LUMA

Transmission Operations

TRANSMISSION OPERATIONS

Document Control & Signature Page

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Approved by:

Name/Title Raphael Gignac/Director System Operations

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Title _____

Signature _____

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Reason for Revision

_____

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_____

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1.0 Executive Summary

This procedure addresses the conduct of routine and emergency transmission clearance order requests and subsequent switching operations that occur in preparation for field personnel performing repairs, maintenance, and new equipment installations on the Bulk Power System. Also included are generating station activities requiring transmission or substation switching beyond the physical bounds of the generating station or interconnected facilities. Processing and executing clearance order requests for transmission generation or substation switching is described, as well as safeguards to ensure that switching does not result in worker injury, equipment damage, system instability, loss of load or inefficient use of resources.

2.0 Objective/Scope/Roles

2.1 Objective

This procedure supports LUMA's goal to provide for the safe, reliable, and efficient daily operation of the Bulk Power System. The procedure provides a systematic process for the receipt, development, scheduling and conduct of transmission clearance orders and switching operations in support of daily transmission operations, maintenance and construction activities.

2.2 Scope

This procedure **shall** be routinely used by personnel in the Transmission Operations Center(TOC), as well as by Transmission and Substation field personnel and contractors. The procedure covers receiving, processing, scheduling, and executing clearance order requests from transmission, substation, generating stations and interconnected facilities. The procedure is for all personnel conduction maintenance, construction or any other activities requiring switching on the Bulk Power System. This procedure does not cover actual hands-on, safe work practices used by person(s) performing maintenance or construction operations on the Bulk Power System.

2.3 Roles

2.3.1 Supervisor Transmission and Generation (STG)

The STG has overall responsibility for the operation of the Transmission and Generation portion of the TOC. Oversees, manages and ensures that all transmission and transmission substation clearance order operations, both routine and emergency, are properly initiated, coordinated, executed and documented.

2.3.2 Senior Transmission Operator (STO)

The STO has direct responsibility for observing and supervising the activities of the Transmission Operators writing, directing and performing clearance orders and switching operations on the 115 kV and 230 kV portions of the BPS. Also, the STO acts as a reviewing and approving authority as required for transmission-, transmission substation- and generation-related clearance order switching.

2.3.3 Transmission Operator (TO)

The TO receives clearance requests; develops, writes, and initiates clearance orders for the 38 kV portions of the BPS. Ensures that all clearance order requests, and subsequent switching are properly documented, performed as written, directed, and properly closed-out upon completion. Coordinates operations with the (SE).

2.3.4 Shift Engineer (SE)

The SE has direct responsibility for clearance order switching operations that are under the control of generating stations or interconnected facility owners or operators. Communicates directly with generating station personnel and interconnected facility owners or operators, to ensure that clearance order switching requests are completed as written, on time, and that proper equipment blocking, grounding, and tagging are performed and documented, as required, to ensure the safety of all workers. Coordinates clearance order switching operations with the STO and TO when clearance orders for generating stations or interconnected facilities require switching to be performed beyond generation station or interconnected facilities responsibility boundaries.

2.3.5 Engineering

Engineering is responsible for the real-time maintenance of the SCADA information database and all associated documentation including BPS schematics, as well as the operational status of the equipment on the BPS operated by LUMA. Any system changes **shall** be properly documented and communicated in real time to all TOC operations personnel.

2.3.6 Generation Facility Operator (GFO)

The GFO is responsible for operating and maintaining generation and interconnected facilities. This includes supervising, and/or operating the generation facility or interconnected facility including operating switches, breakers, grounding and other operations as necessary to provide clearance for work on the BPS.

3.0 Procedure

3.1 Scheduled Clearance Orders

This procedure covers the requesting, processing, execution, and closeout of clearance orders on the BPS.

3.1.1 Clearance Request

A request for a scheduled clearance order **shall** be received by the TOC at least 2 working days in advance of the time the clearance **shall** be required, and **shall** include the following information as specified on Clearance Application Form CN084-12371:

3.1.1.1. REQUESTOR'S NAME, COMPANY, TITLE, TELEPHONE NUMBER, EMAIL ADDRESS

The requestor must be at a supervisory level or higher and **shall** be trained, tested and certified by LUMA in all aspects of these Transmission Operations Procedures.

3.1.1.2. START OF WORK

If equipment **shall** be modified, added or removed from the BPS, then two schematics **shall** also be present showing the before and after system configurations. In addition, Form CN 084-12397, Request for Construction and Addition Clearances, **shall** also be completed.

- Description of the specific work to be performed.
- Required length of time for the work to be performed.
- The extent to which the work to be performed is weather dependent.
- Estimated time to stop work and make-safe.
- A list of all required blocking points AND all locations where grounds must be installed including any switching, blocking or grounding that the crew **shall** perform themselves.

- The name and contact information for the supervisor or other person in charge at the work site.

- The method and specific instructions **shall** be used to contact the personnel performing the work if an emergency arises.

3.1.2 Engineering Shall Perform the Following:

- Determine if the work that **shall** be done under the clearance **shall** modify, replace or add any equipment onto the BPS that **shall** change any circuit configurations, relaying or equipment ratings.

- If so, Engineering **shall** determine if changes in SCADA and other equipment documentation can be completed as soon as the clearance is released following completion of work.

- If the changes cannot be completed as above, then the Clearance Request **shall** be returned to the STO/TO who **shall** notify the requestor that the clearance **shall** have to be re-scheduled.

- If the changes can be completed when the clearance is released, CN Form 084-1239 (Appendix E) will be completed by Engineering.

- Review existing deferred work orders to determine if other deferred work can be performed concurrent with this clearance request.

- If so, Engineering **shall** notify the deferred work order owner to coordinate with the STO/TO handling the clearance request.

- Notify the STO/TO that they have permission to proceed with processing the clearance request.

3.1.3 STO/TO Shall Complete the Following:

- Write the switching order to establish the Clearance Order electrical and/or physical boundaries for the Clearance Order, and include the following:
    - The switching steps in the order in which they are to be completed.
    - A unique identifier for each piece of equipment to be operated (e.g., switch number or specific physical location).
    - The closing of, or installation of, any grounding switches or Standard Safety Grounds.
    - The revising of any relay settings, the measurement of any voltages, frequencies, or amperages.
    - Runs the proposed system configuration through SCADA to help ensure that system stability is maintained throughout the switching and clearance process.
    - Obtains an independent review of the switching process by another STO/TO.
    - Determines when switching commences so that it **shall** be completed by the clearance requested work start time.
    - Confirms that any field personnel required to perform the switching **shall** be available when required by the switching order.

- The STO/TO then **shall** commence switching operations and **shall** ensure that:
    - Section 3.7 of this procedure (Conduct of Operations/Switching on a Clearance Order) is always followed.
    - All steps are completed in the order specified in the switching order.
    - Each step of the switching is confirmed and recorded as complete before moving to the next step
- Following completion of the required switching and blocking, the STO/TO:
    - **Shall** contact the lead person(s) performing the work and issues a permit to perform the work described on the clearance order.
    - **Shall** review the switching and blocking points with the Lead Person(s) using Three-Part Communication.
    - **Shall** inform the Lead Person(s) that any work-site safety grounds that are installed are the responsibility of the Lead Person(s) to record and remove prior to the release of the permit.
    - **Shall** confirm the method of communication with the Lead Person(s) in the event they must be contacted by the STO/TO during the work.
    - **Shall** confirm the expected duration of the work with the Lead Person(s).
- The permit holder **shall** review the switching and blocking with the personnel performing the work as part of their required Pre-Job Briefing.
- The lead person(s) **shall** contact the STO/TO prior to the end of their shift and reports the status of the work being performed.

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- In the event the permit **shall** be held for more than one work shift:
    - The Lead Person(s) **shall** contact the STO/TO and supply them with off-hours contact that **shall** be aware of the work status, including any Work-Site Safety Grounds.
    - The Lead Person(s) can make decisions requiring any changes to the permit status if the STO/TO determines that system conditions necessitate that the permit must be released, or the limits modified.
- Upon completion of all work, the Lead Person(s):
    - **Shall** remove all Work-Site Grounds.
    - **Shall** ensure that all personnel are in the clear and that all personnel are aware that the permit is about to be released and the area re-energized.
    - **Shall** contact the STO/TO and, using 3-Part Communications, inform them that:
        - All work is complete under their permit and state the permit number.
        - All Work-Site Safety grounds are removed.
        - All personnel are in the clear, and that the equipment within the clearance is ready to be re-energized.
- The STO **shall** then:
    - Confirm the above information using 3-Part Communications.
    - Notify Engineering that work is completed.

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- Engineering:
    - **Shall** ensure that any system equipment that has been added, removed, modified or rearranged has been added to the appropriate SCADA database, and is reflected on all appropriate electrical system documentation.
    - **Shall** notify the STO/TO that restoration of the system can proceed.
- STO/TO **shall** then proceed with restoration of the switching and blocking related to the permit and ensures that
    - All communications required between personnel involved in the switching use 3-Part Communications (i.e., say it, repeat back, confirm accuracy of repeat back).
    - All steps are completed in the order specified in the switching order.
    - Each step of the switching is confirmed and recorded as complete before moving to the next step.
- Following completion of the required switching the STO/TO **shall**:
    - Notify Engineering that the restoration to normal switching is completed.
    - Record that all restoration to normal switching has been completed.
    - Check SCADA to ensure that the BPS is stable.
    - Forward the completed clearance order for filing with the appropriate portion of the organization (e.g., clearances programming section of clearances).

3.2 Emergency Clearance Orders

NOTE TO TRAINERS: The “Extraordinary” Clearance Classification has boon eliminated. All clearances **shall** be either SCHEDULED, or an EMERGENCY.

3.2.1 Shall follow the same procedure as Scheduled Clearance Orders EXCEPT:

- Emergency Clearance Form AEE15.4-2 (See Appendix E) **shall** be completed by the requestor instead of Clearance Application Form CN084-12371 (See Appendix C).

- The emergency clearance order request **shall** be immediately reviewed by the STG OR, if not available, by any 2 TSO/TOs to confirm that the request warrants an emergency clearance classification.

- The STO/TO **shall** immediately write the required switching to perform the clearance and schedule appropriate personnel to perform any required field switching that **shall** be required and proceed with the required switching.

The STO/TO **shall** then notify engineering of the emergency request but **shall** proceed with switching regardless of engineering readiness to make permanent changes to SCADA and other system data.

- No Clearance Application Form CN084-12371 **shall** be required until the emergency clearance is completed at which time the SE **shall** complete the Form CN084-12371.
- The STO/TO **shall** immediately:
    - Contact all personnel who are performing switching operations within the affected area and confirm the status of their switching progress.
    - Contact any field personnel working on any equipment within the affected area that extraordinary emergency switching is taking place.

- Write the required switching to perform the clearance and immediately dispatch any personnel necessary to perform any required field switching that **shall** be required.

- Engineering **shall** immediately prepare temporary work-around data required for SCADA or other data necessary for short-term use.
- Engineering **shall** then begin the process of making any permanent BPS changes. However, Engineering **shall** not hold up the progress of performing the necessary switching required for the Emergency Clearance Order.

3.3 Restrictions

3.3.1 Shall follow the same procedure as a scheduled clearance order EXCEPT:

- A request for restrictions shall be submitted to the STO/TO at least one working day prior to the required restriction being required.
- **Shall** not involve the opening or closing of switches, breakers, disconnects or other equipment that Shall have the effect of altering the BPS's normal configuration.

3.4 Clearances Involving Generation, and/or Interconnected Facilities

3.4.1 Shall follow the same procedure as a Scheduled Clearance Order, Emergency Clearance Order or Extraordinary Clearance Order and additionally:

- A request for a clearance order that requires switching within the physical limits of a generation or interconnected facility **shall** be forwarded to the SE in addition to Engineering.
- The SE **shall** contact the generation or interconnected facility operator/owner and request that they perform all required switching within their facilities.
    - The Generation or Interconnected Facility owner/operator **shall**:
        - Confirm that the required switching **shall** be completed within the time frame indicated on the clearance request.
        - Complete all required switching operations within the agreed time frame and issue a permit to the TOC.
        - This permit **shall** serve as proof that all requested switching and/or the closing of station grounds and/or ground trucks has been completed and appropriately tagged in accordance with OSHA 1910.269.
    - The SE **shall** notify the STO/TO that the required generation and/or interconnected facility is completed, and a permit has been issued to the TOC where it **shall** be held.
- The STO/TO will include this permit in the clearance order and the resulting permit for the performance of work in accordance with the original clearance request.
- Upon release of the permit on the BPS the SE **shall** notify the GFO that the TOC is releasing the Generation or Interconnected Facility permit

3.5 Calibration and Trip Tests by Relays

3.5.1 A clearance order shall not be required to calibrate equipment on the BPS.

3.5.2 Relay personnel approved to request clearances shall request permission to perform calibrations and relay trip testing through the STO/TO

- The request may be either written or verbal to the STO/TO.

3.5.3 The request shall be entered into the TOC log by the STO/TO who shall review the request to ensure that the requested calibration work will not adversely affect the stability of the BPS or interfere with other work or clearances currently in progress on the BPS.

3.5.4. Scheduled, emergency or extraordinary clearance requests shall take priority over any calibration requests.

3.6 Verification of Switch Operation by Supervisory Equipment

3.6.1. Verification tests of supervisory control equipment operations or switches shall be performed through coordination of the relay personnel, the STO/TO, and SE/SSE shall be entered in the TOC log.

3.7 Conduct of Operations/Switching on a Clearance Order

3.7.1 All communications required between personnel involved in the switching shall use 3-Part Communication. All communications shall use the Phonetic Alphabet when saying or repeating alpha-numeric equipment descriptions.

3.7.2 Each switch, circuit breaker or other piece of equipment shall be opened or closed using a separate command, including the operation of closing disconnects in connection with synchronizing a unit, EXCEPT:

- Every command regarding the operation of a switch or other piece of equipment **shall** include repeating the clearance order number.

3.7.3 Job Site earth grounding shall be completed prior to any workers starting work and shall be installed on all sides of the work area. The person in charge shall have responsibility to record the location of all Job Site Earth Grounding installed by the crew and the responsibility to remove the Job Site earth grounds before the clearance is released.

3.7.4 Under no circumstances shall any piece of equipment be treated as at Zero Potential until an approved test for no voltage is performed.

3.7.5 Before any clearance is released, the person in charge shall confirm that all Job Site Earth Grounds are removed and that all personnel are clear of the work area that shall be re-energized. This information shall also be given to the STO/TO when the clearance is released.

Appendix A: Glossary

Term	Definition
3-Part Communication	Used whenever communicating precise instructions between 2 or more persons. The sender speaks the instruction, the receiver repeats the instruction back to the sender, and the sender then replies back to the receiver that the instruction was correctly communicated.
Clearance Order	A written document that includes all components and actions necessary to de-energize equipment so the specific work can be performed safely.
Clearance Request	The request must accurately describe all equipment and lines to be isolated and the work that **shall** be performed. The Clearance Request **shall** be received by the TOC at least two working days in advance of the scheduled start date.
Emergency Clearance Order	A request for an Emergency Clearance Order must be approved by the STG, if available or 2 TSO/SOs. The STO/TO **shall** immediately write the required switching and schedule appropriate personnel to complete the required switching and all necessary tasks.
Engineering	Is responsible for the real-time maintenance of the SCADA database and all BPS schematics, as well as operational status of the equipment on the BPS operated by LUMA.
Ground Truck	A piece of equipment (sometimes referred to as an earth truck) that looks like an electrical breaker that can be racked in or out of a breaker compartment. It is used in place of the breaker to provide grounding for the conductors feeding out of a breaker. It has the same capabilities and purpose as job site earth grounds at a job site.

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Term	Definition
Job Site Earth Grounds or Work Site Grounds	Also referred to as Standard Safety Grounds (SSGs) or Personal Protective Grounds are Portable grounds that are installed at a job site to help ensure that the work area remains de-energized during all work that requires the equipment to be de-energized. They consist of covered copper extra flex conductor and clamps at either end that are attached to the copper conductor. They must be capable of conducting the maximum fault current that could flow at the point of grounding for the time necessary to clear any electrical fault.
Lead Person	Typically, a Job Leader, Foreman, or Supervisor who is directly responsible for the field personnel performing work. This person typically holds a permit and is directly responsible for ensuring that it is safe to work following the issuance of a permit for work on the bulk power system including the installation of any job site earth grounds.
Microsoft Access Database	Computer program that is designed to store information in a form that can be easily, reviewed, sorted, tracked, and retrieved. In this procedure it is used to enter information (data) regarding clearance requests and their status(s).
OSHA 1910.269	Document issued by the United States Department of Labor Occupational Safety and Health Administration. Section 1910.269 covers Electric Power Generation, Transmission, and Distribution. This document covers the government work standards that must be met when working on electric generation, transmission, or distribution equipment. It is also referred to as 29 CFR Part 1910. 269.
Pre-Job Briefing	A Puerto Rico OSHA requirement (Sometimes referred to as a tailboard) that all crews, or an individual working alone, reviews the work that **shall** be done, the risks involved, the barriers to prevent any incidents or accidents, and the safety equipment, tools, and procedures to be used during the work. This information shall be written down and kept as part of the documentation for the work being performed.

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Term	Definition
Phonetic Alphabet	A communications technique used to help ensure that letters of the alphabet are accurately communicated. This is used in virtually all military communications. Examples: a=alpha, b=bravo, c= Charlie, d=delta, e=echo, f=foxtrot, f=Golf, etc.)
Restrictions	Used to describe a condition when a piece of equipment on the Bulk Power System is temporarily prohibited from operating as it is normally intended. For example: a transmission line breaker that is normally designed to re-close once after it trips off for any reason but is temporarily reset to prohibit this re-close operation.
Zero Potential	Used to describe when a piece of electrical equipment is at the same potential as ground (earth). A piece of equipment is not at zero potential until it has been tested using approved methods and proven to be at zero potential.

Appendix B: Procedure Cross-Reference Matrix

Procedure Reference Matrix, Part 1 of 2	Short Term Load Forecasting	New Facility Interconnection	Resource Adequacy Planning	Interconnected Facility Retirements	Legacy T&G Demarcation	Interconnected Facilities Capabilities	Black Start	Telemetry	Cybersecurity	Root Cause Analysis & Corrective Actions	Public Reporting	Performance Reporting	Stakeholder Management	Policy on Reserves
Short Term Load Forecasting														
New Facility Interconnection														
Resource Adequacy Planning														
Interconnected Facility Retirements														
Legacy T&G Demarcation														
Interconnected Facilities Capabilities														
Black Start														
Telemetry														
Cybersecurity														
Root Cause Analysis and Corrective Actions														
Public Reporting														
Performance Reporting														
Stakeholder Management														
Policy On Reserves														
Reducing Risk Exposure to Contingencies														
Critical Loads														
Load Shedding														
Contingency and System Operating Limits Response														
Energy Dispatch, Scheduling and Merit Order														
Transmission Operations														
Plant Level Communications														
Balancing Frequency and Voltage														
Demand-Side Resources (Non-Wire Alternatives)														
System Operator Training														
Scheduling Planned T&G Outages														
Forced Outage														
Outage Execution and Closeout														
Emergency Response Execution														
Emergency Response Drills														

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Procedure Reference Matrix, Part 2 of 2	Reducing Risk Exposure to Contingencies	Critical Loads	Load Shedding	Contingency & System Operating Limits Response	Energy Dispatch, Shedding & Merit Order	Transmission Operations	Plant Level Communications	Balancing Frequency & Voltage	Demand Side Resources (NWA)	System Operator Training	Scheduling Planned T&G Outages	Forced Outage	Outage Execution & Closeout	Emergency Response Execution	Emergency Response Drills
Short Term Load Forecasting															
New Facility Interconnection															
Resource Adequacy Planning															
Interconnected Facility Retirements															
Legacy T&G Demarcation															
Interconnected Facilities Capabilities															
Black Start															
Telemetry															
Cybersecurity															
Root Cause Analysis and Corrective Actions															
Public Reporting															
Performance Reporting															
Stakeholder Management															
Policy On Reserves															
Reducing Risk Exposure to Contingencies															
Critical Loads															
Load Shedding															
Contingency and System Operating Limits Response															
Energy Dispatch, Scheduling and Merit Order															
Transmission Operations															
Plant Level Communications															
Balancing Frequency and Voltage															
Demand-Side Resources (Non-Wire Alternatives)															
System Operator Training															
Scheduling Planned T&G Outages															
Forced Outage															
Outage Execution and Closeout															
Emergency Response Execution															
Emergency Response Drills															

Appendix C: Clearance Request Numbering Convention

Numbering Convention for Clearance Requests consists of 4 alpha-numeric characters (i.e., XXXX). The first character identifies the requesting region/sub-division as follows:

-0- Bayamón Technical Operations Region

-1- San Juan and Carolina Technical Operations Region

-2- Caguas Technical Operations Region

-3- Ponce Technical Operations Region

-4- Mayagüez Technical Operations Region

-5- Arecibo Technical Operations Region

-6- Electrical Conservation Subdivision

-7 - Electrical System Protection Subdivision

-8- Department of Conservation of Generating Stations

-9- Combined Cycle facilities

-G- Gas Turbine facilities attached to the Hydro-Gas Division

-H- Hydroelectric facilities attached to Hydroelectric and Gas

-T- Thermoelectric facilities

-N- Emergencies for work in the North Area

-S- Emergencies for work in the South Area

The last 3 characters Shall be assigned consecutively starting with 001 through 999. This numbering Shall be annual by calendar year startin g with January.

Appendix D: Form CN084-12371 Clearance Application Form

CN-084-12371
REV.11/79
AEE-015.4-1

ORIGINAL Y TRES COPIAS

AUTORIDAD DE ENERGIA ELECTRICA
DIVISION OPERACION SISTEMA ELECTRICO
SOLICITUD DE VIA LIBRE DE CONSERVACION

VIA LIBRE NUM.	SOLICITANTE	OFICINA O CENTRAL:	TELEFONO DE OFICINA:
VLE2021-084	ING. LUIS MIRANDA USE MAQUINILLA	LUMA ENERGY	
FECHA:	INGENIERO DE AREA O SUPTE. CENTRALES	OFICINA O CENTRAL:	TELEFONO DE OFICINA:
7/9/2021	ING. LUIS MIRANDA USE MAQUINILLA	TRANSMISSION LINES	

PROPOSITO: TRABAJOS LIMPIEZA BARRA 4 115KV MONACILLOS T.C.

FECHA DE EJECUCION SOLICITACTA:

DE 7:00A (HORA) A ___ (HORA) 10 (DIA) JULIO (MES) 2021 (AÑO)

HASTA ___ (HORA) A 5:00PM (HORA) 14 (DIA) JULIO (MES) 2021 (AÑO)

DE ___ (HORA) A ___ (HORA) ___ (DIA) ___ (MES) ___ (AÑO)

HASTA ___ (HORA) A ___ (HORA) ___ (DIA) ___ (MES) ___ (AÑO)

FECHA DE EJECUCION APROBADA:

DE: ___ (HORA) A ___ (HORA) ___ (DIA) ___ (MES) ___ (AÑO)

HASTA ___ (HORA) A ___ (HORA) ___ (DIA) ___ (MES) ___ (AÑO)

DE ___ (HORA) A ___ (HORA) ___ (DIA) ___ (MES) ___ (AÑO)

HASTA ___ (HORA) A ___ (HORA) ___ (DIA) ___ (MES) ___ (AÑO)

VIA LIBRE AFECTA ABONADOS O EQUIPO DE DISTRIBUCION: SI ☐ NO ☑

VIA LIBRE SE CERRARA TODOS LOS DIAS: SI ☐ NO ☑

SI AFECTA ABONADOS INCLUYA VIA LIBRE DISTRIBUCION

CANCELADA POR ___ FECHA ___ HORA ___

RAZON: ___

REASIGNACION APROBADA POR: ___ FECHA ___

DE ___ (HORA) A ___ (HORA) ___ (DIA) ___ (MES) ___ (AÑO)

HASTA ___ (HORA) A ___ (HORA) ___ (DIA) ___ (MES) ___ (AÑO)

EXTENSION APROBADA POR: ___ FECHA ___

RAZON: ___

DE: ___ (HORA) A ___ (HORA) ___ (DIA) ___ (MES) ___ (AÑO)

HASTA: ___ (HORA) A ___ (HORA) ___ (DIA) ___ (MES) ___ (AÑO)

REASIGNACIONES, EXTENSIONES y CANCELACIONES SE NOTIFICARANA INCUMBENTES.

NOTIFICAR	TEL. OFICINA	DESPACHADOR INICIAL	FECHA	HORA
SOLICITANTE				
SUPTE. LOCAL DE LINEAS				

NOTAS:
1- VIAS LIBRES QUE AFECTAN VARIAS AREAS SE DEBE AVISAR A LOS SUPTE.LOCALES DE DICHAS AREAS.
2 - SOLICITANTE NOTIFICARA A SEGURIDAD Y AL ENCARGADO.

ENCARGADO DEL TRABAJO:	FIRMA SOLICITANTE:	APROBADA POR:
ING. LUIS MIRANDA USE MAQUINILLA	FECHA ___	ING. AREA O SUPTE. CENTRALES FECHA ___
APROBACION OPERACION SISTEMA:	RECIBIDA Y COTEJADA POR:	RECIBIDA Y COTEJADA POR:
ING. EDWIN ADORNO FECHA 7/9/2021	SUPERVISOR DE TURNO FECHA ___	DESPACHADOR DE AREA FECHA ___

MANIOBRAS: (INCLUYA MANIOBRAS DE PRINCIPIO A FIN, INCLUYENDO TIERRAS, TARJETA, PRUEBA, ETC.)

1) ___ 13) ___
2) ___ 14) ___
3) ___ 15) ___
4) ___ 16) ___
5) ___ 17) ___
6) ___ 18) ___
7) ___ 19) ___
8) ___ 20) ___
9) ___ 21) ___
10) ___ 22) ___
11) ___ 23) ___
12) ___ 24) ___

(DE SER NECESARIO INCLUYA HOJA ADJUNTA)

DIAGRAMAS DEL SISTEMA

ANTES DE LA VIA LIBRE | DESPUES DE LA VIA LIBRE

COMENTARIOS:

Appendix E: Form CN084-12397 Request for Construction and Addition Clearance

CN084-12397
REVISIÓN 0 (12/01/97)

NÚMERO VÍA LIBRE

AUTORIDAD DE ENERGÍA ELÉCTRICA
PRODUCCIÓN - CONSERVACIÓN - TRANSMISIÓN Y DISTRIBUCIÓN
SOLICITUD DE VÍA LIBRE DE CONSTRUCCIÓN Y ADICIÓN

SOLICITANTE	OFICINA	TELÉFONO
ADMINISTRADOR DE ZONA OPERACIONES TÉCNICAS	OFICINA	TELÉFONO

CONDICIONES

CONSERVACIÓN DE RECURSOS

CONSERVACIÓN DE SUBESTACIONES

OPERACIÓN Y CONTROL - DISTRIBUCIÓN

VÍA LIBRE AFECTA CLIENTES O EQUIPOS DE DISTRIBUCIÓN ☐ SÍ ☐ NO

VÍA LIBRE SE CERRARÁ TODOS LOS DÍAS ☐ SÍ ☐ NO

FECHA Y HORA DE EJECUCIÓN:
DE ____ A ____ / / ____ HASTA: ____ A ____ / / ____
HORA HORA DÍA / MES / AÑO HORA HORA DÍA / MES / AÑO

PROPÓSITO: _____

CANCELADA POR: _____

REASIGNADA POR: _____

DE ____ A ____ / / ____ HASTA ____ A ____ / / ____
HORA HORA DÍA / MES / AÑO HORA HORA DÍA / MES / AÑO

MOTIVO: _____

NOTIFICADOS

DATOS DEL EQUIPO (Para equipos de distribución, indique el número de circuito y el número de poste)

EXTENSIÓN APROBADA POR: _____

DE ____ A ____ / / ____ HASTA ____ A ____ / / ____
HORA HORA DÍA / MES / AÑO HORA HORA DÍA / MES / AÑO

MOTIVO

NÚMERO DE CUENTA DEL CLIENTE

EQUIPO	ALIM	ESTADO	ANDEP	PATRÓN	REMISIÓN / LOCACIÓN	CANTIDAD	CAPACIDAD	NÚMERO DE POSTE	VOLTAJE (KILOVOLTIOS)	CONDICIÓN (NUEVO - USADO)	PAÍS	FABRICANTE	DISEÑO	NÚMERO DE SERIE	TIPO

PERSONA ENCARGADA DEL TRABAJO	FECHA	FIRMA DEL SOLICITANTE	FECHA	APROBADA POR (NOMBRE Y TÍTULO)	FECHA
APROBACIÓN DE OPERACIÓN DEL SISTEMA	FECHA	RESPONSABLE DEL TURNO	FECHA	RECIBIDA SCCOSE	FECHA

ALIMENTADORES QUE SE AFECTAN: _____

MANIOBRAS: (INCLUYA OPERACIONES DE PRINCIPIO A FIN, INCLUYENDO TIERRAS, TARJETA, BRIDA, ETC.)

1) _____ 11) _____
2) _____ 12) _____
3) _____ 13) _____
4) _____ 14) _____
5) _____ 15) _____
6) _____ 16) _____
7) _____ 17) _____
8) _____ 18) _____
9) _____ 19) _____
10) _____ 20) _____
21) _____ 31) _____
22) _____ 32) _____
23) _____ 33) _____
24) _____ 34) _____
25) _____ 35) _____

DIAGRAMAS DEL SISTEMA (IDENTIFIQUE LOS ALIMENTADORES SI NO MÁS DE UNO)

ANTES DE LA VÍA LIBRE	DESPUÉS DE LA VÍA LIBRE

COMENTARIOS: _____

Appendix F: Form AEE15.4-2 Emergency Clearances Form

ORDEN NUM.	EQUIPO	MANIOBRA	TIERRA	ORDENADA A Y EJECUTADA POR		HORA ORDENADA	HORA EJECUTADA

ADHIERA
TARJETAS RELACIONADAS
EN ESTE ESPACIO

COMENTARIOS: _____

VIA LIBRE CERRADA S.C.C.O.S.E. _____

FECHA _____ HORA _____ INGENIERO DE TURNO _____

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