JCM Validation Report Form

A. Summary of validation

A.1. General Information

Title of the project	Introduction of High Efficiency Looms in Weaving Mill
Reference number	ID 020
Third-party entity (TPE)	Japan Quality Assurance Organization (JQA) (TPE-ID-003)
Project participant contracting the TPE	Nisshinbo Textile Inc.
Date of completion of this report	27/02/2019

A.2 Conclusion of validation

Overall validation opinion	☒ Positive ☐ Negative

A.3. Overview of final validation conclusion

Only when all of the checkboxes are checked, overall validation opinion is positive.

Item	Validation requirements	No CAR or CL remaining
Project design document form	The TPE determines whether the PDD was completed using the latest version of the PDD forms appropriate to the type of project and drafted in line with the Guidelines for Developing the Joint Crediting Mechanism (JCM) Project Design Document, Monitoring Plan and Monitoring Report.	☒
Project description	The description of the proposed JCM project in the PDD is accurate, complete, and provides comprehension of the proposed JCM project.	☒
Application of approved JCM methodology (ies)	The project is eligible for applying applied methodology and that the applied version is valid at the time of submission of the proposed JCM project for validation.	☒
Emission sources and calculation of emission reductions	All relevant GHG emission sources covered in the methodology are addressed for the purpose of calculating project emissions and reference emissions for the proposed JCM project.	☒
	The values for project specific parameters to be fixed *ex ante* listed in the Monitoring Plan Sheet are appropriate, if applicable.	☒
Environmental impact assessment	The project participants conducted an environmental impact assessment, if required by the Republic of Indonesia, in line with Indonesia's procedures.	☒
Local stakeholder	The project participants have completed a local stakeholder consultation process and that due steps were taken to engage	☒

Item	Validation requirements	No CAR or CL remaining
consultation	stakeholders and solicit comments for the proposed project unless a local stakeholder consultation has been conducted under an environmental impact assessment.	
Monitoring	The description of the Monitoring Plan (Monitoring Plan Sheet and Monitoring Structure Sheet) is based on the approved methodology and/or Guidelines for Developing the Joint Crediting Mechanism (JCM) Project Design Document, Monitoring Plan, and Monitoring Report. The monitoring points for measurement are appropriate, as well as whether the types of equipment to be installed are appropriate if necessary.	☒
Public inputs	All inputs on the PDD of the proposed JCM project submitted in line with the Project Cycle Procedure are taken into due account by the project participants.	☒
Modalities of communications	The corporate identity of all project participants and a focal point, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories are included in the MoC.	☒
	The MoC has been correctly completed and duly authorized.	☒
Avoidance of double registration	The proposed JCM project is not registered under other international climate mitigation mechanisms.	☒
Start of operation	The start of the operating date of the proposed JCM project does not predate January 1, 2013.	☒

Authorised signatory:	Mr. ☒ Ms. ☐
Last name: Asada	First name: Sumio
Title: Senior Executive	
Specimen signature:	Date: 27/02/2019

[redacted]

B. Validation team and other experts

	Name	Company	Function*	Scheme competence*	Technical competence*	On-site visit
Mr. ☒ Ms. ☐	Tadashi Yoshida	JQA	Team leader	☒	Authorized	☐
Mr. ☒ Ms. ☐	Irhan Febijanto	External individual	Team member	☒	Authorized	☒
Mr. ☐ Ms. ☒	Sachiko Hashizume	JQA	Internal Reviewer	☒	Authorized	☐

Please specify the following for each item.

* *Function: Indicate the role of the personnel in the validation activity such as team leader, team member, technical expert, or internal reviewer.*

* *Scheme competence: Check the boxes if the personnel have sufficient knowledge on the JCM.*

* *Technical competence: Indicate if the personnel have sufficient technical competence related to the project under validation.*

C. Means of validation, findings, and conclusion based on reporting requirements

C.1. Project design document form

<Means of validation>

The PDD form was checked and confirmed as complete in accordance with the JCM Guidelines for Developing Project Design Document and Monitoring Report (JCM_ID_GL_PDD_MR_ver03.0). The latest version of the JCM PDD form (JCM_ID_F_PDD_ver02.0) is used for the PDD of the proposed project (Version 01.0 dated 30/10/2018 for the first edition and Version 02.0 dated 31/01/2019 for Second edition). The validation was conducted on the first edition of the PDD.

<Findings>

No issue was raised to the requirement.

<Conclusion based on reporting requirements>

JQA concludes that the PDD is completed using the valid version of the PDD form and drafted in line with the JCM Guidelines for Developing Project Design Document and Monitoring Report.

C.2. Project description

<Means of validation>

The purpose of the project is to achieve GHG emission reductions by replacing the existing

weaving looms with highly efficient air jet looms at an existing textile factory. The project is located at the factory of PT. Nikawa Textile Industry in Karawang Regency, West Java Province, Indonesia, and has installed 81 units of the latest model air jet looms, *i.e.*, JAT810, made by Toyota Industries Corporation. Toyota JAT810 is able to reduce air consumption for weft insertion by more than 15% compared to the conventional model (JAT710) and this effect contributes to the reduction of CO_2 emission from the power consumption of air-compressors. Thus, the proposed project would achieve 430 tCO_2 of the annual emission reductions and 3,010 tCO_2 of emission reductions for the period of 2018 – 2025.

The air-saving of more than 20% of the latest model air jet loom (JAT810) has been achieved with modification of weft insertion system and the combined use of newly developed e-REED and sub nozzle. The sub nozzle consumes 90% of air supplied by air compressor. Thus, the reduction of both air pressure and air volume contributes not only to the reduction of CO_2 emission from the power consumption of air compressor but also to the reduction of running cost.

The proposed project is implemented by PT. Nikawa Textile Industry from Republic of Indonesia and Nisshinbo Textile Inc. from Japan. The installation of JAT810 was commenced in 2016 and satisfactorily completed in June 2018, which is supported by the Certificate of Confirmation signed by PT. Nikawa Textile Industry and Toyota Industries Corporation. The starting date of the monitoring activity was set to 01/07/2018 after the complete installation of 81 units of JAT810. The expected operational lifetime of the project is 7 years, which is based on the statutory useful life of the proposed technology according to National Tax Administration Agency of Japan.

The proposed project was partially financed by Ministry of the Environment, Japan, through the Financing Programme for JCM model projects, which provides financial support of less than half of the initial investment for the projects in order to acquire JCM credits. Further, Nisshinbo Textile Inc. has promoted technology transfer through OJT training on the operation and maintenance of JAT810 for the engineering staffs of PT. Nikawa Textile Industry.

JQA has assessed the PDD and the supporting documents through the desk review and on-site assessment conducted on 16/01/2019 to validate the requirements about accuracy and completeness of the project description. The details of the persons interviewed and documents reviewed are provided in Section E of this report.

Regarding the starting date of project operation and the expected operation lifetime of the project, JQA raised CL 01 and this issue was resolved as explained in “Findings”.

<Findings>

< CL 01 >

The PPs are requested to justify the starting date (01/01/2017) and operational lifetime (9 years) of the proposed project based on the supporting documents.

< Resolution by the PPs >

The starting date of the project activity is set after all of the 81 air jet looms subject to the JCM model project are installed. The determined starting date is 1st July 2018. The PDD has been revised accordingly. Also, the operational lifetime of the project is set to 7 years based on the statutory useful life of the proposed technology according to National Tax Administration Agency of Japan.

https://www.keisan.nta.go.jp/survey/publish/34255/faq/34311/faq_34360.php

< Assessment by the TPE >

It is confirmed through the review of the relevant documents and the interview with the PPs that the starting date of the project activity was set to 01/07/2018 after the installation of 81 units of JAT810 was completed on 29/06/2018. It is also confirmed through the review of the relevant document from National Tax Administration Agency of Japan that the lifetime of the project facility is determined to 7 years. Thus, CL 01 is closed.

<Conclusion based on reporting requirements>

JQA concludes that the description of the proposed project in the revised PDD complies with the supporting documents and information obtained through the desk review, on-site visit and the interview with the PPs, and the description is accurate and complete.

C.3. Application of approved methodology(ies)

<Means of validation>

The approved methodology JCM_ID_AM011_ver01.0 "Installation of energy saving air jet loom at textile factory, Version 01.0" is applied to the proposed project. The methodology is approved by the JC on 10/02/2017 (JC6, Annex 3) and valid at the time of the validation.

JQA has assessed whether the selected methodology is applicable to the proposed project. The project applicability was checked against two eligibility criteria contained in the approved methodology. The project information for each eligibility criterion and the assessment/ conclusion about its applicability to the proposed project are summarized in the following table.

Eligibility criteria	Descriptions specified in the methodology	Project information	Assessment and conclusion

Criterion 1	The project replaces existing air jet looms at a weaving factory with air jet looms equipped with energy saving technologies such as an optimized shape reed's tunnel of nozzles and a pressure sensor to measure air pressure of nozzles for optimization of compressed air consumption of welt insertion.	The project replaces existing air jet looms at a weaving factory with JAT810, which are equipped with energy saving technologies such as an optimized shape reed's tunnel of nozzles and a pressure sensor to measure air pressure of nozzles for optimization of compressed air consumption of welt insertion.	It is confirmed through the review of the relevant documents, the on-site inspection and the interview with the PPs that the existing air jet looms at PT. Nikawa Textile Industry have been replaced with highly efficient air jet looms (Toyota JAT810) which is equipped with optimized shape reed's tunnel of nozzles and a sensor to monitor air pressure of nozzles for controlling the air consumption of welt insertion. Hence, the proposed project meets Criterion 1.
Criterion 2	The air jet looms which are installed by the project reduce the specific air consumption by at least 15% compared with the reference air jet looms in line with the description in Section I of this methodology.	The air jet looms JAT810 which are installed by the project reduce the specific air consumption by more than 15% compared with the reference air jet looms.	It is confirmed through the review of the relevant documents, the on-site inspection and the interview with the PPs that JAT810 is able to reduce the specific air consumption by about 20% compared to the reference air jet looms (JAT710). Hence, the proposed project meets Criterion 2.

<Findings>

No issue was raised to the requirement.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

JQA concludes that the proposed project is eligible for applying the valid version of the methodology ID_AM011_ver01.0 and all eligibility criteria have been met by the proposed project.

C.4. Emission sources and calculation of emission reductions

<Means of validation>

The proposed project aims to reduce CO_2 emissions from electricity consumption by air compressor which supplies the compressed air to air jet looms at the textile factory where the existing air jet looms (JAT710) have been replaced with highly efficient air jet looms (JAT810). The implementation of the proposed project is expected to reduce the air consumption by more than 15% compared to the reference air jet loom. Reference emissions are sourced from the electricity consumption by air compressors for the reference air jet looms (JAT710) and project emissions are sourced from the electricity consumption by air compressor for the project air jet looms (JAT810).

Reference emissions are calculated by Equation (1), in accordance with the methodology ID_AM011:

$$RE_p = \sum(SEC_j \times \sum(SAC_{PJ,iI,j} \times AP_{PJ,I,j,p}) / (1 - RR_{i,j}/100) \times EF_{elec,j}) \quad \text{----------} \quad (1)$$

Where:

RE_p : Reference emissions during the period *p* [tCO_2/p]

SEC_j : Specific electricity consumption of the air compressors at the project factory *j* [kWh/Nm^3]

$SAC_{PJ,I,j}$: Specific air consumption of the project air jet loom type *i* at the project factory *j* [Nm^3/m]

$RR_{i,j}$: Reduction rate of specific air consumption of the project air jet loom type *i* at the project factory *j* [%]

$AP_{PJ,I,j,p}$: Amount of fabric woven by the project air jet loom type *i* at the project factory *j* during the period *p* [m/p]

$EE_{elec,j}$: CO_2 emission factor for consumed electricity at the project factory *j* [tCO_2/kWh]

i : Identification number of the project air jet loom type, differentiated according to, for example, models

j : Identification number of the project factory

The default values of SEC_j, $SAC_{PJ,I,j}$ and $RR_{i,j}$, project-specific parameter to be fixed *ex-ante*, used in the calculation of reference emissions for electricity consumption of the air compressor are 0.1005kWh/Nm^3, 1.74Nm^3/m and 20.0%, respectively, which were determined by the experiments. The value of $EE_{elec,j}$ is 0.000877 tCO_2/kWh for JAMALI grid (*ex-post* value) which is sourced from "Emission Factor of Electricity Interconnection Systems (2016)", National Committee on Clean Development Mechanism (Indonesian DNA for CDM), based on data obtained by Directorate General of Electricity, Ministry of Energy and Mineral

Resources, Indonesia.

Project emissions are calculated by Equation (2), in accordance with the methodology ID_AM011:

$$PE_p = \sum(SEC_j \times \sum(SAC_{PJ,iI,j} \times AP_{PJ,I,j,p}) \times EF_{elec,j}) \quad \text{----------} \quad (2)$$

Where:

PE_p : Project emissions during the period *p* [tCO_2/p]

SEC_j : Specific electricity consumption of the air compressors at the project factory *j* [kWh/Nm^3]

$SAC_{PJ,I,j}$: Specific air consumption of the project air jet loom type *i* at the project factory *j* [Nm^3/m]

$AP_{PJ,I,j,p}$: Amount of fabric woven by the project air jet loom type *i* at the project factory *j* during the period *p* [m/p]

$EE_{elec,j}$: CO_2 emission factor for consumed electricity at the project factory *j* [tCO_2/kWh]

i : Identification number of the project air jet loom type, differentiated according to, for example, models

j : Identification number of the project factory

Thus, the GHG emission reductions during the period *p* are calculated by Equation (3), in line with the approved methodology:

$$ER_p = RE_p - PE_p \quad \text{----------} \quad (3)$$

The *ex-ante* value of the monitoring parameter ($AP_{PJ,I,j,p}$) used in the calculation of emission reductions in the MPS are estimated based on the monitoring data of fabric woven during the period of March - May 2018. As a result, 11,225,759 m of fabric woven is estimated for the proposed project.

Thus, the annual emission reductions are calculated as follows:

$$ER_p = RE_p - PE_p$$
$$= \sum(SEC_j \times \sum(SAC_{PJ,iI,j} \times AP_{PJ,I,j,p}) / (1 - RR_{i,j}/100) \times EF_{elec,j}) - \sum(SEC_j \times \sum(SAC_{PJ,iI,j} \times AP_{PJ,I,j,p}) \times EF_{elec,j})$$
$$= (0.1005 \times 1.74 \times 11{,}225{,}759 / (1\text{-}20.0/100) \times 0.000877) - (0.1005 \times 1.74 \times 11{,}225{,}759 \times 0.000877)$$

= 430 tCO_2

The annual GHG emission reductions are estimated to be 430 tCO_2 and the sum of the emission reductions for the period of 2018 – 2025 is estimated to be 3,010 tCO_2.

It is confirmed through the review of relevant documents and on-site assessment that all GHG emission sources specified by the applied methodology are identified, and the reference emissions (RE_p), project emissions (PE_p) and emission reductions (ER_p) in the PDD (ver.2.0) and Monitoring Plan Sheet are correctly calculated, in accordance with the methodology ID_AM011_ver01.0.

Regarding the values of SEC_j and $RR_{i,j}$ to be fixed *ex-ante* and the value of $AP_{PJ,i,j}$ to be monitored *ex-post* in the MPS, JQA raised CL 04, CL 05 and CL 06 and these issues were resolved as explained in "Findings".

<Findings>

< CL 04 >

Methodology ID_AM011 requires that the most conservative value of SEC_j at the project factory is selected from the multiple air compressors. The PPs are requested to clarify how 0.1011 kWh/Nm^3 for SEC_j is determined.

< Resolution by the PPs >

The value of SEC_j has been revised to 0.1005 kWh/Nm^3, in accordance with the applied methodology ID_AM011.

< Assessment by the TPE >

It is confirmed through the review of the relevant documents and the revised MPS that the most conservative value of SEC_j, *i.e.*, 0.1005 kWh/Nm^3, was selected among three air compressors used at the project factory. Thus, CL 04 is closed.

< CL 05 >

The methodology ID_AM011 requires that the value of $RR_{i,j}$ at the project factory is fixed as an average of reduction rate of specific air consumption for each fabric type woven as per project air jet loom type. The PPs are requested to clarify how 20% for $RR_{i,j}$ is determined.

< Resolution by the PPs >

The PPs selected the value of 20% as the default value for $RR_{i,j}$, based on the Toyota JAT 810 catalogue which showed the expected minimum value of air reduction ratio compared to

the previous model JAT710.

< Assessment by the TPE >

It is confirmed through the review of the relevant documents issued by the manufacturer that the project air jet loom (JAT810) is able to save significant air consumption over 20% by the combined use of newly developed sub nozzle and e-REED, compared to the existing air jet looms (JAT710). Furthermore, this value (20%) is smaller than the average of reduction rate of specific air consumption for each fabric type woven (23.2%) and therefore it is conservative. Thus, CL 05 is closed.

< CL 06 >

PP is requested to clarify why the value of 1.5 times as large as the total fabric woven production obtained during March-May 2018 is applied for the ex-ante estimates of $AP_{PJ,I,j,p}$ in the proposed project.

< Resolution by the PPs >

The fabric woven production obtained from March to May 2018 represents the fabric woven production by 54 units of the air jet looms. The multiplying factor of 1.5 was applied in the *ex-ante* estimation for the amount of fabric woven production for 81 units of air jet looms.

< Assessment by the TPE >

It is confirmed through the review of relevant documents and the interview with the PPs that the multiplying factor of 1.5 (=81/54) comes from the ratio of the installed number of air jet looms before and after the completion of installation of 81 units in June 2018. Thus, CL 06 is closed.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

JQA confirms that all emission sources and GHG types specified in the approved methodology are appropriately identified. JQA concludes that the value of parameter ($AP_{PJ,I,j,p}$) to be monitored *ex-post* in the MPS is correctly estimated based on the historical data of fabric woven, and the values of the project-specific parameters to be fixed *ex-ante* listed in the MPS (SEC_j, $SAC_{PJ,i,j}$ and $RR_{i,j}$) are also correctly determined by the experiments. Further, the equations to calculate reference emissions, project emissions and emission reductions for the proposed project are appropriately derived and the annual emission reductions are correctly calculated using parameters and data in the MPS.

C.5. Environmental impact assessment

<Means of validation>

The proposed project is to reduce CO_2 emissions from electricity consumption of air compressor by replacing the existing air jet loom with the highly efficient air jet loom at the textile factory. The PDD states that an Environmental Impact Assessment (EIA) is not required, because the proposed project does not conduct a physical development with an impact to the society as well as the environment around the project site. According to the Ministry of Environment decree no 05 year 2012 and the EIA Guidebook for Japanese Companies in Overseas Business Development, published by Institute for Global Environmental Strategies (IGES) on March 2015, there is no stipulation which requires EIA assessment to such kind of the technology implementation. Therefore, JQA confirms that EIA is not required.

Regarding the EIA in Indonesia, JQA raised CL 03 and this issue was resolved as explained in "Findings".

<Findings>

< CL 03 >

The PPs are requested to explain the reason why EIA is not required for the proposed project.

< Resolution by the PPs >

Based on the Ministry of Environment decree no 05 year 2012 regarding activities which requires EIA (Environmental Impact Assessment), the proposed JCM project is not subject to the EIA.

< Assessment by the TPE >

It is confirmed through the review of the Ministry of Environment decree no 05 year 2012 and EIA Guidebook for Japanese Companies in Overseas Business Development published by IGES that the type of the proposed project does not require the EIA. Thus, CL 03 is closed.

<Conclusion based on reporting requirements>

JQA concludes that the proposed project does not require the EIA. The implementation of the project is in line with the regulations in the Republic of Indonesia and the requirements of the JCM.

C.6. Local stakeholder consultation

<Means of validation>

The PPs conducted a local stakeholder consultation under the EIA at PT. Nikawa Textile Industry in Kabupaten Karawang on 04/09/2018. Prior to the meeting, the invitation letter was delivered to the stakeholders on 08/08/2018.

The list of the participants for Local Stakeholders' Consultation Meeting is as follows:

- Indonesia JCM Secretariat
- Coordinating Ministry of Economic Affairs (CMEA)
- Directorate of Energy Conservation, Directorate General of New Renewable Energy and Energy Conservation, Ministry of Energy and Mineral Resources of Indonesia (MEMR)
- Center for Research and Development for Green Industry and Environment (PPIHLH), Ministry of Industry of Indonesia
- Indonesia Textile Association (API)
- Production and Industry Bureau, West Java Province
- Energy and Mineral Resources Agency, West Java Province
- Nisshinbo Textile Inc.
- Toyota Industries Corporation
- PT. Anugerah Texindotama
- PT. Nikawa Textile Industry
- Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.

The local stakeholders provided positive comments for the proposed project. No negative issues that require actions to be taken by the PPs were raised through the consultation. It is confirmed through the review of the relevant documents and the interview with the PPs that the stakeholder consultation process was appropriately conducted to collect stakeholders' opinions on the project. The summary of the comments received in the consultation and due account of all comments taken by the PPs are fully described in the PDD.

<Findings>

No issue was raised to the requirement.

<Conclusion based on reporting requirements>

JQA concludes that the PPs have completed a local stakeholder consultation process under the EIA and invited comments on the proposed project from the local stakeholders. The summary of the comments received is provided in the PDD in a complete manner and the PPs have taken due account of all the comments received and described this process in the PDD.

C.7. Monitoring

<Means of validation>

The Monitoring Plan consists of the Monitoring Plan Sheet and Monitoring Structure Sheet which comply with the approved Methodology JCM_ID_AM011_ver01.0. A monitoring parameter, *i.e*., amount of fabric woven by the project air jet loom type *i* at the project factory *j* during the period *p* ($AP_{PJ,i,j,p}$), is measured by the meter installed to the project air jet loom. The amount of the fabric woven by each loom is recorded in the PC server located in the control room as illustrated by the figure in Section C.2 of the PDD.

The monitoring parameter of $AP_{PJ,I,j,p}$ is monitored every production lot and aggregated monthly. The aggregated data is double-checked by a responsible staff on a monthly basis to prevent the missing of data. The calibration of the meter is not required as per the methodology ID_AM011 which states that the fabric is a commercial commodity under contract with a client and is subject to an accurate measurement.

The roles and responsibilities of the personnel are described in Monitoring Structure Sheet. The monitoring structure consists of Plant Engineer, Project Engineer and Project Manager. Plant Engineer is in charge of data collection, checking of monitoring equipment and keeping/archiving monitored data. Project Engineer is in charge of emission reduction calculation. Project Manager is responsible for the project planning, monitoring result and reporting. All monitored data which are required for verification and issuance is kept and archived for two years after the final issuance of credits.

It is confirmed through the review of the relevant documents, on-site inspection and the interview with the PPs that the monitoring plan complies with the requirements of the approved methodology and the PPs are able to implement the monitoring activity appropriately according to the monitoring plan.

Regarding the location of the monitoring point 1, JQA raised CL 02 and this issue was resolved as explained in "Findings".

<Findings>

< CL 02 >

The PPs are requested to illustrate the location of monitoring point 1 clearly which monitors total length of fabric woven production in Figure of Section C.2.

< Resolution by the PPs >

The PDD has been revised and the location of monitoring point 1 for total length of fabric woven production is now clearly indicated in the figure of C.2.

< Assessment by the TPE >

It is confirmed through the review of the revised PDD that the monitoring point 1 for the monitoring parameter of $AP_{PJ,I,j,p}$ is appropriately revised in the figure of Section C.2. Thus, CL 02 is closed.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

JQA concludes that the description of the MPS is based on the methodology ID_AM011 and JCM Guidelines for Developing Project Design Document and Monitoring Report, and the monitoring point as well as measuring equipment is also appropriate. Thus, the PPs have demonstrated feasibility of the monitoring structure and their abilities to implement the monitoring activity appropriately.

C.8. Modalities of Communication

<Means of validation>

The MoC was provided to JQA for review on 07/01/2019, in the valid form (JCM_ID_F_MoC_ver01.0) at the time of validation, in which Nisshinbo Textile Inc. is nominated as the focal point. The MoC was signed by the authorized representatives of PT. Nikawa Textile Industry on 03/09/2018 and by the authorized representatives of Nisshinbo Textile Inc. on 03/09/2018, along with the contact details.

JQA has checked the personal identities including specimen signatures and employment status of the authorized signatories directly through the interview with the PPs during on-site assessment. Primary authorized signatory of Nisshinbo Textile Inc. is Director, and alternate authorized signatory is Senior Manager of Production Control Department. Primary authorized signatory of PT. Nikawa Textile Industry is President, and alternate authorized signatory is Director of Weaving Department.

It is confirmed that all corporate and personal details including specimen signatures and the information in the MoC are valid and accurate as requested in the JCM Guidelines for Validation and Verification.

<Findings>

No issue was raised to the requirement.

<Conclusion based on reporting requirements>

JQA concludes that the MoC is completed using the valid version of the form, and the

information and the specimen signature of the PPs provided in the MoC are correct and sufficient, in compliance with the requirements of the JCM Guidelines. It is demonstrated that the MoC is correctly completed and dully authorized.

C.9. Avoidance of double registration

<Means of validation>

The representative of focal point entity in the MoC, Director of Production Control Department of Nisshinbo Textile Inc., declares that the proposed project is not registered under any other international climate mitigation mechanism other than the JCM. It is confirmed through the check of publicly available information (e.g. CDM/JI website, etc.) that the proposed project is not registered under any other international climate mitigation mechanisms in terms of the name of entity, applied technology, scale and location. Thus, it can be concluded that the proposed project will not result in double counting of GHG emission reductions.

<Findings>

No issue was raised to the requirement.

<Conclusion based on reporting requirements>

JQA concludes that the proposed project is not registered under any other international climate mitigation mechanisms and hence will not result in double counting of GHG emission reductions.

C.10. Start of operation

<Means of validation>

For the proposed project, the commissioning of the project facilities was satisfactorily completed on 29/06/2018 and the starting date of monitoring activity was set to 01/07/2018. It is confirmed through the review of relevant documents, on-site assessment and the interview with the PPs that the starting date of the proposed project given in the PDD, 01/07/2018, was determined as the date which the monitoring activity of the project operation actually commenced.

<Findings>

No issue was raised to the requirement.

<Conclusion based on reporting requirements>

JQA concludes that the starting date of project operation, 01/07/2018, is correct and does not predate 01/01/2013 as required by the Guideline of the JCM project.

C.11. Other issues

<Means of validation>

No more issues are raised in the validation of the proposed project.

<Findings>

Not applicable.

<Conclusion based on reporting requirements>

Not applicable.

D. Information on public inputs

D.1. Summary of public inputs

In line with the JCM Project Cycle Procedure, the PDD was made publicly available for 30 days from 26/12/2018 to 24/01/2019 to invite public comments on the following JCM website: https://www.jcm.go.jp/id-jp/projects/58

No public comments were received.

D.2. Summary of how inputs received have been taken into account by the project participants

Not applicable.

E. List of interviewees and documents received

E.1. List of interviewees

- Ryuichi OIKAWA President Director, PT. Nikawa Textile Industry
- Ryuji SHIBATA Director, PT. Nikawa Textile Industry
- Yoshiyuki KATAYAMA Senior Manager, Nisshinbo Textile Inc.

- Chisato NAKADE	Senior Consultant, Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
- Ricky Tagar Risnauli	Senior Consultant, Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.

E.2. List of documents received

1. PDD, ver. 01.0, 30/10/2018, ver. 02.0, 31/01/2019
2. Monitoring Plan Sheet and Monitoring Structure Sheet, ver. 01.0, 30/10/2018, ver. 02.0, 31/01/2019
3. JCM Modalities of Communication Statement Form (MoC) dated 21/12/2018
4. JCM Approved Methodology ID_AM011_ver01.0, 10/02/2017, JC6, Annex 3
5. JCM Glossary of Terms (JCM_ID_Glossary_ver02.0)
6. JCM Project Cycle Procedure (JCM_ID_PCP_ver05.0)
7. JCM Modalities of Communication Statement Form (JCM_ID_F_MoC_ver01.0)
8. JCM Guidelines for Developing Project Design Document and Monitoring Report (JCM_ID_GL_PDD_MR_ver03.0)
9. JCM Project Design Document Form (JCM_ID_F_PDD_ver02.0)
10. JCM Guidelines for Validation and Verification (JCM_ID_GL_VV_ver01.0)
11. JCM Validation Report Form (JCM_ID_F_Val_Rep_ver01.0)
12. Outline of Nisshinbo textile project

13-1. Business plan of JCM project “Introduction of High Efficiency Looms in Weaving Mill”

13-2. Report on the implementation of JCM project “Introduction of High Efficiency Looms in Weaving Mill”

14. Company profile of PT. Nikawa Textile Industry
15. Company profile of Nisshinbo Textile Inc.
    https://www.nisshinbo.co.jp/profile/pdf/corporate_profile.pdf
16. Catalogue of air jet loom JAT810 manufactured by Toyota Industries Corporation

17-1. Confirmation of installation of 27 units of JAT 810 (JA2S-190ES-EF-T810) at PT. Nikawa Textile Industry on 01/12/2016

17-2. Confirmation of installation of 27 units of JAT 810 (JA2S-190ES-EF-T810) at PT. Nikawa Textile Industry on 08/09/2017

17-3. Confirmation of installation of 27 units of JAT 810 (JA2S-190ES-EF-T810) at PT. Nikawa Textile Industry on 29/06/2018

18. Statutory useful life the equipment according to National Tax Administration Agency of Japan

(http://elaws.egov.go.jp/search/elawsSearch/elaws_search/lsg0500/detail?lawId=340M50000040015_20180401_430M60000040031&openerCode=1)

19. Air consumption data of JAT710 and JAT810 for each category
20. Schematic diagram of monitoring structure including information and data flow
21. Invitation letter for LSC meeting dated 08/08/2018
22. Minutes of LSC meeting on 04/09/2018
23. MRV of the project presented at the LSC meeting
24. LSC attendance list
25. Introduction of Toyota project technologies
26. Inspection record of No.2 turbo compressor (TRE50-500kW) issued by IHI Corp. dated July 2004
27. Inspection record of No.3 turbo compressor (TRA40-400kW) issued by IHI Corp. dated Dec 2010
28. Inspection record of No, 5 turbo compressor (TRE50-500kW) issued by IHI Corp. dated Nov 2007
29. Documents on the determination of $SAC_{PJ,i,j}$ and $RR_{i,j}$ to be fixed *ex-ante* and $AP_{PJ,Ii,j,p}$ to be monitored *ex-post*
30. Documents on the determination of SEC_j to be fixed *ex-ante*
31. 2016 CO_2 emission factor of the grids in Indonesia, sourced from “Emission Factors of Electricity Interconnection Systems”, National Committee on Clean Development Mechanism (Indonesian DNA for CDM).
32. Sample of daily monitoring data of fabric woven in July 2018
33. Ministry of Environmental decree No.5: 2012
34. Indonesia EIA Guidebook issued by IGES, March 2015

Annex Certificates or curricula vitae of TPE's validation team members, technical experts and internal technical reviewers

Please attach certificates or curricula vitae of TPE's validation team members, technical experts and internal technical reviewers.

Statement of competence

Name: Dr. Tadashi Yoshida

Qualified and authorized by Japan Quality Assurance Organization.

Function	Date of qualification
Validator	2014/12/22
Verifier	2014/12/22
Team leader	2014/12/22

Technical area within sectoral scopes	Date of qualification
TA 1.1. Thermal energy generation	2014/12/22
TA 1.2. Renewables	2014/12/22
TA 3.1. Energy demand	2014/12/22
TA 4.1. Cement and lime production	2015/11/12
TA 4.6. Other manufacturing industries	2014/12/22
TA 5.1. Chemical industry	2014/12/22
TA 10.1. Fugitive emissions from oil and gas	2014/12/22
TA 13.1. Solid waste and wastewater	2014/12/22
TA 14.1. Afforestation and reforestation	-

Statement of competence

Name: Dr. Irhan Febijanto

Qualified and authorized by Japan Quality Assurance Organization.

Function	Date of qualification
Validator (JCM project only)	2017/8/21
Verifier (JCM project only)	2017/8/21
Team leader	-

Technical area within sectoral scopes	Date of qualification
TA 1.1. Thermal energy generation	2014/12/22
TA 1.2. Renewables	-
TA 3.1. Energy demand	2014/12/22
TA 4.1. Cement and lime production	-
TA 4.6. Other manufacturing industries	-
TA 5.1. Chemical industry	-
TA 10.1. Fugitive emissions from oil and gas	-
TA 13.1. Solid waste and wastewater	-
TA 14.1. Afforestation and reforestation	-

Statement of competence

Name: Ms. Sachiko Hashizume

Qualified and authorized by Japan Quality Assurance Organization.

Function	Date of qualification
Validator	2015/11/20
Verifier	2015/11/20
Team leader	2018/6/22

Technical area within sectoral scopes	Date of qualification
TA 1.1. Thermal energy generation	2015/11/20
TA 1.2. Renewables	2015/11/20
TA 3.1. Energy demand	2015/11/20
TA 4.1. Cement and lime production	-
TA 4.6. Other manufacturing industries	-
TA 5.1. Chemical industry	-
TA 10.1. Fugitive emissions from oil and gas	-
TA 13.1. Solid waste and wastewater	2015/11/20
TA 14.1. Afforestation and reforestation	-