

APPRAISAL REPORT

CAO Appraisal for Audit of IFC

**CAO** Compliance

C-I-R1-Y10-F123 March 15, 2010

# **Orion Pulp Plant, Uruguay**

#### Case of IFC's involvement with the Orion pulp plant in Uruguay

#### Summarv

The Orion project comprises the construction of a greenfield bleached eucalyptus kraft pulp (BEKP) plant on the banks of the River Uruguay with annual capacity of one million tons in Fray Bentos, Uruguay. The CAO received a first complaint regarding this project in September 2005. This complaint was related to two pulp projects that IFC and MIGA were considering investing in, the Celulosas de M'Bopicua (CMB) and the Orion projects. The case was closed in 2006. The CAO received a second complaint regarding the Orion project in August 2009. The complaint was submitted by an Argentine civic association/non-governmental organization. This 2009 complaint raised concerns claimed to be attributable to the Orion plant related to: odorous emissions, dioxins found in river sediments, and river pollution (evidenced by visual inspection not measurements). The complainants further claimed that consequences of air emissions and effluent discharges from the plant include impacts on the health of community members, as well as legal rights under transboundary agreements and policies.

#### CAO finds the following.

- Emissions to air and water have been thoroughly addressed by IFC during the assessment phase, and the monitoring and reporting demonstrate that IFC assured itself of the Project's performance against applicable requirements.
- There is no indication that IFC did not assure itself that the independent verification of the monitoring fulfills the applicable IFC requirement.
- There are no indications that IFC failed to assure itself of the applicability of OP 7.50.
- This case does not fulfill the criteria for further investigation in the form of an audit.

CAO will close this appraisal case with no further action.

Office of the Compliance Advisor/Ombudsman (CAO)
for the
International Finance Corporation (IFC)
Multilateral Investment Guarantee Agency (MIGA)
Members of the World Bank Group

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### **About the CAO**

The CAO's mission is to serve as a fair, trusted, and effective independent recourse mechanism and to improve the environmental and social accountability of IFC and MIGA.

The CAO (Office of the Compliance Advisor/Ombudsman) is an independent post that reports directly to the president of the World Bank Group. The CAO reviews complaints from communities affected by development projects undertaken by the two private sector lending arms of the World Bank Group: the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA).

For more information about the CAO, please visit www.cao-ombudsman.org



## 1. Overview of the CAO Compliance Appraisal process

CAO Compliance oversees project-level audits of the social and environmental <u>performance of IFC/MIGA</u>. The purposes of CAO auditing are to ensure compliance with policies, standards, guidelines, procedures, and conditions for IFC/MIGA involvement and thereby improve social and environmental performance.

The focus of compliance auditing is on IFC and MIGA, and how IFC/MIGA assured itself/ themselves of project performance. In many cases, however, it will be necessary to review the actions of the project sponsors and verify outcomes in the field, in assessing the performance of the project and implementation of measures to meet the relevant requirements.

The working definition of compliance auditing adopted by CAO Compliance is as follows:

A compliance audit is a systematic, documented verification process of objectively obtaining and evaluating evidence to determine whether environmental and social activities, conditions, management systems, or related information are in conformance with the audit criteria.

The audit criteria include IFC/MIGA policies, performance standards, guidelines, procedures and requirements whose violation might lead to adverse social or environmental consequences. Audit criteria may have their origin, or arise from, the environmental and social assessments or plans, host country legal and regulatory requirements (including international legal obligations), and the environmental, social, health, or safety provisions of the World Bank Group, IFC/MIGA, or other conditions for IFC/MIGA involvement.

The CAO has no authority with respect to judicial processes. The CAO is not an appeals court or a legal enforcement mechanism, nor is the CAO a substitute for international courts systems or court systems in host countries.

A compliance audit may be initiated in response to any of the following circumstances:

- A request from senior management of IFC/MIGA or the President of the World Bank Group.
- A complaint transferred from the CAO Ombudsman.
- At the discretion of the CAO Vice President.

Before undertaking a compliance audit, CAO Compliance will initiate an <u>appraisal</u> to determine whether a compliance audit should take place.

The <u>purpose of the appraisal process</u> is to ensure that compliance audits are initiated only for those projects that raise substantial concerns regarding social or environmental outcomes. Appraisals are limited to the issues raised in the requests for a compliance audit, or for cases referred by the CAO Ombudsman, to issues related to the complaint.

To guide the appraisal process, the CAO applies several basic criteria. These are framed as a series of questions to test the value of undertaking a compliance audit, and whether IFC/MIGA readily can document compliance:

• Is there evidence of potentially significant adverse social and environmental outcome(s) now or in the future?



- Are there indications that a policy or other audit criteria may not have been adhered to or properly applied?
- Is there evidence that indicates that IFC/MIGA's provisions, whether or not complied with, have failed to provide an adequate level of protection?

In the context of compliance auditing within IFC/MIGA, at issue is whether:

- The actual social or environmental outcomes are consistent with or contrary to the desired effect of the policy provisions.
- The failure to address social or environmental issues as part of the review process resulted in outcomes that are contrary to the desired effect of the policy provisions.

Once an appraisal is concluded, the Executive Vice President of IFC/MIGA, the President and the Board of the World Bank Group will be advised in writing, as will the relevant departmental directors or managers associated with the project. If an appraisal results from a complaint to the CAO Ombudsman, the complainant will also be advised in writing, and a summary of the results will be made public.

In the event that CAO Compliance determines that the issues do not meet the appraisal criteria, the CAO will close the case.

In the cases where the CAO Vice President initiates an audit, a memorandum explaining the rationale for the proposal to audit will be submitted to the Executive Vice President of IFC/MIGA. The final decision to conduct an audit will be taken in consultation with the Executive Vice President(s), but at the discretion of the CAO Vice President.

If the CAO decides to initiate a compliance audit as an appropriate response to a compliance appraisal, the CAO will draw up a terms of reference for the audit in accordance with CAO's operational guidelines.

## 2. Background and concerns that led to the Appraisal

- 1. The Orion project comprises the construction of a greenfield bleached eucalyptus kraft pulp (BEKP) plant on the banks of the River Uruguay with annual capacity of one million tons in Fray Bentos, Uruguay, by OY Metsa Botnia AB from Finland. The total Project cost is expected to be approximately \$1.2 billion. IFC's investment was approved on a proposed A loan for IFC's own account and a syndicated B loan for the account of participants.
- 2. The CAO received a first complaint regarding this project in September 2005. The complaint in 2005 related to two pulp projects that IFC was considering investing in, the Celulosas de M'Bopicua (CMB) and the Orion projects. At the time of filing the complaint in 2005, neither project had been submitted by IFC for IFC Board approval. The 2005 complaint did not lead to any settlement facilitated by the CAO Ombudsman. A subsequent audit by CAO Compliance concluded in 2006 that IFC did not comply with its public disclosure requirements when it released the impact assessments related to the two pulp plants. The CAO case was closed in 2006.
- 3. The CAO received a second complaint regarding the Orion project in August 2009. The complaint was submitted by the Environmental Civic Assembly of Gualeguaychú, an Argentine civic association/non-governmental organization that states that it represents interests of residents of Gualeguaychú, a settlement on the Argentine side of the River Uruguay. This 2009 complaint



raises concerns claimed to be attributable to the Orion plant related to: odorous emissions, dioxins found in river sediments, and river pollution (evidenced by visual inspection not measurements). The complainants further claim that consequences of air emissions and effluent discharges from the plant include impacts on health of community members, as well as legal rights under transboundary agreements and policies.

Actions by CAO	
September 2005	CAO receives the first complaint, at this time on IFC's and MIGA's proposal to
	invest in the Orion and the Celulosas de M'Bopicua pulp plants.
February 2006	CAO Compliance concluded in 2006 that IFC did not comply with its public
-	disclosure requirements when it released the impact assessments related to
	the two pulp plants. The CAO case was closed in 2006.
August 2009	CAO receives a second complaint, at this time on IFC's involvement in the
	Orion pulp plant.
January 2010	CAO Compliance commissions its appraisal process in order to conclude
	whether an audit of IFC is merited.
March 2010	CAO Compliance discloses Compliance Appraisal Report

# 3. Scope of the Appraisal for an Audit of IFC

- 4. The scope of the CAO compliance appraisal includes the specific issues listed below, which were raised by the complainants. The issues listed here do not necessarily reflect CAO Compliance's position, but are statements made by the complainants.
  - "perception of nauseating odor caused by the emission of toxic gases". The complainants claim that the Project has violated applicable standards of emissions to air, and exposed the public to unacceptable odor and health risk by emitting unacceptable amounts of gases.
  - "report on dioxins" The complainants claim that an unacceptable level of dioxins have been detected in river sediments, and that these are attributable to the Project.
  - "stain on the Uruguay river". The complainants claim that an unacceptable presence of a
    white stain and algae growth on the river was attributable to unacceptable discharge of
    compounds to the river by the Project.
  - The complainants claim that the above reported events have not been reviewed and assessed by IFC in order to provide an acceptable level of assurance of the Projects performance.
  - The complainants claim that the monitoring reports ordered by IFC and produced by the private entity Ecometrix are biased and guestionable.
  - The complainants state that the above further strengthens their argument that IFC violated its OP 7.50 on international waterways when deciding to get involved in the Project.
- 5. During an appraisal, CAO Compliance assesses whether IFC/MIGA can readily document compliance in the context of:
  - Are the actual social or environmental outcomes consistent with or contrary to the desired effect of the policy provisions?
  - Has failure to address social or environmental issues as part of the review process resulted in outcomes that are contrary to the desired effect of the policy provisions?



- The extent to which IFC's assessment, supervision and monitoring has identified and addressed the issues raised, if merited.
- 6. The overall objective of an appraisal is defined as providing answers to the following questions:
  - Is there evidence of potentially significant adverse social and environmental outcome(s) now or in the future?
  - Are there indications that a policy or other audit criteria may not have been adhered to or properly applied?
  - Is there evidence that indicates that IFC/MIGA's provisions, whether or not complied with, have failed to provide an adequate level of protection?
  - In addition, an appraisal should provide assurance to the President, and the public, that the concerns identified had been appropriately investigated.



## 4. CAO Findings

- 7. What CAO seeks to understand is what criteria have IFC identified as applicable on emissions from the Project; how have these criteria been documented and communicated; and how has IFC assured itself that these criteria have been met. It is also of interest to determine how IFC has assured itself of the quality and credibility of the monitoring.
- 8. In regard to the extent to which IFC's assessment, supervision and monitoring <u>has</u> <u>identified</u> and addressed the issues raised, the appraisal team finds the following.

#### Emissions to air and credibility of air emission monitoring

- 9. In this context, it is of importance for CAO to understand how IFC has interpreted and applied criteria related to emissions to air, and specifically the emissions related to odor.
- 10. Regarding the reporting of specific chemical compounds in the emissions to air from the plant and the overall performance reporting, CAO finds that IFC assured itself of monitoring and follow-up to an extent that goes beyond the specific requirements in IFC guidelines.
- 11. Reporting of emissions of oxides of nitrogen  $(NO_x)$  in the annual monitoring reports has, on occasions, identified that emissions are in excess of the criteria identified as being BAT (Best Available Techniques) by EU documents. This emissions criterion is expressed as a mass of  $NO_x$  per tonne of pulp produced. The Orion plant burns most of the wood waste that is not used to make pulp and this waste generates more energy than is required by the plant to produce pulp. The additional energy is used to generate power that is then exported to the national grid. If the  $NO_x$  emissions associated with power production are excluded from the calculation the  $NO_x$  emissions associated with pulp production are well within the criterion. The EU BAT Reference Document (2001) supports this re-calculation method and makes specific mention that when comparing air emissions to what is considered BAT "...figures for process emissions are related to the Kraft pulp production only and do not include air emission from steam boilers or power plants that might be operated to provide the energy for paper production".
- 12. There is no specific guidance under the applicable IFC policies and guidelines that defines any strict or easily interpreted threshold values for odorous emissions related to pulp plants, odorous emissions being one of the more complex parameters to monitor. However, CAO finds that the issue of odor is diligently addressed in the publicly available cumulative impact assessment (CIS). This assessment was initiated when plans still existed to locate both the Orion and the CMB plants in the vicinity of Fray Bentos. The CIS report addresses the combined impacts of the two plants; keeping this in mind it still provides relevant information regarding impacts of the Orion plant alone. IFC itself acknowledges this in the publicly available information. The CIS concludes the following in regard to odorous emissions; Annex C4.5 describes odor effect analysis, with an odor effect of 3 being the assumed human detection threshold. The CIS states that odor will not be detectable in either Fray Bentos or Gualeguaychú under normal operations. The maximum odor effect predicted under upset conditions in Gualeguaychú was 2, supporting the conclusion that detectable odor attributable to the plants was not expected in Gualeguaychú. However, the CIS acknowledges that detectable odor was possible in Fray Bentos and other offsite locations under upset conditions. The conclusive part of the CIS does not contain a discussion on the uncertainty that is inherent in the predictive models used. This uncertainty is addressed in the



specific technical parts of the CIS, discussing the meteorological dataset used as input, as well as definition of "upset' conditions and the methodology used by each model.

- 13. In international good practice, CAO finds that there are a variety of numeric and nonnumeric approaches to assessing the impact from emissions of odorous compounds and its potential to cause nuisance and health issues. Numerical odor criteria are not always defined because odor nuisance is a subjective matter related to how the receiver perceives the odorant. Different individuals will have varying sensitivities to a particular odorous compound or mixture of compounds; different individuals will also respond differently to smells of the same strength. Individuals can also become sensitized or desensitized as exposure continues. Detection of an odor does not always lead to nuisance. Nuisance itself may or may not lead to health impacts depending again on the individual, their understanding and perception of the odor. Exposure to odorous compounds may or may not also lead to health effects irrespective of perceived smell or nuisance. For this reason international good practice assessments of impacts often focus on the estimation of the likely concentrations of odorous compounds at a receptor location, how these predicted concentrations relate to technical data on odor detection or recognition thresholds and how frequently these predicted concentrations are likely to occur.
- 14. The CIS presents a thorough and full assessment of the likely odor potential from the two pulp plants. The predicted adverse odor impacts in the CIS are primarily the result of emissions during plant upset. It is recognized in the CIS that both pulp plants would be extremely unlikely to suffer upset conditions at the same time. One might reasonably assume that the impact from the Orion project alone would be at least no more than stated in the CIS. Odorous compounds such as mercaptans and hydrogen sulfide are considered in the CIS and emissions of these compounds are shown by subsequent monitoring to be below both those stated in the CIS and what would be considered BAT. The CIS clearly identifies that during plant upset odor is likely to be perceived outside the plant and at local settlements. Discussion of the results in the detailed air quality assessment (Annex C) also identifies that the models used have uncertainty and that predictions are based on worst case assumptions and hence results are likely to be overestimates.
- 15. Assessing the reporting of odor occurrences, the reporting supports the CIS conclusions, although there are indications that the number of occurrences expected was somewhat overstated in the CIS, something that could be attributed to construction of one plant instead of two, and also emissions being intentionally overestimated. The CIS acknowledges up front the difficulty to accurately predict concentrations of odorous emissions, in combination with the subjective perception by individuals to odor. The CIS further predicts that the beach area of Nandubaysal in Argentina, where a majority of the complainants state they experienced odor, could experience odor during upset conditions, predicted as up to ten times a year, particularly in the first year(s) of operation when the plant would be less stable then in subsequent years. Regarding exposure in the City of Gualeguaychú, the CIS states that it will not be exposed to measurable change in air quality. The international good practice method of assessment is to obtain measurements of relevant pollutants prior to a development commencing, compare these to the ambient air quality criteria and then examine the predicted impacts from the development in the context of pre-existing ambient concentrations and assessment criteria. It is not mathematically correct to just add the predicted impact of a development to the pre-existing concentrations except in a few special cases. The CIS acknowledges that no pre-existing air quality data were available. However, CAO finds that the CIS conclusion is reasonably drawn since predicted changes in annual average air quality are generally small in comparison to air quality criteria, the impact is likely to be immeasurable against the normal variability in ambient concentrations. The CIS further states that the



concentration of odor in the City of Gualeguaychú will be lower than the detection threshold and concludes that odor would not be detected. Given that the reports on odor in the City of Gualeguaychú are attributable to the plant, this conclusion appears to be understated.

- 16. However, CAO finds that the uncertainty embedded in the modeling, and the subjective nature of defining odor is identified and addressed in the technical parts of the CIS.
- 17. As stated above, the CIS acknowledges that detectable odor was possible in Fray Bentos and other offsite locations, such as Nandubaysal in Argentina, under upset conditions.
- 18. CAO notes that in IFC's presentation to the Board, IFC states that under routine operating conditions, odorous emissions from the plant will not be detected on either side of the River Uruguay, and that only during the convergence of specific meteorological conditions and upset of the pulp plant's operation will odor be detected within the vicinity of the plant, but not in the towns of Fray Bentos or Gualeguaychú in Argentina.
- 19. CAO finds that IFC's statement to the Board, in the previous paragraph, is not completely supported by the Cumulative Impact Study (CIS). During discussions between CAO and IFC as part of this appraisal, IFC indicated that, prior to formal submission of the investment proposal, there were several discussions with Board members, in which odor and its potential impacts were extensively considered. CAO can only conclude that it does not see, and has not been presented with, any technical rationale that would support the statement made to the Board.

#### Emissions to water

- 20. In this context it is of interest for CAO to understand how IFC has interpreted and applied criteria related to discharge to water, and specifically the emissions that can be claimed to be related to the presence of dioxins, and the claimed "white stain".
- 21. The CIS summarized available data on the concentrations of various compounds present in the river that may be emitted in the effluent of the plant. This establishes a baseline for comparison with assessment criteria and to assess the impact from the operation of the plant. Criteria for a large range of pollutants were identified from national and international locations including the WBG, the USEPA and that defined as BAT by the EU.
- 22. Dioxins (tetra-chloro-dibenzo-dioxins, or TCDDs) and furans (tetra-chloro-dibenzo-furans, or PCDFs) are a group of 210 similar compounds each of which is called a congener. All congeners do not have the same toxicity to humans or the environment. Some are thousands of times less toxic than others. Most are not toxic and international convention is that only 17 congeners are sufficiently toxic to be of concern for human or environmental health. Toxicity is related to the most toxic congener to humans ie 2,3,7,8-TCDD (a dioxin) that is allocated a toxicity of 1. Data on concentrations of dioxins and furans can then be reported in two ways (i) as the raw measured number (which can then be summed to give a total mass of dioxin/furan but no indication of the overall toxicity or importance) or (ii) by multiplying the raw measurement by the toxicity of each congener (and then summed to give a single number that is related to the overall toxicity of the mixture of dioxins and furans present). The CIS discusses the various methods and uses an internationally accepted toxicity method; concentrations when corrected for toxicity are expressed in the relevant units (e.g. pg/L for water, ng/m<sup>-3</sup> for air) including "I-TEQ" to denote International Toxic EQuivalent. It is important to recognize that a concentration of



- e.g. 50 picograms per litre (pg/L) of a congener with a toxicity of e.g. 0.001 would have a concentration of 0.05 pg/L I-TEQ (i.e. 50 x 0.001); if the toxicity of the congener was 1, then the concentration would be 50 pg/L I-TEQ. Whilst the toxicity of congeners is not the same for all organisms it is important to interpret reported concentrations correctly and in relation to their toxicity; very high concentrations of non-toxic congeners should not lead to concern.
- 23. Criteria for assessment of dioxins and furans were discussed in the CIS. Uruguayan legislation does not specify criteria for dioxins or furans for river water quality or liquid effluents (end-of-pipe). The CIS reports USEPA drinking water standard for 2,3,7,8-TCDD of 30 pg/L, this is for the specific congener not the I-TEQ value or the sum of all dioxins/furans. The CIS also discusses the USEPA water quality criterion of 0.005 pg/L for the protection of human consumers of fish. This is described by the CIS as well below the limits of detection and is again only specific to the 2,3,7,8-TCDD congener.
- 24. In considering what constitutes BAT for the plant in terms of the concentrations of dioxins and furans in the effluent the IFC Annual Monitoring Report (AMR) report dioxin (TCDD) BAT as 15 pg/L and furan (TCDF) BAT as 50 pg/L. The measured data reported in the AMR 2008 (April 2009) confirm that the effluent concentration of dioxins and furans were below the limits of detection in all cases (1 pg/L) except one sample of 2.1 pg/L for furans.
- 25. In relation to dioxins and furans the CIS presented a summary of water quality in areas close to the proposed location of the pulp plant, in the River Uruguay, based on a variety of literature sources. Several dioxins and furans were found in the sampling done in 2005 and their non-I-TEQ concentrations ranged from "not detected" (defined as 0.2 to 2.0 picograms per litre (pg/L)) to 50 pg/L. Because the dioxins/furans found in the sample with the highest reading (of 50 pg/L) was not the most toxic congener the concentration expressed in I-TEQ units was 0.31 pg/L.
- 26. The CIS reports that river sediments were analyzed as part of the Botnia EIA at a variety of locations including close to Nuevo Berlin, Fray Bentos and in the Yaguareté Bay. The administrative commission of the River Uruguay (CARU) are reported in the CIS as having recorded sediment concentrations of metals and organic compounds and found them to indicate good sediment quality but with some locally high metal concentrations particularly downstream of urban centers.
- 27. Dioxin and furan concentrations in fish samples were also reported in the CIS to be below those levels requiring a fish consumption advisory as defined by the USEPA and the EU. This is taken as an indication that the river water quality is reasonable.
- 28. The CIS estimates that the concentrations of dioxins and furans in the effluent from the plant will be small (less than  $2.5 \times 10^{-10}$  kg/ADt, equivalent to 0.25 micrograms ( $\mu$ g)/ADt) and summarizes several studies looking at effluents from other similar pulp plants to justify this conclusion. Modeling of the fate of the dioxins in the effluent is undertaken in the CIS and concludes that the impact of the effluent on river water quality is likely to be undetectable in relation to the existing concentrations in the river.
- 29. The AMRs so far published (relating to 2007 and 2008) also report data on concentrations of dioxins and furans in the river water. All data reported are below the limit of detection, as stated by IFC. No direct data on sediment quality are reported in the AMRs. Work undertaken by the



Argentinean Industrial technology institute (INTI) and the Uruguayan Technological Laboratory (LATU) reported in the press and summarized in the AMR 2008 states that monitoring of the sediments after start up of the Botnia plant indicated that there had been no change in the quality of the water or the sediments.

## IFC's assurance of the quality and credibility of the monitoring

- 30. There is no strict IFC requirement on third party independent monitoring that CAO finds applicable to this investment. However, the 1998 Environmental and Social Review Procedure (ESRP) states "For Category A projects, the investment agreement requires the project company to comply with the requirements described in the agreed Environmental Action Plan (EAP). IFC also requires that the annual environmental monitoring and performance reports for Category A projects be completed or verified for completeness and accuracy by an independent consultant acceptable to IFC." In this case, IFC voluntarily publicly committed to third party independent verification of monitoring reporting that goes beyond the ESRP requirements. CAO notes that IFC's commitment was to independent verification of monitoring reporting, not to independent monitoring, an important distinction.
- 31. CAO finds that IFC conducted a competitive bidding process to select the third party monitoring body. The independent procurement process limited IFC's ability to freely choose the monitoring entity, and the process concluded with the company Ecometrix being selected. IFC acknowledges its concern about the public perception when the same company that performed the cumulative impact study (CIS) was selected for the verification of monitoring.

#### Applicability of IFC's Operational Procedure 7.50, international waterways

- 32. IFC argues that its assessment of the predicted performance of the pulp plant was correct, and the actual performance reported confirms this. So while the plant effluent is detectable a short distance from the diffuser on the Uruguayan side, the effluent is indistinguishable from the river water baseline, to the extent that the pulp plant's effect on river water quality is undetectable at the international border. This leads IFC to the conclusion that the project has no adverse effect on the international waterway.
- 33. IFC further states that, in addition to its internal assessment, IFC assured itself of the applicability of OP 7.50 by commissioning an independent assessment prior to Board presentation, as required in the procedure. This assessment was included in the presentation to the Board.
- 34. CAO finds that given a strict interpretation of OP 7.50, there is validity to IFC's arguments and position.



### 5. CAO Conclusions

- 35. In relation to:
  - the extent to which IFC identified emissions criteria applicable to the Project;
  - how these criteria were documented and communicated; and
  - how IFC assured itself through supervision and monitoring that these criteria have been met:

CAO concludes the following:

- 36. Emissions to air, including odorous emissions have been thoroughly addressed during the assessment phase, and the monitoring and reporting demonstrate that IFC assured itself of the Projects performance against applicable requirements. CAO does not see any indication of failure on the behalf of IFC, and how IFC assured itself of the Project's performance and compliance with applicable IFC criteria. CAO therefore concludes that IFC assured itself of the Project's performance with applicable IFC requirement. CAO concludes that the CIS appears to have correctly predicted the emissions during normal operations. CAO concludes the CIS appears to be overstated in the regard of number of occurrences of upset conditions, and in the conclusive parts, given the reports on odor in the City of Gualeguaychú as attributable to the pulp plant, understated the potential area of detectable odor under certain upset conditions. However, given the information available in the CIS on the uncertainties inherent in the prediction of odor effects, CAO concludes that this does not constitute a failure on the part of how IFC assured itself of the Project's performance prior to investment, nor IFC's assurance and responses to the reports on the actual performance once the plant was commissioned.
- 37. Emissions to water have been thoroughly addressed during the assessment phase, and the monitoring and reporting demonstrate that IFC assured itself of the Project's performance against applicable requirements. Documentation demonstrates that IFC has followed up on all monitoring reports, including assessing specific reports, and addressing concerns raised by external stakeholders. CAO does not see any indication of failure on behalf of IFC and how IFC assured itself of the Project's performance with applicable IFC criteria. CAO therefore concludes that IFC assured itself of the Project's performance with applicable IFC requirements.
- 38. There is no indication that IFC did not assure itself that the independent verification of the monitoring fulfilled the applicable IFC requirement and, in addition, fulfilled IFC's public commitment to commission independent verification of the monitoring of the pulp plant's performance.
- 39. There are no indications that IFC failed to assure itself of the applicability of OP 7.50.
- 40. CAO notes that in IFC's presentation to the Board, IFC states that only during the convergence of specific meteorological conditions and upset of the pulp plant's operation will odor be detected within the vicinity of the plant, but not in the towns of Fray Bentos or Gualeguaychú in Argentina. CAO finds that this statement to the Board is not completely supported by the Cumulative Impact Study (CIS). However, given the information available in the public CIS, CAO concludes that this does not constitute a failure on the part of how IFC assured itself of the projects performance prior to investment, and it does not in itself fulfill the CAO requirements to merit an audit of IFC's involvement in the Project.



### 6. CAO Decision

- 41. CAO does not find that this case fulfills the criteria for further investigation in the form of an audit of IFC involvements in the Orion Pulp Plant, and CAO does not find than an audit would be an appropriate response to the issues raised.
- 42. Based on the above conclusions, CAO will close this appraisal case with no further action.