: Quantity of alternative fuel or less carbon intensive fossil fuel type k ($FC_{PJ,k,y}$) and fossil fuel of type i ($FC_{PJ,i,y}$) used in the project plant in year y

<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data Unit:</td><td>Tonnes</td><td>Ton</td></tr>
<tr><td>Source of data:</td><td>Data log sheet and operation monthly report</td><td>Work Journal : WJ</td></tr>
<tr><td>Measurement procedure</td><td>The biomass residue will be weighted by weight scale before fed to the calciner. Data will be kept electronically in a systematic and transparent manner during the crediting period and two years after the end of the crediting period</td><td>The quantity of solid fossil fuel and biomass fuel is continuously monitored by weighing equipment. The data from all inline measuring equipment is connected to Distributed Control System (DCS) at the control room. The data recording from</td></tr>
</table></td><td>~~CAR01~~</td><td>OK</td></tr>
</table>

CHECKLIST QUESTION	COMMENTS			Draft Concl	Final Concl
			DCS is carried out by cell operator on daily basis. • The fuel oil volume is continuously monitored by flow meter. The cell operators record the totalized flow at the flow meter before and after the operation of fuel oil supply pump. • The daily monitored data is checked and adjusted with stock checking report at the end of month. The final figures are summarized in Work Journal (WJ) by engineer.		
	Monitoring frequency:	Recorded continuously and reported monthly from project owner	Continuous monitoring with daily recording and adjusting with stock checking report at the end of month		
	QA/QC procedures:	Instrument should be calibrated according to manufacturer's	The monitoring equipment is calibrated according		

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td>guidelines. All data is available and recorded according to ISO9001 procedures</td><td>to calibration plan and/or shutdown plan of kiln. The documentation and calibration is controlled and managed according with ISO 9001 requirements</td></tr>
</table>

<u>BV:</u> Verification team noticed that the measurement procedure in MR version 01 dated 12/03/2013 is deviated from the registered VCS PD by changing the measuring equipment form weight scale to weighing equipment. Hence, CAR01 is raised for the inconsistency between MR and registered VCS PD

<u>CAR01</u>
The description of measurement procedure for $FC_{PJ,k,y}$ and $FC_{PJ,i,y}$ in section 3.2 of MR version 01 dated on 12/03/2013 is inconsistency with the description provided in registered VCS PD by changing the measuring equipment form weight scale to weighing equipment.

2) $EF_{CO2,k,y}$: Weighted average CO_2 emission factor for alternative or less carbon intensive fuels of type *k* ($EF_{CO2,k,y}$) and for fossil fuel of type *i* ($EF_{CO2,FF,i}$) in year *y*

<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit:</td><td>tCO2/GJ</td><td>tCO2/GJ</td></tr>
</table>
</td><td>OK</td><td>OK</td></tr>
</table>

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td>Source of data:</td><td>IPCC default values at the upper/lower limit of the uncertainty at a 95% confidence interval as provided in table 1.4 of chapter 1 of Vol.2 (energy) of the 2006 IPCC Guidelines on National GHG Inventories</td><td>IPCC default values at the upper/lower limit of the uncertainty at a 95% confidence interval as provided in table 1.4 of chapter 1 of Vol.2 (energy) of the 2006 IPCC Guidelines on National GHG Inventories</td></tr>
<tr><td>Measurement procedures</td><td>-</td><td>-</td></tr>
<tr><td>Monitoring frequency:</td><td>Any future revision of the IPCC Guidelines will be taken into account</td><td>-</td></tr>
<tr><td>QA/QC procedures:</td><td>-</td><td>-</td></tr>
<tr><td>Any comment</td><td>-</td><td>$EF_{CO2,k,y}$ is zero for the biomass residues referred to page 29/40 ACM0003 version 07.2.</td></tr>
</table>

<u>BV:</u> This description in MR have been verified against registered VCS PD and also methodology at desk review and accepted.

3) $NCV_{k,y}$ and $NCV_{i,y}$: Weighted average net calorific value of</td><td>OK</td><td>OK</td></tr>
</table>

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	the alternative or less carbon intensive fuel types *k* ($NCV_{k,y}$) and fossil fuel types *i* ($NCV_{i,y}$)		

Items	PD	MR
Data unit	GJ/tonne	GJ/ton
Sources of data	Since the values provided by the fuel supplier in invoices is not available, then the value measured by the project participants is taken.	The NCV analysis results from internal laboratory
Measurement Procedure	This parameter will be measured daily and summarized as a monthly report. Data will be kept electronically in a systematic and transparent manner during the crediting period and two year after the end of the crediting period.	The fuel sample is analyzed by internal laboratory. The results are saved in QIS (Quality Information System) by Lab analyst.
Monitoring Frequency	The NCV will be obtained for each fuel delivery, from which weight average annual values should be calculated.	This parameter will be measured daily or every batch/ delivery depends on type of fuel The monthly weight-average figure from

CHECKLIST QUESTION	COMMENTS			Draft Concl	Final Concl
			QIS is used in emission reduction calculation.		
	QA/QC procedures	NCV will be measured on a monthly basis according to the national or international approved standards and procedures through a qualified laboratory.	NCV is measured according to the national or international approved standards and procedures through a qualified laboratory. The laboratory equipment is calibrated as per manufacturer's recommendation. The documentation and calibration is controlled and managed in accordance with ISO 9001 requirements.		
	Any comment	-	• In case the NCV data is not available, it means there is not fuel delivered in that month. The NCV data from previous month will be used. • The NCV of fuel oil applied for all sites is		

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td></td><td>from the annual average test result from laboratory at KW site. Since there are only 2 suppliers, Bangchak and PTT, who supply the fuel oil to all sites, then the same average value can be used for all sites.</td></tr>
</table>
<u>BV:</u> This description in MR have been verified against registered VCS PD and also methodology at desk review and accepted.

4) AVD_y : Average round trip distance (from and to) between the alternative fuel supply site and the site of project plant during the year y
<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit:</td><td>km</td><td>km</td></tr>
<tr><td>Sources of data</td><td>Transportation data logs, but if not available the maximum round trip distance suggested in methodology ACM0003 version 7.2</td><td>The maximum round trip distance suggested in methodology ACM0003 version 7.2</td></tr>
<tr><td>Measurement Procedure</td><td>400 km is considered as the maximum round trip</td><td>400 km is considered as the</td></tr>
</table>
</td><td>OK</td><td>OK</td></tr>
</table>

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

	distance and is used for calculation; however if transportation data logs are available the distance in the log sheet will be used	maximum round trip distance and is used for calculation
Monitoring Frequency	This parameter will be updated monthly via the biomass residue supplier list. Data will be kept electronically in a systematic and transparent manner during the crediting period and two year after the end of the crediting period.	-
QA/QC procedures	The consistency of distance records will be randomly checked against invoices from biomass residue supplier.	Any future revision of the methodologies will be taken into account
Any comment:	If transportation data logs are not available, 400 km will be used as conservative calculation.	

BV: This description in MR have been verified against registered VCS PD and also methodology at desk review and

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>accepted.

5) $EF_{km,CO2,y}$: Average CO_2 emission factor for the trucks measured during the year y
<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit:</td><td>tCO2/km</td><td>tCO2/km</td></tr>
<tr><td>Sources of data</td><td>Conduct sample measurements of the fuel type, fuel consumption and distance travelled for all truck types. Calculate CO2 emission from fuel consumption by multiplying with appropriate net calorific values and CO2 emission factors. For net calorific values and CO2 emission factors, use reliable national default values or, if not available, (country-specific) IPCC default values. Alternatively, choose emission factors applicable for the truck type used for the</td><td>Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual, Table 1-32 (for US heavy duty diesel vehicles, uncontrolled)</td></tr>
</table></td><td>OK</td><td>OK</td></tr>
</table>

CHECKLIST QUESTION	COMMENTS			Draft Concl	Final Concl
		literature in a conservative manner (i.e. the higher end within a plausible rage).			
	Measurement Procedure	0.001917 tCO2/km [Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual, Table 1-32 (for US heavy duty diesel vehicles, uncontrolled – this is the most conservative)	The value from IPCC is applied for the most conservative approach		
	Monitoring Frequency	At least annually	-		
	QA/QC procedures	-	Any future revision of the methodologies will be taken into account		
	BV: Verification team noted that the value mentioned in registered PD (0.001917 tCO_2/km) is not in line with the above mentioned references (IPCC Guideline); however Verification team had reviewed the reference and confirmed that the value of 0.001097 tCO2/km which is presented in MR version 1 is corrected. This is acceptable.				

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	6) $AF_{T,k,y}$: Quantity of alternative fuel type *k* that has been transported to the project site during the year *y*.	OK	OK

Items	PD	MR
Data unit:	Tonnes	Ton
Sources of data	On-site measurement	Work Journal : WJ
Measurement procedures	Weigh scale.	Using weight scale to measure and monthly adjusted according to stock change
Monitoring Frequency	Recorded continuously and reported monthly and adjusted according to stock change	Continuous monitoring with daily recording
QA/QC procedures	Periodic calibration of weigh scales	- The monitoring equipment is calibrated according to calibration plan and/or shutdown plan of kiln. - The monitoring equipment is calibrated according to calibration plan and/or shutdown

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td></td><td>plan of kiln. All data is managed according to ISO 9001</td></tr>
</table>

<u>BV</u>: This description in MR have been verified against registered VCS PD and also methodology at desk review and accepted.

7) TL_y : Average truck load of the trucks used during the year *y*
<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit:</td><td>Tonnes</td><td>Ton</td></tr>
<tr><td>Sources of data</td><td>For a conservative calculation, the default value 15 tonnes/trip is used, since the on-site data is not available. [References to transportation regulation of Thailand]</td><td>Transportation regulation of Thailand</td></tr>
<tr><td>Measurement procedures</td><td>Update the transport regulation</td><td>For a conservative calculation, the default value 15 tonnes/trip is used, since the on-site data is not available</td></tr>
<tr><td>Monitoring Frequency</td><td>Every verification period</td><td>Every verification period</td></tr>
</table>
</td><td>OK</td><td>OK</td></tr>
</table>

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td>QA/QC procedures</td><td>-</td><td>Any future revision of the regulation will be taken into account</td></tr>
</table>

<u>BV:</u> This description in MR have been verified against registered VCS PD and also methodology at desk review and accepted.

8) $FC_{i,j,y}$: Quantity of alternative fuel type k for biomass handling
<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit:</td><td>Litre/day</td><td>Litres/ton biomass</td></tr>
<tr><td>Sources of data</td><td>To be conservative, the maximum number of fossil fuel used in biomass handling system, (130 litre/day) is used</td><td>To be conservative, the maximum number of fossil fuel used in biomass handling system is applied.</td></tr>
<tr><td>Measurement procedures</td><td>Update in every verification period</td><td>-</td></tr>
<tr><td>Monitoring Frequency</td><td>Every verification period</td><td>Every verification period</td></tr>
<tr><td>QA/QC procedures</td><td>-</td><td>-</td></tr>
<tr><td>Any comment</td><td>The large amount of fuel used in the biomass handling will be taken as the</td><td>The value applied is from the specific fuel consumption by the biomass handling</td></tr>
</table>
</td><td>~~CL01~~</td><td>OK</td></tr>
</table>

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td>default.</td><td>equipment at Thung Song site. Reference information is provided in section 5.4.</td></tr>
</table>

<u>BV:</u> Verification team noted that there are changed in $FC_{i,j,y}$ unit from ‘Litre/day’ in registered VCS PD to ‘Litres/ton biomass’ in this MR version 01 dated 12/03/2013. Even though the figure 0.4955 L/ton biomass had been verified and accepted, CL01 is raised due to there is no justification on this deviation in MR version 1 dated 12/03/2013.

<u>CL01</u>
Please justify this deviation of the unit of $FC_{i,j,y}$ changed from ‘Litre/day’ in registered VCS PD to ‘Litres/ton biomass’.

9) $EF_{grid,y}$: CO2 emission factor for grid electricity during the year y
<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit</td><td>tCO2/MWh</td><td>tCO2/MWh</td></tr>
<tr><td>Sources of data</td><td>0.5057 tCO_2/MWh, calculated by Department of alternative Energy Development and Efficiency (DEDE) using ‘Tool to calculate baseline, project and/or leakage emissions from</td><td>Summary report: The study of emission factor for electricity generation of Thailand in year 2010, published by Thailand Greenhouse Gas Management</td></tr>
</table>
</td><td>OK</td><td>OK</td></tr>
</table>

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td>electricity consumption’</td><td>Organization.</td></tr>
<tr><td>Measurement procedures</td><td>Update in every verification period</td><td>Use the most update public data available</td></tr>
<tr><td>Monitoring Frequency</td><td>Every verification period</td><td>Update in every verification period</td></tr>
<tr><td>QA/QC procedures</td><td>-</td><td>-</td></tr>
</table>
<u>BV</u>: This description in MR have been verified against registered VCS PD and also methodology at desk review and accepted.

10) $TDL_{j,y}$: Average technical transmission and distribution losses for providing electricity to source j
<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit</td><td>-</td><td>-</td></tr>
<tr><td>Sources of data</td><td>Scenario A “Electricity consumption from the grid” is applicable in this case. Then default value of 20% is chosen for a conservative calculation</td><td>Scenario A “Electricity consumption from the grid” is applicable in this case</td></tr>
<tr><td>Measurement procedures</td><td>The latest version of the tool</td><td>The latest version of the tool</td></tr>
<tr><td>Monitoring Frequency</td><td>Every verification period</td><td>Every verification period</td></tr>
<tr><td>QA/QC</td><td>-</td><td>-</td></tr>
</table>
</td><td>OK</td><td>OK</td></tr>
</table>

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td>procedures</td><td></td><td></td></tr>
</table>

BV: This description in MR have been verified against registered VCS PD and also methodology at desk review and accepted.

11) $P_{clinker,y}$: Production of clinker in year y
<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit</td><td>Tonnes</td><td>Ton</td></tr>
<tr><td>Sources of data</td><td>Production data logs at the project site</td><td>Work Journal : WJ</td></tr>
<tr><td>Measurement procedures</td><td>Weighing feeders</td><td>The quantity of clinker produced is calculated from amount of raw material with clinker factor and adjusting with stock checking report at the end of month. The final figures are summarized in WJ.</td></tr>
<tr><td>Monitoring Frequency</td><td>Record continuously and reported monthly and annually. Data will be kept electronically in a systematic and transparent manner</td><td>The amount of raw material is continuously monitored. Daily recording and adjusting with</td></tr>
</table>
</td><td>~~CAR02~~</td><td>OK</td></tr>
</table>

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	<table><tr><td></td><td>during the crediting period and two year after the end of the crediting period.</td><td>stock checking report at the end of month.</td></tr><tr><td>QA/QC procedures</td><td>Instrument should be calibrated according to manufacturer's guidelines. All data is available and recorded according to ISO 9001 procedures</td><td>The monitoring equipment is calibrated according to calibration plan and/or shutdown plan of kiln. All data is managed under ISO 9001</td></tr></table> BV: As per indicated in ACM0003 version 7.2 and registered PD version 2 dated on 24/09/2009 that $P_{clinker,y}$ shall be measured by weighing feeder. However statement in section 3.2 of MR version 01 dated on 12/03/2013 provided that this parameter is calculated from amount of raw material. Hence, CAR01 is raised for the inconsistency between MR and registered VCS PD and applied methodology. CAR02 The description of measurement procedure for $P_{clinker,y}$ in section 3.2 of MR version 01 dated on 12/03/2013 is inconsistency with the description provided in registered VCS PD and applied methodology which stated that $P_{clinker,y}$ shall be measured by weighing feeder. 12) $EF_{CO2,BL,y}$: CO_2 emissions factor for the fossil fuels	OK	OK

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>displaced by the use of alternative fuels or less carbon intensive fossil fuels in the project plant.
<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit</td><td>tCO2/GJ</td><td>tCO2/GJ</td></tr>
<tr><td>Sources of data</td><td>The weighted average annual CO2 emission factor for the fossil fuel consumed and monitored ex ante during the most recent three years before the start of the project activity</td><td>The annual weighted average value is calculated as determined in “Procedure for the selection of the most plausible baseline scenario”</td></tr>
<tr><td>Measurement procedures</td><td>-</td><td>-</td></tr>
<tr><td>Monitoring Frequency</td><td>Every verification period</td><td>Every verification period</td></tr>
<tr><td>QA/QC procedures</td><td>-</td><td>-</td></tr>
</table>
<u>BV:</u> This description in MR have been verified against registered VCS PD and methodology at desk review and accepted.

13) $FC_{BL,i,y}$: Quantity of fossil fuel type i displaced in the project plant as a result of the project activity in year y
<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit</td><td>Tonnes</td><td>Ton</td></tr>
</table></td><td>OK</td><td>OK</td></tr>
</table>

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<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td>Sources of data</td><td>The quantities and types of fossil fuel i that are displaced as a result of the project activity ($FC_{BL,i,y}$) should be determined consistent with the guidance above on the determination of the baseline CO2 emission factor ($EF_{CO2,BL,y}$)</td><td>The quantities and types of fossil fuels i that are displaced as a result of the project activity ($FC_{BL,i,y}$) should be determined consistent with the guidance above on the determination of the baseline CO2 emission factor ($EF_{CO2,BL,y}$)</td></tr>
<tr><td>Measurement procedures</td><td>-</td><td>-</td></tr>
<tr><td>Monitoring Frequency</td><td>Every verification period</td><td>Every verification period</td></tr>
<tr><td>QA/QC procedures</td><td>-</td><td>-</td></tr>
</table>
<u>BV:</u> This description in MR have been verified against registered VCS PD and methodology at desk review and accepted.

14) Quantity of biomass residues of type k that are utilized (e.g. for energy generation or as feedstock) in the defined geographical region
<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit</td><td>Tons</td><td>-</td></tr>
<tr><td>Sources of data</td><td>The nation</td><td>Thailand</td></tr>
</table>
</td><td>OK</td><td>OK</td></tr>
</table>

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td>statistics or Surveys</td><td>Alternative Energy Situation Report 2011 , from Department of Alternative Energy Development and Efficiency (DEDE)</td></tr>
<tr><td>Measurement procedures</td><td>-</td><td>Use the latest update data from official sources.</td></tr>
<tr><td>Monitoring Frequency</td><td>Every verification period</td><td>Every verification period</td></tr>
<tr><td>QA/QC procedures</td><td>-</td><td>-</td></tr>
<tr><td>Any Comment</td><td>Monitoring of this parameter is applicable if approach L_2 is used to rule out leakage.</td><td>Please refer to deviation 1</td></tr>
</table>
<u>BV:</u> This description in MR have been verified against registered VCS PD and methodology at desk review and accepted.

15) Quantity of available biomass residues of type k in the region
<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit</td><td>-</td><td>-</td></tr>
<tr><td>Sources of data</td><td>-</td><td>Thailand</td></tr>
</table>
</td><td>OK</td><td>OK</td></tr>
</table>

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td></td><td>Alternative Energy Situation Report 2011 , from Department of Alternative Energy Development and Efficiency (DEDE)</td></tr>
<tr><td>Measurement procedures</td><td>-</td><td>Use the latest update data from official sources.</td></tr>
<tr><td>Monitoring Frequency</td><td>-</td><td>Every verification period</td></tr>
<tr><td>QA/QC procedures</td><td>-</td><td>-</td></tr>
<tr><td>Any Comment</td><td>-</td><td>Please refer to deviation 1</td></tr>
</table>
<u>BV:</u> Verification team noticed that this parameter which is mentioned in applied methodology is not presented in registered VCS PD. However, the description of this parameter have been justified as deviation in section 2.1 of the MR, verification team had verified this deviation against applied methodology at desk review and accepted.

16) $EC_{PJ,y}$: Quantity of electricity consumed by project electricity consumption source j in year (MWh/year)

<table>
<tr><th>Items</th><th>PD</th><th>MR</th></tr>
<tr><td>Data unit</td><td>-</td><td>kWh</td></tr>
<tr><td>Sources of data</td><td>-</td><td>For TL, KK, TS, and LP, the installed rated</td></tr>
</table>
</td><td>OK</td><td>OK</td></tr>
</table>

CHECKLIST QUESTION	COMMENTS			Draft Concl	Final Concl
			capacity of biomass related equipment is used to determine electricity consumption. The energy meter at KW site is used to measure electricity consumption.		
	Measurement procedures	-	The power consumption is calculated from the total kW and the number of operating hours within monitoring period (applicable for TL, KK, TS, and LP). At KW site, the power meter continuously monitors the electricity consumption. The record is taken by operator on monthly basis.		
	Monitoring Frequency	-	Continuous monitoring with monthly recording		
	QA/QC procedures	-	The installed power capacity is updated when the changing in process equipment (applicable for TL, KK, TS, and LP). At Khao Wong site, the		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	<table><tr><td></td><td></td><td>electricity meter is calibrated according to the manufacturer's recommendation.</td></tr><tr><td>Any Comment</td><td>-</td><td>Since the electricity meter at KW site is not calibrated, the maximum error of 0.5% is applied for conservative approach as per EB 52 Annex 60. Please refer to the information in deviation 2.</td></tr></table> BV: This description in MR have been verified against registered VCS PD and methodology at desk review and accepted.		
b Have all parameters stated in the monitoring plan, and the applied methodology been sufficiently monitored and updated as applicable, including:	Verification team found that the data collection in December 2012 in WJ and VER calculation spreadsheet version 1 are calculated from 1st - 31st December 2012. This is found inconsistency with the requested monitoring period of 1st March 2011 to 12th December 2012 stated in the cover page of MR version 1 dated on 12/03/2013. CAR03 is raised due to the earlier reason. CAR03 The data collection in December 2012 for the below parameter in WJ and VER calculation spreadsheet version 1 are calculated from 1st - 31st December 2012. This is found	~~CAR03~~	OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	inconsistency with the requested monitoring period of 1st March 2011 to 12th December 2012 stated in the cover page of MR version 1 dated on 12/03/2013. – $FC_{BL,F3,i,y}$ – $FC_{PJ,k,y}$ – $FC_{PJ,i,y}$ – $AF_{T,k,y}$ – $P_{clinker,y}$ – $FC_{BL,i,y}$ – $EC_{PJ,y}$		
i Baseline emission parameters?	To calculate baseline emission in year *y*, these following parameters are specified by registered VCS PD to be monitored. These following parameters were verified by verification team during desk review and onsite visit as per description below; ***1) $FC_{i,x}$, $FC_{i,x-1}$, and $FC_{i,x-2}$: Quantity of fossil fuel of type i used in the project plant in year x, x-1 and x-2 where x is the year prior to the start of the project activity and i are the fossil fuel types used in the project plant in the three years prior to the start of the project activity.*** At desk review, verification team had verified and confirmed its consistency of the value in MR version 1 dated 12/03/12 with the registered VCS PD. This is accepted. ***2) NCV_i : Net calorific value of fossil fuel types i where i is the fossil types used in the project plant in the three years prior to the start of the project activity.*** Verification team found during desk review the inconsistency in	OK ~~CAR04~~	OK OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	the NCV of Coal for year 2001 between cell R12 of 'BE_step1' and cell E14 of 'BE_step2' sheet from VER calculation spreadsheet. Hence, CAR04 is raised below. CAR04 There is inconsistency in the NCV of Coal for year 2001 between cell R12 of 'BE_step1' and cell E14 of 'BE_step2' sheet from VER calculation spreadsheet.		
	3) $FC_{PJ,i,y}$: Quantity of fossil fuel type i fired in the project plant in year y Verification team had verified the quantity of fuel fired in project plant by these following means. ***Step 1 : Cross-checking between data in Voluntary Emission Reduction (VER) calculation spreadsheet and Stock Checking Report*** According to requirement in ACM0003, the amount of fuel fired or consumed in project plant is subject to be cross-checked with available purchase invoice from financial record. In this sense, verification team had cross-checked quantity of fuel consumption in VER calculation against data provided in 'Stock Checking Report' in order to ensure reliability of data used to calculate emission reduction. ***Step 2 : Cross-checking of data in Stock Checking Report against original hard copy of invoices*** Based on testimony from SCG staff, it was testified that quantity of 'fuel consumption' in each month is derived from	~~CL19~~ ~~CL20~~ ~~CL21~~ ~~CAR10~~ ~~CL22~~ ~~CAR11~~ ~~CL23~~ ~~CAR12~~ ~~CL24~~ ~~CAR13~~ ~~CAR14~~ ~~CL25~~ ~~CAR15~~ ~~CL26~~	OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	availability of fuel in stock. This availability of fuel had taken account of monthly 'fuel delivered' to project plant including what was delivered in the previous month. Therefore, verification team had sampling some of the month that having significant usage of fuel, and then, cross-check amount of 'fuel delivered' with original hard copy of invoices to ensure reliability of 'stock checking report'. ***Thung Song site*** Due to there is no evidence to support the cross-checking for the quantity of fossil fuel fired in the project plant at Thung Song site for entire crediting period. Hence, CL19 is raised. CL19 Please provide evidences to support the cross-checking of the type and quantity of fuel fired in the project plant at Thung Song site for the entire crediting period. ***Ta Luang site*** *(a) Fuel Oil* According to ACM0003, verification body is requested to cross-check the consistency of fuel consumption quantities with stock change. Therefore, verification team had verified this consumption by cross-checking with Stock Checking Report prepared by SCG Ta Luang. It was found that the inconsistency between data used in Voluntary Emission Reductions (VERs) Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table.		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	254.00	254.17
Apr-11	121.00	121.43
May-11	193.00	192.16
Jun-11	191.00	190.79
Jul-11	182.00	181.64
Aug-11	153.00	152.89
Sep-11	152.00	152.63
Oct-11	78.00	78.21
Nov-11	134.00	133.64
Dec-11	44.00	44.00
TOTAL	**1,502.00**	**1,501.56**
Different between data used in VER calculation and Stock Checking Report		**0.03%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	172.19	172.19
Feb-12	126.06	126.06
Mar-12	232.03	232.03
Apr-12	155.26	155.26
May-12	116.86	116.86
Jun-12	170.85	170.85
Jul-12	44.16	44.16
Aug-12	34.00	34.00
Sep-12	114.07	114.07
Oct-12	74.93	74.93
Nov-12	107.44	107.44
Dec-12	169.93	169.93

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

TOTAL	**1,517.78**	**1,517.78**
Different between data used in VER calculation and Stock Checking Report		**0**

(b) Lignite (แม่ตีน)

It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table.

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	4,042.00	4,042.57
Apr-11	2,562.00	2,562.10
May-11	949.00	949.41
Jun-11	1,263.00	1,262.79
Jul-11	23.00	22.89
Aug-11	893.00	893.83
Sep-11	-	-
Oct-11	-	-
Nov-11	-	-
Dec-11	1,388.00	1,387.41
TOTAL	**11,120.00**	**11,121.00**
Different between data used in VER calculation and Stock Checking Report		**0.01%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Jan-12	2,583.04	2,583.04
Feb-12	1,795.16	1,795.16
Mar-12	3,073.87	3,073.87
Apr-12	1,025.35	1,025.35
May-12	730.50	730.50
Jun-12	424.25	424.25
Jul-12	915.82	915.82
Aug-12	240.78	240.78
Sep-12	44.48	44.48
Oct-12	-	-
Nov-12	1,217.11	1,217.11
Dec-12	-	-
TOTAL	**12,050.35**	**12,050.35**
Different between data used in VER calculation and Stock Checking Report		**0**

- In order to verify the reliability of Stock Checking Report according to ACM0003, the month that having significant usage of Lignite (แม่ตีบ) which is April 2011 had been selected for cross-checking. Verification team had cross-checked quantity of Lignite (แม่ตีบ) delivered showing in monthly stock record against original invoices as follow.6 invoices from 2/04/2011
- 2 invoices from 3/04/2011
- 1 invoice from 18/04/2011
- 7 invoice from 19/04/2011

However, verification team noticed that the total amount of Lignite (แม่ตีบ) delivered in April 2011 from Stock Checking Report (3044.2 tons) and monthly invoice list (2975.88 tons) is

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	found inconsistency more than 5 %. Hence, CL20 is raised. CL20 With reference to lignite consumption at Ta Luang site, please justify the inconsistency of total amount of Lignite (แม่ตีบ) delivered in April 2011from Stock Checking Report (3044.2 tons) and monthly delivery record (2975.88 tons). *(c) Bituminous* It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	7,014.00	7,014.01
Apr-11	6,774.00	6,774.47
May-11	5,675.00	5,674.37
Jun-11	7,898.00	7,898.16
Jul-11	2,561.00	2,561.07
Aug-11	1,898.00	1,897.95
Sep-11	2,334.00	2,333.68
Oct-11	744.00	743.89
Nov-11	220.00	219.87
Dec-11	2,678.00	2,678.24
TOTAL	**37,796.00**	**37,795.71**
Different between data used in VER calculation and Stock Checking Report		**Less than 0.01%**

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	6,600.36	6,600.36
Feb-12	9,047.01	9,047.01
Mar-12	10,654.87	10,654.87
Apr-12	10,153.34	10,153.34
May-12	10,915.41	10,915.41
Jun-12	8,433.09	8,433.09
Jul-12	7,028.78	7,028.78
Aug-12	10,380.58	10,380.58
Sep-12	7,821.22	7,821.22
Oct-12	5,982.80	5,982.80
Nov-12	5,476.70	5,476.70
Dec-12	6,220.21	6,220.21
TOTAL	**98,714.38**	**98,714.38**
Different between data used in VER calculation and Stock Checking Report		**0**

For verification of Stock Checking Report, the month that having significant usage of Bituminous which is March 2011 had been selected for cross-checking. Verification team had checked quantity of bituminous delivered showing in Stock Checking Report against original invoices as follow.

– 10 invoices from 8/03/2011

This is found consistency and accepted.

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	(d) *Lignite (MT)* It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	11,536.00	11,535.92
Apr-11	11,564.00	11,564.28
May-11	10,234.00	10,233.98
Jun-11	16,325.00	16,324.92
Jul-11	12,602.00	12,601.64
Aug-11	13,128.00	13,128.32
Sep-11	8,296.00	8,295.79
Oct-11	2,098.00	2,097.81
Nov-11	2,631.00	2,630.77
Dec-11	11,656.00	11,655.76
TOTAL	**100,070.00**	**100,069.19**
Different between data used in VER calculation and Stock Checking Report		**Less than 0.01%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	11,279.92	11,279.92
Feb-12	9,933.87	9,933.87
Mar-12	10,305.95	10,305.95
Apr-12	9,251.52	9,251.52
May-12	11,096.89	11,096.89
Jun-12	11,600.38	11,600.38
Jul-12	14,580.39	14,580.39

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Aug-12	10,588.63	10,588.63
Sep-12	7,580.51	7,580.51
Oct-12	4,239.96	4,239.96
Nov-12	8,852.40	8,852.40
Dec-12	12,941.55	12,941.55
TOTAL	**122,251.96**	**122,251.96**
Different between data used in VER calculation and Stock Checking Report		**0**

For verification of Stock Checking Report, the month that having significant usage of lignite (MT) which is March 2011 had been selected for cross-checking. Verification team had checked quantity of lignite (MT) delivered showing in Stock Checking Report against original invoices as follow.

– 11 invoices from 1/03/2011

This is found consistency and accepted.

(e) *Coal*

It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table.

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	9,948.00	9,948.41
Apr-11	9,311.00	9,310.94
May-11	8,658.00	8,657.66
Jun-11	8,489.00	8,489.10

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Jul-11	8,847.00	8,847.14
Aug-11	15,105.00	15,105.31
Sep-11	7,154.00	7,153.60
Oct-11	2,543.00	2,543.74
Nov-11	3,461.00	3,460.74
Dec-11	13,112.00	13,112.08
TOTAL	**86,628.00**	**86,628.72**
Different between data used in VER calculation and Stock Checking Report		**Less than 0.01%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	14,518.40	14,518.40
Feb-12	10,507.17	10,507.17
Mar-12	12,428.34	12,428.34
Apr-12	9,556.75	9,556.75
May-12	10,634.42	10,634.42
Jun-12	9,276.46	9,276.46
Jul-12	14,035.88	14,035.88
Aug-12	15,495.25	15,495.25
Sep-12	11,550.20	11,550.20
Oct-12	11,024.74	11,024.74
Nov-12	9,665.50	9,665.50
Dec-12	11,120.61	11,120.61
TOTAL	**139,813.72**	**139,813.72**
Different between data used in VER calculation and Stock Checking Report		**0**

For verification of Stock Checking Report, the month that having significant usage of coal which is August

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	2012 had been selected for cross-checking. Verification team had checked quantity of coal delivered showing in Stock Checking Report against original invoices as follow. – 3 invoices from 13/08/2012 – 12 invoices from 15/08/2012 This is found consistency and accepted. Verification team has conducted cross-checking between VERs calculation spreadsheet and Stock Checking Report prepared by SCG Ta Luang. Based on this report, there is confusion need to more clarification; therefore, CL21 is issues for project proponents to give more clarification as follows. • What is the relationship between consumption of various types of waste (i.e. Biodiesel, Coal Low Heat, and Coke/Activated Carbon) in Ta Luang indicated in Stock Checking Report and the data used in VERs Calculation? • How data at Ta Luang is grouped or summarized and transferred from Stock Checking Report to data used in VERs Calculation? ***Khao Wong site*** *(a)* *Fuel Oil* It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents. Therefore, CAR10 is raised due to the finding below; 1) There is inconsistency of fuel oil consumption at Khao Wong site between data used in VERs calculation and stock checking report during March 2011 – December 2011. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Khao Wong site in regard to fuel oil consumption is not following principle of conservativeness defined by VCS version 3.3		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	165.73	183.00
Apr-11	85.53	89.00
May-11	4.31	7.78
Jun-11	15.00	15.00
Jul-11	-	-
Aug-11	-	-
Sep-11	-	-
Oct-11	-	-
Nov-11	-	-
Dec-11	-	-
TOTAL	**271.00**	**294.78**
Different between data used in VER calculation and Stock Checking Report		**8.77%**

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	-	-
Feb-12	-	-
Mar-12	-	-
Apr-12	-	-
May-12	-	-
Jun-12	-	-
Jul-12	1.00	N.A.
Aug-12	-	N.A.
Sep-12	-	N.A.
Oct-12	-	N.A.
Nov-12	-	N.A.
Dec-12	-	N.A.
TOTAL	**1.00**	N.A.
Different between data used in VER calculation and Stock Checking Report		N.A.

Due to there is no evidence to support the cross-checking for the quantity of fossil fuel fired in the project plant at Khao Wong site for the period of July 2012 to December 2012. Hence, CL22 is raised.

CL22
Please provide evidences to support the cross-checking of the type and quantity of fuel fired in the project plant at Khao Wong site for the period of July 2012 to December 2012.

(b) Lignite

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table. Due to there is no evidence to support the cross-checking for the quantity of fossil fuel fired in the project plant at Khao Wong site for the period of July 2012 to December 2012. Hence, please refer to CL22 above. **Month** / **Data used in VERs Calculation (Tons)** / **Stock Checking Report (Tons)** Mar-11 / 17,293.59 / 17,286.20 Apr-11 / 12,866.45 / 12,867.25 May-11 / 14,113.75 / 14,118.88 Jun-11 / 16,190.59 / 16,192.58 Jul-11 / 18,115.00 / 18,118.82 Aug-11 / 18,907.00 / 18,924.17 Sep-11 / 14,529.43 / 14,529.43 Oct-11 / 8,219.02 / 8,219.02 Nov-11 / 19,559.61 / 19,563.74 Dec-11 / 17,513.91 / 17,516.22 **TOTAL** / **157,308.00** / **157,336.30** **Different between data used in VER calculation and Stock Checking Report** / **0.02%** **Month** / **Data used in VERs Calculation (Tons)** / **Stock Checking Report (Tons)** Jan-12 / 15,961.74 / 15,986.23 Feb-12 / 14,810.54 / 14,806.29		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Mar-12	15,039.87	15,058.12
Apr-12	13,277.32	13,250.24
May-12	18,454.51	18,468.54
Jun-12	8,686.55	8,710.55
Jul-12	20,359.27	N.A.
Aug-12	20,652.42	N.A.
Sep-12	17,673.83	N.A.
Oct-12	15,352.33	N.A.
Nov-12	8,594.55	N.A.
Dec-12	11,980.49	N.A.
TOTAL	**180,843.43**	N.A.
Different between data used in VER calculation and Stock Checking Report		N.A.

For verification of Stock Checking Report, the month that having significant usage of lignite had been selected for cross-checking. However, there is no available evidence present to support cross-checking of the amount of Lignite delivered to Khao Wong site on August 2011 and November 2011 during on site visit (4/4/2013). Hence, CL23 is raised below.

(c) *Coal*

It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents.

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Therefore, CAR11 is raised due to the finding below; 1) There is inconsistency of Coal consumption at Khao Wong site between data used in VERs calculation and stock checking report during March 2011 – December 2011. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Khao Wong site in regard to Coal consumption is not following principle of conservativeness defined by VCS version 3.3		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	13,128.51	10,345.75
Apr-11	11,611.22	9,274.63
May-11	12,117.88	10,716.80
Jun-11	13,877.72	12,998.35
Jul-11	19,049.18	19,379.28
Aug-11	19,065.58	19,583.16
Sep-11	16,281.09	16,615.73
Oct-11	10,685.66	9,972.88
Nov-11	14,027.66	13,338.44
Dec-11	14,916.73	13,950.38
TOTAL	**144,761.00**	**136,175.42**
Different between data used in VER calculation and Stock Checking Report		**5.93%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	17,329.26	14,699.00
Feb-12	17,363.62	15,440.78
Mar-12	19,564.89	17,806.34

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Apr-12	16,819.18	16,738.43
May-12	19,528.07	18,026.51
Jun-12	7,613.70	7,611.68
Jul-12	18,822.48	N.A.
Aug-12	18,188.16	N.A.
Sep-12	21,191.40	N.A.
Oct-12	18,401.63	N.A.
Nov-12	13,490.70	N.A.
Dec-12	18,626.42	N.A.
TOTAL	17,329.26	N.A.
Different between data used in VER calculation and Stock Checking Report		N.A.

Due to there is no evidence to support the cross-checking for the quantity of fossil fuel fired in the project plant at Khao Wong site for the period of July 2012 to December 2012. Hence, please refer to CL22 above.

For verification of Stock Checking Report, the month that having significant usage of coal had been selected for cross-checking. However, there is no available evidence present to support cross-checking of the amount of Coal delivered to Khao Wong site on July 2011 and August 2011 during on site visit (4/4/2013). Hence, please refer to CL23 below.

<u>CL23</u>
Please provide evidence to support the amount of fossil fuel delivered to Khao Wong site as follow.

- Lignite – August 2011, November 2011
- Coal – July 2011, August 2011

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	- Rice Husk – March 2011, May 2011 - Biomass (Bark Staw) – January 2012, May 2012 - Other1 (CTA) – January 2012, May 2012 - Other2 (CKB) – June 2012, December 2012 *(d) Pet Coke* According to ACM0003, verification body is requested to cross-check the consistency of fuel consumption quantities with stock change. Therefore, verification team had verified this consumption by cross-checking with Stock Checking Report prepared by SCG Khao Wong. It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table. Due to there is no evidence to support the cross-checking for the quantity of Pet Coke fired in the project plant at Khao Wong site for the period of July 2012 to December 2012. Hence, please refer to CL22 above.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	-	-
Apr-11	-	-
May-11	-	-
Jun-11	-	-
Jul-11	-	-
Aug-11	-	-
Sep-11	-	-
Oct-11	-	-
Nov-11	413.10	413.10

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Dec-11	1,422.90	1,422.90
TOTAL	**1,836.00**	**1,836.00**
Different between data used in VER calculation and Stock Checking Report		**0**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	-	-
Feb-12	-	-
Mar-12	-	-
Apr-12	-	-
May-12	-	-
Jun-12	-	-
Jul-12	-	N.A.
Aug-12	-	N.A.
Sep-12	-	N.A.
Oct-12	-	N.A.
Nov-12	-	N.A.
Dec-12	-	N.A.
TOTAL	-	N.A.
Different between data used in VER calculation and Stock Checking Report		N.A.

Verification team has conducted cross-checking between VERs calculation spreadsheet and Stock Checking Report prepared by SCG Khao Wong. CAR12 and CL24 are issued for project proponents due to the following reasons as follows..

- Anthracite had been fired at Khao Wong site during the crediting period and reported in Work Journal. However,

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Anthracite is not taken account in VERs calculation sheet version1 dated 13/3/2013. - With reference to Stock Checking Report, Bituminous had been consumed at Khao Wong site during crediting period. However, there is no Bituminous consumption presented in Work Journal and VERs Calculation for the following period. <u>CAR12</u> With reference to work journal and Stock Checking Report, Anthracite had been fired at Khao Wong site during the crediting period. However, Anthracite is not taken account in VERs calculation sheet version1 dated 13/3/2013. <u>CL24</u> With reference to Stock Checking Report, Bituminous had been consumed at Khao Wong site during crediting period. Please clarify why there is no Bituminous consumption presented in Work Journal and VERs Calculation for the following period? ***<u>Kaeng Khoi site</u>*** <u>*(a)*</u> Fuel Oil According to ACM0003, verification body is requested to cross-check the consistency of fuel consumption quantities with stock change. Therefore, verification team had verified this consumption by cross-checking with Stock Checking Report prepared by SCG Kaeng Khoi. It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	less than 5% materiality threshold defined by VCS version 3.3 as following table.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	564.00	580.49
Apr-11	300.00	316.49
May-11	694.00	710.92
Jun-11	661.00	677.84
Jul-11	725.00	741.60
Aug-11	598.00	614.25
Sep-11	733.00	750.01
Oct-11	528.00	545.16
Nov-11	205.00	221.35
Dec-11	274.00	290.40
TOTAL	**5,282.00**	**5,448.51**
Different between data used in VER calculation and Stock Checking Report		**3.15%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	198.92	198.92
Feb-12	402.64	419.24
Mar-12	303.64	320.24
Apr-12	571.96	588.56
May-12	441.94	458.54
Jun-12	351.09	367.69
Jul-12	215.57	232.17
Aug-12	198.60	215.20
Sep-12	599.12	615.72
Oct-12	694.62	711.22

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Nov-12	113.86	130.46
Dec-12	362.39	378.99
TOTAL	**4,454.00**	**4,636.94**
Different between data used in VER calculation and Stock Checking Report		**4.11%**

For verification of Stock Checking Report, the month that having significant usage of Fuel oil which is October 2011 had been selected for cross-checking. Verification team had checked quantity of Fuel oil delivered showing in Stock Checking Report against original invoices as follow.

- 5 invoices from 12/10/2011

This is found consistency and accepted.

(b) *Lignite*

It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents.

Therefore, CAR13 is raised due to the finding below;

1) There is inconsistency of Lignite consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	2) VERs calculation at Kaeng Khoi site in regard to Lignite consumption is not following principle of conservativeness defined by VCS version 3.3		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	50,654.00	59,684.00
Apr-11	42,236.00	49,986.80
May-11	47,117.00	57,103.15
Jun-11	51,316.00	60,682.81
Jul-11	48,119.00	58,025.51
Aug-11	40,188.00	48,518.81
Sep-11	41,342.00	51,038.12
Oct-11	30,209.00	37,225.86
Nov-11	43,838.00	53,184.06
Dec-11	40,059.00	48,095.70
TOTAL	**435,078.00**	**523,544.82**
Different between data used in VER calculation and Stock Checking Report		**20.33%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	46,254.15	56,096.47
Feb-12	49,163.88	58,789.61
Mar-12	57,647.84	68,043.94
Apr-12	49,284.02	58,956.15
May-12	55,382.16	67,196.58
Jun-12	47,336.88	59,137.96
Jul-12	47,502.45	59,268.25
Aug-12	47,337.40	59,433.20
Sep-12	43,209.49	53,592.34

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Oct-12	33,075.01	40,162.22
Nov-12	25,494.40	30,230.72
Dec-12	27,563.83	33,045.48
TOTAL	**529,252.00**	**643,952.92**
Different between data used in VER calculation and Stock Checking Report		**21.67%**

For verification of Stock Checking Report, the month that having significant usage of Lignite which is June 2011 had been selected for cross-checking. Verification team had checked quantity of Lignite delivered showing in Stock Checking Report against original invoices as follow.

– 86 invoices from 17/06/2011 (4 suppliers)

This is found consistency and accepted.

(c) Coal
It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents.

Therefore, CAR14 is raised due to the finding below;

1) There is inconsistency of Coal consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	inconsistency is greater than 5% materiality threshold 2) VERs calculation at Kaeng Khoi site in regard to Coal consumption is not following principle of conservativeness defined by VCS version 3.3		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	30,362.00	35,349.47
Apr-11	36,560.00	42,642.53
May-11	29,220.00	33,197.37
Jun-11	26,927.00	27,208.01
Jul-11	32,047.00	34,112.28
Aug-11	20,463.00	24,233.00
Sep-11	37,246.00	45,329.77
Oct-11	42,621.00	51,460.00
Nov-11	35,534.00	41,968.53
Dec-11	44,909.00	53,013.33
TOTAL	**335,889.00**	**388,514.29**
Different between data used in VER calculation and Stock Checking Report		**15.67%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	40,000.60	46,302.72
Feb-12	27,053.00	31,090.02
Mar-12	27,588.84	31,229.42
Apr-12	15,813.46	18,193.75
May-12	18,624.49	21,026.88
Jun-12	28,810.47	32,219.03
Jul-12	26,604.37	30,060.84
Aug-12	21,458.67	24,495.58

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Sep-12	14,985.81	17,195.33
Oct-12	18,290.13	21,964.74
Nov-12	35,925.33	43,392.56
Dec-12	37,113.00	44,732.82
TOTAL	**312,268.00**	**361,903.70**
Different between data used in VER calculation and Stock Checking Report		**15.90%**

For verification of Stock Checking Report, the month that having significant usage of Coal which is December 2011 had been selected for cross-checking. Verification team had checked quantity of Coal delivered showing in Stock Checking Report against original invoices as follow.

– 18 invoices from 6/12/2011

However, the total amount of coal delivered on 6 December 2011 from monthly delivery record (582.44 tons) and actual invoice (1164.14 tons) is found inconsistency more than 5 %. Hence, CL25 is raised.

CL25
Please justify the inconsistency of total amount of coal delivered at Kaeng Khoi site from monthly delivery record (582.44 tons) and original invoices (1164.15 tons) on 6 December 2011.

(d) Bituminous
It was found that the inconsistency between data used

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents. Therefore, CAR15 is raised due to the finding below; 1) There is inconsistency of Bituminous consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Kaeng Khoi site in regard to Bituminous consumption is not following principle of conservativeness defined by VCS version 3.3		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	12,360.00	16,427.23
Apr-11	8,907.00	12,046.51
May-11	12,755.00	16,217.06
Jun-11	13,113.00	17,130.64
Jul-11	10,655.00	14,047.76
Aug-11	5,437.00	7,509.08
Sep-11	5,888.00	8,109.93
Oct-11	1,650.00	2,215.75
Nov-11	-	-
Dec-11	205.00	280.66
TOTAL	**70,970.00**	**93,984.62**
Different between data used in VER calculation and Stock		**32.43%**

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Checking Report		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	5,363.59	7,093.38
Feb-12	6,624.09	8,648.83
Mar-12	13,577.07	17,966.11
Apr-12	7,701.36	10,080.66
May-12	5,957.81	8,616.94
Jun-12	8,960.51	12,861.65
Jul-12	10,711.04	14,402.93
Aug-12	13,472.04	16,711.11
Sep-12	13,653.96	16,963.50
Oct-12	10,563.74	12,947.80
Nov-12	6,399.88	8,314.21
Dec-12	8,077.90	10,312.67
TOTAL	**111,063.00**	**144,919.79**
Different between data used in VER calculation and Stock Checking Report		**30.48%**

For verification of Stock Checking Report, the month that having significant usage of Bituminous which is September 2012 had been selected for cross-checking. Verification team had checked quantity of Bituminous delivered showing in Stock Checking Report against original invoices as follow.

- 16 invoices from 3/09/2012

However, the total amount of Bituminous delivered on 3 September 2012 from actual invoice (440.34 tons) and monthly

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	delivery record (432.07 tons) is found inconsistency more than 5 %. Hence, CL26 is raised. CL26 Please justify the inconsistency of total amount of Bituminous delivered at Kaeng Khoi site from original invoices (440.34 tons) and monthly delivery record (432.07 tons) on 3 September 2012. *(e)* Pet Coke It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	-	-
Apr-11	-	-
May-11	-	-
Jun-11	-	-
Jul-11	-	-
Aug-11	-	-
Sep-11	-	-
Oct-11	-	-
Nov-11	-	-
Dec-11	-	-
TOTAL	**-**	**-**
Different between data used in VER calculation and Stock Checking Report		**0**

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	-	-
Feb-12	-	-
Mar-12	-	-
Apr-12	-	-
May-12	-	-
Jun-12	-	-
Jul-12	-	-
Aug-12	816.47	816.47
Sep-12	195.66	208.06
Oct-12	5,947.23	6,277.27
Nov-12	2,992.37	3,123.20
Dec-12	-	-
TOTAL	**9,952.00**	**10,424.99**
Different between data used in VER calculation and Stock Checking Report		**4.75%**

4) $FC_{PJ,k,y}$: Quantity of alternative fuel or less carbon intensive fossil fuel type k used in project plant in year y

During on site visit, the valued applied in VER calculation had been firstly cross-checked with the monthly fuel stock data in order to cross-check the quantity of fossil fuel used. Then, monthly fuel stock data had been verified with the actual delivery invoice as followed.

Thung Song site

~~CAR16~~
~~CL27~~
~~CL28~~
~~CAR17~~
~~CL30~~
~~CAR18~~
~~CAR19~~
~~CL31~~
~~CAR20~~
~~CAR21~~
~~CAR22~~

OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Please refer to CL19 above. ***Ta Luang site*** *(a)* Husk It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	8,747.00	8,747.32
Apr-11	8,760.00	8,759.59
May-11	7,016.00	7,015.77
Jun-11	6,503.00	6,503.06
Jul-11	4,468.00	4,468.12
Aug-11	5,480.00	5,480.39
Sep-11	3,350.00	3,349.33
Oct-11	716.00	716.27
Nov-11	894.00	894.44
Dec-11	3,713.00	3,712.78
TOTAL	**49,647.00**	**49,647.07**
Different between data used in VER calculation and Stock Checking Report		**Less than 0.01%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	7,513.91	7,513.91
Feb-12	6,884.16	6,884.16
Mar-12	5,341.49	5,341.49

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Apr-12	4,963.48	4,963.48
May-12	5,528.57	5,528.57
Jun-12	4,830.42	4,830.42
Jul-12	4,942.14	4,942.14
Aug-12	5,009.25	5,009.25
Sep-12	5,748.78	5,748.78
Oct-12	3,293.85	3,293.85
Nov-12	4,606.82	4,606.82
Dec-12	5,795.67	5,795.67
TOTAL	**64,458.53**	**64,458.53**
Different between data used in VER calculation and Stock Checking Report		**0**

For verification of Stock Checking Report, the month that having significant usage of Husk had been selected for cross-checking. Due to there is no available evidence present to support cross-checking of the amount of Husk delivered to Ta Luang site on March 2011 and April 2011 during on site visit (4/4/2013). Hence, please refer to CL27 below

(b) Woodchip
It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents.

Therefore, CAR16 is raised due to the finding below;

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	1) There is inconsistency of Woodchip consumption at Ta Luang site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Ta Luang site in regard to Woodchip consumption is not following principle of conservativeness defined by VCS version 3.3		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	209.00	199.01
Apr-11	407.00	390.05
May-11	169.00	126.30
Jun-11	145.00	121.83
Jul-11	317.00	285.34
Aug-11	166.00	136.03
Sep-11	393.00	378.38
Oct-11	93.00	73.56
Nov-11	-	-
Dec-11	333.00	309.58
TOTAL	**2,232.00**	**2,020.07**
Different between data used in VER calculation and Stock Checking Report		**9.49%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	402.98	337.76
Feb-12	256.72	219.46
Mar-12	697.42	587.45

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Apr-12	595.35	514.92
May-12	534.30	448.56
Jun-12	522.24	426.13
Jul-12	629.42	535.16
Aug-12	695.92	599.63
Sep-12	480.99	426.51
Oct-12	431.37	331.03
Nov-12	767.39	601.04
Dec-12	343.34	297.19
TOTAL	**6,357.44**	**5,324.84**
Different between data used in VER calculation and Stock Checking Report		**16.24%**

For verification of Stock Checking Report, the month that having significant usage of Woodchip had been selected for cross-checking. Due to there is no available evidence present to support cross-checking of the amount of Woodchip delivered to Ta Luang site on March 2011 and November 2011 during on site visit (4/4/2013). Hence, please refer to CL27 below.

<u>CL27</u>
Please provide evidence to support the amount of fossil fuel delivered to Ta Luang site as follow.

- Husk – March 2011, April 2011
- Woodchip – March 2012, November 2012

Verification team has conducted cross-checking between VERs calculation spreadsheet and Stock Checking Report prepared by SCG Ta Luang. Based on this report, there is

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	confusion need to more clarification; therefore, CL28 is issues for project proponents to give more clarification as follows. • What is the relationship between consumption of various types of waste (i.e. Aqueous Waste, RDF, Mixed Solid+ผ้าเปื้อนน้ำมัน(Contaminated cloth), PTA/เม็ดพลาสติก(Plastic granule), Biodiesel, Used Tyre+Plastic+จารบี(grease)+กากสี (waste paint)+scum oil+ถุงกระดาษ(paper bag)+rubber seal+Solid , ผ้าเปื้อนน้ำมัน(Contaminated cloth), ผงหมึก(Toner)) in Ta Luang indicated in Stock Checking Report and the data used in VERs Calculation? • How data at Ta Luang is grouped or summarized and transferred from Stock Checking Report to data used in VERs Calculation? ***<u>Khao Wong site</u>*** *<u>(a)</u>* Rice husk It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents. Therefore, CAR17 is raised due to the finding below; 1) There is inconsistency of Rice husk consumption at Khao Wong site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	threshold 2) VERs calculation at Khao Wong site in regard to Rice husk consumption is not following principle of conservativeness defined by VCS version 3.3 Due to there is no evidence to support the cross-checking for the quantity of fossil fuel fired in the project plant at Khao Wong site for the period of July 2012 to December 2012. Hence, please refer to CL22 above.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	8,331.54	9,842.34
Apr-11	7,918.11	9,632.73
May-11	8,662.01	10,190.61
Jun-11	6,389.96	7,357.47
Jul-11	7,486.93	8,650.41
Aug-11	3,277.43	3,883.68
Sep-11	3,836.40	4,793.70
Oct-11	-	-
Nov-11	3,186.83	3,529.94
Dec-11	5,282.35	5,960.00
TOTAL	**54,371.56**	**63,840.88**
Different between data used in VER calculation and Stock Checking Report		**17.42%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	7,320.38	8,075.44
Feb-12	10,488.38	11,813.90

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Mar-12	6,441.74	7,167.04
Apr-12	6,989.19	7,773.54
May-12	5,574.53	6,535.20
Jun-12	3,703.06	4,313.91
Jul-12	4,622.00	NA
Aug-12	6,268.16	NA
Sep-12	5,529.72	NA
Oct-12	4,956.58	NA
Nov-12	3,118.16	NA
Dec-12	4,563.07	NA
TOTAL	**69,574.96**	NA
Different between data used in VER calculation and Stock Checking Report		**NA**

For verification of Stock Checking Report, the month that having significant usage of Rice Husk had been selected for cross-checking. Due to there is no available evidence present to support cross-checking of the amount of Rice husk delivered to Khao Wong site on March 2011 and May 2011 during on site visit (4/4/2013). Hence, please refer to CL23 above.

(b) Biomass (Bark straw)
It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table.

Due to there is no evidence to support the cross-checking for the quantity of fossil fuel fired in the project plant at Khao Wong

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	site for the period of July 2012 to December 2012. Hence, please refer to CL22 above.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	1,824.01	1,824.01
Apr-11	2,732.88	2,732.88
May-11	4,619.12	4,619.12
Jun-11	4,014.03	4,014.03
Jul-11	3,124.45	3,124.45
Aug-11	5,236.97	5,236.97
Sep-11	6,619.92	6,619.92
Oct-11	5,054.48	5,054.48
Nov-11	9,573.04	9,573.04
Dec-11	4,242.85	4,242.85
TOTAL	**47,041.75**	**47,041.75**
Different between data used in VER calculation and Stock Checking Report		**0%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	8,300.64	8,300.64
Feb-12	2,505.03	2,505.03
Mar-12	4,466.12	4,466.12
Apr-12	3,691.97	3,691.97
May-12	5,882.91	5,882.91
Jun-12	2,525.68	2,525.68
Jul-12	3,289.03	NA
Aug-12	2,600.55	NA
Sep-12	4,691.53	NA
Oct-12	5,819.13	NA

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Nov-12	2,948.43	NA
Dec-12	6,413.47	NA
TOTAL	**53,134.50**	NA
Different between data used in VER calculation and Stock Checking Report		**NA**

For verification of Stock Checking Report, the month that having significant usage of Biomass had been selected for cross-checking. Due to there is no available evidence present to support cross-checking of the amount of Biomass delivered to Khao Wong site on January 2012 and May 2012 during on site visit (4/4/2013). Hence, please refer to CL23 above.

(c) Mixed Solid Waste
It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents.

Therefore, CAR18 is raised due to the finding below;

1) There is inconsistency of Mixed Solid Waste consumption at Khao Wong site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold
2) VERs calculation at Khao Wong site in regard to Mixed

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Solid Waste consumption is not following principle of conservativeness defined by VCS version 3.3 Due to there is no evidence to support the cross-checking for the quantity of fossil fuel fired in the project plant at Khao Wong site for the period of July 2012 to December 2012. Hence, please refer to CL22 above.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	-	-
Apr-11	-	-
May-11	-	-
Jun-11	-	-
Jul-11	-	-
Aug-11	19.91	24.89
Sep-11	8.11	10.14
Oct-11	2.82	3.52
Nov-11	5.21	6.51
Dec-11	3.79	4.74
TOTAL	**39.84**	**49.80**
Different between data used in VER calculation and Stock Checking Report		**25%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	1.02	1.27
Feb-12	5.95	7.44
Mar-12	-	-
Apr-12	-	-

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

May-12	45.25	56.56
Jun-12	29.98	-
Jul-12	60.35	NA
Aug-12	39.36	NA
Sep-12	50.75	NA
Oct-12	61.49	NA
Nov-12	16.64	NA
Dec-12	14.54	NA
TOTAL	**325.33**	NA
Different between data used in VER calculation and Stock Checking Report		**NA**

(d) Other1 (CTA)
According to ACM0003, verification body is requested to cross-check the consistency of fuel consumption quantities with stock change. Therefore, verification team had verified this consumption by cross-checking with Stock Checking Report prepared by SCG Khao Wong. CL29 is issued for project proponents as follows.

CL29
With reference to Stock Checking Report, Other1 (CTA) had been consumed at Khao Wong site during crediting period. Please clarify why there is no Other1 (CTA) consumption presented in Work Journal and why VERs Calculation not taken account of this fuel during crediting period?

Due to there is no evidence to support the cross-checking for the quantity of fossil fuel fired in the project plant at Khao Wong site for the period of July 2012 to December 2012. Hence, please refer to CL22 above.

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	-	312.29
Apr-11	-	250.30
May-11	-	227.30
Jun-11	-	309.32
Jul-11	-	277.40
Aug-11	-	318.53
Sep-11	-	285.62
Oct-11	-	208.32
Nov-11	-	426.59
Dec-11	-	261.30
TOTAL	**-**	**2,876.97**
Different between data used in VER calculation and Stock Checking Report		**>5%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	299.80	333.11
Feb-12	261.40	290.44
Mar-12	218.72	243.02
Apr-12	195.81	217.57
May-12	271.32	301.47
Jun-12	188.34	209.27
Jul-12	262.57	NA
Aug-12	161.44	NA
Sep-12	244.63	NA
Oct-12	194.00	NA
Nov-12	101.28	NA
Dec-12	166.34	NA

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

TOTAL	**2,565.65**	NA
Different between data used in VER calculation and Stock Checking Report		**NA**

For verification of Stock Checking Report, the month that having significant usage of Other1 (CTA) had been selected for cross-checking. Due to there is no available evidence present to support cross-checking of the amount of Other1 (CTA) delivered to Khao Wong site on January 2012 and May 2012 during on site visit (4/4/2013). Hence, please refer to CL23 above.

(e) Other2 (CKB)
It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table.

Due to there is no evidence to support the cross-checking for the quantity of fossil fuel fired in the project plant at Khao Wong site for the period of July 2012 to December 2012. Hence, please refer to CL22 above.

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	-	-
Apr-11	82.91	82.91
May-11	245.19	245.19
Jun-11	307.59	307.59
Jul-11	33.00	33.00
Aug-11	165.04	165.04

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Sep-11	332.49	332.49
Oct-11	268.26	268.26
Nov-11	135.00	135.00
Dec-11	258.00	258.00
TOTAL	**1,827.48**	**1,827.48**
Different between data used in VER calculation and Stock Checking Report		**0**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	106.50	106.50
Feb-12	107.05	107.05
Mar-12	166.01	166.01
Apr-12	211.01	211.01
May-12	30.03	30.03
Jun-12	472.78	472.78
Jul-12	82.03	NA
Aug-12	127.24	NA
Sep-12	43.22	NA
Oct-12	183.00	NA
Nov-12	16.20	NA
Dec-12	343.49	NA
TOTAL	**1,888.56**	NA
Different between data used in VER calculation and Stock Checking Report		**NA**

For verification of Stock Checking Report, the month that having significant usage of Other2 (CKB) had been selected for cross-checking. Due to there is no available evidence present to support cross-checking of the

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	amount of Other2 (CKB) delivered to Khao Wong site on June 2012 and December 2012 during on site visit (4/4/2013). Hence, please refer to CL23 above. *(f)* Other3 (S40B + R40B) It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table. Due to there is no evidence to support the cross-checking for the quantity of fossil fuel fired in the project plant at Khao Wong site for the period of July 2012 to December 2012. Hence, please refer to CL22 above.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	-	-
Apr-11	-	-
May-11	-	-
Jun-11	-	-
Jul-11	-	-
Aug-11	-	-
Sep-11	-	-
Oct-11	-	-
Nov-11	-	-
Dec-11	-	-
TOTAL	**-**	**-**
Different between data used in VER calculation and Stock Checking Report		**0**

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	-	-
Feb-12	-	-
Mar-12	-	-
Apr-12	-	-
May-12	21.48	21.48
Jun-12	-	37.48
Jul-12	-	NA
Aug-12	116.12	NA
Sep-12	-	NA
Oct-12	229.73	NA
Nov-12	211.77	NA
Dec-12	326.90	NA
TOTAL	906.00	NA
Different between data used in VER calculation and Stock Checking Report		**NA**

Verification team has conducted cross-checking between VERs calculation spreadsheet and Stock Checking Report prepared by SCG Khao Wong. Based on this report, there is confusion need to more clarification; therefore, CL30 is issues for project proponents to give more clarification as follows.

- What is the relationship between consumption of various types of waste (i.e. Waste water, Solid Waste Rubber) in Khao Wong indicated in Stock Checking Report and the data used in VERs Calculation?
- How data at Khao Wong is grouped or summarized and

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	transferred from Stock Checking Report to data used in VERs Calculation? ***Khaeng Khoi site*** *(a)* Paddy husk It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is less than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	6,305.00	6,305.00
Apr-11	4,076.00	4,021.19
May-11	7,464.00	7,167.13
Jun-11	3,315.00	3,315.00
Jul-11	2,365.00	2,364.90
Aug-11	82.00	82.00
Sep-11	607.00	606.55
Oct-11	-	-
Nov-11	-	-
Dec-11	1,689.00	1,689.10
TOTAL	**25,903.00**	**25,550.86**
Different between data used in VER calculation and Stock Checking Report		**3.15%**

Month	Data used in VERs	Stock Checking Report

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

	Calculation (Tons)	(Tons)
Jan-12	4,404.33	4,404.83
Feb-12	5,843.32	5,843.44
Mar-12	9,449.75	9,450.95
Apr-12	5,067.63	5,067.63
May-12	8,022.69	8,022.69
Jun-12	9,208.71	9,208.71
Jul-12	8,663.99	8,663.99
Aug-12	6,036.07	6,036.28
Sep-12	8,083.82	8,083.82
Oct-12	4,177.70	4,177.70
Nov-12	7,363.33	7,363.33
Dec-12	6,823.20	6,828.45
TOTAL	**83,145.00**	**83,151.82**
Different between data used in VER calculation and Stock Checking Report		**0.01%**

For verification of Stock Checking Report, the month that having significant usage of Husk which are March 2012 had been selected for cross-checking. Verification team had checked quantity of Husk delivered showing in Stock Checking Report against original invoices as follow.

- 9 invoices from 5/03/2012
- 15 invoices from 28/03/2012

This is found consistency and accepted.

(b) Biomass (Waste wood, Wood chip, Particle wood)
It was found that the inconsistency between data used

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents. Therefore, CAR19 is raised due to the finding below; 1) There is inconsistency of Biomass consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during January 2012 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Kaeng Khoi site in regard to Biomass consumption is not following principle of conservativeness defined by VCS version 3.3		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	7,553.00	7,552.26
Apr-11	7,674.00	7,674.46
May-11	3,021.00	3,020.25
Jun-11	7,492.00	7,492.16
Jul-11	8,806.00	8,805.90
Aug-11	9,099.00	9,098.76
Sep-11	8,363.00	8,363.49
Oct-11	9,490.00	9,490.23
Nov-11	13,075.00	13,075.26
Dec-11	12,866.00	12,866.05
TOTAL	**87,439.00**	**87,438.81**
Different between data used in VER calculation and Stock Checking Report		**>0.01%**

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	12,062.85	12,063.85
Feb-12	10,374.10	10,374.10
Mar-12	7,780.08	7,780.08
Apr-12	7,001.29	7,001.29
May-12	5,836.55	5,836.55
Jun-12	6,688.66	6,688.66
Jul-12	8,159.40	7,445.63
Aug-12	9,179.46	6,725.92
Sep-12	6,281.07	5,516.67
Oct-12	8,777.58	7,164.08
Nov-12	7,151.80	6,887.80
Dec-12	7,980.65	6,266.85
TOTAL	**97,274.00**	**89,751.48**
Different between data used in VER calculation and Stock Checking Report		**7.73%**

For verification of Stock Checking Report, the month that having significant usage of Woodchip which is December 2011 had been selected for cross-checking. Verification team had checked quantity of Woodchip delivered showing in Stock Checking Report against original invoices as follow.

– 21 invoices from 10/12/2011

This is found consistency and accepted.

(c) Mixed solid waste (other waste)

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents. Therefore, CAR20 is raised due to the finding below; 1) There is inconsistency of Mixed solid waste consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Kaeng Khoi site in regard to Mixed solid waste consumption is not following principle of conservativeness defined by VCS version 3.3		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	142.00	47.00
Apr-11	96.00	51.06
May-11	68.00	64.68
Jun-11	128.00	-
Jul-11	93.00	93.40
Aug-11	47.00	42.36
Sep-11	79.00	79.42
Oct-11	54.00	50.34
Nov-11	118.00	118.61
Dec-11	38.00	13.01
TOTAL	**863.00**	**559.88**
Different between data used in		**35.12%**

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

VER calculation and Stock Checking Report	

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	63.49	9.21
Feb-12	85.07	79.37
Mar-12	99.52	93.22
Apr-12	74.82	63.62
May-12	62.09	62.09
Jun-12	62.16	62.16
Jul-12	88.94	85.55
Aug-12	98.34	98.34
Sep-12	104.70	104.70
Oct-12	82.23	83.00
Nov-12	54.95	54.95
Dec-12	118.36	-
TOTAL	**995.00**	**796.21**
Different between data used in VER calculation and Stock Checking Report		**19.98%**

(d) Waste Oil

It is unclear how to link Waste oil mentioned in VERs calculation sheet with the data in Stock Checking Report. Hence, CL31 is raised below.

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	840.00	NA
Apr-11	672.00	NA
May-11	977.00	NA

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Jun-11	866.00	NA
Jul-11	827.00	NA
Aug-11	987.00	NA
Sep-11	630.00	NA
Oct-11	566.00	NA
Nov-11	1,512.00	NA
Dec-11	808.00	NA
TOTAL	**8,686.00**	**NA**
Different between data used in VER calculation and Stock Checking Report		**NA**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	-	NA
Feb-12	-	NA
Mar-12	-	NA
Apr-12	-	NA
May-12	-	NA
Jun-12	-	NA
Jul-12	-	NA
Aug-12	-	NA
Sep-12	-	NA
Oct-12	-	NA
Nov-12	-	NA
Dec-12	-	NA
TOTAL	**-**	**NA**
Different between data used in VER calculation and Stock Checking Report		**NA**

(e) Other1 (G1+G2)

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	It is unclear how to link G1 and G2 mentioned in VERs calculation sheet with the data in Stock Checking Report. Hence, please refer to CL31 below.		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	-	NA
Apr-11	-	NA
May-11	-	NA
Jun-11	-	NA
Jul-11	-	NA
Aug-11	-	NA
Sep-11	-	NA
Oct-11	-	NA
Nov-11	-	NA
Dec-11	-	NA
TOTAL	**-**	**NA**
Different between data used in VER calculation and Stock Checking Report		**>5%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	339.44	NA
Feb-12	1015.77	NA
Mar-12	1413.05	NA
Apr-12	824.6	NA
May-12	1512.53	NA
Jun-12	1458.54	NA
Jul-12	1484.23	NA
Aug-12	1712.8	NA
Sep-12	1310.14	NA

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Oct-12	405.4	NA
Nov-12	489.4	NA
Dec-12	792.14	NA
TOTAL	**12758**	**NA**
Different between data used in VER calculation and Stock Checking Report		**>5%**

Draft Concl: | Final Concl: **NA**

(f) Other2 (Solid AF)
It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents.

Therefore, CAR21 is raised due to the finding below;

1) There is inconsistency of Other2 consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold
2) VERs calculation at Kaeng Khoi site in regard to Other2 consumption is not following principle of conservativeness defined by VCS version 3.3

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	1,063.00	1,063.00
Apr-11	786.00	786.05
May-11	320.00	314.60
Jun-11	579.00	-

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Jul-11	477.00	407.00
Aug-11	3,058.00	3,058.30
Sep-11	1,998.00	1,998.45
Oct-11	4,903.00	4,189.85
Nov-11	2,660.00	2,519.96
Dec-11	4,106.00	4,105.00
TOTAL	**19,950.00**	**18,442.21**
Different between data used in VER calculation and Stock Checking Report		**7.56%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	5,130.78	5,123.78
Feb-12	5,670.26	5,498.21
Mar-12	3,604.36	3,518.36
Apr-12	2,256.59	2,257.15
May-12	1,910.70	1,910.70
Jun-12	4,891.41	5,121.41
Jul-12	3,052.80	3,053.00
Aug-12	2,680.47	2,680.47
Sep-12	4,316.12	4,316.12
Oct-12	3,964.55	3,964.55
Nov-12	2,071.53	2,071.53
Dec-12	4,114.97	-
TOTAL	**43,665.00**	**39,515.28**
Different between data used in VER calculation and Stock Checking Report		**9.50%**

(g) Other3 (Used Tyre)

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	It was found that the inconsistency between data used in VERs Calculation and Stock Checking Report is greater than 5% materiality threshold defined by VCS version 3.3 as following table. As result of this, data used in VERs calculation is not preserving conservative principle that not contributes less benefit to project proponents. Therefore, CAR22 is raised due to the finding below; 1) There is inconsistency of Other3 consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Kaeng Khoi site in regard to Other3 consumption is not following principle of conservativeness defined by VCS version 3.3		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	662.00	663.00
Apr-11	587.00	587.50
May-11	684.00	683.50
Jun-11	1,108.00	
Jul-11	869.00	1,100.31
Aug-11	-	684.17
Sep-11	-	-
Oct-11	-	713.00
Nov-11	-	140.49
Dec-11	-	-
TOTAL	**3,910.00**	**4,571.97**
Different between data used in VER calculation and Stock		**16.93%**

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Checking Report		

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	-	7.00
Feb-12	-	172.05
Mar-12	-	85.51
Apr-12	-	-
May-12	-	-
Jun-12	-	-
Jul-12	-	-
Aug-12	-	21.00
Sep-12	-	-
Oct-12	-	-
Nov-12	-	-
Dec-12	-	-
TOTAL	**-**	**285.56**
Different between data used in VER calculation and Stock Checking Report		**>5%**

Verification team has conducted cross-checking between VERs calculation spreadsheet and Stock Checking Report prepared by SCG Kaeng Khoi. Based on this report, there is confusion need to more clarification; therefore, CL31 is issues for project proponents to give more clarification as follows.

- What is the relationship between consumption of various types of waste (i.e. Black sand, Iron Powder Dust, Water Sludge, Ash Dred, Scale, Silica Base Sludge, Alumina Base Sludge, General Base Sludge) in

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Khao Khoi indicated in Stock Checking Report and the data used in VERs Calculation (Waste Oil, G1, G2)? • How data is at Kaeng Khoi grouped or summarized and transferred from Stock Checking Report to data used in VERs Calculation?		
	5) $NCV_{i,y}$: Net calorific value of the fossil fuel type i in year y ***<u>Khao Wong site</u>*** Verification team had visited Khao Wong laboratory for testing of heating value of fuels. It's confirmed that 4-digit weighting machine for testing of Net Calorific Value (NCV) are well calibrated. These machines are calibrated according to internal procedure at 6-month per time. *a) <u>Lignite</u>* During onsite visit at Khao Wong site on 4 April 2013, verification team had checked Net Calorific Value (NCV) of Lignite as indicated in Work Journal for NCV '180_WJ for NCV_rev01_130312.xls' against laboratory analysis record shown in QIS database as follow;	~~CAR05 CL02~~	OK

Month	Value (GJ/ton)	Cross-checking result
July 2011	19.70	OK. This value is in line with lab analysis record.
August 2011	19.75	OK. This value

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

		is in line with lab analysis record

In light of positive result above, verification team confirmed the NCV of lignite at Khao Wong site used in emission reduction calculation is authentically based on actual laboratory analysis record.

b) *Coal*
Taken account of Net Calorific Value of coal (NCV_{coal}) indicated in Work Journal for NCV '180_WJ for NCV_rev01_130312.xls' at which compared against lab analysis record provided in QIS database, verification team had cross-checked these following data, as shown in table below.

Month	Value (GJ/ton)	Cross-checking result
May 2011	25.42	OK. This value is in line with lab analysis record.
August 2011	25.10	OK. This value is in line with lab analysis record

With positive result above, verification team confirmed that the NCV of coal at Khao Wong site used in emission reduction calculation is authentically based on lab analysis record.

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Ta Luang site *a) Lignite (แม่ตีบ)* Verification team had cross-checked data provided in Work Journal for NCV '180_WJ for NCV_rev01_130312.xls' compared against lab analysis record as follow. **Month** / **Value (GJ/ton)** / **Cross-checking result** March 2011 / 18.56 / OK. This value is in line with lab analysis record July 2011 / 19.12 / There is no lab analysis record provided in QIS database to support this figure. Thus, the CAR05 is raised Combined with evidence found in QIS database, verification team found that there is no supportive evidence from laboratory to support application of figure "19.12 GJ/ton" for July 2011. Therefore, CAR05 is raised as below CAR05 Combined with evidence found onsite, the indication of Net Calorific Value of lignite (แม่ตีบ) for Ta Luang site on July 2011 (i.e., 19.12 GJ/ton) as indicated in Work Journal for NCV '180_WJ for NCV_rev01_130312.xls' is not based on		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	actual laboratory analysis record. The application of "19.12 GJ/ton" on July 2011 for Ta Luang site in emission reduction calculation spreadsheet is not accepted. *b)* *Bituminous* Verification team had cross-checked NCV of bituminous against laboratory analysis record as follow. **Month** / **Value (GJ/ton)** / **Cross-checking result** March 2011 / 22.29 / There is slightly different between laboratory record and spreadsheet but the difference is not larger than 5% materiality. This is accepted. December 2011 / 22.52 / OK. This value is in line with laboratory analysis record. In light of finding above, verification team confirmed that the NCV of bituminous used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing.		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	c) *Lignite (MT)* Verification team had cross-checked NCV of lignite (MT) against laboratory analysis record as follow. **Month** / **Value (GJ/ton)** / **Cross-checking result** November 2012 / 20.20 / There is slightly different between laboratory record and spreadsheet but the difference is not larger than 5% materiality. This is accepted. December 2012 / 20.50 / OK. This value is in line with laboratory analysis record. In light of finding above, verification team confirmed that the NCV of lignite (MT) used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing. *d)* *Coal* Verification team had cross-checked NCV of lignite (MT)		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	against laboratory analysis record as follow. **Month** / **Value (GJ/ton)** / **Cross-checking result** May 2012 / 24.78 / There is slightly different between laboratory record and spreadsheet but the difference is not larger than 5% materiality. This is accepted. December 2012 / 24.86 / OK. This value is in line with laboratory analysis record. In light of finding above, verification team confirmed that the NCV of coal used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing. ***Kaeng Khoi site*** *(a)* *Lignite* Verification team had cross-checked NCV of lignite against laboratory analysis record as follow.		

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><th>Month</th><th>Value (GJ/ton)</th><th>Cross-checking result</th></tr>
<tr><td>May 2011</td><td>16.94</td><td rowspan="2">OK. This value is in line with laboratory analysis record.</td></tr>
<tr><td>November 2011</td><td>16.57</td></tr>
</table>
In light of finding above, verification team confirmed that the NCV of lignite used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing.

(b) <u>*Coal*</u>
Verification team had cross-checked NCV of coal against laboratory analysis record as follow.

<table>
<tr><th>Month</th><th>Value (GJ/ton)</th><th>Cross-checking result</th></tr>
<tr><td>May 2011</td><td>23.72</td><td rowspan="2">OK. This value is in line with laboratory analysis record.</td></tr>
<tr><td>June 2011</td><td>23.82</td></tr>
</table>
In light of finding above, verification team confirmed that the NCV of coal used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing.

(c) <u>*Fuel Oil*</u>
Verification team had cross-checked NCV of fuel oil used in
</td><td></td><td></td></tr>
</table>

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	emission reduction calculation spreadsheet against laboratory analysis record as following;		

Bang Chak		PTT	
Date	Heating Value (cal/g)	Date	Heating Value (cal/g)
Feb 2012	10,530	Feb 2012	10,580
Mar 2012	10,120	Apr 2012	10,320
Apr 2012	10,270	May 2012	10,340
Aug 2012	10,320	Jul 2012	10,320
Sep 2012	10,400		
Oct 2012	10,320		
AVG	**10,358** cal/g		

Combined with NCV of fuel oil applied in emission reduction spreadsheet '180_ER calculation_3rd_rev01_130312.xls', it is found that the average NCV of fuel oil from SCG internal laboratory is slightly higher than what was applied in the emission reduction spreadsheet (i.e., 10,352 cal/g) but this is not larger than 5% materiality threshold. However, given that this verification is covering period of March 2011 to December 2012 but verification team could not access to NCV fuel oil test in year 2011. Verification team had only evidences of NCV fuel oil test in year 2012 for cross-checking. Therefore, CL02 is raised below.

CL02
Please provide laboratory test for NCV of fuel oil conducted

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	by SCG in year 2011. *(d)* *Bituminous* Verification team had cross-checked NCV of bituminous against laboratory analysis record as follow. **Month** / **Value (GJ/ton)** / **Cross-checking result** October 2012 / 21.85 / OK. This value is in line with laboratory analysis record. December 2011 / 21.82 In light of finding above, verification team confirmed that the NCV of bituminous used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing. ***6)*** ***$NCV_{k,y}$: Net calorific value of the alternative or less carbon intensive fossil fuel type k in year y*** ***Khao Wong site*** (a) *Rice Husk* Verification team had cross-checked NCV of rice husk against laboratory analysis record as follow. **Month** / **Value (GJ/ton)** / **Cross-checking result**	~~CAR06~~	OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

June 2011	14.37	OK. This value is in line with laboratory analysis record.
November 2011	14.69	

In light of finding above, verification team confirmed that the NCV of rice husk used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing.

(b) *Bark Straw*
Verification team had cross-checked NCV of bark straw against laboratory analysis record as follow.

Month	Value (GJ/ton)	Cross-checking result
February 2012	16.67	There is inconsistency for figure applied in Work Journal for NCV. The CAR06 is raised
April 2012	13.66	OK. This value is in line with laboratory analysis record.

In light of finding above, verification team found that there is Inconsistency for the NCV of bark straw applied in Work Journal for NCV '180_WJ for NCV_rev01_130312.xls' compared against original laboratory test record. Therefore,

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	CAR06 is raised below. CAR06 As per indication of NCV of bark straw at Khao Wong for February 2012 in Work Journal (WJ) for NCV '180_WJ for NCV_rev01_130312.xls', combined with original laboratory test result - it's found that this figure is not derived from 3,982 but 2,982 cal/g. Therefore, the application of $NCV_{bark\ straw}$ at 16.67 GJ/ton in WJ for NCV and other relevant calculations are not accepted. (c) *CTA* Verification team had cross-checked NCV of CTA against laboratory analysis record as follow. **Month** / **Value (GJ/ton)** / **Cross-checking result** May 2012 / 18.31 / OK. This value is in line with laboratory analysis record. August 2012 / 18.66 / In light of finding above, verification team confirmed that the NCV of CTA used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing. (d) *CKB* Verification team had cross-checked NCV of CKB against laboratory analysis record as follow.		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Month	Value (GJ/ton)	Cross-checking result
February 2012	41.08	OK. This value is in line with laboratory analysis record.
September 2012	41.10	

In light of finding above, verification team confirmed that the NCV of CKB used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing.

Ta Luang site

(a) *Husk*

Verification team had cross-checked NCV of husk against laboratory analysis record as follow.

Month	Value (GJ/ton)	Cross-checking result
March 2011	13.46	OK. This value is in line with laboratory analysis record.
June 2011	14.08	

In light of finding above, verification team confirmed that the NCV of husk used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing.

(b) *Woodchip*

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
Verification team had cross-checked NCV of woodchip against laboratory analysis record as follow.

<table>
<tr><th>Month</th><th>Value (GJ/ton)</th><th>Cross-checking result</th></tr>
<tr><td>May 2012</td><td>14.96</td><td rowspan="2">There is slightly difference between WJ of NCV and original laboratory record but this is not larger than 5% materiality. This is accepted.</td></tr>
<tr><td>December 2012</td><td>15.80</td></tr>
</table>

In light of finding above, verification team confirmed that the NCV of woodchip used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing.

<u>Kaeng Khoi site</u>

(a) *<u>Waste Wood</u>*
Verification team had cross-checked NCV of waste wood against laboratory analysis record as follow.

<table>
<tr><th>Month</th><th>Value (GJ/ton)</th><th>Cross-checking result</th></tr>
</table>
</td><td></td><td></td></tr>
</table>

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td>April 2011</td><td>11.65</td><td>There is slightly difference between WJ of NCV and original laboratory record but this is not larger than 5% materiality. This is accepted.</td></tr>
<tr><td>July 2011</td><td>10.93</td><td>OK. This value is in line with laboratory analysis record.</td></tr>
</table>
In light of finding above, verification team confirmed that the NCV of waste wood used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing.

(b) <u>*Paddy Husk*</u>
Verification team had cross-checked NCV of paddy husk against laboratory analysis record as follow.
<table>
<tr><th>Month</th><th>Value (GJ/ton)</th><th>Cross-checking result</th></tr>
<tr><td>March 2012</td><td>12.80</td><td rowspan="2">OK. This value is in line with laboratory analysis record.</td></tr>
<tr><td>December 2012</td><td>12.86</td></tr>
</table>
</td><td></td><td></td></tr>
</table>

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	In light of finding above, verification team confirmed that the NCV of paddy husk used in emission reduction calculation spreadsheet is authentically based on actual laboratory testing. ***7) $P_{clinker,y}$: Production of clinker in year y*** ***<u>Khao Wong site</u>*** During site visit, verification team had accessed to daily log sheet and Work Journal in order to verify credibility of clinker production used in emission reduction calculation. As shown below, verification team had interviewed Mr Worrapan, SCG production engineer on how amount of clinker production was determined. With reference to his testimony, it was provided that the amount of clinker production is calculated from combination of %Ash (analyzed by SCG laboratory) and amount of material used in production process. The daily production of clinker will be calculated and report in daily log sheet on daily basis. In order to verify this process, verification team had sampling some month and verify the amount of clinker production (Pclinker,y) as indicated in summary of wok journal <Ref > WJ_2011_summary.xls> against daily log sheet as follow. **Date** / **Clinker Production (ton)** / **Cross-checking result** July 2011 / 313,094 / OK. There is consistency for figure reported in August 2011 / 313,190 May 2012 / 311,566	~~CL03~~	OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

July 2012	312,612	work journal and daily log sheet found onsite

In light of the above, verification team requested Mr Worrapan to re-calculate amount of clinker production for the above dates, it was clear that SCG Khao Wong had applied % ash and amount of material used to estimate amount of clinker production. Verification team had cross-checked %ash with QIS database, it's confirmed that this %ash was authentically taken from SCG internal laboratory test. There is no inconsistency found while verifying daily log sheet and QIS database. Verification team confirmed that amount of clinker production at Khao Wong site is reliable and based on laboratory test combined with amount of material used.

Ta Luang site

Verification team had interviewed Mr Suranon, who is responsible for operation of SCG Ta Luang site, on how to determine amount of clinker production. It was testified that the amount of clinker production is calculated from amount of material involved in production process combined with %ash analyzed by internal SCG laboratory. This is same process with SCG Khao Wong.

In order to verify this testimony, verification team had sampling some of date in these following table and compared against daily log sheet.

Date	Clinker Production (ton)	Cross-checking result

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><td>March 2011</td><td>231,541</td><td rowspan="4">OK. There is consistency for figure reported in work journal and daily log sheet found onsite</td></tr>
<tr><td>June 2011</td><td>233,650</td></tr>
<tr><td>January 2012</td><td>254,903</td></tr>
<tr><td>August 2012</td><td>255,438</td></tr>
</table>

Verification team also requested Mr Suranon to re-calculate amount of daily clinker production for the month selected above, it was clear that this amount had been calculated taken account of % ash conducted by SCG laboratory test and amount of material used in production process. Verification team confirmed that amount of clinker production is reliable and supported by objective evidences.

<u>Kaeng Khoi site</u>
Verification team had interviewed Mr Pollphat and Mr Voramet, who is production engineer for SCG Kaeng Khoi site, on how to determine amount of clinker production. It was testified that amount of clinker production is calculated from amount of material used in production process and %ash analyzed by internal SCG laboratory. In addition, there is internal adjustment process to reconcile the inconsistency of amount of material used in production process from 2 sources between raw material storage yard and weighing feeder at production line.

Taken account of the above, verification team verified this testimony against daily log sheet shown to verification team onsite compared with data provided in summary of wok journal <Ref > WJ_2011_summary.xls> as following.
</td><td></td><td></td></tr>
</table>

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>
<table>
<tr><th>Date</th><th>Clinker Production (ton)</th><th>Cross-checking result</th></tr>
<tr><td>March 2011</td><td>566,819</td><td rowspan="2">There is no evidence to support these figures. Therefore, the CL03 was raised</td></tr>
<tr><td>June 2011</td><td>xxx,xxx</td></tr>
<tr><td>January 2012</td><td>588,123</td><td rowspan="2">OK. There is consistency for figure reported in work journal and daily log sheet found onsite</td></tr>
<tr><td>July 2012</td><td>588,130</td></tr>
</table>

Combined with the above, verification team cannot access to daily log sheet to support production of clinker on March and June 2011. The CL03 is raised below.

<u>CL03</u>
Please provide evidence to support amount of clinker production at Kaeng Khoi site for these following months.
• March 2011
• June 2011</td><td></td><td></td></tr>
<tr><td>ii Project emission parameters?</td><td>According to monitoring plan in registered VCS PD version 02 dated 24/09/2009, these following parameters are needed to be monitored, as per detail below;

1) $PE_{k,y}$: Project emission from combustion of alternative fuels</td><td>OK</td><td>OK</td></tr>
</table>

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	and/or less carbon intensive fossil fuels in the project plant in year y (tCO2) Please refer the description and numerous CAR/CLs of the $FC_{PJ,k,y}$, $NCV_{k,y}$, and $EF_{CO2,k,y}$ parameter in 'Baseline emission parameters' section above.		
	2) $PE_{FC,y}$: Project emission from additional fossil fuel combustion as a result of the project activity in year y (tCO2) With reference to CL01, verification team found that parameter of 'average fossil fuel consumption for biomass handling' ($FC_{i,j,y}$), as indicated in VER calculation spreadsheet '180_ER calculation_3rd_rev01_130312.xls', had been taken from Thung Song site at rate of 0.4955 litre/ton under conservative approach due to the assumption that this site has the highest biomass consumption and various types of biomass. However, this figure had been used since previous verification period. It is unclear that how it still remains claimed as applicable for this verification period, CL04 is raised. <u>CL04</u> Please clarify how $FC_{i,j,y}$ of 0.4955 litre/ton described in section 5.4 of the MR version 1 dated 12/03/2013 which is used in VER calculation spreadsheet is it still applicable for this verification period.	~~CL04~~	OK
	3) $PE_{EC,y}$:Project emission from additional electricity consumption as a result of the project activity in year y	~~CL06~~ ~~CL07~~	OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	(tCO2) At desk review, verification team confirmed the correctness of project proponents in applying grid emission factor ($EF_{grid,CM,y}$) and average technical and distribution loss (TDL_y). This is in line with applied methodology and applicable tools. *Ta Luang, Thung Song, and Kaeng Khoi site* During onsite visit, verification team confirmed the consistency of annual operating day between WJ and daily logsheet at Ta Luang and Kaeng Khoi site. However, there is no sufficient evidence during onsite visit to confirm the type and amount of machines and equipment installed for biomass handling and its installed rate capacity. Hence, CL05 is raised. CL05 Please provide evidences to support the type and amount of machines and equipment installed for biomass handling and its installed rate capacity for Ta Luang, Thung Song, and Kaeng Khoi site. *Khao Wong site* It was verified as of onsite visit that power meter had been used to measure amount of electricity consumed by biomass handling system. However, there is no evidence to support the amount of electricity consumption for March 2011 to December 2012. The CL06 is raised below. CL06 Please provide the evidence to support the amount of		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	electricity consumption at Khao Wong site for March 2011 to December 2012 4) $PE_{T,y}$: CO2 emission during the year y due to transport of alternative fuels to the project plant (tCO2) At desk review process, verification team verified its correctness and conservativeness of TL_y and AVD_y that have been applied in VER calculation spreadsheet. These two parameter were taken from reliable sources and correctly applied in calculation. For $EF_{km,CO2,y,}$ verification team confirmed its correctness with reference from IPCC default value. For $AF_{T,k,y}$, total amount of biomass residue consumed in the project plant had been transported to project site, hence, all amount of biomass is considered. This is acceptable.	OK	OK
iii Leakage parameters?	As stated in registered VCS PD version 2.0 dated 24/09/2009 and applied methodology that quantity of biomass residues of type k that are utilized in the defined geographical region and quantity of available biomasss residues of type k in the region needed to be monitored. Verification team accessed the information presented in MR version 1 dated 12/03/2013 as mentioned below. **Table: The rice husk availability data of Lamapang site**	~~CL07~~ ~~CL08~~	OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Year 2011	Rice Husk Potential - LP		
	ktoe	GJ	Ton
Chiang Rai	71.71	3,029,317	210,369
Lampang	18.26	771,375	53,568
Lampoon	7.2	304,157	21,122
Chiang Mai	28.91	1,221,274	84,811
Tak	9.46	399,628	27,752
Kampaengphet	74.99	3,167,878	219,991
Sukhothai	56.15	2,372,001	164,722
Phrae	11.93	503,971	34,998
Nan	8.3	350,625	24,349
Uthradith	36.36	1,535,992	106,666
Pitsanuloke	86.14	3,638,898	252,701
Pichit	97.29	4,109,919	285,411
Nakornsawan	138.55	5,852,906	406,452
Total	**645.25**	**27,257,941**	**1,892,913**

Average consumption in this monitoring period *28,883* *ton/year*

% usage by Project activites 1.53%

Availability *98.47%*

Table: The rice husk availability data of Ta Luang, Keang Khoi, and Khao Wong sites

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

Year 2011	Rice Husk Potential - TL , KK , KW		
	ktoe	GJ	Ton
Bangkok	12.07	509,885	35,409
Nonthaburi	11.29	476,935	33,120
Samutprakarn	3.1	130,956	9,094
Samutsakorn	1.43	60,409	4,195
Nakornpathom	39.68	1,676,242	116,406
Saraburi	29.12	1,230,145	85,427
Lopburi	55.12	2,328,489	161,701
Singhburi	35.57	1,502,619	104,349
Chainat	72.99	3,083,390	214,124
Uthaithani	30.74	1,298,581	90,179
Suphanburi	102.83	4,343,951	301,663
Angthong	31.25	1,320,125	91,675
Kanchanaburi	26.79	1,131,717	78,591
Ratchaburi	29.03	1,226,343	85,163
Phetchburi	26.44	1,116,931	77,565
Ayutthaya	76.79	3,243,917	225,272
Nakornnayok	25.37	1,071,730	74,426
Prajeenburi	28.66	1,210,713	84,077
Srakaew	21.1	891,348	61,899
Samutsongkram	0.23	9,716	675
Chacherngsao	51.39	2,170,919	150,758
Chanthaburi	1.24	52,383	3,638
Rayong	1.22	51,538	3,579
Chonburi	5.18	218,824	15,196
Total	**718.63**	**30,357,806**	**2,108,181**

Average consumption in this monitoring period *189,330* *ton/year*

% usage by Project activites *9%*

Availability *91%*

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Table: The biomass availability data of Thung Song site		

Year 2011	Biomass Residue Potential - TS coconut husk,fuel wood,frond & leaves , saw dust		
	ktoe	GJ	Ton
Ranong	4.01	169,398	13,359
Suratthani	78.02	3,295,877	259,927
Phang Nga	21.43	905,289	71,395
Phuket	4.57	193,055	15,225
Krabi	17.72	748,564	59,035
Trang	42.75	1,805,931	142,424
Nakorn Sri Thammarat	53.48	2,259,209	178,171
Patthalung	15.46	653,092	51,506
Songkhla	45.35	1,915,765	151,086
Satun	9.58	404,698	31,916
Pattani	19.39	819,111	64,599
Total	**311.76**	**13,169,989**	**1,038,643**

Consumption	*175,504*	*ton/year*
% usage by Project activites	*17%*	
Availability	*83%*	

CL07 was raised due to there are no references of conversion factor the calorific values of 42.244 GJ/toe and the energy content of 14.4 and 12.68 MJ/kg for paddy husk and agricultural waste respectively.Furthermore, it is unclear on how the quantity of biomass residues that are utilitzed in the region is calculated by considering others consumption under the applied methodology and tools. CL08 is raised for the following rationale.

<table>
<tr><th>CHECKLIST QUESTION</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td></td><td>CL07
Please provide the references/evidences of the conversion factor used for leakage calculation as followed;
1) The calorific values of 42.244 GJ/toe
2) The energy content of 14.4 and 12.68 MJ/kg for paddy husk and agricultural waste respectively

CL08
Please clarify the calculation of the biomass residues that are utilized in the region which including project plant as described in L_2 approach in ACM0003 version 07.2.</td><td></td><td></td></tr>
<tr><td>iv Management and operational system: the responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan?</td><td>Based on onsite visit for 3 SCG sites (Ta Luang, Khao Wong, and Kaeng Khoi), it was verified that responsibility and authorities of staffs in SCG 3 sites are in accordance with monitoring plan in registered VCS PD version 2.0 dated on 24/09/2009.</td><td>OK</td><td>OK</td></tr>
<tr><td>c Are equipment controlled and calibrated in accordance with the monitoring plan?</td><td>These following meters were verified by verification team during desk review and onsite visit as per description below;

<u>Khaeng Khoi site</u>

KK3
<table>
<tr><th>Meter Name</th><th>Tag No.</th><th>Accuracy</th><th colspan="2">Calibration History</th></tr>
<tr><td>Pfister</td><td>22FE02</td><td>2%</td><td>27/05/11
20/11/11</td><td>07/9/12</td></tr>
<tr><td>Pfister</td><td>22WF01</td><td>0.5%</td><td>27/05/11
20/11/11</td><td>22/9/12</td></tr>
<tr><td>AF Feeder</td><td>08FE72</td><td>xx</td><td>xx</td><td>xx</td></tr>
<tr><td>AF+Biomass</td><td>08WF03</td><td>2%</td><td>27/05/11
20/11/11</td><td>12/9/12</td></tr>
</table></td><td>~~CL09~~
~~CL10~~
~~CL11~~
~~CL12~~
~~CL13~~
~~CL14~~</td><td>OK</td></tr>
</table>

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

KK4

Meter Name	Tag No.	Accuracy	Calibration History	
Pfister	22FE51	2%	06/07/11 20/12/11	25/05/12 01/12/12
Pfister	22WF53	0.5%	06/07/11 20/12/11	22/05/12 01/12/12
AF Feeder	08FE73	xx	xx	xx
AF+Biomass	08FC77	2%	06/07/11 20/12/11	25/05/12 01/12/12

KK5

Meter Name	Tag No.	Accuracy	Calibration History	
Pfister	W5V72	1%	25/04/11	10/11/12
CLORIORIS	W5V82	2%	25/04/11	11/11/12

KK6

Meter Name	Tag No.	Accuracy	Calibration History	
Pfister	W6V72	1%	06/11/10 05/05/11	08/04/12 15/10/12
Pfister	W6V82	1%	06/11/10 05/05/11	08/04/12 16/10/12
Biomass	W6V139	2%	06/11/10 06/05/11	11/10/12

Truck scale

Meter Name	Tag No.	Accuracy	Calibration History	
Toledo 8530	4411608 -4TX	±10 kg for 10 tons	28/03/11 01/09/11	22/03/12 08/10/12
Toledo 8530	4283910	±10 kg for	28/03/11	22/03/12

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

	-4ZS	10 tons	01/09/11 04/10/11	08/10/12

The standard weight for KK3 and KK4

Meter Name	Tag No.	Accuracy	Calibration History
Standard weight (5 kg)	9411 (A-G), 9412 (H-J)	±18 mg	04/04/11
Steel weight set (5 kg)	10784 (K-R), 10785 (S-T)	±22 mg	22/03/11

Verification team found that there are some of equipment are fail to calibrate according to the calibration plan (6 months) or not covered the entire crediting period. Moreover, the calibration certificate for the standard weight of KK5 and KK6 is not available. These findings have been taking into account, verification team takes action on this finding and issues CL09 and CL10 below.

<u>CL09</u>
With reference to calibration records submitted to verification team onsite, these following equipments at Kaeng Khoi site had not fully covered verification period.

- Pfister 22FE02
- Pfister 22WF01
- AF+Biomass 08WF03
- Pfister 22FE51
- Pfister 22WF53
- AF+Biomass 08FC77
- Pfister W5V72

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	- CLORIORIS W5V82 - Pfister W6V72 - Pfister W6V82 - Biomass W6V139 - Toledo 8530 4411608-4TX - Toledo 8530 4283910-4ZS - Standard weight (5 kg) 9411 (A-G),9412 (H-J) - Steel weight set (5 kg) 10784 (K-R),10785 (S-T) Hence, please provide more evidences. <u>CL10</u> Please provide calibration records for the following equipment at Kaeng Khoi site; - AF Feeder 08FE73 - AF Feeder 08FE72 - The standard weight used at KK5 and KK6 ***<u>Khao Wong site</u>***		

Meter Name	Tag No.	Accuracy	Calibration History	
Energy meter	031310187			13/07/12
Energy meter	031310029			13/07/12
Feeder Lignite (Pfister)	1566-1	-		13/03/12 03/08/12 28/09/12 11/10/12 12/10/12 15/10/12

CHECKLIST QUESTION	COMMENTS					Draft Concl	Final Concl
					04/12/12		
	Feeder Lignite (Pfister)	1566-2	-	24/11/11 20/12/11	13/03/12 16/03/12 30/04/12 09/07/12 03/08/12 28/09/12 11/10/12 04/12/12		
	Feeder Lignite (Pfister)	1566-3	-	03/12/11	13/03/12 03/08/12 11/08/12 11/10/12 01/11/12 04/12/12		
	Biomass Belt Weigher	904H-1	3%	21/01/11 04/03/11 28/04/11 03/06/11 14/07/11 26/08/11 21/10/11 01/12/11	13/01/12 23/02/12 04/04/12 18/04/12 23/06/12 27/07/12 28/09/12 01/12/12		
	Biomass Belt Weigher	904H-2	3%	19/01/11 21/01/11 2/03/11	11/01/12 22/02/12 04/04/12		

CHECKLIST QUESTION	COMMENTS					Draft Concl	Final Concl
				26/04/11 01/06/11 12/07/11 26/08/11 16/11/11 01/12/11 21/12/11	25/06/12 27/07/12 28/09/12 01/12/12		
	Truck Scale 5691932-5HN	X2503 (Mettler Toledo Model IND.780)	2%	23/09/11	23/05/12		
	Truck Scale 4268350-4RS	X2504 (Mettler Toledo Model 8530)	2%	03/09/10	23/05/12		
	Truck Scale 4290781-4QT	X2505 (Mettler Toledo Model 8530)	2%		25/10/12		
	Truck Scale 4289112-4PT	X2506 (Mettler Toledo Model 8530)	2%	13/01/11	25/08/12 27/11/12		
	Truck Scale 4286655-4NT	X2507 (Mettler Toledo Model	2%	07/04/09 13/01/11	25/08/12		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl

	8530)			
Truck Scale 0040351-6EH	X2508 (Mettler Toledo Model IND.310)	2%	02/06/09 13/01/11	25/08/12

The standard weight used for calibration of Pfister.

Meter Name	Tag No.	Accuracy	Calibration History
Standard weight for Biomass weighting (10 kg)	No.1 (H1, H2)	±37 mg	27/09/11
Standard weight for Pfister (19.735 kg)	72520	±74 mg	27/09/11 30/03/12

For truck weight scale, verification team confirmed that these below equipment had been calibrated by governmental agency covering verification period.

Verification team found that there are some of equipment are fail to calibrate according to the calibration plan (6 months) or not covered the entire crediting period. Moreover, the calibration certificate for the standard weight of KK5 and KK6 is not available. These findings have been taking into account, verification team takes action on this finding and issues CL11 and CL12 below.

<u>CL11</u>

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	With reference to calibration records submitted to verification team onsite, these following equipments at Khao Wong site had not fully covered verification period. - Energy meter 031310187 - Energy meter 031310029 - Pfister 1566-1 - Pfister 1566-2 - Pfister 1566-3 - Truck Scale 5691932-5HN - Truck Scale 4290781-4QT - Standard weight for Biomass weighting (10 kg) No.1 (H1, H2) - Standard weight for Pfister (19.735 kg) 72520 Hence, please provide more evidences. Verification team had noticed during onsite visit that there are evidences of truck scale SN.4268349-4RS, 4290782-4QT, and 4290783-4QT which is not recorded in list of equipment provided by project proponent. Hence, CL12 is raised. <u>CL12</u> With reference to calibration records submitted to verification team onsite, it was found that the following equipments at Khao Wong site had been calibrated. - Truck scale SN.4268349-4RS - Truck scale SN.4290782-4QT - Truck scale SN.4290783-4QT However, this is not in the equipment list provided in VER calculation spreadsheet. Hence, please clarify the purpose of the above mentioned equipments with evidences.		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Ta Lung site Verification team had checked the original calibration record for these following equipments and found that these all equipment had been appropriately calibrated according to SCG internal plan (once in a year) - WF-Rice Husk Tag No. W1U64F1 - WF-Rice Husk Tag No. W2U64F1 - WF-Raw Meal Tag No. W1A03F1 - WF-Solid Fuel Tag No. K6A10 - WF-Solid Fuel Tag No. L7F15 - WF-Solid Fuel Tag No L7F25 - WF-Solid Fuel Tag No.L5F35 - WF-Solid Fuel Tag No. K1A02 - WF-Solid Fuel Tag No. K1A03 However, there is no evidence to confirm verification team that the weighing reference used for internal calibration had been calibrated with national standard; therefore, CL13 had been raised below. For truck weight scale, verification team confirmed that these below equipment had been calibrated by governmental agency covering verification period. - Truck Scale 8XBSU.6009 - Truck Scale 8XBSU.60015 - Truck Scale 00387206CK CL13		

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Please provide calibration certificate for weighing reference used for internal calibration of all weighing feeders at Ta Luang site. ***Thung Song site*** CL14 is raised due to there is no evidence to support the calibration activity for measuring equipment at Thung Song site. CL14 With reference to measuring equipment list in VER calculation spreadsheet, please provide evidence to support that the measuring equipment at Thung Song site had been calibrated according to the monitoring plan.		
d Are monitoring results consistently reccorded as per approved frequency?	**Yes.** Monitoring result is consistent recorded as per indicated in monitoring plan of registered VCS PD	OK	OK
e Have quality assurance and quality control procedures been applied in accordance with the monitoring plan?	**No.** Verification team found that there are numerous inconsistencies among daily report spreadsheet and data log sheet provided onsite. Verification team takes these into action and issues numerous of CARs/CLs based on this finding, as per described earlier.	OK	OK
4 Assessment of data and calculation of greenhouse gas emission reductions			
a Is a complete set of data for the specified monitoring period available? (If no, i.e., only partial data are available because activity levels or non-activity	**Yes.** Complete set of data for all SCG sites during current	OK	OK

	CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	parameters have not been monitored in accordance with the registered monitoring plan, the validator shall make the most conservative assumption theoretically possible in finalizing the verification report).	monitoring period are available for desk review and onsite visit.		
b	Has information provided in the monitoring report been cross-checked with other sources such as plant log books, inventories, purchase records, laboratory analysis?	**Yes.** verification team has checked data provided in monitoring report against these following documents; - Data log sheet - Stock checking report - Purchased invoice - Test result from SCG laboratory - Certificate of Analysis from fuel supplier The inconsistency of data among above mentioned documents have been taking into verification account, numerous of CARs and CLs have been issued, as per earlier description.	OK	OK
c	Have calculations of baseline emissions, proposed project emissions and leakage, as appropriate, been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document?	At desk review, verification team raised CAR07, CAR08, CAR09, and CL15 based on incorrect calculation in VER calculation spreadsheet and '180_WJ for NCV_rev01_130312.xlsx' as described below. <u>CAR07</u> With reference to VER calulcation spreadsheet, cells H23-J23 and cells H29-K29 of 'BE_step2' sheet are not calculated. <u>CAR08</u> According to equation 2 of ACM0003 version 7.2 - The emission factor (EF) of alternative fuels and/or less carbon intensive fossil fuels used in project emission	~~CAR07~~ ~~CAR08~~ ~~CAR09~~ ~~CL15~~	OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	calculation step 1 referred to EF for methane (CH4) equivalent instead of EF for CO2 equivalent. This is not in line with the equation (2) of applied methodology - The calculation of project emission step 1 had been multiplied with 1.73. This is not in line with the equation (2) of applied methodology. <u>CAR09</u> The calculation of average NCV in '180_WJ for NCV_rev01_130312.xlsx' is not completed; for example; NCV of CWB for KW 2011 and 2012 is missing. <u>CL15</u> With reference to '180_WJ for NCV_rev01_130312.xlsx', please clarify why in some month which have no fuel consumption for some type of fuel. However, there still have NCV value for the particular type of fuel (i.e. Liquid Waste G1 and G2 for KK 2011)		
d Have any assumptions used in emission calculations been justified?	**Yes.** It was verified during desk review that fossil fuel consumption due to biomass handling ($FC_{i,j,y}$) had been described in section 5.4 of the MR version 1 dated 12/03/2013. This parameter had been taken from Thung Song site at rate of 0.4955 litre/ton under conservative approach due to the assumption that this site has the highest biomass consumption and various types of biomass as described in section above.	OK	OK
e Have appropriate emission factors, IPCC default values and other reference values been correctly	It was found during desk review that the EF of Lignite in 'EF' sheet of VER calculation spreadsheet had been referred from	~~CL16~~ ~~CL17~~	OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
applied?	the EF for the shale oil. Moreover, verification team had cross-checked the EF for biomass/wood, waste oil, charcoal, and other primary solid biomass and found that the value is not in line with the value in the source provided. Verification took this unclear reference into account and raised CL16 and CL17 for more clarification as per described earlier. CL16 With reference to VER calculation spreadsheet version 1 dated 13/03/12, please clarify why the EF of Lignite in 'ER' sheet is referred from EF of shale oil. CL17 Please clarify why the emission factor (tCO2/TJ) of biomass/wood, waste oil, charcoal, and other primary solid biomass are inconsistency with the reference (http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf).		
5 Forward Action Request from previous verification			
a Is there/ are there any FAR requested from previous verification?	**Yes.** There are 4 FARs for previous verification	OK.	OK.
b Have appropriate justification been provided for the FAR aboved?	**No.** There are no justification for all 4 FARs stated in the MR version 1 dated 12/03/2013. Hence, CL18 is raised following this issue. CL18 Please provide justifications and/or evidences in Monitoring	~~CL18~~	OK

CHECKLIST QUESTION	COMMENTS	Draft Concl	Final Concl
	Report which show that all 4 FARs from previous verification period had been considered in this crediting period.		
c Can any FAR be closed in this verification period?	**No.** Please refer to section 5.b above.	~~Refer to CL18 above~~	OK

Table 2 Resolution of Corrective Action / Forward Action / Clarification Requests

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
CAR01 The description of measurement procedure for $FC_{PJ,k,y}$ and $FC_{PJ,i,y}$ in section 3.2 of MR version 01 dated on 12/03/2013 is inconsistency with the description provided in registered VCS PD by changing the measuring equipment form weight scale to weighing equipment.	Section 3 (a)	**1st response on 30/04/2013** The monitoring description for these two parameters are changed from weighting equipment to the weight scale since it means the same equipment.	**1st Verification team feedback (15/05/13)** The description is now revised in MR rev.02 dated 30/04/13. This is in line with monitoring plan in registered PD. This is accepted and CAR01 is closed.
CAR02 The description of measurement procedure for $P_{clinker,y}$ in section 3.2 of MR version 01 dated on 12/03/2013 is inconsistency with the description provided in registered VCS PD and applied methodology which stated that $P_{clinker,y}$ shall be measured by weighing feeder.	Section 3 (a)	**1st response on 30/04/2013** The deviation 1 is provided in section 2.2 of MR rev.02 for deviated approach for monitoring of $P_{clinker,y}$. The supporting document , W-P-W1-001 is provided. This approach is same as the one followed during the 1st and 2nd verification of the project.	**1st Verification team feedback (15/05/13)** Verification team had review supporting document namely "W-P-W1-001" and combined with evidence found onsite, it's found that there is impossible to weigh amount of clinker produced by weighting machine. In light of this supporting document, the amount of clinker will be careful calculated from constant and reliable scientific parameter such as loss on ignition and % ash, etc. after burning. This $P_{clinker,y}$ calculation was verified during onsite visit and satisfied.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			In light of the above, verification team held positive opinion to justification in section 2.2 (deviation 1) of MR version 02 dated on 30 April 2013. Thus, CAR02 is closed.
CAR03 The data collection in December 2012 for the below parameter in WJ and VER calculation spreadsheet version 1 are calculated from 1st - 31st December 2012. This is found inconsistency with the requested monitoring period of 1st March 2011 to 12th December 2012 stated in the cover page of MR version 1 dated on 12/03/2013. – $FC_{BL,F3,i,y}$ – $FC_{PJ,k,y}$ – $FC_{PJ,i,y}$ – $AF_{T,k,y}$ – $P_{clinker,y}$ – $FC_{BL,i,y}$ – $EC_{PJ,y}$	Section 3 (b)	**1st response on 30/04/2013** The cover page of MR rev.02 is revised. The corrected monitoring period is 1st March 2011 to 31st December 2012.	**1st Verification team feedback (15/05/13)** The description is now revised in MR rev.02 dated 30/04/13. The crediting period is now consistency. This is accepted and CAR03 is closed.
CAR04 There is inconsistency in the NCV of Coal	Section 3 (b) i	**1st response on 30/04/2013**	**1st Verification team feedback (15/05/13)**

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
between for year 2001 between cell R12 of 'BE_step1' sheet and cell E14 of 'BE_step2' sheet from VER calculation spreadsheet.		The NCV of coal in BE_step 2 is revised to be 25.41 in ER calculation spread sheet rev.02.	The NCV of Coal for year 2001 in 'BE_step1' and 'BE_step2' sheets of ER calculation spreadsheet rev.02 dated 30/04/13 is now corrected and consistency. This is accepted and CAR04 is closed.
CAR05 Combined with evidence found onsite, the indication of Net Calorific Value of lignite (แม่ตีบ) for Ta Luang site on July 2011 (i.e., 19.12 GJ/ton) as indicated in Work Journal for NCV '180_WJ for NCV_rev01_130312.xls' is not based on actual laboratory analysis record. The application of "19.12 GJ/ton" on July 2011 for Ta Luang site in emission reduction calculation spreadsheet is not accepted.	Section 3 (b) i	**1st response on 30/04/2013** The NCV of lignite (Mae Teep) at Ta Luang site on July 2011 is revised to be 18.22. Since from the QIS information , there was no receiving of this lignite in this month. Then there is no NCV test result. The same NCV data of June 2011 is applied for ER calculation.	**1st Verification team feedback (15/05/13)** Validation team had reviewed Emission Reduction (ER) calculation '180_ER calculation_3rd_rev02_130430.xls' and NCV calculation sheet '180_WJ for NCV_rev02.xls' and found that the NCV of lignite (Mae Teep) on July 2011 had been appropriately corrected. This is satisfied and CAR05 is closed.
CAR06 As per indication of NCV of bark straw at Khao Wong for February 2012 in Work Journal (WJ) for NCV '180_WJ for NCV_rev01_130312.xls', combined with original laboratory test result - it's found that this figure is not derived from 3,982 but 2,982 cal/g. Therefore, the	Section 3 (b) i	**1st response on 30/04/2013** The NCV of bark straw in Feb'12 is revised from 3,982 to 2,982. The NCV of bark straw in 2012 in the ER calculation spread sheet rev.02 is changed to 12.10.	**1st Verification team feedback (15/05/13)** The NCV of biomass (bark straw) at Khao Wong for 2012 in ER calculation spreadsheet rev.02 dated 30/04/13 is now revised.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
application of $NCV_{bark\ straw}$ at 16.67 GJ/ton in WJ for NCV and other relevant calculations are not accepted.			This is accepted and CAR06 is closed.
CAR07 With reference to VER calulcation spreadsheet, cells H23-J23 and cells H29-K29 of 'BE_step2' sheet are not calculated.	Section 4 (c)	**1st response on 30/04/2013** The BE_step 2 of the ER calculation spread sheet rev.02 is revised to include the Anthracite data for KW site. **2nd response on 03/06/2013** The calculation is corrected in the ER calculation spread sheet rev.03.	**1st Verification team feedback (15/05/13)** Cells H23-J23 of 'BE_step2' sheet in ER calculation spread sheet rev.02 is now corrected and accepted. However, the calculation of cells H29-J29 is not corrected due to it is multiplied with EF of coke instead of EF of Anthracite. Hence, CAR07 is pending. **2nd Verification team feedback (04/07/13)** Verification team had verified the revised ER calculation spread sheet rev.03 and found that the revision is corrected. Hence, this is accepted and CAR07 is closed.
CAR08 According to equation 2 of ACM0003 version	Section 4 (c)	**1st response on 30/04/2013** According to the registered PD,	**1st Verification team feedback (15/05/13)**

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
7.2 - The emission factor (EF) of alternative fuels and/or less carbon intensive fossil fuels used in project emission calculation step 1 referred to EF for methane (CH4) equivalent instead of EF for CO2 equivalent. This is not in line with the equation (2) of applied methodology - The calculation of project emission step 1 had been multiplied with 1.73. This is not in line with the equation (2) of applied methodology.		the alternative fuels are excluded from project boundary as per explanation in section 2.1 of MR rev.02.	Given that DOE at verification stage is requested by VCS Validation and Verification Manual to investigate project activities during operation stage to ensure whether or not there is deviation from what was described in registered PD. It is confirmed by verification team that PPs had involved with combustion of alternative fuels and less carbon intensive fossil fuel. It's such an objective evidences confirmed by eye witness that SCG had utilized these fuels in the process which create more carbon emission from what was proposed in project registration stage. In addition, with reference to the applied methodology, the description of project emission calculation stated that project emission *'shall'* include emissions from the use of alternative fuels and/or less carbon intensive fossil fuels ($PE_{k,y}$). In light of that, the description of $PE_{k,y}$ in registered PD also accepted the concept of $PE_{k,y}$ from applied methodology to include the "emission from the use alternative fuels

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			and/or less carbon intensive fossil fuel" as main emission source, please refer to section 2.3 in registered PD. Furthermore, $FC_{PJ,k,y}$ (Quantity of alternative fuel or less carbon intensive fossil fuel of type k) is clearly defined as one of the monitoring parameters required to be recorded continuously and aggregated at least annually. Combined these together, verification team considered that PPs had been agreed to follow any requirement in applied methodology since the first beginning of the project, at which including any project emission that might occurred from the use of alternative fuel and/or less carbon intensive fossil fuel. With all above rationale, verification team could not have same agreement with PPs to exclude emission from alternative fuels from project boundary. The clarification of emission calculation on EF and factor of 1.73 are pending.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		2nd response on 03/06/2013 The emission factors of alternative fuels provided by World Business Council for Sustainable Development , WBCSD[1] are used for emission reduction calculation because this reference source can provide the emission factor for all types of AF consumed in cement plant. The emission factors are shown in sheet "Fuel CO2 Factors" of CSI_ProtoclV3_04_16Dec2011.xls file. The formulae for PE calculation step 1 and the EF are revised in ER calculation spread sheet rev.03.	Therefore, CAR08 is pending **2nd Verification team feedback (04/07/13)** Verification team had verified the emission factors from World Business Council for Sustainable (WBCSD) which provided in 'CSI_ProtoclV3_04_16Dec2011.xls' and found that this is applicable. Verification team also found that the emission factor of waste oil in ER calculation spreadsheet rev.03 (74.2) is inconsistency with the value in the reference provided (74). However, the applied value (74.2) provided more conservative result due to its provide 1 tCO2e/y of total emission reduction lower than applying the reference value (74). Thus this is accepted.

[1] Cement sustainability initiative - http://www.cement-co2-protocol.org/v3/

http://www.wbcsdcement.org/index.php/key-issues/climate-protection/co2-accounting-and-reporting

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			Hence, CAR08 is closed.
CAR09 The calculation of average NCV in '180_WJ for NCV_rev01_130312.xlsx' is not completed; for example; NCV of CWB for KW 2011 and 2012 is missing.	Section 4 (c)	**1st response on 30/04/2013** In case of there is no NCV result from laboratory, means there was no CKB delivered in that month. The NCV data from the previous month will be applied since it is the same delivery batch of fuel. The ER calculation spread sheet and NCV spread sheet are revised accordingly. **2nd response on 03/06/2013** The NCV of coal (KK) and S40B (KW) for weight average calculation is revised. The annual average values used for ER calculation spread sheet are corrected accordingly.	**1st Verification team feedback (15/05/13)** The calculation of average NCV in '180_WJ for NCV_rev02.xlsx' is still not completed. The NCVs of following cells are still missing i.e. Cell I13, R13, W13 for Kaeng Khoi site, and Cell S35, V35 for Khao Wong site. Hence, CAR09 is pending **2nd Verification team feedback (04/07/13)** Verification team had verified the revised ER calculation spreadsheet rev.03 and found that the revision is corrected. Hence, this is accepted and CAR09 is closed.
CAR10 1) There is inconsistency of fuel oil consumption at Khao Wong site between	Section 3 (b) i	**1st response on 30/04/2013** The fuel oil consumption in 2011 is revised to 294.78 tons for	**1st Verification team feedback (15/05/13)** Verification team noticed that the

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
data used in VERs calculation and stock checking report during March 2011 – December 2011. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Khao Wong site in regard to fuel oil consumption is not following principle of conservativeness defined by VCS version 3.3		conservativeness. The correction is done in sheet BE_step1 of the ER calculation spread sheet rev.02.	relationship between the amount of fuel consumption and the amount of emission reduction is not straight forward due to it is calculated in both baseline emission side and project emission side. Hence in order to follow the principle of conservativeness, verification team had checked the calculation by applying both values from Work Journal and Stock Checking report (271 and 294.78) into ER calculation spreadsheet to find the most conservative result. In this case, it could not found any significant change on the result of emission calculation. Moreover, the verification team had reviewed the calculation in spread sheet and found that it is in line with the applied methodology. Hence, the correction is accepted and CAR10 is closed.
CAR11 1) There is inconsistency of Coal consumption at Khao Wong site between data used in VERs calculation and stock checking report	Section 3 (b) i	**1st response on 30/04/2013** The coal consumption used for ER calculation in 2011 (144,761) is more conservative compared to	**1st Verification team feedback (15/05/13)** With reference to the 1st verification team feedback in CAR10, the

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
during March 2011 – December 2011. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Khao Wong site in regard to Coal consumption is not following principle of conservativeness defined by VCS version 3.3		the stock checking value (136,175.42) since it gives the lower ERs. No correction is done.	justification is accepted due to the verification team had checked the calculation by applying both values. It could not found any significant change on the result of applying both values (144,761 and 136,175.42) into ER calculation spreadsheet. Hence, this is accepted and CAR11 is closed. **Addition note** With reference to the 2nd response on CL24, it is found that the Bituminous consumption had been included in Coal consumption. It was found that the different between data used in VER calculation (144,761) and Stock Checking Report (151,427.68) is 4.61%. This is less than 5% materiality threshold defined by VCS version 3.3. Thus, this is accepted.
CAR12 With reference to work journal and Stock Checking Report, Anthracite had been fired at Khao Wong site during the crediting period.	Section 3 (b) i	**1st response on 30/04/2013** The WJ of 2011 identifies the anthracite consumption of 0.92 t-dry in August while the stock	**1st Verification team feedback (15/05/13)** With reference to stock checking report for Khao Wong site in 2011, Anthracite

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
However, Anthracite is not taken account in VERs calculation sheet version1 dated 13/3/2013.		checking reports 1 t-wet consumption of anthracite in this month. The amount of 0.92 is used for ER calculation with the NCV 7,500 kcal/kg from DEDE report[2] as National default heating value. The correction is done in ER calculation spread sheet rev.02. **2nd response on 03/06/2013** Since the consumption in July 2011 is not appeared in WJ. For conservativeness, the same values as August 2011 above are added in the ER calculation spread sheet rev.03.	was consumed not only in August but also in July. Hence, the revision is not completed. CAR12 is pending **2nd Verification team feedback (04/07/13)** Verification team had verified the revised ER calculation spreadsheet rev.03 and found that it is corrected. Hence, this is accepted and CAR12 is closed.
CAR13 1) There is inconsistency of Lignite	Section 3 (b) i	**1st response on 30/04/2013** The comparison of lignite	**1st Verification team feedback (15/05/13)**

[2] http://www.dede.go.th/dede/images/stories/stat_dede/alternative_54/alternative_54.pdf

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr>
<td>consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold
2) VERs calculation at Kaeng Khoi site in regard to Lignite consumption is not following principle of conservativeness defined by VCS version 3.3</td>
<td></td>
<td>consumption in unit ton-wet presented in WJ and stock checking report is presented in below table.
<table>
<tr><td>Ton - wet</td><td>2011</td><td>2012</td></tr>
<tr><td>WJ</td><td>523,559</td><td>643,952.7</td></tr>
<tr><td>Stock</td><td>523,544.8</td><td>643,952.9</td></tr>
<tr><td>Diff</td><td>14.18</td><td>0.22</td></tr>
</table>
The data used for ER calculation is from WJ.

No correction is done since the difference is less than 5%.</td>
<td>Verification team had rechecked the value with WJ, stock checking report and ER calculation spreadsheet rev.02 for Lignite consumption at Kaeng Khoi site and the result is shown as follow.

- Ton wet – Work Journal and Stock Checking Report
<table>
<tr><th>Month</th><th>WJ (Ton Wet)</th><th>Stock Checking Report</th></tr>
<tr><td>Mar-11</td><td>59,684</td><td>59,684.00</td></tr>
<tr><td>Apr-11</td><td>49,987</td><td>49,986.80</td></tr>
<tr><td>May-11</td><td>57,103</td><td>57,103.15</td></tr>
<tr><td>Jun-11</td><td>60,683</td><td>60,682.81</td></tr>
<tr><td>Jul-11</td><td>58,026</td><td>58,025.51</td></tr>
<tr><td>Aug-11</td><td>48,533</td><td>48,518.81</td></tr>
<tr><td>Sep-11</td><td>51,038</td><td>51,038.12</td></tr>
<tr><td>Oct-11</td><td>37,226</td><td>37,225.86</td></tr>
<tr><td>Nov-11</td><td>53,184</td><td>53,184.06</td></tr>
<tr><td>Dec-11</td><td>48,096</td><td>48,095.70</td></tr>
<tr><td>TOTAL</td><td>523,559</td><td>523,544.82</td></tr>
<tr><td colspan="2">Different</td><td>Less than 0.01%</td></tr>
</table>
<table>
<tr><th>Month</th><th>WJ (Ton Wet)</th><th>Stock Checking Report</th></tr>
<tr><td>Jan-12</td><td>56,096.3</td><td>56,096.47</td></tr>
<tr><td>Feb-12</td><td>58,789.6</td><td>58,789.61</td></tr>
</table></td>
</tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion

Mar-12	68,043.9	68,043.94
Apr-12	58,956.2	58,956.15
May-12	67,196.6	67,196.58
Jun-12	59,138.0	59,137.96
Jul-12	59,268.3	59,268.25
Aug-12	59,433.2	59,433.20
Sep-12	53,592.3	53,592.34
Oct-12	40,162.2	40,162.22
Nov-12	30,230.7	30,230.72
Dec-12	33,045.5	33,045.48
TOTAL	**643,952.7**	**643,952.92**
Different		**Less than 0.01%**

- Ton dry – Work Journal and ER Calculation spreadsheet

Month	WJ (Ton dry)	ER Calculation spreadsheet
Mar-11	50,654	50,654.00
Apr-11	42,236	42,236.00
May-11	47,117	47,117.00
Jun-11	51,317	51,316.00
Jul-11	48,119	48,119.00
Aug-11	40,188	40,188.00
Sep-11	41,342	41,342.00
Oct-11	30,209	30,209.00
Nov-11	43,839	43,838.00
Dec-11	40,058	40,059.00

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>TOTAL</td><td>435,080</td><td>435,078.00</td></tr>
<tr><td colspan="2">Different</td><td>Less than 0.01%</td></tr>
</table>
<table>
<tr><th>Month</th><th>WJ (Ton dry)</th><th>ER Calculation spreadsheet</th></tr>
<tr><td>Jan-12</td><td>46,254.2</td><td>46,254.15</td></tr>
<tr><td>Feb-12</td><td>49,163.9</td><td>49,163.88</td></tr>
<tr><td>Mar-12</td><td>57,647.8</td><td>57,647.84</td></tr>
<tr><td>Apr-12</td><td>49,284.0</td><td>49,284.02</td></tr>
<tr><td>May-12</td><td>55,382.2</td><td>55,382.16</td></tr>
<tr><td>Jun-12</td><td>47,336.9</td><td>47,336.88</td></tr>
<tr><td>Jul-12</td><td>47,502.5</td><td>47,502.45</td></tr>
<tr><td>Aug-12</td><td>47,337.4</td><td>47,337.40</td></tr>
<tr><td>Sep-12</td><td>43,209.5</td><td>43,209.49</td></tr>
<tr><td>Oct-12</td><td>33,075.0</td><td>33,075.01</td></tr>
<tr><td>Nov-12</td><td>25,494.4</td><td>25,494.40</td></tr>
<tr><td>Dec-12</td><td>27,563.8</td><td>27,563.83</td></tr>
<tr><td>TOTAL</td><td>529,251.5</td><td>529,252.00</td></tr>
<tr><td colspan="2">Different</td><td>Less than 0.01%</td></tr>
</table>
Verification team confirmed that the unit of fuel consumption in Stock Checking report is Ton-wet. And it was found that the difference is less than 5% materiality threshold defined by VCS version 3.3.
</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>Hence, this is accepted and CAR13 is closed.</td></tr>
<tr><td><u>CAR14</u>
1) There is inconsistency of Coal consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold
2) VERs calculation at Kaeng Khoi site in regard to Coal consumption is not following principle of conservativeness defined by VCS version 3.3</td><td>Section 3 (b) i</td><td><u>1st response on 30/04/2013</u>
The comparison of coal consumption in unit ton-wet presented in WJ and stock checking report is presented in below table.
<table>
<tr><td>Ton - wet</td><td>2011</td><td>2012</td></tr>
<tr><td>WJ</td><td>395,328</td><td>361,902.6</td></tr>
<tr><td>Stock</td><td>388,514.3</td><td>361,903.7</td></tr>
<tr><td>Diff</td><td>6,813.7</td><td>1.1</td></tr>
</table>
The data used for ER calculation is from WJ.

No correction is done since the difference is less than 5%.</td><td><u>1st Verification team feedback (15/05/13)</u>
Verification team had rechecked the value with WJ, stock checking report and ER calculation spreadsheet rev.02 for Coal consumption at Kaeng Khoi site and the result is shown as follow.

- Ton wet – Work Journal and Stock Checking Report
<table>
<tr><th>Month</th><th>WJ (Ton Wet)</th><th>Stock Checking Report</th></tr>
<tr><td>Mar-11</td><td>35,349</td><td>35,349.47</td></tr>
<tr><td>Apr-11</td><td>42,643</td><td>42,642.53</td></tr>
<tr><td>May-11</td><td>33,197</td><td>33,197.37</td></tr>
<tr><td>Jun-11</td><td>30,231</td><td>27,208.01</td></tr>
<tr><td>Jul-11</td><td>37,903</td><td>34,112.28</td></tr>
<tr><td>Aug-11</td><td>24,233</td><td>24,233.00</td></tr>
<tr><td>Sep-11</td><td>45,330</td><td>45,329.77</td></tr>
<tr><td>Oct-11</td><td>51,460</td><td>51,460.00</td></tr>
<tr><td>Nov-11</td><td>41,969</td><td>41,968.53</td></tr>
<tr><td>Dec-11</td><td>53,013</td><td>53,013.33</td></tr>
<tr><td>TOTAL</td><td>395,328</td><td>388,514.29</td></tr>
<tr><td colspan="2">Different</td><td>1.72%</td></tr>
</table></td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion

Month	WJ (Ton Wet)	Stock Checking Report
Jan-12	46,302.5	46,302.72
Feb-12	31,090.0	31,090.02
Mar-12	31,229.4	31,229.42
Apr-12	18,193.8	18,193.75
May-12	21,026.9	21,026.88
Jun-12	32,218.5	32,219.03
Jul-12	30,060.8	30,060.84
Aug-12	24,495.2	24,495.58
Sep-12	17,195.3	17,195.33
Oct-12	21,964.7	21,964.74
Nov-12	43,392.6	43,392.56
Dec-12	44,732.8	44,732.82
TOTAL	**361,902.6**	**361,903.70**
Different		**Less than 0.01%**

- Ton dry – Work Journal and ER Calculation spreadsheet

Month	WJ (Ton dry)	ER Calculation spreadsheet
Mar-11	30,362	30,362.00
Apr-11	36,561	36,560.00
May-11	29,220	29,220.00
Jun-11	26,927	26,927.00
Jul-11	32,047	32,047.00

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion

Aug-11	20,463	20,463.00
Sep-11	37,246	37,246.00
Oct-11	42,622	42,621.00
Nov-11	35,534	35,534.00
Dec-11	44,909	44,909.00
TOTAL	**335,892**	**335,889.00**
Different		**Less than 0.01%**

Month	WJ (Ton dry)	ER Calculation spreadsheet
Jan-12	40,000.6	40,000.60
Feb-12	27,053.0	27,053.00
Mar-12	27,588.8	27,588.84
Apr-12	15,813.5	15,813.46
May-12	18,624.5	18,624.49
Jun-12	28,810.5	28,810.47
Jul-12	26,604.4	26,604.37
Aug-12	21,458.7	21,458.67
Sep-12	14,985.8	14,985.81
Oct-12	18,290.1	18,290.13
Nov-12	35,925.3	35,925.33
Dec-12	37,113.0	37,113.00
TOTAL	**312,268.2**	**312,268.00**
Different		**Less than 0.01%**

It is confirmed that the unit of fuel

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>consumption in Stock Checking report is Ton-wet. And it was found that the difference is less than 5% materiality threshold defined by VCS version 3.3

Hence, this is accepted and CAR14 is closed.</td></tr>
<tr><td><u>CAR15</u>
1) There is inconsistency of Bituminous consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold
2) VERs calculation at Kaeng Khoi site in regard to Bituminous consumption is not following principle of conservativeness defined by VCS version 3.3</td><td>Section 3 (b) i</td><td><u>1st response on 30/04/2013</u>
The comparison of bituminous consumption in unit ton-wet presented in WJ and stock checking report is presented in below table.
<table>
<tr><td>Ton - wet</td><td>2011</td><td>2012</td></tr>
<tr><td>WJ</td><td>41,755 (kiln)
52,216 (calciner)
93,971 (Total)</td><td>144,919.8</td></tr>
<tr><td>Stock</td><td>93,984.62</td><td>144,919.8</td></tr>
<tr><td>Diff</td><td>13.62</td><td>0</td></tr>
</table>
The data used for ER calculation</td><td><u>1st Verification team feedback (15/05/13)</u>
Verification team had rechecked the value with WJ, stock checking report and ER calculation spreadsheet rev.02 for Bituminous consumption at Kaeng Khoi site and the result is shown as follow.

- Ton wet – Work Journal and Stock Checking Report
<table>
<tr><th>Month</th><th>WJ (Ton Wet)</th><th>Stock Checking Report</th></tr>
<tr><td>Mar-11</td><td>16,427</td><td>16,427.23</td></tr>
<tr><td>Apr-11</td><td>12,012</td><td>12,046.51</td></tr>
<tr><td>May-11</td><td>16,185</td><td>16,217.06</td></tr>
<tr><td>Jun-11</td><td>17,094</td><td>17,130.64</td></tr>
<tr><td>Jul-11</td><td>14,048</td><td>14,047.76</td></tr>
<tr><td>Aug-11</td><td>7,509</td><td>7,509.08</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td>is from WJ.

No correction is done since the difference is less than 5%.</td><td>
<table>
<tr><td>Sep-11</td><td>8,110</td><td>8,109.93</td></tr>
<tr><td>Oct-11</td><td>2,216</td><td>2,215.75</td></tr>
<tr><td>Nov-11</td><td>-</td><td>-</td></tr>
<tr><td>Dec-11</td><td>281</td><td>280.66</td></tr>
<tr><td>TOTAL</td><td>93,881</td><td>93,984.62</td></tr>
<tr><td colspan="2">Different</td><td>0.11%</td></tr>
</table>

<table>
<tr><th>Month</th><th>WJ (Ton Wet)</th><th>Stock Checking Report</th></tr>
<tr><td>Jan-12</td><td>7,093.4</td><td>7,093.38</td></tr>
<tr><td>Feb-12</td><td>8,648.8</td><td>8,648.83</td></tr>
<tr><td>Mar-12</td><td>17,966.1</td><td>17,966.11</td></tr>
<tr><td>Apr-12</td><td>10,080.7</td><td>10,080.66</td></tr>
<tr><td>May-12</td><td>8,616.9</td><td>8,616.94</td></tr>
<tr><td>Jun-12</td><td>12,861.7</td><td>12,861.65</td></tr>
<tr><td>Jul-12</td><td>14,402.9</td><td>14,402.93</td></tr>
<tr><td>Aug-12</td><td>16,711.1</td><td>16,711.11</td></tr>
<tr><td>Sep-12</td><td>16,963.5</td><td>16,963.50</td></tr>
<tr><td>Oct-12</td><td>12,947.8</td><td>12,947.80</td></tr>
<tr><td>Nov-12</td><td>8,314.2</td><td>8,314.21</td></tr>
<tr><td>Dec-12</td><td>10,312.7</td><td>10,312.67</td></tr>
<tr><td>TOTAL</td><td>144,919.8</td><td>144,919.79</td></tr>
<tr><td colspan="2">Different</td><td>Less than 0.01%</td></tr>
</table>

- Ton dry – Work Journal and ER Calculation spreadsheet
<table>
<tr><th>Month</th><th>WJ (Ton</th><th>ER Calculation</th></tr>
</table>
</td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion

	dry)	spreadsheet
Mar-11	12,360	12,360.00
Apr-11	8,908	8,907.00
May-11	12,754	12,755.00
Jun-11	13,113	13,113.00
Jul-11	10,656	10,655.00
Aug-11	5,436	5,437.00
Sep-11	5,889	5,888.00
Oct-11	1,650	1,650.00
Nov-11	-	-
Dec-11	205	205.00
TOTAL	70,971	**70,970.00**
Different		**Less than 0.01%**

Month	WJ (Ton dry)	ER Calculation spreadsheet
Jan-12	5,363.6	5,363.59
Feb-12	6,624.1	6,624.09
Mar-12	13,577.1	13,577.07
Apr-12	7,701.4	7,701.36
May-12	5,957.8	5,957.81
Jun-12	8,960.5	8,960.51
Jul-12	10,711.0	10,711.04
Aug-12	13,472.0	13,472.04
Sep-12	13,654.0	13,653.96
Oct-12	10,563.7	10,563.74
Nov-12	6,399.9	6,399.88

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>Dec-12</td><td>8,077.9</td><td>8,077.90</td></tr>
<tr><td>TOTAL</td><td>111,063.0</td><td>111,063.00</td></tr>
<tr><td colspan="2">Different</td><td>0</td></tr>
</table>

It is confirmed that the unit of fuel consumption in Stock Checking report is Ton-wet. And it was found that the difference is less than 5% materiality threshold defined by VCS version 3.3.

Hence, this is accepted and CAR15 is closed.
</td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
CAR16 1) There is inconsistency of Woodchip consumption at Ta Luang site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Ta Luang site in regard to Woodchip consumption is not following principle of conservativeness defined by VCS version 3.3	Section 3 (b) i	**1st response on 30/04/2013** The woodchip consumption in 2011 and 2012 are revised to 2,020.07 and 5,324.84 ton-dry for conservativeness. The correction is done in sheet BE_step1 of the ER calculation spread sheet rev.02.0 **2nd response on 03/06/2013** The woodchip consumption in 2011 and 2012 at TL are revised to 2,232 and 6,357.44 ton-dry for conservativeness. The correction is done in sheet BE_step1 of the ER calculation spread sheet rev.03.	**1st Verification team feedback (15/05/13)** With reference to the 1st verification team feedback in CAR10 above, verification team had checked the calculation by applying both values for 2011 (2,020.07 and 2,232) and 2012 (6357.44 and 5,324.84) in ER calculation spreadsheet. It is found that the revision in ER calculation spreadsheet rev.02 is not conservative approach. Therefore, CAR16 is pending. **2nd Verification team feedback (04/07/13)** Verification team confirmed that the value is now revised in ER calculation spreadsheet rev.03. Hence, this is accepted and CAR16 is closed.
CAR17 1) There is inconsistency of Rice husk consumption at Khao Wong site between	Section 3 (b) i	**1st response on 30/04/2013** The rice husk consumption used for ER calculation in 2011 and	**1st Verification team feedback (15/05/13)** With reference to the 1st verification

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr>
<td>data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold
2) VERs calculation at Khao Wong site in regard to Rice husk consumption is not following principle of conservativeness defined by VCS version 3.3</td>
<td></td>
<td>2012 from WJ are more conservative compared to the stock checking value since they result in the lower ERs.

<table>
<tr><th>Month</th><th>WJ</th><th>Stock</th></tr>
<tr><td>Jul’12</td><td>4,622.00</td><td>5,381.30</td></tr>
<tr><td>Aug’12</td><td>6,268.16</td><td>7,246.42</td></tr>
<tr><td>Sep’12</td><td>5,529.72</td><td>6,521.66</td></tr>
<tr><td>Oct’12</td><td>4,956.58</td><td>5,676.34</td></tr>
<tr><td>Nov’12</td><td>3,118.16</td><td>3,502.76</td></tr>
<tr><td>Dec’12</td><td>4,563.07</td><td>5,069.52</td></tr>
<tr><td>2012</td><td>69,574.96</td><td>79,077.04</td></tr>
</table>

No correction is done.

<u>2nd response on 03/06/2013</u>
The rice husk consumption in 2012 at KW is revised to 79,077.04 ton-dry for conservativeness.</td>
<td>team feedback in CAR10 above, verification team had checked the calculation by applying both values for 2011 (54371.56 and 63840.88) and 2012 (69,574.96 and 79,077.04) in ER calculation spreadsheet. It is confirmed and accepted that the revision in 2011 is conservative approach. However, the value of Rice Husk consumption used in ER calculation spreadsheet rev.02 for 2012 is not conservative approach.

Therefore, CAR17 is pending.

<u>2nd Verification team feedback (04/07/13)</u>
Verification team confirmed that the value is now revised in ER calculation spreadsheet rev.03.

Hence, this is accepted and CAR17 is</td>
</tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		The correction is done in sheet BE_step1 of the ER calculation spread sheet rev.03.	closed.
CAR18 1) There is inconsistency of Mixed Solid Waste consumption at Khao Wong site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Khao Wong site in regard to Mixed Solid Waste consumption is not following principle of conservativeness defined by VCS version 3.3	Section 3 (b) i	**1st response on 30/04/2013** According to the registered PD , the alternative fuels are excluded from project boundary as per explanation in section 2.1 of MR rev.02. **2nd response on 03/06/2013** The mixed solid waste consumptions at KW in 2011 is revised to 49.80 ton for conservativeness. Since this value gives the higher PE. The ER calculation spread sheet rev.03 is revised accordingly.	**1st Verification team feedback (15/05/13)** This is related to alternative fuel at which verification team still not agree on the exclusion of this calculation. Please refer to the 1st Verification team feedback in CAR08. CAR18 is pending. **2nd Verification team feedback (04/07/13)** With reference to the 1st verification team feedback in CAR10, the justification is accepted due to the verification team had checked the calculation by applying both values (39.84 and 49.8) into ER calculation spreadsheet. It is confirmed and accepted that the revision in 2011 is conservative approach

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			Hence, this is accepted and CAR11 is closed.
CAR19 1) There is inconsistency of Biomass consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during January 2012 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Kaeng Khoi site in regard to Biomass consumption is not following principle of conservativeness defined by VCS version 3.3	Section 3 (b) i	**1st response on 30/04/2013** The biomass consumption in 2012 is revised to 89,751.48 ton-dry for conservativeness. The correction is done in sheet BE_step1 of the ER calculation spread sheet rev.02.0 **2nd response on 03/06/2013** The biomass consumption in 2011 at KK is revised to 97,274 ton-dry for conservativeness. The correction is done in sheet BE_step1 of the ER calculation spread sheet rev.03.	**1st Verification team feedback (15/05/13)** With reference to the 1st verification team feedback in CAR10 above, verification team had checked the calculation by applying both values for 2011 (89,751.48 and 97,274) in ER calculation spreadsheet. It is found that the revision in ER calculation spreadsheet rev.02 is not conservative approach. Therefore, CAR19 is pending. **2nd Verification team feedback (04/07/13)** With reference to the new revised MR rev.03, Kaeng Khoi site does not claim for the emission reduction due to the design change in this monitoring period anymore. Hence, the biomass consumption at Kaeng Khoi site is not used for ER calculation.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			Therefore, CAR19 is closed.
CAR20 1) There is inconsistency of Mixed solid waste consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Kaeng Khoi site in regard to Mixed solid waste consumption is not following principle of conservativeness defined by VCS version 3.3	Section 3 (b) i	**1st response on 30/04/2013** According to the registered PD, the alternative fuels are excluded from project boundary as per explanation in section 2.1 of MR rev.02. **2nd response on 03/06/2013** The mixed solid waste consumptions in WJ of KK is higher compared with stock checking report. The data used for ER calculation from WJ is more conservative since it gives the higher PEs. No correction is done.	**1st Verification team feedback (15/05/13)** This is related to alternative fuel at which verification team still not agree on the exclusion of this calculation. Please refer to the 1st Verification team feedback in CAR08. CAR20 is pending. **2nd Verification team feedback (04/07/13)** With reference to the new revised MR rev.03, Kaeng Khoi site does not claim for the emission reduction due to the design change in this monitoring period anymore. Hence, the mixed solid waste consumption at Kaeng Khoi site is not used for ER calculation. Therefore, CAR20 is closed.
CAR21	Section 3 (b) i	**1st response on 30/04/2013**	**1st Verification team feedback**

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
1) There is inconsistency of Other2 consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Kaeng Khoi site in regard to Other2 consumption is not following principle of conservativeness defined by VCS version 3.3		According to the registered PD, the alternative fuels are excluded from project boundary as per explanation in section 2.1 of MR rev.02. **2nd response on 03/06/2013** The Other2 – solid AF consumptions in WJ of KK is higher compared with stock checking report. The data used for ER calculation from WJ is more conservative since it gives the higher PEs. No correction is done.	**(15/05/13)** This is related to alternative fuel at which verification team still not agree on the exclusion of this calculation. Please refer to the 1st Verification team feedback in CAR08. CAR21 is pending. **2nd Verification team feedback (04/07/13)** With reference to the new revised MR rev.03, Kaeng Khoi site does not claim for the emission reduction due to the design change in this monitoring period anymore. Hence, the Other2 – solid AF consumption at Kaeng Khoi site is not used for ER calculation. Therefore, CAR21 is closed.
CAR22 1) There is inconsistency of Other3 consumption at Kaeng Khoi site between data used in VERs calculation and stock checking report during March 2011 – December 2012. This inconsistency is	Section 3 (b) i	**1st response on 30/04/2013** According to the registered PD, the alternative fuels are excluded from project boundary as per explanation in section 2.1 of MR rev.02.	**1st Verification team feedback (15/05/13)** This is related to alternative fuel at which verification team still not agree on the exclusion of this calculation. Please refer to the 1st Verification team

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
greater than 5% materiality threshold 2) VERs calculation at Kaeng Khoi site in regard to Other3 consumption is not following principle of conservativeness defined by VCS version 3.3		**2nd response on 03/06/2013** The Other3 (Used tyre) consumptions at KK are revised to 4,572.97 ton in 2011 and 285.56 ton in 2012 for conservativeness. The correction is done in the ER calculation spread sheet rev.03.	feedback in CAR08. CAR22 is pending. **2nd Verification team feedback (04/07/13)** With reference to the new revised MR rev.03, Kaeng Khoi site does not claim for the emission reduction due to the design change in this monitoring period anymore. Hence, the Other3 – used tyre consumption at Kaeng Khoi site is not used for ER calculation. Therefore, CAR22 is closed.
CAR23 1) There is inconsistency of Mixed Solid Waste consumption at Khao Wong site between data used in VERs calculation and stock checking report during January 2012 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Khao Wong site in regard to Mixed Solid Waste consumption is not following principle of conservativeness defined by VCS version	Section 3 (b) i	**2nd response on 03/06/2013** The mixed solid waste consumption at KW in 2012 is revised to 406.66 ton for conservativeness. The correction is done in the ER calculation spread sheet rev.03.	**2nd Verification team feedback (04/07/13)** With reference to the 1st verification team feedback in CAR10, the justification is accepted due to the verification team had checked the calculation by applying both values (325.33 and 406.66) into ER calculation spreadsheet. It is confirmed and accepted that the revision in 2012 is following conservative approach.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
3.3			Hence, this is accepted and CAR23 is closed.
CAR24 1) There is inconsistency of Other1 (CTA) consumption at Khao Wong site between data used in VERs calculation and stock checking report during January 2012 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Khao Wong site in regard to Other1 (CTA) consumption is not following principle of conservativeness defined by VCS version 3.3	Section 3 (b) i	**2nd response on 03/06/2013** The other1-CTA consumption at KW in 2012 is revised to 2,850.72 ton for conservativeness. The correction is done in the ER calculation spread sheet rev.03.	**2nd Verification team feedback (04/07/13)** With reference to the 1st verification team feedback in CAR10, the justification is accepted due to the verification team had checked the calculation by applying both values (2565.65 and 2850.72) into ER calculation spreadsheet. It is confirmed and accepted that the revision in 2012 is following conservative approach Hence, this is accepted and CAR24 is closed.
CL01 Please justify this deviation of the unit of $FC_{i,j,y}$ changed from 'Litre/day' in registered VCS PD to 'Litres/ton biomass'.	Section 3 (a)	**1st response on 30/04/2013** This parameter is not identified in the registered PD. In PD, the $AF_{T,k,y}$ is the quantity of alternative fuel type k for biomass handling which is not according to the methodology. Hence the $FC_{i,j,y}$ is the additional parameter for this	**1st Verification team feedback (15/05/13)** There is duplication of parameter $AF_{T,k,y}$ in the registered PD page 40 and 41, however the description is different. The first $AF_{T,k,y}$ in registered PD is found consistency with parameter '$AF_{T,k,y}$' in MR version 01 (and also

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		monitoring period. The applied specific figure has been validated and verified in the 1st and 2nd verification. **<u>2nd response on 03/06/2013</u>**	applied methodology) which is quantity of alternative fuel type *k* that has been transported to the project site during year *y*. For the second $AF_{T,k,y}$, description of the second $AF_{T,k,y}$ in registered PD is consistency with the description of parameter '$FC_{i,j,y}$' in MR version 01 which is quantity of alternative fuel type k for biomass handling. These showed that this parameter had been considered since registered PD and also can be implied that the second $AF_{T,k,y}$ in registered PD and $FC_{i,j,y}$ in MR version 01 is the same parameter and can be referred as $FC_{i,j,y}$. Nevertheless, the unit of the second $AF_{T,k,y}$ in registered PD and $FC_{i,j,y}$ in MR version 01 (in other words: quantity of alternative fuel type *k* for biomass handling) is found inconsistency as described in this CL. Hence, please justify this deviation. CL01 is pending.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		The $FC_{i,j,y}$ are revised as per below justifications , KW : Use the average figure provided by sub-contractor at 9,900 litres per month. KK : Use the amount provided by sub-contractor ; • 2011 40,638 litres • 2012 49,591 litres The specific consumptions from all above data are calculated in unit of litres per ton. The maximum specific value is used for calculating the consumption at TL and LP site for conservativeness. TS : Using the same approach during the validation that the specific consumption is 0.4955 litres per ton. This value is still valid in this monitoring period since there is no change in internal biomass transportation process. The ER calculation spread sheet	**2nd Verification team feedback (04/07/13)** Verification team found that according to the new evidence received on the fossil fuel consumption at KW site provided by the sub-contractor, the revised value is now used in ER calculation spreadsheet rev.03 for Khao Wong site. Moreover, verification team also confirmed that the maximum of specific value ratio from all site is now used for calculating for the fossil fuel consumption for biomass handling at Ta Luang site and Lampang site. Even though, there is no evidence submitted for the Kaeng Khoi site to confirmed the amount of fossil fuel used for biomass handling at 40,683 litres in 2011 and 49591 litres in 2012. But with reference to the new revised MR rev.03, Kaeng Khoi site does not claim for the emission reduction due to the design change in this monitoring period anymore. Hence, this is accepted. In light of above, the changing of $FC_{i,j,y}$

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		and MR rev.03 are revised accordingly.	unit from 'Litre/day' in registered VCS PD to 'Litres/ton biomass' is accepted, because it provides more accuracy in ER calculation. Therefore, CL01 is closed.
CL02 Please provide laboratory test for NCV of fuel oil conducted by SCG in year 2011.	Section 3 (b) i	**1st response on 30/04/2013** The reports are provided.	**1st Verification team feedback (15/05/13)** Verification team had reviewed the document 'HFO_LHV report 20111.pdf' and accepted. Thus, CL02 is closed.
CL03 Please provide evidence to support amount of clinker production at Kaeng Khoi site for these following months. • March 2011 • June 2011	Section 3 (b) i	**1st response on 30/04/2013** The requested information is submitted.	**1st Verification team feedback (15/05/13)** Verification team had reviewed the document supporting Kaeng Khoi for clinker production, it is found that the explanation in March 2011 is in line with testimony of SCG staff interviewed by verification team. Therefore, the document for March 2011 is accepted. However, another document stated that this is clinker production on June 2010

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		2nd response on 03/06/2013 We confirm that the submitted clinker production file of June 2011 is the correct file. The date indicate in the 1st page is June 2011 although the other pages identify June 2010 which is typing error. This can be confirmed by the clinker production amount in this file is 535,184 tons which is matched with the value in the WJ.	not 2011 that requested by verification team. In this sense, please provide clinker production in June 2011. This CL03 is pending. **2nd Verification team feedback (04/07/13)** Verification team had re-considered clinker production file for clinker production at June 2010, at which it was claimed as "typing error". It's found that the amount of clinker production in this mentioned period above is in line with data presented in Work Journal (WJ). Therefore, the claimed about "typing error" is valid and the figure "535,184 ton" of clinker is actually June 2011 not June 2010. This is accepted. In light of positive opinion above, this CL03 is closed.
CL04 Please clarify how $FC_{i,j,y}$ of 0.4955 litre/ton	Section 3 (b) ii	**1st response on 30/04/2013** As per the information provided in	**1st Verification team feedback (15/05/13)**

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
described in section 5.4 of the MR version 1 dated 12/03/2013 which is used in VER calculation spreadsheet is it still applicable for this verification period.		section 5.4 of MR and the update process diagram, there is no changing occurred at the existing process. Hence the 0.4955 litre/ton of fuel consumption is still valid for this monitoring period. **2nd response on 03/06/2013** Please refer to the response of CL01.	Verification team had reviewed the process diagram provided in section 5.4 of MR rev.02. However, it could not confirm that fuel consumption at Thung Song site is the largest consumption among other 4 sites due to the evidence received in FAR01 'KW_FO BM handling.pdf'. Verification team noticed that 0.4955 litre/ton might not be representative to other site except Thung Song. Hence, CL04 is pending. **2nd Verification team feedback (04/07/13)** With reference to 2nd verification team feedback in CL01, verification team had confirmed that the revised ER calculation sheet rev.03 is corrected and accepted. Hence, CL04 is closed.
CL05 Please provide evidences to support the type and amount of machines and equipment	Section 3 (b) ii	**1st response on 30/04/2013** The requested information is provided.	**1st Verification team feedback (15/05/13)** Verification team had reviewed 'TL_MC

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
installed for biomass handling and its installed rate capacity for Ta Luang, Thung Song, and Kaeng Khoi site.			list.xls' for Ta Luang site and 'KK_List of biomass motor.pdf' for Kaeng Khoi site for the type and amount of machines and equipment installed for biomass handling and its installed rate capacity and had no further question. Verification team noticed that the evidence for Thung Song site which is 'TS_biomass transport.pdf' showed only the process flow without the installed rate capacity of each machine. However, with reference to verifier who conducted on site visit last year at Thung Song site, it is confirmed that 5,941,437 kwh applied in this verification is conservative approach. Hence, this is accepted and CL05 is closed.
CL06 Please provide the evidence to support the amount of electricity consumption at Khao Wong site for March 2011 to December 2012	Section 3 (b) ii	**1st response on 30/04/2013** **2nd response on 03/06/2013** The requested document , log sheet for C1,C2 and the summary	**1st Verification team feedback (15/05/13)** CL06 is pending. **2nd Verification team feedback (04/07/13)**

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		report have been submitted. • The monitored values are revised as per the actual monitored data , with the adjustment of 5% maximum error due to the calibration delay. • Since the log sheet for biomass building and shredder is not available. The operator directly record the data from operation panel into excel sheet. For conservative approach , the monthly electricity consumption from these two meters are divided by the running hour of kiln from WJ. The maximum figure in each year will be used to multiplied with the running hour to get the new consumption figures. By this approach , the total electricity consumption is	Verification team had crosschecked the electricity consumption with the daily log sheet for meter C1 C2 at KW site. This is found consistency and accepted. Meanwhile, in the absence of evidence for another 2 meters; Rice Husk building and Biomass S/S 23 (Shredder), it is found difficulty to confirm the electricity consumption of these meters. Project proponent had proposed more conservative approach on this issue by calculation of multiplying running hour of kiln from WJ with maximum figure in each year. Verification team had rechecked the reference as well as the calculation sheet, and found that the new electricity consumption calculated from Rice Husk building and Biomass S/S 23 (Shredder) have been increased 38.7% in 2011 and 6.9% in 2012. Hence, it is confirmed that the revised calculation is correct and accepted following the principle of conservativeness. Thus, CL06 is closed.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		increased and results in the lower ERs achieved which in line with conservativeness principle.	
CL07 Please provide the references/evidences of the conversion factor used for leakage calculation as followed; 1) The calorific values of 42.244 GJ/toe 2) The energy content of 14.4 and 12.68 MJ/kg for paddy husk and agricultural waste respectively	Section 3 (b) iii	**1st response on 30/04/2013** This information is identified in Unit Conversion Table in page 29 of *Thailand Alternative Energy Situation Report 2011*[3].	**1st Verification team feedback (15/05/13)** Verification team had verified the Thailand Alternative Energy Situation Report 2011 for the conversion factor used in leakage calculation and found that it is correct and accepted. Hence, CL07 is closed.
CL08 Please clarify the calculation of the biomass residues that are utilized in the region which including project plant as described in L_2 approach in ACM0003 version 07.2.	Section 3 (b) iii	**1st response on 30/04/2013** The Biomass Potential data is studied and reported by DEDE[4] The biomass potential data is converted into tonne. Then the	**1st Verification team feedback (15/05/13)** Verification team had reviewed the reference of Biomass potential data reported by DEDE (http://lib3.dss.go.th/Fulltext/Glass/Glas

[3] http://www.dede.go.th/dede/images/stories/stat_dede/alternative_54/alternative_54.pdf

[4] http://lib3.dss.go.th/Fulltext/Glass/Glass_Annual_Meeting_Handout/2011/Biomass_resoures_survay_in_Thailand.pdf

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		biomass consumption of the project activities is compared with the biomass potential in each region. If the result shows that the biomass availability (after deducting the project consumption) is more than 25% of total biomass residue amount, the leakage will be considered as zero. The spread sheet 180_Biomass potential 2011_rev.01.xlsx is provided. **2nd response on 03/06/2013**	s Annual Meeting Handout/2011/Biomass resoures survay in Thailand.pdf) and spreadsheet '180_Biomass potential 2011_rev.01.xlsx'. According to the DEDE reference provided, the study showed the biomass potential data only for the country level not specific province (region) level. It is still unclear how the Biomass potential data used in '180_Biomass potential 2011_rev.01.xlsx' and MR rev.02 for specific province is referenced from. It is unclear how the biomass potential data in DEDE reference is applied to '180_Biomass potential 2011_rev.01.xlsx' e.g. the value of 321,757 which is used in biomass consumption calculation at Thung Song site in cell E69 of '180_Biomass potential 2011_rev.01.xlsx' came from. Therefore, CL08 is pending. **2nd Verification team feedback (04/07/13)**

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		The link provided in the footnote no.4 is the procedure for preparation of biomass potential data. The reference source of biomass potential data is page 21 ; Table energy potential of solid biomass energy by province in 2011 of *Thailand Alternative Energy Situation Report 2011*[5]. The biomass consumption of each site is updated to be in line with the latest version of ER calculation spread sheet rev.03.	Verification team had rechecked the calculation procedure of biomass potential data with Department of Alternative Energy Development and Efficiency of Thailand (DEDE). It is confirmed that biomass potential data is the biomass surplus in the region (without project activity consumption) not the biomass available in the region. This means that biomass consumption by others had already been considered in biomass potential data. Hence, verification team confirmed that the calculation of the biomass residues that are utilized in the region is following L2 approach in ACM0003 version 07.2 and had no further question. Moreover, verification team had reviewed and accepted the revision of biomass consumption data in ER

[5] http://www.dede.go.th/dede/images/stories/stat_dede/alternative_54/alternative_54.pdf

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			calculation spreadsheet rev.03. Hence, this is accepted and CL08 is closed.
CL09 With reference to calibration records submitted to verification team onsite, these following equipments at Kaeng Khoi site had not fully covered verification period. - Pfister 22FE02 - Pfister 22WF01 - AF+Biomass 08WF03 - Pfister 22FE51 - Pfister 22WF53 - AF+Biomass 08FC77 - Pfister W5V72 - CLORIORIS W5V82 - Pfister W6V72 - Pfister W6V82 - Biomass W6V139 - Toledo 8530 4411608-4TX - Toledo 8530 4283910-4ZS - Standard weight (5 kg) 9411 (A-G),9412 (H-J) - Steel weight set (5 kg) 10784 (K-R),10785 (S-T)	Section 3 (c)	**1st response on 30/04/2013** The calibration reports are provided. The calibration data in the ER calculation spread sheet is updated. However, as per the maintenance instruction for calibration of Pfister and Prehopper , step 8 to10 , there is the procedure to self cross-check the accuracy of the calibration with the check weight or standard weight. The instruction provides the comparison with the calculated ML (step9). It mentions that the final deviation must be 0.00%. The check weight will be sent to calibrate outside only when the technician cannot get the final	**1st Verification team feedback (15/05/13)** Verification team had reviewed the calibration record follows; Pfister 22FE02, Pfister 22WF01, AF+Biomass 08WF03, Pfister 22FE51, Pfister 22WF53, AF+Biomass 08FC77, Standard weight (5 kg) 9411 (A-G), 9412 (H-J) Steel weight set (5 kg) 10784 (K-R), 10785 (S-T) There are no additional evidences submitted with the 1st response. Hence, there still has a gap of calibration certification which is not according to the calibration plan (6 months). This issue is transferred to FAR02.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
Hence, please provide more evidences.		deviation at 0.00%. Since there is very low possibility that the weight of standard weight is loose or reduced. Then the calibration frequency of the standard weight is not defined. Then one calibration is valid at least 5 years. Please refer to TL_WI_cal Pfister.pdf.	<u>Pfister W5V72</u> The equipment is calibrated on - 28/08/10 - 25/04/11 - 20/10/11 - 27/04/12 - 10/11/12 However, there still has a gap between 28/08/10-25/04/11, 20/10/11-27/04/12, and 27/04/12-10/11/12 which is not according to the calibration plan (6 months). This issue is transferred to FAR02. <u>CLORIORIS W5V82</u> The equipment is calibrated on - 28/08/10 - 25/04/11 - 20/10/11 - 27/04/12 - 11/11/12 However, there still has a gap between 28/08/10-25/04/11, 20/10/11-27/04/12, and 27/04/12-10/11/12 which is not according to the calibration plan (6 months). This issue is transferred to

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			FAR02. <u>Pfister W6V72</u> The equipment is calibrated on - 05/11/10 - 05/05/11 - 31/08/11 - 08/04/12 - 15/10/12 However, there still has a gap between 31/08/11-08/04/12 and 08/04/12-15/10/12 which is not according to the calibration plan (6 months). This issue is transferred to FAR02. <u>Pfister W6V82</u> The equipment is calibrated on - 05/11/10 - 05/05/11 - 31/08/11 - 08/04/12 - 16/10/12 However, there still has a gap between 31/08/11-08/04/12 and 08/04/12-15/10/12 which is not according to the calibration plan (6 months). This issue is transferred to FAR02.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			Biomass W6V139 The equipment is calibrated on - 07/11/10 - 06/05/11 - 29/08/11 - 09/04/12 - 11/10/12 However, there still has a gap between 31/08/11-08/04/12 which is not according to the calibration plan (6 months). This issue is transferred to FAR02. Toledo 8530 4411608-4TX The equipment is calibrated on - 28/03/11 - 29/03/11 (2 yrs valid) - 01/09/11 - 22/03/12 - 08/10/12 However, there still has a gap before 28/03/11. This issue is transferred to FAR02. Toledo 8530 4283910-4ZS The equipment is calibrated on

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			- 28/03/11 - 29/03/11 (2 yrs valid) - 01/09/11 - 22/03/12 - 08/10/12 However, there still has a gap before 28/03/11. This issue is transferred to FAR02. Even though the weighing equipment at Kaeng Khoi site were calibrated with the weighing reference. But, the weighing reference was not calibrated with national reference standard. Due to lack of this calibration, there is no guarantee that fuel consumption data is accurate. This issue is transferred to FAR02. Hence, this issue is transferred to FAR02, and CL09 is closed.
CL10 Please provide calibration records for the following equipment at Kaeng Khoi site; - AF Feeder 08FE73 - AF Feeder 08FE72	Section 3 (c)	**1st response on 30/04/2013** The calibration reports are provided.	**1st Verification team feedback (15/05/13)** Calibration AF Feeder and standard weight have been verified by verification team as follows;

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
- The standard weight used at KK5 and KK6			- AF Feeder 08FE72 is calibrated on ➢ 04/08/10 ➢ 18/06/11 ➢ 08/11/11 ➢ 27/05/12 However, there still has a gap between 08/11/11 - 27/05/12 and after the due date of certification on 27/05/12 (27/11/12 onwards) which is not according to the calibration plan (6 months). This issue is transferred to FAR02. - AF Feeder 08FE73 is calibrated on ➢ 04/08/10 ➢ 09/12/10 ➢ 15/04/11 ➢ 20/11/11 ➢ 27/05/12 ➢ 03/08/12 However, there still has a gap between 15/04/11 - 20/11/11 and 20/11/11 - 27/05/12 which is not according to the calibration plan (6 months). This issue

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			is transferred to FAR02. - The standard weight used at KK5 and KK6 There is no evidence submitted on this issue. Hence, CL10 is pending due to the pending evidence on standard weight used at KK5 and KK6.
		2nd response on 03/06/2013 The calibration certificate for standard weight at KK5,KK6 is not available. The standard weight will be calibrated only when the calibration result is not acceptable. However , the daily consumption recorded from all weight feeders , which should be calibrated by the standard weights , will be adjusted by the stock checking value at the end of month. The value in stock checking report is from the truck	**2nd Verification team feedback (04/07/13)** Even though the weighing equipment at Kaeng Khoi site were calibrated with the weighing reference. But, the weighing reference was not calibrated with national reference standard. Due to lack of this calibration, there is no guarantee that fuel consumption data is accurate. In addition, with reference to the new revised MR rev.03, Kaeng Khoi site does not claim for the emission reduction due to the design change in this monitoring period anymore. Hence,

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		scales which are calibrated every three years. This approach is in line with the description in the methodology , *the consistency of metered fuel consumption quantities should be cross-checked by an annual energy balance that is based on purchased quantities and stock changes.*	there is no effect to ER calculation. Thus, CL10 is closed.
CL11 With reference to calibration records submitted to verification team onsite, these following equipments at Khao Wong site had not fully covered verification period. - Energy meter 031310187 - Energy meter 031310029 - Pfister 1566-1 - Pfister 1566-2 - Pfister 1566-3 - Truck Scale 5691932-5HN - Truck Scale 4290781-4QT - Standard weight for Biomass weighting (10 kg) No.1 (H1, H2)	Section 3 (c)	**1st response on 30/04/2013** The calibration reports are provided. The calibration data in the ER calculation spread sheet is updated. The frequency of the calibration of the standard weight is described in CL09. The maximum error is used of adjusting the electricity consumption at KW due to the	**1st Verification team feedback (15/05/13)** Verification team had reviewed the evidences submitted as follow. Energy meter 031310187 and 031310029 Due to the lack of calibration before July 2012. PP had used the maximum error of meter (5%) in order to calculate project emission for the entire monitoring period (1 March 2011 to 31 December 2012) in ER calculation spread sheet rev.02. This is

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
- Standard weight for Pfister (19.735 kg) 72520 Hence, please provide more evidences.		lack of calibration before June'12. The adjusting is done in the ER calculation spread sheet rev.02.	conservative approach, hence this is accepted. <u>Pfister 1566-1, 1566-2, and 1566-3</u> Verification team had reviewed the calibration record in 'Feeder Lignite ปี 54.xls' provided as follow ➢ 08/01/11 ➢ 03/03/11 ➢ 17/10/11 ➢ 25/10/11 ➢ 24/11/11 ➢ 01/12/11 ➢ 03/12/11 ➢ 20/12/11 However, there still has a gap between 03/03/11-17/10/11 which is not according to the calibration plan (6 months). This issue is transferred to FAR02. <u>Truck Scale 5691932-5HN</u> The evidences submitted on 30/04/13 are the same evidence which verification team had verified during site visit which are calibration record on

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			23/05/12. There is no additional evidence submitted. Hence, this issue is transferred to FAR02. <u>Truck Scale 4290781-4QT</u> According to the response on CL12 that the indicator of truck scale X2505 was changed and the calibration record of the changed equipment during onsite visit, verification team had concluded the calibration history as followed; ➢ 7/04/09 : 4290783-4QT is calibrated (2 yrs valid) ➢ 3/09/10 : 4268349-4RS is calibrated (2 yrs valid) ➢ 6/04/11 : changed from 429083-4QT to 4268349-4RS ➢ 13/01/11 4268349-4RS is calibrated (2 yrs valid) ➢ 27/02/12 : changed from 4268349-4RS to 4290781-4QT ➢ 27/02/12 : 4290781-4QT is calibrated (2yrs valid) ➢ 25/10/12 : 4290781-4QT is calibrated (2yrs valid) Hence, the calibration had been

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			performed following the calibration plan. Standard weight for Biomass weighting (10 kg) No.1 (H1, H2) and Standard weight for Pfister (19.735 kg) 72520 With reference to the evidence submitted 'KW_cal_std weight.pdf', there is no serial number reported on the calibration record. Moreover, the due date of the calibration record is 31 March 2009. Hence, there would be a gap of calibration record between 31 March 2009 and 27 September 2011 which is not following to the calibration plan (6 months). This issue is transferred to FAR02. Thus, the issues are transferred to FAR02 and CL11 is closed.
CL12 With reference to calibration records submitted to verification team onsite, it was found that the following equipments at Khao Wong site had been calibrated. - Truck scale SN.4268349-4RS - Truck scale SN.4290782-4QT	Section 3 (c)	**1st response on 30/04/2013** As per the calibration reports , the indicator of truck scale X2505 was changed ; • 06/04/11 : changed from 429083-4QT to 4268349-4RS	**1st Verification team feedback (15/05/13)** According to the onsite visit on 4/04/13, it is found that Truck scale SN.4290781-4QT is in operation and there is no Truck scale SN.4290782-4QT in operation.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
- Truck scale SN.4290783-4QT However, this is not in the equipment list provided in VER calculation spreadsheet. Hence, please clarify the purpose of the above mentioned equipments with evidences.		• 27/02/12 : changed from 4268349-4RS to 4290781-4QT The truck scale S/N 4290782-4QT is not used anymore.	Hence the justification is accepted, CL12 is closed.
CL13 Please provide calibration certificate for weighing reference used for internal calibration of all weighing feeders at Ta Luang site.	Section 3 (c)	**1st response on 30/04/2013** The calibration report is not available for this monitoring period. However, as per the maintenance instruction for calibration of Pfister and Prehopper, step 8 to10, there is the procedure to self cross-check the accuracy of the calibration with the check weight or standard weight. The instruction provides the comparison with the calculated ML (step9). It mentions that the final deviation must be 0.00%. The check weight will be sent to calibrate outside only when the technician cannot get the final	**1st Verification team feedback (15/05/13)** Due to lack of this calibration, there is no guarantee that fuel consumption data is accurate. This issue is transferred to FAR02. Hence, this issue is transferred to FAR02 and CL13 is closed.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		deviation at 0.00%. Since there is very low possibility that the weight of standard weight is loose or reduced. Then the calibration frequency of the standard weight is not defined. Then one calibration is valid at least 5 years. Please refer to TL_WI_cal Pfister.pdf.	
CL14 With reference to measuring equipment list in VER calculation spreadsheet, please provide evidence to support that the measuring equipment at Thung Song site had been calibrated according to the monitoring plan.	Section 3 (c)	**1st response on 30/04/2013** The summary of calibration records and the calibration reports are provided.	**1st Verification team feedback (15/05/13)** Verification team had reviewed the submitted calibration record and the calibration report as followed, - Standard weight SN.SCT0010322 - Standard weight SN.SCT0500124 - Pfister Calciner I 792_10 - Pfister Calciner II 793_10 However, these equipment are not matched with the equipment list provided in 'Calibration' sheet of ER calculation spreadsheet rev.02 which

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			consist of - WF-Solid fuel - 228_92 - WF-Solid fuel - 228_95 - Truck scale - BIX03 - Truck scale - BIX04 - Truck scale - XIX05 - Truck scale - XIX06 Moreover, there is no objective evidence submitted to confirm that the meters in equipment list were calibrated according to the monitoring plan. Therefore, CL14 is pending.
		2nd response on 03/06/2013 The missing calibration reports are provided. The same as other cement plants , TS has plan to do calibration every 6 months or twice a year according to the shutdown plan of the kilns. Additionally , the truck scale will be calibrated by external	**2nd Verification team feedback (04/07/13)** Verification team had checked the original calibration record for these following equipment and found that these all equipment had been appropriately calibrated according to SCG internal plan (every 6 months) - Pfister Calciner I 792_10 is calibrated on ➢ 08/03/11

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		organization every two years by Central Bureau of Weights and Measures.	➢ 11/02/12 However, this is not according to the calibration plan (6 months). This issue is transferred to FAR02. - Pfister Calciner II 793_10 is calibrated on ➢ 08/03/11 ➢ 11/02/12 However, this is not according to the calibration plan (6 months). This issue is transferred to FAR02. - WF-Solid fuel - 228_92 is calibrated on ➢ 13/01/11 ➢ 28/06/11 ➢ 17/05/12 ➢ 09/12/12 However, there still has a gap between 28/06/11 to 17/05/12 and 17/05/12 to 09/12/12 which is not according to the calibration plan (6 months). This issue is transferred to FAR02. - WF-Solid fuel - 228_95 is calibrated on

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			➢ 13/01/11 ➢ 28/06/11 ➢ 17/05/12 ➢ 09/12/12 However, there still has a gap between 28/06/11 to 17/05/12 and 17/05/12 to 09/12/12 which is not according to the calibration plan (6 months). This issue is transferred to FAR02. - Truck scale - BIX03 is calibrated on ➢ 19/04/11 ➢ 18/07/11 ➢ 17/10/11 ➢ 23/01/12 ➢ 23/04/12 ➢ 27/07/12 ➢ 25/10/12 However, there still has a gap between 01/03/11 to 18/04/11 which is not according to the calibration plan (6 months). This issue is transferred to FAR02. - Truck scale - BIX04 is calibrated on ➢ 20/04/11 ➢ 18/07/11

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			➢ 17/10/11 ➢ 24/01/12 ➢ 23/04/12 ➢ 28/07/12 ➢ 25/10/12 However, there still has a gap between 01/03/11 to 19/04/11 which is not according to the calibration plan (6 months). This issue is transferred to FAR02. - Truck scale - XIX05 is calibrated on ➢ 13/01/11 ➢ 17/04/11 ➢ 11/07/11 ➢ 10/10/11 ➢ 16/01/12 ➢ 20/04/12 ➢ 17/07/12 ➢ 15/10/12 Hence, the calibration had been performed following the calibration plan. - Truck scale - XIX06 is calibrated on ➢ 14/01/11 ➢ 16/04/11 ➢ 11/07/11

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			➢ 10/10/11 ➢ 16/01/12 ➢ 20/04/12 ➢ 20/07/12 ➢ 15/10/12 Hence, the calibration had been performed following the calibration plan. Thus, this issue is transferred to FAR02 and CL14 is closed.
CL15 With reference to '180_WJ for NCV_rev01_130312.xlsx', please clarify why in some month which have no fuel consumption for some type of fuel. However, there still have NCV value for the particular type of fuel (i.e. Liquid Waste G1 and G2 for KK 2011)	Section 4 (c)	**1st response on 30/04/2013** The heating value analysis for alternative fuels and biomass will be conducted after receiving the new batch of fuel. It is possible that the factory receives the fuel but not use it in the same month.	**1st Verification team feedback (15/05/13)** The justification is accepted. Therefore, CL15 is closed.
CL16 With reference to VER calculation spreadsheet version 1 dated 13/03/12, please clarify why the EF of Lignite in 'ER' sheet is referred from EF of shale oil.	Section 4 (e)	**1st response on 30/04/2013** The information in ER calculation spread sheet is revised. Since the identified figures are for lignite.	**1st Verification team feedback (15/05/13)** The revision in ER calculation spreadsheet rev.02 is confirmed and accepted. Therefore, CL16 is closed.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
CL17 Please clarify why the emission factor (tCO2/TJ) of biomass/wood, waste oil, charcoal, and other primary solid biomass are inconsistency with the reference (http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf).	Section 4 (e)	**1st response on 30/04/2013** The emission factor is not applicable as alternative fuel are excluded from the analysis. **2nd response on 03/06/2013** The other source of emission factor is used as per clarification provided in CAR08.	**1st Verification team feedback (15/05/13)** This is related to alternative fuel at which verification team still not agree on the exclusion of this calculation. Please refer to the 1st Verification team feedback in CAR08. Thus, CL17 is pending. **2nd Verification team feedback (04/07/13)** With reference to 2nd verification team feedback in CAR08, the new emission factor has been introduced which are referenced from WBCSD. Verification team had verified the new emission factor and the application in ER calculation. This is now corrected and accepted. Therefore, CL17 is closed.
CL18 Please provide justifications and/or evidences in Monitoring Report which show that all 4 FARs from previous verification period had	Section 5 (b)	**1st response on 30/04/2013** Please refer to the response of FAR01 – FAR04.	**1st Verification team feedback (15/05/13)** This issue is transferred to FAR01-04.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
been considered in this crediting period.			Thus, CL18 is closed.
CL19 Please provide evidences to support the cross-checking of the type and quantity of fuel fired in the project plant at Thung Song site for the entire crediting period.	Section 3 (b) i	**1st response on 30/04/2013** The stock checking report are provided.	**1st Verification team feedback (15/05/13)** Verification team had reviewed the evidences 'TS_stock_solid fuel.xls' and 'TS_stock_biomass.xlsx'. However, the evidences provided are not completed, there still have pending information required as followed, - Fuel oil, and other alternative fuel or less carbon intensive fossil fuel – March 2011 to December 2012 - Solid fuel – April 2012 to December 2012 - Biomass – March 2011 to September 2011, and April 2012 - Moisture content of biomass to calculate ton wet to ton dry In addition, verification team also found 2 more issues as follow; - There are some biomass presented in stock checking report which were not mentioned in the ER Calculation spread sheet rev.02 i.e. Palm shell,

<table>
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<tr><td></td><td></td><td><u>2nd response on 03/06/2013</u>
Biomass
• Biomass : Palm shell and palm crushed are included in coconut dust
• Wood slab and recycle wood chip are included in wood chip.
• Charcoal consumption is neglected since it is only 9 tons in 2012.
• The specification for moisture content of biomass is provided. The moisture of wood slab ,</td><td>Wood Slab, Palm Crushed, Charcoal (F). Please clarify how this data is taken into account.

- Please clarify why the baseline emission calculation of bituminous dust during 2012 is combined in the baseline emission calculation of ‘Coal’ meanwhile it is separated in 2011.

Therefore, CL19 is pending

<u>2nd Verification team feedback (04/07/13)</u>
Verification team had reviewed the stock checking report and the results show as follow.

- Rice Husk
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Mar-11</td><td>611</td><td>574.672</td></tr>
<tr><td>Apr-11</td><td>145</td><td>149.536</td></tr>
<tr><td>May-11</td><td>216</td><td>196.28</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td>wood chip and stump are the same as the moisture content of wood chip.

<table>
<tr><td>2011</td><td>WJ</td><td>Stock</td><td>Diff</td></tr>
<tr><td>rice husk</td><td>3,571</td><td>3,308</td><td>7%</td></tr>
<tr><td>saw dust</td><td>29,542</td><td>28,278</td><td>4%</td></tr>
<tr><td>Biomass</td><td>90,932</td><td>70,367</td><td>23%</td></tr>
</table>

<table>
<tr><td>2012</td><td>WJ</td><td>Stock</td><td>Diff</td></tr>
<tr><td>rice husk</td><td>8,565</td><td>6,985</td><td>18%</td></tr>
<tr><td>saw dust</td><td>45,113</td><td>34,716</td><td>23%</td></tr>
<tr><td>Biomass</td><td>156,170</td><td>100,056</td><td>36%</td></tr>
</table>

Refer to the comparison tables above , the lower biomass consumption is more conservative. The values from stock checking report are used for ER calculations. The ER calculation sheet rev.04 is revised accordingly.</td><td>

<table>
<tr><td>Jun-11</td><td>199</td><td>190.184</td></tr>
<tr><td>Jul-11</td><td>338</td><td>308.464</td></tr>
<tr><td>Aug-11</td><td>221</td><td>206.368</td></tr>
<tr><td>Sep-11</td><td>143</td><td>134.16</td></tr>
<tr><td>Oct-11</td><td>475</td><td>437.291</td></tr>
<tr><td>Nov-11</td><td>621</td><td>566.9562</td></tr>
<tr><td>Dec-11</td><td>601</td><td>544.1624</td></tr>
<tr><td>TOTAL</td><td>3571.15</td><td>3308.074</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>7.37%</td></tr>
</table>

<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>393.493891</td><td>362.10</td></tr>
<tr><td>Feb-12</td><td>312.7104</td><td>341.76</td></tr>
<tr><td>Mar-12</td><td>652.55139</td><td>596.45</td></tr>
<tr><td>Apr-12</td><td>90.70524</td><td>85.44</td></tr>
<tr><td>May-12</td><td>0</td><td>0</td></tr>
<tr><td>Jun-12</td><td>217.900698</td><td>194.42</td></tr>
<tr><td>Jul-12</td><td>1047.46593</td><td>938.25</td></tr>
<tr><td>Aug-12</td><td>1097.11426</td><td>965.50</td></tr>
<tr><td>Sep-12</td><td>1780.1822</td><td>1647.38</td></tr>
<tr><td>Oct-12</td><td>608.228194</td><td>470.22</td></tr>
<tr><td>Nov-12</td><td>659.93745</td><td>604.20</td></tr>
<tr><td>Dec-12</td><td>1704.8743</td><td>1483.12</td></tr>
</table>

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</table>

<table>
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<tr>
<td></td>
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<td>
AF
The stock files of used tire and waste oil are provided.
<table>
<tr><td>Used tire</td><td>2011</td><td>2012</td></tr>
<tr><td>WJ</td><td>5,203</td><td>5,678</td></tr>
<tr><td>Stock</td><td>5,203.06</td><td>5,678.28</td></tr>
<tr><td>Diff</td><td>0%</td><td>0%</td></tr>
</table>
The used tire consumptions in WJ and stock report are matched. No correction is done.

There is mistake in formulae in WJ file , the formulae refers to the wrong cell for waste oil usage of TS5. The revised WJ of 2011 and WJ 2012 are provided.
<table>
<tr><td>Waste oil</td><td>2011</td><td>2012</td></tr>
<tr><td>WJ</td><td>77.17</td><td>0</td></tr>
<tr><td>Stock</td><td>29.17</td><td>0</td></tr>
<tr><td>Diff</td><td>62%</td><td></td></tr>
</table>
</td>
<td>
<table>
<tr><th>TOTAL</th><th>8565.16395</th><th>7688.86</th></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>10.23%</td></tr>
</table>
It was found that the difference is more than 5% materiality threshold defined by VCS version 3.3. However, it is found that the values applied in ER calculation sheet rev.04 are already following conservative approach (3308 and 6985). Thus, no action required.

- Saw dust
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Mar-11</td><td>3,653</td><td>3382.56</td></tr>
<tr><td>Apr-11</td><td>3,170</td><td>3293.78</td></tr>
<tr><td>May-11</td><td>2,504</td><td>2354.53</td></tr>
<tr><td>Jun-11</td><td>3,030</td><td>2833.72</td></tr>
<tr><td>Jul-11</td><td>3,429</td><td>3207.23</td></tr>
<tr><td>Aug-11</td><td>3,225</td><td>3042.25</td></tr>
<tr><td>Sep-11</td><td>2,274</td><td>2288.87</td></tr>
<tr><td>Oct-11</td><td>2,603</td><td>2451.23</td></tr>
<tr><td>Nov-11</td><td>2,304</td><td>2207.55</td></tr>
</table>
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</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td>The waste oil consumption are revised to 77.17 and 0 ton-dry for conservative since the higher value gives the higher fuel penalty.

Bituminous dust
The bituminous dust is the by-product from sieving of coal. In 2011 , the internal lab separated the heating value test of bituminous dust. But in 2012 , there was no test for bituminous dust since it is the same source of coal. By the way, as per below comparison table with stock checking report , there is no separated value of bituminous dust stock. Hence the bituminous consumption in 2011 and 2012 are included with coal.

Coal
The coal consumption in WJ is the</td><td>
<table>
<tr><td>Dec-11</td><td>3,350</td><td>3216.10</td></tr>
<tr><td>TOTAL</td><td>29542</td><td>28277.82</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>4.28%</td></tr>
</table>
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>3585.03</td><td>3275.32</td></tr>
<tr><td>Feb-12</td><td>4589.98</td><td>3689.11</td></tr>
<tr><td>Mar-12</td><td>5313.98</td><td>4952.92</td></tr>
<tr><td>Apr-12</td><td>3887.11</td><td>3759.04</td></tr>
<tr><td>May-12</td><td>4301.35</td><td>4175.68</td></tr>
<tr><td>Jun-12</td><td>3488.35</td><td>3267.64</td></tr>
<tr><td>Jul-12</td><td>3186.40</td><td>2898.64</td></tr>
<tr><td>Aug-12</td><td>3883.71</td><td>3617.66</td></tr>
<tr><td>Sep-12</td><td>3311.10</td><td>3745.42</td></tr>
<tr><td>Oct-12</td><td>2723.54</td><td>2546.95</td></tr>
<tr><td>Nov-12</td><td>2814.04</td><td>2632.00</td></tr>
<tr><td>Dec-12</td><td>4028.51</td><td>3120.34</td></tr>
<tr><td>TOTAL</td><td>45113.10</td><td>41680.72</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>7.61%</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr>
<td></td>
<td></td>
<td>summation of coal high grade , coal MH coal low grade and bituminous dust.
The values in stock checking report are adjusted by total moisture (annual average) for conversion into ton-dry unit.
<table>
<tr><td>Coal</td><td>2011</td><td>2012</td></tr>
<tr><td>WJ</td><td>415,508</td><td>504,100</td></tr>
<tr><td>Stock</td><td>450,825.2</td><td>526,031</td></tr>
<tr><td>Diff</td><td>8.5%</td><td>4%</td></tr>
</table>
The coal consumption in 2011 is revised to 450,825 ton-dry for conservativeness. Since this higher value gives the higher fuel penalty.

Fuel Oil
<table>
<tr><td>HFO</td><td>2011</td><td>2012</td></tr>
<tr><td>WJ</td><td>2,191.79</td><td>3,138.38</td></tr>
<tr><td>Stock</td><td>2,474.59</td><td>3,093.38</td></tr>
<tr><td>Diff-Ton</td><td>282.8</td><td>45</td></tr>
</table>
</td>
<td>It was found that the difference is more than 5% materiality threshold defined by VCS version 3.3. However, it is found that the values applied in ER calculation sheet rev.04 are already following conservative approach (28278 and 34716). Thus, no action required.

- Biomass (Palm shell, Palm crushed, coconut dust, stump, bark, woodchip, recycle wood chip)
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Mar-11</td><td>5865.68</td><td>4780.535</td></tr>
<tr><td>Apr-11</td><td>6013.54</td><td>4922.195</td></tr>
<tr><td>May-11</td><td>7951.41</td><td>6559.48</td></tr>
<tr><td>Jun-11</td><td>9875.72</td><td>8221.81</td></tr>
<tr><td>Jul-11</td><td>10188.46</td><td>7732.58</td></tr>
<tr><td>Aug-11</td><td>12166.2</td><td>8906.235</td></tr>
<tr><td>Sep-11</td><td>8205.93</td><td>6725.31</td></tr>
<tr><td>Oct-11</td><td>8842.03</td><td>7188.736</td></tr>
<tr><td>Nov-11</td><td>8795.04</td><td>7539.364</td></tr>
<tr><td>Dec-11</td><td>13037.41</td><td>10451.91</td></tr>
<tr><td>TOTAL</td><td>90941.42</td><td>73028.16</td></tr>
<tr><td colspan="2">Different between data</td><td>19.70%</td></tr>
</table>
</td>
</tr>
</table>

<table>
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<tr><td></td><td></td><td>
<table>
<tr><td>Diff-%</td><td>12.9</td><td>1.4</td></tr>
</table>
The HFO consumption in 2011 is revised to 2,474.59 ton for conservativeness. Since this higher value gives the higher fuel penalty.
</td><td>
<table>
<tr><th colspan="2">used in VER calculation and Stock Checking Report</th><th></th></tr>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>13251.7</td><td>12400.56</td></tr>
<tr><td>Feb-12</td><td>14554.29</td><td>12005.43</td></tr>
<tr><td>Mar-12</td><td>11794.47</td><td>9650.663</td></tr>
<tr><td>Apr-12</td><td>11747.96</td><td>9456.779</td></tr>
<tr><td>May-12</td><td>16244.76</td><td>13283.56</td></tr>
<tr><td>Jun-12</td><td>13164.41</td><td>10149.01</td></tr>
<tr><td>Jul-12</td><td>14367.4</td><td>11810.58</td></tr>
<tr><td>Aug-12</td><td>15360.63</td><td>11510.34</td></tr>
<tr><td>Sep-12</td><td>14372.44</td><td>11260.1</td></tr>
<tr><td>Oct-12</td><td>11455.55</td><td>9259.758</td></tr>
<tr><td>Nov-12</td><td>10586.28</td><td>8607.157</td></tr>
<tr><td>Dec-12</td><td>9270.362</td><td>6825.162</td></tr>
<tr><td>TOTAL</td><td>156170.3</td><td>126219.1</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>19.18%</td></tr>
</table>
It was found that the difference is more than 5% materiality threshold defined
</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>by VCS version 3.3. However, it is found that the values applied in ER calculation sheet rev.03 are already following conservative approach (70367 and 100056). Thus, no action required.

- Used oil
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Mar-11</td><td>0</td><td>0</td></tr>
<tr><td>Apr-11</td><td>48</td><td>0</td></tr>
<tr><td>May-11</td><td>0</td><td>0</td></tr>
<tr><td>Jun-11</td><td>29</td><td>29.17</td></tr>
<tr><td>Jul-11</td><td>0</td><td>0</td></tr>
<tr><td>Aug-11</td><td>0</td><td>0</td></tr>
<tr><td>Sep-11</td><td>0</td><td>0</td></tr>
<tr><td>Oct-11</td><td>0</td><td>0</td></tr>
<tr><td>Nov-11</td><td>0</td><td>0</td></tr>
<tr><td>Dec-11</td><td>0</td><td>0</td></tr>
<tr><td>TOTAL</td><td>77</td><td>29.17</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>62.11%</td></tr>
</table>
It was found that the difference is more</td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			than 5% materiality threshold defined by VCS version 3.3. However, it is found that the value applied in ER calculation sheet rev.04 is already following conservative approach. Thus, no action required.

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	0	0
Feb-12	0	0
Mar-12	0	0
Apr-12	0	0
May-12	0	0
Jun-12	0	0
Jul-12	0	0
Aug-12	0	0
Sep-12	0	0
Oct-12	0	0
Nov-12	0	0
Dec-12	0	0
TOTAL	0	0
Different between data used in VER calculation and Stock Checking Report		**0**

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>This is found consistency and accepted.

- Used tire
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Mar-11</td><td>-</td><td></td></tr>
<tr><td>Apr-11</td><td>1,381</td><td>1380.957</td></tr>
<tr><td>May-11</td><td>1,291</td><td>1291.177</td></tr>
<tr><td>Jun-11</td><td>1,249</td><td>1249.26</td></tr>
<tr><td>Jul-11</td><td>473</td><td>472.81</td></tr>
<tr><td>Aug-11</td><td>28</td><td>27.51</td></tr>
<tr><td>Sep-11</td><td>600</td><td>599.78</td></tr>
<tr><td>Oct-11</td><td>47</td><td>46.77</td></tr>
<tr><td>Nov-11</td><td>78</td><td>78</td></tr>
<tr><td>Dec-11</td><td>57</td><td>56.8</td></tr>
<tr><td>TOTAL</td><td>5203.07</td><td>5203.063</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>Less than 0.01%</td></tr>
</table>
It was found that the difference is less than 5% materiality threshold defined by VCS version 3.3.</td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	307.07	307.07
Feb-12	750.94	750.94
Mar-12	1040.87	1040.87
Apr-12	68.98	68.98
May-12	267.55	267.55
Jun-12	1175.03	1175.03
Jul-12	117.511777	117.5118
Aug-12	0	0
Sep-12	328.96	328.96
Oct-12	458.66	458.66
Nov-12	567.9	567.9
Dec-12	594.81	594.81
TOTAL	**5678.282**	**5678.282**
Different between data used in VER calculation and Stock Checking Report		**0**

This is found consistency and accepted.

- Fuel Oil

Month	Data used	Stock

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><th></th><th>in VERs Calculation (Tons)</th><th>Checking Report (Tons)</th></tr>
<tr><td>Mar-11</td><td>272.28</td><td>272.28</td></tr>
<tr><td>Apr-11</td><td>168.33</td><td>168.33</td></tr>
<tr><td>May-11</td><td>199.41</td><td>199.41</td></tr>
<tr><td>Jun-11</td><td>198.42</td><td>198.42</td></tr>
<tr><td>Jul-11</td><td>284.74</td><td>284.74</td></tr>
<tr><td>Aug-11</td><td>210.14</td><td>210.14</td></tr>
<tr><td>Sep-11</td><td>209.27</td><td>209.27</td></tr>
<tr><td>Oct-11</td><td>46.15</td><td>46.15</td></tr>
<tr><td>Nov-11</td><td>229.78</td><td>229.78</td></tr>
<tr><td>Dec-11</td><td>373.27</td><td>373.27</td></tr>
<tr><td>TOTAL</td><td>2191.79</td><td>2,474.59</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>12.9%</td></tr>
</table>

It was found that the difference is more than 5% materiality threshold defined by VCS version 3.3. However, it is found that the value applied in ER calculation sheet rev.06 is already following conservative approach. Thus, no action required.

<table>
<tr><th>Month</th><th>Data used</th><th>Stock</th></tr>
</table>
</td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion

	in VERs Calculation (Tons)	Checking Report (Tons)
Jan-12	255.69	255.69
Feb-12	179.65	179.65
Mar-12	281.2	281.20
Apr-12	295.54	295.54
May-12	268.82	268.82
Jun-12	315.73	315.73
Jul-12	263.03	218.03
Aug-12	101.42	101.42
Sep-12	280.99	280.99
Oct-12	430.93	430.93
Nov-12	199.78	199.78
Dec-12	265.6	265.60
TOTAL	**3138.38**	**3,093.38**
Different between data used in VER calculation and Stock Checking Report		**1.43%**

It was found that the difference is less than 5% materiality threshold defined by VCS version 3.3.

- Coal

Month	Data used in VERs	Stock Checking

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><th></th><th>Calculation (Tons)</th><th>Report (Tons)</th></tr>
<tr><td>Mar-11</td><td>38,552</td><td>39,037</td></tr>
<tr><td>Apr-11</td><td>36,001</td><td>42,685</td></tr>
<tr><td>May-11</td><td>51,644</td><td>57,250</td></tr>
<tr><td>Jun-11</td><td>45,508</td><td>51,746</td></tr>
<tr><td>Jul-11</td><td>37,379</td><td>46,248</td></tr>
<tr><td>Aug-11</td><td>44,339</td><td>47,853</td></tr>
<tr><td>Sep-11</td><td>41,966</td><td>44,262</td></tr>
<tr><td>Oct-11</td><td>45,702</td><td>46,320</td></tr>
<tr><td>Nov-11</td><td>36,912</td><td>37,411</td></tr>
<tr><td>Dec-11</td><td>37,505</td><td>38,012</td></tr>
<tr><td>TOTAL</td><td>415,508</td><td>450,825</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>8.5%</td></tr>
</table>

It was found that the difference is more than 5% materiality threshold defined by VCS version 3.3. However, it is found that the value applied in ER calculation sheet rev.03 is already following conservative approach (450825). Thus, no action required.

<table>
<tr><th>Month</th><th>Data used in VERs</th><th>Stock Checking</th></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><th></th><th>Calculation (Tons)</th><th>Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>44912.72</td><td>45,574</td></tr>
<tr><td>Feb-12</td><td>46948.31</td><td>45,712</td></tr>
<tr><td>Mar-12</td><td>47486.97</td><td>48,433</td></tr>
<tr><td>Apr-12</td><td>42645.18</td><td>44,713</td></tr>
<tr><td>May-12</td><td>47976.7</td><td>49,838</td></tr>
<tr><td>Jun-12</td><td>36449.4</td><td>37,674</td></tr>
<tr><td>Jul-12</td><td>40515.74</td><td>44,212</td></tr>
<tr><td>Aug-12</td><td>45375.24</td><td>48,864</td></tr>
<tr><td>Sep-12</td><td>39364.07</td><td>42,284</td></tr>
<tr><td>Oct-12</td><td>34710.87</td><td>36,842</td></tr>
<tr><td>Nov-12</td><td>38403.05</td><td>39,542</td></tr>
<tr><td>Dec-12</td><td>39814.12</td><td>42,342</td></tr>
<tr><td>TOTAL</td><td>504602.4</td><td>526031</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>4.24%</td></tr>
</table>

It was found that the difference is less than 5% materiality threshold defined by VCS version 3.3.

Hence, CL19 is closed.
</td></tr>
<tr><td><u>CL20</u>
With reference to lignite consumption at Ta</td><td>Section 3 (b) i</td><td><u>1st response on 30/04/2013</u>
According to the work instruction</td><td><u>1st Verification team feedback (15/05/13)</u></td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
Luang site, please justify the inconsistency of total amount of Lignite (แม่ตีบ) delivered in April 2011 from Stock Checking Report (3044.2 tons) and monthly delivery record (2975.88 tons).		for daily report preparation (for example W-P-OO-002) , page 26 step 4.4 , the stock of other raw materials will be adjusted if the difference of the calculated stock and actual stock is over 1,000 tons for two day. This principle is also applied for the fossil fuels and biomass stock. This adjusting is approved by the production manager. Hence it is possible that the incoming stock is corrected.	Verification team had reviewed the work instruction W-P-OO-002 and found that section 4.4 allowed the production manager to adjust the stock of raw materials if the difference of the calculated stock and actual stock is over 1,000 tons for two day and the adjustment would be remarked in the daily report. Moreover, it is found that the difference is less than 5% materiality threshold defined by VCS version 3.3. Therefore, this is accepted and CL20 is closed
CL21 • What is the relationship between consumption of various types of waste (i.e. Biodiesel, Coal Low Heat, and Coke/Activated Carbon) in Ta Luang indicated in Stock Checking Report and the data used in VERs Calculation? • How data at Ta Luang is grouped or summarized and transferred from Stock	Section 3 (b) i	**1st response on 30/04/2013** According to the registered PD, the alternative fuels are excluded from project boundary.	**1st Verification team feedback (15/05/13)** This is related to alternative fuel at which verification team still not agree on the exclusion of this calculation. Please refer to the 1st Verification team feedback in CAR08. CL21 is pending.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
Checking Report to data used in VERs Calculation?		**2nd response on 03/06/2013** • Coal Low heat is coal from Simirara (name of source) , it is included in coal for ER calculation. ○ 2011 = coal SCT,Limex,Adaro + coal BP,Jurong + coal BP,Kitadin ○ 2012 = coal high heat (coal log , Banpu,Kideco) + coal low heat (coal Simirara) • The consumption of biodiesel is added in ER calculation by using default LHV at 39,300 kJ/kg and 0.887 g/ml of density[6] . The default emission factor of biodiesel from IPCC table 2.3 is used for PE calculation. • The consumption of	**2nd Verification team feedback (04/07/13)** Verification team had confirmed that Coal low heat had been included in ER calculation spreadsheet as part of coal consumption. Moreover, the consumption of other types of waste had been taken into account as showed in CL28. Hence, this is accepted and CL21 is closed.

[6] http://www.tistr.or.th/t/publication/page_area_show_bc.asp?i1=90&i2=10000

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td>coke/activated carbon is included in mixed solid waste. Please refer to response of CL28.</td><td></td></tr>
<tr><td><u>CL22</u>
Please provide evidences to support the cross-checking of the type and quantity of fuel fired in the project plant at Khao Wong site for the period of July 2012 to December 2012.</td><td>Section 3 (b) i</td><td><u>1st response on 30/04/2013</u>
The stock checking reports are provided.</td><td><u>1st Verification team feedback (15/05/13)</u>
Verification team had reviewed the stock checking report and the results show as follow.

- Fuel oil
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>-</td><td>-</td></tr>
<tr><td>Feb-12</td><td>-</td><td>-</td></tr>
<tr><td>Mar-12</td><td>-</td><td>-</td></tr>
<tr><td>Apr-12</td><td>-</td><td>-</td></tr>
<tr><td>May-12</td><td>-</td><td>-</td></tr>
<tr><td>Jun-12</td><td>-</td><td>-</td></tr>
<tr><td>Jul-12</td><td>1.00</td><td>1.00</td></tr>
<tr><td>Aug-12</td><td>-</td><td>-</td></tr>
<tr><td>Sep-12</td><td>-</td><td>-</td></tr>
<tr><td>Oct-12</td><td>-</td><td>-</td></tr>
<tr><td>Nov-12</td><td>-</td><td>-</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>Dec-12</td><td>-</td><td>-</td></tr>
<tr><td>TOTAL</td><td>1.00</td><td>1.00</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>0</td></tr>
</table>

This is found consistency and accepted.

- Lignite
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>15,961.74</td><td>15,986.23</td></tr>
<tr><td>Feb-12</td><td>14,810.54</td><td>14,806.29</td></tr>
<tr><td>Mar-12</td><td>15,039.87</td><td>15,058.12</td></tr>
<tr><td>Apr-12</td><td>13,277.32</td><td>13,250.24</td></tr>
<tr><td>May-12</td><td>18,454.51</td><td>18,468.54</td></tr>
<tr><td>Jun-12</td><td>8,686.55</td><td>8,710.55</td></tr>
<tr><td>Jul-12</td><td>20,359.27</td><td>20,355.62</td></tr>
<tr><td>Aug-12</td><td>20,652.42</td><td>20,658.57</td></tr>
<tr><td>Sep-12</td><td>17,673.83</td><td>17,667.59</td></tr>
<tr><td>Oct-12</td><td>15,352.33</td><td>15,361.27</td></tr>
<tr><td>Nov-12</td><td>8,594.55</td><td>8,563.81</td></tr>
<tr><td>Dec-12</td><td>11,980.49</td><td>11,980.62</td></tr>
<tr><td>TOTAL</td><td>180,843.43</td><td>180,867.44</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><th>Different between data used in VER calculation and Stock Checking Report</th><th>Less than 0.01%</th></tr>
</table>

It was found that the difference is less than 5% materiality threshold defined by VCS version 3.3.

- Coal
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>17,329.26</td><td>14,699.00</td></tr>
<tr><td>Feb-12</td><td>17,363.62</td><td>15,440.78</td></tr>
<tr><td>Mar-12</td><td>19,564.89</td><td>17,806.34</td></tr>
<tr><td>Apr-12</td><td>16,819.18</td><td>16,738.43</td></tr>
<tr><td>May-12</td><td>19,528.07</td><td>18,026.51</td></tr>
<tr><td>Jun-12</td><td>7,613.70</td><td>7,611.68</td></tr>
<tr><td>Jul-12</td><td>18,822.48</td><td>16,424.33</td></tr>
<tr><td>Aug-12</td><td>18,188.16</td><td>14,002.82</td></tr>
<tr><td>Sep-12</td><td>21,191.40</td><td>17,411.40</td></tr>
<tr><td>Oct-12</td><td>18,401.63</td><td>16,611.10</td></tr>
<tr><td>Nov-12</td><td>13,490.70</td><td>13,483.61</td></tr>
<tr><td>Dec-12</td><td>18,626.42</td><td>18,629.99</td></tr>
<tr><td>TOTAL</td><td>206,939.52</td><td>186,885.98</td></tr>
<tr><td colspan="2">Different between data</td><td>9.69%</td></tr>
</table>
</td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			used in VER calculation and Stock Checking Report | | It was found that the difference is more than 5% materiality threshold defined by VCS version 3.3. However, it is found that the value applied in ER calculation sheet rev.02 (206,939.52) is already the most conservative approach. Thus, no action required. - Pet coke

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	-	-
Feb-12	-	-
Mar-12	-	-
Apr-12	-	-
May-12	-	-
Jun-12	-	-
Jul-12	-	-
Aug-12	-	-
Sep-12	-	-
Oct-12	-	-
Nov-12	-	-

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>Dec-12</td><td>-</td><td>-</td></tr>
<tr><td>TOTAL</td><td>-</td><td>-</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>0</td></tr>
</table>

This is found consistency and accepted.

- Rice Husk
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>7,320.38</td><td>8,075.44</td></tr>
<tr><td>Feb-12</td><td>10,488.38</td><td>11,813.90</td></tr>
<tr><td>Mar-12</td><td>6,441.74</td><td>7,167.04</td></tr>
<tr><td>Apr-12</td><td>6,989.19</td><td>7,773.54</td></tr>
<tr><td>May-12</td><td>5,574.53</td><td>6,535.20</td></tr>
<tr><td>Jun-12</td><td>3,703.06</td><td>4,313.91</td></tr>
<tr><td>Jul-12</td><td>4,622.00</td><td>5,381.30</td></tr>
<tr><td>Aug-12</td><td>6,268.16</td><td>7,246.43</td></tr>
<tr><td>Sep-12</td><td>5,529.72</td><td>6,521.66</td></tr>
<tr><td>Oct-12</td><td>4,956.58</td><td>5,676.33</td></tr>
<tr><td>Nov-12</td><td>3,118.16</td><td>3,502.76</td></tr>
<tr><td>Dec-12</td><td>4,563.07</td><td>5,069.52</td></tr>
<tr><td>TOTAL</td><td>69,574.96</td><td>79,077.03</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><th>Different between data used in VER calculation and Stock Checking Report</th><th>13.66%</th></tr>
</table>

It was found that the difference is more than 5% materiality threshold defined by VCS version 3.3. Please refer to CAR17

- Biomass (Bark Straw)
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>8,300.64</td><td>8,300.64</td></tr>
<tr><td>Feb-12</td><td>2,505.03</td><td>2,505.03</td></tr>
<tr><td>Mar-12</td><td>4,466.12</td><td>4,466.12</td></tr>
<tr><td>Apr-12</td><td>3,691.97</td><td>3,691.97</td></tr>
<tr><td>May-12</td><td>5,882.91</td><td>5,882.91</td></tr>
<tr><td>Jun-12</td><td>2,525.68</td><td>2,525.68</td></tr>
<tr><td>Jul-12</td><td>3,289.03</td><td>3,289.03</td></tr>
<tr><td>Aug-12</td><td>2,600.55</td><td>2,600.55</td></tr>
<tr><td>Sep-12</td><td>4,691.53</td><td>4,691.53</td></tr>
<tr><td>Oct-12</td><td>5,819.13</td><td>5,819.13</td></tr>
<tr><td>Nov-12</td><td>2,948.43</td><td>2,948.43</td></tr>
<tr><td>Dec-12</td><td>6,413.47</td><td>6,413.47</td></tr>
<tr><td>TOTAL</td><td>53,134.50</td><td>53,134.50</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>Different between data used in VER calculation and Stock Checking Report</td><td>0</td></tr>
</table>

This is found consistency and accepted.

- Mixed Solid Waste
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>1.02</td><td>1.27</td></tr>
<tr><td>Feb-12</td><td>5.95</td><td>7.44</td></tr>
<tr><td>Mar-12</td><td>-</td><td>-</td></tr>
<tr><td>Apr-12</td><td>-</td><td>-</td></tr>
<tr><td>May-12</td><td>45.25</td><td>56.56</td></tr>
<tr><td>Jun-12</td><td>29.98</td><td>37.48</td></tr>
<tr><td>Jul-12</td><td>60.35</td><td>75.44</td></tr>
<tr><td>Aug-12</td><td>39.36</td><td>49.20</td></tr>
<tr><td>Sep-12</td><td>50.75</td><td>63.44</td></tr>
<tr><td>Oct-12</td><td>61.49</td><td>76.86</td></tr>
<tr><td>Nov-12</td><td>16.64</td><td>20.80</td></tr>
<tr><td>Dec-12</td><td>14.54</td><td>18.17</td></tr>
<tr><td>TOTAL</td><td>325.33</td><td>406.66</td></tr>
<tr><td colspan="2">Different between data used in VER</td><td>25%</td></tr>
</table>
</td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			calculation and Stock Checking Report CAR23 is raised due to the finding 1) There is inconsistency of Mixed Solid Waste consumption at Khao Wong site between data used in VERs calculation and stock checking report during January 2012 – December 2012. This inconsistency is greater than 5% materiality threshold 2) VERs calculation at Khao Wong site in regard to Mixed Solid Waste consumption is not following principle of conservativeness defined by VCS version 3.3 - Other1 (CTA)

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	299.80	333.11
Feb-12	261.40	290.44
Mar-12	218.72	243.02
Apr-12	195.81	217.57
May-12	271.32	301.47
Jun-12	188.34	209.27

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion

Jul-12	262.57	291.74
Aug-12	161.44	179.38
Sep-12	244.63	271.82
Oct-12	194.00	215.55
Nov-12	101.28	112.54
Dec-12	166.34	184.82
TOTAL	2,565.65	2,850.72
Different between data used in VER calculation and Stock Checking Report		**11.11%**

CAR24 is raised due to the finding
1) There is inconsistency of Other1 (CTA) consumption at Khao Wong site between data used in VERs calculation and stock checking report during January 2012 – December 2012. This inconsistency is greater than 5% materiality threshold
2) VERs calculation at Khao Wong site in regard to Other1 (CTA) consumption is not following principle of conservativeness defined by VCS version 3.3

- Other2 (CKB)

Month	Data used	Stock

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><th></th><th>in VERs Calculation (Tons)</th><th>Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>106.50</td><td>106.50</td></tr>
<tr><td>Feb-12</td><td>107.05</td><td>107.05</td></tr>
<tr><td>Mar-12</td><td>166.01</td><td>166.01</td></tr>
<tr><td>Apr-12</td><td>211.01</td><td>211.01</td></tr>
<tr><td>May-12</td><td>30.03</td><td>30.03</td></tr>
<tr><td>Jun-12</td><td>472.78</td><td>472.78</td></tr>
<tr><td>Jul-12</td><td>82.03</td><td>82.03</td></tr>
<tr><td>Aug-12</td><td>127.24</td><td>127.24</td></tr>
<tr><td>Sep-12</td><td>43.22</td><td>43.22</td></tr>
<tr><td>Oct-12</td><td>183.00</td><td>183.00</td></tr>
<tr><td>Nov-12</td><td>16.20</td><td>16.20</td></tr>
<tr><td>Dec-12</td><td>343.49</td><td>343.49</td></tr>
<tr><td>TOTAL</td><td>1,888.56</td><td>1,888.56</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>0</td></tr>
</table>

This is found consistency and accepted.

- Other3 (S40B + R40B)
</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>-</td><td>-</td></tr>
<tr><td>Feb-12</td><td>-</td><td>-</td></tr>
<tr><td>Mar-12</td><td>-</td><td>-</td></tr>
<tr><td>Apr-12</td><td>-</td><td>-</td></tr>
<tr><td>May-12</td><td>21.48</td><td>21.48</td></tr>
<tr><td>Jun-12</td><td>-</td><td>-</td></tr>
<tr><td>Jul-12</td><td>-</td><td>-</td></tr>
<tr><td>Aug-12</td><td>116.12</td><td>116.12</td></tr>
<tr><td>Sep-12</td><td>-</td><td>-</td></tr>
<tr><td>Oct-12</td><td>229.73</td><td>229.73</td></tr>
<tr><td>Nov-12</td><td>211.77</td><td>211.77</td></tr>
<tr><td>Dec-12</td><td>326.90</td><td>326.90</td></tr>
<tr><td>TOTAL</td><td>906.00</td><td>906.00</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>0</td></tr>
</table>

This is found consistency and accepted.

Hence, CL22 is closed and CAR23 to CAR24 are raised.
</td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
CL23 Please provide evidence to support the amount of fossil fuel delivered to Khao Wong site as follow. - Lignite – August 2011, November 2011 - Coal – July 2011, August 2011 - Rice Husk – March 2011, May 2011 - Biomass (Bark Straw) – January 2012, May 2012 - Other1 (CTA) – January 2012, May 2012 - Other2 (CKB) – June 2012, December 2012	Section 3 (b) i	**1st response on 30/04/2013** The summary of purchasing invoices is provided.	**1st Verification team feedback (15/05/13)** Verification team had verified the evidences provided, and the results are describes as followed, Lignite Verification team had checked monthly delivery record of Lignite delivered on August 2011 and November 2011, and quantity of Lignite delivered showing in Stock Checking Report against original invoices as follow. – 7 invoices from 1/08/11 – 13 invoices from 3-5/08/11 This is found consistency and accepted. Coal Verification team had checked monthly delivery record of Coal delivered on July 2011 and August 2011, and quantity of Coal delivered showing in Stock Checking Report against original invoices as follow. - 24 invoices from 25/07/11

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			The total amount of Coal delivered on July 2011 from monthly delivery record (16488.54 tons) and stock checking report (36184.08 tons) is found inconsistency more than 5%. However, with reference to the response on CL20, the delivered amount could be adjusted following the work instruction W-P-OO-002. Hence, there is accepted and has no further question. <u>Rice Husk</u> Verification team had checked monthly delivery record of Lignite delivered on March 2011 and May 2011, and quantity of Rice Husk delivered showing in Stock Checking Report against original invoices as follow. – 7 invoices from 10/03/11 – 3 invoices from 11/03/11 – 8 invoices from 7/05/11 This is found consistency and accepted. <u>Biomass (Bark Straw)</u>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			Verification team had checked monthly delivery record of Biomass delivered on January 2012 and May 2012, and quantity of Biomass delivered showing in Stock Checking Report against original invoices as follow. – 5 invoices from 11/01/12 – 5 invoices from 22/05/12 The total amount of biomass delivered on May 2012 from monthly delivery record (7783.7 tons) and stock checking report (5882.91 tons) is found inconsistency more than 5%. However, with reference to the response on CL20, the delivered amount could be adjusted following the work instruction W-P-OO-002. Hence, there is accepted and has no further question. In addition, there are no evidence submitted related to Other1 (CTA) and Other2 (CKB). Therefore, CL23 is pending due to pending information.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		2nd response on 03/06/2013 The summary of CTA and CKB delivery records are provided.	**2nd Verification team feedback (04/07/13)** Verification team had verified the evidences provided, and the results are describes as followed, CTA Verification team had checked monthly delivery record of CTA delivered on January 2012 and May 2012, and quantity of CTA delivered showing in Stock Checking Report against original invoices as follow. – 13 invoices from January 2012 – 10 invoices from May 2012 CKB In absence of invoice, verification team had checked monthly delivery record of CKB delivered on June 2012 and December 2012 and could not found any inconsistency which would not trigger further question, hence this is accepted. Thus, CL23 is closed

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr>
<td>CL24
With reference to Stock Checking Report, Bituminous had been consumed at Khao Wong site during crediting period. Please clarify why there is no Bituminous consumption presented in Work Journal and VERs Calculation for the following period?</td>
<td>Section 3 (b) i</td>
<td><u>1st response on 30/04/2013</u>
Please refer to the response of CAR12.

<u>2nd response on 03/06/2013</u>
The bituminous is included in coal consumption.

The comparison between WJ (used in ER calculation) and stock report is provided in table below.
<table>
<tr><th>2011 ton-dry</th><th>WJ</th><th>Stock</th></tr>
<tr><td>Mar’11</td><td>13,128.51</td><td>14,836.55</td></tr>
<tr><td>Apr’11</td><td>11,611.22</td><td>13,164.85</td></tr>
<tr><td>May’11</td><td>12,177.88</td><td>13,153.15</td></tr>
<tr><td>Jun’11</td><td>13,877.72</td><td>15,372.50</td></tr>
<tr><td>Jul’11</td><td>19,049.18</td><td>19,478.28</td></tr>
</table>
</td>
<td><u>1st Verification team feedback (15/05/13)</u>
The response in CAR12 is related to Anthracite consumption. However, This CL24 is related to Bituminous consumption. Hence, please clarify.

Therefore, CL24 is pending

<u>2nd Verification team feedback (04/07/13)</u>
Verification team had reviewed and accepted the justification of including bituminous in coal consumption.

However, verification team had re-checked amount of Coal consumption in Work journal and stock checking report as follow.
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Mar-11</td><td>13,128.51</td><td>14,836.55</td></tr>
<tr><td>Apr-11</td><td>11,611.22</td><td>13,164.85</td></tr>
<tr><td>May-11</td><td>12,117.88</td><td>13,153.15</td></tr>
<tr><td>Jun-11</td><td>13,877.72</td><td>15,372.50</td></tr>
</table>
</td>
</tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Aug’11</td><td>19,065.58</td><td>19,839.112</td></tr>
<tr><td>Sep’11</td><td>16,281.09</td><td>17,359.54</td></tr>
<tr><td>Oct’11</td><td>10,685.66</td><td>9,972.88</td></tr>
<tr><td>Nov’11</td><td>14,027.66</td><td>13,338.45</td></tr>
<tr><td>Dec’11</td><td>14,916.73</td><td>14,912.36</td></tr>
<tr><td>Total</td><td>144,761.23</td><td>151,787.56</td></tr>
<tr><td>Diff</td><td>7026.53</td><td>4.85%</td></tr>
</table>
<table>
<tr><th>2012 ton-dry</th><th>WJ</th><th>Stock</th></tr>
<tr><td>Jan’12</td><td>17,329.26</td><td>17,323.34</td></tr>
<tr><td>Feb’12</td><td>17,363.62</td><td>17,370.50</td></tr>
<tr><td>Mar’12</td><td>19,564.89</td><td>19,558.63</td></tr>
<tr><td>Apr’12</td><td>16,819.18</td><td>16,880.23</td></tr>
<tr><td>May’12</td><td>19,528.07</td><td>19,521.19</td></tr>
<tr><td>Jun’12</td><td>7,613.70</td><td>7,611.68</td></tr>
<tr><td>Jul’12</td><td>18,822.48</td><td>18,817.30</td></tr>
<tr><td>Aug’12</td><td>18,188.16</td><td>18,187.87</td></tr>
<tr><td>Sep’12</td><td>21,191.40</td><td>21,191.35</td></tr>
<tr><td>Oct’12</td><td>18,401.63</td><td>18,385.34</td></tr>
</table>
</td><td>
<table>
<tr><td>Jul-11</td><td>19,049.18</td><td>19,478.28</td></tr>
<tr><td>Aug-11</td><td>19,065.58</td><td>19,839.11</td></tr>
<tr><td>Sep-11</td><td>16,281.09</td><td>17,359.54</td></tr>
<tr><td>Oct-11</td><td>10,685.66</td><td>9,972.88</td></tr>
<tr><td>Nov-11</td><td>14,027.66</td><td>13,338.44</td></tr>
<tr><td>Dec-11</td><td>14,916.73</td><td>14,912.36</td></tr>
<tr><td>TOTAL</td><td>144,761</td><td>151,427.68</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>4.61%</td></tr>
</table>
It was found that the difference is less than 5% materiality threshold defined by VCS version 3.3. Moreover, the applied value in ER calculation spreadsheet rev.04 is already following conservative approach.
Hence, this is accepted and CL24 is closed.
</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Nov’12</td><td>13,490.70</td><td>13,483.61</td></tr>
<tr><td>Dec’12</td><td>18,626.42</td><td>18,630</td></tr>
<tr><td>Total</td><td>206,939.52</td><td>206,961.04</td></tr>
<tr><td>Diff</td><td>21.51 t-dry</td><td>0.01%</td></tr>
</table>
For both year , the inconsistency between two sources of data is less than 5%. Hence no correct is done in ER calculation spread sheet.
</td><td></td></tr>
<tr><td><u>CL25</u>
Please justify the inconsistency of total amount of coal delivered at Kaeng Khoi site from monthly delivery record (582.44 tons) and original invoices (1164.15 tons) on 6 December 2011.</td><td>Section 3 (b) i</td><td><u>1st response on 30/04/2013</u>
Please refer to justification provided for CL20.</td><td><u>1st Verification team feedback (15/05/13)</u>
With reference to the response on CL20, the delivered amount could be adjusted following the work instruction W-P-OO-002. Hence, there is accepted and has no further question.

Even though, the difference is larger than 5% materiality threshold defined by VCS version 3.3. With reference to the new revised MR rev.03, Kaeng Khoi site does not claim for the emission reduction due to the design change in</td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			this monitoring period anymore. Hence, the total amount of coal delivered at Kaeng Khoi site is not affected to ER calculation. Hence, CL25 is closed
CL26 Please justify the inconsistency of total amount of Bituminous delivered at Kaeng Khoi site from original invoices (440.34 tons) and monthly delivery record (432.07 tons) on 3 September 2012.	Section 3 (b) i	**1st response on 30/04/2013** Please refer to justification provided for CL20.	**1st Verification team feedback (15/05/13)** With reference to the response on CL20, the delivered amount could be adjusted following the work instruction W-P-OO-002. Hence, there is accepted and has no further question. Moreover, it is found that the difference between original invoices (440.34 tons) and monthly delivery record (432.07 tons) is less than 5% materiality threshold defined by VCS version 3.3. In addition, with reference to the new revised MR rev.03, Kaeng Khoi site does not claim for the emission reduction due to the design change in this monitoring period anymore. Hence, the total amount of bituminous delivered at Kaeng Khoi site is not

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			affected to ER calculation. Hence, CL26 is closed.
CL27 Please provide evidence to support the amount of fossil fuel delivered to Ta Luang site as follow. - Husk – March 2011, April 2011 - Woodchip – March 2012, November 2012	Section 3 (b) i	**1st response on 30/04/2013** This document is pending. **2nd response on 03/06/2013** The requested information has been submitted.	**1st Verification team feedback (15/05/13)** CL27 is pending **2nd Verification team feedback (04/07/13)** Verification team had verified the evidences provided, and the results are describes as followed, Husk In absence of invoice, verification team had checked monthly delivery record of Husk delivered on March 2011 and April 2011 and could not found any inconsistency which would not trigger further question, hence this is accepted. Woodchip In absence of invoice, verification team had checked monthly delivery record of Woodchip delivered on March 2012 and

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			November 2012 and could not found any inconsistency which would not trigger further question, hence this is accepted. Hence, CL27 is closed.
CL28 • What is the relationship between consumption of various types of waste (i.e. Aqueous Waste, RDF, Mixed Solid+ผ้าเปื้อนน้ำมัน(Contaminated cloth), PTA/เม็ดพลาสติก (Plastic granule), Biodiesel, Used Tyre+Plastic+จารบี(grease)+กากสี (waste paint)+scum oil+ถุงกระดาษ (paper bag)+rubber seal+Solid , ผ้าเปื้อนน้ำมัน(Contaminated cloth), ผงหมึก (Toner)) in Ta Luang indicated in Stock Checking Report and the data used in VERs Calculation? • How data at Ta Luang is grouped or summarized and transferred from Stock Checking Report to data used in VERs Calculation?	Section 3 (b) i	**1st response on 30/04/2013** According to the registered PD, the alternative fuels are excluded from project boundary. **2nd response on 03/06/2013** • Aqueous waste is the liquid waste then it is not included in ER calculation. • RDF and all other various types of solid waste are summarized as "Mixed solid waste". The comparison table is provided below.	**1st Verification team feedback (15/05/13)** This is related to alternative fuel at which verification team still not agree on the exclusion of this calculation. Please refer to the 1st Verification team feedback in CAR08. CL28 is pending. **2nd Verification team feedback (04/07/13)** Verification team had reviewed the stock checking report and the results show as follow. - Aqueous waste Aqueous waste had been taken into account in this sense due to it is categorized in the same sheet of others

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Ton</td><td>2011</td><td>2012</td></tr>
<tr><td>WJ</td><td>562</td><td>379</td></tr>
<tr><td>Stock</td><td>612</td><td>403.64</td></tr>
<tr><td>Diff – Ton</td><td>30.66</td><td>24.64</td></tr>
<tr><td>Diff - %</td><td>5.45</td><td>6.5</td></tr>
</table>
As per conservativeness principle, the higher consumption is more conservative since it gives the higher PE. The consumption from WJ and stock report are used in ER calculation for year 2011, 2012 accordingly.
Since the source of solid waste is the same as KW, the same heating values from KW are applied for ER calculation.</td><td>alternative fuel or less carbon intensive fuel used in Stock Checking report.
With reference to email discussion on 18 June 2013, the project proponent responded to verifier's question on the composition of aqueous waste that *'the aqueous waste is the wastewater contained hazardous substance such as heavy metal. For example, hazardous chemical from laboratory, wastewater from chemically cleaning process which is not allowed to discharge into wastewater treatment.'*

In view of justification above, verification team re-checked with objective evidence found during onsite and discovered that SCG operated their own internal laboratory for testing of heating value of fuels and other necessary procedures. This is in line with the PP's justification that there would possibly having wastewater from laboratory cleaning, at which not appropriate to send to outside wastewater treatment but need to be burnt in the kiln. In view of this,</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>verification team convinced that the aqueous water is contained of waste water from laboratory.

Apart from above justification, verification team also conducted the research for heating value of water and found that there is no signification heating value from water. In such case, verification team agreed that due to aqueous waste is liquid waste which is based on water, it would consume heat not generate heat, hence the justification is accepted.

- Mixed Solid Waste
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Mar-11</td><td>215.33</td><td>215.33</td></tr>
<tr><td>Apr-11</td><td>56.99</td><td>56.99</td></tr>
<tr><td>May-11</td><td>73</td><td>73</td></tr>
<tr><td>Jun-11</td><td>108.16</td><td>112.16</td></tr>
<tr><td>Jul-11</td><td>20.68</td><td>37.79</td></tr>
<tr><td>Aug-11</td><td>71.05</td><td>71.05</td></tr>
<tr><td>Sep-11</td><td>0</td><td>0</td></tr>
<tr><td>Oct-11</td><td>13.06</td><td>13.06</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>Nov-11</td><td>0</td><td>0</td></tr>
<tr><td>Dec-11</td><td>32.33</td><td>32.33</td></tr>
<tr><td>TOTAL</td><td>611.71</td><td>611.71</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>17.56%</td></tr>
</table>

It was found that the difference is more than 5% materiality threshold defined by VCS version 3.3. However, it is found that the values applied in ER calculation sheet rev.06 are already the most conservative approach. Thus, no action required.

<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>75.67</td><td>75.67</td></tr>
<tr><td>Feb-12</td><td>28.96</td><td>28.96</td></tr>
<tr><td>Mar-12</td><td>25.71</td><td>24.71</td></tr>
<tr><td>Apr-12</td><td>28.19</td><td>28.19</td></tr>
<tr><td>May-12</td><td>8.05</td><td>8.05</td></tr>
<tr><td>Jun-12</td><td>0</td><td>0</td></tr>
<tr><td>Jul-12</td><td>0</td><td>0</td></tr>
<tr><td>Aug-12</td><td>0</td><td>0</td></tr>
</table>
</td></tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion

Sep-12	0	0
Oct-12	0	137.06
Nov-12	137.06	100
Dec-12	100	0
TOTAL	**403.64**	**402.64**
Different between data used in VER calculation and Stock Checking Report		**0.24%**

It was found that the difference is less than 5% materiality threshold defined by VCS version 3.3.

- Other 1 (Biodiesel)

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Mar-11	51.45	51.45
Apr-11	46.12	46.12
May-11	51.45	51.45
Jun-11	11.09	11.09
Jul-11	43.46	43.46
Aug-11	41.69	41.69
Sep-11	42.13	42.13
Oct-11	25.72	25.72
Nov-11	26.61	26.61

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion

Dec-11	27.94	27.94
TOTAL	367.66	367.66
Different between data used in VER calculation and Stock Checking Report		**0%**

Month	Data used in VERs Calculation (Tons)	Stock Checking Report (Tons)
Jan-12	65.64	65.64
Feb-12	50.12	50.12
Mar-12	40.54	40.54
Apr-12	45.50	45.50
May-12	43.29	43.29
Jun-12	40.18	40.18
Jul-12	33.71	33.71
Aug-12	66.44	66.44
Sep-12	38.32	38.32
Oct-12	16.14	16.14
Nov-12	11.18	11.18
Dec-12	26.96	26.96
TOTAL	478.00	478.00
Different between data used in VER calculation and Stock Checking Report		**0%**

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td></td><td>This is found consistency and accepted.

Hence, CL28 is closed.</td></tr>
<tr><td><u>CL29</u>
With reference to Stock Checking Report, Other1 (CTA) had been consumed at Khao Wong site during crediting period. Please clarify why there is no Other1 (CTA) consumption presented in Work Journal and why VERs Calculation not taken account of this fuel during crediting period?</td><td>Section 3 (b) i</td><td><u>1st response on 30/04/2013</u>
According to the registered PD, the alternative fuels are excluded from project boundary.

<u>2nd response on 03/06/2013</u>
The CTA consumption from stock checking report is presented in table below.
<table>
<tr><th>2011 ton</th><th>Stock</th></tr>
<tr><td>Mar’11</td><td>312</td></tr>
<tr><td>Apr’11</td><td>250.3</td></tr>
<tr><td>May’11</td><td>227.3</td></tr>
<tr><td>Jun’11</td><td>309.32</td></tr>
</table></td><td><u>1st Verification team feedback (15/05/13)</u>
This is related to alternative fuel at which verification team still not agree on the exclusion of this calculation. Please refer to the 1st Verification team feedback in CAR08.

CL29 is pending.

<u>2nd Verification team feedback (04/07/13)</u>
With reference to the 1st verification team feedback in CAR10, verification team had checked the calculation by applying all value into ER calculation spreadsheet. It is confirmed and accepted that the revision of Other1 (CTA) consumption is conservative approach

Hence, this is accepted and CL29 is</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Jul’11</td><td>277.4</td></tr>
<tr><td>Aug’11</td><td>318.53</td></tr>
<tr><td>Sep’11</td><td>285.62</td></tr>
<tr><td>Oct’11</td><td>208.32</td></tr>
<tr><td>Nov’11</td><td>426.59</td></tr>
<tr><td>Dec’11</td><td>261.3</td></tr>
<tr><td>Total</td><td>2,876.68</td></tr>
</table>
<table>
<tr><th>2012
ton</th><th>WJ</th><th>Stock</th></tr>
<tr><td>Jan’12</td><td>299.8</td><td>333.11</td></tr>
<tr><td>Feb’12</td><td>261.4</td><td>290.44</td></tr>
<tr><td>Mar’12</td><td>218.72</td><td>243.01</td></tr>
<tr><td>Apr’12</td><td>195.81</td><td>217.57</td></tr>
<tr><td>May’12</td><td>271.32</td><td>301.47</td></tr>
<tr><td>Jun’12</td><td>188.34</td><td>209.27</td></tr>
<tr><td>Jul’12</td><td>262.57</td><td>291.74</td></tr>
<tr><td>Aug’12</td><td>161.44</td><td>179.38</td></tr>
<tr><td>Sep’12</td><td>244.63</td><td>271.82</td></tr>
<tr><td>Oct’12</td><td>194</td><td>215.55</td></tr>
</table>
</td><td>closed.</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Nov’12</td><td>191.28</td><td>112.54</td></tr>
<tr><td>Dec’12</td><td>166.34</td><td>184.82</td></tr>
<tr><td>Total</td><td>2,565.65</td><td>2,850.71</td></tr>
<tr><td>Diff</td><td>285.06 ton</td><td>11%</td></tr>
</table>

The CTA consumption in 2011 is revised to 2,876.88 ton. Since the NCV data from internal lab is not available, the same NCV data from 2012 is used for ER calculation.
The CTA consumption in 2012 is revised to 2,850.71 for conservativeness since this value gives the higher PE.

The ER calculation spread sheet rev.03 is revised accordingly.</td><td></td></tr>
<tr><td><u>CL30</u>
• What is the relationship between consumption of various types of waste (i.e. Waste water, Solid Waste Rubber) in Khao Wong indicated in Stock Checking Report</td><td>Section 3 (b) i</td><td><u>1st response on 30/04/2013</u>
According to the registered PD, the alternative fuels are excluded from project boundary.</td><td><u>1st Verification team feedback (15/05/13)</u>
This is related to alternative fuel at which verification team still not agree on the exclusion of this calculation.</td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr>
<td>and the data used in VERs Calculation?
• How data at Khao Wong is grouped or summarized and transferred from Stock Checking Report to data used in VERs Calculation?</td>
<td></td>
<td><u>2nd response on 03/06/2013</u>
• Waste water is not in included in ER calculation since it is the liquid waste with no heating value.
• The mixed solid , solid waste + rubber , paint sludge , solid AF and solid blending in stock checking report , and mixed solid waste and pain sludge in WJ , are combined as mixed solid waste. The comparison between WJ and stock checking report is provided in table below.
<table>
<tr><td>Ton</td><td>2011</td><td>2012</td></tr>
<tr><td>WJ</td><td>723.13</td><td>507</td></tr>
<tr><td>Stock</td><td>750.94</td><td>725.93</td></tr>
</table>
</td>
<td>Please refer to the 1st Verification team feedback in CAR08.

CL30 is pending.

<u>2nd Verification team feedback (04/07/13)</u>
Verification team had reviewed the stock checking report and the results show as follow.

- Waste water
Same with aqueous waste in CL28, verification team agreed that due to waste water would consume heat not generate heat, hence the justification is accepted.

- Mixed Solid Waste
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Mar-11</td><td>68.7</td><td>68.7</td></tr>
<tr><td>Apr-11</td><td>68.11</td><td>68.11</td></tr>
<tr><td>May-11</td><td>99.72</td><td>99.72</td></tr>
<tr><td>Jun-11</td><td>82.3</td><td>82.3</td></tr>
<tr><td>Jul-11</td><td>83.53</td><td>83.53</td></tr>
</table>
</td>
</tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by verification team</th><th>Reference to checklist question in Periodic Verification Checklist</th><th>Summary of project owner response</th><th>Verification team conclusion</th></tr>
<tr>
<td></td>
<td></td>
<td>
<table>
<tr><td>Diff - ton</td><td>27.81</td><td>218.93</td></tr>
<tr><td>Diff - %</td><td>3.8%</td><td>43%</td></tr>
</table>
For conservativeness , the higher values from stock checking report are used for ER calculation.
</td>
<td>
<table>
<tr><td>Aug-11</td><td>133.68</td><td>133.68</td></tr>
<tr><td>Sep-11</td><td>96.65</td><td>96.65</td></tr>
<tr><td>Oct-11</td><td>24.25</td><td>24.25</td></tr>
<tr><td>Nov-11</td><td>69.06</td><td>69.06</td></tr>
<tr><td>Dec-11</td><td>24.94</td><td>24.94</td></tr>
<tr><td>TOTAL</td><td>750.94</td><td>750.94</td></tr>
<tr><td colspan="2">Different between data used in VER calculation and Stock Checking Report</td><td>0</td></tr>
</table>
<table>
<tr><th>Month</th><th>Data used in VERs Calculation (Tons)</th><th>Stock Checking Report (Tons)</th></tr>
<tr><td>Jan-12</td><td>52.25</td><td>52.25</td></tr>
<tr><td>Feb-12</td><td>36.18</td><td>36.18</td></tr>
<tr><td>Mar-12</td><td>93.55</td><td>93.55</td></tr>
<tr><td>Apr-12</td><td>0</td><td>0</td></tr>
<tr><td>May-12</td><td>78.04</td><td>78.04</td></tr>
<tr><td>Jun-12</td><td>45.88</td><td>45.88</td></tr>
<tr><td>Jul-12</td><td>75.44</td><td>75.44</td></tr>
<tr><td>Aug-12</td><td>165.32</td><td>165.32</td></tr>
<tr><td>Sep-12</td><td>63.44</td><td>63.44</td></tr>
<tr><td>Oct-12</td><td>76.86</td><td>76.86</td></tr>
<tr><td>Nov-12</td><td>20.8</td><td>20.8</td></tr>
<tr><td>Dec-12</td><td>18.17</td><td>18.17</td></tr>
<tr><td>TOTAL</td><td>725.93</td><td>725.93</td></tr>
<tr><td colspan="2">Different between data</td><td>0</td></tr>
</table>
</td>
</tr>
</table>

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			used in VER calculation and Stock Checking Report It was found consistency and accepted. Hence, CL30 is closed.
CL31 • What is the relationship between consumption of various types of waste (i.e. Black sand, Iron Powder Dust, Water Sludge, Ash Dred, Scale, Silica Base Sludge, Alumina Base Sludge, General Base Sludge) in Khao Khoi indicated in Stock Checking Report and the data used in VERs Calculation (Waste Oil, G1, G2)? • How data at Kaeng Khoi is grouped or summarized and transferred from Stock Checking Report to data used in VERs Calculation?	Section 3 (b) i	**1st response on 30/04/2013** The Black sand, Iron Powder Dust, Water Sludge, Ash Dred, Scale, Silica Base Sludge, Alumina Base Sludge, General Base Sludge are the AR (alternative raw material) which does not concern the ER calculation. **2nd response on 03/06/2013** • Waste oil consumption is used in ER calculation cell H7,I7 of PE_step1 sheet. • The G1,G2 is the Other1 type in the cell H8,I8 of PE_step1	**1st Verification team feedback (15/05/13)** This is related to alternative fuel at which verification team still not agree on the exclusion of this calculation. Please refer to the 1st Verification team feedback in CAR08. CL31 is pending. **2nd Verification team feedback (04/07/13)** With reference to the new revised MR rev.03, Kaeng Khoi site does not claim for the emission reduction due to the design change in this monitoring period anymore. Hence, the various type of waste consumption at Kaeng Khoi site

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		sheet.	is not used for ER calculation. Therefore, CL31 is closed.
FAR01 It's requested for next verification period to ensure that quantity of fossil fuel consumption for biomass handling will be monitored by project proponents at all SCG sites. And also ensure that the monitoring procedure would be in line with tool to calculate project or leakage CO2 emission from fossil fuel combustion		**1st response on 30/04/2013** The operation of internal biomass handling belongs to local service contractor, who is paid on the service as per the contract, which also includes payments for the fuel used in biomass handling. Therefore the project owner cannot directly measure this parameter. Although there are some information provided by service contractor from KK and KW site but it is from the estimation of the contractor, not from any measuring device. Hence it will not be used for ER calculation. In the registered PD, this value was determined based on the equipment used at Tung Song site which is also the biggest biomass handling system. The value was already calculated at the time of	**1st Verification team feedback (15/05/13)** Based on the ER calculation spreadsheet rev.02, the maximum average amount of fossil fuel for biomass handing calculated which is calculated based on 0.4955 liter/ton biomass is from Thung song site on 2012 with the amount of 103,980 liter/year. And the average amount of fossil fuel for biomass handing calculated at Khao Wong site is 60,800 liter/year On the other hands, with reference to 'KW_FO BM handling.pdf' showed that the fossil fuel consumption of tractor used for biomass handling at Khao Wong site is approximately 9,900 liter/month which equal to 118,800 liter/yr. With the above explanation, the

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		validation. This value is conservative and it should be used for the current and future monitoring periods. The same approach was also used in the 1st and 2nd verifications. Therefore, this is the best and conservative approach for this parameter. • **<u>2nd response on 03/06/2013</u>** Please refer to the response of CL01.	evidence from contractor at Khao Wong site showed that the amount of fossil fuel consumed for biomass handling (118,800 liter/year) is approximately 100% more than the estimated calculation (60,800 liter/year) and even more than the maximum consumption (103,980 liter/year) at Thung Song site which is claimed as the maximum use of fossil fuel for biomass handling. Even though this reference is dated 2013, but the result showed that it broke the maximum estimation of fossil fuel consumption at Thung Song site. This means that the estimation approach used for the calculation is not following the conservative approach and might not applicable anymore. Hence, FAR01 is pending **<u>2nd Verification team feedback (04/07/13)</u>** Due to present project activity operation, internal biomass handling system had been taken care by local

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			service contractor, it is difficult to monitor the fossil fuel consumption by project proponents. However, the data of quantity of fossil fuel used in biomass handling is provided by the local service contractor. In addition, verification team had confirmed that the ER calculation is now revised according to the new evidence. For the site without data, the maximum ratio calculated from other site is used in calculation followed the conservative approach. Even though, verification team was satisfied with the calculation which is following the conservative approach, this is still not in line with the tool to calculate project or leakage CO2 emission from fossil fuel combustion, Thus, FAR01 from previous verification period will still remain open for the next verification period. Hence, this is accepted and FAR01 will remain open for the next verification period.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
FAR02 It is raised for next verification period to ensure these as follow; (1) The acceptance tolerance has been set up for P_{Fister} calibration. (2) The standard weight that used to calibrate the P_{Fister} has been set up to be traceable back to National/International Standard. (3) The calibration plan and record for next monitoring period have been set up.		**1st response on 30/04/2013** (1) The new calibration reports are provided. (2) The calibration certificates were presented at the site during site visit. (3) The calibration plan and reports are presented during site visit.	**1st Verification team feedback (15/05/13)** With reference to CL06, CL09, CL10, CL11, and CL13 issued earlier in regard to calibration certification for Weighting feeder, standard weight, etc. It's found that there still have some equipments are not fulfill requirement in calibration. Unless there are more calibration results/certificates as requested in CL06, CL09, CL10, CL11, and CL13 above, the FAR02 will remain open for the next verification period.
FAR03 It is opened for next verification period to ensure these following; (1) Calibration plan and procedure for flow meter has been set up following manufacturer guidance (2) All flow meters used to monitor fuel/bunker oil consumption have been calibrated according to the plan		**1st response on 30/04/2013** The weight of fuel is calculated from the default density which may have some variation due to changes in the temperature. The flow meter is installed after pre-heater unit. The temperature of fuel oil is not monitored and therefore corresponding density value will have an error. Which will result in error in the	**1st Verification team feedback (15/05/13)** Verification team had reviewed the justification provided and had been rechecked with ER calculation spreadsheet and WJ. It is found the amount of fuel/bunker oil consumption had been periodically adjusted following invoice from fuel supplier. This is also in line with evidence and interview result during onsite visit that there is monthly

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		measurement of flow meter. Then the default density value cannot reflect the actual density of fuel oil. However, at the end of month, the available stock at the storage tank with scale and the data from purchasing invoice are used for adjusting the daily consumption data from flow meter for the getting the accurate consumption and reporting in WJ. This approach is used for all sites. The same was also discussed during the site visit with the DOE.	adjustment of WJ to be in line with actual fuel stock availability. In light of the above, as long as the fuel oil/bunker oil used in ER calculation had been adjusted with actual fuel stock NOT directly taken from flow meter (which is not properly calibrated), this approach is accepted. Thus, FAR03 is closed.
FAR04 FAR04 is raised requesting next verification period to follow up the completeness of biomass consumption measurement in Kaeng Khoi to be in line with its monitoring description indicated in registered VCS PD		**1st response on 30/04/2013** The evidence for installation of the new biomass feeder is provided.	**1st Verification team feedback (15/05/13)** Verification team had reviewed the evidence for installation of new biomass feeder, it is found that PPs has strong determination to bridge the gap for closure of FAR04 raised. Even though,

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
			the installation had not completed during verification team onsite visit, there is objective evidence to ensure that the installation of biomass feeder would be completed soon. By the evidence provided, FAR04 is closed.