
ANNEX 33

GENERAL OPERATION AND CLOSURE STANDARDS FOR CAMPS AND WORKING FACES

1. INTRODUCTION

This document deals with the general aspects of the management of construction contracts that GENER will implement to carry out the PHAM, in particular with reference to the conduct of workers hired by contractors and subcontractors in connection with:

- Work standards or procedures within camps, worksite facilities and working faces.
- Workers code of conduct in connection with the local population and the environment in general.

2. GENERAL ASPECTS

2.1 COMPLIANCE WITH CURRENT REGULATIONS AND ENVIRONMENTAL APPROVAL RESOLUTION (RCA, AS PER ITS SPANISH ACRONYM)

GENER will require its contractors and subcontractors to submit, along with their respective construction programs and prior to the commencement of the works, an environmental management program that should include the following:

- The safety, health and environmental sanitation regulations applicable to the Project, and their respective compliance actions.
- An environmental management plan contained in the EIA.
- Requirements imposed by the Environmental Approval Resolution for the PHAM.

The foregoing will be in addition to the Internal Order, Health, and Safety Manual that GENER will require from its Contractors and Subcontractors.

2.2 SUPERVISION AND CONTROL BY THE CONSTRUCTION MANAGER'S OFFICE

GENER will set out stringent contractual requirements for Contractors and Subcontractors in order to ensure appropriate management at each working face and workers' precinct.

GENER will have the following in-house mechanisms available for the purpose of supervision and control:

- GENER will have a technical works inspection (ITO, as per its Spanish acronym) within its functions to check compliance with the various environmental and management programs.
- GENER will require its Contractors to have a full-time Environmental Manager.
- GENER will conduct an independent Environmental Audit, as committed in the EIA.

3. CAMP LOCATION AND OPERATION STANDARDS

A total of five camps are envisaged on a preliminary basis (see Annex 11). Camps will include worksite facilities that will house between 150 and 350 workers, with an average permanent staffing of 200 workers on site, including professional and technical personnel, workers, drivers, and operators associated to canteen tasks, camp maintenance, and paramedics.

The work shift system will be associated to the type of work or activity performed; thus, in working faces associated to tunnel construction there will be three 8-hour work shifts per day, which will be necessary to work continuously 24 hours a day 365 days a year. It should be understood that while two shifts are at rest at the camp, another shift is on duty at the worksite facilities or working faces and the fourth one is off-duty at home.

In those working faces associated to the construction of surface works (water intakes, channels, bridges, among others) only daytime shifts will be implemented.

Personnel engaged in construction works will be transferred via bus from and to the working faces. Camps will maintain a permanent staffing of 20 people who will provide general maintenance and security services for the facilities.

Transportation from the camps to the workers' homes will be scheduled according to the frequency of work shifts (11/4 or 10/5 work/rest days).

The staffing level and work flow to be maintained at each camp during the execution of the project is set out in Table 3.1, and will vary pursuant to the works carried out as set out in the Gantt Chart for the project (See Annex 2). This team will be distributed across the various camp-related working faces, worksite facilities, in addition to permanent camp staff.

**Table 3.1
Personnel Staffing and Work Flow per Camp**

Personnel Movement	Camp				
	No. 1 El Volcán	No. 2 El Yeso	No. 3 Aucayes Alto	No. 4 Aucayes Bajo	No. 5 Las Lajas
At the Camp					
2008 Avg (Apr - Dec)	0	0	0	0	0
2009 -2011 Average	150	338	95	315	135
2012 Average	150	188	81	54	18
Fortnightly trip to San José	75	169	47	158	68
Fortnightly trip to Puente Alto	75	169	47	158	68
Daily trip to San José					
2008 Avg (Apr - Dec)	8	11	15	45	11
2009 -2011 Average	0	0	5	105	101
2012 Average	0	0	5	18	14
Daily trip to Puente Alto					
2008 Avg (Apr - Dec)	8	11	15	45	11
2009 -2011 Average	0	0	5	105	101
2012 Average	0	0	5	18	14

During the construction and operation stage, personnel transfer will take place using both public roads and roads implemented by the Project. The camps and approach routes envisaged by the Project are itemized below.

**Table 3.2
Camps and Approach Routes**

Camp	Location	Public and/or Private Roads
Camp and Worksite Facility No. 1	El Volcán Sector	El Volcán Route. Joins Route G-25 with the towns of El Volcán and Lo Valdés.
Camp and Worksite Facility No. 2	El Yeso, Lo Encañado Sector	Route G-445 El Yeso Reservoir.
Camp and Worksite Facility No.3	Aucayes Alto Sector	G-345 Parallel to the Colorado River plus the new road
Camp and Worksite Facility No. 4	Aucayes Bajo Sector	G-345 Parallel to the Colorado River plus the new road
Camp and Worksite Facility No. 5	El Sauce Sector	G-345 Parallel to the Colorado River

Even though the environmental assessment reported in the EIA states that the Project will not generate alterations in the life system of the neighboring towns, to control any risk of disturbances or conflicts with the local community, GENER will require its Contractors, by contract, to comply with at least the following camp operating standards:

3.1 GENERAL STANDARDS OF CONDUCT AT WORKING PLACES AND FACES

- Every worker involved in the PHAM will undertake to exhibit at all times an honest and transparent conduct and a high level of personal and professional responsibility, both in and out of the area of the Project. In this regard, they shall respect the local population and customs, and the quality of the surroundings.
- Workers will go through induction processes where they will be trained in management measures that should be taken to prevent the Project from causing environmental and social impacts, including management measures regarding waste, atmospheric and noise emissions that might cause some kind of disturbance both to workers inside the site and to the neighboring resident community.
- On an annual basis, PHAM workers will be given training intended to create awareness in connection with environmental matters, and to instruct personnel about the suite of requirements or commitments agreed by the Project during its environmental assessment.
- Both the Project's Environmental Management Program and the Internal Order, Health and Safety Manual will be widely disseminated to workers, and penalties will be established by contract for noncompliance therewith.
- Workers will be trained in the importance and value of conserving flora and fauna species, as well as the sclerophyllous and Andean highland vegetation that may be found in the area of the project, especially with respect to species which have a conservation status. Training will be geared to identifying such species, their preservation value, associated legislation, protection measures, and penalties.
- For industrial safety and security reasons, workers will not be allowed to leave any working face, camp, or worksite facility without the due permission from field supervisors.
- Drug and alcohol consumption shall not be allowed, nor shall any kind of arms be carried, inside camps, worksite facilities or working faces.
- Strangers shall not be allowed to enter the job site.
- No pets or domestic animals shall be permitted on PHAM property.

3.2 CONTRACTOR TRANSPORTATION AND TRANSFER

- The itinerary providing for the daily transfer of workers from/to the worksite shall be defined in the construction program.
- Workers will be transferred to the towns where they live or to nearby points, and no unauthorized stops shall be allowed.
- A strict camp entry and exit control shall be implemented, and the work shifts set up shall be honored. The purpose of this is to prevent the influx of workers to nearby towns during rest hours. The facilities shall have the necessary leisure and entertainment places.
- Vehicles will not be allowed to exit from camps except as required by the Project.

3.3 CONTRACTORS' ACCOMMODATION

- Contractor companies will be required by contract not to build or set up camps in populated locations, and to
- Maximize the use of existing accommodation facilities inside the camps during the construction stage, so as to minimize accommodating outsiders in nearby locations.

3.4 LABOR ORIGIN AND QUALIFICATION

- Priority will be given to hiring local labor. To this end, the Owner will coordinate with the labor intermediation office of the I. Municipalidad de San José de Maipo, the supply or demand of local labor pursuant to the Contractor's requirements.
- An inquiry log of the Municipality databases shall be maintained, signed and/or stamped by said entity and the contractors prior to the commencement of the works.

3.5 COORDINATION OF FIELD WORK

- Contractor personnel will be given special instructions in connection with the need to exercise caution and honor the prohibition to enter "Restricted Areas" as defined by the Project.
- The Contractor shall take the necessary steps to coordinate field work in the sectors where crossing of animals may be expected as a result of the beginning and end of the summer and winter grazing seasons, so as to reduce the risk of animals being run over. Accordingly, the Contractor will caution drivers against driving in the area, by installing road signage and having signalmen stationed there is required.
- In the case of working faces in the upper section of El Volcán River, the Contractor will be instructed to use only and exclusively the personnel trails that will be implemented,

thus preventing workers from opening new tracks or paths in the summer grazing areas. These measures will be in addition to training sessions aimed to creating awareness and respect in connection with established environmental protection rules.

- Workers will be trained in special preventive actions concerning maintenance of the facilities in the La Engorda summer grazing area, so as to minimize vegetation alteration and/or prevent any type of interference with local users during the summer grazing seasons (minor grazing).
- A “Travel Match System” consisting in the coordination of travels and uses of the access roads shall be set up between the Contractor, cattle owners and cattle owners’ associations of the locations within the area of direct influence of the PHAM. This system will be agreed upon at meetings which will coordinate a schedule of routes so that cattle herding takes place at different times and dates from those of the project’s load transportation.
- Field supervisors will be instructed to implement fencing to prevent animals from falling into the excavations in the Alto Volcán sector.
- The Owner shall instruct its contractors to install road signage informing visitors about the works and activities carried out in the area so that they may safely travel to the upper part of these summer grazing areas. This requirement will be set out in the Contract with each Contractor company and compliance therewith will be checked in the field.

4. FOLLOWING UP CONTROL MEASURES

- The respective technical works inspections (ITOs) shall make a written record of, and act in response to, any kind of claim made by the community in connection with PHAM workers’ behavior.
- A log of incidents will be maintained in relation to crimes against people and public/private property, disturbance of public order, prostitution, alcoholism, drug addiction, as well as any other social conflicts that may be identified in which Contractor and subcontractor personnel is involved.
- All coaching and training activities will be documented and disclosed.
- To reassure the local community during the years of project construction, a Social Indicators Monitoring survey will be conducted on a half-yearly basis to check that there have been no effects from camps on the access to property, facilities, utilities and basic infrastructure of the neighboring towns. If any effects are detected, they will be so at an early stage so that the appropriate corrective actions may be taken.

5. CONSIDERATIONS FOR THE CLOSURE OF CAMPS AND WORKING FACES

Gener will have a full and rigorous program for closing up and removing enclosures and

facilities, as well as for cleaning up and/or restoring the sites occupied on a temporary basis.

The facilities to be used in the construction stage that will be either removed or dismantled are: the camps and the platforms used for accessing working faces and setting up other minor facilities.

Camps will be restored throughout the area used for the project, while a tunnel access road and a reduced working space (approximately 400 m²) for minor ancillary facilities shall remain on the platform on a permanent basis.

The following are the main activities envisaged for removing all or part (in the case of some platforms) of the facilities and restoring the intervened areas:

- Dismantling and full removal of worksite facilities and camps, including contractor offices, staff and workers' accommodation, machinery yard, warehouses, store rooms, maintenance shops, drinking water utilities, vehicle parking areas, temporary materials stockpiling enclosures, and so on. Removal of drinking water facilities, including pipes and storage tanks, as well as sanitary facilities, i.e. modular sewage treatment plant chambers from each camp plus the sewage network and chemical toilets.
- Removal of electric facilities, including electrical posts and wiring installed by the project in some sectors; this job will be done by specialized personnel. Generating equipment set up in each camp will also be removed.
- Removal of all solid construction waste piled up in temporary enclosures, as well as other wastes that may be scattered in camps, working faces or adjacent sectors.
- Removal of fencing, anchoring and other minor facilities, concrete left over from mixing, settling ponds, etc. after all the movable elements have been removed .
- Cleaning the ground in the event of spillage of any liquids or other substances foreign to the ground which have been used for carrying out the works. Ground cleaning will be done by removing all the affected topsoil and transporting it to an authorized site for treatment and final disposal.
- De-compaction of any sectors that have been compacted (e.g. constructions, inner roads, etc.), once the area is clear of all kinds of facilities, elements or substances foreign to the environment.
- Addition of topsoil layers that have been set aside for this purpose (See Annex 29 "Vegetation Restoration Plan").
- To the extent possible, restitution of pre-existing vegetation for purposes of erosion control, visual mitigation, and restitution of fauna habitats (See Annex 29).
- Monitoring the plantations for the first five years after planting. Monitoring will be conducted in the spring season in order to check on the development of species

and the likely appearance of erosion spots that will be controlled before the following winter (see Annex 29).

Activities involving the closure and restoration of the areas used on a temporary basis shall be required from Contractors by contract.