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**Open-ended Working Group of the Parties to
the Montreal Protocol on Substances that
Deplete the Ozone Layer
Forty-first meeting**

Bangkok, 1–5 July 2019

Item 3 of the provisional agenda*

**Unexpected emissions of trichlorofluoromethane
(CFC-11) (decision XXX/3)**

**Monitoring and management system for ozone-depleting
substances in China**

Note by the Secretariat

At the Thirtieth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, held in Quito from 5 to 9 November 2018, China proposed that it organize an international workshop to discuss and exchange information on the effectiveness of the implementation of the Montreal Protocol. Following the convening of that workshop on 18 and 19 March 2019 and pursuant to decision XXX/3 of the Thirtieth Meeting of the Parties, China has submitted an overview of its system for monitoring and managing ozone-depleting substances. That submission, along with a cover letter, are set out in annexes I and II to the present note.

The present note is being circulated for the information of the parties under agenda item 3 of the provisional agenda for the forty-first meeting of the Open-ended Working Group. The text is presented as received by the Secretariat, without formal editing.

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Annex I

Letter to the Ozone Secretariat

At the 30th Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (hereafter referred to as the Montreal Protocol), Parties accorded high attention to the issue of unexpected increase of emissions of trichlorofluoromethane (CFC-11), and adopted a decision on this issue, requesting all Parties to take concrete actions to phase out CFC-11.

The Chinese government has attached great importance to this issue and responded proactively. The Montreal Protocol, recognized by the international community as the most successful international convention, serves as a model of joint engagement in resolving global environmental issues based on sincere cooperation. Achievements made by the Montreal Protocol so far are hard-won, and deserve to be valued and guarded by all parties. In this spirit, the Chinese delegation proposed at the 30th Meeting of the Parties that China would hold an international workshop to discuss and exchange information with Parties on the effectiveness of the implementation of the Montreal Protocol. The workshop was successfully held in Beijing, China on March 18 and 19, with the support of the Ozone Secretariat, the Multilateral Fund Secretariat, international implementing agencies and Parties from Asia, Africa, Europe, North and South America and Oceania. At the workshop, participants analyzed the potential causes of unexpected increase of global CFC-11 emissions, as well as had in-depth discussions and exchanges about the experience of implementation, ODS phase-out policies and regulations, law enforcement, import and export control, and monitoring and verification of phase-out projects. The participants spoke highly of the organization of the workshop and the results achieved, and they were of the view that such exchanges facilitate experience learning and promote better implementation of the Montreal Protocol, and there should be more such exchanges in the future.

Taking opportunity of hosting this workshop, China made a comprehensive overview of its ODS monitoring and management system, and based on which, more comprehensive monitoring and management measures and more rigorous enforcement will be adopted to combat illegal ODS production with no effort spared. China will take the initiative to overcome all weaknesses. We would like communicate this information to the Ozone Secretariat through which the Parties can be notified of this message. China looks forward to seeing other Parties also share information and exchange experience related to monitoring and enforcement in their countries so as to jointly promote the successful implementation of the Montreal Protocol.

Annex II

Monitoring and Management System of Ozone Depleting Substances (ODS) in China

I. Foreword

China acceded to the Vienna Convention for the Protection of the Ozone Layer (hereinafter referred to as the Vienna Convention) in 1989 and the Montreal Protocol on Substances that Deplete the Ozone Layer (hereinafter referred to as the Montreal Protocol) and its London Amendment in 1991. China's Country Program for Ozone Depleting Substances (ODS) Phase-out was compiled for guiding the gradual phase-out of ODS in 1993. Subsequently, China acceded to the Copenhagen Amendment in 2003, and the Montreal Amendment and the Beijing Amendment in 2010.

With great efforts in the last 30 years, China has met the compliance targets specified under the Montreal Protocol in a comprehensive manner. So far, China has achieved the phase-out of five categories of main ODS for controlled use and the targets of the first stage of Hydrochlorofluorocarbon (HCFC) phase-out. China has phased out in total 280,000 MT of ODS, accounting for more than half of the amount phased out in developing countries. To put it specifically: (1) China completed the phase-out of the production and consumption of Chlorofluorocarbons (CFCs) and Halons for controlled use on July 1st 2007, two and a half years earlier than the phase-out schedule stipulated by the Montreal Protocol. (2) On January 1st 2010, except for essential use, China realized complete phase-out of the production and consumption of carbon tetrachloride (CTC) and methyl chloroform (TCA) for controlled use, with 5 years ahead of schedule for TCA. (3) China had realized the total phase-out of production and consumption of methyl bromide for controlled use by January 1st 2015. (4) China has achieved HCFC freeze target in 2013 and 10% reduction target in 2015 by phasing out 71,000 MT of HCFCs production and 45,000 MT of HCFCs consumption, with the closure of 88,000 MT production capacities. Moreover, to maximize climate benefits, 76% of the HCFC phase-out projects adopted low GWP alternatives.

II. Institutional Mechanism for the Compliance with the Montreal Protocol in China

The institutional mechanism for the compliance with the Montreal Protocol in China has been proved to be feasible and effective. The government responsibilities could be effectively integrated and mobilized through coordination of government departments and industrial

associations related to the compliance with the Protocol, and the compliance tasks have been successfully completed with industry guidance and organization.

National Leading Group for the Protection of the Ozone Layer and its Office. The Government of China established the inter-departmental National Leading Group for the Protection of the Ozone Layer (hereinafter referred to as the Leading Group) in 1991. As the coordinating mechanism for the implementation of the Montreal Protocol, the Leading Group currently consists of 13 relevant ministries and commissions. The Leading Group is responsible for the coordination of critical matters related to the compliance with the Montreal Protocol, review of guiding principles, policies and work plans for the compliance, overseeing the implementation of the work plans, and dealing with emerging issues which require the considerations of the Leading Group. The Office of the Leading Group is set up in the Ministry of Ecology and Environment.

National Management Office for ODS Import and Export. National Management Office for ODS Import and Export (hereinafter referred to as the I/E Office) is co-established by the Ministry of Ecology and Environment, the Ministry of Commerce and the General Administration of Customs. Its main responsibility is the daily management of ODS import and export as authorized by the three ministries. The Ministry of Commerce is in charge of reviewing and issuing import and export licenses and formulating import and export catalogue of controlled ODS. The General Administration of Customs is responsible for ODS border management, transforming ODS catalogue to HS codes and ODS import and export data statistics, monitoring, inspecting and releasing ODS imports and exports, assisting in the formulation of ODS import and export regulations and policies, and fighting against illegal trades. The I/E Office is set up in the Ministry of Ecology and Environment.

National Ozone Unit. The National Ozone Unit (NOU), set up in the Ministry of Ecology and Environment, undertakes the daily work of the Office of the Leading Group and the I/E Office. In the meantime, as the national focal point of the Vienna Convention, the Montreal Protocol and the Executive Committee to the Multilateral Fund, NOU is responsible for daily liaison with the Ozone Secretariat of the United Nations Environment Programme (UNEP), Multilateral Fund Secretariat and international implementing agencies.

Industrial Associations. The Government of China cooperates closely with relevant industrial associations, which mainly participate in data surveys of ODS-related sectors and enterprises,

research of alternative technologies, and formulation of sector phase-out roadmaps. Industrial associations provides technical consultancy in the development and preparation of projects and sector plans, as well as suggestions to relevant departments in the formulation of sector policies. Industrial associations are also responsible for assisting relevant departments in implementing compliance policies and requirements. They are also invited in relevant enforcement actions.

Local Ecology and Environment Bureaus. Local ecology and environment bureaus (EEBs), together with relevant competent authorities in the thirty-one provinces, autonomous regions and municipalities, have established provincial coordination mechanism for ozone layer protection, which are responsible for: 1) implementing national ODS regulations and relevant management policies, formulating relevant policies within their jurisdiction, for example controlling new construction, renovation and expansion projects of ODS production and consumption facilities through the construction project and environmental impact assessment approval system; 2) conducting daily monitoring and law enforcement on the production, consumption, sales, import and export of controlled substances; 3) conducting trainings on environment management and enforcement officials and enterprises; 4) organizing activities to raise the awareness in ozone layer protection.

III. Legal System for ODS Management in China

China implements life-cycle management on the production, use, sales, import and export of ODS with a three-level system of laws, regulations, departmental rules and regulatory documents.

The Law on Air Pollution Prevention and Control of the People's Republic of China

(hereinafter referred to as Law on Air). Law on Air is the special law on the prevention and control of air pollution, and the improvement of atmospheric quality of China. Approved by the National Peoples' Congress, the Chinese legislature, Law on Air clearly stipulates that the State shall encourage and support the production and use of ODS alternatives, and reduce the production and use of ODS step by step until complete phase-out. The State implements total amount control and quota management on ODS production, use, import and export.

The Regulation on Administration of Ozone Depleting Substances. The Regulation on Administration of Ozone Depleting Substances (hereinafter referred to as the Regulation), formulated by the State Council in accordance with the Law on Air and came into effect on June 1, 2010, is the most important special regulation on ODS control in China. Consisting of 6 chapters and 41 articles, the Regulation establishes the total amount control and quota

management system, stipulating life-cycle management on the production, sales, use, import and export of ODS. The Regulation defines that local EEBs and relevant departments at or above the county level shall be responsible for the monitoring and management of ODS within their regional jurisdiction.

ODS Rules and Regulatory Documents. The Ministry of Ecology and Environment, the Ministry of Commerce and the General Administration of Customs jointly formulated the Management Rules on ODS Import and Export in order to strengthen and refine ODS import and export management. The document was revised recently in 2014.

Meanwhile, over a hundred regulatory documents and management documents including bans have been issued jointly by the Ministry of Ecology and Environment and relevant government ministries for implementation of the Montreal Protocol. Bans on construction projects of new, renovated and expanded ODS production capacity have been implemented through the construction project and environmental impact assessment approval system so that the source of ODS production is curbed in line with the phase-out schedule. Quota management has been applied in the management of controlled ODS to reduce production, use, import and export of ODS step by step.

IV. ODS Supervision and Enforcement in China

1. Supervision and Enforcement on Domestic ODS Production and Consumption

China controls the total production and consumption of ODS through quota system. The monitoring and management on ODS production and consumption is carried out at both central and local levels. Daily supervision is mainly carried out by local EEBs. The Ministry of Ecology and Environment conducts professional trainings regularly for enforcement officials from local EEBs, focusing on knowledge of ODS as well as introduction of relevant laws, regulations and policies on ODS. Over 50 training sessions have been held with a total of about 6,000 enforcement officials trained since 2002. Furthermore, workshops are organized annually to promote communication and experience sharing on ODS management and enforcement among local EEBs, which help enhance local EEB's capacity in supervision and enforcement. Local EEBs at the provincial level also organize training workshops on ODS management and convention implementation with city or county level officers and management personnel of enterprises as target trainees. The number of government officials who received training exceeded 35,000 and management personnel of enterprises exceeded 13,000.

Coordination mechanisms for ozone layer protection at the local level have been established in the 31 provinces, most of which are inter-departmental coordination mechanisms. EEBs of key provinces and municipalities have carried out data surveys on ODS production and consumption and preliminarily acquired lists of ODS production and consumption enterprises within their jurisdiction. Enterprises that have dismantled ODS production lines or carried out technological conversions are monitored, inspected and accepted by NOU and local EEBs jointly. Meanwhile, the enterprises are subject to the verification by international implementing agencies. For those enterprises that have completed technological conversions, local EEBs conduct compliance inspection at least once a year, including checking production records, purchase bills, production lines and warehouses, to ensure that they are not illegally using ODS that has been phased-out.

Local EEBs strictly control new construction projects through the environmental impact assessment approval system to ensure that, except for feedstock use, no new ODS production and consumption facilities are built in China. To strengthen supervision on enterprises in the PU foam sector, the Ministry of Ecology and Environment has equipped local EEBs in 11 key provinces and municipalities with instant detectors to improve their means of enforcement and detection for local EEBs since 2014. The Ministry of Ecology and Environment also requires local EEBs to spot check at least 15-30 PU foam enterprises on a quarterly basis according to actual situations.

Based on information provided by the public and other sources, the Ministry of Ecology and Environment and local EEBs jointly take actions to crack down ODS related illegal activities.

2. Monitoring and Management on ODS Import and Export

China has implemented effective management and control of ODS import and export through the ODS import and export licensing system and the informal prior informed consent (iPIC) mechanism. Since 2010, except for exempted uses, China has no longer issued import and export licenses for the four major categories (including CFCs) of ODS that had been phased-out for controlled use. China is currently the largest HCFCs producer and exporter in the world. In 2018, the I/E Office reviewed HCFC import and export applications for more than 3,000 batches (weighing up to about 134,000 tons), exporting to more than 120 countries, issued import quota for HCFC-123 and HCFC-225 of around 100 tons and carried out iPIC more than 300 times.

China issues import and export licenses through the ODS Import and Export Management Online Approval System. In daily work, the online system can help review the approval process,

get trade information including destination countries, ports, chemicals and quantities, etc., and monitor HCFC licenses and customs clearance of goods in real time.

Moreover, the General Administration of Customs has actively participated in a series of transnational special actions initiated by the World Customs Organization to combat ODS illegal trade, including “Sky-Hole Patching”, “Sky-Hole Patching II”, “Demeter”, etc. In the meantime, the crackdown on ODS illegal trade has also been included in special actions initiated by China, including “Shield of the Nation” and “Green Fence Action”, to maintain high-pressure on combatting illegal trade.

In order to strengthen the enforcement capacity for customs officers, the Ministry of Ecology and Environment and the General Administration of Customs launched 24 training workshops with 14 local customs from 2012 to 2018. More than 2,000 customs officers were trained in key customs districts of China. 150 instant detectors were provided to local customs, which have helped customs officers carry out effective detection of goods. In addition, local customs have increased the proportion of sampling inspections of ODS and its related products, studied the characteristics of ODS illegal trade, and strengthened the inspection and testing on key enterprises and products.

3. Results of Supervision and Enforcement

From 2010 to the first half of 2018, 24 cases of illegal production, 44 cases of illegal use, and 5 cases of illegal sale of ODS were investigated and given penalty in China. According to the Regulation, equipment and facilities used for the illegal production of ODS have been dismantled and destroyed, and financial penalties have been imposed on enterprises. Among them, there were 14 cases involving illegal production of CFC-11, and about 84 tons of illegal CFC-11 were destroyed.

In August 2018, the Ministry of Ecology and Environment organized local EEBs from all provinces, autonomous regions and municipalities across the country and launched a special ODS enforcement inspection. The inspection, on the one hand, targeted the source by extensively collecting information and tracking down illegal production. Two illegal CFC-11 production facilities located respectively in Liaoning Province and Henan Province were demolished. 177.6 tons of various raw materials and 29.9 tons of illegally produced CFC-11 were seized on the spot. The criminal suspect in Henan case has been in criminal detention by local public security authority and the case is under trail according to the judicial procedure. For

the other case, the local public security authority has released a wanted notice for the criminal suspects of the illegal production facility. On the other hand, the inspection started from the use end by cracking down on illegal use of ODS and tracing the source of illegal ODS. In 2018, 1,172 related companies were investigated in China. CFC-11 were identified after detection in some batches of materials in 10 system houses. Local EEBs imposed penalties on them according to law.

From 2012 to 2018, the General Administration of Customs has investigated and seized 17 cases of ODS smuggling, involving more than 1,500 tons of ODS. Criminals were punished as smuggling offences, which are generally sentenced to 1 to 3 years' imprisonment and fined 1 to 3 times of the value of the smuggled goods.

4. Challenges of Supervision and Enforcement

- (1) Enforcement has become increasingly difficult. Small shelters of illegal ODS production are becoming more and more difficult to detect as a result of the ongoing crackdown on illegal production. Illegal acts are usually conducted in a highly concealed manner. In the meantime, supervision is extremely difficult due to simple production process of specific ODS, easy access to facilities, and high mobility of the illegal acts.
- (2) Convenient logistics and internet facilitate illegal production and consumption. The Internet of things, social media, and e-commerce platforms continue to develop, making ODS illegal trade easier, faster, more hidden, and difficult to trace back, which brings great difficulties for enforcement and evidence gathering.
- (3) Illegal production and consumption exist due to market demand. Price fluctuation of chemicals, defects of the economy of alternatives as well as the adaptability of production could induce illegal production and consumption.
- (4) The current lack of testing capacity poses difficulties for enforcement. At present, the testing capacity of ODS is insufficient in all parts of the country, and there are few institutions that can issue quantitative testing reports with legal force, resulting in difficulties in obtaining enforcement basis.
- (5) The deterrent force of the law needs to be further demonstrated. The existing legal system has insufficient penalties for illegal ODS behaviors, and it can be made use of wrongdoers. The rigidity and penalties stipulated by the law need to be further enhanced.

V. China's Initiatives to Further Strengthen ODS Monitoring and Management

The Montreal Protocol is recognized by the international community as the most successful international convention and a model for the international community to sincerely cooperate and work together to resolve global environmental issues. The results achieved so far by the Montreal Protocol do not come easily and deserve to be valued and maintained by all parties. In this spirit, China has made a comprehensive overview of the ODS monitoring and management system, and based on the results of the overview, plans to adopt stricter monitoring and management measures and spares no efforts to combat ODS illegal acts.

1. Further Improve Laws and Regulations and its Legal Deterrence Force

The Ministry of Ecology and Environment is organizing relevant departments to promote the revision of the Regulation, which would further improve the provisions on legal liability to punish illegal ODS production, consumption, sales, imports and exports. It would reinforce punishment on illegal ODS acts and enhance legal deterrence force.

2. Further Strengthen Domestic Supervision and Enforcement

The Ministry of Ecology and Environment will organize local EEBs to further strengthen the monitoring of ODS enterprises within their jurisdiction by increasing the frequency of inspections, and further strengthening and improving enforcement capacity and means. At the same time, the Ministry of Ecology and Environment will organize 4 ODS enforcement training sessions in 2019 in order to increase the capacity of enforcement officials in local EEBs. By the end of 2019, local EEBs in all provinces of the country will have been equipped with ODS instant detectors, enriching enforcement means for local enforcement officials. On the basis of strict monitoring and management of chloromethane enterprises (CTC by-producers) at earlier stage, the Ministry of Ecology and Environment will organize local EEBs to establish a whole process real-time monitoring mechanism at all chloromethane enterprises. Mass flow meters for CTC by-product will be installed, covering CTC measurement in its production, storage, conversion, sales, residual liquid, etc. The mechanism aims to enable the on-line monitoring of chloromethane enterprises. In order to crack down on all kinds of illegal acts, the Ministry of Ecology and Environment will continue to encourage the industry and the public to report illegal acts, increase the frequency of enforcement inspections in key areas of ODS production and consumption, and conduct annual special enforcement inspections against ODS key industries in order to achieve sustained crackdown on ODS illegal production and consumption.

3. Continue to be on Guard in ODS Import and Export Monitoring and Enforcement

The Ministry of Ecology and Environment and the General Administration of Customs will further strengthen the capacity building jointly, especially targeting customs officers and anti-smuggling polices on knowledge of goods, international conventions, domestic policies and regulations and common tricks of smuggling to increase the capacity of risk control, inspection/detection and handling. Handy, safe and instant detectors shall be equipped to make faster judgment that whether the goods belong to ODS or not in initial screening. Communication with logistic companies will be strengthened to obtain flow directions of export goods and abnormal situations such as alterations of destinations and goods names. The I/E office will keep using the iPIC mechanism.

4. Enhance the Capacity of ODS Atmospheric Monitoring and Product Testing

The Government of China, aware of the importance of monitoring, will conduct planning and study on the construction of ODS atmospheric monitoring network, and develop a construction programme based on the study results. A long-term ODS monitoring network will be established step by step (including atmospheric ODS monitoring stations in key cities and atmospheric ODS background monitoring stations) with the aims to strengthen the capacity of early alerting and evaluation. Specific construction schedule is as follows: starting from 2020, the Ministry of Ecology and Environment will select several key cities to carry out ODS scientific research monitoring, aiming for routine monitoring within 2 to 3 years. The planning and construction of atmospheric ODS background value monitoring stations will be initiated in 2021.

As for ODS product testing, 6 ODS product testing laboratories will be established by the end of 2019. Their testing samples are currently considered to be foam products and blowing agents, etc. The testing range of ODS product will be expanded along with the enforcement priorities. In 2020, all the 6 new laboratories will be put into use to provide timely judgment basis for enforcement.
