CLEAN DEVELOPMENT MECHANISM
PROJECT DESIGN DOCUMENT FORM (CDM-SSC-PDD)
Version 03 - in effect as of: 22 December 2006

CONTENTS

Annexes

Revision history of this document

Version Number	Date	Description and reason of revision
01	21 January 2003	Initial adoption
02	8 July 2005	• The Board agreed to revise the CDM SSC PDD to reflect guidance and clarifications provided by the Board since version 01 of this document. • As a consequence, the guidelines for completing CDM SSC PDD have been revised accordingly to version 2. The latest version can be found at <http://cdm.unfccc.int/Reference/Documents>.
03	22 December 2006	• The Board agreed to revise the CDM project design document for small-scale activities (CDM-SSC-PDD), taking into account CDM-PDD and CDM-NM.

SECTION A. General description of small-scale project activity

A.1 Title of the small-scale project activity:

Substitution of fuel generators by small scale 0.8 MW hydropower in Pasto Bueno

Version : 1

Date when the document was completed: March 12, 2007

A.2. Description of the small-scale project activity:

The main objective of the project is the production of hydroelectric energy in Pasto Bueno, Peru, to replace the diesel fuel-generated energy currently used by a local mining company at the nearby "Huaura" mining compound. In addition, the project will contribute to the local economic development of the nearby peasant community and provide jobs. Transfer of knowledge will also benefit the local partners in charge of managing and operating the plant.

The project consists of the installation of hydroelectric equipment on the site of a discarded small hydroelectric scheme, taking advantage of the previously existing infrastructure. The power house was partly destroyed and then abandoned several years ago. The scheme has further deteriorated since, because it turned out to be easier for local actors to generate electricity using diesel generators than to mobilise the funds necessary for repairs. The participants in the project activity seek to reverse this development, using the stimulus of CER to attract investment. The power plant will generate 800 kW(e), which will be fed to the Pasto Bueno mine "Huaura" belonging to Minera Dynacor del Perú S.A.C. The scheme will use water from the Pelagatos river, with an intake located a few km downstream of the lake Pelagatos (4'000 m a.s.l.), where the flow is regulated by an existing dam.

The project will help reduce greenhouse gas emissions by reducing CO_2 emissions. Currently all of the electricity generated for the mine operation comes from diesel generators, producing a considerable amount of CO_2. In the future this electricity will be entirely replaced by hydroelectric energy, producing no greenhouse gases at all.

The technology used will be the standard technology for generating hydroelectric power: two hydromechanical units (Pelton turbines) will transform the hydrodynamic energy (the pressure and velocity of the water) into mechanical energy (the rotation of a shaft) connected to electromechanical units (an alternator) that will transform the mechanical energy into electricity.

The participants believe that the project will contribute to the sustainable development of the Republic of Peru in the following ways:

(a) The project will create a source of renewable energy in a sustainable way.

(b) The project will develop local abilities through the supervision of Peruvian service providers and the training of personnel directly contracted for the rehabilitation work and the operation of the plant.

(c) The project will create temporary jobs (construction) and long-term employment (operation).

(d) The project will create a decentralized power source in a remote area, in this way contributing to the overall supply of electricity, which is essential for development.

(e) The project will contribute to the reduction of the country's diesel fuel consumption.

(f) The project's secondary activities will contribute to the sustainable development of the nearest peasant community through the rehabilitation of an irrigation canal connected to the water outlet of the plant (See Section E).

A.3. Project participants:

Name of Party involved (*) ((host) indicates a host Party)	Private and/or public entity(ies) project participants (*) (as applicable)	Kindly indicate if the Party involved wishes to be considered as project participant (Yes/No)
Peru (host party)	• Elektrokraft del Perú S.A. (participates in the project as a private enterprise) • Minera Dynacor del Perú S.A.C. (participates in the project as a private enterprise)	No No
Switzerland	• Emerging Power Developers Ltd (participates in the project as a private enterprise)	No
(*) In accordance with the CDM modalities and procedures, at the time of making the CDM-PDD public at the stage of validation, a Party involved may or may not have provided its approval. At the time of requesting registration, the approval by the Party(ies) involved is required.		
Note: *When the PDD is filled in support of a proposed new methodology* at least the host Party(ies) and any known project participant (e.g. those proposing a new methodology) shall be identified.		

A.4. Technical description of the small-scale project activity:

A.4.1. Location of the small-scale project activity:

A.4.1.1. Host Party(ies):

Republic of Peru

A.4.1.2. Region/State/Province etc.:

Department of Ancash / Province of Pallasca / Pampas District

A.4.1.3. City/Town/Community etc:

Pelagatos River Valley / Pasto Bueno "Huaura" mine

A.4.1.4. Details of physical location, including information allowing the unique identification of this small-scale project activity :

Pasto Bueno Hydro Power Plant: Latitude 8°10'28 S; Longitude 77°51'8 W

A.4.2. Type and category(ies) and technology/measure of the small-scale project activity:

The proposed small-scale project activity (**CDM-SSC**) is **Type I**, i.e. "Renewable energy project activities with a maximum output capacity equivalent to up to 15 MW (or an appropriate equivalent)" in conformity with Decision 17/CP.7, paragraph 6 (c) (i).

The category is I.A. The project will feed electricity to the Dynacor mining compound at Huaura and replace energy presently generated entirely through the combustion of diesel fuel.

Technology planned for use in this project: the project foresees the replacement of the energy consumed by the Dynacor Huaura mine near Pasto Bueno, presently generated with diesel fuel, by hydroelectric energy, through the rehabilitation and modification of partly destroyed infrastructure. This includes the repair / reinstallation of hydraulic structures, penstock, hydromechanical infrastructure (turbines, valves), electromechanical machinery (generators), electrical equipment (transformers, transmission line) and monitoring and control systems (cubicles, measurement and command systems). During the generation of electricity no fossil fuel is burned, and therefore, no emissions or wastes are dumped into the environment.

The technical specifications of the new hydroelectric plant are as follows:

Component	**Characteristics**
Net fall	175 m
Number of sets	2
Turbines	Pelton type
Unit capacity (kVA)	500
Unit capacity (kW)	400

Technology transfer: environmentally safe and sound technology will be used in the project. Engineering and operation and maintenance knowledge will be transferred to the Peruvian engineers and local staff taking part in the project activity by the foreign engineering company contracted for the project. The Peruvian and foreign engineers contracted for the project will also take part in participatory workshops about water management with the local community.

A.4.3 Estimated amount of emission reductions over the chosen crediting period:

The replacement of diesel fuel by hydroelectric energy enables CO_2 reductions that is summarized below. The first crediting period of seven years is 01/01/2008 to 31/12/2014, with the option of renewing the crediting twice.

Using the AMS-I.A. methodology, it is estimated that the project will reduce CO_2e emissions by a total of 111,846 tonnes CO_2e over a 21-year period (37,282 tonnes CO_2e over the first crediting period and in each of the following crediting periods).

Years	Estimation of annual emission reductions in tonnes of CO_2 e
2008	5,326
2009	5,326
2010	5,326
2011	5,326
2012	5,326
2013	5,326
2014	5,326
2015	5,326
2016	5,326
2017	5,326
2018	5,326
2019	5,326
2020	5,326
2021	5,326
2022	5,326
2023	5,326
2024	5,326
2025	5,326
2026	5,326
2027	5,326
2028	5,326
Total estimated reductions (tonnes of CO_2 e)	**111,846**
Total number of crediting years	**21**
Annual average of the estimated reductions over the crediting period (tCO_2 e)	5,326

A.4.4. Public funding of the small-scale project activity:

The project does not involve public funding. Consequently, the realization of the project cannot bring about a reorientation in official cooperation flows for development.

A.4.5. Confirmation that the small-scale project activity is not a debundled component of a large scale project activity:

According to the Appendix C of the Simplified Methodologies and Procedures for the small-scale CDM, this Project activity is not a de-bundled component of a larger project activity.

There has been no registration request or a registered small-scale activity project:

- with the same project participants
- in the same category and technology / measure
- registered in the last two years, and
- whose project boundary is less than one kilometre from the boundary of the proposed project activity.

SECTION B. Application of a baseline and monitoring methodology

B.1. Title and reference of the approved baseline and monitoring methodology applied to the small-scale project activity:

The baseline and monitoring methodology for this small-scale type is:

Version 12 of AMS-I.A.

B.2 Justification of the choice of the project category:

The project belongs in the AMS-I.A. category because its aim is the generation of hydroelectric power (a renewable resource by definition) that will feed users with electricity who do not have a grid connection, in this case the mining compound "Huaura" of a mine belonging to Minera Dynacor del Perú S.A.C. located near Pasto Bueno, Ancash department in Peru.

B.3. Description of the project boundary:

The project boundary include the powerhouse, the penstock and pressure chamber, the auxiliary facilities, the substations, the transmission line linking the power house to the Huaura mining compound and the equipment at the Huaura mining compound that uses the electricity produced.

B.4. Description of baseline and its development:

The energy will be provided to the Huaura mining compound that is currently fed by diesel generators located at different mine facility´s places, as shown in the table below:

Generators	KW capacity	Location	Fuel
Caterpillar 450	450	Level 12 Huaura Mine	Diesel
Cummins 125	125	Level 12 Huaura Mine	Diesel
Caterpillar 265	265	Huaura operating plant	Diesel
Kholer 55	55	Huaura magnetic separation plant	Diesel
Total:	895		100% diesel

All of the above generators are in operation 24 hours / days at full capacity. All of the renewable energy produced by the activity of this project will replace diesel power generation. The output capacity will be limited to less than 15 MW(e) by the rated capacity of the installed equipment. In particular, the installed turbine-alternator groups (a total of 800 kW(e)) will have a capacity below the permissible limit for small-scale projects. Consequently, the applicable methodology is AMS-IA (version 12).

The energy baseline is the fuel consumption of the technology in use. It is established in accordance with the AMS-I.A methodology, option 2. Option 3 is not applicable currently, as there is no trend available, due to the fact that the mine was only recently put into operation and the consumption increased over the past few months, only reaching full scale operations very recently.

$$E_B = \Sigma_i O_i / (1 - l)$$

Since the mine operates around the clock, the demand is continuous, and a 95% load factor can be assumed, to take into account maintenance and unforeseen breakdowns.

$$\Sigma_i O_i = 800 \text{ kW} * 365 \text{ days} * 24 \text{ hours} * 0.95 \text{ (load factor)} = 6'657'600 \text{ kWh}$$

According to footnote 4 of the methodology, a reasonable default value for distribution losses on low voltage rural distribution grid could be 20%, l being the average technical distribution losses that would have been observed in diesel powered mini-grids installed by public programmes or distribution companies in isolated areas, expressed as a fraction. As the diesel generators are located within the project boundary, a conservative approach is to consider that l = 0, and thus, as the hydropower plant will substitute 800 kW of the existing 895 kW installed diesel capacity, the baseline is :

$$E_B = 6'657'600 \text{ kWh}$$

Taking into account a default value of 0.8 KgCO2/kWh as specified under point 10 in the methodology AMS-I.A, the emission baseline is therefore:

$$E_B = 6'657'600 \text{ kWh} * 0.8 \text{ KgCO}_2 \text{ e/kWh} = 5'326 \text{ tCO2 e / year}$$

B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered small-scale CDM project activity:

This project is additional because the rebuilding of the former Pasto Bueno hydropower plant would not be carried out due to the following barriers:

(a) Investment barrier. The investment required for a small hydroelectric plant is by far much higher than the investment necessary to put diesel-powered generators into operation (see the following table). The mining company which has installed and operates the diesel generators which will be replaced by the hydropower-generated electricity does not have the financial ability to finance the entirety of the proposed project activity upfront, which is necessary for hydropower, contrary to thermal power production, where most of the expenses occur during the operation for fuel purchase and are therefore included in operating costs, thus not requiring large pre-financing capacity.

Machinery	kW	Investment	Cost per installed kW
John Deere diesel generator (GS 500)	500	$69,327	139.- $/kW
Perkins diesel generator	100	$20,384	204.- $/kW

Caterpillar diesel generator (3412TA)	800	$155,870	195.- $/kW
Pasto Bueno Hydroelectric scheme	800	$2,700,000	3,375.- $/kW

Market Price for diesel generators on 1/3/2007; Estimated project rehabilitation cost

The installation of diesel-powered generators is therefore the only available alternative.

(b) Technological barrier. Diesels are technologically easy to purchase, implement, repair, store and move. For a mining company, the purchase and installation of diesel generators is an option that allows a high degree of security for the investment, since the technology is known, very predictable and widely available, without delays. The machinery can be maintained and repaired by skilled employees easily found in the region, and spare parts are easily and rapidly available, which is essential for mining activities. In contrast, mini hydroelectric plants require extensive planning and need specialised technical support, while the technology involves risks, insofar as each new power plant is a special case, with hydrological, hydraulic, seismic and technical risk factors. In particular, there is uncertainty regarding a river's potential water flow, due to its dependence of rain, and it is impossible to guarantee production 100% of the time, which maintains that diesel generators must be on hand anyway as a backup, in case hydroelectric generation stops or diminishes and cannot be replaced immediately. Additionally, hydrologic cycles and global climate change or phenomenon like "el niño" or "la niña", could seriously affect the hydraulic resource and consequently energy production. Furthermore, diesel generators are easily found on the market, new and second hand, and can be moved and replaced at any time, whereas hydroelectric machinery must be made to order (turbines and alternators), with very long manufacturing backlogs due to the prevailing market conditions at this time, and they cannot be easily repaired in case of damage. In case of termination or decrease in mining operations, generators can easily be sold as second hand equipment, while hydroelectric equipment is extremely site specific.

(c) Barriers due to prevailing practice. Dynacor has covered the demand for electricity in the Pasto Bueno mine by installing diesel generators. The increasing mastery of this technology and the possibility of economies of scale, since the company already has the capacity for maintenance and repairs, are also factors making diesel generators an attractive option.

(d) Market barrier. The long term investment needed for hydropower development is not attractive to investors and banks in this case, taking into account the risk related to the fact that the only offtaker is a mining company located in a remote area, with no alternative for electricity sales in case the mine reduces its activity or stops buying electricity. With no other potential offtakers, such an investment is far beyond the normal risk appetite for investors and banks. The alternative to the project activity is to continue with diesel generators, which do not require large amounts of funding upfront. The diesel generator alternative fully complies with all applicable legal and regulatory requirements, in Peru.

Due to the very nature of small scale mining activities, the use of generators to produce electricity in remote mines is a standard and common worldwide. The production of the Dynacor mine is submitted to the same market rules as the rest of the mining industry, and there is no reason the common practice of using generators in this industry sector would not apply in this case.

Registration impact. EPD has structured the financing of the project activity together with a buyer of CER ready to invest in the project activity in order to get CER at fixed prices. Thus, it is the CDM registration impact which makes the project feasible.

In conclusion, without the CDM financing, the project activity would not overcome the barriers that prevent it to take place; the Pasto Bueno mine would continue using diesel fuel to generate its electrical energy, and so therefore the project is additional.

B.6. Emission reductions:

B.6.1. Explanation of methodological choices:

Since this is a mini hydroelectric power plant, the new unit for the production of electrical energy would produce no emissions.

The new equipment is imported from an Annex 1 country, and the availability of the old machinery (diesel engines) would have no effect on the ensemble of electrical energy producing facilities. At most they would substitute for the importation or production of new diesel groups, but it is foreseen that they would remain at the mine to serve as a backup.

B.6.2. Data and parameters that are available at validation:

Data / Parameter:	
Data unit:	kWh/l
Description:	Diesel consumption of the generators used on the mining compound
Source of data used:	Dynacor
Value applied:	Confidential information, available to DOE
Justification of the choice of data or description of measurement methods and procedures actually applied :	The diesel consumption of the generators gives the quantity of CO_2 produced for electricity production
Any comment:	

B.6.3 Ex-ante calculation of emission reductions:

Parameter	**Unit**	**Value**
Hydropower Capacity (e)	kW	800
Existing diesel Capacity (e)	kW	895
Factor 2	hours/day	24
Factor 1	days/year	365
Load factor for hydropower plant	-	95%
Emission baseline	tCO2 e / year	5’326
Emission coefficient, as per point 10 of the AMS-I.A methodology	$KgCO_2$ e/kWh	0.8

The proposed activity will substitute for 800 kW of installed capacity, with a 95% plant factor, representing 6’657’600 kWh /year.

There are no emissions due to project activity or leaks

Therefore the emission reduction is 6’657’600 kWh / year * 0.8 KgCO_2 e/kWh = 5’326 tCO2 e / year, every year.

B.6.4 Summary of the ex-ante estimation of emission reductions:

Year	Estimation of project activity emissions (tCO_2 e)	Estimation of baseline emissions (tCO_2 e)	Estimation of leakage (tCO_2 e)	Estimation of overall emission reductions (tCO_2 e)
2008	0	5326	0	5326
2009	0	5326	0	5326
2010	0	5326	0	5326
2011	0	5326	0	5326
2012	0	5326	0	5326
2013	0	5326	0	5326
2014	0	5326	0	5326
Total (tonnes of CO_2 e)	0	37282	0	37282

Estimated amount of emission reduction during the first crediting year: 37 282 tCO_2 e

B.7 Application of a monitoring methodology and description of the monitoring plan:

B.7.1 Data and parameters monitored:

In conformity with the methodology for the I.A. type, the monitoring will consist of the measurement of the electricity generated by the renewable technology.

Parameter:	**Electricity generated**
Unit:	MWh
Description:	Electricity generated by the project fed to the Huaura mining compound after ancillary consumption (power plant operation).
Source of data:	Measuring instrumentation
Value of data:	6'657 MWh/year
Brief description of measurement methods and procedures to be applied:	Continual measurement by instruments (electronic registry with continuous data storage, daily readout by operator). The calibration of the instrumentation will be carried out in conformity with Peruvian regulations and ISO/CEI standards.
QA/QC procedures to be applied (if any):	- Manual recording and calibration forms - Paper and digital data storage and transmission to participants

	- Technical assistance by Elektrokraft del Perú S.A. - Joint annual auditing (by Emerging Power Developers and Dynacor) of the operating company - Double-checked by calculations using the actual operating hours and the capacity of the generating units.
Any comment:	The generation statistics will be sent to the supervisory unit of the concession in conformity with Peruvian regulations.

B.7.2 Description of the monitoring plan:

The measuring system will be acquired from an internationally recognized manufacturer who will install it and guarantee its operation. All measurements of electricity will be in conformity with the national regulations for the electricity industry, which describe the technical specifications for measurements, reporting and data storage. Furthermore, data storage periods will be in conformity with the requirements for verified CDM projects (particularly the conservation of archives for at least two years after the end of the crediting period).

The measurement data will be directly used for calculating emission reductions. The commercial measurement instrumentation will be subject to regular verification and calibration by companies certified for the verification and calibration of instrumentation measuring the interconnection with the national system. Calibration will be carried out in conformity with the manufacturer's specific ations and Peruvian law, but in any case at least once every three years. This measurement will determine the billing of the gird operator (Dynacor) for the energy generated and to calculate the Certified Emission Reductions.

The records of the sale of electricity and other records, particularly concerning maintenance and shutdowns, will be used to ensure the consistency of data. A regression model will be developed between the operating pattern (functioning and non-functioning hours for each group) and the energy produced. In this way, the operating records will become useable with increasing precision to verify the quantity of electricity generated.

The functioning of the monitoring plan will be reviewed annually as part of the joint audits carried out by the project participants on the company supplying plant management.

Annex 4 details the Quality Control Plan.

B.8 Date of completion of the application of the baseline and monitoring methodology and the name of the responsible person(s)/entity(ies)

The baseline was completed on January 10, 2007 (contact: Antoine Dubas, Emerging Power Developers Ltd – contact information in Annex 1)

SECTION C. Duration of the project activity / crediting period

C.1 Duration of the project activity:

C.1.1. Starting date of the project activity:

21 years, 0 months

C.1.2. Expected operational lifetime of the project activity:

21 years, 0 months

C.2 Choice of the crediting period and related information:

C.2.1. Renewable crediting period

C.2.1.1. Starting date of the first crediting period:

01/01/2008

C.2.1.2. Length of the first crediting period:

7 years - 0 months

C.2.2. Fixed crediting period:

C.2.2.1. Starting date:

Not applicable

C.2.2.2. Length:

Not applicable

SECTION D. Environmental impacts

D.1. If required by the host Party, documentation on the analysis of the environmental impacts of the project activity:

The project will not generate new construction or activities that could have significant environmental repercussions. All the existing basic structures for the project already exist, but needs costly repairs due to the long period of abandonment.

Further, the specifications will be kept the same as those that have already been approved when authorization for generation was obtained.

Consequently, the realization of the project will have no significant negative environmental impact, and a sworn declaration to that effect has been issued to the CONAM.

D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party:

There are no environmental impacts considered significant by the project participants or the host Party as all works necessary are purely repair or reinstallation works on existing infrastructure.

SECTION E. Stakeholders' comments

E.1. Brief description how comments by local stakeholders have been invited and compiled:

The project boundary is located within the mining compound, which is a private property. Thus the main local stakeholder is the mining company Dynacor. This actor was consulted through meetings, exchanges of correspondence and telephone calls, and is a project participant.

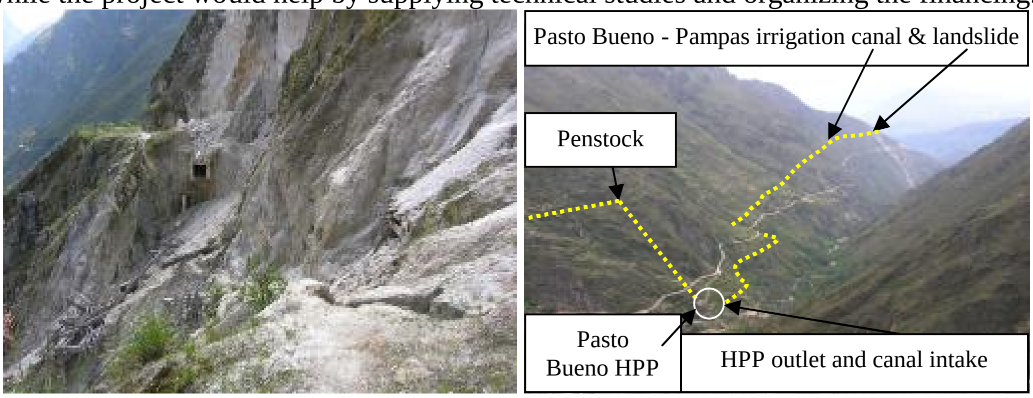
The preceding not withstanding, comments have also been obtained from the nearest community, Comunidad Campesina de Pampas, in the town of Pampas, 5 km to the west of the project area. The consultations were carried out by Rubén Madueño Luján of Elektrokraft del Perú S.A. in 2006, in the framework of participative workshops.

E.2. Summary of the comments received:

The Comunidad Campesina de Pampas expressed interest in the rehabilitation of the irrigation canal for the Pampas community.

The canal was damaged by a landslide several years ago, and never repaired due to lack of funding.

The repair of the damaged section would be too costly for the community, which lacks the necessary resources, while the project would help by supplying technical studies and organizing the financing.



Pasto Bueno – Pampas irrigation canal (right), with the section damaged by a landslide (left)

E.3. Report on how due account was taken of any comments received:

In addition to helping the community repair the part of the canal damaged by the landslide, the project would allow and ensure the supply of water to the canal intake, which is not possible now because the water pours unchecked before the penstock and does therefore not reach the canal intake, which is only connected to the outlet of the Pasto Bueno power plant. The repair would also prevent hillside erosion that is currently taking place due to the above-mentioned leaks occurring before the penstock.

Annex 1

CONTACT INFORMATION ON PARTICIPANTS IN THE PROJECT ACTIVITY

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Annex 2

INFORMATION REGARDING PUBLIC FUNDING

There is no public funding in the project.

Annex 3

BASELINE INFORMATION

The baseline data are included in the project document.

Additional information on the present set of generators, their records and their fuel consumption is confidential, but available to the DOE from the Dynacor company.

Annex 4

MONITORING INFORMATION

Quality control of the data acquired for the project will be organized as follows:

Daily recording of data: The operating personnel will record the daily data for generated electricity. This information will be transmitted to all the project participants every month. Then the measurements will be verified to detect any anomaly before being archived for future reference. Further, this data will be compared to the estimated generated electricity calculated from the operating hours, the rated capacity and the performance of the groups. Any discrepancies will be clarified and resolved through the intervention of Elektrokraft del Perú (technical assistance) and Dynacor. If no satisfactory way to clear up the discrepancies can be found, an independent engineer will be asked to do a study, and it will make a proposal for a final decision. The generators are connected to a local control system that monitors the performance of the generators, detecting problems and calling attention to them when necessary.

Routine reminders for on-site technicians: All on-site technicians will be given a list of reminders to guide them in their daily, weekly and monthly routines. The operations director and the Training, Health and Security Council will review this list together with the local personnel during visits to the site to ensure that all aspects and roles have been properly understood and correctly executed.

Site audits: The operations chief and the Training, Health and Security Council will make regular visits to the site. In addition to making sure that all routines are fully carried out, they will also evaluate the need for further training and perform an audit for possible special activities.

Work permit forms: This form will be filled out before any work is performed. It will then be transmitted to the project participants and added to the service records of each group.

Service records: A maintenance company will carry out maintenance at intervals of 700 and 8,400 hours (monthly and annual service) of generator operating time, in addition to major inspections every ten years. Service records will be filled out for each service to ensure that all aspects of maintenance have been completed and recorded. An engineer will be present for the initial and all major services if the site technician or project leadership believe it appropriate. Based on these maintenance services, the performance of the generators will be monitored to detect any changes. It is expected that with this kind of rigorous maintenance performance will remain constant throughout the duty life of the generators.

Calibration of the measurement instrumentation: The calibration of the measurement instrumentation will be done in conformity with local regulations and ISO/IEC standards, but in any case at a minimum of every three years.

Corrective measures: The quality control measures include procedures for the appropriate handling and correcting of anomalies in the realization of the project and the monitoring plan. If an anomaly is detected:

An analysis of the situation and its causes will be carried out immediately by on-site personnel.

The project leadership will make a decision concerning the appropriate corrective measures to eliminate the anomaly and its causes.

Corrective measures will be taken and reported to the project leadership to provide feedback.

Operating manual: In addition to the quality control measures described above, an operating manual with prescribed procedures will also be followed. It will cover training procedures, knowledge management, proper handling of the equipment, and plans for emergencies and environmental security. The project will also ensure that the personnel of the company that manages the production unit are properly trained in regard to the launching of the monitoring and project plan.

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