ETILENO XXI X)[1]
ENVIRONMENTAL AND SOCIAL (E&S) ACTION PLAN (ESAP)

ASPECTS	ACTIONS	TIMETABLE	DELIVERABLE
GENERAL			
Reporting	Report on the Project's Environmental and Social Compliance with the ESHS management plans and procedures and all Lenders' requirements[2]	Quarterly reports until Project Completion and semi-annually thereafter according to an agreed template	Project's ESHS Compliance Report
PS 1- Social and Environmental Assessment and Management System and IDB Environment and Safeguards Compliance Policy 703			
Braskem –Idesa ESHS Management System	Develop and Implement an ESHS Management System (capable of certification compliant with ISO 14001 for environment and OHSA 18001 for HS) for site Preparation incorporating the IFC Performance Standards and the relevant elements of the applicable WBG Environmental, Health and Safety (EHS) guidelines[3] including the following elements: (a) social and environmental assessment; (b) management programs, including the B-I management procedures to oversee the HSE performance of the EPC contractor; (c) organizational capacity; (d) training; (e) community engagement; (f) monitoring; (g) auditing; and (h) reporting	Prior to December 31st, 2011	ESHS Management System Manual

[1] For the purpose of compliance, all deliverables in this Action Plan, including but not limited to, plans, maps, documents and reports, must be in form and content satisfactory to the Lenders.

[2] IFC Performance Standards
WBG Environmental, Health and Safety (EHS) Guidelines: (i) General EHS Guidelines, (ii) Petroleum –based Polymers Manufacturing, and (iii) Large Volume Petroleum-based Organics Chemicals Manufacturing
IDB Policies and Guidelines
Equator Principles

ASPECTS	ACTIONS	TIMETABLE	DELIVERABLE
PS 2 – Labor and Working Conditions			
Human Resources	Braskem Idesa to develop Human Resources Policy that conforms to PS 2	Prior to December 31st, 2011	Human Resources Policy
PS 4 - Community, Health and Security			
Security	1) Conduct an assessment of potential security risks associated with the project in each of its phases, and its use of private and public security forces, other risks to security including any potential for violence or social unrest 2) Prepare a security management plan	1) and 2) end of May 2012	Security management plan
PS 5 - : Land Acquisition and Involuntary Resettlement and Operational Policy on Involuntary Resettlement (OP-710)			
Land Acquisition and Involuntary Resettlement	Develop Land Acquisition Framework to outline policies and procedures that will apply in the event of land acquisition, land lease, impacts to crops to or any other livelihood system	December 1, 2011	Land Acquisition Framework Document
PS 6 Biodiversity Conservation and Sustainable Natural Resource Management, and IDB Policy Directive B9 of OP-703			
Critical Natural Habitat	1) Extend surveying methodology for *Ceratozamia miqueliana* in the project site and nearby areas to at least three additional specified areas, The planning and implementation of these surveys should be supported by an expert in cycad biology 2) With the support of an expert in cycad biology, and an expert in local landscape ecology: (a) complete an analysis of the suitability of proposed compensation measures that would result in "no net loss" for the species or habitats affected by the project and (b) identify most appropriate sites for implementing compensation measures 3) Location (s) chosen for the compensation/offset of removed habitat 4)Implementation of the offset plan	1) December 31, 2011 *2)* December 31, 2011 3) December 31, 2011 4) Dec 31, 2012	1) Report including all the requested information. (2), (3), (4) Qualitative Report describing (a) the proposed compensation measures and evaluating these against criteria of no net loss (b) location and details of the most appropriate sites for implementing offsets and set asides, c) report of the implementation of the offset plan

ASPECTS	ACTIONS	TIMETABLE	DELIVERABLE
SITE PREPARATION PHASE			
PS 1- Social and Environmental Assessment and Management System and IDB Environment and Safeguards Compliance Policy – OP 703			
Stakeholder Engagement Plan	1) Develop and implement a Stakeholder Engagement Plan. The Stakeholder Engagement Plan must include preparation of detailed action plans on an annual basis for public consultation and meaningful disclosure activities, including, but not limited to: - Stakeholder identification and analysis - Disclosure of E&S Management programs and monitoring results - Contractor responsibilities in relation to community relations during the construction program - Disclosure of the progress with the implementation of the actions in this ESAP - Identification of relevant information for local disclosure including results of local hiring plan, grievance mechanism, community health plan, participatory monitoring program as well as the project's policies' on recruitment and hiring as well as anti-discrimination. - Communication of emergency plan procedures - Performance Indicators with benchmarks and frequencies 2) Implement consultations with (all community members) in each Category I[4] and II[5] communities to review the ESIA and planned mitigation measures and this ESAP 3) Increase the number of community relations personnel to meet commitments outlined in project documents. 4) Set up information offices with pre-established service hours in local communities	December 31, 2011	1) and 2) Stakeholder Engagement Plan including summary of consultations. 3) Updated Organization Chart and CVs of personnel hired 4) Provide documentation of offices set up and hours of operation

[4] Category I: Communities within 1-2 km radius
[5] Category II: Communities within 2-3 km radius

ASPECTS	ACTIONS	TIMETABLE	DELIVERABLE
Community Grievance Mechanism	Develop a grievance management system that will be communicated and accessible to communities in Category I, II and III[6]. The grievance mechanism will include the procedures to disseminate the availability of the grievance mechanism by the communities	Prior to submittal of the project to the IDB and IFC Board	Copy of grievance procedures
Social Investment Plan	Develop a Social Investment Framework for the site preparation phase. Framework will include overview of Project's approach to social investment, key support areas, overview of roles and responsibilities as well as principles	Prior to submittal of the project to the IDB and IFC Board	Report including the Social Investment framework
Sponsor's ESHS Monitoring	Conduct external independent audits (qualified experts) to ensure compliance of contractor with Mexican and IFC requirements as per monitoring plan developed. Include (a) the contractor internal audits reports as part of the Project's Quarterly Compliance Reports and (b)) reports on the performance and labor practices of the contractor	On-going during site preparation every 6 months	Quarterly Compliance Report including(a) the contractor internal audits reports and (b) reports on the performance and labor practices of the contractor
Sponsor' ESHS Management System	Provide the environmental, social, and health and safety key performance indicators KPIs that will be required to monitor EPC contractors performance	No later than December 31, 2011	KPIs
EPC Contractors' ESHS Management System	1) Develop and Implement the EPC Contractor's ESHS Management System consistent with the principles of ISO 14001 for environment and OHSA 18001 for HS, to: - Coordinate all project HSE issues - Liaise with Social and Community Manager - Liaise with national and regional regulators - Monitor performance - Report to management, regulators, lenders, and affected community 2) Establish the EPC Contractor HSE organization structure	1 and 2) No later than December 31st, 2011	1) Copy of EPC Contractor's ESHS System manual and copy of periodic B-I reports on the performance /activities of the Management System 2) Copy of EPC Contractors organizational structure and organigram 3)

[6] Category III: Communities within 3-5 km radius

ASPECTS	ACTIONS	TIMETABLE	DELIVERABLE
EPC Contractors' ESHS Management Plans and Procedures	Sponsor to require the EPC Contractors to develop and implement the EPC Contractors' HSE Management Plans for the Site Preparation Phase, including but not limited the following plans: Environmental and Health and Safety - Emergency Preparedness and Response Plan - Occupational Health and Safety (work related statistics, training, operational accidents, etc.) - Environmental Management Plans: water management (surface and underground), effluents, waste, hazardous materials, soil, noise and others - Environmental Monitoring Plan for , liquid effluents, workplace conditions (including sampling collection, parameters, frequencies, analysis methods, performance indicators) and others Social - Local Hiring Plan - Training Plan - Local Procurement and Supply Plan - Safety Transport and Traffic Management Plan - Human Resources Policy - Social Investment Plan - Workers' grievance mechanism Plan - Stakeholder Engagement Plan - Grievance Mechanism - Cultural Heritage Plan/Chance Find Procedure Plans will include procedures, organizational resources (including roles and responsibilities), monitoring (including key performance indicators) and reporting requirements	End of May 2012	Copy of each plan and procedure
PS 2: Labor and Working Conditions			
EPC Contractors' Human Resource Policy	Sponsor to require the EPC Contractors to develop and implement Human Resources policy and employment contracts in line with Mexican labor law and IFC PS2	December 31st, 2011	Copy of the policy

ASPECTS	ACTIONS	TIMETABLE	DELIVERABLE
Labor Assessment	1) Prepare TORs for labor assessment 2) Conduct a labor assessment by external expert to assess compliance with PS 2 and propose mitigation plans in case non-compliances are identified. The assessment would focus on the Braskem-Idesa's policies and procedures especially as they relate to recruitment process and proposing mitigation measures and guidance setting up Labor Advisory Team	Prior submittal of the project to the IDB and WB Board	1) Copy of TORs and final selection of consultant 2) Labor assessment recommendations
Labor Audit	Quarterly audits by third party labor expert during site preparation and construction 1) Submit TORs for quarterly third party expert labor audits 2) Conduct quarterly audits	1) No later than December 31, 2011 2) Initiating 3 months after completion of labor assessment. (March, 2012)	1) TORs for labor audits 2) Audit reports
Workers Grievance mechanism	Develop and Implement Workers' Grievance Management Procedure that (i) allow for filing anonymous complaints; (ii) is widely and directly accessibly by workers, (iii) the mechanism is internally monitored with results of monitoring reported publicly. Mechanism is managed by Odebrecht and supervised by Braskem-Idesa, applies to direct and indirect workers and is audited by third party labor experts	Prior submittal of the project to the IDB and IFC Board	Copy of grievance procedures
Local Hiring	Develop Local Hiring Plan for site preparation to include: - Definition of priority workers and measures to implement and monitor prioritization. (Requires preferential hiring from residents of directly affected communities first, then from neighboring towns.) - Inventory of local workers in the communities in category 1 and II; - Training program considering Project needs and inventory of local workers (capacities) - Develop key performance indicators - Worker's grievance mechanism - Roles and Responsibilities - Provides guidelines for non-discriminatory recruitment and hiring practices that apply to Odebrecht and sub-contractors for the Project	Prior submittal of the project to the IDB and IFC Board	Copy of Plan

	including dissemination of anti-discriminatory policies in project area of influence - Provisions to facilitate job application for residents of local communities		
Labor Advisory Team	Creation of a representative team of employees (including direct and indirect workers) and management to review labor policies and procedures. 1) Submit framework for creation of Labor Advisory Team to include composition, timeframe, frequency, monitoring and reporting. 2) Develop and submit Implementation Plan for Labor Advisory Team that includes recommendations from labor assessment. Plan to include objectives, selection criterion, frequency, monitoring, and reporting	1) Prior submittal of the project to the IDB and Board 2) Prior to financial close	1) Framework for Labor Advisory Team 2) Implementation Plan for Labor Advisory Team
Staffing	Creation of a senior internal labor liaison position: The liaison will oversee the worker's grievance mechanism, organize and lead the Labor Advisory Team, coordinate the external labor audits and be responsible for internal labor monitoring	Prior submittal of the project to the IDB and IFC Board	Curriculum Vitae of hired labor liaison officer
PS3 – Pollution Prevention and Abatement. IDB's Environment and safeguards compliance policy. Directive B11			
Ambient Air Quality	Design and implement an ambient air quality monitoring network to measure impact of project from SO_2, NO_x, and particulate matter on nearby communities	Design – End February, 2012 Implement according to proposed/approved scheduled but no later than June 2012	Ambient air quality monitoring network implementation reports
Energy Consumption	Conduct energy balance establishing consumption for each unit Benchmark those consumptions with the most efficient commercially available units to demonstrate the optimum energy consumptions of the project	Prior submittal of the project to the IDB and WB Board	Energy and optimum energy consumption report
PS 4: Community Health, Safety and Security			
Community groundwater monitoring	1) Prepare a protocol to conduct communities' wells groundwater monitoring to be initiated in February 2012	1) December 31, 2011 2) according to the agreed	1) Copy of the protocol including locations, number of wells,

	2) Gather baseline data	protocol	parameters to be monitored 2) According to the agreed protocol
PS 6 – Biodiversity Conservation and Sustainable Natural Resource Management, and IDB Policy Directive B9 of OP-703			
Biodiversity	Provide the schedule, type and process to enclose the Conservation Area within the Project area	December 31, 2011	Report
CONSTRUCTION PHASE			
PS 1- Social and Environmental Assessment and Management System and IDB Environment and Safeguards Compliance Policy – OP 703			
Sponsors' ESHS Management System	Develop the Sponsor's management system structure and procedures to oversee the construction phase	1) Draft version, no later than 60 days prior to starting construction 2) Final version approved by Lenders no later than 30 days prior to starting construction	Copy of system manual, structure and procedures
Sponsor's ESHS Monitoring	Conduct external independent audits (qualified experts) to ensure compliance of contractors with Mexican and IFC requirements as per monitoring plan developed. Include (a) the contractors internal audits reports as part of the Project's Quarterly Compliance Reports and (b) reports on the performance and labor practices of the contractors	On-going during construction phase on a semi-annual basis	Quarterly Compliance Report including(a) the contractors internal semi-annual audits reports and (b) reports on the performance and labor practices of the contractor s
EPC Contractors' ESHS Management System	1) Sponsor to require the EPC Contractors to develop and Implement the Contractor's ESHS Management System consistent with the principles of ISO 14001 for environment and OHSA 18001 for HS, to: - Coordinate all project HSE issues - Liaise with Social and Community Manager - Liaise with national and regional regulators - Monitor performance - Report to management, regulators, lenders, and affected community	1) No later than 90 days prior to starting construction 2) No later than 30 days prior starting construction 3) Provide the EPC's internal audits reports	1) Copy of ESHS System manuals and copy of periodic B-I reports on the performance /activities of the specific managers 2) copy of the organizational structure

	2) Hire or assign qualified personnel dedicated to oversee ESHS aspects and a Social and Community Manager 3) Conduct internal audits to routinely monitor compliance with Mexican and IFC and IDB requirements as per monitoring plan developed.	as part of the Project's Quarterly Compliance Reports	and of CVs 3) Project's Quarterly Compliance Report.
EPC Contractors' HSE Management Plans and Procedures	Sponsor to require the EPC Contractors to develop and implement management plans specifying the key mitigation measures to be implemented by the EPC contractor during the construction phase including but not limited the following plans: <u>Environmental and Health and Safety</u> Emergency Preparedness and Response Plan - Occupational Health and Safety (work related statistics, training, operational accidents, etc.) - Environmental Management Plans: water management (surface and underground), effluents, waste, hazardous material, soil, noise and others) - Environmental Monitoring Plan for -, Liquid Effluents, workplace conditions (including sampling collection, parameters, frequencies, analysis methods, performance indicators) and others <u>Social</u> - Local Hiring Plan - Training Plan - Local Procurement and Supply Plan - Influx Management Plan - Safety Transport and Traffic Management Plan - Worker's accommodation Plan - Human Resources Policy - Social Investment Plan - Stakeholder Engagement Plan - Community Grievance Mechanism - Worker's Grievance Mechanism - Cultural Heritage Plan/Chance Find Procedure Plans will include procedures, organizational resources (including roles and responsibilities), monitoring (including key performance indicators) and reporting requirements	1) Draft version, no later than 60 days prior to starting construction 2) Final version approved by Lenders no later than 30 days prior to starting construction	Copy of each plan and procedure

ASPECTS	ACTIONS	TIMETABLE	DELIVERABLE
EPC Contractors' ESHS Management System	Sponsor to require the EPC Contractors to provide the environmental, social, and health and safety key performance indicators (KPIs) that will be applied to the each component of the Etileno XXI Project, during construction	Draft KPIs no later than 60 days prior to starting construction. Final KPIs no later than 30 days prior to starting construction	KPIs
Stakeholder Engagement Plan	Update and implement the Stakeholder Engagement Plan, building on experiences during the implementation of the site preparation phase.	No later than 60 days prior to starting construction	Updated plan
Social Investment Plan	Update Social Investment Plan with actionable timetable and benchmarks for construction phase to include: a) Key social investment focus areas b) Roles and responsibilities (including contractors) c) Budget d) Timetable and benchmarks e) Development impact tracking system and f) Key success indicators and auditing g) Consultation with beneficiaries on objectives of development program h) Partners i) I) Gender equality in development provisions j) Participatory monitoring on progress	No later than 60 days prior to starting construction	Copy of Plan
Community Grievance Mechanism	Update, implement, monitor and report on the community grievance management system that will be communicated and accessible to communities in Category I, II and III. The grievance mechanism will include a dissemination action plan	60 days prior to construction	Copy of updated grievance procedures monitoring results reported in quarterly reports
Community Participatory Monitoring	Develop a Community Monitoring Program (CMP) to verify compliance with environmental and social standards and commitments of the Project	1) Provide a draft Program no later than 60 days prior to starting	Community Monitoring Program Report

		construction 2) The final version approved by the Lenders should be received no later than 30 days prior tostarting construction	
PS 2: Labor and Working Conditions			
Local Hiring	Develop Local Hiring Plan for construction to include: Inventory of local workers and skills (Category I, II and III) - Definition of priority workers and measures to implement and monitor prioritization - Inventory of local workers in the region; - Personnel transportation, accommodation, logistics as required - Training program considering Project needs and inventory of local workers (capacities) - Develop key performance indicators - Workers' grievance mechanism - Roles and Responsibilities - Include a Gender inclusion approach, equal opportunity and no-discrimination provisions	1) Draft Plan 90 days prior to starting construction 2) Final Plan no later than 60 days prior to starting construction	Copy of Plan
Labor Audit	Quarterly labor audit conducted by external experts, according to TORs and consultants to be approved by Lenders	Audits to initiate no later than 3 months after completion of labor assessment. Results to be presented to the Lenders as a standalone report	Labor Audit Report
Worker Relations	1) Develop and Implement an internal compliance evaluation protocol for routinely monitoring the construction contractors (and sub-contractors) and supply chain implementation of the project HR Policy, Local Hiring Plan and manual (and compliance with Mexican laws and IFC PS2). 2) Implement the contractor's Human Resource Monitoring Program during	1) No later than 90 days prior to starting construction 2) Quarterly throughout construction	1) Copy of protocol 2 and 3) Results provided as part of the Project's Quarterly Compliance

	Construction 3) Provide quarterly results of the Human Resource Monitoring	3) Quarterly until the end of construction	Report
Post-construction employment transition support program	Develop the program to support direct and indirect workers as construction phase employment terminates. The program should include: - Measures to minimize impact to communities from loss of employment - Timeframe to implement measures - Roles and responsibilities - Budget - Monitoring and reporting	1) Program submitted no later than November 30, 2012 2) Program implemented according with the approved schedule	Copy of the Program
PS 3: Pollution Prevention and Abatement. IDB OP 703. Directive B-11			
Air Dispersion Modeling	Repeat existing air dispersion modeling after having one year of air quality monitoring data If the results demonstrate non-compliance with the Mexican ambient air quality standards, provide mitigations	Results and recommendations to be provided no later than June 2013	Results of the air dispersion modeling and recommendations as needed
Cumulative Impact Assessment	Conduct the cumulative impacts assessment of the project using the results of the air dispersion model conducted in June 2013 with the air quality baseline data gathered by B-I If negative impacts are identified, provide the corrective proposed measures	Results and recommendations to be provided no later than August 2013	Cumulative Impacts Assessment Report
Emergency Response and Spill Prevention Plan	1) Develop and implement an Emergency Response and Spill Prevention Plan for the construction sites and project related transportation to document accident/spill prevention measures (training, storage, handling) and accident/spill response arrangements, and measures to be followed (including training, equipment to be used and reporting procedures) in the event of an accident/ spill 2) Discuss the construction emergency response plans for construction with the local authorities and local emergency services and assist them in the development of community emergency response to be implemented in the event of accidents at the facilities. Include action plan for informing and notifying communities	1) (a) Draft version, no later than 60 days prior to starting construction. 1) (b) Final version approved by Lenders no later than 30 days prior to starting construction 2) No later than 90 days prior to starting construction	1) Copy of the plan 2) Report demonstrating Public Safety Emergency Events have been carried out

ASPECTS	ACTIONS	TIMETABLE	DELIVERABLE
Risk Assessment of third parties	1) Develop a risk assessment on the PEMEX ducts located within the project site premises 2) Implement any corrective actions that are found to be necessary to mitigate any potential existing risks	1) No later than 60 days prior to starting construction 2) Corrective action plan 30 days prior to starting construction	1) Risk Assessment Report 2) Plan and implementation schedule
PS 4: Community Health, Safety and Security			
Security Management	Develop a Security Management Plan to include: - Background check of security personnel - Training of private and public security forces - Rules of engagement - Communication of plan to communities - Monitoring and reporting - Roles and responsibilities - Grievance mechanism The plan is to be based on an assessment analyzing potential security risks associated with the project and its use of private and public security forces, other risks to security including any potential for violence or social unrest	No later than 60 daysprior to starting construction	Copy of the Plan
Community Health	Develop a Community Health Assessment including: 1) Scoping: determining which health impacts may be caused by the project and 2) Assessment of Current Health Situation: a) Health Status Information: i) Considering and cross-referencing with available demographic information (socio-economic baseline), determine morbidity and mortality rates, including common diseases in the region, by community ii) Determine causes of morbidity and mortality in the region b) Access to Health Care: i) Describe available health facilities and services in the region and by community (hospitals, clinics, health posts, private providers, doctors, nurses, etc.) ii) Describe utilization of primary care and preventive health services iii) Identify barriers for access to health care by subgroup (financial barriers, personal barriers, structural barriers, others barriers) c) Assessment of Project activities that may affect (positively or negatively) community health	1) Draft version, no later than 60 days prior to starting construction 2) Final version approved by Lenders no later than 30 days prior to starting construction	Copy of the Community Health Assessment including the monitoring plan with key health indicators and the framework to address potential community health effects with an implementation schedule

	d) Design and implement a monitoring plan based on relevant key health indicators e) Development and implementation of a framework to address potential community health effects		
Participatory Community Monitoring	1) Develop plan for participatory community monitoring. 2) Implement plan as outlined in plan	1) No later than 90 days prior to starting operations 2) Prior to commencement of construction	1) Copy of plan 2) Results of Participatory Monitoring
OPERATION PHASE			
PS 1- Social and Environmental Assessment and Management System			
Sponsor ESHS Management System	Develop and implement an SHS Management system for the operational phase, that is consistent with ISO14001 for environment and OHSA 18001 for HS, including the HSE and Social Organization Structure with specific responsibilities to: - Coordinate all project HSE issues - Liaise with Social and Community Manager - Liaise with national and regional regulators - Monitor performance - Report to management, regulators, lenders, and affected community	No later than 90 days prior to starting operation	Copy of ESHS System Manual and contracts and CVs.
ESHS Monitoring	Conduct environmental monitoring and assessment as part of the Performance Tests before plant begins operation demonstrating the project will operate in accordance to the Mexican law and IFC requirements This will be part of the project completion requirements	No later than 30 days prior to starting operation	Assessment reports including remedial actions if not in compliance with the parameters established in the monitoring plan
ESHS auditing	1) Conduct internal audits to routinely monitor compliance with Mexican and IFC and IDB requirements as per monitoring plan developed 2) Conduct independent third party (qualified experts) external audits to assess implementation of E&S management plans and compliance with Mexican and IFC requirements as per monitoring plan developed	1) Quarterly 2) Every six months	1) Copy of internal audits reports as part of the Project's Compliance Report 2) Provide external audits

			reports as part of the Project's Compliance Report
Sponsors Management Plans and Procedures	Develop and implement ESHS management plans and procedures for Etileno XXI operations in accordance with the ESHS Management System as follows: - Occupational Health and Safety (work related statistics, training, operational incidents, etc.) Management - (a) Ambient Air, (b) Stack Emissions, (c) Green House Gas Emissions, (d) Fugitive Emissions, (e) Liquid Effluents, (f) Groundwater, (g) Surface Waters, (h) Workplace Conditions Monitoring (including sampling collection, parameters, frequencies, analysis methods, performance indicators) - Waste Management - Hazardous Materials Management - Emergency Preparedness and Response Plan - Oil Spill Prevention and Contingency Measures - Community Health (i.e., communicable diseases) Management - Local Hiring Plan - Local Procurement and Supply - Workers' Accommodation Management - Influx Management Plan - Safety Transport and Traffic Management - Grievance Management Plan - Security Management Plan - Land Acquisition Framework - Human Resources Policy - Participatory Monitoring Program Plans will include procedures, organizational resources (including roles and responsibilities), monitoring (including key performance indicators) and reporting requirements	No later than 90 days prior to starting operation	Copy of each plan and procedure
Sponsor' ESHS Management System	Provide the environmental, social, and health and safety key performance indicators KPIs that will be applied to the each component of the Etileno XXI Project, during the operations phase	Draft KPIs no later than 60 days prior to starting operations. Final KPIs no later than 30 days prior to starting operation	KPIs

ASPECTS	ACTIONS	TIMETABLE	DELIVERABLE
Stakeholder Engagement Plan	Update the Stakeholder Engagement Plan, building on experiences during the implementation of the Plan for construction	No later than 60 days prior to starting operation	Updated plan, in format and content satisfactory to the Lenders
Community Grievance Mechanism	Update, monitor and report on the community grievance management system that will be communicated and accessible to communities in Category I, II and III. The grievance mechanism will include the procedures to dissemination the availability of the grievance mechanism to the communities	No later than 60 days prior to starting operation	Copy of updated grievance procedures monitoring results reported in quarterly reports
Social Investment Plan	Update a Social Investment Plan with actionable timetable and benchmarks for operation phase	No later than 90 days prior to starting operation	Copy of plan in format and content satisfactory to the Lenders
PS 2: Labor and Working Conditions			
Local Hiring	Develop Local Hiring Plan for operations	No later than June 30, 2012	Copy of the plan
Health and Safety	Conduct Job Risk Analysis identifying prevention and mitigation actions	No later than six months prior to starting operation	Copy of the analysis Conducted
PS3: Pollution Prevention and Abatement			
Air Emissions	Develop and Implement a Greenhouse Gas (GHG) emissions reporting system that will routinely monitor GHG contributions from the project	90 days before operation begins	Copy of the monitoring system protocol
Hazardous Wastes	Develop a protocol to follow the hazardous wastes from generation to final disposal including intermediate steps to confirm proper collection, handling, storage and disposal	90 days before operation begins	Copy of the protocol
Hazardous Materials	Develop and Implement a detailed procedure for handling and storing hazardous materials/cargo according with Mexican and IFC PS3 requirements, the IFC/WBG guidelines and the UN Hazmat Model Regulations	90 days before operation begins	Copy of the Hazardous Chemical Management Procedures
Accidents/Spills	Develop and implement an Emergency Response and Spill Prevention Plan during the Operations Phase for the site as well as project transportation related activities, that will document accident/spill prevention measures (training, storage, handling) and spill response arrangements, and measures to	No later than 90 days prior to starting operations	Copy of the plan

	be followed (including training, equipment to be used and reporting procedures) in the event of an accident/ spill		
Operational Safety	Conduct HAZOP prior to the start of operations	No later than 90 days prior to starting operations	Copy of the recommendations and demonstrated implementation of the HAZOP
	1) Develop Process Safety Operation Procedures consistent with the process safety information. There should be clear instructions for safely conducting activities involved in each covered process including (a)initial startup; (b) normal operations; (c) temporary operations; (d) emergency shutdown, including the conditions under which emergency shutdown is required, and the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner; (e) emergency operations; (f) normal shutdown; and (g) startup following a turnaround, or after an emergency shutdown. Include also consequences of deviation of operation limits and steps required to correct or avoid deviation *2)Management of Change (MOC) Procedures* Establish and implement MOC procedures to manage changes to process chemicals, technology, equipment, and procedures, and changes to the facilities that affect a process. The procedures ought to consider, but are not limited to the following aspects: (a) technical basis for the proposed change, (b) impact of the change on employee safety and health, (c) modifications to operating procedures, (d) necessary time period for the change, and (e) authorization requirements for the proposed change *3)Mechanical Integrity Procedures* Develop and implement mechanical integrity procedures to maintain the ongoing integrity of process equipment particularly for the following equipment (a) pressure vessels and storage tanks; (b)piping systems (including piping components such as valves); (c) relief and vent systems and devices; (d) emergency shutdown systems; (e) controls (including monitoring devices and sensors, alarms, and interlocks); and (f) pumps	No later than 90 days prior to starting operations	Copies of the following documents: 1. Process Safety Operation Procedures, 2. MOC Procedures 3. Mechanical Integrity Procedures

ASPECTS	ACTIONS	TIMETABLE	DELIVERABLE
Decommissioning	Framework Management Plans for decommissioning and closure will be prepared during the operation phase.	Two years after operation has began	Copy of the Decommissioning Framework Plan
Ducts and transmission lines	1) Conduct Environmental and Social Assessments for (a) the water supply, (b) natural gas ducts and (c) the electricity transmission line demonstrating compliance with IDB and IFC ESHS requirements 2) Provide adequate disclosure and stakeholder engagement, including as a minimum one consultation with the local affected communities 3) Present the environmental permit issues by the applicable Mexican Authorities	1) No later than 180 days prior construction of such facilities commencement 2) No later than 60 days prior to start construction 3) No later than 30 days prior to starting construction of such facilities	1) Copy of the ESIAs 2) Report on the engagement and consultation 3) Copy of the permits
PS 4: Community Health, Safety and Security			
Community Safety	1) Provide the detailed Quantitative Risk Assessment to assess potential off-site risks to local populations 2) Discuss the operations phase emergency response plans for operations with the local authorities and local emergency services and assist them in the development of community emergency response to be implemented in the event of a major accident at the facilities. Include action plan for informing and notifying communities	1) no later than 120 days prior to starting operation 2) No later than 60 days prior to starting operation	1) Detailed QRA Report 2) Report demonstrating Public Safety Emergency Events have been carried out
Security Management	Update Security Management Plan for operations	No later than 60 days prior to starting operation	Copy of the Plan