

*[CEC Secretariat's translation of Mexico's Response regarding submission
SEM-16-001 (Agricultural Waste Burning in Sonora)]*

Party Response of the Government of the United Mexican States

Submission SEM-16- 001 (Agricultural Waste Burning in Sonora)

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SEMARNAT
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I. INTRODUCTION

On 22 January 2016, a resident of the municipality of Caborca, state of Sonora, who designated his name and identifying information as confidential in accordance with Article 11(8) of the North American Agreement on Environmental Cooperation (NAAEC) (the “Submitter”), filed an NAAEC Article 14 submission with the Secretariat of the Commission for Environmental Cooperation (“Secretariat”) asserting that Mexico is failing to effectively enforce its environmental law in relation to the air pollution generated by the burning of asparagus crop residues in that municipality.

On 2 March 2016, the Secretariat found that Submission SEM-16-001 (*Agricultural Waste Burning in Sonora*) did not meet all the eligibility requirements of NAAEC Article 14(1) and, pursuant to sections 6.1 and 6.2 of the *Guidelines for Submissions on Enforcement Matters under Articles 14 and 15 of the North American Agreement on Environmental Cooperation* (“Guidelines”), notified the Submitter that he had 60 working days in which to file a revised submission, which was in fact filed by the Submitter on 29 April 2016.

On 13 June 2016, the Secretariat issued a second determination (“Article 14(1)(2) Determination”) finding that Submission SEM-16-001 met all the requirements of NAAEC Article 14(1) and (2) and requesting a response from the Government of Mexico in regard to the effective enforcement of the following environmental laws in connection with air pollution caused by crop residue burning in the municipality of Caborca, state of Sonora:

- a) Articles 144, 146, and 172 of the Environmental Protection Bylaw of the Municipality of Caborca (*Reglamento de Equilibrio Ecológico y Protección al Medio Ambiente del Municipio de Caborca—REEPMA*), in relation to the implementation of air quality measurement systems and corresponding action measures;
- b) REEPMA Article 151, in relation to the prohibition on emitting pollutants in excess of the maximum permissible levels applicable to crop residue burning;
- c) REEPMA Article 167, in relation to the implementation of the measures necessary to prevent and control air-pollution-related environmental contingencies;
- d) REEPMA Articles 168 and 169, in relation to the issuing of crop residue burning permits;
- e) REEPMA Article 170, in relation to alleged public health alteration, harm, or nuisance during open-air burning, and

- f) sections 4.0, 4.1.3, 4.1.14, 4.2, 5.1.3, 5.1.5, 5.2, 5.2.2, 7, and 7.4, as well as paragraphs 2.4.3 and 2.4.6 of Part III of the Technical Appendix to Mexican Official Standard NOM-015-Semarnat/Sagarpa-2007, *Establishing technical specifications for fire use methods on forested land and agricultural land* (NOM-015), on the Application of Burning Methods.

The Government of the United Mexican States hereby issues this Party Response pursuant to NAAEC Article 14(3) and the Guidelines, providing information requested by the Secretariat in its Article 14(1)(2) Determination and referring to each and every assertion made by the Submitter in his Revised Submission.

II. PARTY RESPONSE IN REGARD TO AIR QUALITY MEASUREMENT

A) Submitter's Assertions and Secretariat's Determination

In relation to the effective enforcement of the environmental law under this heading, the Submitter asserts that the municipality of Caborca and the farmers are failing to conduct air quality measurement, and that it is therefore impossible to know the extent to which the maximum permissible limits established by the applicable law are being exceeded.

For its part, the Secretariat, in its Article 14(1)(2) Determination, requested a response from the Government of Mexico in relation to the enforcement of REEPMA Articles 144, 146, and 172 in connection with the implementation of air quality measurement systems and the corresponding action measures to which the Submitter refers.

B) Party Response

The environmental law at issue in this section provides as follows:

Article 144.- For the prevention and control of air pollution, the following criteria shall be considered:

- I.* air quality shall be satisfactory in all human settlements and all areas of the municipality;
- II.* air pollutant emissions, whether from artificial or natural sources, and whether from fixed or mobile sources, shall be controlled in order to guarantee air quality that is satisfactory for the well-being of the population and for ecological stability;
- III.* protecting air quality is the responsibility of the municipality and of society at large;

- IV. programs concerning reforestation, verification of pollutant emissions, development of clean technologies compliant with environmental criteria, and soil protection shall be contemplated with a view to achieving environmental efficiency, so as to preserve the integrity and stability of the components of the atmosphere, and
- V. the preservation and sustainable use of the atmosphere is the joint responsibility of the authorities and the citizens.

Article 146.- The Department shall have the following responsibilities, within the scope of its jurisdiction:

- I. to control air pollution on municipal property, as well as from fixed sources under municipal jurisdiction that function as industrial, commercial, or service establishments;
- II. to apply the general criteria established by this Bylaw for the protection of the atmosphere, in municipal urban development plans;
- III. to require the parties responsible for the operation of fixed sources under municipal jurisdiction to refrain from exceeding the maximum permissible limits for pollutant emissions, in accordance with the applicable Mexican Official Standards, state environmental standards, and other environmental criteria or guidelines established in this Bylaw;
- IV. to establish and operate air quality monitoring systems, using technological devices meeting Mexican Official Standards and state environmental standards for this purpose;
- V. to produce environmental monitoring reports and keep them up to date;
- VI. to formulate and apply air quality management programs based on Mexican Official Standards and state environmental standards in order to establish environmental quality on the territory of the municipality;

- VII. to arrange, with the parties responsible for the operation of pollution sources, the application of new environmentally compatible or efficient technologies, with a view to reducing or eliminating their air emissions, and
- VIII. to exercise any other powers vested in them by other applicable provisions.

Article 172.- The Department [of Urban Development and Environment] shall establish and operate air quality monitoring systems with a view to evaluating the ambient air quality of population centers in accordance with the parameters set out in the applicable Mexican Official Standards, with the technical support of the environmental authorities and the academic or research institutions, and shall deliver the local air quality monitoring reports to these entities for incorporation into the National Environmental Information System in accordance with the applicable coordination agreements.

As regards the specific issue raised by the Submitter in relation to REEPMA Article 172, concerning the implementation of air quality measurement systems to provide certainty as to the quantities and types of air pollutants emitted as a consequence of the open-air burning of crop residues in the municipality of Caborca, Sonora, it is noted that the Municipal Council of Caborca possesses neither a measurement instrument nor the technology necessary for such purposes, stating that it is in the process of costing out equipment of that nature and seeking the funding necessary to purchase it.

Notwithstanding the foregoing, it should be noted that pursuant to NAAEC Article 45(1)(b), “A Party has not failed to “effectively enforce its environmental law ... in a particular case where the action or inaction in question by agencies or officials of that Party results from *bona fide* decisions to allocate resources to enforcement in respect of other environmental matters determined to have higher priorities.” In addition to preserving the discretionary power of the administrative authorities to determine those matters to be given priority in a context of limited public resources, this NAAEC provision aims to ensure the effective and rational use of such resources, preserving the authorities’ power to solve environmental problems in the least costly and most effective manner possible. Thus, as stated in Part III of this Party Response, the competent authorities have, by means of the Program (as this term is defined below), taken other measures to control and monitor air pollution on property and in areas under municipal jurisdiction, exercising their powers pursuant to REEPMA Article 146 and in accordance with the Mexican Official Standards and the state environmental standards.

Therefore, even though the Municipal Council of Caborca lacks pollution measurement devices and technology, measures have in fact been taken to monitor emissions from crop residue burning, and these emissions have been found to be acceptably within the parameters established by REEPMA Article 144 paragraph I; air pollution emissions have in fact been controlled pursuant to REEPMA Article 144 paragraph II, and pollutant emission verification programs have been established in accordance with REEPMA Article 144 paragraph III; the foregoing all in accordance with the Program discussed in detail in the next section of this Party Response.

III. PARTY RESPONSE IN RELATION TO THE PROHIBITION ON POLLUTANT EMISSIONS IN EXCESS OF THE MAXIMUM PERMISSIBLE LIMITS APPLICABLE TO CROP RESIDUE BURNING AND IN RELATION TO THE IMPLEMENTATION OF MEASURES TO PREVENT AND CONTROL ENVIRONMENTAL CONTINGENCIES

A) Submitter's Assertions and Secretariat's Determination

In regard to the matters at issue in this section, the Submitter asserts that REEPMA Article 151 prohibits open-air burning where it may cause environmental instability or have an impact on air quality, as is the case of the burning taking place in the municipality of Caborca. Moreover, the Submitter asserts that the Municipal Council of Caborca is failing to enforce REEPMA Article 167 by failing to implement the measures necessary to prevent and control air pollution and environmental contingencies affecting the population when air pollution parameters are exceeded, as often occurs during the burning season.

For its part, the Secretariat, in paragraphs 24(ii) and (iii) of its Article 14(1)(2) Determination, requested a response from the Government of Mexico in relation to the following provisions of Mexican environmental law:

- REEPMA Article 151, as regards the prohibition on emitting pollutants in excess of the maximum permissible levels applicable to crop residue burning, and
- REEPMA Article 167, as regards the taking of the measures necessary to prevent and control air-pollution-related environmental contingencies.

B) Party Response

Since the two requests for a response are interrelated, the Government of Mexico is providing a combined response to both in this section of its Party Response.

The environmental law at issue in this section provides as follows:

Article 151.- The open-air burning of urban solid waste is prohibited, as is that of the vegetation resulting from the clearing, felling, or removal of vegetation from any land, for the purposes of construction or for any other purpose. The municipality may only issue approvals where the burning does not create an environmental risk or impact on air quality and is justified on applicable grounds, in the opinion of the competent authorities. The incineration of any waste by controlled methods, with the exception of such waste as is considered hazardous under the General Act or other federal legislation, shall remain subject to the emissions provisions of the [Sonora State Environmental Protection Act].

Article 167.- The Municipal Council, acting by the Department [of Urban Development and Environment] and in coordination with the Municipal Civil Protección Unit, shall take the measures necessary to prevent and control air pollution-related environmental contingencies, for a given area and/or for the whole population of the municipality, where the air quality parameters established by the Mexican Official Standards are exceeded.

Pursuant to the above-transcribed provisions of the REEPMA, an annual program has been applied for the last six years in the municipality of Caborca to administer the controlled burning of asparagus in the months of December and January. With a view to implementing this program and reinforcing measures to prevent environmental contingencies caused by crop residue burning, especially the burning of asparagus plants; in fulfillment of the mandate contained in the REEPMA, and in conformity to the principles of joint responsibility and participation by the authorities and the public in improving air quality and reducing and controlling air pollution as prescribed by the REEPMA, the Municipal Council of Caborca, for the 2015–2016 season, issued the *Program to Administer the Controlled Burning of Asparagus in Compliance with NOM–015-SEMARNAT/Sagarpa-2007* (the “Program”), in concert with Public Health Jurisdiction No. 2 of the Sonora State Ministry of Health, and with the collaboration of Rural Development Center (*Centro de Apoyo al Desarrollo Rural—CADER*) no. 02, Caborca, of the Ministry of Agriculture, Livestock Production, Rural Development, Fisheries, and Food (*Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación—Sagarpa*); Rural Sustainable Development District (*Distrito de Desarrollo Rural Sustentable—DDR*) no. 139, Caborca, Sonora; the National Institute of Forest, Agriculture, and Livestock Research (*Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias—Inifap*) of Sagarpa; the Local Phytosanitary Committee (*Junta Local de Sanidad Vegetal*) of Caborca (a farmers’ organization that assists Sagarpa); the Asparagus Commission of the Asociación Agrícola de Productores de Frutas y Hortalizas de Caborca, A.C., and the Asociación de Usuarios del Distrito de Riego 037, Altar, Piquito, Caborca, A.C.

This Program was adopted at the meeting held 24 November 2015 at the office of the Mayor of Caborca, the minutes of which are attached to this Party Response as **Appendix A**. It was stated at this meeting that the controlled burning of asparagus program was to be implemented for the sixth consecutive year, in conformity with NOM-015, and those present were informed that all the region's asparagus growers were willing to comply with the program proposed by the Local Phytosanitary Committee, with a view to substantially diminishing the impacts of the controlled burning of asparagus.

The main provisions of the Program are as follows:

- Inspections to ascertain compliance with the Program will be conducted by personnel of the Local Phytosanitary Committee.
- The growers commit to full cooperation with the inspections to be performed by the personnel of the Local Phytosanitary Committee.
- The maximum daily area of burning is limited to 3.5% of the total area under cultivation; that is, of the 9,000 hectares under asparagus cultivation in the region, no more than 315 hectares may be burned in a single day.
- Burning is to be planned more rigorously as from the time the asparagus plants are cut down.
- The Sapos and La Almita regions being the most critical, the companies operating there (Las Tres Californias, Hortícola del Desierto, and Exportadora de Caborca), are not permitted to all burn crop residues on the same day.
- The burning schedule will be from 11:00 a.m. to 3:00 p.m., regardless of whether conditions are favorable at later hours.
- Unused hours allotted for burning may not be banked for use on subsequent days, nor may the permitted burning area be exceeded on any given day in anticipation of unfavorable subsequent weather.
- Each grower must submit its burning plan to the Local Phytosanitary Committee by November 30 to allow for any necessary adjustments to planning and programming.
- Each grower shall pay the sum of 30 Mexican pesos per hectare burned.

- Growers who fail to comply with the Program are subject to fines, and the Municipal Council of Caborca is responsible for levying and collecting such fines.
- The Local Phytosanitary Committee agrees to coordinate the Program only if full grower cooperation is obtained and the authorities acquit themselves of their responsibilities under the Program.

In fulfillment of the Program, burning was monitored daily. On only one day, 2 January 2016, was a contingency recorded due to excessive burning as a consequence of non-compliance with the Program; the corresponding sanctions were applied.

In addition, the Sonora State Environmental Attorney (*Procuraduría Ambiental del Estado de Sonora*—Proaes), acting by its Office Manager and its Director of Inspection and Surveillance, held a meeting on 10 June 2016 with the Mayor of Caborca, as well as with the Municipal Secretary and the Environmental Coordinator of the City of Caborca, at which it was agreed to coordinate activities in order to address the matter of open-air burning in anticipation of the 2016–2017 season. Efforts would be made to arrange a meeting with the region’s farmers in order to propose research aimed at improving burning practices and thereby to minimize the resulting pollution, as well as to work on implementing new practices for better final disposal of asparagus crop residues.

Proaes representatives participated in other meetings similar to the one held with the representatives of the Municipal Council of Caborca, such as a meeting on 27 May 2016 with the Mayor of Cajeme, Sonora, as well as with the Municipal Secretary and the Director of Environmental Affairs of that municipality, for the purpose of addressing the problem of crop residue burning comprehensively, for the whole region.

In the manner described above, the competent authorities of the municipality of Caborca are complying with REEPMA Article 167, among other REEPMA provisions adduced in the Submission, concerning the prevention and control of air-pollution-related environmental contingencies. Likewise, the measures described in this section of the Party Response are being implemented in accordance with REEPMA Article 151, so that the burning of asparagus crop residues does not cause an environmental risk, striving for the minimization of air quality impacts, with the understanding that, as discussed below, crop residue burning is justified since it has beneficial effects on the asparagus crop and on the control of asparagus pests and diseases, and with the further consideration that agriculture is the principal economic activity of the municipality, generating 3.3 million pesos per day and over \$4.6 billion pesos per year.

IV. PARTY RESPONSE IN REGARD TO CROP RESIDUE BURNING PERMITS

A) Submitter's Assertions and Secretariat's Determination

In relation to the matter at issue in this section, the Submitter asserts that open-air burning of crop residues is being carried out without the approvals contemplated in REEPMA Articles 168 and 169, and that no such permit has ever been issued even though crop residue burning is in fact taking place. In addition, the Submitter asserts that when he requested the burning permits issued for the 2015 season, all he obtained from the municipal authorities were documents concerning the burning schedule.

For its part, the Secretariat requested a response from the Government of Mexico in relation to REEPMA Articles 168 and 169, with reference to the issuing of crop residue burning permits.

B) Party Response

The environmental law at issue in this section provides as follows:

Article 168.- Open-air burning in areas under municipal jurisdiction shall only be permitted where carried out with the approval of the Department [of Urban Development and Environment] and with adherence to the applicable Mexican Official Standards, and as regards agricultural burning, it shall:

- I.* conform to the provisions of NOM-015-Semarnat/Sagarpa, and
- II.* be covered by all documentation and forms prescribed by NOM-015-SEMARNAT/SAGARPA, in the manner prescribed therein, submitted to the Department of Urban Development and Environment, with copies to the competent agricultural authority and the municipal civil protection unit.

Article 169.- To obtain the permit mentioned in the preceding article, the interested party shall apply to the Department [of Urban Development and Environment] in writing at least fifteen working days prior to the intended date of the event, with copies to the competent agricultural authority and the municipal civil protection unit, fully justifying the necessity of the activity. The Department [of Urban Development and Environment] shall review the application and issue a decision within a period not to exceed fifteen working days, either unconditionally approving, conditionally approving, or denying the permit.

On this issue, the Municipal Council of Caborca issued permits and approvals under the Program for open-air burning or combustion of plant matter in areas under municipal jurisdiction during the 2015–2016 season.

V. PARTY RESPONSE IN REGARD TO PUBLIC HEALTH HARM OR NUISANCE DURING OPEN-AIR BURNING

A) Submitter’s Assertions and Secretariat’s Determination

In relation to alleged public health alteration, harm, or nuisance occurring during open-air burning, the Submitter asserts that this practice should be prohibited, since the local population complains of eye irritation, scratchy or burning throat, headaches, and other ailments during the burning season.

For its part, the Secretariat, in its Article 14(1)(2) Determination, requested a response from the Government of Mexico in relation to REEPMA Article 170, in connection with alleged public health alteration, harm, or nuisance during open-air burning.

B) Party Response

The environmental law at issue in this section provides as follows:

Article 170.- The Municipal Council shall not permit open-air burning where toxic pollutants are generated that may cause adverse health effects, harms, or nuisance in the exposed population, nor in the case of urban solid waste. Any permit that has been issued may be suspended, in whole or in part, temporarily or permanently, where an extraordinary contingency event is caused by the burning, or where environmental and meteorological conditions do not allow for adequate dispersal of the pollutants.

In this regard, the document attached hereto as **Appendix A** indicates that Public Health Jurisdiction no. 2 conducted an in-depth review to ascertain whether the smoke from asparagus burning is a risk factor to be considered in diseases of the respiratory tract, but found no significant evidence linking the two phenomena; it did, however, find a link between said public health impacts and the low temperatures prevailing during the season of the year when the burning takes place. It also found that there is an incidence of other types of diseases during the rest of the year, outside the burning season.

Added to the foregoing is the fact, previously mentioned in this Party Response, that the Program establishes clear scheduling guidelines for burning, taking account of environmental and weather conditions so as to allow for adequate dispersal of pollutants, in accordance with REEPMA Article 170, but also in accordance with REEPMA Articles 144, 151, and 167.

VI. PARTY RESPONSE IN REGARD TO THE IMPLEMENTATION OF NOM-015

A) Submitter's Assertions and Secretariat's Determination

The Submitter asserts that the open-air burning of asparagus plants violates provisions of NOM-015, especially those of its sections relating to its object and scope of application, as well as the part of its technical appendix referring to burning schedules and smoke management.

For its part, the Secretariat requested a Party Response in relation to the effective enforcement of sections 4.0, 4.1.3, 4.1.14, 4.2, 5.1.3, 5.1.5, 5.2, 5.2.2, 7, and 7.4 of NOM-015, as well as paragraphs 2.4.3 and 2.4.6 of Part III of the Technical Appendix to NOM-015 on the Application of Burning Methods, which provisions are allegedly applicable to the burning of asparagus crop residues as mentioned in the Submission.

B) Party Response

In regard to the application of NOM-015 to the matters raised by the Submission, the Government of Mexico wishes the Submitter to understand that while this Mexican Official Standard does refer to fire use on agricultural land such as the land occupied by the asparagus crop in Caborca, Sonora, it clearly specifies that the object of the standard is to establish "technical specifications for fire use on forested land and agricultural land, **with a view to preventing and diminishing forest fires**" (emphasis added). Thus, while it is true that owners of agricultural land wishing to make use of fire must obey the provisions of NOM-015, it is also true that this Mexican Official Standard is not designed as a general regulation covering all uses of fire on agricultural land, but exclusively the possibility that fire on agricultural land may cause a forest fire due to its location near forest, which is not the case of the agricultural land in the municipality of Caborca.

It should also be noted that sections 5.1.3 and 5.15 (sic) of NOM-015 do not apply to the matters raised in the Submission, since they form a part of section 5.1 of NOM-015, which establishes the specifications for the use of fire on forested land, not agricultural land such as the land at issue in the Submission.

Notwithstanding that the focus and purpose of NOM-015 do not strictly coincide with the Submitter's assertions, the Submitter is hereby informed that, as noted in previous sections of this Party Response, the authorities of the Municipal Council of Caborca and other competent phytosanitary and human health authorities consider NOM-015 to be a guideline

and a reference framework for crop residue burning and have brought together under the Program some of its provisions relevant to the burning of asparagus plants, especially the provisions of section 4.0 relating to the use of fire.

Thus, as per sections 4.1.3 and 4.2 of NOM–015, the Program establishes a burning schedule, on which agricultural landowners enter the dates they plan to carry out burning as a means of notifying the competent authorities and other agricultural landowners and thereby ensuring that the burning is not carried out in a disorderly fashion, the purpose being to avert any risk of generating environmental contingencies caused by too many simultaneous burning events. In addition, section 4.1.14 of NOM–015, whose effective enforcement is called for in the Submission, forms a part of the General Provisions for Fire Use, which give the National Forests Commission (*Comisión Nacional Forestal*—Conafor) discretionary power to establish sites at which to monitor the effects of fire on **soil, water, wildlife, and flora** and to generate an information system with a view to disseminating information to guide decision making on fire use. This provision does not apply to the matters addressed by the Submission, since Conafor has no jurisdiction over agricultural land of the kind at issue in the Submission. In addition, since this section forms a part of the General Provisions, it is understood that these provisions apply to the taking of measures having to do with the object of the Mexican Official Standard, which, as stated, is to prevent forest fires resulting from fire use on forested and agricultural land, a matter not addressed by the Submission. Furthermore, the provision in question does not relate to the effects of fire use on air quality, the central issue of the Submission and the Submitter's assertions.

As regards sections 5.2 and 5.2.2 of NOM–015, the document attached to this Party Response as **Appendix A** indicates that Sagarpa, acting by CADER, the DDR, and Inifap, has been in contact with the asparagus growers of Caborca and has trained them in the use of fire and other alternatives for soil preparation and pest control. In this regard, Inifap has conducted studies on the effect of the burning of asparagus foliage during the harvest season, concluding that at sites where such burning did not take place, the harvest commenced six days later, production was poor, the marketing window was shifted accordingly, and growers could not get the best prices for their product. For this reason, Inifap considers the burning of crop residues to be part of the “technology package” for asparagus, this practice being necessary for the elimination of disease propagules and for breaking the biological cycle of the main pests and diseases affecting this crop.

In regard to the assertions concerning the enforcement of sections 2.4.3 and 2.4.6 of the Technical Appendix to NOM–015, the Submitter is hereby informed that:

- a) Section 2.4.3 provides that the burning schedule is preferentially during morning hours, no later than 11:00 a.m., when wind speed is below 10 kilometers per hour and relative humidity is above 40%. On this point, the provisions of the Program establish that the burning must be carried out during morning hours, but according to a schedule running from 11:00 a.m. to 3:00 p.m., these being considered the hours with the most optimal burning conditions, in view of the specific climatology of the region.

- b) Section 2.4.6 provides that, where burning takes place, smoke dispersal management must be considered for land less than 10 kilometers from human settlements and sensitive infrastructure, and that winds must be blowing away from such settlements so as to avert harm to persons. The document attached hereto as **Appendix A** indicates that the Local Phytosanitary Committee analyzed the results of the controlled burning programs from years prior to 2015–2016, devoting specific study to issues relating to the appropriate burning schedule and variables such as wind speed and direction.

In addition, it is hereby noted that section 7.4 of NOM–015 does not apply to the use of fire at issue in the Submission. This is because, as explained above, the object of NOM–015 is to establish a fire use method for the purpose of preventing forest fires. Section 7.4 of NOM–015 provides that violations under the standard shall be sanctioned in accordance with the Mexican Sustainable Forestry Act (*Ley General de Desarrollo Forestal Sustentable*—LGDFS), which does not apply to agricultural land nor to the types of fire use addressed by the Submission. LGDFS Articles 13 paragraph XIV, 55 paragraph IX, 122, and 163 paragraphs VIII and IX exclusively regulate agricultural land adjacent to forest ecosystems and fire uses related to agricultural activities that may affect forest ecosystems. Therefore, while Sagarpa and the Ministry of the Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales*—Semarnat) are responsible for the enforcement of NOM–015, the Federal Attorney for Environmental Protection (*Procuraduría Federal de Protección al Ambiente*—Profepa) is only responsible for responding to complaints that relate to controlled burning on forested or preferentially forested land.

Therefore, NOM–015 is not the legal basis for inspection and surveillance or for the application of sanctions in the case of violations committed in connection with the type of burning at issue in the Submission; rather, this legal basis is provided by municipal provisions (such as the Program and the REEPMA) and any applicable state-level provisions. Consequently, any complaints filed with Profepa in connection with the burning of crop residues were relayed to Proaes for processing. In regard to the complaints relayed by Profepa to Proaes (one dated 7 January 2014 and another dated 2 December 2015), Proaes states that in the first case it made an inspection visit to the site but did not observe any burning taking place, and that in the second case it opened a file for processing. This information is attached to this Party Response as **Appendix B**.

VII. CONCLUSIONS

From the Government of Mexico’s response to the assertions contained in the Revised Submission, the following may be concluded:

- Even though the municipality of Caborca lacks the equipment and technology necessary to measure pollutants emitted by asparagus crop residue burning, measures have been taken to reduce, control, and monitor air pollution emissions from this

activity under the Program, thereby making rational use of the municipality's limited financial resources.

- The authorities of the municipality of Caborca have used the Program as a means of organizing crop residue burning in such a way as to create a coordinating mechanism establishing the requirements and conditions for obtaining the permits and approvals necessary to carry out the burning, as well as for penalizing growers who fail to comply with the Program. The Program constitutes the public policy mechanism whereby the authorities seek to reduce, control, and monitor air pollution emissions as well as to diminish any harmful effects on public health and the environment.
- The competent authorities of the municipality of Caborca have monitored the population to ascertain the impact of open-air crop residue burning on the health of local residents, but have found no link between these phenomena; instead, the ailments and illnesses observed are typical of the winter season in which burning takes place; that is, they occur at other times of the year when crop residue burning is not taking place.
- Notwithstanding the fact that the Program and other measures taken by the authorities of the municipality of Caborca fall within the framework of NOM-015, this standard is not applicable to crop residue burning or to agricultural land, which are the matters addressed by the Submission. Nevertheless, the municipal public policy instruments applicable to this matter do follow the technical guidelines established by NOM-015 where the use of fire is concerned.
- The municipality of Caborca authorities, along with the state of Sonora and the federal authorities, acting by Sagarpa, have taken various measures to regulate and reduce emissions from open-air crop residue burning and its effects on the environment and public health, coordinating with the industry the implementation and enforcement of the corresponding public policy instruments and carrying out acts of inspection, surveillance, and sanction.

In this Party Response, the Government of Mexico has specifically responded to each matter raised by the Submitter in the Revised Submission, as well as in the Secretariat's Article 14(1)(2) Determination, seeking thereby to inform the Submitter and the North American public as to the manner in which the Party's environmental law is being applied in connection with the specific facts addressed by the Submission.