Factual Record

Río Magdalena Submission

(SEM-97-002)

Prepared in Accordance with Article 15 of the North American Agreement on Environmental Cooperation

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1. Executive Summary

Articles 14 and 15 of the *North American Agreement on Environmental Cooperation* (NAAEC) establish the process regarding citizen submissions and the development of factual records relating to the effective enforcement of environmental law. The Secretariat of the North American Commission for Environmental Cooperation (CEC) administers this process.

On 7 April 1997, Comité Pro Limpieza del Río Magdalena (the "CPLRM" or the "Submitter") filed a submission with the Secretariat in accordance with Article 14 of the NAAEC (SEM-97-002). The submission asserts that Mexico is failing to effectively enforce its environmental law with respect to wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora, which is allegedly discharged into the Magdalena River without being duly treated to prevent the pollution of the river.

On 7 March 2002, the Council decided unanimously to instruct the Secretariat to develop a factual record on the alleged failure by Mexico to effectively enforce various provisions of the General Law on Ecological Balance and Environmental Protection *(Ley General del Equilibrio Ecológico y la Protección al Ambiente*—LGEEPA) with respect to the pollution of the Magdalena River by the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana, to which the submission filed by CPLRM refers.

In the development of this factual record, the Secretariat considered publicly available information, information provided by Mexico and other interested parties, and information developed by the Secretariat. In this factual record, the Secretariat presents the facts relevant to whether Mexico is failing to effectively enforce LGEEPA Articles 88 paragraph IV, 89 paragraph VI, 93, 117, 121, 122, 123, 124 and 133, without aiming to reach any conclusions on this question.[1]

1. In its recommendation to Council for the development of this factual record (at 20) of 5 February 2002, the Secretariat determined that consideration of the effective enforcement of LGEEPA Article 92 was not warranted, but the recommendation inadvertently included this article in the list of provisions that would be covered by

The LGEEPA requires persons who discharge wastewater to prevent pollution of national waters through adequate treatment of their discharges. In addition, wastewater discharges must comply with Mexican Official Standard NOM-001-ECOL-1996, which establishes the maximum contaminant limits for wastewater discharges into national waters and onto national property (NOM-001).[2] The Magdalena River is national property and wastewater discharges into this river are federal jurisdiction.[3] The deadline for compliance with the maximum contaminant limits established by NOM-001 for Imuris and Santa Ana is 1 January 2010; the deadline for Magdalena de Kino is 1 January 2005.

The National Water Commission (*Comisión Nacional del Agua*—CNA) is the authority competent to enforce the laws, regulations, and Mexican Official Standards governing water pollution prevention and control. The CNA is also the body responsible for ongoing and systematic monitoring of the quality of national waters as required by the LGEEPA. In addition, among other responsibilities, the CNA carries out hydraulic infrastructure projects, including construction of wastewater treatment systems.

The factual information presented by the Secretariat in this factual record reveals that, in fact, when the submission was filed in 1997, the municipality of Magdalena de Kino was discharging its wastewater into the Magdalena River without sufficient prior treatment to prevent pollution of that river, and the municipalities of Imuris and Santa Ana were discharging them near the river without any treatment. Starting in 1998, the CNA built or expanded treatment infrastructure (lagoons) in the three municipalities. Currently, the wastewater from the municipalities of Imuris, Magdalena and Santa Ana is sent to those treatment systems prior to being discharged into the Magdalena River and its environs. However, the water operating agencies (*organismos operadores de agua*) of the municipalities of Imuris, Magdalena de Kino and Santa Ana do not have financial resources allocated in their budget to operate and maintain the treatment systems. The municipalities do not monitor or report the pollutants present in their discharges as required by NOM-001, nor do they pay the fees for use of national waters as repositories of wastewater discharges required by the Federal Duties Law (*Ley Federal de Derechos*—LFD).

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the factual record, (SEM-97-002) Article 15(1) Notification to Council that preparation of a factual record is warranted (5 February 2002), at 2 and 27. The factual record does not address this provision.

2. Published in the Official Gazette of the Federation (DOF) on 6 January 1997.
3. As per Declaration 207 of 25 June 1924, published in the Official Gazette of the Federation (*Diarro Oficial de la Federación*—DOF) on 22 August 1924.

The information the Secretariat presents in this factual record reveals that since the entry into force of the NAAEC on 1 January 1994, the CNA has not taken any enforcement action regarding the water pollution prevention and control environmental law provisions referred to in this factual record with respect to the municipalities of Imuris, Magdalena de Kino and Santa Ana.

As regards ongoing and systematic monitoring of Magdalena River water quality, since 1999 the CNA has been performing bimonthly sampling at the Terrenate station. The station is downstream of the Imuris discharge and upstream of the Magdalena and Santa Ana discharges. According to the CNA, the water of the Magdalena River is suitable for public water supply, recreation, fishing, aquatic wildlife, and industrial and agricultural uses, notwithstanding the fact that in 1999 and 2000 several river water samples exceeded the Ecological Water Quality Criteria (including fecal coliform levels of 3,500 MPN/100 ml compared to the limit of 1,000 MPN/100 ml).

2. Summary of the Submission

On 7 April 1997, CPLRM filed a submission with the Secretariat in accordance with Article 14 of the NAAEC. The CPLRM, a non-governmental organization established in Terrenate, Municipality of Imuris, Sonora, Mexico, asserts that the municipalities of Imuris, Magdalena de Kino and Santa Ana discharge their wastewater into the Magdalena River without prior treatment, in contravention of Mexican environmental law. The Submitter asserts that Mexico is failing to effectively enforce various articles of the LGEEPA, as well as three laws of the state of Sonora: the Ecological Balance and Environmental Protection Law, the Waters Law, and the Health Law. The Submitter asserts that it has taken various actions to prevent the pollution of the Magdalena River since 1980, and describes the principal events that have occurred since then.

The Submitters have sent letters concerning the pollution of the Magdalena River to different authorities: the Office of the President of the Republic, the Ministry of Social Development (*Secretaría de Desarrollo Social*—Sedesol), the Ministry of Environment, Natural Resources and Fisheries (*Secretaría de Medio Ambiente, Recursos Naturales y Pesca*—*Semarnap*), the Office of the Federal Attorney for the Environment (*Procuraduría Federal de Protección al Ambiente*—Profepa), the Government of the State of Sonora and the Human Rights Commission (*Comisión de Derechos Humanos*).

In 1988, CNA began construction of a project to build a treatment lagoon for the municipal wastewater of Imuris. The project was suspended following complaints from residents of the neighboring communities. In 1992, Sedesol and CNA authorized Imuris to discharge its municipal wastewater into the area that had been dug up as part of the suspended treatment project, for a period of 45 days, during which the authorities were to develop a new project. Imuris was still discharging its municipal wastewater at this site when the submission was filed in 1997.

The submission makes assertions regarding the pollution problems of the Magdalena River, the lack of adequate treatment of municipal wastewater discharges in alleged violation of the laws prohibiting the dumping of pollutants into watercourses, and the obligation to prevent and control water pollution. The Submitter asserts that pollution in the Magdalena Rivers results in harm to the environment and human health. It states that bacteriological analyses performed on water from the Magdalena de Kino irrigation district in 1991 showed large quantities of fecal coliforms at the various irrigation intakes, and that similar results were obtained from bacteriological analyses reported in 1996.[4]

The Submitter asserts that the pollution of the Magdalena River has caused harm to farmers and others who use it to irrigate the traditional crops that represent the main source of economic livelihood for the region's households. The submission asserts that the CNA has sanctioned farmers and water users under Mexican Official Standard NOM-CCA-033-ECOL/1993[5] (NOM-033) because the Magdalena River water they use exceeds the parameters of the standard for use in vegetable crop irrigation. The Submitter also asserts that Magdalena River water caused irreversible levels of root rot on many fruit trees.

The submission asserts that the three levels of government (federal, state and municipal) have failed to address and solve the problems raised. The Submitter asserts that at the time the submission was filed, the Magdalena River had not been classified as required by law.[6] It states

4. Supplement to the submission, at 2–3.
5. Establishing the bacteriological conditions for the use of urban or municipal wastewater, or mixtures of such wastewater with water taken from bodies of water, in the irrigation of vegetable crops and vegetable/fruit products. The code of this standard changed to NOM-033-ECOL-93 on 30 November 1994.
6. The Law of National Waters (*Ley de Aguas Nacionales*) provides that:
   Article 15.– The formulation, implementation and evaluation of water planning will include:
   ... V. Classifying the bodies of water according to their uses and the development of water balances for quantity and quality and by watershed and hydrologic region; ...

that at that time, municipal wastewater was still being discharged directly and without restriction into the river, which has historically been used as a source of drinking water for human consumption and for irrigation of the crops that represent the main source of economic livelihood for the region's households.[7]

The Submitter cites various laws that are no longer in force, asserting that although water pollution prevention and control laws have existed for some time, they have merely been amended every six-year term without ever having been enforced.[8] As for laws currently in force, the Submitter indicates that it considers Mexico to be failing to effectively enforce the following provisions of law:

(i) The LGEEPA: Articles 1 paragraphs I, II, III, V, VI, VIII, IX and X; 4; 5 paragraphs I, II, III, V, VII, XVI, XVII, XVIII and XIX; 6; 7 paragraphs I, II, VIII, IX, XI, XII, XIV, XV, XVIII, XIX and XXI; 8 paragraphs I, II, VII, IX, X, XI, XIII and XV; 10; 15; 16; 23 paragraph VII; 36; 88; 89 paragraphs II, VI and VII; 90; 91; 92; 93; 96; 98 paragraph IV; 104; 108 paragraph I; 109 BIS; 117; 118 paragraphs I, II, III, V and VI; 119; 119 BIS; 120; 121; 122; 123; 124; 126; 127; 128; 129; 133; 157; 159 BIS 3; 159 BIS 4; 159 BIS 5; 189; 190; 191; 192; 199; and 200.

(ii) The Ecological Balance and Environmental Protection Law of the State of Sonora: Articles 3 paragraphs I, IV, and V; 6 paragraphs II, III, VIII, X and XII; 7 paragraphs III and VII; 8 paragraphs II, VI and IX; 52, 95 paragraph IV; 96 paragraphs I and III; 97 paragraphs I and II; 98 paragraphs I, II and IV; 99, 101, 102, 104, 105, 163, 164, 165, 166, 167 and 168.

(iii) The Waters Law of the State of Sonora, Article 73 paragraph I.

Article 87.– "The Commission" will determine the parameters that discharges shall meet, the assimilation and dilution capacity of the national bodies of water and the pollution burden that they may receive, as well as the water quality goals and the deadlines to reach them, through the Decrees of Classification of National Waters, that will be published in the Official Gazette of the Federation, as well as their amendments, for their observance.
The decrees will contain:
I. The boundaries of the body of water being classified;
II. The parameters that discharges shall meet depending on the body of water being classified, in accordance with the time periods set in the regulations to this law;
III. The capacity of the body of water being classified to assimilate or dilute pollutants; and
IV. The maximum limits of pollutants analyzed, as a base to set individual discharge conditions.

7. Supplement to the submission, at 11.
8. Supplement to the submission, at 1, 10–11.

(iv) The Health Law of the State of Sonora: Articles 3 paragraph XI; 4 paragraph VI; 5 paragraph I; 6 paragraphs I and II; 8 paragraph V; 18 paragraph V; 86 paragraph III; 90, 91 paragraphs I and II; 94; 95; 194; 195; 196; 200, and 201.

On 6 October 1997, the Secretariat determined that the submission met the requirements of NAAEC Article 14(1) and, considering the criteria set forth in NAAEC Article 14(2), on 8 May 1998 it requested a response from the Party. The Secretariat received the Party's response on 29 July 1998, in accordance with NAAEC Article 14(3).

3. Summary of Mexico's Response

Mexico, in its response submitted 29 July 1998, asserts that the majority of the facts alleged by the Submitter arose prior to the entry into force of the NAAEC on 1 January 1994, and thus the application of the Agreement to this submission would be retroactive, to the detriment of the Party.[9]

Mexico states that the environmental laws of the State of Sonora are not applicable to the submission because wastewater discharges into national waters are under federal jurisdiction.[10] The response states that the Magdalena River is in the national domain as per Declaration 207 of 25 June 1924, published in the Official Gazette of the Federation (*Diario Oficial de la Federación*—DOF) on 22 August 1924.[11]

The response addresses each of the provisions cited in the submission. Mexico argues that some of these provisions are not applicable and that those that are applicable were enforced.

Mexico's response asserts that LGEEPA Article 93, which makes water pollution prevention and control mandatory, was duly enforced through the creation of a legal framework for pollution control in national waters and through monitoring of compliance with the applicable Mexican Official Standards (*Normas Oficiales Mexicanas*—NOM).[12]

9. The Secretariat determined that the application of Article 14 with respect to the alleged failures to effectively enforce the environmental law is not retroactive because the alleged violations were continuing at the time that the submission was filed. (SEM-97-002) Notification to Council that Development of a Factual Record is Warranted (5 February 2002), at 9-10.
10. Response of the Party (RSP), at 30.
11. RSP, at 31.
12. RSP, at 47.

Mexico asserts that the CNA monitors compliance with the applicable NOMs.

Concerning the effective enforcement of LGEEPA Article 117, the response refers only to paragraph IV of the article, which requires the treatment of urban wastewater discharges. Mexico asserts that this provision was enforced because treatment infrastructure exists in Imuris and Magdalena and there are plans to build such infrastructure in Santa Ana.[13]

In regard to LGEEPA Article 122 prescribing the specific obligation that wastewater from urban public uses must meet the conditions necessary to prevent the pollution of the receiving waters, Mexico again responds that wastewater treatment infrastructure does exist.[14]

As regards the criteria for sustainable use of water and aquatic ecosystems, provided in Articles 88 and 89 of LGEEPA, Mexico's response does not refer to the enforcement of Article 88. Mexico asserts that Article 89, is not relevant to the submission and that, in view of the broad definition of the concepts of sustainable use and aquatic ecosystem, it's impossible for Mexico to refute any violations of which the Submitter may be complaining.[15]

Regarding the alleged failure to effectively enforce LGEEPA Article 123 with reference to NOM–001, Mexico asserts that the CNA, as a means of solving the environmental problems of the Magdalena River, entered into a contract in 1997 to develop the "Project to Adapt and/or Expand the Sanitary Sewer Systems and Wastewater Treatment Plants of the Cities of Imuris, Magdalena, and Santa Ana" (the "Project of 1997"). Mexico provided copies of documents describing that project with its response.[16]

Mexico states in its response that to enforce Article 133, the CNA has monitored the quality of Magdalena River water, leading to inspection visits, the closing of establishments and the sanctioning of farmers (as per NOM–033).[17]

13. RSP, at 49.
14. RSP, at 51.
15. RSP, at 44–45.
16. RSP, at 13–16, 28–29 and Appendix 23, "Project to Adapt and/or Expand the Sanitary Sewer Systems and Wastewater Treatment Plants of the Cities of Imuris, Magdalena, and Santa Ana."
17. RSP, at 18–23 and 55.

In Chapter IV of its response, Mexico offers an account of the environmental problems of the Magdalena River, stating that "based on the water quality monitoring conducted by the CNA with a view to classifying [the river], it may be observed that the river has the capacity to assimilate or attenuate the impact of the wastewater discharges it receives."[18] Mexico confirms that the municipalities of Imuris, Magdalena de Kino, and Santa Ana discharge their wastewater into the river, but clarifies that in the case of Imuris and Magdalena de Kino, the discharges are treated in oxidation lagoons, even though these systems are faulty.[19] Mexico's response states as follows:

> It should be mentioned that the treatment of wastewater from the country's population centers is a goal that the Mexican government has been unable to fully achieve and that progress in this area is subject to the availability of budgetary resources. This being the case, it must be stated that despite the existence of a general obligation in both federal and state law to treat wastewater from population centers, the economic limitations facing the country make it as yet impossible to fully enforce this provision; nevertheless, a clear strategy for a gradual solution to the wastewater treatment problem at the national level can be discerned in the corresponding government plans.[20]

In its response, Mexico acknowledges that there are deficiencies in the treatment of the wastewater discharged into the Magdalena River.[21] However, the response states that "the economic situation of the municipalities, the state government and the federation limit the ability to implement action plans for the construction of treatment systems."[22]

The information provided in Mexico's response confirms that the municipalities in question did not hold the relevant discharge permits at the time the response was submitted, but stated that issuance of those permits was forthcoming.[23]

Regarding the use of Magdalena River water for human consumption, Mexico asserts that the drinking water supply in the three munici-

18. RSP, at 13.
19. RSP, at 34–35.
20. *Ibid.*
21. According to the Response, the oxidation lagoons used by the municipality of Magdalena de Kino to treat its wastewater are obsolete and inadequate. The municipality of Santa Ana has no wastewater treatment system at all. As for Imuris, Mexico asserts that according to information provided by the state and municipal governments, one anaerobic and one facultative wastewater treatment lagoon began operation on 11 June 1998. RSP, at 14.
22. RSP, at 23.
23. RSP, at 36.

palities in question comes from deep wells: 2 in Imuris, 4 in Magdalena de Kino, and 4 in Santa Ana. Mexico's response specifies that two of the wells in Magdalena de Kino are located on the left bank of the Magdalena River.[24]

Mexico's response acknowledges that the waters of the Magdalena River are polluted. It states that sanctions have been imposed on farmers that used them for irrigation. Mexico asserts, however, that according to the CNA study, the pollution is due to "open-air defecation, domestic discharges, refuse, and organic matter."[25] Likewise, the response asserts that a well in Imuris was capped (without specifying the date) because it was seriously contaminated, and states that the cause of the contamination was that the majority of residents discharge their domestic wastewater into latrines, cesspools, and septic tanks.[26]

Finally, Mexico asserts that three citizen complaints filed by the Submitter were processed. According to the response, the two complaints filed in 1992 were duly processed in accordance with the LGEEPA.[27] The response states that the processing of the citizen complaint filed by the Submitter in 1997 has not yet concluded.[28]

Given the complexity of the matter, and to better understand some aspects of the legal and administrative framework referenced in Mexico's response, the Secretariat, relying on NAAEC Article 21(1)(b), requested but did not receive additional information from the Party. The requests were sent on 13 September 1999, 13 January 2000 and 23 October 2000. In order to continue with the processing of this submission, the Secretariat proceeded with its analysis based on the available information.

4. Scope of Factual Record

On 5 February 2002, the Secretariat notified Council that, pursuant to Article 15(1) and in light of the Response, it considered some of the arguments in the submission to warrant the development of a factual record.

24. RSP, at 14–16.
25. RSP, at 18–23.
26. RSP, at 14.
27. RSP, at 24–27.
28. RSP, at 28. The Secretariat found that the since the submission did not develop a specific line of argument about the alleged failure to effectively enforce LGEEPA Articles 189, 190, 191, 192 and 199 regarding the citizen complaint procedure, and in view of the actions described in the Response, it is not necessary to continue reviewing this assertion in the factual record.

The provisions cited in the submission refer to various aspects of the regulatory framework for water. They establish jurisdictions, general principles, criteria, obligations, and prohibitions with the objective of guaranteeing the sustainable use of water and preventing and controlling the pollution thereof. However, not all the provisions are directly applicable to the facts addressed in the submission, although all are related to it in a general way. As Mexico states in its Response, the discharge of wastewater into national bodies of water such as the Magdalena River is under federal jurisdiction, and therefore the Secretariat did not include the state environmental protection, water, and health provisions cited in the submission in its recommendation to Council for the development of this factual record.

Likewise, the Secretariat found that the following LGEEPA provisions are not directly applicable to the matters addressed by the submission in light of the arguments put forward by Mexico in its Response and absent specific arguments by the Submitter as to why it considers that Mexico is failing to effectively enforce the provisions invoked: Article 1 (on the regulatory nature of the LGEEPA); Articles 4–8 and 10 (on jurisdictional division and coordination between the authorities); Articles 15 and 16 (on environmental policy); Article 23 (on the regulation of human settlements); Articles 36, 90 and 119 (on the issuance of Mexican Official Standards); Article 88 paragraphs I to III (containing criteria for the use of aquatic ecosystems and the hydrological cycle); Article 89 paragraphs I to V and VII to X (on consideration of the criteria for sustainable water use in the granting of permits, concessions, and authorizations that may affect the hydrological cycle, and in the urban development masterplan for the Federal District); Article 91 (on the granting of authorization to affect the channel or bed of watercourses); Article 96 (on aquatic ecosystems); Articles 98 and 104 (on soil preservation and sustainable use); Article 108 (on exploration and exploitation of non-renewable resources); Article 109 BIS (on the requirement for the Ministry to produce an inventory of emissions and discharges); Article 118 (contemplating the governmental activities in which water pollution prevention and control criteria must be considered); Article 119 BIS (on the powers and obligations of the state and municipal governments in regard to water pollution prevention and control); Article 120 (establishing that in order to prevent water pollution, certain activities are subject to federal or local regulation); Article 126 (providing that urban wastewater treatment equipment must meet the requirements set out in the Mexican Official Standards); Article 127 (on industrial wastewater treatment facilities); Article 128 (establishing that wastewater from urban drainage and sewer systems may be used in industry and agriculture if treated as prescribed by Mexican Official Standards); Article 129 (establishing the

water treatment obligation for economic activities likely to cause water pollution); Article 134 (establishing criteria for the prevention of soil contamination); Article 157 (on social participation in environmental policy); Articles 159 BIS 3, 159 BIS 4 and 159 BIS 5 (on the right to environmental information); and Article 200 (requiring state laws to provide for a citizen complaint procedure).[29]

Based on the Secretariat's recommendation, Council Resolution 02–02 (reproduced in full in Appendix 1 of this factual record) instructs the Secretariat:

> to prepare a factual record in accordance with Article 15 of the NAAEC and the Guidelines for Submissions on Enforcement Matters under Articles 14 and 15 of the North American Agreement on Environmental Cooperation for the assertions set forth in Submission SEM-97-002 that Mexico is failing to effectively enforce Articles 88 paragraph IV, 89 paragraph VI, 92, 93, 117, 121, 122, 123, 124 and 133 of the LGEEPA (Ley General del Equilibrio Ecológico y la Protección al Ambiente) with respect to the pollution of the Magdalena River through the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora.[30]

In consequence, this factual record presents information relevant to the facts relating to:

i) the alleged violations by the municipalities of Imuris, Magdalena de Kino, and Santa Ana in the state of Sonora, Mexico of LGEEPA Articles 88 paragraph IV, 89 paragraph VI, 93, 117, 121, 122, 123, 124 and 133;

ii) the enforcement of these provisions by Mexico with respect to these municipalities; and

iii) the effectiveness of that enforcement.

5. Environmental Law in Question

This factual record refers to the alleged failure by Mexico to effectively enforce its environmental law with respect to pollution of the Magdalena River by wastewater discharges from the municipalities of Imuris, Magdalena de Kino, and Santa Ana in the state of Sonora.

29. (SEM-97-002) Notification to Council that Development of a Factual Record is Warranted (5 February 2002), at 11–13.
30. See footnote 1.

The relevant provisions establish the general obligation to prevent and control water pollution; the responsibility of users of national waters to use them sustainably; and the obligation of any person discharging wastewater to treat it prior to discharge in order to prevent contamination of the collecting bodies. In addition, these provisions refer to the issuance and revocation of wastewater discharge permits; compliance with the applicable Mexican Official Standards and particular conditions of discharge (CPD); and the authorities' obligation to conduct ongoing and systematic water quality monitoring. The relevant provisions are cited verbatim below:

> **LGEEPA Article 88.–** The following criteria shall be considered for the sustainable use of water and aquatic ecosystems:
>
> ...IV.– The preservation and sustainable use of water and aquatic ecosystems is the responsibility of the users thereof and of anyone undertaking works or activities affecting such resources.
>
> **LGEEPA Article 89.–** The criteria for the sustainable use of water and aquatic ecosystems shall be considered in:
>
> ...VI.– The operation and administration of drinking water and sewer systems serving population centers and industries;
>
> **LGEEPA Article 93.–** The Secretariat shall undertake the actions necessary to prevent and, as applicable, control eutrophication, salinization and any other pollution process in national waters.
>
> **LGEEPA Article 117.–** The following criteria shall be considered for the prevention and control of water pollution:
>
> I. The prevention and control of water pollution is fundamental in preventing the reduced availability of water and protecting the country's ecosystems;
>
> II. The State and society have shared responsibility for preventing the pollution of rivers, watersheds, reservoirs, marine waters and other bodies of water and watercourses, including groundwater;
>
> III. Anyone who uses water in production activities that may cause it to become polluted bears the responsibility for treatment of discharges in such a manner as to restore it to a condition suitable for use in other activities and to maintain the balance of ecosystems;
>
> IV. Urban wastewater must be treated before being discharged into rivers, watersheds, reservoirs, marine waters and other bodies of water and watercourses, including groundwater; and

V. The participation and joint responsibility of society is an indispensable condition for the prevention of water pollution.

LGEEPA Article 121.– Wastewater containing pollutants may not be discharged or allowed to infiltrate into any body of water or watercourse or into the soil or subsoil without prior treatment and the permission or authorization of the federal authority, or the local authority in cases of discharges into waters under local jurisdiction or into the drainage and sewer systems of population centers.

LGEEPA Article 122.– Wastewater arising from urban public uses and from industrial or agricultural uses that is discharged into the drainage and sewer systems of population centers or into watersheds, rivers, riverbeds, reservoirs or other bodies of water or watercourses, as well as waters allowed to infiltrate into the subsoil by any means, and in general waters spilled into the soil, must meet the conditions necessary to prevent:

I. Pollution of the collecting bodies;

II. Interference with water purification processes; and

III. Disruptions, impediments or alterations in the proper use or adequate operation of the systems, and in the hydraulic capacity of the watersheds, watercourses, reservoirs, water tables and other national bodies of water as well as the sewer systems.

LGEEPA Article 123.– All discharges into collecting systems, rivers, aquifers, watersheds, riverbeds, reservoirs, marine waters and other bodies of water or watercourses as well as spills of wastewater on soil, or infiltration thereof into lands, shall satisfy the requirements of any Mexican Official Standards promulgated for such purpose and any applicable particular conditions of discharge determined by the Ministry or the local authorities. The person who generates such discharges is responsible for performance of the required prior treatment.

LGEEPA Article 124.– Where wastewater affects or may affect water supply sources, the Ministry shall so notify the Ministry of Health and deny or revoke the corresponding permit or authorization, as the case may be and, as applicable, order the suspension of the supply.

LGEEPA Article 133.– With the participation of the Ministry of Health as applicable pursuant to other provisions of law, the Ministry shall perform systematic and ongoing monitoring of water quality in order to detect the presence of pollutants or excesses of organic wastes and to take the appropriate measures. In the case of waters under local jurisdiction, such actions shall be coordinated with the authorities of the states, the Federal District and the municipalities.

The relevant Mexican Official Standard under Article 123 is NOM–001–ECOL–1996 establishing the maximum contaminant limits in wastewater discharges into national bodies of water and property. The most relevant sections provide as follows:

> ... 4. Specifications
>
> 4.1 The concentration of basic pollutants, heavy metals, and cyanide for wastewater discharges into national waters and property shall not exceed the value indicated as the maximum contaminant limit in Tables 2 [see Appendix 8 of this factual record] and 3 of this Mexican Official Standard. The allowable pH range is 5 to 10.
>
> 4.2 Fecal coliforms shall be taken as an indicator in determining pathogen contamination. The maximum contaminant limit for wastewater discharges into national waters and property as well as discharges into soil (use in agricultural irrigation) are 1,000 and 2,000 as the most probable number (MPN) of fecal coliforms per 100 ml as monthly and daily averages, respectively.
>
> ... 4.5 The persons responsible for discharges of wastewater into national waters and property shall comply with this Mexican Official Standard as follows:
>
> a) Municipal discharges shall meet the compliance deadliness set out in Table 4. Compliance is gradual and progressive as a function of population size. The number of inhabitants corresponds to that determined in the XI National Census of Population and Housing for 1990, published by the National Institute of Statistics, Geography, and Information Technology.
>
> ...

Table 4

Municipal Discharges	
Compliance deadline	Population range
1 January 2000	Over 50,000
1 January 2005	20,001–50,000
1 January 2010	2,501–20,000

> 4.6 The compliance deadlines set out in Tables 4 and 5 of this Mexican Official Standard may be advanced by the National Water Commission for a specific collecting body provided that there exists a study validating such a change.

4.7 The persons responsible for municipal and non-municipal wastewater discharges whose pollutant concentration for any of the basic parameters, heavy metals, and cyanides exceeds the maximum contaminant limits set out in Tables 2 and 3 of this Mexican Official Standard, multiplied by five, for type B collecting bodies (rivers, urban public use), shall file a plan of actions or works to control the quality of the discharges with the National Water Commission within a period not to exceed 180 calendar days following the publication of this standard in the Official Gazette of the Federation.

Other persons responsible for municipal and non-municipal wastewater discharges exceeding the maximum contaminant limits of this standard shall file a plan of actions or works to control the quality of the discharges with the National Water Commission by the dates set out in Tables 6 and 7.

The foregoing is without prejudice to the payment of the fees contemplated in the Federal Duties Law and the fines and sanctions prescribed by the applicable laws and regulations.

Table 6

Municipal Discharges	
Population range	Filing deadline for action plan
Over 50,000	30 June 1997
20,001–50,000	31 December 1998
2,501–20,000	31 December 1999

...

4.8 The person responsible for the discharge shall conduct monitoring of the wastewater discharges to determine the daily and monthly averages. The analysis and reporting frequencies are given in Table 8 for municipal discharges and in Table 9 for non-municipal discharges. In situations justifying greater control such as the protection of water supply sources for human consumption, water-related environmental emergencies, or uncontrolled production processes, the National Water Commission may amend the analysis and reporting frequency. The monitoring records must be kept on file and made available for review during a period of three years following their production.

Table 8

Population range	Sampling and analysis frequency	Reporting frequency
Over 50,000	Monthly	Quarterly
20,001–50,000	Quarterly	Semiannually
2,501–20,000	Semiannually	Annually...

6. Auditing

The National Water Commission shall conduct sampling and analysis of wastewater discharges periodically and randomly for the purpose of verifying compliance with the maximum contaminant limits established by the parameters set forth in this Mexican Official Standard.

6. Summary of Other Relevant Factual Information and Facts Presented by the Secretariat in Relation to the Matters Addressed in the Submission

6.1 Process for Gathering Information

Based on the Secretariat's recommendation of 5 February 2002, the Council of the CEC instructed the Secretariat on 7 March 2002 to develop a factual record in regard to submission SEM-97-002. In April 2002, the Secretariat initiated the factual record development process.

The scope of the information gathering for the factual record was the effective enforcement of LGEEPA Articles 88 paragraph IV, 89 paragraph VI, 93, 117, 121, 122, 123, 124 and 133 with respect to the municipalities of Imuris, Magdalena de Kino, and Santa Ana in the state of Sonora, Mexico. The Secretariat sought to gather information on the Party's initiatives and actions to achieve compliance by these municipalities with the requirements of preventing and controlling water pollution; the responsibility of the municipalities of Imuris, Magdalena de Kino, and Santa Ana as users of the (national) waters of the Magdalena River to use them sustainably; the wastewater monitoring and treatment obligations; compliance with the applicable NOM (NOM-001); and ongoing and systematic monitoring of water quality in the Magdalena River.

The Secretariat made available to the Parties, the Submitter, and any interested party a general plan for the development of the factual

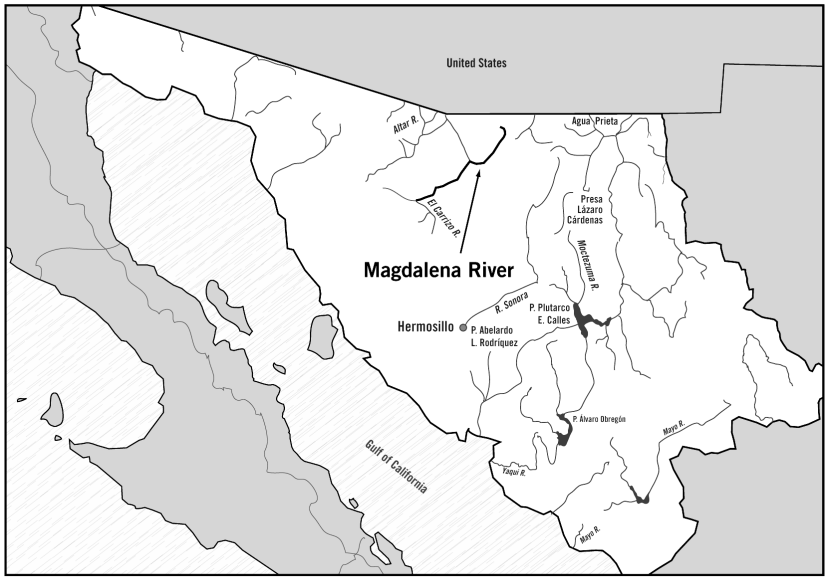
record (Appendix 2 of this factual record) and a description of the scope of the relevant information gathering (Appendix 3 of this factual record). Pursuant to NAAEC Articles 15(4) and 21(1)(a), the Secretariat requested Mexico and 6 of its authorities to provide the relevant information in their possession for the preparation of the factual record (Appendix 4 of this factual record contains a list of the recipients of this request and a description of the information requested). Two Mexican authorities provided information in response to the request, while the others either did not respond, or stated that the matter is outside their jurisdiction. Likewise, the Secretariat invited the other two parties to the NAAEC and the Joint Public Advisory Committee (JPAC) to provide relevant information. The Secretariat identified 22 persons or nongovernmental organizations that might possess relevant information, including CPLRM, and invited them to provide that information. Information was received from 3 persons in response to that request (Appendix 5 of this factual record contains a list of the recipients of the request and a description of the information requested).

Appendix 6 contains a list of all the information gathered by the Secretariat that formed the basis for this factual record.

Article 15(5) of the NAAEC provides that "[t]he Secretariat shall submit a draft factual record to the Council. Any Party may provide comments on the accuracy of the draft within 45 days thereafter." Pursuant to Article 15(6), "[t]he Secretariat shall incorporate, as appropriate, any such comments in the final factual record and submit it to the Council." The Secretariat submitted the draft factual record to the Council on 29 July 2003. The Parties did not comment on the draft factual record.

6.2 Information on the Magdalena River and the Municipalities of Imuris, Magdalena de Kino and Santa Ana[31]

The Magdalena River and the municipalities of Imuris, Magdalena de Kino and Santa Ana are located in the northern part of the Mexican state of Sonora.



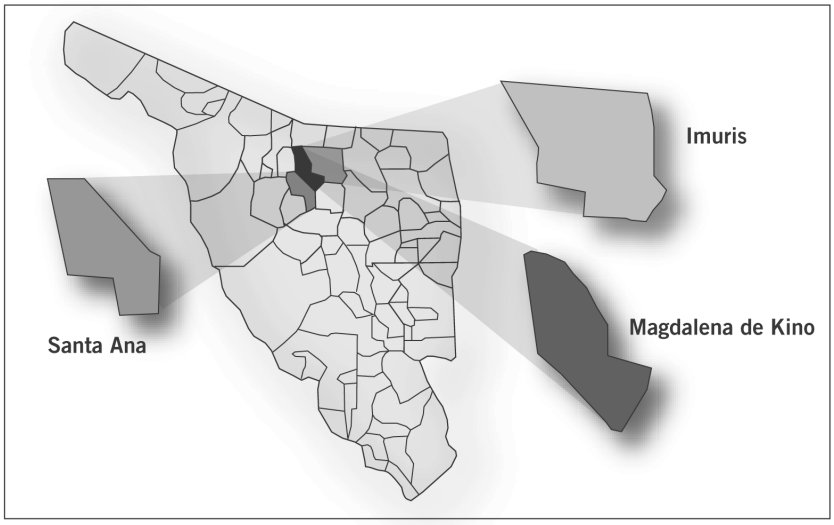
The State of Sonora

The Magdalena River is part of the Concepción River watershed. It is formed in the municipality of Imuris by the junction of the El Bambuto, Milpillas, and El Fresnal Rivers. At Magdalena de Kino, the river receives water from the Sásabe and Tasiacuri Creeks, and at the Santa Ana limits it joins the Altar River to form the La Asunción River. In the municipality of Santa Ana, the Magdalena River also receives water from Corral Viejo, El Aguaje, El Otate, Coyotillo, and El Cumaro creeks, and continues toward Trincheras, Pitiquito, and Caborca.

The principal settlements of the municipalities of Imuris, Magdalena de Kino and Santa Ana along the banks of the Magdalena River and its tributaries are the seats of those municipalities and the

31. Unless expressly indicated otherwise, the information in this section is taken from the website of the Government of the State of Sonora <http://www.sonora.gob.mx>.

rural communities of San Ignacio, El Crucero, Terrenate, La Mesa, Pantanito, and Santa Marta. The Magdalena River is the main source of water supply for human consumption and agricultural use in those communities.[32] Irrigation water is also taken from the Comaquito reservoir 18 km northwest of the municipal seat of Imuris (capacity of 32 million cubic metres). The Magdalena River is dry part of the year.[33] The Magdalena River is classified in the Federal Duties Law (*Ley Federal de Derechos*—LFD) as a collecting body for urban public use (type B).[34]



Municipalities of the State of Sonora

The municipality of Imuris occupies an area of 1,710.3 km^2 (0.92% of the state total and 0.09% of the national total). Its seat is Imuris, and other important towns are Campo Carretero, Terrenate, La Estación and La Mesa. The topography of the municipality is rugged in its western and northern portions, while the valleys forming the Cocóspera Rivers and their tributaries emerge to the south. The climate is hot and arid with an average annual temperature of 18.7 ^{o}C. The main months of rainfall are July and August; average annual precipitation is 413.1 mm. According to preliminary figures from the 2000 Census of Population and Housing produced by the National Institute of Statistics, Geography,

32. RSP, at 13, and information provided by Mexico for the development of this factual record on 11 June 2002 (IPM), at 6.
33. Information provided to the Secretariat in an interview with personnel from the CNA Hermosillo regional office on 9 October 2002.
34. IPM, at 21.

and Information Technology (*Instituto Nacional de Estadística, Geografía e Informática*—INEGI), the total population in 2000 was 10,006. The population growth rate is 3.1 per cent.

The municipality of Magdalena de Kino covers an area of 1,460.23 km^2 of gently sloping valleys and hills. It borders Imuris on the east and Santa Ana on the south. The most important towns in addition to the seat —Magdalena— are San Ignacio, San Isidro, Tasiacuri, and El Sásabe. The climate is semi-arid with an average annual temperature of 19.5 ^{o}C. The eastern and northwestern portions are extremely rugged while the southern portion is almost entirely flat. The average annual rainfall is 395.7 mm. According to preliminary figures from the 2000 census, the municipality has a population of 24,409 which is growing at a rate of 2.0 per cent.

The municipality of Santa Ana covers an area of 1,620.65 km^2. In addition to the seat —Santa Ana— other important towns are Estación Llano, El Claro, and Santa Ana Viejo. The topography of the municipality is almost entirely flat, with a downward slope to the west. The climate is hot and arid with an average annual temperature of 20.6 ^{o}C and average annual rainfall of 332 mm. According to preliminary 2000 census data, the municipality of Santa Ana has a total population of 13,534 and a growth rate of 0.6 per cent.

Agricultural production occupies a total of 4,378.9 ha in Imuris, 1,233 ha in Magdalena de Kino, and 8,410 ha in Santa Ana. The principal crops are wheat, corn, forage crops, vegetables, beans, sorghum, and fruit. Crops are irrigated with well water and by small water intakes from the Magdalena River. Livestock production is another activity of considerable economic importance in the three municipalities, although the main sources of employment are in the commercial, service, and maquiladora sectors.

6.3 Wastewater from the Municipalities of Imuris, Magdalena de Kino and Santa Ana

Pursuant to Article 115 paragraph III of the Political Constitution of the United Mexican States (*Constitución Política de los Estados Unidos Mexicanos*—CPEUM), drinking water, drainage, sewage, and wastewater treatment and disposal services are public services exclusively provided by the municipalities. Municipalities are authorized to provide this service either through their centralized administration or through decentralized municipal administration agencies, as provided

in the municipal administrative provisions issued by the municipalities in accordance with the state laws establishing the general framework for municipal public administration.[35]

The LGEEPA prohibits the discharge or infiltration of wastewater containing pollutants into any body of water or watercourse or into the soil or subsoil without prior treatment and the permission of the authorities. The municipalities, as users of national waters as receiving bodies for wastewater discharges from urban public uses, are responsible for controlling any pollution that may ensue from these discharges and for performing the prior treatment required in order to meet the applicable Mexican Official Standards and particular conditions of discharge. The CNA is the authority competent to issue wastewater-related permits and to enforce the laws governing the prevention of pollution of national waters.

The municipalities of Imuris, Magdalena de Kino and Santa Ana discharge wastewater from the drainage and sewer systems of their municipal seats into or near the Magdalena River. Only the municipal seats have sewer service. In Imuris, the sewer system covers 80% of the population. The majority of the municipality's residents discharge their domestic wastewater into latrines, cesspools, and septic tanks.[36] In Magdalena, the sewer system covers 75% of the population.[37] In Santa Ana, 60% of the population has access to the sewer service.[38] According to the Border Environment Cooperation Commission (BECC), problems associated with the Magdalena sewer system include infiltration into the collecting system, negative slopes, insufficient pipe capacity, and silting of pipes due to low water velocity. BECC estimates the investment necessary to correct these defects at approximately US $3,000,000.00.[39] The Secretariat did not obtain information on the condition of the sewer systems of Santa Ana and Imuris.

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35. CPEUM, Article 115.– The States shall, for their internal governance, adopt the republican, representative and popular form of government, taking as a basis for their territorial division and political and administrative organization the Free Municipality, as follows: ... III. Municipalities are responsible for the following public duties and services: a) Drinking water, drainage, sewerage, treatment and disposal of their wastewater;...
36. http://www.sonora.gob.mx/municipios/getmun.asp?municipio=imuris.htm&nombre=Imuris.
37. http://www.sonora.gob.mx/municipios/getmun.asp?municipio=magdalena.htm&nombre=Magdalena.
38. http://www.sonora.gob.mx/municipios/getmun.asp?municipio=santaana.htm&nombre=Santa %20Ana.
39. BECC, Summary of Ongoing Projects in the Magdalena River Basin, at 1. Information provided to the Secretariat for the development of this factual record on 3 June 2002.

6.3.1 Pollutant Levels in Municipal Wastewater Discharges and Monitoring

NOM-001 establishes the maximum contaminant limits for wastewater discharges into national waters and property, but provides that compliance with these limits is gradual and progressive. For municipal discharges, the compliance deadline depends on population size (as per the XI National Census of Population and Housing for 1990, published by INEGI). Municipalities with populations between 20,001 and 50,000, such as Magdalena de Kino, must comply by 1 January 2005, while municipalities with populations between 2,501 and 20,000, such as Imuris and Santa Ana, have until 1 January 2010 to comply.

NOM-001 also establishes deadlines by which the persons responsible for municipal wastewater discharges exceeding the maximum contaminant limits of NOM-001 must file with the CNA a plan of action or works to control the quality of their discharges. The deadline for filing the plan applicable to Magdalena de Kino was 31 December 1998, while the deadline applicable to Imuris and Santa Ana was 31 December 1999. The municipalities are also required to file semiannual progress reports on their plans of action.

In addition, the municipalities are required to monitor their wastewater discharges in order to determine daily and monthly pollutant averages. Municipalities with populations between 20,001 and 50,000, such as Magdalena de Kino, must perform quarterly sampling and analysis and semiannual reporting; those with populations between 2,501 and 20,000, such as Imuris and Santa Ana, must perform semiannual sampling and analysis and annual reporting. The monitoring records must be kept on file and made available for review for three years. The wastewater discharge permits issued by the CNA for the three municipalities in question provide for annual reporting and semi-annual monitoring in all three cases.

NOM-001 and the compliance deadlines established for some of the obligations set out therein do not exempt the persons responsible for wastewater discharges from the general prohibition on causing the pollution of surface water, groundwater, or soil due to the discharging of wastewater containing pollutants without prior treatment; nor do these deadlines affect the CNA's obligations in regard to inspection, monitoring, and sanctioning as applicable.[40]

40. In this regard, see also RSP, at 24.

Also, the LAN and the LFD provide that users of national waters as collecting bodies for their wastewater discharges (including municipalities) must pay fees to the Federation for those wastewater discharges that exceed the maximum contaminant limits. Executive Orders issued by the federal Executive Branch on 11 October 1995 and 21 December 2001 established a waiver scheme for these obligations. Municipalities that decide to join the scheme are exempted from fee obligations accrued prior to their joining.

The municipal wastewater from Imuris, Magdalena, and Santa Ana contains primarily domestic waste. According to the CNA, no industrial facilities discharge into the municipal sewer system.

In the course of developing the Project of 1997, CNA measured pollutant concentrations in the wastewater discharges. The following table is a summary, provided by Mexico, of the monitoring results,[41] along with the corresponding values under NOM–001 (rivers, type B use) and the particular conditions of discharge.[42]

41. IPM, at 1–3. The CNA performed this monitoring at the discharge point of the sanitary system of the town of Imuris, at the outlet of the oxidation lagoon of the city of Magdalena, and at the final discharge point of the water sanitation system of the city of Santa Ana. The analysis was performed on compound samples consisting of a mixture proportional to the measured flow of six simple samples taken every 4 hours during a period of 24 hours. During the sampling period, gauging was performed, water and air temperature were measured, and pH and electrical conductivity readings were taken.
42. NOM-001 and the CPD contemplate other parameters that Mexico did not include in its summary table (heavy metals—arsenic, cadmium, cyanide, copper, total chromium, mercury, nickel, lead, zinc—and floating matter).

Parameter	Unit	Significant Sample (Imuris)	Significant Sample (Magdalena)	Significant Sample (Santa Ana)	Limits set out in NOM-001 and CPD
PH	mg/l	7.7	7.5	7.5	Not less than 5 nor greater than 10
BOD (5) at 20 ºC	mg/l	92.5	149.0	105.6	150
Oils and lubricants	mg/l	13.3	15.0	18.2	25
Settleable solids	mg/l	2.3	1.0	Not indicated	2
Total suspended solids	mg/l	86.0	141.0	Not indicated	125
Methylene blue active substances (MBAS)*	mg/l	9.0	10.0	10.0	Not prescribed
Total phosphorus (exp. as P)	mg/l	5.0	8.0	Not indicated	30
Organic nitrogen	mg/l	7.4	10.0	Not indicated	60 (total nitrogen)
Ammonia nitrogen	mg/l	21.0	16.0	Not indicated	
Electrical conductivity	mmhos/ cm	810.0	914.0	840.8	Not prescribed
Total coliforms	MPN/ 100 ml	2.40E+07	2.05E+07	Not indicated	Not prescribed
Fecal coliforms	MPN/ 100 ml	1.55E+07 (15,500,000)	1.20E+07 (12,000,000)	1.266E+07 (12,660,000)	2,000
Minimum flow rate	lps	8.4	Not taken	Not indicated	Not prescribed
Maximum flow rate	lps	12.4	Not taken	Not indicated	Not prescribed
Average flow rate	lps	10.6	Not taken	Not indicated	Not prescribed
Average ambient temperature	ºC	7.5	10.0	Not indicated	40 (temperature of sample)

* detergents

In the case of Magdalena, the CNA concluded from these results that "... the quality of the effluent does not meet the requirements of the standard to be considered an effluent appropriate for discharge into the Magdalena River."[43] In the cases of Imuris and Santa Ana, one of the CNA's conclusions with respect to these results was that "the wastewater discharges from the town negatively impact the quality of

43. RSP, Appendix 23 -Magdelena, at 40.

the collecting body, since the contribution of salts, solids (dissolved), nutrients (ammonia nitrogen and phosphates), detergents (MBAS), oils and lubricants, organic matter (COD and BOD) and bacteriological load (total coliforms) are harmful to the water used for crop irrigation."[44]

These are the most recent analyses of wastewater discharges by these three municipalities into the Magdalena River, according to the information obtained by the Secretariat. As stated above, pursuant to LGEEPA Article 123 and NOM–001 section 4.8, the municipalities of Imuris, Magdalena de Kino, and Santa Ana are obligated to conduct monitoring of their wastewater discharges and to report the results to the CNA. These municipalities are not performing the required monitoring and reporting.[45]

6.3.2 Wastewater Treatment Systems

The wastewater from the city of Magdalena is discharged into the Magdalena River, while the wastewater from the cities of Imuris and Santa Ana is discharged in near the river. Currently, the three cities treat their wastewater prior to discharging it into the river. The treatment systems of these cities include different types of lagoons, which may be described as follows:

> *Oxidation Lagoon*
> Relatively shallow wastewater body contained within a specifically designed earthen pond in which biological oxidation of organic matter takes place by natural transfer or is artificially accelerated with oxygen.[46]
>
> *Stabilization Lagoon*
> A type of oxidation lagoon in which biological oxidation of organic matter is effected by natural or artificially accelerated transfer of oxygen to the water from air. Their dimensions are specially designed for biological treatment of wastewater by a natural biochemical purification process. They are simple earthen structures open to the soil and air for better purification. In order for a stabilization lagoon to work properly, the following processes must occur:
>
> – Oxidation of organic matter under aerobic conditions.

44. RSP, Appendix 23 -Imuris, at 52 and Santa Ana, at 44.
45. Interview with personnel from the CNA Northwest Regional Office during Secretariat's 9–10 October 2002 visit.
46. Diccionario del Agua, *Aquamarket* <http://www.aguamarket.com/diccionario/> (translation). In particular, see "laguna de oxidación" at <http://www.aguamarket.com/diccionario/terminos.asp?Id=2339>.

– Surface reaeration.

– Decomposition of organic matter under anaerobic conditions.

Classification of stabilization lagoons:

Aerobic: As their name indicates, these lagoons operate in the presence of air. They are shallow (1.20–0.80 m), thus conducive to the proliferation of the algae that supply a large part of the necessary oxygen. BOD removal efficiencies of 65–75% are achieved. Their main disadvantage is the amount of space required. In aerobic lagoons, the suspended and dissolved degradable substances are stabilized by the aerobic microbial flora.

Anaerobic: Generally used as a preliminary purification or pretreatment method, they may be considered as digesters since specific quantities of organic matter or load are applied per unit of volume, such that anaerobic conditions (i.e., the absence of oxygen) prevail. The expected BOD removal efficiency with this lagoon varies with retention time; for times of 1 to 10 days, efficiencies of 20–60% are obtained. One disadvantage of this type of lagoon is the production of foul odors that prevent it from being sited near inhabited areas (within 500 m). Generally, these reservoirs are 3–5 m deep.

Facultative: This is a combination of the two previous types. Facultative lagoons are designed at depths varying normally from 1.5–2 m and a quantity of organic matter or load per unit of volume enabling the growth of aerobic and facultative organisms (which latter can reproduce either in the presence or absence of oxygen). Its flexibility makes it the most common type of lagoon; it requires less land than the aerobic type and does not produce the bad odors typical of the anaerobic type. As with all biological processes, the factor most affecting its efficiency is temperature. Expected BOD removal efficiencies with these lagoons range from 60–85%. Removal efficiency for bacteria, particularly the coliform group, can reach 99.99% due to the prolonged retention times.

Maturation Lagoon
Stabilization lagoon designed to treat secondary or wastewater effluent previously treated by a lagoon system (anaerobic-facultative, aerated-facultative, or primary-secondary). Originally designed to reduce bacterial loads.

These are shallow (0.5–1.0 m) with a large surface area. Light must be allowed to penetrate the lagoon and aerobic conditions must prevail throughout, hence the necessity of oxygen.

Their main function is to remove any remaining fecal bacteria, pathogens, etc., guaranteeing the sanitary quality of the water.

> The main biological phenomena occurring in this lagoon are oxidation by aerobic bacteria and photosynthesis by algae, which proliferate rampantly.[47]

When the submission was filed in 1997, wastewater from Magdalena was being treated in one anaerobic lagoon (1.79 ha, depth of 2.41 m) and one facultative lagoon (4.88 ha, depth of 1.5 m). This system operated with a removal efficiency of 70.72% for BOD and 83.97% for total coliforms.[48] Wastewater from Santa Ana was not being treated.[49] Imuris was discharging its wastewater into a temporary lagoon because its two facultative lagoons were not operating.[50]

In 1988 the CNA built an oxidation lagoon to receive domestic wastewater from the municipality of Imuris. However, this treatment system never went into operation because a flood destroyed the pipes, and the municipality did not have the budget to rebuild the damaged sections. In 1992, the Sonora state office of the Ministry of Social Development (*Secretaría de Desarrollo Social*) gave a temporary 45-day authorization for discharge of wastewater from Imuris into an area known as "Laguna Vieja," for infiltration and evaporation while the construction and installation of the new wastewater lagoons for that town were completed. The Water Administration Division (*Subgerencia de Administración del Agua*) of the CNA ratified the 45-day discharge authorization on 2 September 1992, stating that the authorization was granted in order to resolve the pollution problem caused by the domestic wastewater, and because the sewer system required cleaning prior to operation of the sump, which was silted up due to the obstruction of the last section of the wastewater pipe.[51]

The first phase of expansion of the Magdalena treatment plant was carried out during 1998, with the construction of a maturation lagoon to treat a flow of 42.18 lps (2.52 ha, depth of 1.5 m). In Imuris, during this first phase, an anaerobic lagoon (0.44 ha, depth of 4 m) and three maturation lagoons (1.09 ha, depth of 1.5 m) to treat a flow of 19.83 lps were built as a complement to the existing facultative lagoons, which were out of service.[52]

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47. See "laguna de maduración" at <http://www.aguamarket.com/diccionario/terminos.asp?Id=3005> (translation).
48. RSP, Appendix 23 -Magdalena, at 15.
49. RSP, Appendix 23 -Santa Ana, at 11.
50. RSP, Appendix 23 -Imuris, at 10.
51. Memo no. BOO.728.2.01771, RSP, Appendix 7.
52. IPM, at 8.

In 2000, the Santa Ana oxidation lagoons were built. These consisted of an anaerobic lagoon (0.076 ha, depth of 4 m) and three maturation lagoons (approximately 1.12 ha, depth of 1.5 m) to treat a flow of 27.85 lps. Also in 2000, the second phase of the Magdalena treatment plant expansion was completed. This consisted of the addition of an anaerobic lagoon (0.05 ha), a facultative lagoon (1.30 ha) and three maturation lagoons (0.85 ha each) to treat a flow of 23.36 lps.[53]

Currently, the Imuris wastewater treatment system consists of 6 oxidation lagoons with a total treatment capacity of 19.8 lps; the Magdalena system consists of 8 lagoons with a total capacity of 65.54 lps, and the Santa Ana system consists of 5 lagoons with a total capacity of 27.85 lps. The removal efficiency of these three systems is 92.9% for BOD and 99.9% for fecal coliforms.[54] Further to the Project of 1997 (second phase), expansions are planned in 2017 for the Santa Ana and Imuris systems.[55] In a study to improve the Magdalena de Kino water supply, sewer, and treatment systems, the BECC estimated that an investment on the order of $1,900,000 is required to optimize the treatment process.[56]

The Imuris wastewater treatment lagoons are located 12 km southwest of that town, approximately 4 km from the right bank of the Magdalena River.[57] In the case of Magdalena, the lagoons are approximately 3 km to the west of the town along the banks of the Magdalena River.[58] The Santa Ana lagoons are approximately 4 km to the southwest of Santa Ana near the river.[59]

As mentioned previously, these municipalities carry out their drinking water and sewer-related roles through their respective drinking water and sanitary sewer operating agencies. The CNA built the treatment facilities, but the municipalities are responsible for operating and maintaining the oxidation lagoons in such a manner as to ensure that they work properly. However, the budget of the operating agencies does not include a line item for treatment, but only covers operation and maintenance of the water supply and sewer systems.[60] The person

53. IPM, at 8-9.
54. IPM, at 9–10 and 13–15.
55. RSP, Appendix 23 -Santa Ana, at 87 and Imuris, at 103.
56. BECC, Summary of Ongoing Projects in the Magdalena River Basin, at 1.
57. RSP, Appendix 23 -Imuris, at 3 and 112.
58. RSP, Appendix 23 -Magdalena, at 4, 15 and 102.
59. RSP, Appendix 23 -Santa Ana, at 3 and 88.
60. IPM, at 12–13.

responsible for the Magdalena operating agency estimates the expense of operating and maintaining that town's treatment plant at approximately P $20,000.00 monthly. The expenses include the cost of electrical power to operate the pumps, periodic cleaning to prevent obstruction of flow through accumulation of garbage, prevent the silting of pipes, chlorine and other purification agents, etc.[61] The Submitter asserts that problems frequently affect the treatment systems, especially the sumps, causing wastewater spills. This was the situation in Imuris when the Secretariat visited the site on 9 October 2002. The sump that pumps wastewater to the treatment lagoons is on the bank of the river, and although it was operating, the wastewater was running off into the riverbed.[62]

In its response to the submission of 29 July 1998, Mexico states that the absence of a budget has prevented the municipalities from duly fulfilling their water treatment obligations.[63] The Secretariat requested but did not obtain additional information about the budgetary limitations invoked by Mexico.

6.3.3 Magdalena River Water Quality Monitoring

Under LGEEPA Article 133, Semarnat, with the participation of the Ministry of Health, is responsible for conducting systematic and continued monitoring of national waters to detect the presence of pollutants and excess organic wastes, and for taking any necessary measures. Pursuant to LAN Articles 9 paragraph V and 86 paragraph V, Semarnat performs this function through the agency of the CNA.

In 1993, the CNA conducted a physicochemical and bacteriological study of the Agua Zarca-El Claro section of the Magdalena River to ascertain its assimilative capacity.[64] Samples were taken at 11 points: Agua Zarca, Cibuta, Imuris, Cocóspera Creek, Punta de Agua Creek, Magdalena, Sásabe Creek, Santa Ana, Santa Ana wastewater, El Cajón Creek and El Claro. The highest results for BOD, oils and lubricants, settleable solids, total suspended solids, total coliforms and fecal

61. Conversation of 9 October 2002 with Ing. Armida E. Carranza A., Director of Municipal Water Operating Agency, Municipality of Magdalena 2000-2003.
62. The Secretariat went to the Imuris municipal offices to obtain information about the cause of this leak but found nobody there at the time, and the Secretariat did not inquire further.
63. RSP, at 35.
64. IPM, at 3 and "Magdalena River" Appendix.

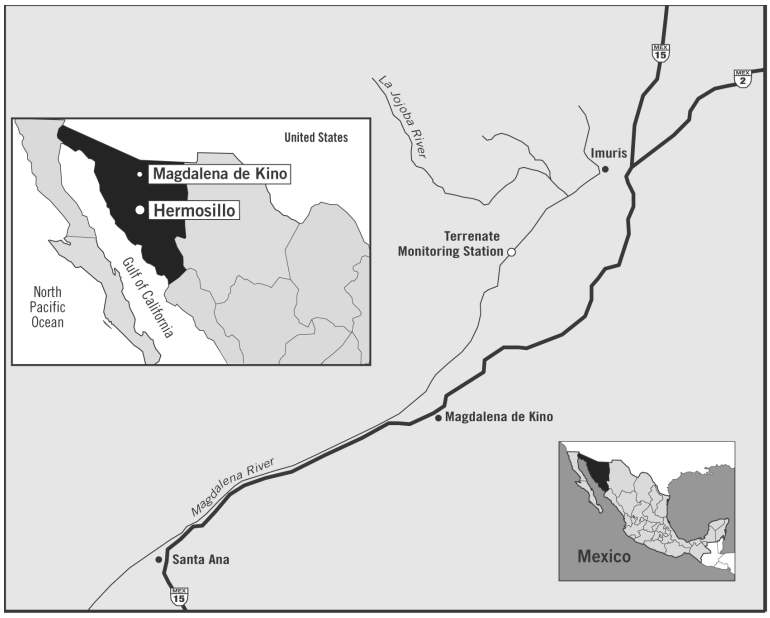
coliforms at the river sampling points in Imuris, Magdalena and Santa Ana were as follows:[65]

Parameter	Units	Imuris	Magdalena	Santa Ana
BOD (5)	mg/l	6.06	4.54	7.07
Oils and lubricants	mg/l	12.86	7.56	17.12
Settleable solids	mg/l	1.0	.22	N.D.
Total suspended solids	mg/l	96.0	160.0	78.0
Total coliforms	MPN/100 ml	2,400	21,000	4,600
Fecal coliforms	MPN/100 ml	930	15,000	2,400

Until 1997, the CNA operated the National Monitoring Network in the state of Sonora (17 monitoring stations located along surface waterways in the Mayo and Yaqui valleys and along the Sonora River but not including the Magdalena River). This monitoring network ceased to be meaningful due to the population growth and the diversification of industry and manufacturing in the state. In its place, the CNA began operating the National Monitoring Network in 1998 with 8 new surface water-monitoring stations along the main waterways of the state of Sonora. At the Terrenate station on the Magdalena River, bimonthly water quality monitoring began in 1999.[66]

The Terrenate monitoring station is 10 km downstream from the town of Imuris on the Magdalena River. The Magdalena and Santa Ana discharge points are downstream of the station. CNA states that the station was located there because this is the only point where the river has a sufficient volume of water that is constantly flowing, but provided no further information on the process by which CNA decided to locate the monitoring station in Terrenate.[67]

65. IPM, "Magdalena River" Appendix, Appendix B, "Water Quality Tables."
66. *Ibid*.
67. Interview with personnel from the CNA Northwest Regional Office, during the Secretariat's visit of 9–10 October 2002.



Monitoring data dating back to 1999 is available for this station. The parameters used to assess water quality for *agricultural irrigation use* at the Terrenate station are pH, specific conductivity, chlorides, fecal coliforms, total suspended solids, and dissolved solids. The CNA measurements indicate that, in general, the Ecological Water Quality Criteria (CE–CCA–001/89)[68] were met for all of these parameters in five of the six samples conducted in 2001. In the sixth sample, the fecal coliform criterion was exceeded (3,500 MPN/100 ml versus a maximum contaminant limit of 1,000 MPN/100 ml for agricultural irrigation use).[69] The CNA concluded as follows for the 20 samples conducted from 1999 to 2001:

- The pH met the criterion in 100% of the samples.
- The specific conductivity met the criterion in 100% of the samples.
- The chloride concentration met the criterion in 100% of the samples.
- The suspended solids limit was only exceeded twice and only by 10%, so the results are not considered significant.
- The concentration of dissolved solids met the criterion in 100% of the samples.

68. Published 13 December 1989 in the DOF.
69. IPM, at 4 and "Magdalena River" Appendix.

– The fecal coliform parameter of 1,000 MPN/100 ml was exceeded in 8 of the samples, in 2 cases by 10%, in 2 cases by 30%, and in 4 cases by an amount between 60% and 350%.

The average Use Potential Index for the three years monitored is 1.07; although this is slightly greater than 1, the water quality is considered acceptable for use in agricultural irrigation, although not on vegetables intended for raw consumption due to the presence of fecal coliforms.

To prevent the fecal coliform concentration from exceeding the quality criterion, the water must be disinfected.[70]

The parameters used to assess water quality for *use as drinking water* at the Terrenate station are pH, dissolved oxygen, oils and lubricants, colour, chlorides, methylene blue active substances (detergents), fecal coliforms, alkalinity, total phosphates, nitrates, total suspended solids, and dissolved solids. The CNA states that in general the Ecological Water Quality Criteria for drinking water were met for all parameters indicated for that use, although oils and lubricants were found in two samples, total phosphates were slightly higher than the criterion in two samples, and as mentioned previously, fecal coliforms exceeded the criterion in one sample.[71] The CNA concluded the following about the 20 samples conducted between 1999 and 2001:

– The pH met the criterion in 100% of samples.

– Dissolved oxygen met the criterion in 100% of samples.

– Oils and greases were detected in 47% of samples

– Colour met the criterion in 100% of samples.

– The concentration of chlorides met the criterion in 100% of samples.

– The concentration of methylene blue active substances met the criterion in 100% of samples.

– The fecal coliform criterion of 1,000 MPN/100 ml was exceeded in 8 of the samples, in 2 cases by 10%, in 2 cases by 30%, and in 4 cases by an amount between 60% and 350%.

– Alkalinity met the criterion in 100% of samples.

– The phosphate concentration met the criterion in 75% of samples and never exceeded the criterion by more than 30%, so the results are not considered significant.

70. Results of water quality assessment using Use Potential Index. IPM, "Magdalena River" Appendix.
71. *Ibid*.

– The nitrate concentration met the criterion in 100% of samples.

– The concentration of suspended solids met the criterion in 100% of samples.

– The concentration of dissolved solids met the criterion in 100% of samples.

The average Use Potential Index for the three years monitored is 1.13; although this is slightly greater than 1, the water quality is considered acceptable for use as a drinking water source if purified to eliminate coliform microorganisms and oils and lubricants.[72]

Appendix 7 of this factual record contains the table of 1999–2001 monitoring data for the Terrenate station, which was provided by Mexico.

The CNA classifies the Magdalena River as "suitable" for the following uses: public water supply, recreation, fishing and aquatic wildlife, and industrial and agricultural uses.[73]

6.3.4 *Effects of Wastewater Discharge from Imuris, Magdalena, and Santa Ana on Magdalena River Users*

In the submission that gave rise to this factual record, CPLRM asserts that wastewater discharges into the Magdalena River from the municipalities of Imuris, Magdalena de Kino, and Santa Ana caused harm to persons who use the river's water for irrigation, and caused the rotting of fruit trees.

In 1996, the CNA conducted monitoring of Magdalena River water used for irrigation in the municipalities of Imuris, Magdalena de Kino, and Santa Ana, and found that it exceeded the limits of NOM-CCA-033-ECOL-93.[74] Pursuant to LAN Article 119 paragraph II, the CNA sanctioned 3 farmers who were using polluted water to irrigate vegetables.[75] The vegetable producers expressed their disagreement with being prevented from using Magdalena River water for irrigation of

72. *Ibid*.
73. Surface Water Quality in the Northwest Region, December 2001 <www.cna.gob.mx>.
74. Published in the DOF on 18 October 1993. This standard establishes the bacteriological conditions for the use of urban or municipal wastewater, or mixtures of such wastewater with water taken from bodies of water, in the irrigation of vegetable crops and vegetable/fruit products. The code for this standard was changed to NOM-033-ECOL-93 on 30 November 1994.
75. RSP, at 18, Appendix 9.

their already planted crops. In this regard, Francisco Villarreal Villarreal filed a complaint with the state human rights commission on 9 December 1996.[76] The National Human Rights Commission determined that the matter was outside its jurisdiction and recommended that the complainant apply to the CNA.[77]

In order to address this matter, a commission was formed with representatives of the farmers using the water, the municipalities of Imuris, Magdalena de Kino, and Santa Ana, the CNA, the federal Ministry of Agriculture, Livestock Production and Rural Development (*Secretaría de Agricultura, Ganadería y Desarrollo Rural*—SAGAR), the Sonora State Ministry of Agricultural Development (*Secretaría de Fomento Agrícola*) and the Sonora State Ministry of Health and Welfare (*Secretaría de Salubridad y Asistencia*).[78] The commission met on 27 August and 5 September 1996 and agreed on measures for irrigation of the crops. It was agreed that SAGAR would issue planting permits so that the producers, with knowledge of the water quality, could take the measures necessary to chlorinate the water if it did not meet the standard. The director of the SAGAR Rural Development District sent the chlorine dosages recommended for treatment of water for vegetable irrigation to the president of the San Ignacio Pueblo section of the Comaquito Irrigation Unit. The users did not chlorinate the water as agreed, arguing that the stated measures were too costly.[79]

The commission was dissolved in November 1996 when the CNA completed the study titled "Preliminary Pollution Analysis of the Magdalena River."[80] The study determined that the towns situated along the banks of the river were responsible for the entirety of the pollution as a result of their practices of open-air defecation and discharge of domestic wastewater, refuse, and organic matter. No sources of chemical pollution were detected.

Mexico asserts that no problems have ever arisen in regard to water supply for human consumption as a result of wastewater discharges from the municipalities in question.[81] According to CPLRM, in September 1997, the residents of San Lorenzo reported fetid odors due to

76. RSP, Appendices 10–11.
77. RSP, Appendix 11.
78. The Secretariat did not find information on who formed this commission and under what authority. The commission held its meetings in the municipal offices of Magdalena de Kino, according to the minutes. RSP, Appendix 12.
79. RSP, at 19–22, Appendix 12.
80. RSP, Appendix 13.
81. IPM, at 6.

an overflow of the oxidation lagoon that receives wastewater from Magdalena, which was reported by the committee to be flowing into the Magdalena River. The Submitter also reported that one child died of gastroenteritis at that time,[82] and annexed a medical notice of 15 September 1997 by which Dr. Arturo Ibarra, a pediatric physician, alerted the residents of Magdalena to the risks represented by the lack of adequate water treatment infrastructure.[83]

The Secretariat did not obtain additional information about these incidents, nor did it receive additional information about the rotting of fruit trees noted in the submission as an effect of the municipal wastewater discharges in question.

Mexico asserts that in view of the data obtained from the Terrenate monitoring station and the asserted fact that no epidemics or harm to health have occurred in the area, "the discharges cannot be considered to have caused any adverse effects on the environment." Mexico states that "in order to avert any risk," the CNA has, since 1996, been requiring that Magdalena River water be chlorinated prior to being used in irrigation.[84]

6.4 Enforcement of Environmental Law with Respect to Wastewater Discharges from Imuris, Magdalena, and Santa Ana into the Magdalena River

The LGEEPA provisions relevant to this factual record are cited verbatim in section 6 of this document. These establish the general obligation to prevent and control water pollution, the responsibility of users of national waters to use them sustainably, and the obligation of any person discharging wastewater to treat it prior to discharge in order to prevent pollution of the collecting bodies such that it meets the specific parameters set out in the Mexican Official Standards and the particular conditions of discharge.

As stated previously, the CNA is responsible for enforcing the water pollution prevention and control laws and sanctioning violations thereof.[85] The violations, sanctions, and penalties provided by the LGEEPA, the LAN and the Federal Criminal Code (*Código Penal Federal*—CPF) are as follows:

82. Letter from CPLRM to the CEC Secretariat received 15 October 1997.
83. Appendix to CPLRM letter mentioned in previous footnote.
84. IPM, at 7.
85. LAN Article 86 paragraphs III and VII.

LGEEPA, Article 171.**–** Violations of this law, its regulations, and any provisions ensuing from it shall be sanctioned administratively by the Ministry with one or more of the following:

I.– A fine equivalent to twenty to twenty thousand times the daily minimum wage applicable in the Federal District at the time the sanction is imposed;

II.– Closing of the establishment, either temporary or permanent and either total or partial:

a) Where the violator fails to meet the deadlines or conditions imposed by the authority for performing the corrective measures or urgent actions ordered;

b) In cases of recidivism where the violations cause negative effects on the environment, or

c) In cases of repeated non-compliance, on three or more occasions, with any corrective or urgent measure imposed by the authority.

III.– Administrative arrest for up to thirty-six hours.

IV.– Seizure of instruments, specimens, products or sub-products directly related to violations concerning forest resources, wildlife species, or genetic resources established by this Law, and

V.– Suspension or revocation of the corresponding concessions, licenses, permits, or authorizations.

LAN, Article 119.– "The Commission" shall, as provided by this law, sanction the following violations:

I. Discharging wastewater, on a continuing, intermittent or accidental basis and in violation of the provisions of this law, into collecting bodies in the national domain, including marine waters, as well as where such wastewater infiltrates into land in the national domain or other land where it may contaminate the subsoil or aquifer, without prejudice to the sanctions provided by the sanitary provisions and the provisions on ecological balance and environmental protection;

II. Exploiting, using, or enjoying national wastewaters without meeting the quality-related Mexican Official Standards and particular conditions established for such purpose;

> ... VII. Failing to install the devices necessary to record or measure the quantity and quality of water as prescribed by this law, its regulation, and any other applicable provisions, or modifying or altering facilities and equipment for the measurement of water volumes used, without the permission of the "Commission";
>
> ... XV. Failing to fulfil the obligations set out in the concessions, assignments, or permits;
>
> ... XVIII. Committing any other violation of the provisions of this law or its regulation.
>
> **LAN,** Article 120.– The violations contemplated in the preceding article will be sanctioned administratively by "the Commission" with fines equivalent to the following number of times the daily minimum wage in effect in the geographical area and at the time that the violation is committed:
>
> I. 50 to 500 for violations of paragraphs VI, XI, XV and XVIII;
>
> II. 100 to 1,000 for violations of paragraphs II, III, IV, VII, X, XVI and XVII...
>
> **CPF,** Article 416.– Anyone who illegally discharges or dumps wastewater, chemical or biochemical fluids, waste, or pollutants or allows them to infiltrate into soils, subsoils, marine waters, rivers, watersheds, reservoirs, or other bodies of water or watercourses under federal jurisdiction, thereby causing harm or the risk of harm to natural resources, flora, fauna, water quality, ecosystems, or the environment, or who so authorizes or orders, is liable to a sentence of one to nine years imprisonment and a fine of three hundred to three thousand times the daily minimum wage.
>
> Where the waters are discharged into or flow within or toward a protected natural area, the penalty shall be up to three additional years imprisonment and a fine of an additional amount equal to 1,000 times the daily minimum wage.

As observed previously, another function of the CNA is to construct, in part or in full, water supply impoundment or storage, piping and, as applicable, treatment or purification infrastructure with funds from the federal treasury or funds obtained with the backing of the Federation or with any other type of federal guarantee. The LAN provides as follows:

> **LAN**, Article 46.– "The Commission" may, upon entering into an agreement with the governments of the corresponding federated entities [states] and municipalities, construct in part or in full, the water supply

> impoundment or storage, piping and, as applicable, treatment or purification infrastructure with funds from the federal treasury or funds obtained with the backing of the Federation or any other type of guarantee therefrom, provided that the following requirements are met:
>
> I. The works are located in more than one federated entity or have multiple water uses or are expressly requested by the interested parties;
>
> II. The governments of the respective federated entities and municipalities contribute, as applicable, funds and investments to the infrastructure to be built, and the necessary financing is obtained;
>
> III. The recovery of the investment pursuant to the appropriate fiscal legislation is guaranteed and the user or user system undertakes to efficiently administer the water systems and steward the water quality; and
>
> IV. The respective federated entities and municipalities and their para-state or paramunicipal entities, or the legal persons with which they contract for such purpose, as the case may be, undertake to operate, preserve, maintain, and rehabilitate the hydraulic infrastructure. The corresponding undertakings shall be stipulated in the relevant agreements.
>
> **LAN**, Article 86.– The Commission" is responsible for:
>
> ...VI. Promote or take the necessary measures to prevent refuse, waste, toxic materials and substances, and sludge produced by wastewater treatment, from contaminating surface or groundwater and the property contemplated in Article 113...

The Secretariat has no information about the agreements whereby the CNA constructed the treatment facilities of Imuris, Magdalena and Santa Ana described in section 6.3.2 of this factual record.[86] As stated previously, the operation of these facilities is not the responsibility of the CNA but, in this case, that of the respective municipalities.

As to enforcement and sanctions, from 1 January 1994 to the present, CNA took effluent measurements on only one occasion, in 1997, to determine the pollutant levels in the wastewater discharges for the municipalities of Imuris, Magdalena, and Santa Ana. The samples indicated fecal coliform effluent levels of 15,500,000 MPN/100 ml for Imuris,

86. Appended to the IPM was a "Technical appendix to the coordination agreement of 11 May 2000 between the Federal Government ... and the Executive Branch of the State of Sonora for the purpose of constructing drinking water, sewer, and treatment facilities for the border area of the State of Sonora"; however, this does not refer to the treatment plants of Imuris, Magdalena and Santa Ana but to the sewer and drinking water systems.

12,000,000 MPN/100 ml for Magdalena and 12,660,000 MPN/100 ml for Santa Ana, while the effluent level established by NOM-001 is 2,000 MPN/100 ml. The results are presented in more detail in section 6.3.1 of this factual record. The measurements were taken as part of the Project of 1997 and not with a view to verifying compliance by these municipalities with their wastewater obligations. The CNA did not take any enforcement action in regard to these samples.

Mexico asserts that it would have been inconsistent for the CNA to promote initiatives to advance in bringing users of national waters into compliance with the LAN (including the municipalities) and at the same time sanction the operating agency for failing to comply with discharge quality provisions.[87]

As part of these initiatives to promote compliance, the payment of fees for wastewater discharges into national waters as required by the LAN and the LFD was made subject to a waiver by means of Executive Orders issued by the federal Executive Branch on 11 October 1995 and 21 December 2001. On 30 and 31 December 1996 respectively, the operating agencies of Imuris and Magdalena de Kino signed an action plan in order to receive administrative and fiscal support under the Executive Order of 11 October 1995. However, the information provided to the Secretariat does not indicate that the municipalities in question took the actions necessary to receive the benefits of this Executive Order.[88] The municipality of Santa Ana did not join the program. As to the Executive Order of 2001, the deadline for joining the corresponding program was 31 May 2002. None of the three municipalities joined the program arising from this new Executive Order.[89] Consequently, the municipalities of Imuris, Magdalena de Kino and Santa Ana are not exempt from payment of contributions and accessory expenses for the use or enjoyment of property in the national domain as receiving bodies for their wastewater discharges.

The CNA issued authorization for the municipalities in question to discharge their wastewater into the Magdalena River by granting discharge permits on 14 January 1999. These permits allow a discharge

87. RSP, at 23.

88. To enjoy the benefits of this Executive Order, the municipalities would have had to pay by 30 June 1997 their fees for the use or enjoyment of national waters accrued prior to 1 January 1995, or would have had to comply with the provisions of Article 66 of the Tax Code of the Federation (*Código Fiscal de la Federación*) in force at that time. There is no indication in the information obtained by the Secretariat that the municipalities in question took either of these two actions.

89. Interview with personnel from the CNA Northwest Regional Office, during the Secretariat's 9–10 October 2002 visit.

volume of 1,164.40 m^3/day and 425,736.00 m^3/year for Imuris; 4,492.80 m^3/day and 1,639,872.00 m^3/year for Magdalena; and 3,731.00 m^3/day and 1,361,815.00 m^3/year for Santa Ana. The authority imposed particular conditions of discharge on these permits that are identical to the applicable parameters under NOM-001. However, under NOM-001, the municipalities in question must comply with the maximum contaminant limits applicable to them[90] by 31 December 2005 in the case of Magdalena de Kino and 31 December 2010 in the case of Imuris and Santa Ana. The permits do not mention the deferred compliance dates in NOM-001 for each municipality.[91]

In regard to the other obligations under NOM-001, the municipalities of Imuris, Magdalena de Kino and Santa Ana did not file the action plan to improve the quality of their discharges as prescribed by the standard.[92] The CNA had previously sent a memo to the three municipalities informing them that the filing deadline was approaching (31 December 1999 in the case of Magdalena de Kino and 31 December 2000 in the case of Imuris and Santa Ana).[93] The municipalities did not file the required plan.[94] CNA has not taken any subsequent enforcement action in this respect.

There is no record of any formal verification by the CNA of compliance with the particular conditions of discharge, NOM-001, or the environmental law governing the prevention and control of pollution by wastewater discharges (pursuant to the LGEEPA and NOM-001) from the municipalities of Imuris, Magdalena de Kino and Santa Ana, nor is there any record that the CNA ever sanctioned these municipalities in this regard or in regard to payment of fees under the LFD.

According to the CNA, since it is impossible in practice to suspend urban discharges, the approach it adopted for this sector was one of "promotion," and new mechanisms are being developed to obligate municipalities to comply with their fee payment obligations (for example, through the assignment of federal contributions as payment guaran-

90. In the case of the Magdalena River, classified as being for urban public use in the LFD, the limits are those corresponding to discharges into type B rivers as per Table 2 of NOM-001. (See Appendix 8 of this factual record).
91. This appears to be merely an omission since there is no indication that the authority intended to accelerate the compliance deadline for that collecting body as it might have done under paragraph 4.6 of NOM-001.
92. Interview with personnel from the CNA Northwest Regional Office, during the Secretariat's 9–10 October 2002 visit.
93. IPM, "Anexo Río Magdalena".
94. Interview with personnel from the CNA Northwest Regional Office, during the Secretariat's 9–10 October 2002 visit.

tees on the commitments undertaken in the agreements between the municipalities and the CNA for the construction of treatment infrastructure).[95]

6.5 Current Factual Status of Wastewater Discharges from Imuris, Magdalena de Kino and Santa Ana into the Magdalena River

As users of Magdalena River water and generators of wastewater discharges, these three municipalities are responsible for ensuring that their wastewater discharges do not pollute the Magdalena River and for treating their discharges as required so that they do not exceed the applicable maximum contaminant limits (pursuant to NOM-001 and the particular conditions of discharge established by the CNA in its discharge permits). The municipalities of Imuris, Magdalena de Kino and Santa Ana route their wastewater to treatment lagoons prior to discharging it into the Magdalena River.

The drinking water and sewer operating agencies of these municipalities are responsible for operating and maintaining the oxidation lagoons in such a way that they function adequately (preventing the obstruction of flow through accumulation of debris, preventing the silting of pipes, adding chlorine and other purification agents, etc.). The budgets of these agencies do not include a line item for treatment; the budgets only cover the operation and maintenance of the drinking water and sewer systems.[96] The person responsible for the Magdalena operating agency estimates the expense of operating and maintaining the treatment plant at approximately P $20,000.00 monthly.[97]

The discharge of wastewater into the Magdalena River by the municipalities of Imuris, Magdalena de Kino and Santa Ana is covered by permits issued by the CNA on 14 January 1999 for a period of 10 years. These permits cover a discharge volume of 1,164.40 m^3/day and 425,736.00 m^3/year for Imuris; 4,492.80 m^3/day and 1,639,872.00 m^3/year for Magdalena; and 3,731.00 m^3/day and 1,361,815.00 m^3/year for Santa Ana.

The Imuris wastewater treatment system consists of 6 lagoons with a total treatment capacity of 19.8 lps; that of Magdalena consists of 8 lagoons with a total treatment capacity of 65.54 lps; and that of Santa

95. Interview with personnel from the CNA Northwest Regional Office, during the Secretariat's 9–10 October 2002 visit.
96. IPM, at 12–13.
97. Conversation of 9 October 2002 with Ing. Armida E. Carranza A., Director of Municipal Water Operating Agency, Municipality of Magdalena 2000-2003.

Ana consists of 5 lagoons with a total treatment capacity of 27.85 lps. According to the CNA, the current removal efficiency of these systems is 92.9% for BOD and 99.9% for fecal coliforms.

The compliance deadline established by NOM-001 for the municipalities of Imuris and Santa Ana with respect to the maximum contaminant limits for wastewater discharges into national waters and property is 1 January 2010; the deadline for Magdalena de Kino is 1 January 2005. The municipalities of Imuris, Magdalena de Kino and Santa Ana are not monitoring and reporting their wastewater discharges as prescribed by NOM-001. The Secretariat did not receive information indicating that these municipalities have made payment of fees pursuant to the LFD, from which they are not exempt because they did not join the program arising from the Executive Order of 21 December 2001. Neither did the Secretariat receive information indicating that the CNA has taken any enforcement action regarding the water pollution prevention and control environmental law provisions that are the subject of this factual record, with respect to the municipalities of Imuris, Magdalena de Kino and Santa Ana.

The CNA has conducted continued and systematic water quality monitoring in the Magdalena River as contemplated in LGEEPA Article 133 by means of bimonthly measurements at the Terrenate monitoring station since 1999. The Magdalena and Santa Ana discharge points are downstream of the station while that of Imuris is upstream. According to the CNA, the quality of Magdalena River water at Terrenate generally meets the applicable parameters for use in agricultural irrigation and as drinking water. Nevertheless, some measurements detected levels of oils and lubricants, phosphates, and fecal coliforms in excess of those allowed for such uses.

7. Closing Note

Factual records provide information on alleged failures to effectively enforce the environmental law in North America that may support the submitters, the Parties to the NAAEC, and other interested members of the public in taking any action they consider appropriate in relation to the matters addressed. In accordance with Council Resolution 02-02, which determined its scope, this factual record provides information on whether Mexico is failing to effectively enforce various provisions of its environmental law in relation to water pollution prevention and control with respect to wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana into the Magdalena River.

This factual record reveals that when the submission was filed in 1997, only the municipality of Magdalena de Kino was treating its wastewater at all before discharging it into the Magdalena River. In 2002, when this factual record was produced, the municipal seats of Imuris, Magdalena, and Santa Ana did have operating wastewater treatment systems (lagoons). The operating agencies with responsibility for water do not have a budget to operate and maintain these systems.

The compliance deadline established by NOM-001 for the municipalities of Imuris and Santa Ana with respect to the maximum contaminant limits for wastewater discharges into national waters and property is 1 January 2010; the deadline for Magdalena is 1 January 2005. For fecal coliforms, the maximum effluent contaminant limit is 2,000 MPN/100 ml. According to the CNA, the removal efficiency of these treatment plants is 92.9% for BOD and 99.9% for fecal coliforms.

The three municipalities do not monitor and report their wastewater discharges as prescribed by NOM-001; nor do they pay the applicable fees pursuant to the LFD. According to the most recent measurement known, made for the Project of 1997 in which the treatment plants now operating were built, the following fecal coliform levels were detected in the respective effluent samples: 15,500,000 MPN/100 ml for Imuris, 12,000,000 MPN/100 ml for Magdalena and 12,660,000 MPN/100 ml for Santa Ana.

The CNA conducts bimonthly monitoring of Magdalena River water quality at the Terrenate station. According to the CNA, Magdalena River water is suitable for the following uses: public water supply, recreation, fish and aquatic wildlife, industrial and agricultural. However, in 1999 and 2000, the fecal coliform parameter of the Ecological Water Quality Criteria was exceeded in several river samples (3,500 MPN/100 ml versus a maximum contaminant limit of 1,000 MPN/100 ml). This station is downstream of the Imuris discharge point and upstream of the Magdalena and Santa Ana discharge points. Based on the three years of monitoring at this station, the CNA considers the waters of the Magdalena River to be "of acceptable quality for use in agricultural irrigation, although not of vegetables intended for raw consumption due to the presence of fecal coliforms" and of acceptable quality for use as a drinking water supply "if purified to eliminate coliform microorganisms and oils and lubricants."[98]

98. Results of water quality assessment using Use Potential Index. IPM, "Magdalena River" Appendix.

The information the Secretariat presents in this factual record reveals that, in fact, since the entry into force of the NAAEC on 1 January 1994, the CNA—the competent authority in the area of water—has not taken any enforcement action regarding the water pollution prevention and control provisions referred to in this factual record with respect to the municipalities of Imuris, Magdalena de Kino and Santa Ana. From 1998 to 2002, the CNA—which is also competent to carry out water infrastructure projects—built or expanded the wastewater treatment systems of the three municipalities.

APPENDIX 1

Council Resolution 02-02, Instruction to the Secretariat of the Commission for Environmental Cooperation regarding the assertion that Mexico is failing to effectively enforce certain environmental laws regarding the pollution of the Magdalena River, through the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora (SEM-97-002)

Mexico, March 7, 2002

COUNCIL RESOLUTION 02-02

Instruction to the Secretariat of the Commission for Environmental Cooperation regarding the assertion that Mexico is failing to effectively enforce certain environmental laws regarding the pollution of the Magdalena River through the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora.

THE COUNCIL:

SUPPORTIVE of the process provided for in Articles 14 and 15 of the *North American Agreement on Environmental Cooperation* (NAAEC) regarding submissions on enforcement matters and the preparation of factual records;

CONSIDERING the submission filed on the above-mentioned matter by Comité Pro Limpieza del Río Magdalena, and the response provided by the Government of the United Mexican States on July 29, 1998; and

HAVING REVIEWED the notification by the Secretariat of February 5, 2002, that the development of a factual record is warranted in relation to certain assertions included in the submission (SEM-97-002);

HEREBY UNANIMOUSLY DECIDES:

TO INSTRUCT the Secretariat to prepare a factual record in accordance with Article 15 of the NAAEC and the *Guidelines for Submissions on Enforcement Matters under Articles 14 and 15 of the North American Agreement on Environmental Cooperation* for the assertions set forth in Submission SEM-97-002 that Mexico is failing to effectively enforce Articles 88 paragraph IV, 89 paragraph VI, 92, 93, 117, 121, 122, 123, 124 and 133 of the LGEEPA (*Ley General del Equilibrio Ecológico y la Protección al Ambiente*) with respect to the pollution of the Magdalena River through the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora;

TO DIRECT the Secretariat to provide the Parties with its overall work plan for gathering the relevant facts and to provide the Parties with the opportunity to comment on that plan; and

TO DIRECT the Secretariat to consider, in developing the factual record, whether the Party concerned is "failing to effectively enforce its environmental law" since the entry into force of the NAAEC on January 1, 1994. In considering such an alleged failure to effectively enforce, relevant facts that existed prior to January 1, 1994, may be included in the factual record.

APPROVED BY THE COUNCIL.

APPENDIX 2

Overall Plan to Develop a Factual Record with Regard to Submission SEM-97-002

Secretariat of the Commission for Environmental Cooperation

Overall Plan to Develop a Factual Record

Submission I.D.:	**SEM-97-002**
Submitter(s):	Comité Pro Limpieza del Río Magdalena
Party:	United Mexican States
Date of this plan:	22 March 2002

Background

On 7 April 1997 Comité Pro Limpieza del Río Magdalena filed a submission with the Secretariat of the Commission for Environmental Cooperation (CEC) in accordance with Article 14 of the *North American Agreement on Environmental Cooperation* (NAAEC). The submission asserts that Mexico is failing to effectively enforce its environmental law with respect to the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora, which are allegedly released into the Magdalena River without being duly treated to prevent the pollution thereof.

On 7 March 2002, the Council decided unanimously to instruct the Secretariat to develop a factual record, in accordance with Article 15 of the NAAEC and the *Guidelines for Submissions on Enforcement Matters under Articles 14 and 15 of the NAAEC (Guidelines)*, with respect to the assertions set forth in Submission SEM-97-002, that Mexico is failing to effectively enforce Articles 88 paragraph IV, 89 paragraph VI, 92, 93, 117, 121, 122, 123, 124 and 133 of the General Law of Ecological Balance and Environmental Protection (*Ley General del Equilibrio Ecológico y la Protección al Ambiente*–LGEEPA) with respect to the pollution of the Magdalena River due to the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora. The Council directed the Secretariat, in developing the factual record, to consider whether the Party concerned "is failing to effectively enforce its environmental law" since the entry into force of the NAAEC on 1 January 1994. In considering such alleged failure, rele-

vant facts existing prior to 1 January 1994 may be included in the factual record.

Under Article 15(4) of the NAAEC, in developing a factual record, "the Secretariat shall consider any information furnished by a Party and may consider any relevant technical, scientific or other information: (a) that is publicly available; (b) submitted by interested non-governmental organizations or persons; (c) submitted by the Joint Public Advisory Committee; or (d) developed by the Secretariat or by independent experts."

Overall Scope of the Fact Finding

The submission asserts that Mexico is failing to effectively enforce its environmental law by not preventing the pollution of the Magdalena River due to the discharge of untreated wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora. The assertions in the submission that are the subject of this factual record are:

1. the alleged failure to effectively enforce Articles 93, 117 and 122 of the LGEEPA with respect to the general obligation to prevent and control water pollution, in the case of the Magdalena River;

2. the alleged failure to effectively enforce Articles 88 paragraph IV and 89 paragraph of the LGEEPA with respect to the responsibility of the municipalities of Imuris, Magdalena de Kino and Santa Ana, as users of the Magdalena River's national waters, to use them sustainably;

3. the alleged failure, in the case of the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana into the Magdalena River, to effectively enforce Articles 92, 117 paragraph IV, 121 and 123 of the LGEEPA, with respect to the obligation of any person discharging wastewater to give prior treatment to the discharge to prevent the pollution of the receiving bodies;

4. the alleged failure to effectively enforce Articles 121 and 124 of the LGEEPA, with respect to the granting and cancellation of the wastewater discharge permits for the municipalities of Imuris, Magdalena de Kino and Santa Ana;

5. the alleged failure, in the case of the wastewater discharge into the Magdalena River, to effectively enforce Article 123 of the LGEEPA, with respect to compliance with the applicable Mexican Official Standards; and

6. the alleged failure to effectively enforce Article 133 of the LGEEPA, by not performing an ongoing and systematic monitoring of the water quality of the Magdalena River.

To prepare the factual record, the Secretariat will gather and develop information relevant to the facts concerning:

i) the alleged violations by the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora, of Articles 88 paragraph IV, 89 paragraph VI, 92, 93, 117, 121, 122, 123, 124 and 133 of the LGEEPA;

ii) Mexico's enforcement of these provisions, with respect to those municipalities; and

iii) the effectiveness of Mexico's enforcement of these provisions, with respect to those municipalities.

Overall Plan

Consistent with Council Resolution 02-02, execution of the overall work plan will begin no sooner than 15 April 2002. All other dates are best estimates of execution time. The overall plan is as follows:

- Through public notices or direct requests for information, the Secretariat will invite the Submitters, JPAC, members of the communities of Imuris, Magdalena de Kino and Santa Ana, and the local, state and federal authorities to submit relevant information within the scope of the fact-finding described above. The Secretariat will explain the scope of the fact-finding, providing sufficient information to enable interested persons or non-governmental organizations or JPAC to provide relevant information to the Secretariat (section 15.2 of the *Guidelines*) **[mid-April 2002]**.

- The Secretariat will request information relevant to the factual record from the appropriate federal, state and local Mexican authorities, and will consider any information provided by a Party (Articles 15(4) and 21(1)(a) of the NAAEC) **[mid-April and early May 2002]**. Information will be requested relevant to the facts regarding:

i) the alleged violations by the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora, of Articles 88 paragraph IV, 89 paragraph VI, 92, 93, 117, 121, 122, 123, 124 and 133 of the LGEEPA;

ii) Mexico's enforcement of these provisions, with respect to those municipalities; and

iii) the effectiveness of Mexico's enforcement of these provisions, with respect to those municipalities.

- The Secretariat will gather the relevant technical, scientific or other information that is publicly available, including from existing databases, information centers, libraries, research centers and academic institutions **[May through August 2002]**.

- As appropriate, the Secretariat will develop, through independent experts, technical, scientific or other information relevant to the factual record **[May through August 2002]**.

- As appropriate, the Secretariat will gather relevant technical, scientific or other information for the development of the factual record, from interested persons or non-governmental organizations, JPAC or independent experts **[May through August 2002]**.

- In accordance with Article 15(4), the Secretariat will prepare the draft factual record based on the information gathered and developed **[September through November 2002]**.

- The Secretariat will submit a draft factual record to Council. Any Party may provide comments on the accuracy of the draft within 45 days thereafter, in accordance with Article 15(5) **[December 2002]**.

- As provided by Article 15(6), the Secretariat will incorporate, as appropriate, any such comments in the final factual record and submit it to Council **[February 2003]**.

- The Council may, by a two-thirds vote, make the final factual record publicly available, normally within 60 days following its submission, in accordance with Article 15(7).

Additional Information

The submission, Mexico's response, the Secretariat determinations, the Council Resolution, and a summary thereof are available in the

Registry on Citizen Submissions in the CEC home page at www.cec.org or upon request to the Secretariat at the following address:

CEC Secretariat
Submissions on Enforcement Matters Unit (SEM Unit)
393, rue St-Jacques Ouest, bureau 200
Montreal QC H2Y 1N9
Canadá

CCA / Mexico Liaison Office:
Atención: Unidad sobre Peticiones Ciudadanas (UPC)
Progreso núm. 3,
Viveros de Coyoacán
México, D.F. 04110
México

APPENDIX 3

Process for Gathering Information for the Development of the Factual Record on Submission SEM-97-002 (Examples of relevant information)

Secretariat of the Commission for Environmental Cooperation

REQUEST FOR INFORMATION for Development of the Factual Record on Submission SEM-97-002 (Río Magdalena) 16 April 2002

I. The factual record process

The Commission for Environmental Cooperation (CEC) of North America is an international organization created under the *North American Agreement on Environmental Cooperation* (NAAEC) by Canada, Mexico and the United States. The CEC operates through three organs: a Council, made up of the highest-level environmental official in each member country; a Joint Public Advisory Committee (JPAC), composed of five citizens from each country; and a Secretariat located in Montreal.

Article 14 of the NAAEC allows residents in North America to inform the Secretariat, in a submission, that any member country (hereinafter, a Party) is failing to effectively enforce its environmental law. This initiates a process of review of the submission, after which the Council may instruct the Secretariat to prepare a factual record in connection with the submission. A factual record seeks to provide detailed information to allow interested persons to assess whether a Party has effectively enforced its environmental law with respect to the matter raised in the submission.

Under Articles 15(4) and 21(1)(a) of the NAAEC, in developing a factual record, the Secretariat shall consider any information furnished by a Party and may ask a Party to provide additional information. The Secretariat also may consider any information that is publicly available; provided by the JPAC, the Submitters or other interested persons or nongovernmental organizations; or developed by the Secretariat or independent experts.

On 7 March 2001, the Council decided unanimously to instruct the Secretariat to develop a factual record, in accordance with Article 15 of the NAAEC and the *Guidelines for Submissions on Enforcement Matters under Articles 14 and 15 of the NAAEC (Guidelines)*, regarding the assertions raised in submission SEM-97-002 that Mexico is failing to effectively enforce Articles 88 paragraph IV, 89 paragraph VI, 93, 117, 121,

122, 123, 124 and 133 of the General Law of Ecological Balance and Environmental Protection (*Ley General del Equilibrio Ecológico y la Protección al Ambiente*—LGEEPA), with respect to the pollution of the Magdalena River by the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora.[1] The Council directed the Secretariat, in developing the factual record, to consider whether the Party concerned "is failing to effectively enforce its environmental law" since the entry into force of the NAAEC on 1 January 1994. In considering such an alleged failure to effectively enforce, relevant facts that existed prior to 1 January 1994 may be included in the factual record.

By means of this document, the Secretariat seeks information relevant to matters to be addressed in the factual record for the Río Magdalena submission, SEM-97-002. The following sections provide background on the submission and describe the type of information sought.

II. The Río Magdalena submission

On 7 April 1997, Comité Pro Limpieza del Río Magdalena filed a submission with the Secretariat of the CEC, concerning wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora, which is allegedly released into the Magdalena River without being duly treated to prevent the pollution thereof.

The alleged failures to effectively enforce Mexico's environmental law that is the subject of this factual record refer to:

1) The general obligation to prevent and control water pollution, in the case of the Magdalena River (LGEEPA Articles 93, 117 and 122);

2) The responsibility of the municipalities of Imuris, Magdalena de Kino and Santa Ana as users of the national waters of the Magdalena River, to use them sustainably (LGEEPA Articles 88 paragraph IV and 89 paragraph VI);

1. Note that the reference to Article 92 of the LGEEPA has been eliminated. On page 20 of its recommendation to Council for the development of this factual record, of 5 February 2002, the Secretariat determined that a review of the effective enforcement of this provision was not warranted, as the Party's actions with respect to the wastewater discharge in question qualify as promotion actions pursuant thereto. However, this provision was accidentally included in the list of relevant provisions on pages 2 and 27 of that recommendation.

3) The obligation of any person who discharges wastewater to give prior treatment to the discharge in order to prevent the pollution of the receiving bodies, in this case the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana into the Magdalena River (LGEEPA Articles 117 paragraph IV, 121 and 123);

4) The granting and cancellation of wastewater discharge permits for the municipalities of Imuris, Magdalena de Kino and Santa Ana (LGEEPA Articles 121 and 124);

5) Compliance with the Mexican Official Standards applicable in the case of the discharge of wastewater from the municipalities in question into the Magdalena River (LGEEPA Article 123); and

6) The obligation to perform an ongoing and systematic monitoring of the water quality of the Magdalena River (LGEEPA Article 133).

The principal environmental damages allegedly caused have been the degradation of the water quality of the Magdalena River, the rotting of fruit trees and the impossibility of using the river's water for irrigating traditional crops in the region.

The response to this submission, provided by the Mexican Government on 29 July 1998, describes the problems of the Magdalena River and the situation of the three municipalities in question. Mexico asserts that it has not failed to effectively enforce its environmental law because it has scheduled actions to handle these problems. Mexico's response includes as exhibits, copies of the construction or extension projects of the treatment systems of each municipality with which the treatment deficiencies of the three municipalities supposedly will be addressed.

III. Request for information

The Secretariat of the CEC requests information relevant to the facts concerning:

i) the alleged violations of Articles 88 paragraph IV, 89 paragraph VI, 93, 117, 121, 122, 123, 124 and 133 of the LGEEPA by the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora, relating to the prevention and control of the pollution of the Magdalena River due to the discharge of wastewater;

ii) Mexico's enforcement of these provisions with respect to the discharge of wastewater from those municipalities; and

iii) The effectiveness of Mexico's enforcement with respect to the discharge of wastewater from those municipalities.

IV. Examples of relevant information

1. Information on Mexico's enforcement of Articles 88 paragraph IV, 89 paragraph VI, 93, 117, 121, 122, 123, 124 and 133 of the LGEEPA, with respect to the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana into the Magdalena River.

2. Information on any local, state or federal policies or practices regarding enforcement of the environmental law that apply to the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana into the Magdalena River, and the manner in which those policies or practices were applied.

3. Information on the effectiveness of Mexico's enforcement of these provisions, with respect to the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana into the Magdalena River; that is, information on the extent and manner in which the efforts to enforce the Party's environmental law have contributed to the prevention and control of the water pollution of the Magdalena River.

4. Information on the level of pollutants in the discharges of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana into the Magdalena River.

5. Information on the treatment given to the wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana before it is discharged into the Magdalena River.

6. Information on the removal efficiency of the existing treatment systems, considering the applicable maximum pollutant limits.

7. Information on the water quality of the Magdalena River, upriver and downriver from such discharges.

8. Information on the effects of the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana, on the water quality of the Magdalena River.

9. Information on the effects of the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana, experienced by farmers and other uses of the river's waters.

10. Information on other environmental effects of the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana.

11. Information on the monitoring and reporting of discharges of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana.

12. Information on the human, financial and technical resources used in the enforcement of environmental law, with respect to the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana.

13. Information on the execution of the infrastructure extension and construction programs that, according to Mexico's response to the submission, were undertaken to address these matters in the municipalities of Imuris, Magdalena de Kino and Santa Ana.

14. Any other technical, scientific or other information that could be relevant.

V. Additional background information

The submission, Mexico's response, the Secretariat's determinations, the Council Resolution, the overall plan to develop the factual record and other information are available in the Registry and Public Files in the Citizen Submissions on Enforcement Matters section of the CEC web site at <http://www.cec.org>. These documents may also be requested from the Secretariat.

VI. Where to send information

Relevant information for the development of the factual record may be sent to the Secretariat until 30 August 2002, to the following address:

Secretariat of the CEC
Submissions on Enforcement
Matters Unit (SEM Unit)
393, rue St-Jacques Ouest,
bureau 200
Montreal QC H2Y 1N9
Canada
Tel. (514) 350-4300

CCA / Mexico Liaison Office
Atención: Unidad sobre Peticiones
Ciudadanas (UPC)
Progreso núm. 3
Viveros de Coyoacán
México, D.F. 04110
México
Tel. (52-55) 5659-5021

For any questions, please send an e-mail to the attention of Carla Sbert, at <info@ccemtl.org>.

APPENDIX 4

Information Requests to Mexican Authorities and List of Recipient Authorities

Letter to the Party requesting information for development of the factual record for SEM-97-002

16 April 2002

Re: Development of factual record for submission SEM-97-002 (Río Magdalena)

The Secretariat hereby requests Mexico to provide relevant information for preparation of the factual record in regard to submission SEM-97-002 (Río Magdalena) in accordance with NAAEC Articles 15(4) and 21(1)(a).

As you are aware, on 7 March 2002 the Council resolved unanimously to instruct the Secretariat to develop a factual record in accordance with NAAEC Article 15 and the *Guidelines for Submissions on Enforcement Matters under Articles 14 and 15 of the North American Agreement on Environmental Cooperation* regarding the assertions made in submission SEM-97-002 that Mexico is failing to effectively enforce Articles 88 paragraph IV, 89 paragraph VI, 93, 117, 121, 122, 123, 124 and 133 of the General Law on Ecological Balance and Environmental Protection (*Ley General del Equilibrio Ecológico y la Protección al Ambiente*–LGEEPA) in relation to contamination of the Magdalena River by wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the state of Sonora, México.[1]

In accordance with NAAEC Articles 15(4) and 21(1)(a), the Secretariat shall, in developing the factual record, consider any information furnished by a Party, and may also request additional information. Likewise, it may consider information that is publicly available or is provided by other NAAEC Parties, the JPAC, the submitters, or other interested non-governmental organizations or persons, as well as information developed by the Secretariat and by independent experts.

1. Please note that the reference to LGEEPA Article 92 has been deleted. In its recommendation to Counsel for the development of this factual record (p. 20) of 5 February 2002, the Secretariat determined that the effective enforcement thereof did not warrant review. However, it was accidentally included in the list of provisions for which the Secretariat recommended the development of a factual record (pp. 2 and 27 of the recommendation).

Attached please find the list of questions for which information is requested from Mexico for the development of this factual record. Kindly respond to this request by 28 June 2002.

Thank you for your attention to this matter.

Yours sincerely,

Legal Officer
Submissions on Enforcement Matters Unit

Encl.

cc: [Environment Canada]
[US EPA]
CEC Executive Director

Secretariat of the Commission for Environmental Cooperation

Request for information from Mexico for development of the factual record in regard to submission SEM-97-002 (Río Magdalena) 16 April 2002

Submission SEM-97-002 asserts that despite the enactment of various laws to prevent water pollution as well as multiple amendments to these laws and the institutional arrangements necessary for their enforcement, no measures were taken for the effective enforcement of these laws in the case of the wastewater of the municipalities of Imuris, Magdalena de Kino and Santa Ana, which is discharged into the Magdalena River without the prior treatment necessary to prevent the contamination thereof.

For the development of the factual record in regard to this submission, the Secretariat requests additional information from the Party about the enforcement, with respect to wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana, of the following provisions of the General Law on Ecological Balance and Environmental Protection (*Ley General del Equilibrio Ecológico y la Protección al Ambiente*–LGEEPA): Articles 93, 117 and 122, establishing the generic obligation to prevent and control water pollution; Articles 88 paragraph IV and 89 paragraph VI providing that users of national waters are responsible for their sustainable use; Articles 117 paragraph IV, 121, and 123, providing that anyone who discharges wastewater must treat it in order to prevent contamination of the receiving bodies; Articles 121 and 124, contemplating the granting of wastewater discharge permits and providing for their revocation where they affect or may affect water supply sources; and finally, Article 133, ordering ongoing and systematic monitoring of water quality in order to detect contaminants or excess organic waste and to take the appropriate measures. In particular:

1. Please provide additional information on the contaminant levels in the wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana from 1 January 1994 to date, and provide copies of the corresponding documentation.

2. Describe how monitoring and reporting were done for the wastewater discharges from the municipalities of Imuris,

Magdalena de Kino and Santa Ana from 1 January 1994 to date, and provide copies of the corresponding documentation.

3. Mexico's Response asserts that the CNA conducted water quality monitoring for classification of the Magdalena River which indicated that the river has the assimilative capacity for the discharges it receives.[2]

   3.1. Provide information on this classification of the Magdalena River, specifying the parameters used and the results of the monitoring performed.

   3.2. Describe how the "ongoing and systematic" monitoring of Magdalena River water quality contemplated in LGEEPA Article 133 has been carried out and provide copies of the corresponding documentation.

   3.3. Provide information on Magdalena River water quality upstream and downstream of the discharges in question from 1 January 1994 to date, including copies of the corresponding sampling results.

   3.4. Describe the effects of the wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana on Magdalena River water quality.

4. Detail the uses of the Magdalena River and the water supply sources of the region.

5. Indicate whether water supply sources were affected by the wastewater discharges into the Magdalena River from the municipalities in question, and state the measures taken in each case.

6. Provide information on the effects of the wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana on the users of Magdalena River water, including agricultural and drinking water uses.

7. Provide information on the environmental effects of the wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana.

2. See chapter IV of the Response of the Party.

8. Provide additional information on the wastewater discharge permits of each municipality as well as copies thereof.

9. Provide additional information on the treatment afforded the wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana prior to its discharge into the Magdalena River from 1 January 1994 to date.

10. Provide additional information on the removal efficiency of the existing treatment systems in the three municipalities in question.

11. The submitters allege failure to effectively enforce Article 123, under which all discharges into rivers must meet the applicable Mexican Official Standards. Mexican Official Standard NOM-001-ECOL-1996 (NOM-001) sets maximum contaminant limits for wastewater discharges into national waters and property. These limits are mandatory for the municipalities of Imuris and Santa Ana as of 1 January 2010, and for the municipality of Magdalena de Kino as of 1 January 2005.

    11.1. Mexico's Response asserts that the CNA enforces the applicable Mexican Official Standards. Provide information on the enforcement actions with respect to the wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana, and on the effectiveness of the enforcement of the environmental law related to the prevention and control of water pollution.

    11.2. In accordance with NOM-001, the municipalities of Imuris and Santa Ana were required to file programs of actions or works to be carried out in order to comply with the maximum contaminant limits set by that standard by 31 December 1999, and the municipality of Magdalena de Kino was required to do so by 31 December 1998. Provide information on how that obligation was met by each of the municipalities in question as well as copies of those programs.

    11.3. In relation to the foregoing obligation, the municipalities are required to file semiannual progress reports on control of their discharges. Provide information on fulfillment of that obligation and copies of the semiannual reports for each of the municipalities in question.

11.4. In addition, Imuris and Santa Ana are required to make semiannual discharge quality measurements and report them to the CNA annually, while Magdalena de Kino is required to make quarterly measurements and report them semiannually. Provide copies of the reports filed in fulfillment of this obligation for each of the municipalities in question.

12. Mexico's Response indicates that although there are deficiencies in the treatment of wastewater discharged into the Magdalena River,[3] "the economic status of the municipalities, the state government and the federation limits the execution of programs of action for the construction of treatment systems."[4] The submission challenges the alleged lack of funds for the implementation of such programs, stating that the municipalities "charge 35% monthly on each bill for drinking water, drainage and sewer services."[5]

12.1. Provide information specific to the municipalities of Imuris, Magdalena de Kino and Santa Ana on the economic limitations referred to by Mexico in its Response.

12.2. Provide information on the human, financial and technical resources employed in environmental law enforcement in relation to the wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana from 1 January 1994 to date and on the actions taken to allocate the necessary funds.

13. Mexico's Response includes copies of the "Project to Adapt and/or Expand the Sanitary Sewer Systems and Wastewater Treatment Plants of the Cities of Imuris, Magdalena, and Santa Ana" developed under a contract signed with the CNA in 1997 as a measure to solve the environmental problems of the Magdalena River.

13.1. Indicate the stage of completion of this project for each of the municipalities in question and its results.

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3. According to the Response, the oxidation lagoons with which Magdalena de Kino treats its wastewater are obsolete and insufficient. The municipality of Santa Ana does not have a wastewater treatment system. As for Imuris, the Party asserts that according to information provided by the state government and the municipality, two wastewater treatment lagoons, one anaerobic and one facultative, went into operation on 11 June 1998; Response of the Party, p. 14.
4. Response of the Party, p. 23.
5. Additional filing to the submission, p. 11.

13.2. In particular, provide information on the construction of the necessary wastewater treatment works in the municipality of Santa Ana; the correction of defects in the Magdalena de Kino wastewater treatment system, and the operating efficiency of the Imuris treatment system, for prevention and control of pollution of the Magdalena River.

13.3. Provide information on the budget allocated to the works in question (source, amounts allocated, amounts spent, etc.).

13.4. Provide information on the filing of preventive environmental impact reports for the three projects with the competent authorities, and the processing of these reports.[6]

13.5. Detail the functions, responsibilities and obligations of the operating agencies, the municipal government, and the federal government in relation to the "Project to Adapt and/or Expand the Sanitary Sewer Systems and Wastewater Treatment Plants of the Cities of Imuris, Magdalena, and Santa Ana."[7]

13.6. Explain the basis of the CNA's involvement in carrying out actions that are the responsibility of the municipalities as users of national waters. Explain the relationship between that involvement and the CNA's responsibility for enforcing and sanctioning the fulfillment of user obligations.

14. Explain the enforcement policy for NOM-001 in relation to the general obligations of the federation and the municipalities in regard to the prevention and control of pollution of national waters.

15. Describe the municipal, state and/or federal environmental law enforcement policies or practices applicable to the wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana into the Magdalena River and detail how they were applied in these cases.

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6. Section 11 of each volume of the projects refers to these preventive reports under the heading "Environmental Impact Study."
7. As noted in the Secretariat's recommendation for the development of this factual record, the functions arising from that project do not appear to coincide with those established in the LGEEPA, the National Waters Law (*Ley de Aguas Nacionales*) or NOM-001 (LGEEPA Articles 88 paragraph IV, 89 paragraph VI, 93, 117 paragraph IV, 118 paragraph V, 119 BIS, 121, 122, 123 and 133; LAN Articles 88, 89 and 90).

16. Describe the extent and manner in which the environmental law enforcement initiatives and actions in question with respect to the wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana into the Magdalena River contributed to the prevention and control of water pollution in the Magdalena River.

17. Provide additional information on the effectiveness of the enforcement by Mexico of LGEEPA Articles 88 paragraph IV, 89 paragraph VI, 93, 117, 121, 122, 123, 124 and 133 with respect to the wastewater discharges from the municipalities of Imuris, Magdalena de Kino and Santa Ana into the Magdalena River from 1 January 1994 to date.

18. Provide any other technical, scientific or other information that may be relevant.

Mexican Authorities Recipient of a Request for Information for the Development of the Factual Record on Submission SEM-97-002

FEDERAL

Ministry of the Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales*–SEMARNAT)

Minister

Coordination Unit of International Affairs (UCAI)

National Water Commission (*Comisión Nacional del Agua*)

Sonora Regional Office;

Legal Affairs Unit

STATE

Government of the State of Sonora

Ministry of Urban Development and Environment (*Secretaría de Desarrollo Urbano y Ecología*);

Ministry of Urban Infrastructure and Environment (*Secretaría de Infraestructura Urbana y Ecología*)

Sonora State Institute of Environment and Sustainable Development (*Instituto del Medio Ambiente y Desarrollo Sustentable del Estado de Sonora*–IMADES)

APPENDIX 5

Information Requests to NGOs, JPAC and other Parties to the NAAEC

Form Letter to NGOs

26 April 2002

Re: Request for information relevant to the factual record for submission SEM-97-002 (Río Magdalena)

The Secretariat of the Commission for Environmental Cooperation of North America recently began the process of preparing a factual record regarding an assertion that Mexico is failing to effectively enforce its environmental law with respect to the wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora, which is allegedly discharged into the Magdalena River without being duly treated to prevent the pollution thereof. This assertion was made in a submission filed with the Secretariat in April 1997 by Comité Pro Limpieza del Río Magdalena.

I am writing to invite you to submit information relevant to the factual record. The attached Request for Information explains the citizen submissions process and factual records, gives background about the so-called Río Magdalena submission (SEM-97-002), describes the scope of the information to be included in the factual record for that submission, and provides examples of information that might be relevant. We will accept information for possible consideration in connection with the factual record **until August 30, 2002**.

We appreciate your consideration of this request and look forward to any relevant information you are able to provide. Please feel free to contact the Secretariat if you have questions. Contact information is provided at the end of the Request for Information.

Sincerely,

Legal Officer
Submissions on Enforcement Matters Unit

Enclosure

Memorandum to the Joint Public Advisory Committee

Memorandum

DATE:	22 April 2002
À / PARA / TO:	Chair, JPAC
CC:	JPAC Members, CEC Executive Director, JPAC Liaison Officer
DE / FROM:	Legal Officer, Submissions on Enforcement Matters Unit
OBJET / ASUNTO / RE:	Request for information relevant to the factual record for submission SEM-97-002 (Río Magdalena)

As you know, the CEC Secretariat recently began the process of preparing a factual record for submission SEM-97-002 (Río Magdalena). This submission was filed with the Secretariat in April 1997 by Comité Pro Limpieza del Río Magdalena. Consistent with Council Resolution 02-02, the factual record will focus on the assertion that Mexico is failing to effectively enforce Articles 88 paragraph IV, 89 paragraph VI, 93, 117, 121, 122, 123, 124 and 133 of the General Law of Ecological Balance and Environmental Protection (*Ley General del Equilibrio Ecológico y la Protección al Ambiente*—LGEEPA), with respect to the pollution of the Magdalena River by the discharge of wastewater from the municipalities of Imuris, Magdalena de Kino and Santa Ana in the Mexican state of Sonora.[1]

I am writing to invite the JPAC to submit information relevant to the factual record, consistent with Article 15(4)(c) of the NAAEC. The

1. Note that the reference to Article 92 of the LGEEPA has been eliminated. On page 20 of its recommendation to Council for the development of this factual record, of 5 February 2002, the Secretariat determined that a review of the effective enforcement of this article was not warranted, as the Party s actions with respect to the wastewater discharge in question qualify as promotion actions pursuant thereto. However, this provision was accidentally included in the list of relevant provisions on pages 2 and 27 of said recommendation.

attached Request for Information, which has been posted on the CEC website, gives background about the Río Magdalena submission, describes the scope of the information to be included in the factual record, and provides examples of information that might be relevant. We will accept information for possible consideration in connection with the factual record until August 30, 2002.

We appreciate your consideration of this request and look forward to any relevant information you are able to provide. Please feel free to contact me at (514) 350-4321 or <csbert@ccemtl.org> if you have questions regarding this request or the factual record process.

Letter to the Other Parties of the NAAEC (Canada & US)

22 April 2002

Re: Request for information relevant to the factual record for submission SEM-97-002 (Río Magdalena)

As you know, the CEC Secretariat recently began the process of preparing a factual record for submission SEM-97-002 (Río Magdalena), consistent with Council Resolution 02-02. I am writing to invite the [Canadian Party] [the United States] to submit information relevant to the factual record, in accordance with Article 15(4) of the NAAEC.

The attached Request for Information, which has been posted on the CEC website, gives background about the Río Magdalena submission, describes the scope of the information to be included in the factual record, and provides examples of information that might be relevant. We will accept information for consideration in connection with the factual record until August 30, 2002.

We appreciate your consideration of this request and look forward to any relevant information you are able to provide. Please feel free to contact me at (514) 350-4321 or <csbert@ccemtl.org> if you have questions regarding this request.

Sincerely,

Legal Officer
Submissions on Enforcement Matters Unit

cc: Semarnat
[US EPA]
[Environment Canada]
CEC Executive Director

Enclosure

Nongovernmental organizations and individual recipients of a request for information for development of the factual record in regard to Submission SEM-97-002

Universidad de Sonora (Unison):

Fraternity of Agronomists of Unison;
Dept. of Agriculture and Livestock Production;
Dept. of Scientific Research/DICTUS;
Div. of Biological and Health Sciences;
Div. of Engineering
Hermosillo, Sonora
Northern Regional Unit
Santa Ana Campus
Sciences and Engineering Division
Navojoa, Sonora
Northern Regional Unit
Caborca, Sonora
Unison Norte Legal Aid Office
Caborca, Sonora

Colegio de Sonora:

Health and Society Program;
Regional Studies Program;
Regional Information Unit
Hermosillo, Sonora

UNAM, Institute of Ecology
Hermosillo, Sonora

Enlace Ecológico A.C.

El Colegio de la Frontera Norte (COLEF)
San Carlos, Nogales, Sonora

Centro de Investigación y Estudios Ambientales A.C. (CIEA)

North American Development Bank
San Antonio, Texas

Border Environment Cooperation Commission
Cd. Juárez, Chihuahua

Sonora Environmental Research Institute, Inc. (SERI)
Tucson, Arizona

University of Arizona:
Center for Latin American Studies;
Udall Center for Studies in Public Policy
Tucson, Arizona

Comité Pro Limpieza del Río Magdalena
Magdalena de Kino, Sonora

APPENDIX 6

Information Gathered for the Development of the Factual Record on Submission SEM-97-002 (Río Magdalena)

List of Information Gathered for the Development of the Factual Record on Submission SEM-97-002 (Río Magdalena)

No.	ID	DOCUMENT DATE mm/dd/yy	AUTHOR	DOCUMENT	PROVIDED TO THE SECRETARIAT BY	RECEIVED mm/dd/yy
1	IP-CPLRM[1]	08/21/97	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	Letter to CEC on the situation in the municipalities of Imuris, Magdalena and Santa Ana.	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	09/03/97
2	IP-CPLRM	09/12/97	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.) (Ayala Soto, L.F.) (Sánchez S., J.A.)	Letter to CEC with additional information to that submitted by Comité Pro-Limpieza del Río Magdalena with 3 annexes.	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.) (Ayala Soto, L.F.) (Sánchez S., J.A.)	10/15/97
3	IP-CPLRM	01/06/97	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.) (Ayala Soto, L.F.) (Sánchez S., J.A.)	Annex 1. Letter to the Sonora Municipal President calling for urgent action.	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.) (Ayala Soto, L.F.) (Sánchez S., J.A.)	10/15/97
4	IP-CPLRM	09/08/97	Comité Pro-Limpieza del Río Magdalena (Ayala Soto, L.F.)	Annex 2. Letter to the Secretary of Infrastructure and Ecology, to the Director of Ecological Rules and to the chief of staff of the Sonora State Governor.	Comité Pro-Limpieza del Río Magdalena (Ayala Soto, L.F.)	10/15/97
5	IP-CPLRM	09/15/97	(Dr. Ibarra, A.)	Annex 3. Public letter to the residents of Magdalena, from Dr. Arturo Ibarra, pediatrician.	Comité Pro-Limpieza del Río Magdalena (Ayala Soto, L.F.)	10/15/97
6	IP-CPLRM	02/05/98	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	Letter to the Profepa Delegate in Sonora, in reference to Ruling No. PFPA-DS-UDQ-021/98, providing/ follow-up concerning the complaint with the General Bureau of Complaints from Central Offices, dated 27 October 1997 with 5 annexes.	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	02/26/98
7	IP-CPLRM	01/26/98	Profepa (Morachis López, J.R.)	Annex 1. Ruling No. PFPA-DS-UDQ-021/98, notification of proceeding issued by the Profepa Sonora Delegation (E-26), Complaint Unit	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	02/26/98
8	IP-CPLRM	01/16/98	National Water Commission (Jurado Márquez, M.A.)	Annex 2. Ruling No. BOO.R.3. 5.4.-095/0087, regarding municipal discharges into the Magdalena River.	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	02/26/98
9	IP-CPLRM	01/05/98	National Water Commission (Jurado Márquez, M.A.)	Annex 3. Ruling No. BOO.R. 3.5.4.-081/0110, issued by the National Water Commission Northeast Regional Office, addressed to Profepa, reporting on the inspections performed under the Clean Water Program	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	02/26/98
10	IP-CPLRM	11/29/96	National Human Rights Commission (Guadarrama López, E.)	Annex 4. Ruling No. V2/0040043 Exp. CNDH/122/96/SON/6926, letter from the National Human Rights Commission addressed to Mr. Jesús Alberto Sánchez Sánchez et al., concerning their complaint, dated 22 October 1996	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	02/26/98
11	IP-CPLRM	09/02/92	National Water Commission (Isasi de la Garza, P.)	Annex 5. Ruling No. BOO. 728.2.01771, authorization for the temporary discharge of wastewater into the "Laguna Vieja", addressed to the Municipal President of Imuris, Sonora	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	02/26/98; 04/01/98

1. IP-CPLRM: Information provided by Comité Pro-Limpieza del Río Magdalena.

No.	ID	DOCUMENT DATE mm/dd/yy	AUTHOR	DOCUMENT	PROVIDED TO THE SECRETARIAT BY	RECEIVED mm/dd/yy
12	IP-CPLRM	03/20/98	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	Letter to CEC, to the Presidents of Mexico and the United States, the Prime Minister of Canada, the Mexican Chamber of Deputies, the International Monetary Fund, the World Bank, and the general public, to denounce the situation in Imuris with 2 annexes.	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	04/01/98
13	IP-CPLRM	02/13/98	Semarnap (Morachis López, J.)	Annex 1. Ruling No. PFPA-DS-UDQ-040/98, issued by Profepa and addressed to Mr. Enrique Montaño Guzmán	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	04/01/98
14	IP-CPLRM	n/a	Environmental Health Group Border XXI	Annex 2. "Clean Water at Home" program – pilot project for seven small communities and the improvement of water quality in 15 border towns	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	04/01/98
15	IP-CPLRM	06/24/98	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	Letter to the Chairman of the Municipal Board of Imuris, Sonora, to the CEC, the Presidents of Mexico and the United States, the Prime Minister of Canada, the Mexican Chamber of Deputies, the International Monetary Fund, the World Bank, and the general public, to denounce the situation in Imuris.	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	07/22/98
16	IP-CPLRM	09/18/98	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	Letter to CEC on Mexico's response with one annex.	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	09/30/98
17	IP-CPLRM	09/20/98	Notary Public (Álvarez Llera, J.)	Annex 1. Notarized deed and photographs relating to the drainage from the City of Santa Ana, Sonora	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	09/30/98
18	IP-CPLRM	01/20/00	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	Letter from Comité Pro-Limpieza del Río Magdalena, addressed to Semarnat	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	02/28/01
19		05/31/02	Border Environment Cooperation Commission (Macías Norte, F.)	Ruling No. C4909/AGE 2002, information to prepare the factual record on the Magdalena River, Sonora, Mexico, with annex "Summary of Projects in Development at the Magdalena River Basin"	Border Environment Cooperation Commission (Macías Norte, F.)	06/03/02
20	IPM[2]	07/01/02	Semarnat (Guzmán Sandoval, H.)	Ruling No. UCAI/2991/02, information from the National Water Commission for the factual record, with two annexes	Semarnat (Guzmán Sandoval, H.)	07/11/02
21	IPM	06/27/02	National Water Commission (Gordoa Márquez, G.)	Annex A. Ruling No. BOO.00.02.02.02.1.-5395 issued by the National Water Commission in response to Ruling UCAI/1744/02, dated 19 April 2002	Semarnat (Guzmán Sandoval, H.)	07/11/02
22	IPM	n/a	National Water Commission	Annex B. "Río Magdalena Annex" Request for information from Mexican Party for the preparation of a factual record on the submission SEM-97-002 (Río Magdalena), dated 16 April 2002. Description of the "ongoing and systematic" monitoring of water quality of the Magdalena River with several annexes.	Semarnat (Guzmán Sandoval, H.)	07/11/02

2. IPM: Information provided by Mexico.

No.	ID	DOCUMENT DATE mm/dd/yy	AUTHOR	DOCUMENT	PROVIDED TO THE SECRETARIAT BY	RECEIVED mm/dd/yy
23	IPM	1999-2001	National Water Commission	Annex 1: Results of water quality assessment of the Magdalena River at the Terrenate station employing the potential use index. Three (3) tables: 1. Potential use index (farm irrigation); 2. Potential use index (drink water supply); 3. National Water Commission, Adjunct General Technical Bureau (Surface Water Monitoring Network).	Semarnat (Guzmán Sandoval, H.)	07/11/02
24	IPM	03/16/01	National Water Commission (Dr. Jaime P., A.)	Annex 2: Ruling No. BOO.05.525 issued by the National Water Commission Office of Sanitation and Water Quality, addressed to Mr. Montaño Guzmán with a list of works executed in 1998 and 1999.	Semarnat (Guzmán Sandoval, H.)	07/11/02
25	IPM	n/a	National Water Commission	Annex 3: Map of sampling stations on the Magdalena River	Semarnat	07/11/02
26	IPM	1993	National Water Commission	Annex 4. Appendix B: Water Quality Tables Annex 4a: Physicochemical and bacteriological analyses of water, Agua Zarca sampling station (2 tables)	Semarnat (Guzmán Sandoval, H.)	07/11/02
27	IPM	1993	National Water Commission	Annex 4b: Physicochemical and bacteriological analyses of water, Cibuta sampling station (2 tables)	Semarnat (Guzmán Sandoval, H.)	07/11/02
28	IPM	1992-1993	National Water Commission	Annex 4c: Physicochemical and bacteriological analyses of water, Imuris sampling station (3 tables)	Semarnat (Guzmán Sandoval, H.)	07/11/02
29	IPM	1993	National Water Commission	Annex 4a: Physicochemical and bacteriological analyses of water, Arroyo Cocospera sampling station (2 tables)	Semarnat (Guzmán Sandoval, H.)	07/11/02
30	IPM	1993	National Water Commission	Annex 4e: Physicochemical and bacteriological analyses of water, Arroyo Punta de Agua sampling station (2 tables)	Semarnat (Guzmán Sandoval, H.)	07/11/02
31	IPM	1992-1993	National Water Commission	Annex 4f: Physicochemical and bacteriological analyses of water, Magdalena sampling station (3 tables)	Semarnat (Guzmán Sandoval, H.)	07/11/02
32	IPM	1992-1993	National Water Commission	Annex 4g: Physicochemical and bacteriological analyses of water, Arroyo Sasabe sampling station (2 tables)	Semarnat (Guzmán Sandoval, H.)	07/11/02
33	IPM	1992-1993	National Water Commission	Annex 4h: Physicochemical and bacteriological analyses of water, Santa Ana sampling station (3 tables)	Semarnat (Guzmán Sandoval, H.)	07/11/02
34	IPM	1992-1993	National Water Commission	Annex 4i: Physicochemical and bacteriological analyses of water, Santa Ana wastewater sampling station (2 tables)	Semarnat (Guzmán Sandoval, H.)	07/11/02
35	IPM	1993	National Water Commission	Annex 4j: Physicochemical and bacteriological analyses of water, Arroyo El Cajón sampling station (2 tables)	Semarnat (Guzmán Sandoval, H.)	07/11/02
36	IPM	1993	National Water Commission	Annex 4k: Physicochemical and bacteriological analyses of water, El Claro sampling station (2 tables)	Semarnat (Guzmán Sandoval, H.)	07/11/02

No.	ID	DOCUMENT DATE mm/dd/yy	AUTHOR	DOCUMENT	PROVIDED TO THE SECRETARIAT BY	RECEIVED mm/dd/yy
37	IPM	01/14/99	National Water Commission (Jurado Márquez, M.A.)	Annex 5: Concession Title No. 02SON112353/08HMGR99 from the National Water Commission to the Imuris municipal government	Semarnat (Guzmán Sandoval, H.)	07/11/02
38	IPM	01/14/99	National Water Commission (Jurado Márquez, M.A.)	Concession Title No. 02SON112352/08HMGR99 from the National Water Commission to the Magdalena municipal government	Semarnat (Guzmán Sandoval, H.)	07/11/02
39	IPM	01/14/99	National Water Commission (Jurado Márquez, M.A.)	Concession Title No. 02SON112354/08HMGR99 from the National Water Commission to the Santa Ana municipal government	Semarnat (Guzmán Sandoval, H.)	07/11/02
40	IPM	10/15/99	National Water Commission (Rodríguez López, J.R.)	Annex 6: Ruling No. BOO.00.R03.04.4-7186, Deadline Notice for filing of action program to improve wastewater quality in Imuris	Semarnat (Guzmán Sandoval, H.)	07/11/02
41	IPM	10/15/99	National Water Commission (Rodríguez López, J.R.)	Annex 7. Ruling No. BOO.00.R03.04.4.-7187, Deadline Notice for filing of action program to improve wastewater quality in Magdalena	Semarnat (Guzmán Sandoval, H.)	07/11/02
42	IPM	10/15/99	National Water Commission (Rodríguez López, J.R.)	Annex 8. Ruling No. BOO.00.R03.04.4-7189, Deadline Notice for filing of action program to improve wastewater quality in Santa Ana	Semarnat (Guzmán Sandoval, H.)	07/11/02
43	IPM	n/a	National Water Commission	Annex 9. Map of Terrenate monitoring station	Semarnat (Guzmán Sandoval, H.)	07/11/02
44	IPM	1999-2001	National Water Commission	Annex 10. National Water Quality Monitoring Network. 20 pages of analytical results of water quality	Semarnat (Guzmán Sandoval, H.)	07/11/02
45	IPM	12/21/01	Federal Official Gazette Semarnat	Annex 11. Decree published in the Federal Official Gazette on wastewater discharges	Semarnat (Guzmán Sandoval, H.)	07/11/02
46	IPM	05/11/00	National Water Commission, Northeast Regional Manager; Secretary of Urban Infrastructure and Ecology (Jurado Márquez, M.A.) (Ibarra Legarreta, M.)	Annex 12. Technical annex to the coordination agreement, dated 11 May 2000, between Semarnap through the National Water Commission and the State of Sonora	Semarnat (Guzmán Sandoval, H.)	07/11/02
47	IP-CPLRM	07/10/02	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.) (Ayala Soto, L.F.)	Letter from Comité Pro-Limpieza del Río Magdalena to CEC	Comité Pro-Limpieza del Río Magdalena	07/16/02
48	CNA[3]	12/19/01	National Water Commission Semarnat	Decree on national waters	National Water Commission (Tiznado Aganza, S.)	10/09/02
49	CNA	12/19/01	National Water Commission Semarnat	Decree on wastewater discharges	National Water Commission (Tiznado Aganza, S.)	10/09/02
50	CNA	n/a	National Water Commission (Jaime Jáquez, C.); Semarnat (Lichtinger Waisman, V.)	National Hydraulic Program 2001-2006, Executive Summary, 2nd Edition	National Water Commission (Tiznado Aganza, S.)	10/09/02

3. CNA: National Water Commission (*Comisión Nacional del Agua*).

No.	ID	DOCUMENT DATE mm/dd/yy	AUTHOR	DOCUMENT	PROVIDED TO THE SECRETARIAT BY	RECEIVED mm/dd/yy
51	IP-CPLRM	06/08/98	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	Letter to the National Water Commission in reference to Ruling BOO.R.3./02938, dated 26 May 1998, to denounce the situation in Imuris, Magdalena de Kino and Santa Ana municipalities	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	
52	IP-CPLRM	05/26/98	National Water Commission (Jurado Márquez, M.A.)	Annex 1. Ruling No. BOO.R.3./ 02938 addressed to Comité "Pro-Limpieza del Río Magdalena," regarding municipal discharges into the Magdalena River	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	
53	IP-CPLRM	03/27/98	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	Letter to Profepa in reference to Ruling DG/004/143/98. E.710/811/26, dated 12 February 1998, issued by Profepa on Imuris, Magdalena de Kino and Santa Ana municipalities with one annex.	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	
54	IP-CPLRM	02/12/98	Semarnap (Sodi Robles, E.)	Annex 1. Ruling No. DG/004/143/98, Letter from Semarnap addressed to the Submitter regarding its complaint against the Imuris, Magdalena de Kino and Santa Ana municipal authorities	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.)	
55	IP-CPLRM	07/10/02	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.) (Ayala Soto, L.F.)	Letter to CEC in reference to SEM-97-002, from Comité Pro-Limpieza del Río Magdalena	Comité Pro-Limpieza del Río Magdalena (Montaño Guzmán, E.) (Ayala Soto, L.F.)	07/16/02
56	IP-CPLRM	1997	Comité Pro-Limpieza del Río Magdalena (Ayala Soto, L.F.)	Page of an article entitled "In Defense of the Magdalena River and Health," published by the Border Health and Environment Network	Comité Pro-Limpieza del Río Magdalena (Ayala Soto, L.F.)	n/a
57	n/a	1999	National Water Commission	Situation of the Drinking Water, Sewers and Sanitation Subsector 1999. Municipal Wastewater Treatment Plants	www.cna.gob.mx	n/a
58	n/a	2000	National Water Commission	Document: Basic Compendium of Water in Mexico – Mission of the National Water Commission	www.cna.gob.mx	n/a
59	n/a	2001	Technical Council of the National Water Commission (Lichtinger, V.); National Water Commission (Jáquez, C.J.)	National Hydraulic Program 2001-2006	www.cna.gob.mx	n/a
60	n/a	09/00/01	Semarnat; Banco Nacional de Obras y Servicios Públicos; S.N.C. National Water Commission	Program for the modernization of water operating agencies, with three annexes: Annex 1, Program approach; Annex 2, Cities with populations above 50,000 inhabitants according to the 2000 census; and Annex 3, efficiency improvement actions	www.cna.gob.mx	n/a
61	n/a	12/00/01	National Water Commission	National Inventory of Drinking Water and Wastewater Treatment Plants, as of December 2001	www.cna.gob.mx	n/a
62	n/a	04/15/02	Sonora State Government	Sonora municipalities: Information on Santa Ana	www.sonora.gob.mx	n/a
63	n/a	04/15/02	Sonora State Government	Sonora municipalities: Information on Magdalena	www.sonora.gob.mx	n/a
64	n/a	04/15/02	Sonora State Government	Sonora municipalities: Information on Imuris	www.sonora.gob.mx	n/a

APPENDIX 7

Data from Terrenate Monitoring Station, 1999 through 2001

APPENDIX 7

Data from Terrenate Monitoring Station, 1999 through 2001

National Water Commission
General Technical Division

Surface Water Monitoring Network

Terrenate Station

Sampling Date	Time	Total alkalinity	Fecal Coliforms	Total Coliforms	VRAI color	BOD5	COD	P	Instantaneous flow	Oils and Lubricants	Ammonia N	Nitrates	Nitrites	Dissolved O_2	In situ pH	K	Na	TDS	TSS	Sulfates	MBAS	Ambient Temperature	Water Temperature	Turbidity
09-Mar-99	12:10	200	300	500	5	1,2	4,4	0,05	0,34	5,1	N.D.	0,5	0,005	11,2	7	2,7	44,9	330	8	44,4	0,08	26,7	20,3	0,54
06-Apr-99	10:00	170	300	1 500	10	<1.0	4,7	0,09	0,3	2,1	N.D.	0,4	<0.005	10,1	7	3,7	34,9	320	7	34,4	0,07	25,3	19,2	5
04-May-99	09:20	214	500	1 600	5	<1.0	1,3	0,06	0,245	5,7	N.D.	<0.2	<0.005	8	7	2,8	32,8	362	5	41	0,08	27	21	2
01-Jun-99	09:20	224	1 600	3 000	10	<1.0	1,3	0,06	0,234	9,37	N.D.	<0.2	<0.005	7,3	7	2,8	22,6	402	4	37,5	0,07	27	22	2,3
22-Jul-99	17:25	164	2 200	16 000	10	<1.0	11,9	0,12	0,8	0,3	N.D.	0,7	0,015	6,1	7	3,5	32,9	335	55	28,9	<0.06	26	24	17
16-Aug-99	12:20	168	500	1 700	10	<1.0	N.D.	0,1	1,092	1,3	N.D.	0,5	<0.005	5,9	7	3,3	34,4	298	42	30	0,07	33	29	6,5
11-Oct-99	12:30	179	1 100	1 700	15	1,9	N.D.	0,02	0,142	N.D.	N.D.	0,2	0,007	10,8	7	2,4	41,9	352	6	38	<0.06	38	27	0,2
17-Nov-99	11:40	189	1 300	3 000	10	<1.0	0,6	0,02	0,373	2,4	N.D.	0,2	0,007	12	7	2,5	38,4	366	10	43,9	<0.06	28	20	0,4
16-Dec-99	11:20	189	1 300	3 000	10	<1.0	0,6	0,02	0,35	2,2	N.D.	0,1	0,005	11	7	2,2	38	358	12	43,2	<0.08	25	20	0,4
Average		**188,56**	**808,27**	**2 253,41**	**9,44**	**1,55**	**3,54**	**0,06**	**0,43**	**2,39**	**N.D.**	**0,37**	**0,01**	**9,16**	**7,00**	**2,88**	**35,64**	**347,00**	**16,56**	**37,92**	**0,07**	**28,44**	**22,50**	**3,82**
23-Feb-00	12:35	193	70	170	10	<1.0	3	0,1	0,305	0,9	N.D.	<0.1	<0.005		7	2,6	39,1	344	6	37	0,07	29	22	0,1
10-Apr-00	08:40	198	700	2 800	10	1,4	2,7	0,07	0,14	0,11	N.D.	0,3	0,013	9,9	7	2,6	40,2	288	30	34,6	0,07	29	18	0,8
14-Aug-00	16:20	200	3 000	16 000	20	<1.0	8,1	<0.06	0,358	N.D.	N.D.	0,6	0,014	7,5	8,3	2,4	35	410	22	43	0,07	32	31	6,7
22-Nov-00	14:25	92	50	900	40	2,7	8,9	0,13	*	0,5	N.D.	1,4	0,01	8,3	6,51	2,3	17,4	176	57	20,8	0,06	25	19,3	24
04-Dec-00	18:10	107	1 100	17 000	40	<1.0	6,8	0,11	*	N.D.	N.D.	1,1	0,008	7,5	6,11	2,1	19,9	208	36	18,8	<0.06	14	17,4	5
Average		**158,00**	**381,54**	**2 589,90**	**24,00**	**2,05**	**5,90**	**0,10**	**0,27**	**0,36**		**0,85**	**0,01**	**8,30**	**6,98**	**2,40**	**30,32**	**285,20**	**30,20**	**30,84**	**0,07**	**25,80**	**21,54**	**7,32**
13-Feb-01	11:00	172	8	280	10	1,9	2,4	0,09	1,5	0,8	0,1	1	<0.005	9,4	7	2,2	39,2	302	0	35,2	0,16	17	15,7	0,2
17-Apr-01	16:00	150	300	16 000	5	<1.0	3,5	0,08	1,2	1,6	N.D.	0,7	0,006	8	6,69	2,2	36,2	264	0	26,5	<0.15	30	26	1
06-Jun-01	16:15	184	220	9 000	10	<1.0	3,9	<0.06	0,2	N.D.	N.D.	0,6	0,014	3,9	6,18	2,7	41	294	5	31,9	<0.15	33	25	N.R.
20-août-01	09:15	189	900	16 000	10	<1.0	3	0,08	0,65	N.D.	N.D.	0,7	<0.008	6,9	7,58	2,6	43	332	12	35	<0.15	28	24	N.R.
29-Oct-01	12:00	200	1 000	50 000	5	N.R.	N.R.	0,12	0,33	N.R.	N.R.	0,6	0,005	9,5	8,21	2,5	41,4	346	8	38,6	N.R.	38,5	24	N.R.
10-Dec-01	13:47	204	3 500	17 000	20	N.R.	N.R.	0,12	0,66	N.R.	N.R.	0,5	0,007	9,7	8,14	2,6	40,6	358	8	38,2	N.R.	21	17	N.R.
Average		**183,17**	**344,21**	**9 047,11**	**10,00**	**1,90**	**3,20**	**0,10**	**0,76**	**0,69**	**0,10**	**0,68**	**0,01**	**7,90**	**7,30**	**2,47**	**40,23**	**316,00**	**5,50**	**34,23**	**0,16**	**27,92**	**21,95**	**0,60**

* Overflown river, it was not possible to sample.
N.D.: Non-Detectable
N.R.: Not performed

APPENDIX 8

Contaminant Limits for Wastewater Discharges (Table 2 of NOM-001)

Appendix 8

Maximum contaminant limits for basic contaminants in wastewater discharges as per NOM-001 (Table 2)

PARAMETERS (mg/l, except as specified)	RIVERS						NATURAL AND ARTIFICIAL RESERVOIRS				COASTAL WATERS						SOIL			
	Use in agricultural irrigation (A)		Urban public use (B)		Protection of aquatic wildlife (C)		Use in agricultural irrigation (B)		Urban public use (C)		Fishing, navigation, and other uses (A)		Recreation (B)		ESTUARIES (B)		Use in agricultural irrigation (A)		NATURAL WETLANDS (B)	
	M.A.	D.A.	M.A.	D.A.	M.A.	D.A.	M.A.	D.A.	M.A.	D.A.	M.A.	D.A.	M.A.	D.A.	M.A.	D.A.	M.A.	D.A.	M.A.	D.A.
Temperature °C (1)	N.A.	N.A.	40	40	40	40	40	40	40	40	40	40	40	40	40	40	N.A.	N.A.	40	40
Oils and lubricants (2)	15	25	15	25	15	25	15	25	15	25	15	25	15	25	15	25	15	25	15	25
Floating matter (3)	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent
Settleable solids (m/l)	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	N.A.	N.A.	1	2
Total suspended solids	150	200	75	125	40	60	75	125	40	60	150	200	75	125	75	125	N.A.	N.A.	75	125
BOD5	150	200	75	150	30	60	75	150	30	60	150	200	75	150	75	150	N.A.	N.A.	75	150
Total nitrogen	40	60	40	60	15	25	40	60	15	25	N.A.	N.A.	N.A.	N.A.	15	25	N.A.	N.A.	N.A.	N.A.
Total phosphorus	20	30	20	30	5	10	20	30	5	10	N.A.	N.A.	N.A.	N.A.	5	10	N.A.	N.A.	N.A.	N.A.

D.A. = Daily average; **M.A.** = Monthly average

N.A. = Not applicable

(A), (B) and (C): Type of receiving body as per Federal Duties Law (*Ley Federal de Derechos*)

(1) Instantaneous

(2) Simple weighted average sample

(3) Absent according to test method defined in NMX-AA-006

ATTACHMENT 1

Council Resolution 03-15

COUNCIL RESOLUTION 03-15

Instruction to the Secretariat of the Commission for Environmental Cooperation to make public the Factual Record for Submission SEM-97-002 (Río Magdalena)

THE COUNCIL:

SUPPORTIVE of the process provided for in Articles 14 and 15 of the *North American Agreement on Environmental Cooperation* (NAAEC) regarding submissions on enforcement matters and the preparation of factual records;

NOTING that the Secretariat received no comments from the Parties on the draft Río Magdalena factual record;

HAVING RECEIVED the final factual record for Submission SEM-97-002;

AFFIRMING its commitment to a timely and transparent process; and

FURTHER NOTING that pursuant to Article 15(7) of the NAAEC, the Council is called upon to decide whether to make the factual record publicly available;

HEREBY DECIDES:

TO MAKE PUBLIC and post on the registry the final factual record for Submission SEM-97-002.

APPROVED BY THE COUNCIL:

_____
José Manuel Bulás Montoro
Government of the United Mexican States

_____
Judith E. Ayres
Government of the United States of America

_____
Norine Smith
Government of Canada