CDM: Proposed new methodology expert form (version 04)

(To be used by methodology experts providing desk review for a proposed new methodology)

Name of expert responsible for completing and submitting this form	Steven Schiller
Related F-CDM-NM document ID number	NM0086: Petrotemex Energy Integration Project

Note to those completing this form, as applicable: Please provide recommendations on the proposed new baseline and monitoring methodologies based on an assessment of CDM-NMB and CDM-NMM and of their application in sections A to E of the draft CDM-PDD, desk reviews and public input. Please ensure that the form is entirely filled and that arguments and expert judgements are substantiated.

A. Evaluation of the proposed new methodologies by desk reviewers:

I. Evaluation of the proposed new baseline methodology:

Title of new baseline methodology:>> Petrotemex Energy Integration Project

i. Conditions under which this methodology is applicable to other potential projects (e.g. project type, region, data availability):

>> If this methodology incorporates certain improvements and is approved it would be applicable for projects that:

- Are located at large industrial facilities with a relatively consistent product output
- Replace grid-purchased electricity with on-site generation of electricity using waste heat recovery
- Are justified as additional using EB 16 Annex 1 "Tool For the Demonstration And Assessment of Additionality"
- Are installed at an industrial facility where either:
  - If the fuel or electricity consumption pattern changes - baseline emission rates can be determined using a calibrated model which includes industrial production volumes as the sole or primary independent variable
  - If the fuel or electricity consumption pattern does not change but different fules are used in the baseline versus project scenarios (fuel switching) - baseline emission rates can be determined using data on baseline and project equipment efficiencies and baseline and project fuel emissions factors
- Displace grid electricity whose emission factors can be defined using ACM0002.

ii. Strengths and weaknesses of the methodology:

>>

- Strengths: Well organized and prepared in a manner that should allow generalization to other projects. Builds on approved methodologies. Relies on what should be readily available and verifiable data.
- Weaknesses: Does not address criteria for developing an acceptable relationship between facility baseline production variables and energy consumption (electricity, steam and fuel use). Lack of calculations for displaced electricity emission factors.

iii. Any changes needed to improve the methodology:

a. Minor changes:>>

- Address lifetime of Cooleacaque plant versus 10 year requested credit for CO_2(e)
- It is indicated that on site fuel use at the Altamira plant will not change and thus the implication is that

fuel use will not be evaluated or monitoring – fuel use should be evaluated and monitored at both facilities

- Calculation of emissions reduction associated with fuel switching does not seem to consider emissions associated with fuel use in project case (emissions form bio gas consumption are not included in PDD analysis) – information on source of biogas not provided
- Address leakage issue of transferring production from one facility to another
- Explain more clearly why grid emissions factors are used when a portion of the electricity is purchased from a private party

b. Major changes:>>

- Provide firm criteria for selection of Option 1 or 2 for determining baseline emissions associated with fuel consumption
- Provide criteria for having a statistically valid relationship between (a) baseline fuel, steam and electricity consumption and emissions and (b) facility associated production values. This includes providing criteria for approving a single, ex-ante, relationship, between baseline emissions and process variables, that is unaltered during the crediting period
- Demonstrate how changes in efficiencies of fuel combustion in equipment, from baseline to project cases can be used to calculate baseline emissions values from project emission values if multiple fuels are used in different equipment processes; there will probably need to be some limits defined on the applicability of this baseline calculation option and equations provided showing how emissions reduction is calculated (in addition to equation showing ratios of baseline and project fuel use)
- More clearly define the mechanisms for determining baseline electricity consumption and emission values (similar to the format used for baseline fuel consumption and emission values)
- Address any process changes that can affect greenhouse gas emissions, for example by the addition of an entrainer or mass separating agent for the azeotropic distillation

II. Evaluation of the proposed new monitoring methodology:

Title of new monitoring methodology: >> Petrotemex Energy Integration Project

i. Conditions under which this methodology is applicable to other potential projects (e.g. project type, region, data availability):

>> If this methodology incorporates certain improvements and is approved it would be applicable for projects that meet the criteria described above (A1i) and for which data can be collected on historical and post-installation project (a) industrial production quantities, (b) on-site electricity, steam, fuel use (e.g., natural gas and oil use), and (c) grid electricity characteristics in terms of emission rates per unit of electricity production. In addition, data are required on fuel characteristics and post-project installation electricity sales to grid, if any.

ii. Strengths and weaknesses of the methodology:

>>

- Strengths: relatively simple metering and data collection/recording requirements
- Weaknesses: possible dependence on data collection methods that may not be accurate (without meters) and requires data on un-specified production variables for which a correlation between energy and production have not been provided

iii. Any changes needed to improve the methodology:

a. Minor changes:>>

- Equation in Section B.2.2 should list factors in tons of $CO_2(e)$ per MMBtu and clarification should be provide on use of LHV or HHV values for fuel use in all equations
- Move all project emissions (for electricity and steam) to the project emissions equation and out of equation for baseline – make sure all "signs" (+ or -) are correct in equations

b. Major changes:>>

- Provide mechanisms for collecting process data and/or equipment efficiency data for baseline energy use (and emissions) calculations and models
- QA/QC procedures that will be enforced, particularly given the possibility of significant reliance on hand-written records; address using billing meters and their accuracy and calibration

B. Details of the evaluation of the proposed new methodology by the desk reviewer:

I. Proposed new baseline methodology *(specify title here):* >>

(1) Short description of the methodology, including an assessment of which approach from paragraph 48 of the CDM modalities and procedures was used:

a) Describe the methodology:

>> This new methodology incorporates the following procedures and methodologies:

- Tools for the demonstration and assessment of additionality (Annex 1 to EB 16 Report).
- Approved consolidated baseline methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources."

Baseline emissions associated with electricity, steam and fuel are calculated using IPCC emissions factors multiplied times annual baseline energy use, whether fuel, steam and/or electricity consumption. There are one or two options used for calculating baseline energy use:

- Measuring project energy use and calculating baseline energy consumption with a linear regression equation that correlates energy use to industrial process production levels (used when energy consumption is different in baseline versus project cases due in part to changes to process equipment, e.g. energy efficiency); or
- Baseline energy use is determined using a ratio of baseline and project equipment efficiency(ies) which is multiplied by project energy use (used when energy consumption does not vary between baseline and project due to any changes in process, e.g. energy efficiency activities)

b) State the approach selected:

>>48(a) of the CDM M&P – Existing or historical emissions, as applicable

c) Indicate (in summary form) why the approach selected is the most appropriate. Please provide your expert judgement on the appropriateness of the selected approach to the project category:

>> The baseline actually consists of several elements that each needs to be addressed in terms of their appropriateness:

- Additionality calculation using barrier analysis - this approach is appropriate and convincing. Generic use of "Tools for the demonstration and assessment of additionality (Annex 1 to EB 16 Report)" is appropriate
- Calculation of baseline electricity emission factors – the approach indicated is probably appropriate, but is not well documented
- Calculation of baseline fuel emission factors – use of IPCC factors is appropriate
- Calculation of baseline thermal energy, fuel and electricity – historic usage data "adjusted" using a ratio of pre- and post-project equipment efficiencies or an undetermined relationship between process flow (production rates) and energy consumption is not appropriate without documentation of the relationship's validity
- Simple analyses of fugitive emissions probably provide a conservative estimate of reductions
- Leakage due to movement of production from one facility to another is not addressed and may or may not be a factor at this particular project or others that may be covered if this becomes a generic, approved, methodology

(2) Basis for determining the baseline scenario:

a) State whether the documentation explains how the baseline scenario is to be chosen and identified:

a) >> The documentation explains how the baseline emissions factors are chosen and calculated with the exception of:

- No documentation on how grid electricity production factors are calculated
- No documentation on regression analyses for correlating project and baseline energy use

b) State the basic underlying rationale for algorithms/formulae used (e.g. marginal vs. average basis) (see also section 4 below):

>> The basic underlying rationales consist of:

- project will displace thermal, electricity generation units
- project will displace historic fuel oil consumption at the facility
- baseline electricity, steam and fuel usage can be accurately correlated to product (or other?) production rates
- for fuel switching, baseline fuel use can be determined by relationship between original and new fuel combustion efficiencies
- modification of industrial process does not effect emission of greenhouse gases

c) State whether the documentation explains how, through the use of the methodology, it can be demonstrated that a project activity is additional and therefore not the baseline scenario. If so, what are the tools provided by the project participants?

>> Documentation is provided. The documentation provided is based on EB 16 Annex 1 "tool for the demonstration and assessment of additionality". The barriers analysis is used and the arguments provided are convincing that the baseline scenario is the existing operation of the two industrial plants that are the subject of the project retrofits.

d) State whether the basis for determining the baseline scenario and for assessing additionality is appropriate and adequate:

>> The basis for determining the baseline scenario and additionality is appropriate and adequate with one possible exception. The Cosoleacaque plant was built in 1978 and is listed as having a life of "more than 30 years". Since a 10 year lifetime of emission reduction is being claimed, starting in 2005, it should be confirmed that the plant has a useful life till at least 2014.

(3) Assessment of the description of the proposed methodology and its applicability

a) State whether the methodology has been described in an adequate manner:

>> The methodology is described concerning displaced electricity from the grid and the approach for calculating fuel and steam related emission reductions, although as noted elsewhere in this expert form there are concerns about the lack of documentation and thus validity of certain key assumptions. Of particular concern are:

- calculation of emission factors for displaced electricity (not covered, only referenced to an approved CDM project (El Gallo Hydroelectric?)– in particular there is not documentation on why only a Mexican grid emissions factor is used versus some consideration of the emission factor of the private party's power plant(s) that provide a portion of the facility electricity; the argument for why only the Mexican grid factor is used may be plausible but needs tobe documented
- regression analyses that relate baseline energy use to production volumes or use of changes in equipment fuel conversion efficiencies for calculating baseline emissions

b) State whether the proposed methodology is appropriate for the referred proposed project activity and the referred project context (described in Sections A - E of the draft CDM-PDD and submitted along with CDM-NMB):
>> Generally speaking the proposed methodology is appropriate, but additional documentation is required, see prior items in this Expert From.

c) State whether the application of the methodology could result in a baseline scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases that would occur in the absence of the proposed project activity.
>>No

Please explain:
>> Additional documentation is required to determine whether this methodology is appropriate. See prior items in this Expert From.

Explain: see Sections A.I and B.I.3(a) above regarding baseline calculations.

(4) Assessment of algorithms/formulae and type of data needed:

a) State whether the description of the methodology includes algorithms and generic formulae that can be applied to other potential project activities (if not, the proposed new methodology will be considered as a project-specific methodology):

>> For displaced electricity emission factors the proposed new methodology references CDM approved methodologies ACM0002 and AM0014. ACM0002 appears to be appropriate for this particular project.

Generic formulas are provided for baseline and project emissions that could be used in a general methodology for other projects. However, the baseline emissions formula includes a term for project electricity related consumption and this term should probably not be included in the baseline formula, but instead placed appropriately into the project emissions formula.

For the option of calculating fuel consumption based on only fuel switching, there is no formula for calculating emission reductions and this shortfall seems to be shown in that the PDD calculation of emission reductions associated with biogas does not appear to include the project emissions.

Also, with respect to formulas – there are no provided algorithms, or methodologies for developing algorithms, or correlating energy use to production volumes. This is a key and difficult issue for all industrial facilities where baseline energy use can vary based on changes during the project period in terms of production volumes, product types and characteristics, and/or other factors that can change baseline energy use depending on the industrial process in question. Other such factors could include changes in feedstock, weather, and process technology.

Appropriate algorithms need to be provided for this particular project and in order for the baseline methodology to be useful for other future projects a generic approach or set of guidelines should be provided for creating a statistical model that correlates energy use to industrial process activities, during the emissions crediting period. There are a number of models/algorithms that can be used to develop such correlations with the common complexity being the collection of data over a range of operating and product scenarios.

A set of criteria for determining that a model/algorithm is appropriate could include (from M&V Guidelines: Measurement and Verification for Federal Energy Projects Version 2.2. U.S. Department of Energy, DOE/GO-102000-0960 September 2000, prepared by Schiller Associates):

- The model makes intuitive sense—e.g., the explanatory variables are reasonable, the coefficients have the expected sign (positive or negative), and they are within an expected range (magnitude).

- The modelled data are representative of the population—i.e., data covers a reasonable period of time (greater than one year?) and the model limits (range of independent variables for which the model is valid) are reasonable.
- The form of the model conforms to standard statistical practice.
- The number of coefficients is appropriate for the number of observations (approximately no more than one explanatory variable for every five data observations).
- The T-statistic for all key parameters in the model is at least 2 (95% confidence that the coefficient is not zero). Other statistical parameters may also be appropriate (e.g. RMSE)
- The model is tested for possible statistical problems (e.g., auto-collinearity), and if they are found, appropriate statistical techniques are used to correct for them.
- All data input to the model are thoroughly documented, and model limits are specified - this last point is critical with approaches indicated for what would occur if the model limits are exceeded during the crediting period).

b) Explain the spatial scope of data used to determine the baseline and whether the scope is appropriate:

>> The information related to on-site fuel and electricity consumption is "local" and the displaced emissions from grid electricity is "national". The scope is appropriate.

c) Explain the vintage of data used (in relation to the duration of the project crediting period) and whether the vintage of data is appropriate, indicating the period covered by the data:

>> The methodology calls for fuel and energy consumption baseline data (when Baseline Option 2 is used) to be for a period of at least three years prior to project implementation. This, may or may not be adequate if (a) the data are available, (b) if the data leads to a statically valid regression analysis (see above), and (c) the data can be shown to be accurate and valid and cover a range of operating scenarios that are reasonably expected to occur during the project crediting period.

For Baseline Option 1, use of efficiency factors, the vintage of data are not addressed, but should be to ensure that the appropriate efficiency values are used for baseline operating equipment that will still be in place during the crediting period and is not reaching the end of its useful life.

(5) Definition of the project boundary related to the baseline methodology:

a) State how the project boundary is defined in terms of:

i) Gases and sources

>> The project boundary encompasses the site of the industrial facilities. Fuels used both in the baseline scenario and in the project case are used.

CO_2, NO_2 and CH_4 are included in algorithms.

ii) Physical delineation

>> Mexican national electric grid and the two industrial facilities for fuel use. The private supplier of electricity to both facilities is not included and perhaps should be included.

b) Indicate whether this project boundary is appropriate:

>> The boundary is appropriate except that the process changes under consideration for this specific project, changing from binary to azeotropic distillation (which involves use of an entrainer or mass separating agent - which this reviewer does not know if this has a emissions impact) are not considered. If this methodology is to be used for as generalized methodology for other industrial projects then planned process changes should be evaluated for their possible emission impacts.

(6) Key assumptions/parameters (including emission factors and activity levels) and data sources:

a) List the implicit and explicit key assumptions. Identify those, if any, which are problematic and explain:

>> Key assumptions for the baseline emissions are associated with emission factors for natural gas and fuel oil, characteristics of Mexican power market and a specific supplier of electricity to one of the facilities, and information on operations at the facility where the project is to be installed. Key assumptions related to additionality are that the type of project being proposed, principally, the use of low temperature heat recovery for power generation turbines, has not been down before in this application. The most important implicit assumption is the validity of the changing baseline energy and emissions, up or down, based on product production rates and fuel switching from fuel oil to biogas. This later assumptions on fuel, as discussed elsewhere, is the most problematic.

b) State whether the key assumptions are arrived at in a transparent manner:

>> The key assumptions concerning the baseline data and electric grid markets are transparent with the exception of :

- Emission factors for displaced grid and private power electricity – no data provided and it appears that the gird electricity emissions factor is used and the private company factor emissions factor is not even though power is bought from the private party. The explanation of why this assumption is plausible but not documented.
- Lack of information, as noted above, on production versus energy use for the baseline. It should be noted that the PDD indicates that the baseline energy use and production rates data are “scattered” which does not inspire confidence in the method or results, particularly since the data and analyses are not provided.
- Information on source and type of biogas and how its emissions are included in analyses

c) Give your expert judgement on whether the assumptions/parameters are adequate:

>> See above, insufficient documentation is provided to verify the validity of assumptions concerning baseline for this project

d) Indicate which data sources are used and how the data are obtained (e.g. official statistics,

expert judgement):

>> Information on the Mexican electricity market is not provided. Information on private power producer, from whom power is bought, is not provided. There is reference to another project (El Gallo Hydroelectric Project) for the emission factor estimation method but the actual derivation of the displaced electricity emissions factor (0.584 tCO2/MWh) is not provided. On-site data, such as acid production rates and baseline fuel usage, rely on company provided documentation. The QA/QC process is not transparently described.

e) Give your expert judgement on whether the data used are adequate, consistent, accurate and reliable:

>> Use of official data is adequate. Use of facility data requires an audit documentation procedure.

f) State possible data gaps:

>> The data gaps may consist of historical on site energy usage and production data, and post-installation project gas usage for steam and electricity production.

(7) Assessment of uncertainties:

a) State whether the methodology includes an assessment of uncertainties regarding:

i) The basis for determining the baseline scenario:

>> some discussion, but not assessed for items ii, iii, and iv below

ii) Algorithms/formulae:

>>

iii) Key assumptions:

>>

iv) Data:

>>

b) State whether the uncertainties presented are reasonable:

>> Uncertainties require discussion and possible analyses – such as validity of baseline adjustments through possible modeling of project to baseline energy differences, variations due to changes in the process (volume, distillation technique, product type, etc.) over the time period of crediting emission reductions, and uncertainties associated with the displaced electricity emission factors.

(8) Leakage:

a) State how the baseline methodology addresses any potential leakage due to the project activity:

>> Leakage is defined (by UNFCC) as "the net change of anthropogenic emissions by sources of greenhouse gases which occurs outside the project boundary, and which is measurable and attributable to the CDM project activity". The primary leakage potential is the movement of production of the industrial product (acid in this case) to or from this facility from where it is produced at another facility with higher or lower emission rates. The only explicit leakage discussion in the submitted documents relates to physical "leakage" of natural gas from pipelines.

b) Indicate whether the treatment for leakage is appropriate and adequate:

>> The limited discussion of leakage is probably adequate and conservative for this project with the condition that the following items be included within the project boundary (1) all fuel use at the project site(s) and (2) all power purchases from and sales to the grid and/or private parties for any use at the project site(s).

(9) Transparency and "conservativeness":

a) Indicate whether the baseline methodology was developed in a transparent way:

>> With respect to the displaced electricity no calculations, analyses or data are provided – only a final grid emissions factor. With respect to calculating baseline versus project fuel and electricity use, as discussed in other parts of this review, the analyses and data provided are insufficient.

b) State whether the baseline methodology is conservative:

b) >> Without further documentation and validation it is not possible to tell whether the methodology are conservative or not.

(10) Potential strengths and weaknesses of the proposed baseline methodology *(please explain)*:

>> Strengths: Addresses an excellent project concept for reducing emissions with what may be a simple and conservative methodology for estimating emission reductions as a function of industrial production rates. With additional work this could be an important generalized methodology.

Weaknesses: see A.I.iii

(11) Other considerations, such as a description of how national and/or sectoral policies and circumstances have been taken into account *(please explain)*:

>> There is discussion provided of why this project is not required under Mexican regulation of air pollution. This reviewer is not qualified in the realm of Mexican regulations to determine whether the discussion is valid. Without further information, it must be assumed that this project will not be required by national or sectorial policies.

(12) Applicability of the proposed methodology across project types and regions *(please indicate)*:

>> If this methodology incorporates certain improvements and is approved it would be applicable for industrial projects for which emission rates can be correlated to an industrial plant's product production levels and for which data can be collected on historical and post-installation project (a) industrial production quantities, (b) on-site electricity, natural gas and fuel oil use, and (c) grid electricity characteristics in terms of emission rates per unit of electricity production.

(13) Any other comments:

a) State whether any other source of information (i.e. other than documentation on this proposed methodology available on the UNFCCC CDM web site) has been used by you in evaluating this methodology. If so, please provide specific references:

>>NA

b) Indicate any further comments:

>> NA

II. Proposed new monitoring methodology ***(specify title here):*** **>> NM0086: Petrotemex Energy Integration Project**

In respect of the proposed new monitoring methodology, evaluate each section of CDM-NMM to the draft CDM-PDD. Please provide your comments section by section:

(1) Brief description of new methodology:

Describe new methodology:

>> The proposed methodology primarily involves collection of data: on baseline and project (a) fuel consumed, steam purchased and electricity purchased and sold, (b) production rates of the facility product (or other control variables that are not defined), (c) fuel emission factors (IPCC), (d) equipment efficiency factors, and (e) displaced electricity emission factors (ACM0002). The collected data are then used to estimate emissions reductions.

The methodology for this type of project is relatively simple and with post-project installation monitoring of all fuel usage, steam purchases from outside parties and electricity usage the emission savings can be calculated without concern for accuracy of initial estimates of emission reductions with one large assumption. This assumption is that the baseline energy (fuel, steam and electricity) consumption, and thus emissions, can be calculated from either (a) information about project energy consumption with the use of a baseline model (b) baseline and project equipment fuel consumption efficiencies. The assumption may be perfectly valid but there must be parameters set for determining when the model is valid or not.

(2) Key assumptions/parameters:

a) List the implicit and explicit key assumptions. Identify those, if any, which are problematic and explain:

>> Major assumptions are:

- there are accurate data available on fuel and electricity usage for the prior three years at each facility – unknown in terms of validity as data were not provided
- If baseline Option 1 is used - accurate data available on equipment efficiencies for calculating changes in fuel usage and this could be complex if there is a wide range of end-use equipment that consumes fuel without detailed knowledge of fuel consumption for each piece of equipment or system and the fuel burning efficiency of the equipment/systems; also the combustion efficiencies of older equipment will likely not be available or have varied with age from manufacturer data - – unknown in terms of validity as the analysis and data were not provided
- If baseline calculation Option 2 is used - a correlation can be made between some industrial process control variable(s) and baseline electricity and fuel usage – unknown in terms of validity as the analysis and data were not provided
- Information is available to calculate grid and private party electricity emissions factors - unknown in terms of validity since data and analyses were not provided
- use of IPCC factors for various fuel type used on site and leakage calculations

It is noted in PDD that there will not be any changes in fuel consumption (in terms of Btu content) at the Altamira facility. This may or may not be the case as there may be some incentive to increase fuel usage in order to increase power output of the new turbines or there may be changes in power consumption associated with switching from binary to azeotropic distillation. Therefore, it is critical that both baseline and project fuel analyses and monitoring be conducted.

The calculation of emissions reductions associated with electricity purchases is not well described in that the text and equations imply that there will be a change in emissions associated with electricity usage at the facilities only if electricity is sold, in the project case, back to the grid. This does not seem to account for changes in electricity related emissions from the simple reduction of electricity purchases by the facilities.

b) State whether the key assumptions are arrived at in a transparent manner:

>> *Documentation and further explanation required for monitoring methodology, collection of all required data, and QA/QC procedures.*

c) Give your expert judgement on whether the assumptions/parameters are adequate:

>> *At this time for the reasons stated above the assumptions/parameters are not adequate. As a minor point, the equation in Section B.2.2 should list factors in tons of CO_2(e) per MMBtu and clarification should be provide on use of LHV or HHV values for fuel use.*

(3) Data sources and data quality:

a) Indicate which data sources are used and how the data are obtained (e.g. official statistics, expert judgement):

>> The data sources are primarily on site (manual?) data collection without the benefit of billing data,

which would seem to be a preferred data source. Source of equipment fuel combustion efficiencies (for use when fuel switching occurs) is not indicated; this is often a difficult piece of data to obtain.

b) Give your expert judgement on whether the data used are adequate, consistent, accurate and reliable:

>> As QA/QC procedures are not defined, it is not possible to determine the adequacy, accuracy, etc. of the data sources and quality. The use of metered data from billing records or government reporting information would be preferable to what is assumed to be manual data collection by facility staff with paper records.

c) *State possible data gaps:*

>> Not clear for all facilities that ALL fuel use and All electricity use in the baseline and project cases will be collected. Need to ensure that there is sufficient and valid data available for modelling of baseline energy use and calculation of project emissions.

(4) Assessment of the description of the proposed methodology and its applicability:

a) State whether the proposed methodology has been described in an adequate manner:

>> The proposed methodology has not been described adequately as does not clarify that all required data will be collected and the QA/QC description is not adequate.

b) State whether the proposed methodology is appropriate for the referred proposed project activity and the referred project context (described in Sections A - E of the draft CDM-PDD and submitted along with CDM-NMM):

>> The methodology is not appropriate without modification.

c) State whether this proposed monitoring methodology is compatible with the proposed baseline methodology described in CDM-NMB of the draft CDM-PDD:

>> The methodology is compatible with the baseline methodology, but as discussed may have flaws.

(5) Leakage *(please elaborate, if appropriate)*:

>> Leakage is addressed in submitted documents as "Emissions from fuel production, pipeline and distribution, and CO_2 emissions from fuel transportation are considered as leakage. Emissions from fuel production/transportation is counted only if the fuel is produced/transported in a non-Annex I country." Fugitive emissions are addressed for methane. The calculated leakage is minimal and calculated with IPCC factors, which were not confirmed by this reviewer.

(6) Quality assurance and control procedures *(please explain)*:

>> QA/QC is mentioned but no description is provided of what the QA/QC procedures will actually be and how they ensure data integrity, accuracy, etc.

(7) Potential strengths and weaknesses of the proposed monitoring methodology *(please explain)*:

>> The strength of the proposed methodology is that it relies primarily on what should readily available on-site fuel and electricity consumption data available at almost all project facilities. The weaknesses are the lack of explained QA/QC procedures, inadequate documentation of analyses and assumptions, and missing data that may need to be collected.

(8) Applicability of the proposed methodology across project types and regions *(please indicate)*:

>> If the issues are resolved with this methodology it could be applicable to a wide variety of industrial projects.

(9) Any other comments:

a) State whether any other source of information (i.e. other than documentation on this proposed methodology available on the UNFCCC CDM web site) has been used by you in evaluating this methodology. If so, please provide specific references:

>>NA

b) Indicate any further comments:

>> NA

Signature of desk reviewer 

……..

Date: 20/3 /2005

Information to be completed by the secretariat	
F-CDM-NMex doc id number	
Date when the form was received at UNFCCC secretariat	
Date of transmission to the Meth Panel and EB	
Date of posting in the UNFCCC CDM web site	