



REPORT OF THE:

EXTERNAL COMPLIANCE MONITORING GROUP

BHAGYAM AND AISHWARIYA FIELD DEVELOPMENT

4th Site visit: May 2011

India



Prepared for

International Finance Corporation

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ANNEX A: TRIP SUMMARY 4th MISSION, MAY 2011

FREQUENTLY USED ACRONYMS

BFF; Bhagyam Field Facility
CDF: Community Development Framework
CEIL: Cairn Energy India Pty Limited
CSR: Corporate Social Responsibility
CWA: Central Waste Accumulation
DCC: District Coordination Committee
DG: Diesel Generator
EC: Enterprise Center
ECMG: External Compliance Monitoring Group
EHS: Environmental Health and Safety
EHSS-MS: Environmental, Health, Safety and Social Management System
EMP: Environnemental Management Plan
EIA: Environnemental Impact Assessment
IFC: International Finance Corporation
IOTL: Indian Oil Tanking Limited
KPTL: Kalpa-Taru Limited
LACP: Land Acquisition and Compensation Plan
LAO: Land Acquisition Officer
L&T: Larsen and Toubro
MPT: Mangala Process Terminal
NAAQS: National Ambient Air Quality Standards
NGO: Non Governmental Organization
NOC: No Objection Certificate
PCDP: Public Consultation and Disclosure Plan
PL: Punj Lloyd
PM: Particulate Matter
PPE: Personal Protection Equipment
PS: Performance Standard
RoU: Right of Use
REIA: Rapid Environmental Impact Assessment
SOP: Standard Operating Procedures
SRT: Stakeholder Relations Team
TDS: Total Dissolved Solids
WMP: Waste Management Plan
WP: Well Pad

INTRODUCTION

This report summarizes observations made during the fourth site visit (1 to 3 of May, 2011) by D'Appolonia S.p.A., Italy (D'Appolonia), serving as the External/Independent Environmental, Health and Safety (EHS) Compliance Monitoring Consultant (referred to as the External Compliance Monitoring Group – ECMG) for the Bhagyam and Aishwariya Field Development Project, India (“the Project” or the “Satellites Project”).

This External Compliance Report is broken down into three key subject areas, as follows:

- compliance with International Finance Corporation (IFC) Policies and Guidelines;
- compliance with the Environmental Impact Assessment (EIA) documentation and projects Environmental Management Plans (EMP); and
- recommendations for improvement based on the findings of the visit and D'Appolonia's experience.

ECMG observations that require actions and that will be reviewed in subsequent assessments have been collected in Table 1.1: Follow-up Issues that is updated by the ECMG following each project visit assessment. The Follow-up table is structured as follows: new issues are given a distinctive, progressive number with the first digit indicating the mission (e.g. 1 for the first mission, 2 for the second, etc.); when applicable, issues closed during the current visit have been designated as such and highlighted in gray; and issues closed during a previous visit have been deleted. The ECMG has also provided recommendations for Project improvement based on the collective experience and expertise of the team members. These recommendations are not always to be considered compliance requirements and there is no onus on the operation for implementation. ECMG, however, encourages the Project to consider the usefulness of the recommendations and incorporate them, as appropriate, into management activities.

Cairn Energy India Pty Limited (CEIL), a subsidiary of Cairn India Limited, is party of the RJ-ON-90/1 Block (Rajasthan Block or Block) Production Sharing Contract, dated May 15 1995, and Operator of it on behalf of a Joint Venture with the Oil and Natural Gas Corporation Ltd, a Public Sector Organization. CEIL has then undertaken a comprehensive exploration program in the Rajasthan Block, an area of about 5,820 km², during the past five years resulting in a number of oil and gas field discoveries (see Figure 1.1).

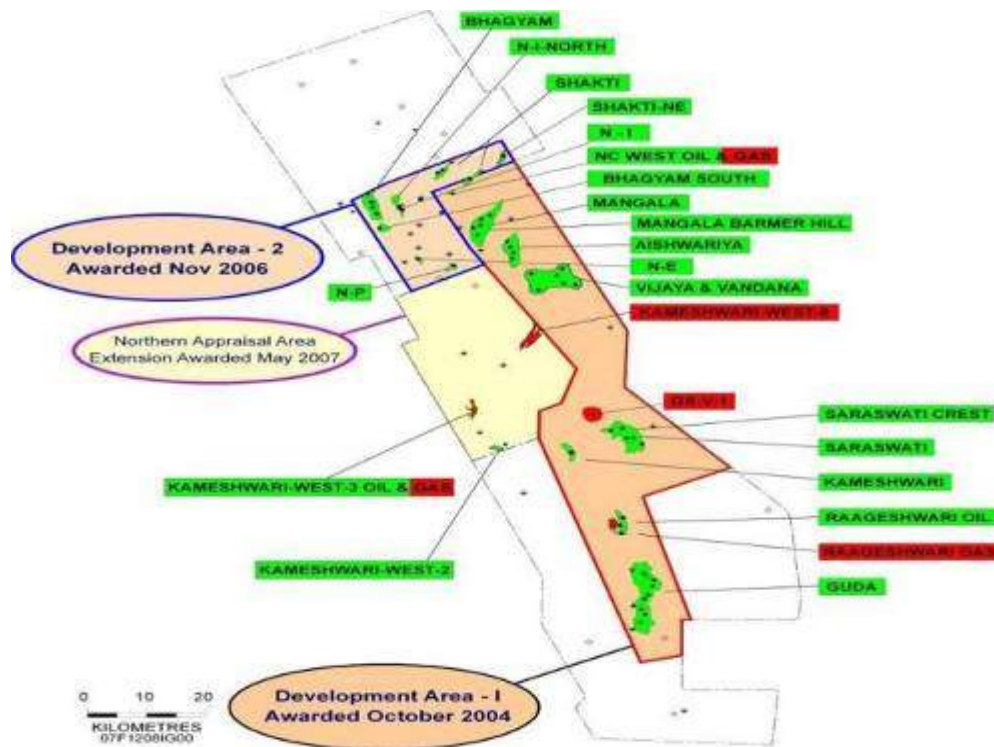


Figure 1.1: Discoveries Fields in the RJ-ON-90/1 Block

The exploration program included the drilling of over 100 exploratory and appraisal wells resulting in over twenty five hydrocarbon discoveries in the block. In early 2006 CEIL obtained Environmental Clearance from the Ministry of Environment and Forests for the development and production of five fields located in the northern and central parts of the Rajasthan Block: Mangala, Aishwariya, Saraswati oil fields and the Raageshwari oil and gas fields. In March 2008, CEIL has obtained the Environmental Clearance from MoEF for the development and production of the Bhagyam field, located approximately 17 km from the Mangala Process Terminal (MPT). The field lays within the Barmer District, southwest Rajasthan, on the northern part of the Block, covering an area of approximately 5.17 km². The Bhagyam field is being developed as a satellite of the Mangala field and extracted crude integrated into the MPT for processing, storage, and export.

The Bhagyam field development plan includes the construction of approximately 15 Well Pads (WPs), a field facility where individual well pads flowlines converge, a network of underground in-field pipelines connecting the WPs to a field facility; a series of transfer pipelines connecting the field facility to the MPT, and expansion of the MPT to accommodate the new crude production. The 15 WPs include a total of 82 wells of which 51 are production and 31 injection wells (see Figure 1.2).

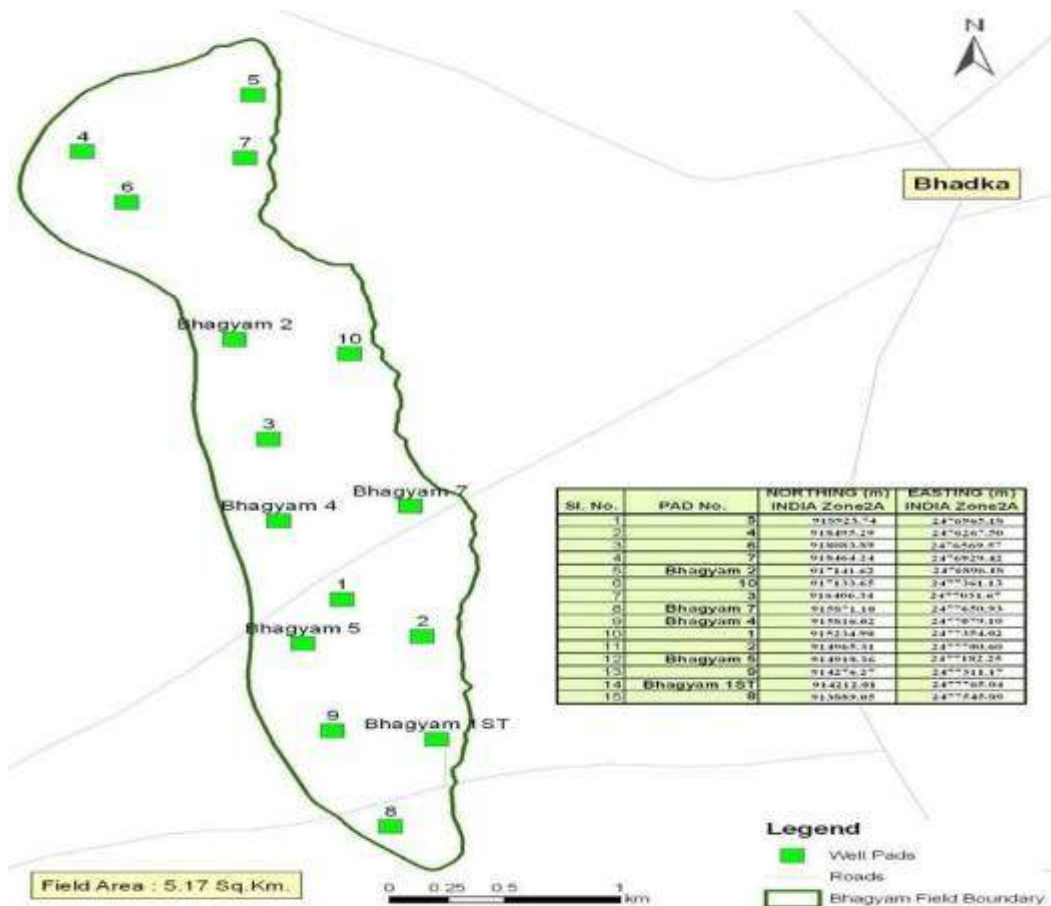


Figure 1.2: Bhagyam Field Development

Drilling of production/injection wells consists of multi-well drilling that enables several wells to be drilled from a single drilling pad location. The maximum depth of the wells is estimated to be around 1,500 to 2,000 m depending on the targeted hydrocarbon zones. Each WP requires approximately 4.4 ha for a total required area of about 66 ha. It should be noted that the total area will not be contiguous but spread over several land parcels within the Bhagyam field. The network of underground in-field pipelines will be first clustered to a receiving WPs (WPs 1, 9, and 12) and then connected to the Bhagyam Field Facility (BFF). This network consists of various size pipelines (e.g. 4 to 16 inches in diameter) to carry the crude oil to the

BFF and to distribute injection water, power fluids and utility from the MPT to the well heads. The BFF, which according to preliminary plans will be located within WP 15, consists of a manifold station that receives the well head fluid from the individual WPs and transfers it, through a common pipeline, to the MPT. In addition, the BFF receives and distributes the service pipelines from the MPT to the individual WPs. Connecting the MPT to the BFF will be a series of pipelines that will be laid within a corridor 30 m wide and approximately 40 km long. With the integration of the Bhagyam field, the total processing capacity of the MPT is expected to increase from 100,000 bopd to 140,000 bopd of crude oil. The utilities, water injection, electrical power, power fluid requirements for the Bhagyam field abstraction and processing will be shared and augmented from the facilities installed at the MPT.

The Aishwariya Field (Figure 1.3) is located approximately 15 km southeast of the MPT area. The overall development of this field will be similar to the Bhagyam field with areas set up for WP development (a total of 8 WPs), associated in-field pipeline, and a series of transfer pipelines connecting the field facility to the MPT along a common Right of Use (RoU).



Figure 1.3: Aishwariya Field Development

Cairn has sought financial assistance from IFC and committed to apply its Performance Standards (PS) on Social and Environmental Sustainability to the design, construction, operation, and closure of the Project. In general, IFC's involvement and financing require both pre-finance project due diligence and post-finance project assurance with respect to social, environmental, health, and safety aspects to ensure compliance with IFC Policies and Performance Standards relevant to the Project. CEIL has committed to external/independent social, environmental, health, and safety compliance monitoring to provide an additional level of transparency to the implementation of its management programs.

D'Appolonia scope of work is to conduct quarterly visits during the construction of the Project in order to:

- identify areas and degrees of compliance with the Equator Principles and the following IFC Policies and Guidelines:
 - IFC General Environmental, Health and Safety Guidelines (April 2007), and
 - IFC Environmental, Health and Safety Guidelines for Oil and Gas Development, Onshore (April 2007);
- identify areas and degree of compliance with each of the following IFC Performance Standards:
 - Performance Standard 1: Social and Environmental Assessment and Management Systems,
 - Performance Standard 2: Labor and Working Conditions,

- Performance Standard 3: Pollution Prevention and Abatement,
- Performance Standard 4 Community Health, Safety and Security,
- Performance Standard 5: Land Acquisition and Involuntary Resettlement; and
- Performance Standard 8: Cultural Heritage;
- compliance with any previously developed Action Plans and/or agreements between Cairn and IFC and other Banks;
- identify areas and degree of compliance with the following CEIL developed plans:
 - Environmental, Health, Safety and Social Management System (EHSS-MS) as described in the Cairn India Corporate Responsibility Management System,
 - Projects specific EIA and EMP,
 - provide practical guidance and advice to Project's field teams; and
 - identify specific EHS issues and conduct follow-up and closure of open issues.

The Focus areas of the EHS reviews are the following:

- EHS Management performance;
- EHS compliance (versus Indian and International standards as presented in project specific EIA and EMPs);
- compliance with IFC PS on Social and Environmental Sustainability and EHS Guidelines;
- facilities review; and
- Implementation of the EHS Action Plans (as presented in the EIA and EMP).

During the field activities, D'Appolonia assessed all Project's associated facilities (i.e. the WPs, the in-field pipeline corridor, etc.) based on direct observations, interviews with project personnel, and pertinent documentation provided by CEIL.

Specific activities conducted during this site visit included the following:

- Evaluation of implementation of the commitments contained within the project specific EIA and EMPs. Items addressed in these documents include: air quality, surface and ground water resources, soil resources, natural resources (flora and fauna), noise and vibrations at off-site receptors, waste management, and cultural resources;
- evaluation of the Project compliance with Corporate Responsibility Guiding Principles and Management System, with the Public Consultation and Disclosure Framework Plan (Corporate, and for Rajasthan) and with the Land Acquisition Framework Plan (Corporate, and those developed specifically for Rajasthan);
- evaluation of the implementation of Project commitments contained within specific EHS Action Plans developed in the EIA and EMPs;
- evaluation of compliance with IFC PS Policies and Guidelines listed above;
- visit of the ECMG environmental team to the Project facilities including: Indian Oil Tanking Limited (IOTL) concrete batching plant, new and former fabrication yard sites; WPs 1, 5, and 15 in the Bhagyam field; areas along the infield pipelines corridors; Larsen and Toubro (LT) fabrication yard; Kalpa-Taru (KPTL) fabrication yard; Artson Engineering (Artson) yard, and John Energy labor camp. In addition, the EHS team visited sections of the trunk pipeline corridor connecting WP15 to the MPT and Punj Lloyd (PL) yard and workers camp. In the Aishwariya Field visits were conducted at WP 6 and the main access road;
- meetings of the ECMG social team included:
 - Corporate Social Responsibility (CSR), Stakeholder Relations, Security and Land Acquisition teams in Barmer,
 - The EMPOWER Project at the Enterprise Center,
 - The Land Acquisition Officer, the chief Medical District Officer and the chief Medical Doctor at Barmer Hospital,
 - The CSR and communication management in Gurgaon,

- The Land Acquisition management in Gurgaon,
- Two school libraries (in Bothia Jagir and Madpura Gurana Gaon), one Mobile Skill Training Van and one Mobile Health Van, and
- Groups of land losers in Bothia Jagir, Madpura Barwala, and Madpura Dhani villages.

The final closeout meeting was conducted at CEIL's Gurgaon offices on May 11th, 2011, and the information presented in the meeting has formed the basis for this report. The information, observations, and opinions presented in this report are those of D'Appolonia and are independent of those of CEIL and IFC.

EXECUTIVE SUMMARY

The Project is in the advanced stages of the construction phase at the Bhagyam field while still in the early civil work phase at the Aishwariya field where permanent land acquisition for the 9 WPs, the access roads, and the in-field pipes RoU has now been almost completed. At the Bhagyam field the Project Stage I construction is well under way having completed early civil work at all 15 WPs and major civil work at 6 WPs. Stage II construction, which includes post drilling civil works, completion works, and in-field pipeline completion, is also on-going. In-field production, injection, and water irrigation lines stringing, trenching and lowering activities have been completed and hydro-testing of some section of the in-filed pipeline network has started. Mechanical and WPs piping work has started at some WPs and the overhead electric line is expected to be completed by the end of May with electrification scheduled for early-mid June 2011. Electrical and Instrumentation work has been recently awarded to EDAC with the initial kick-off meeting held at the beginning of May. The trunk pipeline component of the Project, connecting WP15 to the MPT, is in the advance stages of construction and is expected to be completed by the end of June. At the Aishwariya field there are four priority WPs: early civil work has been completed at WPs 2 and 3 and has started at WP 6 and about to begin at WP 8 priority WPs. The in-field main access road route has been cleared and graded and is now accessible to vehicles.

CEIL and all the main contractors have developed the necessary documentation to cover all EHS aspects including detailed Standard Operating Procedures (SOPs) for specific field activities. However, the regular and frequent presence of CEIL supervisors in the field and their coaching of the local workforce are key elements to ensure compliance with Project procedures and standards. EDAC, which has just been awarded the electrical and instruments installation at all WPs and has not mobilized yet, has still to submit its EHS plans to CEIL for approval. Since activities at the Bhagyam field approach completion, some of the contractors' workforce may be reduced along with the number of the field supervisors. On the other hand, decommissioning and reinstatement activities will likely pick up as contractors complete their assignments and vacate their field sites (camps and yards).

CEIL management reported no major changes in the Project EHS personnel structure but some positions need to be filled (field officers) or replacement found. Of particular importance is the hiring of the field officers that should provide better and more frequent presence in the field to supervise contractors' performance and compliance to Project standards. In that respect, CEIL may need to increase its EHS personnel in the field to cover the construction of the trunk pipeline to ensure Project standards and requirements are met. All contractors currently working at the Bhagyam field have their own EHS personnel in place with some companies having augmented their field personnel in this last quarter. Contractors continue to submit weekly and monthly EHS reports to CEIL management, which then submit EHS monthly report to corporate management. Daily briefing between CEIL and key contractors' EHS personnel are reported to be part of the field routing.

Ambient air monitoring is on-going at the Bhagyam field and has started at the Aishwariya field. Because of the dusty nature of the area, the Project has identified specific locations where working activities could significantly increase particulate suspension and has developed a schedule for dust suppression (wetting of the grounds). Although minor civil work has started at the Aishwariya field, ground sprinkling activities information has not been provided by the Project. As already outlined in the January 2011 report, at the Aishwariya field, in particular where minor civil work has already started and where private dwelling are close to Project sites, CEIL should start an aggressive approach to ground sprinkling activities to mitigate dust suspension.

At the Bhagyam field, ambient air monitoring data from January to April 2011 were submitted to ECMG for review. It should be noted that the January campaign was conducted by Nakshatra Enviro Services, a contractor of IOTL, and did not include all the Project parameters. Monitoring sampling from February to April was carried out by J. M. Environet PVT (Environet), a contractor of CEIL, and included all required Project and IFC parameters including Particulate Matter (PM) less than $2.5 \mu\text{g}/\text{m}^3$ ($\text{PM}_{2.5}$), lead (Pb), and Ozone. In addition, Environet has extended sampling to 24 hours divided into three sets of measurements, of about 8 hours each, to avoid overload of the PM filters. These measurement sets comply with Indian air quality standards requirements. Only minor exceedance of PM_{10} was detected slightly above the National Ambient Air Quality Standards (NAAQS). At the Aishwariya field, ambient air monitoring data from January to April 2011, carried out by Environet, was submitted to ECMG for review. These sampling campaigns included all Project and IFC required analytes and their monitoring duration was similar to the

one adopted at the Bhagyam field (three sets of 8 hours measurements covering a 24 hours period) that conforms to national procedures. Data indicate that only PM₁₀ and PM_{2.5} were detected at slightly above the NAAQS limits at some locations.

No significant changes have been reported in the Project water needs for this past quarter. Larsen and Toubro (L&T) and Oil Tanking Limited (IOTL) are still the contractors with the most need for industrial water. Although there was a peak in consumption in January for IOTL and April for L&T, likely due to a spur in construction activities, industrial water consumption has been within the previously recorded averages. As previously reported, each contractor has its own drinking water arrangements and supplier. Bottled water is supplied by different vendors to contractor's staff field offices while water for camps and yards comes from local boreholes or suppliers. It should be noted that in addition to the adding of chlorinated tablet to the water stored at each WP, the Project has recently started the use of an on-site microbiological kits to test drinking water for coliform bacteria in order to better monitor drinking water quality.

At the Bhagyam field, CEIL continues its monitoring program with monthly analysis of ambient air, noise, and drinking water quality. A similar monitoring program has started at the Aishwariya field on January 2011. It should be noted that at the Bhagyam field Nakshatra Enviro Services performed the monitoring activities in January 2011 while Environet, a CEIL contractor, performed the subsequent monitoring campaigns. Review of the data indicates that drinking water testes generally confirmed that analytes concentrations fall under the national permissible limits with some minor exceedances (Total Dissolved Solids, chloride, and fluoride) in few samples. These recorded exceedances should not compromise the overall water quality. Ambient noise measurements indicated no exceedances of the NAAQS and IFC limits with the exception of some very minor excursion above the residential limits for few measurements at the Bharka and Bothiya villages (Bhagyam field).

A soil assessment of the Aishwariya field has been carried out indicating that soil is characterized by low fertility and productivity.

CEIL has already outlined an overall approach to greenbelt development plan for the Bhagyam field, including the type and number of plants/trees to be planted at each well pad area and along the access roads. The Project divided the greenbelt development in two phases: phase I is scheduled to start July 2011 and include the planting of about 2,100 trees and shrubs on one third of the WPs and corridor. Phase II should begin by December 2011 with the planting of about 5,500 trees and shrubs in the balance two thirds of the designated area. However, information on the planting strategy, with details on local partners, roles and responsibilities, has yet to be submitted to ECMG for review.

As the construction enters its final stages, the Project enters the decommissioning and reinstatement of camps and yards used by the different contractors. In order to avoid any future dispute, CEIL should re-visit its decommissioning and reinstatement procedures to incorporate "lesson learned" from the decommissioning and reinstatement activities undertaken for other projects. ". The Project should require that the NOC documentation includes pictures of the reinstated site and a list of the material and/or structures left on site at the request of the owner and CEIL personnel should conduct a site inspection before the contractor(s) release the site to the land owner to ensure that reinstatement is done in compliance with Project standards.

CEIL and all main contractors have developed comprehensive waste management plans, consistent with Project requirements, and are carrying out adequate implementation in the field with few exceptions with respect to biomedical waste. Poor segregation of biomedical waste was observed at the IOTL cement batch plant pit; furthermore; ECMG noticed the absence of a specifically designed container for the disposal of sharpies at the Artson yard first aid facility. Waste streams are still tracked by individual contractors and CEIL, with all recyclable waste being regularly picked up by licensed and audited vendors. Hazardous waste is sent to the MPT landfill where it will be disposed and/or incinerated once all the required permits from the local authorities are finalized.

Water needed for the hydro-testing of the in-field and the trunk pipelines will be supplied by the MPT reverse osmosis plant. Preliminary plans calls for maximizing the re-use of water for different pipe sections and then dispose of it in WPs lined pits. The hydro-testing waste water will be treated to promote precipitation of suspended solids and then tested for contaminants. If the water meets legislative discharge concentrations will be used for dust suppression, otherwise it will be left in the lined pits for natural

evaporation. CEIL should finalize its hydro-testing procedures and develop a comprehensive document to outline procedures, testing, and discharge standards adopted.

Hazardous materials management and pollution prevention measures were observed to be generally good with few minor exceptions that should be easy to fix in a short time.

CEIL and its contractors have fully developed, task specific health and safety plans. In addition, all main contractors have developed their own EHS plan, job safety analysis and work tasks risk evaluation, and specific standard operating procedures that have been approved by CEIL. EHS inductions, medical and security screening, and training (basic and work specific) of the workforce continue to be well implemented throughout the Project. It should be noted that CEIL also conducted a half a day training program on IFC PSs designed for Project management and contractors' representatives.

Site supervisors continue to conduct regular toolbox meetings and EHS awareness campaigns are still ongoing on a monthly basis at the Bhagyam field. Regular audits and site inspection are carried out by CEIL personnel with one internal site audit being carried out by CEIL personnel during this quarter. Specific equipment inspections are also reported to be carried out on a regular basis and a sticker applied to all inspected equipment to certify status. However, as noted in the January 2011 report, wrong wire rope clipping was again observed on several rigging equipment deployed at active sections of the trunk pipeline. While the CEIL personnel has set a tracking system for all critical equipment used at the WPs and the in-field pipelines construction sites, such a system is not apparently in place for the trunk pipeline activities. Project EHS personnel should ensure that contractors perform, record, and track equipment checks and personally verify equipment status at active work sites along the trunk pipeline project.

The Project has recently implemented some additional health and safety measures including the construction of speed breakers on all Bhagyam access roads to control vehicles' speeding, the distribution of glucose packs to the workforce, and a flagging system with associated procedures to communicate heat index in the field. Required Personal Protection Equipment (PPE) has been observed to be fully implemented at all work sites with the exception of PL workers involved in the construction of a facility building at WP15.

First aid rooms, staffed with paramedics, have been set up at most field camps and, for those sites located away from the Barmer village, ambulances are present on-site. However, during ECMG visit no paramedic was available on site at the IOTL cement batching plant and was temporarily off-site at the Artson yard. In addition, the interior of the ambulance at the IOTL plant was observed to be dusty and dirty. Contractors should promptly inform CEIL when a paramedic and/or doctor is not present on site for an extended period of time (half a day or more) so that the Project could take, if necessary, contingency measures. No major incidents have been reported since the start of the Project and only 32 minor incidents, with no injuries, have been logged in the period from January to April 2011.

Six health and safety emergency drills have been conducted during this past quarter involving CEIL and some contractors personnel. Following each drill a report was issued outlining the emergency scenario, the issues to be checked, relevant observations, and recommendations for improvements.

Fences/barricades have been deployed where excavations are present and welded pipeline sections were observed to be provided with welded end-caps.

PL labor camp was found to be in acceptable conditions and each room is now provided with smoke detectors.

ECMG positively observed that the Project's engagement with communities, which had slowed down in the previous period, has intensified. The recently recruited CSR officers rapidly came up to speed on their role and responsibilities and demonstrated commitment and a remarkable quick uptake of Project issues and approach.

A community liaison officer has been appointed at all major working sites by contractors. However, the liaison officers do not appear to be properly briefed and understand their tasks, which are currently limited to interactions with local workers. The liaison officers should be properly briefed on CEIL's policies and stakeholders relation approach and should regularly visit the communities. They should identify any unforeseen impact of the construction activities, or other relevant issues, in the communities in a timely fashion and address it promptly at contractor level, if applicable and possible, or in collaboration with CSR and Stakeholders Relations Teams (SRTs) of CEIL.

ECMG commends the progress on the on-going CSR health and education programs and the launching of new programs for livelihood improvement (such as skills development and support to agriculture) and a new promising collaboration with the EMPOWER project (veterinary camps).

The ECMG team discussed with a number of district authorities their collaboration with CEIL. The medical district officer and the chief doctor at Barmer hospital were both very satisfied with CEIL support. However, the Land Acquisition Officer (LAO) expressed his concerns that the District Coordination Committee (DCC) is no longer operational. According to the LAO, CEIL exclusively deals with the District Collector and has insufficient interactions with the rest of the administration and the LAO himself. CEIL position is that the DCC has, over time, become less relevant, as activities focusing on different thematic areas (health and education, infrastructures) were better managed through direct interaction with the competent services. ECMG recommends that CEIL engages with all stakeholders, including various local administrations and particularly the LAO, on a continuous basis using regular committee meetings or any other means accepted by all parties.

The LAO has managed the acquisition process for this CEIL Project on behalf of the government and acknowledged that the process for the Bhagyam and Aishwariya fields has been carried out properly and without raising major critical issues. To date, the LAO has recorded ten grievances, all pertaining to the Aishwariya field, concerning land owners who considered compensation inadequate. These cases have all been referred to the Court. According to the LAO, the number of incidents and claims due to land owners not being satisfied with employment opportunities, such as those registered in the previous period, has decreased.

During discussions with the communities, ECMG noticed that for the first time land owners raised issues concerning the amount of the compensation. According to them, the intensified industrial activity in the area has increased land value. Considering the cumulative impact of various projects acquiring land in the area, particularly at Bhagyam, concerns remain for long term livelihood opportunities of the most affected villages. These communities should be monitored and supported with alternative livelihood opportunities.

Affected villagers' and land owners' expectations, in term of employment with the Project, continue to be high. Employment and contracts are distributed through village committees, pooling together the villages affected by construction activities and land acquisition. However, the transparency and fairness of these committees are questioned by some villagers. ECMG recommends that CEIL staff be present at these committees' meetings during job distribution, monitor the situation, and try to sensitize the community to a fair and transparent sharing of opportunities. In this context, ECMG commends CEIL efforts to avoid "side entries" to employment and contracts and supports CEIL in its efforts to concentrate recruitment at community level and in strictly implementing the current employment procedure.

After the lesson learned during the construction of the trunk line from Bhagyam to MPT, which experienced work stoppages because of conflicts between the affected communities in competition for employment, ECMG recommends again that the Project establishes a clear and transparent employment procedure. This should be done in concert with the affected communities, giving employment to the different affected villages by percentage or in turns.

CEIL will set up a local vendor database, which will be administered locally from Cairn Enterprise Centre, that will focus on contract opportunities for local vendors. Through this system, the local vendors will be able to know CEIL requirements in terms of contracting jobs and can apply through a proper channel for getting the same. ECMG commends this initiative that will increase the transparency of the procedure and suggests making this list also available on paper at local offices (both CEIL's and of the district administration).

CEIL presented a draft of the Rajasthan Land Acquisition and Compensation Plan (LACP) that should be amended so to include relevant references to the Project's facilities and social and environmental specificities of Rajasthan.

During ECMG visits to the local communities, no major issue concerning the impact of on-going field activities was mentioned with the exception of the need for more frequent watering for dust suppression. ECMG appreciates the pipeline health and safety awareness program carried out in the Project area, but again recommends sensitizing communities, and particularly children in schools, on road safety issues.

ECMG received and reviewed the second draft of the Community Development Framework for the whole Mangala Development Pipeline Project that incorporates a number of specific comments made by ECMG and IFC. However, ECMG again recommends extracting from this scoping document a corporate document with precise commitments to community investments. The Project should have a separate document, CEIL Community Development Strategy, that focuses and explicitly defines CEIL's strategy and implementation plan, including CEIL commitments to community investments, approach, methodology and implementation actions (drawing from already existing practices that have been successful and new proposed ones). In addition, the document should include a logical framework with clearly defined objectives, indicators, and sound metrics to measure the overall outcomes of the strategy and the specific community development activities including a timeframe for implementation (a 3-5 year plan), staffing and budget.

ECMG reviewed CSR monthly reports that outline CSR activities, including CSR interventions to settle grievances. However, more information on the resolution of conflicts and the general progress in relations with Project affected people should be included. In addition, the monthly and cumulative number of interactions with stakeholders, divided by stakeholder type, could be annexed to the report. In general, for all CSR activities, the monthly and cumulative progress should be presented. CSR management informed ECMG that a more structured monitoring system, including proper indicators, is under preparation. ECMG suggests that the system be related to the specific objectives of the upcoming Community Development Strategy.

ECMG commends the implementation of specific training module covering IFC PSs to CEIL and contractors' managers and recommends CEIL management to pass on this training to their respective teams.

Table 1.1: Follow-up Issues

Mission/ Issue No.	IFC Policy / ESIA Compliance	Description	Status	Comments	Priority
Environmental Organization and Staffing					
M4.1	IFC – PS3	Project EHS personnel should regularly visit active contractor field sites to ensure compliance with Project standards and to verify implementation of corrective actions	New		Medium
Air Quality					
M1.7	IFC – PS3 EIA and EMP	The Project should increase ground sprinkling activities in the Bhagyam field site under construction (Modified)	Closed		N/A
M3.1	IFC – PS3 EIA and EMP	At the Aishwariya field sites CEIL should start an aggressive approach to ground sprinkling activities to mitigate dust suspension in the ambient air.	Pending	To be implemented once activities pick up	High
M3.2	EMP § 10 IFC – General EHS Guidelines §1.1	The Project should include in its monitoring campaigns all Projects and IFC required parameters and ensure that the minimum sampling period is met.	Closed		N/A
Monitoring					
M3.3	EIA §6.2; EMP §10	Of the Project list concerning water analytes only a reduced set is currently tested	Closed		N/A
Reclamation, Revegetation, and Topsoil Management					
M2.1	IFC EHS Guidelines for Onshore Oil and Gas Development p. 13 EIA §4.5.6	The Project should start developing a detailed strategy on greenbelt implementation at the Bhagyam field by identifying local partners, and define overall roles and responsibilities (Modified).	Pending		Low
M4.2	IFC EHS Guidelines for Onshore Oil and Gas Development p. 13 and 15	CEIL should re-visit its decommissioning and reinstatement procedures to incorporate “lesson learned” and require that the NOC documentation includes pictures of the reinstated site and a list of the material and/or structures left on site at the request of the owner	New		Medium
M3.4	EIA §6.2; EMP §10	For the Aishwariya field the Project should prepare a report assessing the overall soil fertility and productivity in the area.	Closed		N/A

ECMG

Mission/ Issue No.	IFC Policy / ESIA Compliance	Description	Status	Comments	Priority
Waste Management					
M4.3 (M2.2)	IFC – General EHS Guidelines §1.3 and 1.6 EMP §7.0	The Project should ensure that proper segregation of biomedical waste is implemented at the source	New		Medium
M4.4	IFC – General EHS Guidelines §1.3 and 1.6	Medical sharpies should be disposed in specifically designed containers and not in regular plastic bags	New		High
Heath and Safety Management and Occupational Health					
M3.5	DOE-STD-1090- 2001	Wrong wire rope clipping was observed on several rigging equipments employed at the trunk pipeline construction project. No record of inspections is available for consultation (Modified).	Pending		High
M4.5	DOE-STD-1090- 2001	Project EHS personnel should ensure that contractors perform, record, and track equipment checks and personally verify compliance at active work sites along the trunk pipeline project.	New		Medium
M4.6	IFC – PS2	Contractors should promptly communicate to CEIL when a paramedic and/or doctor is not present on site for an extended period of time so that the Project could take, if necessary, contingency measures.	New		Medium
M3.6	IFC EHS Guidelines for Onshore Oil and Gas Development p. 20	Welded pipeline should be provided with end caps.	Closed		N/A
M3.7	IFC General EHS Guidelines – p. 86	PL labor camp rooms should be provided with smoke detectors.	Closed		N/A
Social management					
M3.8	PCDP § 4.3.1	CEIL should regularly prepare quarterly and annual CSR and public consultations reports.	Closed	Report prepared but content and monitoring to be improved	N/A
M4.7 (M1.40)	CEIL-IFC Action Plan – September 2009	Prepare, disclose, and implement a “Community Development Strategy”.	New	A second draft of the Community Development Framework has been submitted by CEIL. CEIL should extract from this report a corporate document, and disclose it as CEIL Community Development Strategy.	High

ECMG

Mission/ Issue No.	IFC Policy / ESIA Compliance	Description	Status	Comments	Priority
Stakeholders Engagement - Public Consultation and Communication					
M1.12	Framework PCDP (§1.1 Key Principles; § 3.5 Record of consultations; §4.3 Monitoring and Evaluation)	Contractors should designate a liaison person for community interactions and grievances at each site. This person should speak the local languages and be introduced to communities, authorities and land-losers. All interactions should be recorded. Contractors should be briefed on CEIL's policies and approach practices. All interactions should be documented and regularly updates provided to CEIL on issues that arise (Modified)	Closed	Liaison persons to be properly briefed and to visit communities regularly	N/A
M1.14	PS 1, § 19 Community Engagement, §23 Grievance mechanism §25 Reporting	Establish regular information meetings with the affected communities including information on Project's progress, grievance procedure and liaison persons in charge, employment and business opportunities, with time and number limits, and HSE awareness (Modified).	Closed	The Project's team must catch up the slowdown of engagement activities.	N/A
Stakeholder Engagement – Development Program					
M1.15	IFC PS 1 § 19 Community Engagement	Prepare a Community Development Plan for the Satellites Project in the frame of the general Community Development Framework (Modified).	Pending	Community Development Framework second Draft prepared; it needs to be revised and disclosed.	High
Land Acquisition					
M1.16	IFC PS5 Corporate framework LACP	Prepare a specific LACP for the Satellites Project. Brief LAO and staff on LACP/PCDP and IFC PSs and maintain a copy in the local languages, at each local office.	Pending	The Project should amend the Rajasthan LACP including references to Rajasthan	Medium
Community Health, Safety and Security					
M1.18	PS 4 Community Health, Safety and Security: §6, Infrastructure and Equipment Safety; §10, 11 Community Exposure to Diseases	Include awareness programs on H&S, environment and HIV-AIDS.	Pending	A Plan to Sensitize Communities on HIV / AIDS has been developed but still need to be implemented.	High
M1.19		Use school programs to build safety awareness amongst children.	Pending		Medium
M3.9	IFC PS4	CEIL draft corporate security document (E5) expand and better detail Section 14 (Guards and Guard Management) to incorporate CEIL policies and procedures when private and/or governmental security forces are directly hired by CEIL.	Closed		N/A
M3.10	IFC PS4 – CEIL E5 (§11)	CEIL should develop a site specific risk assessment and relative comprehensive security plan.	Closed		N/A

ECMG

Mission/ Issue No.	IFC Policy / ESIA Compliance	Description	Status	Comments	Priority
Employment and Working Conditions					
M1.22	PS 6 Labor and working conditions: §6	Develop a transparent procedure for recruitment of land-losers and local workers and a transparent communication on criteria for wages.	Pending	On-going. Village committee to be monitored by CEIL	Medium
M1.23	Human Resources Policy; §7, 8 Working conditions and terms of employment; §13 Grievance mechanism, §16 Occupational Health and Safety; §17 Non-employee workers Cairn Group Corporate Responsibility Guiding principles (§3.2.1)	Ensure adequate grievance procedure for workers and record grievances.	Closed		N/A

**FOURTH SITE VISIT OF THE D'APPOLONIA ECMG TO THE BHAGYAM AND
AISHWARIYA FIELDS DEVELOPMENT PROJECT
INDIA MAY 2011**

1 CONSTRUCTION STATUS

The Project is in the advanced stages of the construction phase at the Bhagyam field while still in the early civil work phase at the Aishwariya field where permanent land acquisition for the 9 WPs, the access roads, and the in-field pipes RoU has now been almost completed.

At the Bhagyam field the Project Stage I construction, which includes early and major civil works and the construction of the in-field pipeline network, is well under way having completed early civil work at all 15 WPs and major civil work at 6 WPs. Major civil work, contracted to IOTL, is on-going at the 9 remaining WPs in Bhagyam with completion of 4 WPs expected by the end of May 2011. Stage II construction, which includes post drilling civil works (IOTL), completion works (John Energy Ltd), and in-field pipeline completion (KPTL), is also on-going. In-field production, injection, and water irrigation lines stringing, trenching and lowering activities have been completed and hydro-testing of some section of the in-field pipeline network has started. In addition, mechanical and WPs piping work (Artson Engineering) is being carried out at WPs 1 and 15 (the BFF pad). The overhead electric line (LT) is expected to be completed by the end of May with electrification scheduled for early-mid June 2011. Electrical and Instrumentation work has been recently awarded to EDAC with the initial kick-off meeting held on May 3, 2011.

The trunk pipeline component of the Project, which consists of a 24.5 km corridor that includes a 24 inch insulated and heated product pipe, a 24 inch insulated water injection pipe, and an 8 inch High Density Polyethylene pipe for the irrigation water, is almost completed. RoU survey and verification has been completed and clearing and grading activities are on-going on the last 2 – 3 km. Practically all pipelines have been delivered to site with product and injection lines have practically all been stringed, welded, and lowered. The water irrigation pipe stringing and welding is half way completed while trenching for this line, which has been done separately from the other two line, is one third done. According to CEIL field management, the trunk line should be completed by the end of June 2011.

At the Aishwariya field, early civil work (filling, grading, fencing) of the four priority WPs, which is carried out by local contractors, has been completed at WPs 2 and 3, has started at WP 6, and is about to begin at WP 8. The in-field main access road route has been cleared and graded and is now accessible to vehicles. According to CEIL management, the Projects plans to use only one main contractor to carry out major civil work, infield piping, the trunk pipeline connection from Aishwariya to MPT, and the overhead electrical work. Tender for these activities has been issued with bid deadline reported to be by the end of June 2011.

2 EHS MANAGEMENT ORGANIZATION

Project Strategy:

CEIL environmental, health, safety and social commitments are contained and grouped under the overall CEIL Corporate Responsibility Management System and are outlined in Project specific ESIA's and EMPs. In addition, CEIL requires that all its subcontractors, as part of their contractual obligations, develop their respective EHS and Social plans in line with CEIL commitments and standards.

A Project EIA and EMP have been developed and are an integral component of CEIL overall planning, design and implementation. In addition, the Project has developed a detailed Health, Safety, Environmental, and Security Requirements document to cover early civil work activities.

CEIL has developed a robust Corporate EHS structure and documentation that is at the base of Project specific EIA commitments. The EMP developed by CEIL includes the general requirements, standards, and overall framework for mitigation measures, roles, and responsibilities, including subcontractors, environmental management, training, inspection, and monitoring related to the Project activities

Observations:

As outlined in previous reports, CEIL has developed the necessary documentation to cover all EHS aspects including detailed Standard Operating Procedures (SOPs) for specific field activities.

Early civil work at the Bhagyam field has been completed while is still ongoing at the Aishwariya field. According to CEIL management, there are six local contractors currently involved in the Project performing early civil work and some structural tasks. All these contractors, with the help and guidance of CEIL, have established their own EHS plan, method statements, and job safety analysis. The regular and frequent presence of CEIL supervisors in the field and their coaching of the local workforce are key elements to ensure compliance with Project procedures and standards. As described in Section 1, several contractors are involved in the Bhagyam field construction phase (IOTL, KPTL, L&T, Artson, John Energy, Artson) while EDAC has just been awarded the electrical and instruments installation at all WPs. This contractor has yet to mobilize in the field. All contractors have developed project specific EMP and pertinent EHS documentation that have been approved by CEIL management and reviewed by ECMG. Artson has also submitted its EHS and security plans that have been approved by CEIL. Overall, the EHS documentation developed by all contractors is adequate for the work components awarded. It should be noted that, at the time of ECMG visit, EDAC's EHS plans were not yet available for review since a kick off meeting with the contractor had just taken place.

The Project, as described in Section 1, has several components that have been awarded to different contractors. The main contractors currently present in the field include IOTL, KPTL, L&T, and Artson. All contractors, including Artson that at the time of the January 2011 Audit had yet to mobilize in the field, have developed a series of EHS documents, method statements and job safety analysis, that have been approved by CEIL management. Artson's EHS plans are in the process of being finalized and will be submitted to CEIL for review and approval before field activities start.

As outlined in previous reports, elements of CEIL Quality Health, Safety, and Security management team involved in the construction activities at the Mangala field (part of the Rajasthan Block Project) are overseeing this Project. In addition, all main contractors have developed their specific EHS organograms that appears sufficient for the on-going work activities.

Since activities at the Bhagyam field approach completion, some of the contractors workforce, in particular L&T, KPTL, and IOTL, may be reduced along with the number of the field supervisors. On the other hand, decommissioning and reinstatement activities will likely pick up as contractors complete their assignments and vacate their field sites (camps and yards). Therefore, CEIL should ensure that contractors' supervisors in the field are sufficient to oversee the on-going work and that CEIL personnel closely monitor and guide contractors so that demobilization and restoration activities are carried out according to Project standards and procedures.

As reported by CEIL management, at the Aishwariya field the majority of the construction tasks will be awarded to one main contractor, facilitating the Project overall management of EHS issues. The Project should implement all "lessons learned" during the Bhagyam field construction and transpose and implement them in the Aishwariya field construction activities.

IFC and/or ESIA/EMPs Action Items

Nil

Recommendations for Improvement:

- a. CEIL EHS field supervisors should:
 - Continue their regular presence in the field and their pro-active coaching of the local workforce to ensure continuous compliance with Project procedures and standards,
 - Increase field visits to contractors sites to ensure compliance with Project standards,
 - Ensure that decommissioning and reinstatement activities by contractors are carried out according to CEIL requirements, and
 - If needed, provide the necessary EHS guidance and training to enhance contractors' performance.
- b. At the Aishwariya field strongly implement the EHS plan with the new contractor(s) from the onset and ensure that "lessons learned" are incorporated in the construction activities at this field;
- c. CEIL should ensure that EDAC's EHS plans conform with Project policies and standards, include all relevant components for the assigned tasks, and are approved by CEIL management before field work begins; and
- d. CEIL should ensure that EDAC's EHS team, assigned to the Project is sufficient to cover the field tasks and is familiar and capable to enforce Project EHS standards/procedures.

3 ENVIRONMENT

3.1 ENVIRONMENTAL ORGANIZATION AND STAFFING

Project Strategy:

At company level, Health, Safety, Environment, Security, and CSR fall under the umbrella of CEIL Corporate Responsibility Management System. According to the information provided to the ECMG team, two environmental managers, one for the Aishwariya and one for the Bhagyam fields, report directly to the construction manager. While the complete EHS structure for the Aishwariya field will be defined at a later stage, the draft structure for the Bhagyam field has been defined. Assisting the EHS manager will be a series of EHS coordinators in charge of the WPs, a training instructor, a scaffolding supervisor and a site paramedic.

Observations:

CEIL management reported no major changes in the Project EHS personnel structure. At the Bhagyam field the Project has hired three of the planned seven EHS officers while at the Aishwariya field CEIL needs to replace the EHS coordinator along with the rotational night shift replacement, and hire five EHS field officers. Of particular importance is the hiring of the field officers that should provide better and more frequent presence in the field to supervise contractors' performance and compliance to Project standards (see compliance issues in Sections 3.6, 3.7, and 4.1).

At present, most field activities are centered at the Bhagyam field where IOTL, L&T, KPTL, and Artson are respectively involved in civil works, overhead electrical, infield pipe laying, and WPs mechanical and piping activities. According to the information provide, IOTL organograms has changed slightly. The EHS manager is now assisted by a deputy environmental manager, two deputy EHS managers, and an assistant manager. One deputy EHS manager and the assistant manager oversee 5 field officers, each assigned to a WP where activities are on-going while the other deputy EHS manager oversee the building construction at substations located in WPs, 1, 3, 13, and 15. An inspection/training/induction officer, first aid and ambulance personnel, and EHS personnel at the cement batching and fabrication plant all report to the deputy environmental manager. L&T has added a new safety officer to the EHS team, bringing the total to three, that report to the EHS manager; similarly KPTL has added a new safety officer to help the existing officer that report to the EHS manager. It should be noted that L&T, IOTL, and KPTL are in the last stages of their tasks and are reducing their field workforce accordingly. Artson EHS structure consists of an EHS manager that is assisted by an environmental manager who oversees four officers.

For the construction of the trunk pipeline, connecting WP15 (the BFF) to MPT, the CEIL EHS team consists of a senior EHS manager assisted by two safety engineers. PL team includes an EHS manager and two supervisors that coordinate the activities of four field officers and an environmental engineer.

All contractors continue to submit weekly and monthly EHS reports to CEIL management and to attend scheduled briefing with key Project EHS personnel. CEIL management then compiles all field EHS data and submits regular EHS monthly reports to corporate management. It should be noted that effective January 2011, the Project has adopted a Corporate Reporting Management System to capture all environmental related issues. All EHS issues are electronically logged in the system for easy tracking and management.

IFC Action Items

M4.1 Project EHS personnel should regularly visit active contractor field sited to ensure compliance with Project standards and to verify implementation of corrective actions.

Recommendations for Improvement:

- a. The Project should strengthen and increase its EHS structure in the field to supervise on-going activities;

- b. CEIL should continue their supervision of contractors' field EHS personnel to ensure they comply with Project procedures and standards and, if necessary, provide mentorship and training;
- c. CEIL EHS personnel should ensure that new contractor(s) implement the Project EHS plan field from the onset of their activities at the Aishwariya; and
- d. CEIL may need to increase its EHS personnel in the field to cover the construction of the trunk pipeline to ensure Project standards and requirements are met.

3.2 AIR QUALITY

Project Strategy:

The Project EIA recognizes dust as the main potential impact on air quality during the construction phase. Dust impacts are only temporary and limited to those areas in close proximity of the sites where work is ongoing and along routes frequently used by Project trucks. Dust is associated with civil work activities including excavation work, trenching, material hauling, dumping, site grading, backfilling activities, as well as from increased vehicular traffic in the area. Other gaseous emissions are mainly generated from operation of Diesel Generators (DGs) and vehicular exhausts; however, these emissions are evaluated to be minor, localized, and transient in nature.

The control measures to mitigate fugitive dusts, as outlined in the Project's EIA (Section 4.4.3) and EMP (Section 7.0), include watering of the working areas and of those roads where Project traffic is intense. In addition, the use of cover sheets on topsoil and/or soil piles and of covers on all vehicles delivering construction materials containing fine particles (sand, aggregates, etc.) to/from the site should be implemented. Nose masks are required as standard Personal Protection Equipment (PPE) for workers involved in operations that may entail potential dust inhalation.

Gaseous emissions are mitigated through proper operation and maintenance of all vehicles and construction equipment (e.g. DGs) should have sufficient exhausts height to ensure adequate dispersion. The Project has committed to implement dedicated air monitoring programs for both dust and gaseous emissions control. Air quality parameters, including ambient air parameters (SPM, RPM, SO₂, NO_x, CO, Pb), to be checked during the construction phase are reported in Table 2, Section 10.0 of the Project EMP and summarized in Table 3.1 of this report.

Observations:

Currently, major civil work is being completed in the Bhagyam field while at the Aishwariya field activities are still limited to early civil work at some WPs. It should be noted that the nature of early civil work (cutting, filling, leveling, compaction, and grading) and some activities of major civil work (excavation, equipment movements, etc.) generate a considerable amount of dust suspension in the air, in particular given the dry and desert setting of the area of interest. The Project has identified specific locations where working activities could significantly increase particulate suspension and has developed a schedule for dust suppression (sprinkling of the grounds). At the Bhagyam field, the Project has developed a comprehensive plan to wet the grounds at active WPs and areas, using small tractors contracted from the local communities. According to the information provided, about 500 liters per WP are used daily for dust suppression purposes. In addition, daily watering is reported to be conducted at active in-field pipeline sections, at road crossing, and near sensitive receptors like schools and private dwellings. On average about 6,000 liters are used daily to wet these areas. Although minor civil work has started at the Aishwariya field, ground wetting activities information has not been provided by the Project. As already outlined in the January 2011 report, at the Aishwariya field, in particular where minor civil work has already started and where private dwelling are close to Project sites, CEIL should start an aggressive approach to ground wetting activities to mitigate dust suspension.

At the Bhagyam field, ambient air monitoring data from January to April 2011 were submitted to ECMG for review. It should be noted that the January campaign was conducted by Nakshatra Enviro Services, a contractor of IOTL, and did not include all the Project parameters. Monitoring sampling from February to April was carried out by J. M. Environet PVT (Environet), a contractor of CEIL, and included all required Project and IFC parameters including Particulate Matter (PM) less than 2.5 µgm/m³ (PM_{2.5}), lead (Pb), and Ozone. In addition, Environet has extended sampling to 24 hours divided into three sets of measurements,

of about 8 hours each, to avoid overload of the PM filters. These measurement sets comply with Indian air quality standards requirements.

For the February to April campaigns, air samples were collected at five locations: near WP7; the Bothiya village; the Bharka village; Thumbli; and Meghwalo Ki Dhani. These measurements indicated that in February only PM₁₀ was detected slightly above the National Ambient Air Quality Standards (NAAQS) of 100 µg/m³. These exceedances were recorded near WP7 (118.25 µg/m³ maximum) and at Thumbli (115.10 µg/m³) and Meghwalo ki Dhani (105.25 µg/m³). In March, PM₁₀ above the NAAQS limit was recorded at the Thumbli location (115.15 µg/m³). No PM₁₀ exceedances were detected in the April 2011 campaign. No other ambient air analyte was detected above the relative limit during the January to April sampling activities.

At the Aishwariya field, ambient air monitoring data from January to April 2011, carried out by Environet, was submitted to ECMG for review. These sampling campaigns included all Project and IFC required analytes and their monitoring duration was similar to the one adopted at the Bhagyam field (three sets of 8 hours measurements covering a 24 hours period) that conforms to national procedures. Ambient air samples were collected at five locations: Nimbaniyon Ki Dhani; Madpura Sani; Madpura Barwala; Kawas; and Chittar Ka Par. These samples indicate that only PM₁₀ and PM_{2.5} were detected at slightly above the NAAQS limits at some locations. In particular, PM₁₀ was detected above the national limit in samples collected at the Nimbaniyon Ki Dani during January (110.68 105.25 µg/m³ maximum value) and February (110.24 105.25 µg/m³) and at the Kawas location during January (122.23 105.25 µg/m³) and February (108.45 105.25 µg/m³). This last location also recorded values of PM_{2.5} slightly above to the NAAQS limit of 60 µg/m³ during the January sampling (62 µg/m³) or very close to this limit in February (58 µg/m³).

It should be noted, as also indicated by PM baseline values reported in the Project EIA, that the areas where the Bhagyam and Aishwariya fields are located are subject to very dry and, at times (summer months), high wind conditions that significantly increase dust suspension in the ambient air and directly affect PM field measurements. Therefore, achieving compliance with IFC standards of 50 µg/m³ for PM₁₀ and 25 µg/m³ for PM_{2.5} is not feasible in this regional setting; however, the Project should and can comply with IFC interim target 2 of 100 µg/m³ for PM₁₀ and 50 µg/m³ for PM_{2.5} that are close to the NAAQS limits.

Stack emission tests were conducted by Nakshatra Enviro Services during their January campaign in conjunction with ambient air. It included testing of Diesel Generators (DGs) located at working WPs and other units at the IOTL batching plant and fabrication yard. A review of the report indicated that none of the parameters analyzed (SPM, SO₂, and NO_x) was detected at abnormal levels.

IFC and/or ESIA/EMP Action Items

M3.1 At the Aishwariya field sites CEIL should start an aggressive approach to ground sprinkling activities to mitigate dust suspension in the ambient air.

Recommendations for Improvement:

- a. The Project should continue its careful monitoring of ambient dust, in particular during early civil work, and continue strong mitigation measures (frequent watering of the grounds, use of masks by the workforce, switch to activities that do not suspend dust into the ambient air during windy conditions, etc.) to reduce dust generation;
- b. CEIL should pay particular attention to dust issues at those sites in the Aishwariya field where dwellings are located in close proximity to Project areas. Close coordination with the CSR team should be implemented to ensure that people living near WPs are protected (*Repeated*); and
- c. All monitoring reports should include legislative, Project specific, and IFC limits for each parameter. In addition, the reports should highlight and discuss any exceedances of the above mentioned limits and, if required, propose mitigating measures (*Repeated*).

3.3 GROUNDWATER AND SURFACE WATER

Project Strategy:

According to the Project EIA, water requirements for the construction and operational phase will be sourced from the already existing facilities (Thumbli extraction field and Reverse Osmosis Plant at MPT) that service the Rajasthan Block Project. The daily water consumption during the construction period is estimated to be about 100 m³/day for a period of one year (Section 2.4.3.2 of the EIA). However, the recently approved EMP indicates that water requirements for contractor activities could be sourced from local sources or from groundwater abstraction, previously obtaining the necessary permits from the local authorities (Section 7.0 of the EMP). Water consumption during drilling activities has been estimated to be 40 to 50 m³/day sourced by local suppliers and/or supplemented by saline water from the MPT.

Domestic drinking water during the construction phase will be supplied from groundwater/package water or water transported via tankers to the construction site (Section 4.4.3.4 of the EIA).

Observations:

The current Project water needs include industrial water, used for the civil work, dust abatement activities, and portable toilets, and domestic water used for drinking purposes. According to the information provided, at the Bhagyam field IOTL and L&T are the contractors with the most consumption of industrial water. IOTL industrial water uses include cement, filling of portable toilets, and dust abatement at the WPs and along the field access roads. Recorded water consumptions had a peak in January 2011, with a total of 1,153,000 liters (1,153KL), while March (703KL) and April (801KL) were more in line with monthly values registered in the previous quarter. IOTL water required for portable toilets, dislocated at active WPs, averages 0.3 KL/day, a slight reduction from the 0.5KL/day used before. L&T consumption of industrial water has recorded a peak in April with 405KL. This peak was likely due to the construction of the electrical poles bases and the installation of the poles in the ground. Artson consumption of industrial water is limited to about 26KL per month. As outlined in previous reports, industrial water is sourced from local suppliers as the Project's continued efforts to provide opportunities to nearby business although CEIL has the capability of meeting its needs through the Reverse Osmosis (RO) plant located at the MPT.

Each contractor has its own drinking water arrangements and supplier. Bottle water is supplied by different vendors to KPTL, CEIL, and IOTL, staff field offices while water for camps and yards comes from local boreholes or suppliers. Drinking water for KPTL, PL, and L&T labor camps comes from boreholes located in the Bhadka village while PL staff and labor camp are supplied by a borehole from the Gave Gaon village that is further processed by an on-site Reverse Osmosis unit. It should be noted that drinking water at WPs is transported to site by tankers and stored in plastic containers provided with spigots. Chlorinated tablets are regularly added to the onsite drinking water tanks and chlorination is regularly checked with a portable kit. Drinking water samples are collected regularly at the source and/or at user end-points (spigots) and tested for a complete set of parameters to ensure water is within drinking quality standards (see Section 3.4). In addition, the Project has recently started the use of on-site microbiological kits to test drinking water for coliform bacteria in order to better monitor drinking water quality.

IFC Policy Action and/or ESIA/EMP Actions Items

Nil

Recommendations for Improvement:

- a. The Project should work in concert with CSR to gradually phase out local supply of industrial water and replace it with other sustainable initiative for the local businesses (*Repeated*).

3.4 MONITORING

Project Strategy:

Monitoring of key environmental parameters is both a Project commitment and an IFC requirement. The Project EIA and EMP clearly outline CEIL's Environmental Monitoring program to cover both the construction, the drilling, and operational phases of the Project. Monitoring shall include direct

measurements and recording of quantitative information of physical and chemical indicators to characterize ambient environmental quality in the Project areas. Monitoring should be designed and implemented to ensure that Project commitments are met and to verify compliance with statutory and corporate requirements. In particular, the Project has developed specific parameters and monitoring schedules to be carried out during the construction phase. These parameters and schedules are outlined in Table 6.1, Section 6.2.2.1 of the EIA and Table 2, Section 10 of the EMP and are summarized in Table 3.1 of this report. Monitoring reports should include legislative, Project specific, and IFC limits for each parameter.

Observations:

At the Bhagyam field CEIL continues its monitoring program with monthly analysis of ambient air (see Section 3.2), noise, and drinking water quality and has started a similar program at the Aishwariya field on January 2011. It should be noted that at the Bhagyam field Nakshatra Enviro Services, an IOTL contractor, performed the monitoring activities in January 2011 while Environet, a CEIL contractor, performed the subsequent monitoring campaigns.

Drinking water sample are routinely collected from several WPs and from the IOTL fabrication yard and cement batching plant. A review of the water quality tests on samples collected from January to April 2011 indicates that analytes concentrations generally fall within national permissible limits with few exceptions. Total Dissolved Solids (TDS) and chloride were detected slightly above the national permissible limits (IS:10500 – 1991) of 2,000 mg/l and 1,000 mg/l respectively, in the January samples collected from WP12 (TDS: 2,270 mg/l; chloride: 1,099 mg/l) and WP4 (TDS: 2,242 mg/l; chloride: 1,124 mg/l). In addition, fluoride was also found slightly above the national limit of 1.5 mg/l in the January samples collected at WP4 (1.9 mg/l), WP5 (2.6 mg/l), and at the cement batching plant (2.8 mg/l). These minor exceedances should not compromise the overall water quality. It should be noted that WPs samples were tested for only 10 of listed Project analytes; however, this water is supplied by tankers from local boreholes where separate samples have been collected and analyzed. Also tested was a borehole from the Bharka village and one from the Bohia village that supply drinking water to the Project. Samples at these locations were collected on a monthly basis since February 2011 and tested for an extended list of the Project drinking water parameters. The data indicate that only calcium (341 mg/l) and chloride (1,085 mg/l) were recorded just above their respective limit of 200 mg/l and 1,000 mg/l.

At the Aishwariya field, drinking water samples for the January through March campaigns were collected at the Nimbaniyon Ki Dhani, the Madpura Sani, the Kawas village, and WP6. The April data included two additional locations: the village of Joggasar Kuwan and the Ravji Ki Dhani. No exceedances were found in any of the extended list of Project analytes tested in any of the sample collected.

Ambient noise sampling sites at the Bhagyam field during the January campaign, carried out by Nakshatra Enviro Services, included the IOTL cement batching plant and fabrication yard site, and WPs 4, 5, 12, and 13. Environet, which conducted noise monitoring campaigns from February to April 2011, selected the following four locations: Bothiya village; Meghwalo Ki Dhani; Bharka village; Thumbi; and WP7. All recorded values were found within national and IFC limits with the exception of slight exceedances of the residential limit (45 dBA) for the night measurements recorded in the village of Bharka during the March (45.80 dBA) and April (48.12 dBA) campaigns and in the Bothiya village (45.17 dBA) during the April campaign.

For the Aishwariya field, noise monitoring data for the January through April monthly campaigns were submitted for review. The sampling points for noise monitoring were selected at the Nimbaniyon Ki Dhani, at Madpura Sani, at Madpura Barwala, at Chittar Ka Par, and at the Kawas village. No exceedances of the NAAQ and IFC limits were recorded at any of the monitoring locations in any of the monitoring campaign data submitted for review.

The Project carried out a soil assessment study in the Aishwariya field to determine the overall fertility and productivity characteristics of the top soil layer. Composite samples of three points, from two horizons (15 cm and 50 cm deep), were collected at WPs 2, 3, 4, 6, and 7 and along the main access road near WPs 2, 3, 4, and 7. The samples were then tested for fertility parameters like Ph, organic carbon, conductivity, available nitrogen, available phosphorus, and available potassium. The results indicate that the soil in this area is characterized by low fertility and productivity; therefore, conservation of top soil is not critical.

Table 3.1: Monitoring Parameters

Project Phase	Medium	Parameter	Frequency
Construction	Ambient Air	SPM, RPM, SO ₂ , NO _x , CO, Pb	Monthly
	DG Emissions	SO ₂ , NO _x , CO, Hydrocarbons	Periodic
	Noise	L _{eq} L _{dn} , L _n	Monthly/Quarterly
	Water	Physical characteristics, TDS, Ca, Mg, Cl, B, SO ₄ , F, NO ₃ , Na, K, C ₆ H ₅ OH, CN, Cd, As, Cu, Pb, Mn, Fe, Cr ⁺⁶ , Se, Zn, Al, Hg, Pesticides, E-coli, Total Coliform	Periodic
Drilling	Ambient Air	SPM, RPM, SO ₂ , NO _x , CO	Once
	Noise	L _{eq} L _{dn} , L _n	Once
	Soil	Physical characteristics, P, K, Mg, Na, Cl, SO ₄ , C, Al, Fe, Mn, Zn, B.	Pre and post Drilling
	Water	Physical characteristics, TDS, Ca, Mg, Cl, B, SO ₄ , F, NO ₃ , Na, K, C ₆ H ₅ OH, CN, Cd, As, Cu, Pb, Mn, Fe, Cr ⁺⁶ , Se, Zn, Al, Hg, Pesticides, E-coli, Total Coliform	Pre and post Drilling

IFC and/or ESIA/EMP Action Items

Nil

Recommendations for Improvement:

- Monitoring reports should include legislative, Project specific, and IFC limits for each parameter, highlight anomalies and proposed answer/investigation and/or mitigating actions (*Repeated*).

3.5 RECLAMATION, REVEGETATION, AND TOPSOIL MANAGEMENT

Project Strategy:

The Project EIA and EMP define general measures to prevent and mitigate the impacts on soil resources. Potential impacts of concern include reduction of topsoil fertility and increased erosion due to surface disturbance, vegetation removal, and inadequate reclamation. CEIL is committed to implement actions for the protection and preservation of topsoil in the RoU along the pipeline and at WPs. Preserved topsoil should then be used during site reclamation. Erosion minimization through temporary and permanent erosion control measures in disturbed areas is also part of the Project strategies. Revegetation and the development of greenbelt areas around permanent facilities (WPs and along access roads) are other Project commitments. As per EIA outline, a minimum 10 m wide greenbelt will be planted around all Project facilities.

Reinstatement and top soil management will be done with due regard for local development plans and compatible with the surrounding land use. Restoration will be carried out so that the site will be returned to near original conditions. As part of the reinstatement process, the Project recognizes the importance of the correct management and preservation of topsoil during construction activities. Topsoil stripped during site clearance should be properly stored to preserve its physico-chemical characteristics and to avoid loss due to erosion.

The Project recognizes the particular value of vegetation in the arid climate of the region and has made a strong commitment for the revegetation and the development of greenbelts around permanent facilities. During the construction phase, particular care will be taken to minimize flora disturbance and tree cutting. Also, the Project proposed the development and maintenance of a nursery to facilitate the revegetation

process. The greenbelt programme and revegetation activities should be concomitant with site clearing activities and, as per Project commitments, the number of trees replanted should be at least twice the number of the trees cut during site preparation. Furthermore, the greenbelt extension should be no less than 25% of the total area covered by the permanent facility.

Observations:

CEIL has outlined an overall approach to greenbelt development identifying the number and types of species (39 were selected) that best suit the Project area arid environment and that have some aesthetic values but with medium water requirements. In addition, the Project has already determined the total number of trees and shrubs that will plant at each WP and along the access roads. According to the information provided, the Project divided the greenbelt development in two phases: phase I is scheduled to start July 2011 and include the planting of about 2,100 trees and shrubs on one third of the WPs and corridor. Phase II should begin by December 2011 with the planting of about 5,500 trees and shrubs in the balance two thirds of the designated area. Information on the planting strategy, with details on local partners, roles and responsibilities, has yet to be submitted to ECMG for review. To date, no tree has been cut during the clearing of WPs, access roads, and infield RoU at the Bhagyam field or along the trunk pipe RoU.

As the construction progresses to its final stages, the Project will commence the decommissioning and reinstatement of camps and yards used by the different contractors. ECMG visited IOTL former fabrication yard that has been demobilized and, according to field personnel, returned to the owner who already signed the No Objection Certificate (NOC). Some scattered concrete debris, cement platforms, and metal fencing poles, were left on site as per owner request but, as stated by IOTL personnel, the NOC did not include any pictures of the decommissioned yard and/or a list of the material left on site. In order to avoid any future dispute, CEIL should re-visit its decommissioning and reinstatement procedures to incorporate "lesson learned" from the decommissioning and reinstatement activities undertaken for other projects.". As part of these procedures, CEIL personnel should conduct a site inspection before the contractor(s) releases the site to the land owner to ensure that reinstatement is done in compliance with Project standards. Debris left on site should be piled in the safest zone of the area and the grounds cleared of all loose material. In addition, CEIL should require that the NOC documentation includes pictures of the reinstated site and a list of the material and/or structures left by owner request. The NOC documentation should be checked and approved by CEIL personnel before contractors submit it to the land owner for approval and signature.

IFC and ESIA/EMP Policy Action Items

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| M2.1 | The Project should start developing a detailed strategy on greenbelt implementation at the Bhagyam field by identifying local partners, and define overall roles and responsibilities (Modified). |
| M4.2 | CEIL should re-visit its decommissioning and reinstatement procedures to incorporate "lesson learned" and require that the NOC documentation includes pictures of the reinstated site and a list of the material and/or structures left on site at the request of the owner. |

Recommendations for Improvement:

- The Project should start developing a detailed greenbelt development plan, similar to the one developed for the Bhagyam field, for the Aishwariya field (*Repeated*); and
- CEIL personnel should closely supervise contractors' decommissioning and reinstatement activities of yards/camps and the RoU to ensure compliance to Project and IFC standards.

3.6 WASTE MANAGEMENT

Project Strategy:

According to the Project EIA and EMP:

- “The solid wastes such as paints, lubricants, oil diesel containers or any other non-biodegradable wastes that have leaching characteristics will be disposed at landfill site proposed to be constructed near Mangala terminal”;
- “A waste management plan will be prepared before the commissioning of activity.....”;
- “The waste, such as sanitary wastes will be treated in a septic tanks followed by soak pits of appropriate size and technology”;
- “Use of municipal or external wastewater/sewage treatment facility shall only be considered as last option”;
- “Workshop areas for the maintenance of vehicles, drilling rigs, DG set locations and fuel storage areas would be surrounded by drains.....”;
- “All oil handling and storage areas will be provided with concrete paving and secondary containment”;
- “A Central Waste Accumulation (CWA) area shall be demarcated and all the non-perishable segregated wastes shall be accumulated.....”.

A general Waste Management Plan (WMP) has been developed at the corporate level, by CEIL. This plan includes minimum requirements for the management of hazardous and non-hazardous wastes generated during the construction phase at all CEIL projects. A Waste Management Procedure, developed for other CEIL projects, providing general requirements for the waste identification, segregation and storage, record keeping, and final disposal is available. A general action plan with activities, waste generation locations, actions to be undertaken and responsibilities/accountabilities for final disposal are included in the document as well as an example of a waste disposal register. According to these procedures, Project contractors are required to develop and implement specific waste management programs that include the proper identification, classification, temporary storage, and final disposal strategies. A waste management strategy, calling for segregation at source of the different types of wastes, will be implemented at all Project locations. According to the plan, the collected materials will be transferred to a central waste collection yard and all recyclable items will be sent to authorized/licensed waste handlers. The use of a common integrated engineered landfill and incinerator, located within the MPT boundaries, for the disposal of hazardous waste is foreseen.

Observation:

CEIL have developed a comprehensive WMP, consistent with Project requirements, and is carrying out adequate implementation in the field. Furthermore, at the Bhagyam field all contractors that have mobilized in the field (IOTL, L&T, PL, KPTL, and Artson) have submitted their own WMPs that are consistent with CEIL requirements and specific contractor's tasks. In general, the plans call for segregation of recyclable waste at the source.

At the Bhagyam field, a CWA area has been established at all contractors' yards and camps (IOTL at their batching plant; L&T and KPTL at their fabrication yards; PL at their pipe yard). Waste streams volumes are recorded in a waste tracking form by all contractors and all recyclable waste (paper, plastic, timber, and metal scraps) is regularly picked up by licensed recycler(s) that have been audited by CEIL personnel. Food waste is usually sent to be processed at the composting facility located at the MPT. However, the composting machine at this facility was reported to have broken at the beginning of May, therefore, food waste was temporarily sent to the Project Raageshwari Terminal composting facility. A replacement composting machine has been ordered and is expected to be installed at MPT by mid May.

Oil contaminated materials (rags, contaminated PPE, impacted soil) and biomedical waste, which is produced in very small quantities, are now sent to the newly commissioned MPT landfill and incinerator facilities where they are temporarily stored in an enclosed shed. These waste streams will be either incinerated and/or disposed in the MPT landfill once all the required permits from the local authorities are finalized. Poor segregation of biomedical waste was observed at the IOTL cement batch plant pit. In addition, ECMG noticed the absence of a specifically designed container for the disposal of sharpies at the

Artson yard first aid facility. Another field observation involved the CWA area at the IOTL cement batching plant that was temporarily not accessible because the area was used to stage a significant amount of rebars and scrap metals. The Project should ensure that proper segregation of biomedical waste is implemented at the source and that sharpies are disposed in specifically designed containers and not in regular plastic bags.

Working areas, WPs, and contractors' yards/camps are all provided with toilet facilities. At contractor's yards and camps, wastewater is processed through septic tank - soak pit systems or is collected in septic tanks. Portable toilets have been placed at each WP where a workforce is present and along sections of the infield and trunk line pipeline where work is on-going. Project wastewater from septic tanks and portable toilets is transported to the sewage treatment plant located at the MPT.

According to Project management, water needed for the hydro-testing of the in-field and the trunk pipelines will be supplied by the MPT reverse osmosis plant. Preliminary plans calls for maximizing the re-use of water for different pipe sections and then dispose it in WPs lined pits. The hydro-testing waste water will be treated to promote precipitation of suspended solids and then tested for contaminants. If the water meets legislative discharge concentrations will be used for dust suppression, otherwise it will be left in the lined pits for natural evaporation.

At the Aishwariya field, where only local contractors are engaged in early civil work, waste production is limited to some plastic and food waste, with the first sent to the local authorized recycler and the second processed at the MPT food composting facility. Wastewater from the portable toilets present at active WPs is sent to the sewage treatment plant at MPT.

ESA/EMP and IFC Policy Action Items

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| M4.3 | The Project should ensure that proper segregation of biomedical waste is implemented at the source |
| M4.4 | Medical sharpies should be disposed in specifically designed containers and not in regular plastic bags |

Recommendations for Improvement:

- The Project should keep the CWA area accessible at all time to facilitate the disposal of waste; and
- CEIL should finalize its hydro-testing procedures and develop a comprehensive document to outline procedures, testing, and discharge standards adopted.

3.7 HAZARDOUS MATERIALS MANAGEMENT AND POLLUTION PREVENTION

Project Strategy:

The Project strategy for the management of hazardous materials is outlined in the relevant EIA and EMP as follows:

- “Workshop areas for the maintenance of vehicles, drilling rigs, DG set locations and fuel storage areas would be surrounded by drains.....”;
- “All oil handling and storage areas will be provided with concrete paving and secondary containment”;
- “Material Safety Data Sheets (MSDS) have to be maintained for all hazardous chemicals and the storage and handling points”; and
- “All hazardous material storage areas, fuels storage areas, DG set installations shall be paved with bermes and collection pit for spills and contaminated run-off. These facilities will be within a dedicated enclosure with roofing and side cladding to prevent rain water ingress. Closed storage areas will be well lit with adequate ventilation.....”.

Observations:

All contractors have established properly constructed hazardous and chemical storage area at their field sites. During ECMG site visit, only isolated issues related to secondary containment were observed. At the IOTL fabrication the brick berming at one DG was not completed and at the John Energy site (WP1) the metal frame holding 55 gallons drums of diesel, used for the site DG, needs to be provided with side plates at the base to create an appropriate secondary containment. Also at the John Energy site, a drip pan should be placed near the diesel aboveground storage tank area where fuel is transferred to the 55 gallons drums. Project EHS personnel should regularly visit active contractor field sites to ensure compliance with Project standards and to verify implementation of corrective actions.

Material Safety Data Sheets are present at all visited sites and were observed to be posted/available near hazardous material storage areas.

IFC and/or ESIA/EMP Compliance Action Items

Nil

Recommendations for Improvement:

- a. The Project should ensure that at all working areas hazardous material is properly stored within a secondary containment that, in some cases, can be temporary.

4 HEALTH AND SAFETY

4.1 HEALTH AND SAFETY MANAGEMENT AND OCCUPATIONAL HEALTH

Project Strategy:

CEIL has adopted a Corporate Responsibility Management System that incorporates health, safety, environment, security and corporate social responsibility. The system includes well defined performance standards, procedures and guidelines, and key performance indicators (e.g. lost time incidents, total recordable incidents etc.), which are used to track compliance with annual HS targets.

Observations:

EHS inductions, medical and security screening, and training of all workforces continue to be well implemented throughout the Project. About 900 people are currently working in the field with the majority of the workforce (about 850 people) deployed at the Bhagyam field. In addition to basic EHS inductions for all new hires, since Project inception over 1,900 workers have been reported receiving task specific training (excavation, environmental awareness, working at heights, rigging, electrical safety, etc.) and 900 supervisors have now attended a *Hazard Observation* training module. Furthermore, on March 2011 CEIL conducted a half a day training program on IFC PSs designed for Project management and contractors' representatives. Site supervisors are reported to conduct regular toolbox meetings and EHS awareness shows (Road Show), using pictures and examples, continues to be delivered by CEIL personnel at various work sites on a monthly basis.

CEIL is conducting regular site audits and inspections. One internal site audit was performed by CEIL personnel during the current quarter and weekly scheduled site visit inspection are reported to be on-going on a regular basis. Specific equipment inspections are also reported to be carried out on a regular basis and a sticker applied to all inspected equipment to certify status. The EHS supervisor at each site where open issues and/or faulty equipment were found is responsible for taking action to close the issues. However, as noted in the January 2011 report, wrong wire rope clipping was again observed on several rigging equipment deployed at active sections of the trunk pipeline. While the CEIL personnel has set a tracking system for all critical equipment used at the WPs and the in-field pipelines construction sites, such a system is not apparently in place for the trunk pipeline activities. ECMG observed several cranes with a valid inspection sticker but with wrong wire clipping and, although equipment inspection forms are present at the PL yard, on site personnel could not produce either a record of such inspections or the filled forms. Project EHS personnel should ensure that contractors perform, record, and track equipment checks and personally verify equipment status at active work sites along the trunk pipeline project. Scaffolding and shuttering are erected under CEIL supervision and a tagging system is implemented to ensure safety.

The Project has recently implemented some additional health and safety measures including the construction of speed breakers on all Bhagyam access roads to control vehicles' speeding, the distribution of glucose packs to the workforce, and a flagging system with associated procedures to communicate heat index in the field. In addition, the Project plans to pave all Bhagyam access roads to reduce dust generation and to add additional lighting to improve night security.

Required Personal Protection Equipment (PPE) has been observed to be fully implemented at all work sites with the exception of PL workers involved in the construction of a facility building at WP15. This crew was not wearing protective gloves while handling rebars and wood or while working with cement. Special equipment (blasting hoods, half masks for spray painting, etc.) have been procured and used in the field and EHS warning signs are posted near critical area throughout the Project. Housekeeping has been observed to be generally good at all visited sites. Portable toilets have been placed at all WPs where work is on-going and along in-field and trunk pipeline sections where workers are present.

First aid rooms, staffed with paramedics, have been set up at most field camps and, for those sites located away from the Barmer village, ambulances are present on-site. At WPs where civil work is on-going an emergency vehicle is kept at the gate should transportation of injured personnel be necessary and along the trunk pipeline where workers are present a medical car is deployed. Medical supplies have been observed to be sufficient for the workforce present and well stocked first aid kits are available at WPs and fabrication yards. However, during ECMG visit no paramedic was available on site at the IOTL cement batching plant and was temporarily off-site at the Artson yard. In addition, the interior of the ambulance at the IOTL plant was observed to be dusty and dirty. Given the particular role of the paramedic personnel, it is possible that

occasionally some posts are left uncover due to unforeseen events. However, contractors should promptly inform CEIL when a paramedic and/or doctor is not present on site for an extended period of time (half a day or more) so that the Project could take, if necessary, contingency measures.

No major incidents have been reported since the start of the Project and only 32 minor incidents, with no injuries, have been logged in the period from January to April 2011. According to the information provided, six health and safety emergency drills have been conducted during this past quarter involving CEIL and contractors (KPTL, L&T, and Artson) personnel. Following each drill a report was issued outlining the emergency scenario, the issues to be checked, relevant observations, and recommendations for improvements.

Fences/barricades have been deployed where excavations are present and welded pipeline sections were observed to be provided with welded end-caps.

PL labor camp was found to be in acceptable conditions and each room is now provided with smoke detectors.

IFC and/or ESIA/EMP Compliance Action Items

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|------|---|
| M3.5 | Wrong wire rope clipping was observed on several rigging equipments employed at the trunk pipeline construction project. No record of inspections is available for consultation (Modified) |
| M4.5 | Project EHS personnel should ensure that contractors perform, record, and track equipment checks and personally verify compliance at active work sites along the trunk pipeline project |
| M4.6 | Contractors should promptly communicate to CEIL when a paramedic and/or doctor is not present on site for an extended period of time so that the Project could take, if necessary, contingency measures |

Recommendations for Improvement:

- a. The Project should continue its effort to enforce PPE in particular at new working sites where workers may not be fully familiar with the required standards; and
- b. CEIL should plan to conduct in the near future at least one EHS drill with the participation of local authorities.

5 SOCIAL ISSUES

5.1 SOCIAL MANAGEMENT

The social aspects of the Project are managed by the Cairn Corporate Social Responsibility (CSR) department. CSR is part of the general Cairn Corporate Responsibility Management Plan that also includes Environment, Health and Safety and Security.

In 2008, a Corporate Social Responsibility Policy, a framework Public Consultation and Disclosure Plan (PCDP) and a framework Land Acquisition and Compensation Plan (LACP) were issued by CEIL followed by more specific PCDP and LACP for the Rajasthan Project. A Rapid Environmental Impact Assessment (REIA) for the Bhagyam field was published in November 2007. The REIA assesses as insignificant or minimal the nuisances and negative impacts on neighboring communities and evaluate as positive the impact on employment and overall socio-economic development in the area. However, no monitoring system was recommended to follow up the social impacts of the Project. The REIA also presents the proceedings of the Public Hearing held in Barmer on October 10th, 2007 where the concerns expressed included potential pollution, land acquisition; sources of water supplied by local distributors, and expected socio-economic development programs. These concerns and expectations were addressed in the last version of the REIA as relevant.

CEIL hired a consultant to prepare a Community Development Framework (CDF) for the Mangala Development Pipeline Project, a comprehensive scoping document that synthesizes most of CEIL policies and practices and gives sound recommendations, including best practices and methodologies. The document was reviewed and commented by IFC and ECMG in the January 2011 report. The main recommendation was to extract from this scoping document a separate corporate document with detailed commitments to community investments (CEIL Community Development Strategy).

CEIL regularly prepares monthly, quarterly and annual CSR reports and publishes a monthly newsletter (Sankalp).

The CSR activities in Rajasthan have been clustered around the Cairn Enterprise Center, CEC), a training center based in Barmer that has received joint IFC-CEIL funding until December 2010. CEIL has recently signed a Memorandum of Understanding with the Government of Rajasthan that extended CEC management of the centre for an additional five years. The EC manager, based in Barmer, also coordinates and supervises the CSR teams located in Rajasthan and Gujarat. The CSR staff for the Rajasthan Project (including the Bhagyam and the Aishwariya fields' development Project) includes ten field officers, three of them women, based in Barmer. Each staff member has responsibilities according to his/her experience and specific fields of expertise (including health and nutrition, education, income generating activities development, micro-finance, skills development, micro-enterprises development and land acquisition issues), but also taking into account the geographical distribution of the Project in the field. One officer is specifically assigned to oversee the Bhagyam and Aishwariya area, but other CSR team members fill in if their specific competencies are required.

It should be noted that a training session on IFC PSs was carried out in March 2011 for CEIL and contractors' management.

Observations:

The CSR human resources appointed to the Bhagyam and Aishwariya area appear adequate in number and expertise. The recently hired staff rapidly came up to speed on their roles and responsibilities and demonstrated commitment and a remarkable quick uptake of Project issues and approach.

ECMG received and reviewed the second draft of the Community Development Framework for the whole Mangala Development Pipeline Project. This new draft takes into consideration a number of specific comments made by ECMG and IFC. However, ECMG again recommends extracting from this scoping document a corporate document with precise commitments to community investments: a separate document (CEIL Community Development Strategy) that focuses and explicitly defines Cairn's strategy and implementation plan, including:

- CEIL commitments to community investments, approach, methodology and actions for implementation (drawing from already existing practices that have been successful and new proposed ones);

- a framework with clearly defined objectives, indicators and sound metrics to measure the overall outcomes of the strategy and of the specific community development activities; and
- the definition of a project time frame (a 3-5 year plan), staffing and budget.

More detailed suggestions to finalize the Community Development Strategy are included in the Barmer-Salaya May 2011 report.

ECMG reviewed CSR monthly reports that present CSR activities including interventions to settle grievances, which are described in the *Activities undertaken with other departments* section. However, more information on the resolution of conflicts and the general progress in the relation with Project affected people should be included. In addition, the monthly and cumulative number of interactions with stakeholders, divided by stakeholder type, could be annexed to the report. In general, for all CSR activities, the monthly and cumulative achievements should be summarized.

CSR management informed ECMG that a more structured monitoring system, including proper indicators, is under preparation. ECMG suggests that the system be related to the specific objectives of the upcoming Community Development Strategy.

ECMG commends the implementation of the training module covering IFC PSs and recommends CEIL management to pass on this training to their respective teams.

IFC and/or ESIA/EMP Compliance Action Items

M4.7 Prepare, disclose, and implement a "Community Development Strategy".

Recommendations for Improvement:

- a. The CSR periodic reports should include:
 - the period and cumulative achievements for each activity;
 - the number of stakeholders' consultations by of stakeholders type; and
 - more information on the settlement of conflicts and the general progress in the relation with Project affected people.

5.2 STAKEHOLDERS ENGAGEMENT

Project Strategy:

Public Consultation and Communication

The communication program for the Bhagyam and Aishwariya fields is implemented in the frame of the PCDP for the Rajasthan operations (Upstream project). A specific PCDP for this Project has been prepared, considered adequate by ECMG but with some amendments suggested in ECMG January 2011 report.

Since 2003, CEIL has been interacting with the District administration officials, in the frame of the land acquisition process, to plan and implement socio-economic development measures on a long term basis. A Barmer Development Forum, chaired by the District Collector and Magistrate and including representation from the other Departments of the District administration (education, health, forest, etc.), was set up to discuss the possible synergy and convergence of the public programs with CEIL interventions. According to Project's staff, the forum is no longer functional because it is considered no longer relevant given the tight and continuous collaboration with the District administration on many development programs.

The interactions with the communities are carried out by three teams with different tasks: the CSR team, dealing mainly with development programs; the land team, managing the land acquisition activities; and the Stakeholder Relations Team (SRT). The SRT tasks are midway between communication with stakeholders (both authorities and communities) and security. According to CEIL management, the SRT has a short

term scope, mostly linked to security issues (road blocks, work stoppages, assaults to Project's staff, thefts of Project's properties, etc.) that have arisen particularly in the Upstream project and other CEIL on-going projects like the Bhogat to Salaya pipeline extension. The SRT maintains a dialogue approach using the experience of the team members (all former local police officers) and ensures respect of the laws in the framework of CEIL's policies (including the PCDP). The SRT coordinates with CSR, land and security teams in order to manage stakeholders. The head of the SRT gives overall directions to the consultation process and guides the teams in the implementation of the PCDP.

Development Programs

The CSR activities for the Bhagyam and Aishwariya fields are implemented as part of the general CSR program for the Rajasthan operations (Upstream project). From the beginning of its presence in Rajasthan, CEIL has been supporting various development initiatives either directly and/or in collaboration with local Governmental and Non Governmental Organizations (NGOs). Also, public investments are sponsored by CEIL following the request of local authorities and communities affected by land acquisition.

Since 2007 CEIL (in partnership with IFC until 2010) had supported an Enterprise Center (EC) that provides technical assistance and training. Since December 2010, the EC has been transformed in a non-profit entity directly managed by CEIL, which has recently signed a Memorandum of Understanding with the Government of Rajasthan that extends CEC manage the centre for five years. The Centre is now managed by the Governing Body that consists of 10 members including a President, a Vice President, a Secretary, and a Treasurer. Programs developed to date include: training for micro and small enterprise like a program for rural women in affected villages, engaging them in home-based handicraft linked to market through textile contractors and key exporters; training program in agriculture, teaching farmers to grow new cash crops; and entrepreneurship and local vendor development. The training program is currently being revised with attention to quality and links to the technical education institutes present in the District territory. CSR staff is carrying out participatory needs assessment and resource mapping in communities to identify other opportunities for training and activities.

CSR activities in the Bhagyam and Aishwariya fields focus on projects related to health and education, implemented in collaboration with NGOs and the relevant local administration. A Mobile Health Van program, which includes a doctor, a pharmacist, and a social worker, visits 14 villages once a week. With respect to education, the focus is on improving the quality by motivating teachers and students through: school infrastructure renovation; reading rooms (in 25 schools, four in the Bhagyam area and one in Aishwariya); Science Van (10 schools of which two are in Bhagyam), and English relay training (in 30 schools). A new activity is the Mobile Skill Training Van program; a van that goes in the villages and offer to young men the opportunity to participate in a three months training program in mechanics. After the training, the students have the opportunity to practice their newly acquired skills for one month at mechanical shops, linked to the program, located in Barmer, and ultimately be hired at the end of the trial period or be equipped to find employment elsewhere.

Also, CEIL initiated a cooperation with EMPOWER, a Government of Rajasthan's program funded by the International Fund for Agriculture Development (IFAD), a United Nation agency. In the context of this collaboration, a veterinary health camp was organized in February 2011 for ten villages in the Mangala and Bhagyam area. Other potential areas of collaboration were identified, such as support to agriculture through the use of improved technology and the supply of improved seeds and fertilizers, Self-Help groups' mobilization; and skill training.

CEIL CSR also finances health awareness communication material and sponsors special events and Continuous Medical Education workshops for Barmer doctors in collaboration with government programs and relevant institutions. Of particular notice is the collaboration with UNICEF for the health and education programs.

Observations:

ECMG positively noticed that the Project's engagement with communities, which had slowed down in the previous quarter, has intensified. As observed in Section 5.1, the new CSR officers have rapidly established good relationships with the communities.

A community liaison office has been appointed at all major working sites by contractors. However, these officers do not appear properly briefed or understand their tasks, which are for the moment limited to

interactions with local workers. The liaison officers should be properly briefed on CEIL's policies and stakeholders relation approach and should regularly visit the communities. They should identify any unforeseen impact of the construction activities, or other relevant issues, on the communities in a timely fashion and address it promptly at contractor level, if applicable and possible, or in collaboration with CEIL CSR and the SRT personnel.

CSR activities are on-going in Bhagyam area, where construction activities are being completed, and have started in Aishwariya, where construction is in the early stages. ECMG received positive feedback from villagers met during this visit; they seem confident of CEIL support because, as they say, "we have seen what CEIL has done in neighboring areas", or because they already had previous experience with CEIL during the exploration phase.

ECMG commends the improvement noticed in the on-going CSR programs: the Health Van will be reinforced with the presence of a female nurse, requested by the women in the villages, and by additional equipment to perform some health tests; the Room to Read (school libraries) program strengthened the Children's Management Committees and organized Children's Fairs and Story Workshops; the launching of new programs for livelihood improvement (skills development and support to agriculture); and new promising collaborations like the one with the EMPOWER project (veterinary camps).

The ECMG team met the medical District officer and the chief doctor at Barmer hospital, who were both very satisfied with CEIL collaboration and presented some of the activities supported by CEIL in the district (equipped ambulance service, vaccinations, specialized capacity building for primary health centers, awareness programs).

The ECMG also met the Land Acquisition Officer (LAO), who has managed all the acquisition process for this CEIL Project on behalf of the government. The LAO acknowledged that the land acquisition process for both the Bhagyam and Aishwariya fields has been carried out properly and without raising major critical issues (see Section 5.3). However, the LAO expressed his concerns that the District Coordination Committee (DCC) is no longer operational. According to the LAO, CEIL exclusively deals with the District Collector and has insufficient interactions with the rest of the administration and the LAO himself. CEIL position is that the DCC has, over time, become less relevant, as activities focusing on different thematic areas (health and education, infrastructures) were better managed through direct interaction with the competent services. Moreover, the DCC meetings were sometime used by some stakeholders to try to exercise pressure on CEIL for employment and contracts outside the Project established approach and procedures of employment and of contracts awarding.

ECMG recommends that CEIL engages with all stakeholders, including various local administrations and particularly the LAO, on a continuous basis using regular committee meetings or any other mean accepted by all parties. On the other hand, ECMG commends CEIL efforts to avoid "side entries" to employment and contracts and supports CEIL in its efforts to concentrate recruitment at community level and in strictly implementing the current employment procedure (see Section 5.5).

The draft Bhagyam PCDP amended as suggested in ECMG October 2011 report has not been submitted yet.

IFC and/or ESIA/EMP Compliance Action Items

M1.15 Prepare a Community Development Plan for the Bhagyam-Aishwariya Project in the frame of the general Community Development Framework (**Modified**).

Recommendations for Improvement:

- a. CEIL should engage with all stakeholders, including various local administration (and particularly the LAO), on a continuous basis using regular committee meetings or any other means accepted by all parties;
- b. The contractors' liaison officers should be properly briefed on CEIL's policies and stakeholders relation approach and should regularly visit, in collaboration with CSR and SRT

personnel, the communities to identify impacts and other issues of contractors' competence; and

- c. CEIL should amend the Bhagyam PCDP as suggested in the January ECMG report (repeated recommendation).

5.3 LAND ACQUISITION

Project Strategy:

According to the REIA, the Bhagyam field development will include 15 WPs and related flow lines to and from the MPT. The land requirement for each WP is about 4.4 ha, for a total of about 66 ha, spread over several land parcels in Bhagyam field area. The land required for the in-field pipelines will consist of a 30 m wide corridor running for about 40 km to the MPT. The land is permanently acquired in accordance with the Land Acquisition Act and crop and land compensation is paid as determined by the revenue officials. According to the REIA, the locations of the WPs are away from settlements and at a safe distance from public utilities. No resettlement or displacement of people is expected.

As detailed in the Rajasthan LACP, the National Land Acquisition Act procedure has been used for land acquisition needed for all the Upstream projects. The Government of Rajasthan has nominated the nodal official, namely the LAO based in Barmer, to ensure that all due processes, as required under the law, are carried out for the proposed land acquisition. The land price is determined by the LAO according to Government parameters, which CEIL increased substantially. According to local authorities and CEIL representatives, the sums given for compensations have been generally much higher than market value and no construction is started before compensation is paid.

For the Rajasthan project, a Grievances Redress Committee has been formed that includes representatives of the local administration, CEIL, and the LAO. A log of grievances is kept by LAO and CEIL.

A complete census of all land-losers (including this Project) has been completed.

Observations:

The ECMG team met the LAO, who has managed all the acquisition process for CEIL project on behalf of the government. As already stated, the LAO acknowledged that the land acquisition process for the satellites fields has been carried out properly and without major issues. To date, the LAO has recorded ten grievances, all pertaining to the Aishwariya field, concerning land owners who considered compensation inadequate. These cases have all been referred to the Court. According to the LAO, the number of incidents and claims due to land owners not being satisfied with employment opportunities, such as those registered in the previous period, has decreased.

During discussions with the communities, ECMG noticed that for the first time land owners raised issues concerning the amount of the compensation. According to them, the intensified industrial activity in the area has increased the land value but their major concern is on employment opportunities. Considering the cumulative impact of various projects acquiring land in the area, particularly in Bhagyam, concerns remain for long term livelihood of the most affected households. These communities should be monitored and supported with alternative livelihood opportunities.

The Project prepared a revised Rajasthan LACP that included the Bhagyam and Aishwariya fields. ECMG's comments on the proposed draft are the following:

- The document does not include the description and scope of the Rajasthan Upstream project (including MPT, Raageshwari Terminal, WPs and relative pipelines) that was presented in Section 2.2 (*Project Components – Hydrocarbon Development*) in the 2008 Rajasthan framework LACP;
- Section 4 (Summary of Socio-Economic Baseline in the Project Area covered by the Barmer-Salaya-Bhogat Pipeline) summarizes the social baseline and impact assessment for Gujarat, which is not relevant, while it does not present the Rajasthan baseline (2004) nor the more recent study referring to the Bhagyam and Aishwariya fields (REIA 2007);
- Section 6.2 (Rehabilitation measures) misses the paragraph on the Supporting Community Development Activities under Permanent Land Acquisition (see framework LACP 2008 Section 7.2.1) that makes specific reference to Rajasthan; and

- In Section 8 (Consultation and Disclosure), the reference is the Gujarat instead of the Rajasthan PCDP.

IFC and/or ESIA/EMP Compliance Action Items

- M1.16 Prepare a Land Acquisition and Compensation Plan (LACP) for the Bhagyam-Aishwariya project. Brief LAO and staff on LACP/PCDP and IFC PSs and maintain a copy in the local languages, at each local office.

Recommendations for Improvement:

- a. CEIL should amend the revised Rajasthan LACP so to include relevant references to the Rajasthan project's facilities and social and environmental specificities.

5.4 COMMUNITY HEALTH, SAFETY AND SECURITY

Project Strategy:

The EHS system is expected to prevent and minimize air and water pollution, noise, and risks of accidents (see Sections 3 and 4). A health and safety awareness program specific to gas pipeline projects is being implemented in the frame of CSR activities in Rajasthan.

CEIL has developed a corporate document, *HSE, Security & CSR Procedures E5 – Security guidelines*, specifically covering security issues. The document provides general security guidelines, policies, and procedures as a framework for the development of detailed security management plans for CEIL operations.

Observations:

During the visit to communities, no major issue concerning the impact of the on-going field activities was mentioned with the exception of the need for more frequent watering because of the dust.

ECMG appreciates the pipeline health and safety awareness program carried out in the Project area, but again recommends sensitizing communities, and particularly children in schools, on road safety issues.

CEIL final corporate document on security includes the principles and guidelines outlined in IFC PS4 and the United Nations Voluntary Principles on Security and Human Rights. The shortcomings of the draft document outlined in the January 2011 report have been addressed. The document has referenced and included details on CEIL policies and procedures requirements for private and government security forces in Section 14 (*Guards and Guard Management*). This section also includes overall responsibilities of each party and outlines the underlying principles, standards, and procedures that should regulate any security agreement. Furthermore, in Section 15 (*Weapons/Firearms & Use of Force*) it is now clearly stated that CEIL may be held accountable by the public opinion for any incident connected with its operations.

With respect to the Bhagyam and Aishwariya fields Project, CEIL has updated its original risk assessment, conducted in 2008 for these two areas. In addition, CEIL has drafted a risk assessment manual for the Rajasthan region that also includes overall organization, responsibilities, and specific SOPs that outline procedures for, among others, personnel access control, agitation, and trespassing/site occupation.

IFC and/or ESIA/EMP Compliance Action Items

- M1.18 Include awareness programs on H&S, environment and HIV-AIDS.

- M1.19 Use school programs to build construction safety awareness amongst children.

Recommendations for Improvement:

- a. CEIL should ensure that all security personnel is trained and familiar with Corporate security policies and with Project specific procedures, in particular for those situations that are likely to occur in the field (road blocks, access control, agitation, trespassing, etc).

5.5 EMPLOYMENT AND WORKING CONDITIONS

Project Strategy:

CEIL has a human resources policy, which complies with Indian law, core International Labor Organization conventions, and IFC PS 2. The Human Resources policy and procedures are documented in many ways throughout the organization and are available on the CEIL portal. Any new policy, directive, and/or procedure is communicated to all employees through individual emails and announced on the CEIL intranet portal. Working conditions and workers' rights (including wages) are shown on posters in English and Hindi in all working sites and labour camps.

During construction, the works will be assigned to contractors who have an agreement with CEIL to recruit the majority of the local workforce, for unskilled tasks, from local communities if available. In addition, the contractor is bound to make the best efforts to source skilled workers preferably from the Rajasthan State. Among local candidates, members of land-losers families are prioritized. Wages for unskilled workers are calculated on the basis of national minimum wages. Payments to workers are disbursed each month in the presence of a CEIL administrative person.

The contractors have also to comply with CEIL guidelines for workers' accommodation.

CEIL is developing a number of initiatives to ensure that its operations offer the maximum benefit to the local population in terms of contracts and employment. These initiatives will also allow the Project to track the employment offer and the impact on communities.

A Local Content Policy has been issued that mandates the engagement of minimum 60% locals (i.e. from local District), when available, with priority to land-losers and long term residents. CEIL also decided to impose a financial deterrent (5% of contract value withholding of bank guarantee or final payment) and monthly reporting to ensure local employment by contractors and establish compliance with the original commitment. To guarantee that all upcoming contracts comply with the policy, the Project has introduced the Local Content Policy to contractors at pre-bid meetings.

A local vendor database is in place and a system of cross checking ensure that "genuine" local vendors and land-losers are engaged. The CEC in Barmer is the center for local vendor development activities, including dedicated workshops, and monitoring.

Observations:

At the time of the ECMG visit, a total of about 687 persons were reported to be working on construction sites. The Project could not provide employment numbers disaggregated by main contractor/working site, but provided figures related to the entire workforce engaged in Rajasthan (including operation). Of the 1,079 people employed, 722 are from the Barmer District and 109 are land contributors; of the 59 contractors (including sub-contractors), 40 are from the Barmer District and 16 are land contributors; of the 166 hired vehicles, 135 are from the Barmer District and 73 are land contributors. Logs of local workers and local sub-contractors, grouped according to their provenance and the land-contributor status, should be kept by all main contractors.

About 132 non-local people working for PL are accommodated in a brick building, a former college located in Barmer. The accommodation is overall adequate and a formal grievance mechanism for workers has been established at this camp.

Affected villagers' and land owners' expectations, in term of employment with the Project, continue to be high. Employment and contracts are distributed through village committees, pooling together the villages affected by construction and land take. The committee in Bhagyam is already operational and is a valuable interface with the Project with respect to employment and contract distribution, but also helps in settling grievances and wages issues. In Aishwariya, the villagers expressed the will to set up a similar committee with the same objectives. However, the transparency and fairness of these committees is questioned by some villagers.

During ECMG field discussions, one village agreed on prioritizing for employment the households most in need while another village favored prioritizing the land losers. With respect to local contracts, they are given to local people who have some working asset (at a minimum a vehicle); they are not numerous in the villages and the same persons are likely to be awarded several contracts. ECMG acknowledges that the distribution of local employment is a challenge not easily manageable for the Project. However, ECMG recommends that CEIL staff be present at committees' meetings during job distribution, monitor the situation, and try to sensitize community to a fair and transparent sharing of opportunities.

After the lesson learned during the construction of the trunk line, which experienced work stoppages because of conflicts between the affected communities in competition for employment, ECMG again recommends that the Project establishes a clear and transparent employment procedure in concert with the affected communities. One solution could be giving employment to the different affected villages by percentage or in turns.

CEIL will set up a local vendor database, which will be administered locally from Cairn Enterprise Centre, that will focus on contract opportunities for local vendors. Through this system, the local vendors will be able to know CEIL requirements in terms of contracting jobs and can apply through a proper channel for getting the same. ECMG commends this initiative that will increase the transparency of the procedure.

IFC and/or ESIA/EMP Compliance Action Items

M1.22 Develop a transparent procedure for recruitment of land-losers and local workers and a transparent communication on criteria for wages.

Recommendations for Improvement:

- a. The Project should monitor the Village Committees during the distribution of employment and contracts and sensitize communities for a fair and transparent sharing of opportunities. Vulnerable households should be prioritized;
- b. The Project should find a negotiated solution for distribution of employment between affected communities along the pipelines, for example adopting employment percentages or turns among the affected villages; and
- c. All contractors should keep records of local workers according to provenance and land-loser status.

ANNEX A

**TRIP SUMMARY- 4TH MISSION BY D'APPOLONIA FOR
THE BHAGYAM AND AISHWARIYA FIELDS DEVELOPMENT
PROJECT, MAY 2011**

For the fourth mission, two EHS team members and one Social specialist visited the Bhagyam and Aishwariya Project, and associated facilities.

Field:

May1 – Barmer: The EHS and Social team travel to Barmer.

May 2 – Barmer: The EHS and Social team held a kick off meeting at CEIL field office. The EHS team visited the IOTL batching plant and new fabrication yard as well as its former fabrication yard site (now demobilized); WPs 1, which is under completion by John Energy, 5, and 15; LT yard; and Artson yard. The social team visited the school library in Bothia Jagir and met the Parents' Association, then held a meeting with land-losers. In the afternoon, the social team attended a meeting with land losers at Naraniyo Kidani and later met the EMPOWER Project team at the Enterprise Centre.

May 3 – Barmer: The EHS team visited KPTL offices and yard, PL yard and labour camp; sections (Kilometer Pipeline 2.5 and 21) of the trunk pipeline connecting the Bhagyam field with the MPT; John Energy labour camp; and WP 6 in the Aishwariya field. The social team visited the Madpura Gaon School, and then held meetings with land-losers at the village of Madpura Barwala and Hapura Khotta Dhani in Aishwariya area. Later the social team visited the Barmer hospital and discussed with the chief medical doctor and the chief medical district officer, and then met the Land Acquisition Officer. In the afternoon, an informal close out meeting for the Bhagyam and Aishwariya Project was held at MPT.

May 4 – The EHS and Social team traveled Bhogat

Gurgaon:

May 10 – Gurgaon: The EHS and Social team reviewed available documents collected in the field and prepared the close out meeting.

May 11 – Gurgaon: In the afternoon, a close out presentation was held by the ECMG at Cairn offices with the participation of Cairn management and high level staff.

May 12 – Gurgaon: The team departed from New Delhi.