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ITS PROTOCOL and TRACEABILITY at JA SOLAR GENERAL OVERVIEW

Part 1: SUPPLY CHAIN TRACEABILITY REQUIREMENTS – ITS PROTOCOL

JA Solar has taken the lead in traceability protocol with the JA Integrated Traceability System (ITS) mapping and labelling. The system is aimed at determining the geographical locations of the silicon based product used in the Product and the location of each processing step used in the supply chain from Modules, Cells, Wafer, Ingot to polysilicon. It describes the traceability system in place, ensuring transparency and compliance in sourcing and production and labelling of modules. Below are the approved suppliers and labelling examples.

1. Restricted Use of Factory, Polysilicon Locations and Labelling

1.1 Sellers Factories

The Seller is required to use only the factories listed below for the production of all silicon-based products.

Process	Company name	Locations
Ingot	Baotou JA Solar Technology Co., Ltd	Baotou, China
Ingot	Xingtai Jinglong New Energy Co., Ltd	Hebei Province, China
Wafer	Donghai JA Solar Technology Co., Ltd.	Jiangsu Province, China
Wafer	Xingtai Jinglong Electronic material Co., Ltd.	Hebei Province, China
Wafer	Qujing JA Solar	Qujing, China
Cell	JingAo Solar Co., Ltd.	Hebei Province, China
Cell	Qujing JA Solar	Qujing, China
Cell	Dongtai JA Solar	Jiangsu Province, China
Module	Dongtai JA Solar	Jiangsu Province, China
Module	JA SOLAR (XINGTAI) CO., LTD.	Hebei Province, China
Module	Hefei JA Solar Technology Co., Ltd.	Anhui Province, China

Where exacting details of the Supplier Factory Locations are listed in Exhibit A

1.2 Approved Polysilicon Suppliers

The Seller may procure and use only materials from the Polysilicon suppliers from the Companies and Production Regions listed below for manufacturing modules under this agreement. Failure to comply can entitle the Purchaser to reject the relevant batch of Products.

No.	Company Reference	Locations
1	Tongwei	Sichuan, Inner Mongolia
2	Asia Silicon	Qinghai
3	Dongli	Inner Mongolia
4	GCL	Jiangsu, Sichuan, Inner Mongolia
5	Xinte	Inner Mongolia
6	NanBo	Qinghao

Where exacting details of the Supplier Factory Locations are listed in Exhibit C.

1.3 Product Labelling

Products will include reasonable and clear labelling on the module indicating the specific seller's factories used in their production.

This labelling shall include codes detailed in the List of Seller Designated Suppliers and Sellers Factories with the details of the code detailed in Exhibit B.

2. Supplier Mapping and Factory Utilization Mandate

2.1 Supply Chain Mapping in Contract and Production

The initial supply chain map is provided as part of the contract (Exhibit A), outlining potential factories for each manufacturing stage: ingot, wafer, cell, and module

The Seller must furnish the definitive supply chain map, specifying the actual Seller factories to be used in production, no later than one month prior to the commencement of production.

These specified factories, as detailed in the definitive map, constitute the exclusive locations authorized for production.

2.2 Traceability System Report Audit

The objective is to investigate the supply chain map, particularly examining the traceability systems in place at the sellers factories listed in the map thorough examination of documentation, record-keeping systems, and supply chain maps to assess the integrity and effectiveness of traceability systems at these facilities.

Where Key Elements include the review of systems in place to accurately track:

- Supply chain maps, vendor markers, batch/lot identification, and origin marking methods.
- Documentation of supply chain transactions: contracts (with specific contract numbers), purchase orders, invoices, bill(s) of lading, delivery records, and their link to material, vendor, and batch/lot identifiers.
- System-level procedures and operations-level processes for control over input materials: raw material planning & purchasing, receiving, warehousing, incoming raw material identification, Warehouse Management System (WMS), Manufacturing Execution System (MES), Enterprise Resource Planning (ERP), labelling, packaging, inventory, and shipping procedures.
- Traceability infrastructure features and protocols for data collection, records maintenance, reporting, and inquiry handling.

These audits are aimed at ensuring that the factories listed in the supply chain are able to adhere to the required standards of traceability and can reasonably be able to comply with stipulated supply chain requirements.

Exhibit A: Seller Factory Locations

Short ref	Company name	Address
Baotou	Baotou JA Solar Technology Co., Ltd	21 Equipment Avenue, New Planning Area, Equipment Park, QingShan District, Baotou City.
Donghai	Donghai JA Solar Technology Co., Ltd.	Guangming Road, Economic Development Zone, Donghai County, Lianyungang City, Jiangsu Province.
Qujing	Qujing JA Solar	North of Nanhai Avenue and east of Shaoxi Road, Qujing Economic and Technological Development Zone, Qujing City, Yun Nan Province
XIngtai New energy	Xingtai Jinglong New Energy Co., Ltd	No. 188 XinDu Road, Xingtai Development Zone, Xingtai City, Hebei Province, China
Xingtai Jinglong	Xingtai Jinglong Electronic material Co., Ltd.	Xingda Street, Nanyuan district, Xintai dev. zone, Xingtai, Hebei Province
Xingtai	JA SOLAR (XINGTAI) CO., LTD.	1688 CHANGAN ROAD， ECONOMIC DEVELOPMENT ZONE, XINGTAI，HEBEI PROVINCE， CHINA
Hefei	Hefei JA Solar Technology Co., Ltd.	No. 999, Changning Avenue, Gaoxin District, Hefei City, Anhui Province, China
Ningjin	JingAo Solar Co., Ltd.	5th Jinglong Industrial Park, No. 123 Xinxing Road Ningjin, Xingtai City, Hebei Province, China

ShJIaZhuang	Shi Jia ZHUANG JA Solar	No. 377, Yanshan Street, High-tech Zone, Shijiazhuang City, Hebei Province , China
Dongtai	Dongtai JA Solar	No. 8, North Zaofeng Road, Dongtai High-tech Zone, Yan Cheng City, Jiang Su Province.

Exhibit B: Initial Authorized Factories and Identifiers

The table presents the initial authorized factories for production with the corresponding identifiers for module labelling, approved for present operations. This list may be updated through mutual agreement.

Where the code "C" can be identified as any PolySilicon Factory locations listed in Exhibit C.

Short form Factory list and Codes per production segment

Polysilicon		**Ingot**		**Wafer**		**Cell**		**Module**	
Factory	**Code**	**Factory**	**Code**	**Factory**	**Code**	**Factory**	**Code**	**Factory**	**Code**
Customisation	C	Baotou	1	Donghai	1	Ningjin	1	Fengxian	1
		Jingxing	2	Ningjin	2	Yangzhou	2	Yangzhou	2
		Qujing	3	Shijiazhuang	3	Yiwu	3	Yiwu	3
		Xingtai	4	Xingtai	4	Shijiazhuang	4	Hefei	4
		Erdos	7	Qujing	6	Dongtai	7	Xingtai	6
				Baotou	7	Qujing	8	Dongtai	9
				Erdos	9	Erdos	9	Baotou	0
								Qujing	A
								Erdos	B

Example of Label (ITS -C1114)

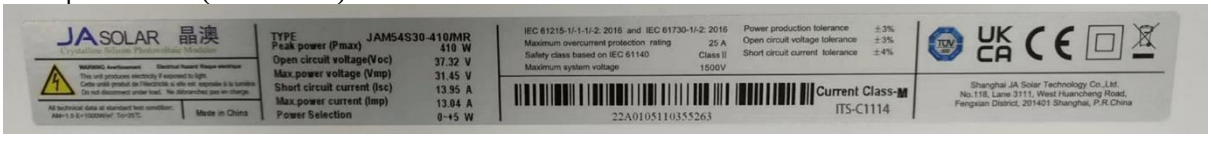

Exhibit C: Approved PolySilicon Factories

Group	Supplier Name	Province of Production	Exact Address
Tongwei	Sichuan Yongxiang New Energy Co., Ltd	Sichuan Province,China	999 Longxiang Road, Wutongqiao District, Leshan City, Sichuan Province
	Sichuan Yongxiang Poly-silicon Co.,Ltd.	Sichuan Province,China	100 Yongxiang Road, Wutongqiao District, Leshan City, Sichuan Province
	Sichuan Yongxiang Energy Technology Co.,LTD	Sichuan Province,China	999 Longxiang Road, Wutongqiao District, Leshan City, Sichuan Province
	Inner Mongolia Tongwei High Purity Crystalline Silicon Co., Ltd	Inner Mongolia Province, China	1 Ronghua Street, Metal Deep Processing Industrial Park, Kundulun District, Baotou City
	Yunnan Tongwei High Purity Crystalline Silicon Co., Ltd	Yunnan Province, China	Changning Garden, Industrial and Trade Park, Yongsheng Street, Longyang District, Baoshan City, Yunnan Province
Asia	Asia Silicon (Qinghai) Co.,Ltd	Qinghai Province, China	1 Jinsilu Road, Chengdong Economic Development Zone, Xining City, Qinghai Province
	Qinghai Asia Silicon Semiconductor Co., Ltd	Qinghai Province, China	1 Jinsilu Road, Chengdong Economic Development Zone, Xining City, Qinghai Province
	Qinghai AS Silicon Materials Co., Ltd	Qinghai Province, China	1 Jinsilu Road, Chengdong Economic Development Zone, Xining City, Qinghai Province
DongLI	Inner Mongolia Dongli Solar Co.，Ltd	Inner Mongolia Province, China	Heiliuzi Industrial Park, Urad Front Banner, Bayannur City, Inner Mongolia
GCL	Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd.	Jiangsu Province, China	66 Yangshan Road, Jinshanqiao Economic Development Zone, Xuzhou City, Jiangsu Province
	Leshan GCL New Energy Technology Co., Ltd.	Sichuan Province,China	1001 Longxiang Road, Wutongqiao District, Leshan City, Sichuan Province
	Inner Mongolia XinYuan Silicon Material Technology Co., Ltd.	Inner Mongolia Province, China	Office 402, Administration Committee of Baotou Metal Deep Processing Industrial Park, Kundulun District, Baotou City, Inner Mongolia
	INNER MONGOLIA XIN HUAN SILICON ENERGY TECHNOLOGY CO., LTD.	Inner Mongolia Province, China	6 Tianping Road, Saihan District, Hohhot City, Inner Mongolia
MENGTE	Inner Mongolia Xinte Silicon Material Co., Ltd.	Inner Mongolia Province, China	Shan Gai Jia Chemical Industrial Park, Tumed Right Banner, Baotou City, Inner Mongolia
TIANHONG	Shaanxi Nonferrous Tian Hong REC Silicon Materials Co., Ltd.	Shaanxi Province,China	Yujia Industrial Park, Wangjiafen Town, Jia County, Yulin City, Shaanxi Province
LIHAO	Qinghai Lihao Semiconductor Material Co., LTD	Qinghai Province,China	258 Red Tooth Village, Shangxin Zhuang Town, Huangzhong County, Xining City, Qinghai Province
YICHANG	Yichang CSG Polysilicon Co.,Ltd.	Hubei Province, China	1 Nanbo Road, Xiaoting District, Yichang City, Hubei Province
NANBO	Qinghai CSG Risheng New Energy Technology Co., Ltd.	Qinghai Pronvince, China	Room 205, West Deputy Building, Qaidam (National Level) Circular Economy Promotion Center, Delingha City, Haixi Prefecture, Qinghai Province

Where additional Groups and locations for Factories can be added by mutual agreement.

Part 2: JA SOLAR TRACEABILITY SYSTEM OVERVIEW

JA Solar has implemented a comprehensive traceability system to ensure product quality and customer satisfaction. The system has been tested and verified by numerous third parties, and JA Solar has a high level of integration across its supply chain in the industry, as well as stable relationships with its suppliers.

The Integrated Traceability System (ITS) badge indicates with codes the provenance of the modules and assures the purchaser of the locations of factories and suppliers down to polysilicon.

The traceability system universal across all JA Solar Group entities from Module, Cell, Wafer and Ingot. It covers all aspects of the supply chain from supplier management to post-delivery, and includes unique identification codes, rigorous supplier evaluation and selection, strict incoming material inspection, and detailed production and warehouse management procedures. By implementing this system, JA Solar ensures that its products meet international standards and regulations, and customers can have complete confidence in the quality, safety and proper Chain of Custody of their solar panels.

1. Supplier Management

JA Solar actively communicates traceability requirements to suppliers and integrates them into the supplier selection process. Supplier compliance is monitored regularly, and non-conformances are addressed promptly. The regulations on Supplier Development, Evaluation, and Improvement Management specify the supplier selection process and traceability requirements. The annual audit report of Polysilicon supplier includes non-conformance items and QPA scores.

2. Incoming Material Management

JA Solar requires that all shipments and units received are described in a record to enable traceability. The incoming material inspection report specifies the inspection requirements for materials upon arrival, including checking the outer package and verifying the inspection report provided by the supplier. The Warehouse Delivery Record includes project ID, product name, batch, quantity, supplier name, and other relevant information. The raw materials in the warehouse are physically separated according to pre-defined criteria.

3. Production

JA Solar strictly controls the use of materials during the manufacturing process to ensure traceability. The company inputs all BOM material information and production process into the MES system, and employees can query all information of products to ensure product traceability. The production records and spot checklists are retained to achieve traceability. The Quality Control Plan manages the traceability of the product production process.

4. Warehouse Management

JA Solar has implemented rules to handle finished products to preserve traceability requirements. The identification and traceability control procedure requires entering information about finished products, packaging, and other materials into the MES system to achieve traceability. The Warehouse Management Control Procedure requires that finished products are placed at designated locations, and warehousing notices are provided with relevant information. The electronic storage is provided before the product put into storage. The finished product warehouse adopts the ERP system to trace all information about materials.

5. Shipping

JA Solar has a logistics management system that includes requirements for the entire shipment process. The Warehouse Management Control Procedures and Logistics Management System Control Procedures specify these requirements. Note that all products are mainly supplied to the downstream production base of JA Group making traceability simple. The checklist of the loading process is checked, and traceability management is conducted on the on-site delivery. Relevant customs declaration documents are checked for overseas shipments. The product COA report is checked for product information after shipment.

6. Post-Delivery

JA Solar's Customer Complaints and Complaints Handling Procedure includes the implementation and control of activities after product delivery and traceability issues. All documents and records from raw materials, storage, production to shipment are stored through software or paper documents. The procurement system, raw material storage system, production system, finished product warehouse

Summary

JA Solar's traceability system is a comprehensive system that ensures the quality, safety and traceability of its products. The company actively communicates traceability requirements to its suppliers, controls the use of materials during production, implements physical separation of incoming materials, and manages the storage and shipment of finished products to achieve traceability. JA Solar's post-delivery traceability system links information to customers and ensures traceability of products after delivery. The company has various documents and procedures in place to manage traceability and ensure compliance with regulations and customer expectations.