HSE Guide for Contractors

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A STAR ALLIANCE MEMBER

REVISION LOG

Revision Number	Date	Section	Changes Made
01	25-09-2013		Original version
02	28-10-2015	Initial	Logo changed and revision log included
03	29-01-2020	All	Updating of the structure, General and Specific Requirements for each category of contractor in terms of Industrial Safety, Health and Environment.
04	12-04-2023	All	Updating of the Corporate Name of Avianca Holding to Avianca Group International Ltda. And update of regulatory requirement changes

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INTRODUCTION

Below are the Safety, Health and Environment guidelines that will help you minimise negative impacts on people, facilities and the environment and guide you on how to protect yourself; while performing work as a Contractor or subcontractor at Avianca's facilities. This guide is also a means of consultation on the requirements established by Avianca for the performance of work by Contractors in its facilities.

During your stay at any of Avianca's facilities, you and your workers must comply with the different standards established by the company in terms of Industrial Safety, Occupational Health and the Environment; as well as other corporate rules.

Please note that everything stipulated in this document is an integral part of your contract and/or purchase order and therefore mandatory, so the contractor must guarantee its compliance.

This document applies to the work performed by Contractors and their subcontractors at Avianca's facilities, and from now on when the term CONTRACTOR is used, it will include its subcontractors with their respective workers.

The CONTRACTOR authorizes Avianca Group's SSMA to carry out inspections or other actions at any time in order to evaluate compliance and application of the standards and policies on Industrial Safety, Occupational Health and the Environment.

This document is a guide and does not replace the obligations that under the legislation are in charge of the CONTRACTORS; therefore, in the event that Avianca is sanctioned for the action or omission of a CONTRACTOR, it may repeat against it.

OBJECTIVES OF THE MANUAL

To make known the requirements and guidelines that must be met by any natural or legal person classified as a Contractor, inside and outside the facilities of AVIANCA GROUP INTERNATIONAL LTDA. in matters of Industrial Safety, Occupational Health and Environment with respect to the legal and technical terms in force, during the execution of a contract or purchase order signed with the company.

1. SCOPE

This manual is strictly complied with by all those natural or legal persons in the condition of Contractors and/or subcontractor who are subject to access and development of the agreed activities inside or outside the facilities of AVIANCA GROUP INTERNATIONAL LTDA

However, the requirements demanded in this manual do not exempt the Contractor from the current technical and legal regulatory compliance that governs its activity.

2. GLOSSARY/DEFINITIONS

- Unsafe or substandard act Refers to all human actions and decisions, which may cause an unsafe situation or incident, with consequences for the worker, the operation, the environment, and other people. It also includes a failure to take action to report or correct unsafe conditions.

- Safe Work Analysis (TAC) Work safety analysis is a useful method for identifying, analyzing, and recording the steps involved in performing a specific job, the existence of safety and health hazards associated with each step or task of the contracted work, and the measures or procedures that will eliminate or reduce these risks.

- Occupational Accident An occupational accident is any sudden event that occurs due to or on the occasion of work, and that produces in the worker an organic injury, a functional or psychiatric disturbance, a disability or death.

  An accident at work is also one that occurs during the execution of orders by the employer, or contractor during the execution of a task under its authority, even outside the place and hours of work.

  Likewise, an accident at work is considered to be one that occurs during the transfer of workers or contractors from their residence to the workplaces or vice versa, when the transport is provided by the employer.

An accident at work shall also be considered to be one that occurs during the exercise of trade union function, even if the worker is on trade union leave, provided that the accident occurs in the performance of that function.

In the same way, an accident at work is considered to be one that occurs due to the execution of recreational, sports or cultural activities, when acting on behalf of or on behalf of the employer or the user company in the case of workers of temporary service companies who are on mission.

- Serious Accident That results in amputation of any body segment; fracture of long bones (femur, tibia, fibula, humerus, radius and ulna); head trauma; second and third degree burns; severe hand injuries, such as crushing

  or burns; severe spinal cord injuries with spinal cord involvement; eye injuries that compromise acuity or visual field or injuries that compromise hearing. Take into account the definitions of each country where Avianca operates.

- ARL Occupational Risk
  Administrator

- Unsafe or substandard condition It is any element of equipment, raw materials, tools, machines, facilities or the environment that becomes a danger to people, property, the operation and the environment and that under certain conditions can cause an accident.

- Contractor or Supplier Supplier whose purpose is to provide a service related to civil works, maintenance
  or installation of infrastructure or equipment in company facilities; such as: remodeling or construction of facilities, installation and maintenance of telecommunications networks and equipment, logistics for holding events, maintenance of facades, installation of advertising, among others.
- Sub-Contractor Supplier hired by the Contractor to perform part of the services for which it was contracted directly by Avianca.

- Avianca Safety, Health and Environment
  SSMA.

- PPE (Personal Protective Equipment) A device designed to prevent people who are exposed to a particular hazard from coming into contact with it. Protective equipment avoids contact with the risk, but does not eliminate it, which is why it is used as a last resort in the control of risks, once the possibilities of reducing them at the source or in the environment have been exhausted. Personal Protective Elements have been designed for different parts of the body that may be injured during

the performance of activities. Example: helmets, acetate masks, safety glasses, hearing protectors, mechanical or chemical filter respirators, safety shoes, among others.

- High-risk work: Any activity carried out that, due to its nature or place where it is carried out, involves a greater exposure than that normally present in routine activity and that can cause severe and often fatal occupational accidents; such as:

  - Work at heights Any activity or movement that a worker performs while exposed

    a a risk of falling at a different level, the difference in elevation of which is approximately equal o r greater than 2 meters with respect to the nearest lower horizontal plane.

    Work at height will also be considered any type of work that is carried out below zero level, such as: wells, entry to buried tanks, excavations deeper than 2 meters and similar situations; In these cases, concepts of working in confined spaces begin to be shared.

  - Confined Spaces A confined space is considered to be any space with limited entry and exit openings and unfavourable natural ventilation, in which toxic or flammable pollutants may accumulate, or have an oxygen-deficient atmosphere, and which is not designed for continuous occupation by the worker.

  - Inerting of atmospheres It consists of maintaining a non-explosive atmosphere inside a confined space, which can be achieved by ensuring in these confined spaces an atmosphere that is very rich or very poor in explosive gases, that is, keeping the mixture of gas and oxygen below the Lower Explosive Limit (L.I.E.) or above the Upper Explosive Limit (L.S.E.). The point, therefore, is that the gas-oxygen ratio is never in the explosive zone, that is, between the LEL and the LSE, the lower and upper limits of explosiveness, respectively.

  - Contact with hazardous energies This is the potential for risk that exists during the operation of any equipment, generated by its ability to move or by the residual energy accumulated within the operating or power subsystems. This contact can be with energy: electrical, mechanical, hydraulic and/or pneumatic, potential, residual, chemical and radioactive, among others.

  - Hot Work (cutting, welding and polishing operations outside authorized places).

Any activity that has the ability to convert, or create a potential source of ignition, for any combustible or flammable material that is present at the site or in the surrounding area related to sparking operations.

- Lifting Loads Those activities that allow a load to be mechanically moved between two different points, and can be carried out by cranes, mechanical and electrical switches, hoists, pulleys, etc.

- Live work Methods of work, in which an operator comes into contact with energized elements or enters the zone of direct influence of the electromagnetic field that it produces, either with a part of his body or with tools, equipment or the devices he manipulates.

- Work Permits It is a written authorization and approval that specifies the location and type of work
to be carried out. It certifies that the hazards have been assessed by trained persons and that the necessary protective measures have been taken. The permit has a maximum duration of 8 hours or shift and applies to the designated site exclusively. Applies to all work considered as non-routine.

- Hazard Source or situation with the potential to produce harm in terms of injury or disease, damage
to property, damage to the environment inside or outside the workplace, or a combination of these (CFR OHSAS 18001:2007).

- Risk Product of combining the probability of a specific unwanted event occurring and the severity of the consequences.

- Waste or waste It is any object, material, substance, element or product that is in a solid or semi-solid state, or is a liquid or gas contained in containers or tanks, whose generator discards, rejects or delivers because its properties do not allow it to be used again in the activity that generated it or because the legislation or regulations in force stipulate it.

- Hazardous waste or waste is that waste or waste that, due to its corrosive, reactive, explosive, toxic, flammable, infectious or radioactive characteristics, can cause risk or damage to human health and the environment. Likewise, containers and packaging that have been in contact with them are considered hazardous waste or waste.

3. CONTRACTOR CLASSIFICATION

Avianca Group Contractors, before supplying a good or providing a service, must be aware -among other things- of their responsibilities and prohibitions; for which they must read in detail this guide that discloses the requirements, standards and procedures required by Industrial Safety, Occupational Health and the Environment, in order to assume them when they are hired and guarantee their faithful compliance.

In order to emphasize the requirements of the Management Systems in Avianca Group, a categorization of contractors was made according to the risks associated with the Good or Service to be provided, as follows:

Category 1: Civil Works and Infrastructure

Category 2: Handling, Transportation, Disposal of Solid and Liquid Waste

Category 3: Ground Assistance

Category 4: Fumigation

Category 5: Food Preparation (Casinos, Cafeterias, VIP Lounges, Catering, etc.)

Category 6: Environmental Controls: Measurements (Atmospheric Emissions, Noise, Quality of discharges, quality of drinking water, among others)

Category 7: Supply and/or Transportation of Chemical Substances

Category 8: Maintenance of machinery and/or equipment

Category 9: Fuel Supply

Category 10: Cleaning and/or Washing

Category 11: Security

It should be clarified that category 1: civil works and infrastructure includes high-risk activities or works that are defined as "Any activity carried out that, due to its nature or place where it is carried out, involves a greater exposure than that normally present in routine activity and that can cause severe occupational accidents and on many occasions, mortals."

Likewise, the requirements set forth in Category 1 correspond to minor works or projects, since for major works (construction of hangars, construction of Collection Centers, etc.) the requirements for the Contractor will be dictated by Avianca's HSE managers, according to the station of execution of the work or project and based on each of its stages. For Avianca, the following are considered high-risk jobs:

1. Working at height
2. Hot work (cutting, welding and polishing operations outside authorized places)
3. Entry into confined spaces.
4. Contact with hazardous energies.
5. Lifting loads
6. Work on electrical circuits with or without voltage.

Contractors that are not identified within any of the 11 categories mentioned above, must only follow the general requirements set forth in the General Legal Requirements of Industrial Safety, Health and Environment, established in Section 5 of this document.

4. RESPONSIBILITIES

In order to preserve and protect the health and safety of people, as well as the environment, the Contractor and its collaborators will have the following responsibilities:

4.1. Contractors

1. Comply with all current legal provisions and other regulations established by the company in terms of Industrial Safety, Occupational Health and Environment of the place where the activity is carried out; and to have the support to demonstrate its compliance at the time Avianca requires it.
2. Comply with current Environmental Legislation based on the activities carried out.
3. Have the respective environmental licenses and/or permits in force, issued by the competent authorities, according to the nature of the activities carried out.
4. If the Contractor subcontracts personnel for specific tasks, it must demand compliance with this document and will be directly responsible to Avianca for all actions carried out by said personnel.
5. Disclose this document to all workers who are going to carry out activities at Avianca's facilities, ensuring its understanding and strict compliance.
6. Make the previous visits that you consider necessary to the site where you will carry out the activity, to become perfectly familiar and establish the safety conditions and the environmental components to be protected, to carry out the work.
7. Submit the required HSE documentation with the requested characteristics and within the stipulated times.
8. Assign the person responsible for HSE in accordance with the provisions of this document.
9. The Contractor shall send to SSMA the contact details (name, position, telephone numbers) of the person responsible for OHS, who shall be designated in accordance with:
    a. For Contractors with less than 50 employees (including Subcontractors) carrying out activities at Avianca's facilities, a person from the group may be appointed to assume the development of the HSE activities and be the contact with Avianca's HSE area, in case they do not have a representative from the HSE area of their company.

    b.

For Contractor with 50 or more employees (including Subcontractors) carrying out activities at Avianca's facilities, a person with training certified by an authorized entity in Safety, Health and Environment must be appointed; to assume the development of the HSE activities and be the contact with Avianca's HSE area.

c. Regardless of the number of employees, when the contracted activity involves high-risk work, a person must be appointed; to take control of high-risk jobs and ensure compliance with the rules for these tasks.

d. Regardless of the number of collaborators, the professional responsible for environmental issues must have training, competence and experience in environmental issues, and must be part of the work team for all the activities carried out during the provision of the service.

10. It is necessary to ensure that all workers who will carry out the activity receive the Safety, Health and Environment induction and carry the certificate delivered in this induction.
11. Guarantee that the execution of the works is carried out under safe and environmentally friendly procedures.
12. To attend to the observations made by SSMA.
13. Ensure that the workers assigned to perform work at Avianca are properly trained, qualified, are of legal age, have a clear and defined military and judicial situation, are bound by an employment contract and are affiliated to the local Social Security System.
14. Have spaces with their workers to monitor the conditions of Safety, Health and Environment and leave a record of these.
15. Investigate any accident, incident, environmental contingency, or emergency that may cause damage to people, property, or equipment.
16. Have an Environmental Contingency Plan prepared based on the risks identified in each of the activities to be carried out during the provision of the service.
17. Provide the tools, equipment, materials, and personal protection elements with the respective certifications that accredit the quality and compliance for the type of hazard to which the worker will be exposed and the necessary and appropriate prevention measures for each risk in the workplace.
18. Obey instructions, rules and signage established by the company.
19. Comply with all the requirements contained in this document on high-risk work (entry into confined spaces, contact with hazardous energies, hot work, lifting loads, working at heights).
20. Provide the chemical inputs required for the performance of the work with their respective MSDS in the local language and provide prior training to the personnel on the use of the y proper handling of substances, leaving a physical record of the training.
21. If chemical products are used, they must be stored in accordance with the provisions of the safety sheets, used, transported and disposed of in compliance with the parameters established in the legislation and in this document.
22. To carry out adequate management of hazardous waste through authorized environmental managers and to safeguard the Final Disposal Acts.
23. Ensure compliance with the legal limits on the duration of the working day, with respect to its workers, especially in tasks that require greater attention or high-risk work.

24. Dismantle or demolish in their entirety, all the facilities and provisional constructions carried out by the CONTRACTOR, leaving the area and facilities of Avianca perfectly clean at the end of the work.
25. Take with him at the end of the work the equipment used, accessories, debris, etc., that are left over and that are the property of the Contractor. Avianca is not responsible for these items after the work is finished.
26. Apply for work permits for activities that Avianca considers to be high risk such as Work at Heights, Work in Confined Spaces, Hot Work, Work with hazardous energies or with electrical installations.
27. For Contractors who supply materials of mineral origin such as gravel or sand, they must have the respective environmental licenses and/or permits issued by the competent authorities. In the same way, Civil Works Contractors must acquire this type of product in places where they have the documentation in accordance with current legislation.

28. Assign qualified and certified personnel to carry out the activities of the service.
29. For Contractors who supply inputs, goods or products, they must deliver to Avianca:

    a. Technical data sheets with specifications of warranty, durability or useful life of the good.
    b. Certificates of extraction and origin of raw materials.
    c. Laboratory certificates of biodegradability and toxicity.
    d. Technical file of the property, to know its recycling potential and/or what is the environmentally appropriate final disposal.

4.2. Contractor's Worker

1. All workers who will carry out the activity must have a card that identifies them as linked to the Contractor company, in a visible place at all times while remaining within Avianca's facilities. It is recommended that the card shows the blood group, the ARL or other relevant information for emergencies.

2. Maintain Avianca's work areas in a perfect state of order and cleanliness at all times. Collect tools, equipment, materials and supplies that are not in use.
3. Demarcate work areas in order to prevent the entry of people outside the task.
4. Check the equipment, facilities, machinery, tools, etc., before starting the daily work; to ensure its proper functioning.
5. Use personal protection elements correctly and at all times in accordance with the risk and the activity they are carrying out.
6. Perform
7. Adequate segregation of non-hazardous waste generated on site, respecting the colour code and the indications given by HSE.
8. Keep the firefighting equipment clear of obstacles and use it in case of fire only.

9. Know the evacuation routes and meeting points of the place where the activity is carried out.
10. Report the occurrence of work accidents, environmental contingencies or emergencies immediately to Avianca's SSMA and, if requested, submit the investigation of the latter within 2

days, which must include at least the description of the event, the analysis of causes and the action plan.

11. Inform SSMA of the unsafe conditions existing in the company that may cause damage to people, property or the environment, by written means, such as the Form. IRO.

5. GENERAL LEGAL REQUIREMENTS IN INDUSTRIAL SAFETY, HEALTH AND THE ENVIRONMENT.

5.1. STAGES

5.1.1. Requirements for pre-selection and selection

As part of the supplier evaluation and selection process, which seeks to mitigate the risks arising from the supply chain by verifying their suitability for the supply of the different goods and services in a sustainable manner, the contracting area is required to carry out a technical evaluation of the suppliers that have offered their goods and/or services.

The technical evaluation is a list of criteria that include, among others, aspects such as:

- Technical information required for the receipt of goods and/or services to the full satisfaction.
- Experience supports.
- In some processes, information on the quality, safety and environmental management systems implemented.

In accordance with what is defined by the contract administrator and the relevance of the good or service to be received for the EMS, environmental criteria will be included to a lesser or greater extent in said technical evaluation that will be evaluated by the environmental team, as a result each potential supplier is assigned a rating in the environmental component. that together with the other technical criteria defined in the process add up to the total grade. Suppliers that, depending on how defined, have a rating greater than 75% or 80% in total, go on to rounds of negotiations.

For this control, the following environmental criteria are documented to qualify the competence of suppliers:

Type of good or service	Evaluation criteria
Elements of Service on Board and/or VIP Lounges	E.T. Inputs
Hazardous Waste Management Supplies	E.T. ResPel
Washing Equipment	E.T. Equipment

Likewise, it must comply with the following minimum requirements, which must be prepared for the contracted work and will be requested at the time Avianca requires it:

1. Procedure for action in the event of an accident at work.

The Contractor must establish the step by step that a worker must follow in the event of a work accident, it must also contain the telephone numbers of: Airport Health (when applicable and the seriousness of the accident warrants it), occupational risk insurer or the one that takes its place in the different stations, responsible for HSE, Contact in the company and nearest health centers.

This document must be known to the workers. And a copy of this document must be delivered to Avianca.

2. Hazard Identification and Risk Control Matrix

For the identification of hazards and risk control, any methodology available to the Contractor may be used. Below are two types of ways to perform this process:

a. Hazard Identification and Risk Assessment Matrix of the Contracted Work

This document must contain at least: the identification of the hazard, assessment of the risk and the definition of controls to mitigate it.
If the company does not have its own established methodology for the evaluation of occupational risks, methodologies approved by qualified entities at the national level must be used o r international.

b. ATS (Safe Work Analysis)

This analysis must contain at least: basic steps of the task, HSE hazards identified for each step, waste generated, control measures implemented (safety, health, environment), it must contemplate damage to third parties or surrounding structures; and the signatures of all the workers who are going to participate in the work, the person in charge of SSMA, the requesting area of Avianca. For each of the steps, all HSE hazards and the corresponding control measures must be associated.

Any of the methodologies will be valid as long as they contemplate the basic points such as: identification of hazards by activity, control measures to mitigate risks.

3. Emergency plan for contracted work

The emergency plan must be applicable to the place where the activity is being carried out and take advantage of Avianca's emergency plan.

This emergency plan must include a list of support entities, information on the workers who are going to carry out the activity (Name, Identity Document, EPS, Rh, name and telephone number of the contact person in case of emergency) and data on the person in charge of coordinating the evacuation if required.

a. Avianca Ground Emergency Plan

Avianca has a plan to prevent, attend to and control emergency situations on the ground identified in

the vulnerability analysis of each work center; avoiding or minimizing damage to people, the environment and the company's assets, while seeking to restart activities in the shortest possible time.

Prior to the start of a contracted work, the Contractor must ensure that its workers know the basic procedure in case of emergencies of the work center where they are located (evacuation routes, meeting point and how to activate the emergency plan).

Below are the functions of the CONTRACTORS in each of the stages of emergencies:

I. Before the emergency

- Identify the evacuation signal from the workplace.
- Ensure that the evacuation plan and emergency telephone numbers are installed in a visible place in the workplace and are known to the workers.
- Have the necessary elements for contingency care such as fire extinguishers, first aid kit, spill kit, PPE, etc.
- Actively participate in the activities of the Emergency Response Plan on Land.
- Exercise caution when handling electrical systems, avoid overloads, store chemicals in accordance with regulations.
- Preserve order and cleanliness in the area.
- The CONTRACTOR must disclose such plan to all its workers and subcontractors.
- Periodically review the procedures established for your area in case of emergency.

II. During the emergency

- Follow the instructions of the support personnel for the emergency, do not perform procedures that you are unfamiliar with, seek suitable support.
- Do not obstruct the activities carried out at that time by the support group.
- Locate yourself at the meeting points established for each area.
- If you go out with a group other than your usual work group, report this situation to the Evacuation Coordinator who is supporting you.
- The CONTRACTOR must have a complete list of its personnel and verify at the meeting point that the personnel is complete, if there is a lack of personnel, the Contractor must immediately inform those in charge of the AVIANCA emergency, never enter the facilities again to look for the personnel.
- Do not give statements to the media, or spread rumors.
- Immediately report an emergency on Avianca property to the Industrial Safety Officer and Contract Administrator.
- Photography of emergency situations is prohibited unless written approval is given by security.

4. Chemicals

The supplier must be listed as a legally established company and registered with the competent chamber of commerce and estancias (in case of being an international supplier, the supplier must guarantee compliance with the stipulations of the regulations of your country).

a. Chemical Safety Data Sheets

Safety data sheets must meet the following requirements:

Figure 1. Diagram of requirements to be included in the safety sheets

Safety data sheets must contain at least 16 sections containing substance identification information, emergency measures, handling and precautions, and supplemental information:

1. IDENTIFICATION

- Section 1. Product and Company Identification.
- Section 2. Hazard identification.
- Section 3. Composition, Ingredient Information.

2. EMERGENCY

- Section 4. First aid measures.
- Section 5. Measures in case of fire.
- Section 6. Measures in case of accidental spillage.

3. MANAGEMENT

- Section 7. Handling and Storage.
- Section 8. Exposure and personal protection controls.
- Section 9. Physical and chemical properties.
- Section 10. Stability and reactivity.

4. TOXICOLOGICAL AND ECOTOXICOLOGICAL INFORMATION

- Section 11. Toxicological information.
- Section 12. Ecological information.
- Section 13. Disposition Considerations.

5. ADDITIONAL INFORMATION

- Section 14. Transportation information.
- Section 15. Regulatory Information.
- Section 16. Additional information.

Safety data sheets must also be available at the site where the activity takes place y its location and interpretation must be known by the workers.

The Contractor must make a list of all the chemical products that will be used during the execution of the contracted work.

b. Chemical labeling

The supplier must ensure that all chemicals are properly identified and that their hazards are communicated through labelling and the Safety Data Sheet.

Figure 2. Diagram of requirements to be included in chemical labels

For suppliers in Colombia, Mexico, Ecuador, Costa Rica, Chile, Brazil, Argentina, the label must contain at least the following information:

Figure 3. Model Chemical Label Structure

5.

Matrix of Environmental Aspects and Impacts To make the matrix of aspects and impacts, you can refer to Annex 2 or if you have your own methodology, the format used to deliver the matrix of aspects and impacts to Avianca must contain at least the following elements:

a. Detailed description of the process by activity of the contracted service.

b. Identification of environmental aspects and impacts.

c. Environmental impact assessment, using a recognized methodology.

d. Identification of significant impacts.

e. Action plan to mitigate significant impacts

6. Waste management plan

Within the framework of the generation of waste, whether it is non-hazardous, hazardous, construction and demolition (CDW) or special waste, it is recommended to request the following information and/or supports from the supplier or contractor

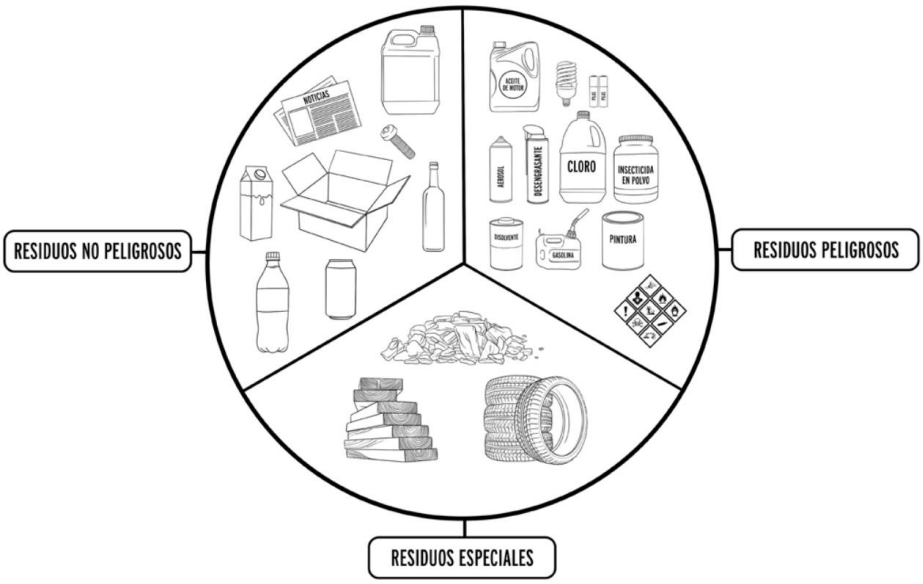


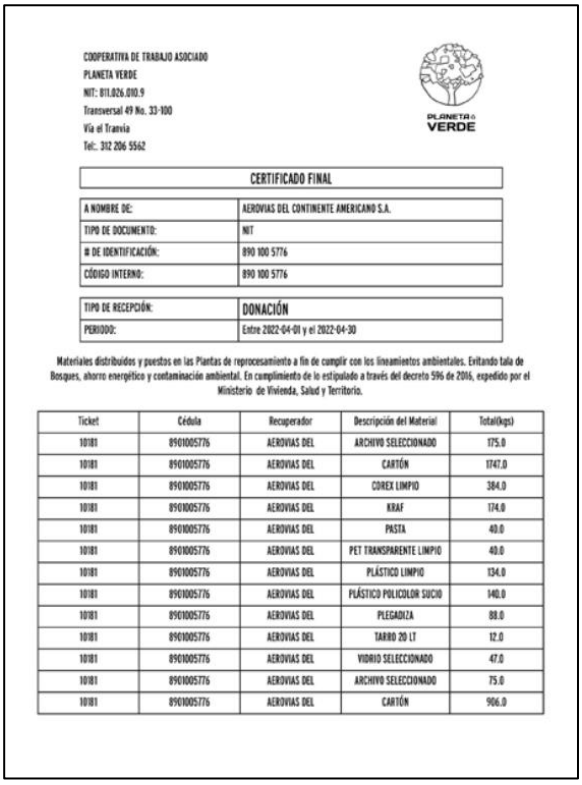
Figure 4. Classification scheme for the different types of waste

a. Non-Hazardous Waste:

- Registration of non-hazardous waste related to the service to be provided and report the amount in (kg) of the waste generated by each work center.
- Training support in good environmental practices or waste segregation for all personnel who are going to enter Avianca Group's facilities.

- Manifest report and final disposal certificate from the authorized manager, which must contain at least the following information:

  - Name of the substance or residue.
  - Generation date.
  - Country.
  - Base.
  - Approximate quantity (kg)



COOPERATIVA DE TRABAJO ASOCIADO
PLANETA VERDE
NIT: 811.026.010.9
Transversal 49 No. 33-100
Vía el Tranvía
Tel.: 312 206 5562

PLANETA VERDE

CERTIFICADO FINAL

A NOMBRE DE:	AEROVIAS DEL CONTINENTE AMERICANO S.A.
TIPO DE DOCUMENTO:	NIT
# DE IDENTIFICACIÓN:	890 100 5776
CÓDIGO INTERNO:	890 100 5776

TIPO DE RECEPCIÓN:	DONACIÓN
PERIODO:	Entre 2022-04-01 y el 2022-04-30

Materiales distribuidos y puestos en las Plantas de reprocesamiento a fin de cumplir con los lineamientos ambientales. Evitando tala de Bosques, ahorro energético y contaminación ambiental. En cumplimiento de lo estipulado a través del decreto 596 de 2016, expedido por el Ministerio de Vivienda, Salud y Territorio.

Ticket	Cédula	Recuperador	Descripción del Material	Total(kgs)
10181	8901005776	AEROVIAS DEL	ARCHIVO SELECCIONADO	175.0
10181	8901005776	AEROVIAS DEL	CARTÓN	1747.0
10181	8901005776	AEROVIAS DEL	COREX LIMPIO	384.0
10181	8901005776	AEROVIAS DEL	KRAF	174.0
10181	8901005776	AEROVIAS DEL	PASTA	40.0
10181	8901005776	AEROVIAS DEL	PET TRANSPARENTE LIMPIO	40.0
10181	8901005776	AEROVIAS DEL	PLÁSTICO LIMPIO	134.0
10181	8901005776	AEROVIAS DEL	PLÁSTICO POLICOLOR SUCIO	140.0
10181	8901005776	AEROVIAS DEL	PLEGADIZA	88.0
10181	8901005776	AEROVIAS DEL	TARRO 20 LT	12.0
10181	8901005776	AEROVIAS DEL	VIDRIO SELECCIONADO	47.0
10181	8901005776	AEROVIAS DEL	ARCHIVO SELECCIONADO	75.0
10181	8901005776	AEROVIAS DEL	CARTÓN	906.0

Figure 5. Non-Hazardous Waste Registration Form

The plan must contain the description of the waste-generating activities, their classification, the conditions of temporary storage and the final disposal of the waste in accordance with local regulations.

You can use the model proposed in Annex 3

b. Hazardous waste

- Record of hazardous waste related to the service to be provided and report the amount in (kg) of the waste generated by each work center.

- Manifest report or delivery of the waste to the collection center or authorized manager, this must contain at least the following information:

  - Name of the substance or residue.

- Generation date.
- Country.
- Base.
- Approximate quantity (kg)

MANIFIESTO CADENA DE CUSTODIA
0080628-0000103005

Código: LO-FO-35-V1
Fecha Creación: 22-08-2018
Fecha Actualización: 06-03-19

DATOS DE GENERADOR DE RESIDUOS		DATOS GESTOR DE RESIDUOS	
Razón Social:	AEROVIAS DEL CONTINENTE AMERICANO	Nombre: Industria Ambiental SAS	TELÉFONO:
Nit/Documento:	890 100577	Nit: 900916621	Dirección: Medellín
Sucursal/Generador:	Aeropuerto José María Córdoba Teléfono: 5699200000	Placa: WNM513	Tipo Vehículo: CAMIÓN 4.5 T FG
Dirección:	Rionegro Antioquia	Conductor: JOSÉ AGUDELO	Cédula: 71668424
Departamento:	Antioquia Ciudad: Rionegro	Auxiliar:	Cédula: 1637623S-1
Solicitante:	Diana Carolina Rendón	Fecha de Recolección: 01/03/2022	Doc Transporte: 000304942
Contacto:	Diana Carolina Rendón	Hora de Recolección: 17:14	

SOLICITUD	MATERIAL	CANTIDAD	UM	EMPAQUE EMBALAJE	CANTIDAD	OBSERVACIONES/NOVEDADES
4300696939	SOLIDOS CONTAMINADOS CON PINTURAS Y12	419.5	KG	Bolsas	60	
4300696939	ENVASES CONTAMINADOS CON SOLVENTES Y12	34.5	KG	Bidón	14	
4300696939	PLÁST CONTAM SOLVENTES Y/O PINTURA Y12					
4300696939	RESIDUOS DE SOLVENTES Y12					
4300696939	ENVASES CONTAMINADOS CON ACEITES Y9					
4300696939	LUMINARIAS A2010					
4300696939	FILTROS CONTAMINADOS AIRE O ACEITE Y9	0.5	KG	Granel	2	
4300696939	DESECHOS BIOÍNFECCIOS CADUCADOS A4140	141	KG	Estibas	2	
4300696939	PRODUCTO, EMPAQUE PROTECCIÓN DE MARCA	5	KG	Granel	2	
4300696939	ELEMENTO USAD PARA PROTEC DE CORONAVIRUS	22	KG	Bolsas	8	
	TOTAL:	630.5				

CONTENEDORES ENTREGADOS:

Nombre Quien Entrega: Andrés Felipe Restrepo Alzate
C.C.: 1089545374 Cargo: Auxiliar de manejo

TELÉFONOS DE EMERGENCIA NACIONAL 123
TELÉFONO FIJO 8290800 CEL.
E-MAIL: info@ica.co - ppi@ica.co

ACLARACIONES

Es obligación del Generador entregar los materiales debidamente empacados, rotulados e identificados de acuerdo a la norma Técnica Colombiana NTC. Los registros de materiales, cantidades, solicitudes registradas en el presente documento serán los materiales, cantidades que se Certificarán y facturarán.

Andrés

FIRMA

Figure 6. Hazardous waste registration form

- Certificate of treatment or final disposal that includes the quantities registered and generated in Avianca's facilities and the environmental license if required.

Industria Ambiental

Código: LO-FO-35-V1
Fecha Creación: 01/09/2018
Fecha Actualización: 22/11/2018

CERTIFICADO DE TARTAMIENTO No. 2000500220-05225342

Que entre el 2022-04-01 al 2022-04-29 fueron recibidos para manejo integral 6248 KG de la empresa: AEROVIAS DEL CONTINENTE AMERICANO SA identificada con 890100577-6 ubicada en dirección CR 51 B 80 58 LC 104 OF 1207 y teléfono (57) 8-77403.

SEDE	FECHA RECEPCIÓN	CORRIENTE	NUMERO SOLICITUD	DESCRIPCIÓN DEL RESIDUO	CANTIDAD	UNIDAD	TRATAMIENTO	DISPOSICIÓN
Aeropuerto José María Córdoba	01/04/2022 7:00	Y12	A630719575	SOLIDOS CONTAMINADOS CON PINTURAS Y12	218.50	KG	INCINERACIÓN CON APROVECHAMIENTO ENERGÉTICO	CELDA DE SEGURIDAD
Aeropuerto José María Córdoba	01/04/2022 7:00	Y12	A630719575	ENVASES CONTAMINADOS CON SOLVENTES Y12	12.00	KG	INCINERACIÓN CON APROVECHAMIENTO ENERGÉTICO	CELDA DE SEGURIDAD
Aeropuerto José María Córdoba	01/04/2022 7:00	Y12	A630719575	RESIDUOS DE SOLVENTES Y12	7.00	KG	MANEJO INTEGRAL DE RESIDUOS	CELDA DE SEGURIDAD

Figure 7. Hazardous waste certificate format

c. Construction and Demolition Waste (CDW)

Categoría	Grupo	Clase	Clase
RCD Aprovechables	I-Residuos mezclados	Residuos pétreos	Cerámicos, ladrillos, arenas, gravas, bloques, fragmentos de roca, etc.
	II-Residuos de material fino	Residuos finos no expansivos	Arcillas, limos, y residuos inertes, entre otros.
		Residuos finos expansivos	Arcillas(montmorillonita) y lodos inertes, entre otros.
	III-Otros residuos	Residuos no pétreos	Plásticos, PVC, maderas, cartones, papel, siliconas, vidrios, cauchos, etc.
		Residuos de carácter metálico	Acero, cobre, hierro, aluminio, estaño y zinc.
		Residuos orgánicos de pedones	Residuos de tierra negra
		Residuos orgánicos de cespedones	Residuos vegetales y otras especies bióticas
RCD No Aprovechables	IV-Residuos peligrosos	1. Residuos corrosivos, reactivos, radioactivos. explosivos, tóxicos, patógenos (biológicos)	Desechos de productos químicos, emulsiones, alquitrán, pinturas, disolventes orgánicos, aceites, resinas, plastifican tes, tintas, betunes, barnices, tejas de asbesto, escorias, plomo, cenizas volantes, luminarias, desechos explosivos, y los residuos o desechos incluidos en el Anexo I y Anexo II o que presenten las características de peligrosidad descritas en el Anexo III del Decreto 4741 de 2005.
	VI-Residuos contaminados con otros residuos	1. Residuos contaminados con residuos peligrosos	Materiales pertenecientes a los grupos anteriores que se encuentren contaminados con residuos peligrosos. Estos deben ser dispuestos como residuos peligrosos.
		No definida	Residuos contaminados con otros residuos, que hayan perdido las características propias para su aprovechamiento.
	VII-Otros residuos	No definido	Residuos que por requisitos técnicos no es permitido su reuso en las obras.

Figure 8. RCD Leaderboard

- Registration of construction and demolition waste related to the service to be provided y report the amount in (kg) of the waste generated by each work center
- It is suggested to have good practices for the segregation of CDW in case they are generated by a supplier or by the company itself, separating non-usable CDW from usable ones.
- Certificate of treatment or final disposal that includes the quantities registered and generated in Avianca's facilities and the environmental license if required.

You can use the model proposed in Annex 3

7. Procedure for the control of spillage of chemical substances.

The procedure must identify the activities and substances that can potentially generate a spill and establish contingency measures to control it.

You can use the model proposed in Annex 5

8. Certificate of legal origin of materials (gravel, sand) when applicable.

The materials used must come from authorized sources, for which the certificate of legal origin of the Quarry must be delivered where it is evident that such extraction is authorized by the respective control

authorities.

9. Copies of Environmental Licenses specifying the scope and validity of the suppliers for the final disposal of hazardous waste and debris.

In accordance with what is documented in the waste management plan, supports must be delivered from the companies hired to dispose of hazardous waste and debris, which must be duly endorsed, attaching for this the copy of the license that accredits the disposing company as an authorized company for the management of the waste that is going to be generated.

10. Biodegradability curves of used soaps and detergents

The soaps and detergents used in the different activities must be biodegradable, to ratify such condition, the biodegradability curve of these must be delivered, which must be issued by a nationally or internationally accredited laboratory. This type of analysis is normally delivered by the manufacturer.

11. Specifications for Colombia

In Colombia, in addition to the documents described above, for Contractors and subcontractors of Construction Projects; new or large construction and major modifications to current structures, large maintenance projects (with or without tasks classified as high-risk); the Certification of the Occupational Risk Insurer must be presented indicating the behavior of the accident rate (frequency rate and severity rate) and the occurrence of occupational diseases in the last year.

5.1.2. Prerequisites for the performance of the contract

Once the CONTRACTOR is informed of the award of the contract and before starting the work, the CONTRACTOR's workers must carry out the HSE induction for Avianca Contractors, which is coordinated by the person in charge of the technical area (auditor).

Workers must attend the induction on the agreed date and time, which will enable them to perform their work within the company's facilities, certifying that they know Avianca's HSE standards.

The HSE induction must be carried out every time a new worker of the Contractor needs to enter Avianca's facilities. Likewise, on the day of the induction, the Contractor must deliver a the documents listed with the following specifications:

1. Copy of Social Security payslip

Copies of the document that supports the payment of Social Security by the company must be delivered for each of the workers who will carry out the activity in Avianca Group.

The Contractor must ensure that social security contributions are up to date, in accordance with the level of risk of the work performed and with local legislation.

If the Contractor lasts more than a month performing the work, the first 10 days of the month must bring to occupational health the payments in force for the month in which the work is performed.

2. Certification of Training in the contracted high-risk work

A copy of the training certificate or the original of the worker's experience certificate, issued by the company, must be provided, stating the time that the worker has performed in the high-risk task to be performed.

3. Responsible for the Contractor's HSE

The data of the person responsible for the Contractor's HSE must be provided, taking into account the characteristics mentioned in numeral 4.1, item 9, in addition to this, if the Contractor performs high-risk work, it must process the Work Permits according to the activity to be executed.

If the Contractor's workers need to bring in tools or supplies, they must inform Physical Security in advance and in writing and/or process entry permits issued by the competent Authority (Customs Administration, Airport Operator, etc.).

4. Occupational health and safety program.
5. Evaluations carried out by the ARL or by external entities of the state of the management system.
6. Medical Examinations Occupations
7. Schedule of activities for risk control

8. Sociodemographic description and diagnosis of the health conditions of the workers before starting the work.
9. Records of current medical-occupational restrictions and recommendations of contracted workers
10. Internal procedures and instructions on occupational safety and health
11. Emergency prevention, preparedness and response plan
12. Certificate of the fifty (50) hour virtual training course in OSH or its update of each of the hired workers
13. Registration and statistical analysis of occupational accidents and occupational diseases
14. Record of accident indicators (frequency index, severity index and proportion of fatal occupational accidents)

15. Specifications for Colombia.

In Colombia, in addition to the documents mentioned above, for activities that involve working at heights, the current certificate of medical aptitude of the people who will perform the work and the certificate of competence or training endorsed by the SENA (National Learning Service) or entity authorized by it will be requested.

If the Contractor had previously carried out the induction and his card is valid, he must present the documents described above 4 days before the start of work, taking into account:

a. Social security payment supports (If more than one month has passed since the induction and the date of start of activities)
b. The details of the Contractor's HSE manager if any changes were made
c. Certificate of training in high-risk activities if it is not registered on the card.

5.1.3. Requirements during the execution of the contract.

The Contractor must carry out the activities for which it was hired, complying with all the requirements stipulated in this HSE Guide for Contractors.

In section 6, some basic recommendations are given according to the activity to be carried out by the Contractor, but which must be complemented in accordance with local legislation and other requirements to which the activity to be carried out is subject (e.g. specific requirements of the Airport Operator).

When the Contractor carries out activities that involve high-risk work (Entry into confined spaces, Contacts with hazardous energies, hot work, lifting loads, working at heights) the person in charge of the technical area and HSE must endorse the formats established by Avianca

SSMA will carry out periodic inspections without prior notice at the place where the activity is being carried out to verify compliance with Avianca's HSE requirements by the Contractor and its Subcontractors. In case

of finding any nonconformity, the person in charge of the technical area (auditor) will be informed and will proceed.

It will be necessary to take into account at this stage, the following points:

1. Personal protection elements.

The Contractor shall provide all its personnel with work clothing and the personal protection elements required for the safe execution of the work. You should also inspect personal protective equipment and keep sufficient inventory available for replacements in case of damage or loss, immediately.

To ensure that the personal protection elements effectively fulfil their function, the Contractor's HSE manager must take into account the following recommendations:

a. Periodically check personal protection items to ensure that they are in good condition.
b. Clean personal protective equipment continuously, with the substances recommended by their manufacturers. Do not use abrasive products.
c. Store personal protection items in protected places.
d. Request a change of personal protection elements when they are deteriorated.

e. To put on the hearing protectors, the hands must be very clean, to avoid infections.

f. Respirators with filters for organic solvents should be stored in a tightly closed plastic container, otherwise the filters would be saturated with the vapors of the solvents dispersed in the environment.

Items for other work are listed below:

I. Work in areas with noise.

Hearing protection according to the level of risk that meets the required attenuation level.

II. Work with chemicals, particulate matter and/or paints

- Half-face or full-face respiratory protection depending on the risk
- Eye and face protection if required
- Gloves according to the chemical to be used.
- Safety boots
- Complete Spill Control Kit

III. Work involving biological risk

- Rubber boots and gloves
- Eye and face protection if required

- Body protection if required (must be commensurate with the type of risk)

Note: ANNEX 5 lists the safety standards and in turn the personal protection elements of each of the high-risk activities classified in numeral 3.

2. Safety standards

a. Electrical, Mechanical, Pneumatic and Hand Tools

I. When the activity requires the use of electric, pneumatic, mechanical or manual tools, the following recommendations should be followed: They
II. should be kept in good condition, clean, sharp, oiled, and replaced when they are worn. (Do not use tools that are in poor condition.)

III. They must not be altered in any way and must be operated in accordance with the manufacturer's recommendations.
IV. They should not be used to perform activities for which they were not designed. Do
V. not use the tools if the safety devices have been removed to avoid accidents or if they no longer work.
SAW. Use personal protective equipment in accordance with the dangers to which the user is exposed by the use of the tool.
VII. Inspect tools before use.
VIII. Verify that the voltage of the electrical outlet corresponds to that required by the tool.
IX. Personnel must report to their boss or supervisor any anomaly that occurs in the equipment, machines and/or tools they use.
X. Do not carry any tools or sharps in the pockets of the shirt, trousers or waist of the trousers, unless they are designed or adapted for this.

XI. When personnel carry out maintenance work on equipment, machines and/or structures in general, they must refrain from using energy-conducting elements such as watches, chains, bracelets, rings, etc.

b. Work with Hazardous Materials.

A hazardous material is any solid, liquid or gaseous substance that, due to its physical, chemical or biological characteristics, can cause damage to human beings, the environment or property.

I. A list of hazardous materials used in the contracted labor.
II. Material Safety Data Sheets (MSDS) for the materials listed above must be available at the location where they are used and in the official language of the station where these works are performed.
III. Each container must be labeled or marked with the identification of the hazardous material it contains. IV.

Flammable materials should not be packaged in glass or plastic containers. And the container must be sealed while not in use.

V. No hazardous materials should be packaged in food containers (such as soda bottles, juices, water, etc.).

SAW. Flammable or combustible material may not be stored in the work area in quantities greater than those required for 1 week of work.

VII. Flammable or combustible material should not be stored near sources of heat, spark or open flame for any reason.

VIII. Workers who handle hazardous materials must know, know how to use and to apply the recommendations of the safety sheets, as well as the hazards to which they are exposed if the recommendations are not applied.

IX. At least the personal protection elements suggested in the safety sheet must be used. For example: safety glasses, half-face masks, full-face masks, suits, gloves, filters; according to the type of chemical.

X. Contractors are responsible for the safe use, storage, transportation, and final disposal of hazardous materials used in the performance of their work, in accordance with applicable laws.

XI. It is forbidden to discharge any chemical substance in any concentration into sanitary rainwater channels, siphons or soils.

XII. It will be mandatory to have at least one spill kit and leak control kit in the place where the hazardous chemical substances are stored, whose capacity exceeds the volume of what is stored.

Contractors must keep accurate records of the types and quantities of waste, including hazardous waste, and the facilities in which the waste is used, treated, or disposed of. The contractor must provide SSMA with copies of these records. Liquids (including industrial or non-domestic wastewater) or chemical remnants should not be drained or allowed to be discharged into siphons, gutters, gutters, or sewers.

Do not clean equipment, machines, or tools or change lubrication fluids or pneumatic fluids in areas without contaminant spill and control facilities.

c. Work with compressed air and industrial gases.

If the contractor's activity requires the use of the company's pneumatic network or involves the use of industrial gases such as ammonia, nitrogen, oxygen, acetylene, natural gas or liquefied petroleum gas (propane), among others, the following recommendations must be followed:

I. The connections of pneumatic equipment to the company's network may only be made with the authorisation of the person in charge of the work centre where the air lines are located.

II. The use of compressed air for personal cleaning is prohibited. The

III. containers must remain in perfect condition and be purchased from suppliers who certify the good condition of the container.

IV. Cylinders or pipes must be prevented from being bumped or dropped.
V. The transport of the cylinders must be done vertically, therefore, it is forbidden to transport them horizontally.
SAW. Cylinders should be held with valve guards and anchored to fixed points to prevent them from falling out and hitting the valve. Cylinders should be stored in
VII. ventilated cubicles, protected from the weather and away from heat sources and secured with chains to a bracket or wall to prevent them from falling.

VIII. They must be stored according to their compatibility characteristics.
IX. Empty containers must be identified and separated from full containers.

d. Demolitions

I. For any work that requires demolition, the areas involved must be isolated and demarcated.
II. Power lines, industrial utility pipes (steam, water, compressed air, and ventilation ducts) must be properly protected and/or deactivated.

III. The removal of materials by gravity must be done through closed ducts. Heavy objects will be lowered by mechanical means, not by free fall. The
IV. rubble must be disposed of in accordance with the provisions of the current legislation of the station where the demolition work is carried out.

5.1.4. Requirements for termination of the contract

As support for the Steps taken during the execution of the project, within Avianca's facilities, the contractor must deliver a report or digital report that includes a summary of the activities carried out and the supports of these, which will be at least as listed below:

1. Copies of environmental licenses of the Environmental Waste Managers

Authorization granted by the competent authority to a natural or legal person for the execution of a project, work or activity that may cause environmental impact.

2. Copies of final disposal reports of waste generated (hazardous, non-hazardous, CDW, chemical, special, wastewater, etc.).

Document issued by a duly authorized Environmental Manager, which stipulates the type of waste handled, the quantity, the method of treatment or final disposal. This copy must be sent by email to the HSE area.

3. Support for the purchase of construction supplies (source or authorized supplier).

4. Supports for the management or integral handling of refrigerant gases.

5. Supports of quantities of fuels supplied and/or consumed.

6. Quality sheets of the fuel supplied and/or consumed.

7. Technical data sheets of the gases used.

8. Water and energy consumption supports

5.2. ACTIVITIES

5.2.1. Generation of hazardous waste.

Because any operation carried out with hazardous waste, from its generation to its final destination, is potentially generating negative environmental impacts; as well as to effectively reduce the risk to health and the environment associated with the management of hazardous waste, it is essential that the contractor develops or has management plans for the waste generated during the execution of the project, taking into account prevention, which contemplate both the reduction of the generation of hazardous waste, as well as the intrinsic danger of the same, and ensure environmentally appropriate management practices.

Therefore, the guidelines that contractors must follow at least in terms of Hazardous Waste are:

1. Use appropriate waste containers, in design, quantity and with the capacity that allows their easy handling, transport and disposal.
2. Segregate waste based on chemical compatibility. Likewise, hazardous waste must not be mixed with non-hazardous waste.
3. Carry out adequate handling, segregation, identification, transport and final disposal of the waste they generate, in accordance with local legislation and Avianca standards.
4. Possess -as the case may be- a document of:

    a. Authorization as a Producer of Hazardous Waste.
    b. Environmental Permit or License of the Environmental Managers Authorized to carry out the Management of the Waste generated during the execution of the work, good or project.
    c. Authorisation as a Waste Transporter (both non-hazardous and hazardous waste) or the Manager who carries out this activity.
    d. Authorisation as Final Waste Manager or Final Disposal Acts of the Manager authorised for this purpose.
    e. Send by email to the Environmental Management area, the supports of the Environmental Waste Managers and the certificate of final disposal of these.

5.2.2. Generation of special waste

1. In case of generating debris, it must carry out the final disposal of these in authorized sites and must send by email to the Environmental Management area, the certificate of disposal of these.
2. It must be deposited in specific containers for construction waste or CDW and managed as indicated by local legislation: Doing so through authorized entities, both for its transport and for the final disposal site.

3. They must not mix them with other waste, such as common or hazardous waste.

5.2.3. Use of chemicals

1. Ensure that the loading/unloading of hazardous chemicals is carried out correctly, so that there is a minimum risk of spillage.
2. All chemical containers used must be identified and correctly labelled.

a. Container

Container intended to hold products until final consumption

b. Label

Printed information that warns of a hazard of a hazardous substance through colors and symbols. They are placed on the different packaging or packaging of the hazardous substance or waste.

3. Have at hand, in the official language of the station, the safety data sheet for hazardous materials or substances.
4. Cleaning products must be biodegradable.

5. The chemical disinfectants used (pesticides, biocides, insecticides, etc.) must be authorised by the competent authority as disinfectants for environmental use, of low hazardousness and biodegradable, if possible.

6. The intrinsic nature of the chemicals stored shall be respected, ensuring that incompatible substances do not mix with each other.

7. Have a Chemical Compatibility Matrix, at the place where the chemical substances are stored.

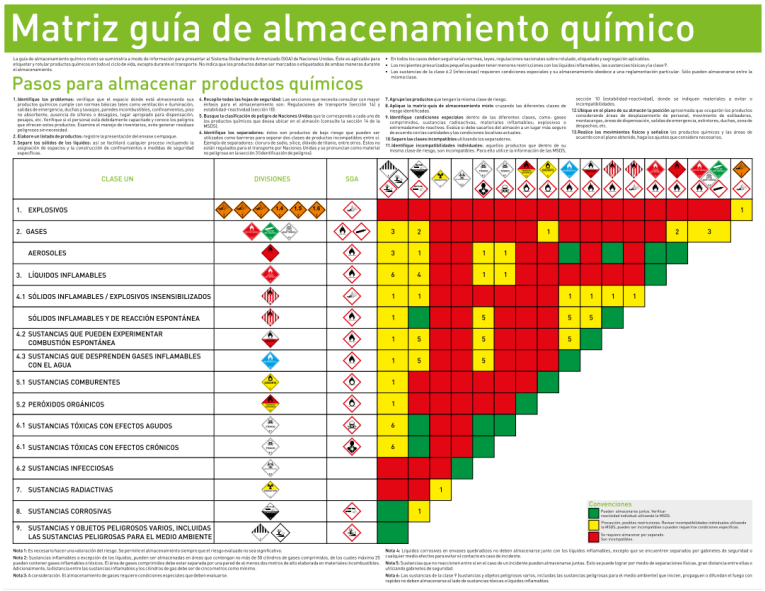


Figure 8. Chemical Storage Guide Matrix

8. Prevent the occurrence of chemical spills at Avianca facilities; If a spill occurs, it must carry out all the necessary actions for its correct cleanup and in the same way, carry out all actions for the remediation of environmental components that may be affected by said spill.

9. Have at least one spill kit and leak kit whose absorption capacity is greater than the volume of substances stored at the temporary storage site.

10. If there is a spill of a chemical substance or hazardous waste into the environment Environment, the contractor, in addition to solving the contingency with its own means, must inform Avianca of what happened, presenting the following information:

    a. Names of the people involved
    b. Date and time of the spill.
    c. Copy of the BEFORE OF of the material that was spilled
    d. Estimated quantity and type of material that was spilled.
    e. Duration of release (how long the material was spilled into the environment)
    f. Measures taken or planned to reduce, eliminate, and prevent the spill from reoccurring.

Emergency response procedures must be tested through practical exercises in simulated conditions, in order to evaluate their operation and ensure their continuous improvement, this corresponds to emergency drills in the event of chemical spills.

5.2.4. Generation of liquid waste or dumping

During the acquisition of services, wastewater discharges and discharges are generated, the following information and/or supports must be requested from the supplier or contractor:

1. Report of the amount generated (kg) during the service and/or operation
2. Have the environmental license or permit in case it is necessary to carry out a punctual dumping
3. Discharges into the network leading to the Wastewater Treatment System must comply with the conditions established in current legislation on discharges, depending on the station where the work, asset or project is carried out.
4. Characterize the type of wastewater according to its origin (water with mixtures of oil, surfactants and other chemical substances such as sodium hypochlorite, etc.)
5. Periodic sampling of the quality of the effluent before carrying out a one-off discharge.
6. If spills occur during the execution of the activities, they must be collected with absorbents, avoiding diluting them or throwing water through a hose, for cleaning; thus eliminating the likelihood of these spills being led into the sewer network or the rainwater gutter.

5.2.5. Carrying out high-risk activities

1. The high-risk works contemplated herein (Section 3: CONTRACTOR CLASSIFICATION) may not be started without compliance with the requirements established in this document.
2. The existence of a work permit as a rule of the contractor does not exempt him from filling out the forms required by Avianca.
3. The decision to perform high-risk work should be the last of the options after having considered work practices in which it is not necessary to assume the risk generated by this type of work.
4. For the execution of high-risk works, the CONTRACTOR must fill out the corresponding work permit according to the work to be performed.
5.

Figure 9. General requirements associated with high-risk jobs.

5.2.5.1. Procedure for applying for Work Permits.

To apply for a work permit, the following steps must be followed:

a. The contractor must request the corresponding permit from SSMA for the work to be performed, for which he must present the HSE induction certificate of all workers who are going to participate in the high-risk work.
b. Fill out the Comprehensive Work Permit (FR-NE0804-95) work permit completely and attach the Safe Work Analysis.
c. Prepare the place where the work will be carried out with all the necessary elements for the activity (Personal Protection Elements, signage, tools, etc.)
d. Request the endorsement of the Work Permit by the person in charge of the Technical Area (Comptroller)
e. Inform SSMA so that it can verify the minimum requirements established in this document at the workplace and its endorsement in the work permit. The permit will not be endorsed by SSMA until all the safety conditions required for the work are met and the corresponding signatures are found.
f. Once the activity is completed, SSMA must verify the delivery condition of the work site. The contractor's OHS manager and Avianca's SSMA sign the closure of the work permit.

6. SPECIAL REQUIREMENTS FOR THE EXECUTION OF SPECIFIC ACTIVITIES.

Below are some specific requirements regarding HSE for each of the categories of contractors that were defined at the beginning of this Guide and whose establishment was made in the Self-Declaration Form; therefore, depending on the category of the Contractor, it must comply with at least:

6.1. CIVIL WORKS AND INFRASTRUCTURE

The contractor offering the Civil Works and Infrastructure service, when applicable according to current legislation, must guarantee compliance – before, during and after the execution of the activities subject to the contract – with the requirements associated with the environment, as well as the requirements in terms of industrial safety according to the type of high-risk work being executed. (See number 3. CONTRACTOR CLASSIFICATION)

REQUIREMENTS ASSOCIATED WITH THE ENVIRONMENT.

1. Processing of Permits before the Environmental Authority

    a. Obtaining the environmental permit for the performance or operation of any activity, work or project of expansion, rehabilitation or reconversion, which includes the submission to the Environmental Authority of environmental forms and/or other information that it requests as part of the EIA process.
    b. Obtaining an Environmental License, permits, authorizations and/or concessions for the use, exploitation and/or affectation of renewable natural resources for the useful life of the project, work or activity.
    c. Obtaining a Permit for the Concession of Surface and/or Groundwater
    d. Obtaining an Atmospheric Emissions Permit: Fixed Sources
    e. Obtaining a Discharge Permit for ordinary and special wastewater
    f. Obtaining a Permit for Prospecting and Exploration of Groundwater
    g. Obtaining Authorization for the Construction of Works that occupy the course of a stream or water tank
    h. Obtaining a Single Forest Use Permit or Authorization
    i. Obtaining a Permit or Authorization for the Use of Isolated Trees
    j. Obtaining a permit for the exploitation of materials

2. Definition of affectation in the area of influence
3. Definition, Establishment, Execution and Monitoring of Plans of:

    a. Handling, protection and storage of construction materials
    b. Soil Protection: Erosion processes and control over runoff, when applicable
    c. Prevention of pollution of bodies of water and public service networks: Sampling of intervened waters
    d. Management of vegetation, fauna and landscape
    e. Traffic Management

f. Contingency for Risks associated with the service to be provided
g. Air Emissions Management and Control: Fixed Sources and Mobile Sources
h. Handling of excavation materials, removal materials, debris and sludge
i. Management, control and monitoring of wastewater discharges.
j. Design and execute a training and training program for personnel involved in the maintenance of machinery, equipment and/or tools

4. Compensation required in intervened areas
5. Installation of temporary infrastructure and dismantling of these at the end of the project:

a. Buildings intended for camps, when applicable
b. Sites for the collection of construction materials
c. Portable toilets
d. Warehouses
e. Water Storage
f. Ecological points
g. Emergency Kit
h. Laboratories, when applicable
i. Equipment Room
j. Installation sites of crushing plants, concrete and asphalt mixtures, when applicable

k. Other spaces that are required for the proper administration and execution of the project

6. Designate an environmental officer who has the skills, knowledge and training in environmental matters, whose functions will be to ensure compliance with the applicable environmental legislation during the execution of the project, the execution of good practices and the delivery of information and evidence required by the Contracting Party
7. Hiring and Training of Personnel and Labor
8. Documents for the final stage of the project

a. Hydrosanitary Plans, when applicable
b. Plans of recovered areas
c. Before and after landscape photographic record
d. Evidence of forest compensation areas, when applicable
e. Registration of uninstallation and removal of temporary installations
f. Copy of Documents and Reports delivered to the Environmental Authorities
g. Final Environmental Management Report

Note: The requirements set forth herein correspond to minor works or projects. For major works (construction of hangars, construction of Collection Centers, etc.) the requirements for the Contractor will be dictated by Avianca's HSE managers, according to the execution station of the work or project and based on each of its stages.

REQUIREMENTS ASSOCIATED WITH INDUSTRIAL SAFETY

6.1.1. Working at heights

To carry out work at heights, the contractor must comply with both the technical and legal requirements mentioned in Res. 4272 of 2021. Please note:

1. Training or certification of the work competence of workers who perform and/or supervise safe work at heights.
2. Fall protection program.
3. Have personal protection elements suitable for safe work at heights, which must be certified.
4. Have engineered systems for fall prevention.
5. Have at least one person exercising the role of coordinator of work at heights in the workplace where they must comply with the following:

    a. Certification in the current labor competence standard for safe work at heights
    b. Training at the level of work at height coordinator
    c. Minimum one-year certified experience related to working at heights

6. Have collective prevention measures such as:

    a. Delimitation of the area by means of ropes, cables, fences, chains, tapes, belts, cones, beacons, or flags, of any type of material, yellow and black combined, if they are permanent, and orange and white combined, if they are temporary.
    b. Access Controls
    c. Handling of unevenness and holes (gaps)
    d. Warning line made of steel, rope, chain or other materials, which must be supported by supports that keep it at a height between 0.85 meters and 1 meter above the work surface. You must meet the following requirements:

        I. It must be placed along all unprotected sides It must be placed 1.80 meters
        II. away from the unprotected edge or more It must resist horizontal forces of at
        III. least 8 kg.
        IV. It must have visible colored flags separated at intervals of less than 1.80 meters.

    e. Area signage.

f. Fixed, portable, permanent or temporary railings. Fixed and portable railings must always be identified and comply with the requirements established in the following table:

TYPE OF REQUIREMENT	MEASURE
Structural resistance of the railing	Minimum 200 lbs (90.8 kg) of point load at the midpoint of the upper cross-member of the applied railing in either direction.
Heights of the railing (From the surface where you walk and/or work, to the upper edge of the upper crossbar).	1 meter minimum on the work surface; The existing railings that are less must be adjusted within a term of no more than 8 years to the minimum required height of 1 meter, as of the effective date of this resolution.
Location of horizontal intermediate crossbars.	They must be located a maximum of 48 cm from each other.
Spacing between vertical supports	That which guarantees the minimum resistance requested.
Skirting board heights	Minimum 9 cm, measured from the surface where you walk and/or work. If there are accumulated materials whose height exceeds that of the skirting board and can fall into the void, a net, canvas, among others, must be installed secured to the railing, with sufficient resistance to effectively prevent the fall of the objects.

Table 2 Minimum requirements for compliance with guardrails. SOURCE: Resolution 4272 of 2021

g. Safety assistant as a complementary measure to the measures listed above, in order to help warn and control the dangers and risks that are identified in the site where work is carried out at heights.

7. Permit to work at heights
8. Annual retraining record with an hourly intensity of 20 hours for all workers who perform work at heights.
9. Valid certificate of medical-occupational fitness for each worker who is going to carry out work at heights
10. Work at Heights Rescue Plan Documented and Implemented
11. Permanent accompaniment of a person who is able to activate the emergency plan and rescue plan at heights if necessary.
12. Emergency plan in accordance with the activities to be carried out and that guarantees an organised and safe response to any incident or accident.
13. Have access systems for work at heights such as scaffolding, ladders, personnel lifts, cranes with baskets, among others, which must meet the following requirements:

ACCESS SYSTEM	REQUIREMENT
SCAFFOLDING	Current quality certificate issued by a regulatory body.
	Pre-operational inspection
	Resume, where the data of: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.
HANGING SCAFFOLDING	Certificate of platform support ropes
	Equipment System Data Sheet
	Inspection of the entire structural system of the scaffold
	Certificate of pre-operational test of the scaffolding, endorsed by the person responsible for the task and HSE.
	Resume, where the data of: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.
LIFTING MACHINE AND CRANES WITH BASKET	Machine quality certificate from a certified body
	Pre-operational test certificate, signed by the specialist manager inspecting the machine, site manager and HSE area
	Last maintenance of the machine, signed by the person responsible for its execution
	Machine Data Sheet
	Pre-operational inspection
	Satellite plan for road management of entry, movement and parking of the machine.
	Fuel and hydraulic fluid safety data sheet
	Certified for machine handling
	Emergency procedure for the machine
STAIRS	Pre-operational inspection
	Technical data sheet supplied by the supplier/manufacturer of the access medium
	Dielectric Stairs Certificate
	Resume, where the data of: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.

Table 3 Minimum compliance requirements for access systems.

14. Have safety net systems for fall arrest that meet at least the following requirements:

    a. Manufacturer's Quality Certificate
    b. System resume, where the data of the following are recorded: date of manufacture, useful life, history of use, inspection records, maintenance records y technical sheet.
    c. WEEKLY inspection records as long as there have been modifications in the system or after any incident that may affect its integrity.

    d. Compliance with the minimum installation requirements of the network systems mentioned below:

VERTICAL DISTANCE FROM THE SURFACE WHERE YOU WALK AND/OR WORK TO THE HORIZONTAL SURFACE OF THE NETWORK	MINIMUM HORIZONTAL DISTANCE REQUIRED FROM THE OUTER EDGE OF THE MESH TO THE EDGE OF THE WORK SURFACE
1.5 m	2.40 m
More than 1.5 m up to 3 m	3 m
More than 3m	4 m

Table 4 Minimum requirements for the installation of safety net systems.

15. Have active protection measures such as fixed anchor points, Portable Anchorage Devices or Connectors, fixed and portable horizontal lifelines, fixed and portable vertical lifelines and connectors, which meet at least the following requirements:

    a. FOR FIXED ANCHOR POINTS:

TYPES OF ANCHOR POINTS	REQUIREMENTS
ANCHOR POINTS FOR FALL DETECTION	Quality certification in accordance with current national or international standards
	Inspection Logs and Maintenance Logs
	Technical data sheet of the point, specifying physical properties such as resistance to strength, ageing, abrasion, corrosion and heat.
	If designed by a qualified person, they must be able to withstand twice the maximum force of the fall (3,600 pounds, 15.83 kilonewtons, or 1,607 kilograms)
	If they are not designed by a qualified person, they must be capable of supporting at least 5,000 pounds (22.2 kilonewtons – 2,272 kg) per person connected.
	NOTE: In no case is the connection of more than two workers to a fixed anchoring mechanism permitted.
	Quality certification in accordance with current national or international standards

ANCHOR POINTS FOR FALL RESTRICTION	Inspection Logs and Maintenance Logs
	Technical data sheet of the point, specifying physical properties such as resistance to strength, ageing, abrasion, corrosion and heat.
	Minimum resistance of 3,000 pounds per connected person (13.19 kilonewtons– 1339.2 kg) and its location and design will prevent the worker from approaching the vacuum.

Table 5 Minimum requirements for fixed anchor point

b. FOR PORTABLE ANCHORING DEVICES OR CONNECTORS

REQUIREMENTS
Quality certification in accordance with current national or international standards
Inspection records and maintenance records Technical data sheet of the devices, specifying
physical properties such as resistance to force, ageing, abrasion, corrosion and heat.
Minimum strength 5,000 pounds (22.2 kilonewtons– 2,272 kg)

Table 6 Minimum requirements for portable anchoring devices.

c. FOR HORIZONTAL LIFELINES

TYPES OF HORIZONTAL LIFELINES	REQUIREMENTS
PORTABLE HORIZONTAL LIFELINES	Quality certification of all equipment in accordance with current national or international standards
	Technical sheet of each of the lifelines used in the development of the work, specifying physical properties such as resistance to strength, ageing, abrasion, corrosion and heat.
	Power Absolver Quality Certificate
	Inspection Logs and Maintenance Logs
	Certificate of operation and quality of each of the components separately
	It must be installed between anchor points that support at least 5,000 pounds (22.2 kilonewtons– 2,272 kg) per connected person;
	NOTE: It must not be overvolted, and a maximum of two people can be connected to the same line

FIXED HORIZONTAL LIFELINES	Quality certification of all equipment in accordance with current national or international standards
	Technical sheet of each of the lifelines used in the development of the work, specifying physical properties such as resistance to strength, ageing, abrasion, corrosion and heat.
	Inspection Logs and Maintenance Logs
	The cable to be used for horizontal lifelines must be made of steel with a steel core of nominal diameter equal to or greater than 5/16" (7.9 mm). In case of having temporary lifelines, they can be in steel with a steel core and nominal diameter equal to or greater than 5/16" (7.9 mm), or be in synthetic materials that meet the minimum strength of 5,000 lb. (22.2 kilonewtons– 2,272 kg) per connected person.
	NOTE: Rail systems must be certified by the manufacturer or the qualified person who designs them

Table 7 Minimum requirements for horizontal lifelines

d. FOR VERTICAL LIFELINES

TYPES OF VERTICAL LIFELINES	REQUIREMENTS
FIXED VERTICAL LIFELINES	Quality certification of all equipment in accordance with current national or international standards
	Technical sheet of each of the lifelines used in the development of the work, specifying physical properties such as resistance to strength, ageing, abrasion, corrosion and heat.
	Inspection Logs and Maintenance Logs
	Impact Absolver Quality Certificate
	Certificate of operation and quality of each of the components separately
	They must be installed on vertical stairs that exceed a height of 4.50 m above the lower level
PORTABLE VERTICAL LIFELINES	Quality certification of all equipment in accordance with current national or international standards
	Technical sheet of each of the lifelines used in the development of the work, specifying physical properties such as resistance to strength, ageing, abrasion, corrosion and heat.

	They must be made of steel cable with a nominal diameter between 5/16" (7.9 mm) and 3/8" (9.5 mm) or rope between 13 mm and 16 mm that meet the minimum strength of 5,000 lb (22.2 kilonewtons – 2,272 kg).
	Certificate of operation and quality of each of the components separately
	Inspection Logs and Maintenance Logs
	Be installed at anchor points that support at least 5,000 pounds (22.2 kilonewtons – 2,272 kg) per person connected.

Table 8 Minimum requirements for vertical lifelines.

e. FOR CONNECTORS

TYPES OF CONNECTORS	REQUIREMENTS
SAFETY HOOKS AND CARABINERS	Certification of the manufacturer's quality in accordance with current national or international standards
	Technical data sheet of each of the hooks and carabiners used in the development of the work, specifying physical properties such as resistance to force, ageing, abrasion, corrosion and heat.
	Minimum strength of 5,000 pounds (22.2 kilonewtons– 2,272 kg)
	Resume, where the data of: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.
	NOTE: They must not have sharp or rough edges that could cut or wear the lines or belts by friction or injure the worker. The use of threaded carabiners is prohibited in fall protection systems. They must have an automatic locking closure and must be made of steel
CONNECTORS FOR FALL RESTRICTION AND POSITIONING	Certification of the manufacturer's quality in accordance with current national or international standards
	Technical sheet of each of the connectors used in the development of the work, specifying physical properties such as resistance to

	strength, aging, abrasion, corrosion and heat.
	Resume, where the data of: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.
	Fall restriction connectors may be made of synthetic fiber, rope, wire rope, or other materials with a minimum strength of 5,000 pounds (22.2 kilonewtons – 2,272 kg) and positioning connectors may be made of rope, synthetic fiber band, chains, wide-opening carabiners, or other materials that guarantee a minimum strength of 5,000 pounds (22.2 kilonewtons– 2,272 kg).
TYPES OF FALL DETECTION CONNECTORS	REQUIREMENTS
ENERGY-ABSORBING SLINGS AND SELF-RETRACTING LIFELINES	Certification of the manufacturer's quality in accordance with current national or international standards
	Resume, where the data of: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.
	Must reduce impact forces to the worker's body, to a maximum of 50% of the MFD (Maximum Detection Force) equivalent to 900 pounds (4 kilonewtons – 408 kg)
	Technical verification of maximum elongation (1.07m)
	Power Absolver Quality Certificate
TYPES OF CONNECTORS FOR VERTICAL TRANSIT (BRAKES)	REQUIREMENTS
BRAKES FOR FIXED LIFELINES	Certification of the manufacturer's quality in accordance with current national or international standards
	Technical data sheet of each of the brakes used in the development of the work, specifying physical properties such as resistance to force, aging, abrasion, corrosion and heat.
	Resume, where the data of: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.

	They must be compatible with the design and diameter of the vertical lifeline and for connection to the harness
	It must have a double locking hook or self-closing carabiner with a minimum strength of 5,000 pounds (22.2 kilonewtons – 2,272 kg), which must be certified by a regulatory body.
BRAKES FOR FIXED LIFELINES	Certification of the manufacturer's quality in accordance with current national or international standards
	Technical data sheet of each of the brakes used in the development of the work, specifying physical properties such as resistance to force, aging, abrasion, corrosion and heat.
	Resume, where the data of: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.
	Brakes may integrate an energy absolver system and for connection to the harness, it must have a double safety hook or a self-closing carabiner with a minimum resistance of 5,000 pounds (22.2 kilonewtons– 2,272 kg) NOTE: The energy absolver, double safety hook or self-closing carabiners must be certified and have a technical verification from qualified entities
	NOTE: Brakes must ensure compatibility with vertical lifeline diameters

Table 9 Minimum requirements for connectors

Note: Under no circumstances may brakes be used as anchor points for other types of connectors, except those designed by the manufacturer. Knots are not allowed as a replacement for Brakes.

f. FOR FULL BODY HARNESS

REQUIREMENTS
Manufacturer's quality certification in accordance with current national or international standards Technical data sheet for
each harness used in the development of the work, specifying physical properties such as resistance to force, ageing, abrasion, corrosion and heat.
Curriculum vitae, which includes the following details: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations It must have a total breaking strength of 5,000 pounds and a capacity of at least 140 kg
The harness straps and sewing threads must be made of synthetic fibers that have characteristics

equivalent to those of polyester fibers or polyamide, with resistance to strength, ageing, abrasion and heat, equivalent to polyamides.
The harness rings must have a minimum breaking strength of 5,000 pounds (22.2 kilonewtons– 2,272 kg) The width of the straps that hold the body during and after the fall is stopped, will be at least 1- 5/8 inches (41 mm)
NOTE: Each of the elements, equipment or components that make up the harness must be certified and have technical verifications that validate and confirm the quantitative values allowed for each component.

Table 10 Minimum Requirements for Full Body Harness

This does not exempt the employer from having other work permits for high-risk activities.

6.1.2. Working in confined spaces

To carry out work in confined spaces, the contractor must comply with Res. 0491/2020 and its technical requirements, as well as complement those named below:

1. Have the management program for work in confined spaces.
2. Have a lookout for work in confined spaces that fulfils the following functions:

    a. Certify the conditions of safe entry into the confined space.
    b. Activation of the emergency response plan.
    c. Coordinate the entry operations of workers who are going to carry out activities within the confined space.

3. Have a supervisor for work in confined spaces
4. Have a person in charge who is EXCLUSIVELY responsible for the purge of the space
5. Training or certification of the labor competency training program of workers who perform and are involved in work in confined spaces such as:

    a. Those responsible for the design and development of the management program for work in confined spaces. DURATION: 8 technical hours
    b. Incoming workers in confined spaces. DURATION: 24 hours (8 theoretical hours and 16 practical hours)
    c. Safety lookouts for work in confined spaces. DURATION: 8 hours (4 theoretical hours and 4 practical hours)
    d. Supervisors of work in confined spaces. DURATION: 16 hours (8 theoretical hours and 8 practical hours)
    e. Responsible for the purge of confined spaces
    f. Apprentices of qualified training of the institutions of training for work, which offer programs in which in their practice or working life there may be a risk of falling from heights, must be trained and certified in the advanced level of safe work at heights by the same institution.

6. Permit to work in confined spaces, which must contain at least:

    a. Names and surnames, signatures and identity documents of the authorised workers and the entities that endorse said permit
    b. Date and time of start and end of the task
    c. Task Description
    d. Self-reporting of working and health conditions
    e. Verification of the existence of the task procedure
    f. Verification of the availability of personal protective equipment and elements selected by employers, taking into account the risks and requirements of the task, in accordance with the provisions of current regulations.
    g. Verification of atmospheric measurements prior to entry.
    h. Tools and equipment to use.
    i. Verification of the level of certified training according to the role to be performed (Incoming Worker, Watcher, Supervisor)
    j. Validity of the permit
    k. Emergency response verification.
    l. Remarks

7. Risk assessment and assessment matrix associated with:

    a. Radiation Sources
    b. Structural failures
    c. Excessive noise
    d. Inadequate visibility
    e. Presence of biohazard
    f. Slippery surfaces
    g. Flood
    h. Burial
    i. Fire
    j. Electric shocks
    k. Burns
    l. Falls
    m. Drowning
    n. Amputations and others that may affect the health and safety of workers

8. Emergency plan in accordance with the activities to be carried out and that guarantees an organised and safe response to any incident or accident.
9. Permissions Analysis by Activity (APA)
10. Have clear procedures for the development of each of the activities that will be carried out in the company.
11. Have administrative controls such as:

    a. Staff rotation schedule.
    b. Area signage.

c. Delimitation of the area: Bands, cones, beacons, made of any type of material, may be used, yellow and black combined for permanent and orange and white for temporary. These elements must guarantee their visibility day and night if applicable. Whenever a delimitation system is used, whatever it may be, signage must be used.

d. Written access controls of personnel to the place where the activity is being carried out

12. Gas detection procedure.
13. Gas detector management procedures.
14. Procedures related to adaptations, intervention and activity to be carried out
15. Safety data sheets of the chemical substances that will be used in the execution of the work.
16. Certificate of the occupational medical evaluations of each of the workers who will perform work in confined spaces
17. Pre-occupational assessment of each of the workers
18. Have preparation procedures such as isolation/lockout/tagout, purging, and cleaning of the space
19. Documentary record and analysis of the conditions before entering the confined space where the following are taken into account:

ASPECT	REMARKS
OXYGEN LEVEL IN THE ATMOSPHERE	Have the record of on-site enhanced oxygen tests NOTE: Oxygen deficiency is considered to be less than 19.5% by volume Oxygen enrichment is considered to be greater than 23.5% by volume in the atmosphere
PRESENCE OF COMBUSTIBLE GASES	For this, the explosive or flammable limits (LIE) for each of the gases present must be considered given the physical conditions of the place
MEASUREMENT OF TOXIC GASES PRESENT IN THE ATMOSPHERE	To carry out this measurement, the concentration of residual gases and vapours, the concentration generated by the operation carried out within the confined space (welding, cutting, painting, etc.) and that which may come from outside the confined space must be considered. NOTE: The probability of effects on the body must be taken into account according to the toxicity inherent to the material (measured as lethal dose), the magnitude of exposure (acute or chronic) and the route of exposure (ingestion, inhalation, absorption of the skin), ensuring through controls that there are no effects on people's health.

PRESENCE OF EQUIPMENT AND TOOLS	Know the risks derived from the use of equipment, machines and tools.
PRESENCE OF HAZARDOUS ENERGIES	Matrix of specific risks associated with contact with hazardous energies
TEMPERATURE MEASUREMENT	To carry out this measurement, the temperature must be considered as the source of ignition and the necessary controls must be determined NOTE: As support for this, the risk of thermal stress must be assessed, in order to determine, among others; exposure time and breaks.

Table 11 Physical conditions before entering the confined space.

20. Have records of the measurement, evaluation and control of the indoor environment (atmospheric monitoring) taking into account the following parameters:

    a. Supports for measurements prior to the execution of the work or each entry into the confined space
    b. Support for stratified monitoring, ensuring that sampling is carried out at distances of no more than 1.2 metres and in periods that take into account the response time of the meter

    c. Guarantee the permanence of atmospheric monitoring equipment within the area and also that they meet the following requirements:

        i. The equipment for measuring gases and vapors must be verified and maintained according to the specifications given by the manufacturer The required
        Ii. monitoring equipment must be directly readable The equipment must have
        Iii. audible and visible alarms, of adequate intensity whenever one of the following conditions is found:

REQUIREMENTS
Oxygen concentration less than 19.5% Flammable gas or vapor at 10 percent or more of the lower flammable limit (LFL - LEL) Hydrogen sulfide or carbon monoxide at 10 ppm or 35 ppm, respectively, measured as an 8-hour time-weighted average (TWA).

Table 12 Requirements for the presence of alarms

        Iv. For prolonged exposure work, it is necessary that the measuring equipment includes an alarm that indicates the limit threshold values for cumulative exposure in periods of 15 MINUTES and 8 HOURS in accordance with the provisions of the American Conference of Governmental Industrial Hygienists (ACGIH) The equipment must be
        v. protected against electromagnetic interference and radio frequency interference The equipment must monitor the oxygen concentration in a standardized way and
        Saw. flammable gases, and depending on the estimated present risks, carbon monoxide, hydrogen sulfide or other toxic gases should be monitored vii.

Viii. Certification of each of the measuring equipment issued by a recognized international organization (Approved by Undrwriters Laboratories (UL), Canada Standard Association International (CSA) The equipment must offer some means of indicating the continuity of the electrical supply, as well as have some means to evaluate the remaining load at any time, in order to plan the duration of the admission Have elements of secure attachment to the clothing of the worker for

Ix. portable measuring equipment For the evaluation of the atmosphere prior to entering the confined space, if fixed equipment installed inside the space is used,

x. there must be an indication of the monitored parameters visible at the entrance to the confined space, if portable equipment is used, there must be a suction system by means of an electric pump incorporated into the measuring equipment and it must have a probe to be inserted into the confined space, of sufficient extension to comply with the stratified measurement requirement Have evidence of the functional and adjustment tests according to the manufacturer's

xi. instructions for all the sensors required for the activity Documentary record of calibrations carried out according to the specifications of the

Xii.

XIII. Manufacturer Each instrument must be labeled with the last and next calibration date. Persons performing calibration must be trained and qualified

XIV. in proper calibration techniques

21. Have prevention measures such as: identification of the type of confined space to be worked on, atmospheric monitoring procedure and ventilation, which must meet the following requirements

a. REQUIREMENTS FOR THE IDENTIFICATION OF THE CONFINED SPACE CLASS

For a workplace to be classified as a CLASS A, CLASS B, or CLASS C confined space, it must meet the following physical and technical conditions:

FEATURES	CLASS A	CLASS B	CLASS C
ATMOSPHERE	Atmosphere Immediately Hazardous to Life or Health (PVS)	Hazardous atmosphere, but not IPVS	Potentially hazardous atmosphere
RANSOM	Rescue procedure requires the admission of more than one individual equipped with a life support system	Rescue procedure requires the admission of at least one individual equipped with a life support system	Standard Rescue Procedure
COMMUNICATION	Maintain constant direct communication	Maintain visual or auditory communication	Standard Communication Procedure

O2 LEVEL	Less than 16%, or greater than 25%	Between 16% - 19.5%, or between 21.5% and 25%	Between 19.5% and 21.5%
TOXICITY	IPVS toxicity	Higher CMP-CPT and lower than IPVS CMP-CPT (Maximum Permissible Concentration - short periods of time)	Toxicity less than CMPCPT
EXPLOSIVENESS	LEL greater than 20% LEL (Low Explosion level) Lower explosive limit	LEL between 1% and 19.9%	LEL less than 10%

Table 13 Technical characteristics of the confined space categories

b. MINIMUM CONDITIONS FOR THE ATMOSPHERIC MONITORING PROCEDURE

I. Have evaluation tests that allow the identification of any hazardous atmosphere that may exist or arise.

NOTE: The evaluation and interpretation of this data should be performed by or reviewed by a competent technical professional (e.g., a certified industrial hygienist, a certified safety engineer, a certified safety professional, etc.) based on the assessment of all serious hazards

II. Have verification tests that allow the detection of residues of all contaminants identified by evaluation tests.

III. Record of the execution of tests associated with oxygen, flammability and toxicity. To carry out the tests, it is necessary to take into account:

- All instruments must be kept ready for use.
- Each instrument must be functionally tested before use.
- This functional test consists of applying a gas of known concentration (test gas) and verifying that the instrument responds or activates its alarms.
- This last operation must be done daily for emergency teams. It must be documented.
- Use accessories recommended or approved by the manufacturer.
- Permanent measurement must be maintained, not only during admission to detect if any condition changes in the atmosphere.
- Any alarm must indicate immediate EVACUATION, until the reason for the atmospheric alteration is determined.

c. REQUIREMENTS FOR CARRYING OUT VENTILATION PROCEDURES

I. Identify proper ventilation for the confined space.
II. Start ventilation early to ensure a safe atmosphere.

III. DO NOT place the fan/exhaust fan too close to a distance of no less than 1.5 m of the entrance.
IV. Locate taking into account the direction of the wind.
V. Sample the atmosphere constantly. Install duct according to the required function

22. Have protective measures such as SCBA (System Crompressed Breathing Apparatus) or Self-contained Air Equipment and RESPIRATORY PROTECTION PROGRAMS that meet at least the following requirements:

a. MINIMUM REQUIREMENTS FOR SCBA EQUIPMENT

I. Be charged to their maximum operating pressure (approximately 2250 psi or the one established by the factory).
II. Certificate of quality and total operation of each element that composes it. Resume,
III. where the data of: date of manufacture, useful life, history of use, inspection records, corrective maintenance records, technical sheet, manufacturer's certification and observations are recorded. Annual verification record performed by
IV. the manufacturer.
V. Hydrostatic and sealing tests from the last 5 years.
VI. Checklist of the number of items that make up self-contained air equipment
Equipment must be disinfected after each practice. Record of the last
VII. year's air change
VIII.

NOTE: In addition to the minimum requirements that self-contained air equipment must meet, the following requirements must be met by the personnel who use it:

I. Evaluation of previous health conditions, ensuring that you do not have heart or respiratory conditions or deficiencies.
II. Evaluation of the optimal physical conditions for the correct sealing of masks, for example, with little or no beard.
III. Have people who do not have astrophobia and/or terror of the dark.
IV. Certificate of theoretical training of no less than 2 hours.
V. Certificate of practical training of no less than 2 hours for each operator. Have
VI. performance evaluation with full use of the load of a 2250 psi SCBA tank.

VII. Have a medical evaluation and spirometry before the course to be an authorized person and every year within the periodic exams.
VIII. Maintain a record of the use and operation of the equipment in order to establish its performance with the equipment, determining the duration of the cylinder, as well as the duration with maximum aerobic load and low aerobic load.

b.

RESPIRATORY PROTECTION PROGRAMS A respiratory protection program must contain at least the following elements:

I. Have the detailed program administration plan.
II. Full identification of respiratory hazards you will encounter at the work.
III. Procedures and equipment to control respiratory hazards, including the use of engineering controls and work practices designed to limit or reduce worker exposure to such hazards.
IV. Guides for the correct selection of appropriate respiratory protective
V. equipment. Training program for the worker that includes the recognition of risks, the hazards associated with respiratory hazards, the proper care and use of respiratory protective equipment Inspection, maintenance and repair
SAW. of respiratory protective equipment. Medical surveillance of workers
VII.

6.1.3. Lifting of loads

To carry out load lifting, the contractor must comply with both the technical and documentary requirements named below:

1. Certificate or training of the work competence of each of the workers who are going to perform tower crane operations. HOURLY INTENSITY: minimum 40 hours.
2. Record of proof of training for the assembly and disassembly procedure of the crane tower or minimum experience of six months.
3. Certificate of occupational medical aptitude for work at heights for assembly and operation personnel.
4. Have a tower crane assistant or quantity surveyor who is trained by the assembly manager or certified by an authorized entity
5. Work permit for promotion to the team of each of the workers who will perform the work

6. Instructions for the safe lifting of all loads on site.
7. Pre-operational inspection of all crane components.
8. Equipment Operator's Driver's License
9. Traffic Management Plan
10. Satellite plan for road management of entry, movement and parking of the machine.
11. Safe working procedure for assembly and disassembly of Tower Crane.
12. Manual for Crane Installation and Tower Crane
13. Safe working procedure for Telescoping.
14. Equipment, Components, and Tools Checklist
15. Provide the signage corresponding to the risks existing in the work, such as:

a. Load lifting caution
b. Falling objects caution

c. Caution Operating Tower Crane
d. Caution: avoid being under the hoisted load
e. Mandatory use of fall protection equipment
f. Mandatory use of personal protective equipment
g. Electrical hazard
h. Mandatory head protection, wear a helmet
i. Mandatory foot protection, wear safety boots

16. Risk assessment and assessment matrix.
17. Matrix of personal protective equipment (PPE) that the staff will wear during the development of the activity and comply with the use of these by the collaborators.
18. Records of non-destructive tests previously carried out on hooks, tower crane body, boom, counter boom, cables, braces and crown, according to the manufacturer's conditions.

19. Table of capacities of the equipment that will be used in the development of the activities
20. Technical and documentary inspections of the cables, controlling the following points:

a. Diameter of the gutter.
b. Wear-free gutter surface.
c. Alignment with the cable and other equipment
d. Freedom of Movement
e. Presence of sharp edges
f. Evaluation of the current conditions of the cables, taking into account deformation or strangulation.
g. Manufacturer's Manufacturer's Manufacturing and Loading Certificate
h. Assessment of the current state of guaya

21. Record of the maintenance inspections carried out on the mechanical parts, brakes, drum, pulleys, tension in the transmission systems, actuators, button panels, structure, bolted and welded joints, etc.
22. Have procedures for the control of hazardous energies.
23. Pre-operational inspections related to:

a. Mechanical Transmission Systems
b. Grease points, lubrication and oil levels
c. Controls and controls

24. Quality certification by the manufacturer of each of the weather vanes installed in the workplace, if applicable.
25. In the case of the use of jib cranes during operation, the following must be taken into account:

a. Fall protection system.
b. Quality certification of each of the active protection measures in accordance with current national or international standards.
c. Inspection and maintenance records of active protective measures

d. Technical data sheet of these measurements, specifying physical properties such as resistance to strength, ageing, abrasion, corrosion and heat.
e. Certificate and current course of work at heights of each of the workers who are going to carry out operations on the crane boom.
f. Certificate of operation by the manufacturer of each of the parts of the crane boom.

26. Have a MEDEVAC rescue and evacuation plan.
27. Emergency plan.
28. Have perimeter protection.
29. Certification of electrical connections by competent personnel and arranged in accordance with the established regulations
30. Current certification of mobile cranes and crane trucks issued by a competent entity

31. Annual inspection of yellow machinery endorsed by a suitable entity
32. Technical data sheet of the rotation limiter, specifying that it prevents more than three rotations in the same direction.
33. Have an anemometer that emits intermittent sound at 50 km/h and continuous sound at 70 km/h.
34. Have the personal protection elements for the execution of the work and maintenance of the equipment.
35. Continuity tests and certification of the grounding pole used in the execution of the work.
36. Have lifting tools such as textile slings, cable slings, chain slings, removable lifting equipment, eyebolts, shackles and ropes that meet the following requirements:

a. FOR TEXTILE SLINGS

I. Certification of the manufacturer's quality in accordance with current national or international standards Curriculum vitae, where the data of the following are
II. recorded: date of manufacture, time of useful life, history of use, inspection records, maintenance records, certification of the manufacturer and observations.

III. Technical sheet of each of the slings to be used, where the following is evidenced:

- Elongation percentage of textile materials: For polyester 11% and for polypropylene 20%
- Utilization coefficient or margin of safety: 7
- Maximum load of use taking into account the colour of the sling.

IV. Each sling must be duly identified by means of an attached plate indicating the maximum lifting capacity Manual of instructions and procedures
V. Pre-operational inspection of each of the slings, taking into account at least
VI. the following:

REQUIREMENT	YES	NO
No cuts or damage due to scratching on the edges		
Covers without damage due to friction		
Wear, cracks or breaks in the tape		
Normal color alteration due to high temperatures		
State of the Gaza		

Table 14 Minimum pre-operational inspection criteria.

b. FOR CABLE SLINGS:

I. Certification of the manufacturer's quality in accordance with current national or international standards Curriculum vitae, where the data of the following are
II. recorded: date of manufacture, time of useful life, history of use, inspection records, maintenance records, certification of the manufacturer and observations.

III. Instruction and procedures manual Technical sheet of each of the slings,
IV. where the following is evidenced at least:

- Type of sling
- Nominal length of the sling in meters
- Types of accessories to use on the ends
- Maximum load with which the sling will work and the diameter of the cable.
- Cable composition
- Type of gauze.
- Number of clamps

V. Each sling must be duly identified by an attached plate containing at least the following:

- Identification numbers or letters of the sling
- Maximum Utilization Load (C.M.U.)
- CE mark (European marking)
- For multi-strand slings, include the following:

C.M.U. for 0° to 45° in relation to the vertical (0° to 90° between branches). C.M.U.
for 45° to 60° with the vertical (90° to 120° between branches) if applicable.

Table 15 Angles of application of loads.

SAW. Pre-operational inspection of each of the slings, taking into account at least the following:

REQUIREMENT	YES	NO
No wear, warping or cracking of the top or bottom end fittings		
No wear, deformation or cracks in the bushings		
No deformation of the cable		
Cable wear does not exceed 10% of the nominal diameter		
No pitting on the wires or lack of flexibility		
No discoloration of the wires or lack of lubrication is observed		
For cases of cable slings with several branches, the length of the cables is equal		
It is suitable for the intended use (temperature range, chemical exposure, etc.)		

Table 16 Minimum requirements for pre-operational inspection of cable slings.

c. FOR CHAIN SLINGS

I. Certification of the manufacturer's quality in accordance with current national or international standards Curriculum vitae, where the data of the following are
II. recorded: date of manufacture, time of useful life, history of use, inspection records, maintenance records, certification of the manufacturer and observations.

III. Technical sheet of each of the slings to be used, showing the safety coefficient 4.
IV. Instruction and Procedures Manual Each sling must be properly identified
V. by an attached plate containing at least the following:

- Manufacturer's Brand.
- Number or letter identifying the sling with the corresponding certificate (for example, class 4 slings will have the number 4 identified).
- The maximum load of use (C.M.U.).
- CE marking.

NOTE: The connectors of the chain slings must have the same identifications as the sling (manufacturer mark, CE marking, maximum use load, etc.)

VII. Pre-operational inspection of each of the slings, taking into account at least the following:

REQUIREMENT	YES	NO
No fissures in the links.		
Absence of deformed links		
There are no branches of different length from the rest		
Elongation is below 5%		
Lack of corrosion in the links		

No "discoloration" due to thermal effects Link wear not exceeding		
10% Chain hook opening less than 10% of the nominal value Hook		
closure device in good condition and with safety latch.		

Table 17 Minimum requirements for pre-operational inspection of chain slings.

d. FOR REMOVABLE LIFTING EQUIPMENT

This section includes all the equipment that can be attached directly to the lifting equipment such as: Lifting forks, clamps, C-hooks, suspension beams, electromagnets and vacuum suction cups

I. Certification of the manufacturer's quality in accordance with current national or international standards Curriculum vitae, where the data of the following are
II. recorded: date of manufacture, time of useful life, history of use, inspection records, maintenance records, certification of the manufacturer and observations.

III. Instruction and procedures manual that must include MINIMUM the following:

- Brief description of the lifting tool.
- Maximum workload.
- Intended use.
- Load characteristics including performance and the number of parts that can be handled at the same time.
- Determination of the operating range.
- Instructions for operation and use.
- Assembly, coupling/uncoupling and adjustment of the equipment on the crane.
- Handling and storage of equipment.
- Stability method when applicable.
- Range of temperatures used by the lifting tool.

IV. Each team must be properly identified, taking into account the following information:

- Identification of the manufacturer.
- CE marking.
- Model.
- Serial number.
- Weight of the accessory without load when 5% of the maximum working load of the equipment is exceeded or if it exceeds 50 Kg.
- Year of manufacture.
- Maximum load in tonnes or kg.

VIII. Technical sheet of each of the teams, where the following is evidenced at least:

- Designed to withstand a static load equal to three times the maximum operating load without releasing it (even if permanent deformation occurs)
- It must withstand a load of twice the maximum load of use without permanent deformation.
- Fixtures intended to be inclined should be designed for a higher angle, at least 6° to the maximum working angle.
- In the case of manually guided equipment, they must be equipped with handles so as not to injure the fingers

IX. Pre-operational inspection of each of the equipment, taking into account the following at LEAST:

REQUIREMENT	YES	NO
Verification of: -No cracks -No deformations in the lifting elements -No blows to load-bearing elements		
Cam wear check		
No corrosion, oxidation in the caliper body		
Verification of the status of the locking system, axles with self-locking ropes		
Existence of serrated grooves, shaft wear and pin condition		

Table 18 Minimum requirements for pre-operational inspection of removable lifting equipment

e. FOR EYEBOLTS

I. Certification of the manufacturer's quality in accordance with current national or international standards Curriculum vitae, where the data of the following are
II. recorded: date of manufacture, time of useful life, history of use, inspection records, maintenance records, certification of the manufacturer and observations.

III. Technical data sheet of each of the eyebolts to be used in the development of the operation, where the following is evidenced:

- Exposure/utilization temperature should be between -20°C and +200°C
- Type of greasing
- Eye type: fixed or swivel
- Utilization coefficient: 5 minimum
- Way of working the eyebolt

IV. Each eye bolt must be properly identified, taking into account the following information:

- Manufacturer's Brand/Symbol.
- CE marking.
- Maximum vertical draft utilization load (C.M.U.).
- Thread diameter.
- Traceability code.

V. Pre-operational inspection of each of the eyebolts, taking into account at least the following:

REQUIREMENT	YES	NO
No cracks and/or deformations in the body of the eyebolt		
For threaded eyebolts, the condition of the thread and pin: -Non-deformed eyelet -Unbent tang -Seamless tang -Corrosion-free tang		
In welded eyebolts. Correct condition of the weld.		
No corrosion, oxidation in the eyebolt body		
Verification of rotation and absence of dirt in rotating mechanisms.		
Repairs to eyebolts since the last revision: non-destructive tests have been carried out, in accordance with the manufacturer's recommendations		

Table 19 Minimum requirements for preoperational inspection of eyebolts.

f. FOR SHACKLES

I. Manufacturer's quality certification in accordance with current national or international standards Curriculum vitae, where the following data are
II. recorded: date of manufacture, useful life, history of use, inspection records, maintenance records, manufacturer's certification and observations. Each
III. shackle must be properly identified, taking into account the following information:

- The load of use in tonnes.
- The number of the shackle class.
- The manufacturer's name, symbol or mark.
- The Traceability Code

IV. Certificate of quality from the manufacturer containing at least the following information:

- Date of manufacture

- Useful life.
- Usage history.
- Inspection records.
- Maintenance records
- Manufacturer certification and remarks
- Description of the shackle.
- Class number.
- Maximum utilization load in Tm
- Working temperature
- Fastening form, in case of being coupled with several slings.

V. Have an instruction manual that contains at least the following sections: limitations of use, replacement of lost or damaged pins, inspection of the shackle before use, avoid applications in which the load is unstable, correct alignment of the shackle with the load line. Pre-operational inspection of each of the shackles, taking into account the following at LEAST:

SAW.

REQUIREMENT	YES	NO
Both the body of the shackle and the shackle pin are of the same size, type and manufacture		
Pin without deformations or cracks		
Wear less than 10% in any dimension		
Correct condition of the body and pin threads		
No wear or cracks in the shackle body		
No rust or corrosion is observed		

Table 20 Minimum requirements for pre-operational inspection of shackles.

6.1.4. Working on live and non-live electrical circuits

To carry out work on electrical circuits with and without voltage, the contractor must comply with both the technical and documentary requirements named below:

1. Professional registration of each of the workers who are going to have contact with electrical circuits, said workers must be:

   a. Electrical, electromechanical, distribution and electrical network engineers.
   b. Electrical or electromechanical technologists.
   c. Electrical technician.

2. Valid certificate of medical-occupational fitness for each worker who is going to carry out work on electrical circuits with and without voltage

3. Emergency plan in accordance with the activities to be carried out and that guarantees an organised and safe response to any incident or accident.
4. Certification in risk control in work with Electrical Risk of each of the workers who are going to perform the work
5. Certification and training of employees in procedures for dealing with emergencies with electrical risk.
6. Safe Work Analysis (ATS)
7. Have a group leader
8. Work permit with electrical risk filled out in the field
9. Evidence or record of delivery of personal protection elements to each of the workers according to the level of tension to which they will be exposed
10. Certificate of training in high-risk activities of each of the workers who are going to perform the work
11. Verification of hazardous energy before commencing work
12. In the case of the design of electrical installations, the following information must be available at least (if applicable):

    a. Analysis and charts of initial and future loads, including power factor analysis y harmonics
    b. Electrical Insulation Coordination Analysis
    c. Short-circuit and ground fault analysis
    d. Analysis of electrical risks and measures to mitigate them
    e. Analysis of the required voltage level
    f. Calculation of electromagnetic fields in spaces intended for people's routine activities.
    g. Grounding System Calculation
    h. Documentary verification of the drivers taking into account at least:

        I. Circuit breaker trip time Short
        II. circuit current Conductor current
        III. capacity

    i. Calculation and coordination of overcurrent protections
    j. Regulation calculations
    k. Area Classification
    l. One-line diagrams
    m. Electrical plans and diagrams to be made
    n. Documentary record of the safety distances required for each area where the work is to be carried out
    o. The other studies that the type of installation requires for its correct and safe operation such as seismic, acoustic, mechanical or thermal conditions.

13. For activities such as changing switches or parts of them, interventions on current transformers, maintenance of bars, installation and removal of meters, opening of capacitors, macro measurements, voltage and current measurements, among others, the following requirements must be met:

a. Risk analysis where voltage, short-circuit power and fault clearance time are taken into account.
b. Setting labels identifying the level of risk
c. Matrix of equipment required to carry out the work
d. Signage of the work area and the areas surrounding it
e. Up-to-date electrical plan approved by a competent professional.
f. Work order signed by authorized personnel
g. Quality certification of personal protective equipment given the level of tension y incident energy involved
h. Have competent and certified personnel in the work.

14. Have an earthing system
15. Current quality certification issued by a regulatory body for each of the materials used for the grounding system.
16. Record of the inspections carried out on the materials of the earthing system before they are used, where the following are evaluated at least:

a. The grounding must consist of one or more of the following types of electrodes: Rods, tubes, plates, straps, wires or bare cables.
b. The use of aluminum in the grounding electrodes is not permitted.
c. Technical data sheet of the grounding electrodes where the physical properties (length, corrosion resistance, appropriate coating) endorsed by the manufacturer are evidenced
d. Each electrode must be properly identified
e. The attachment point between the grounding electrode conductor and the grounding should be accessible and the top of the buried electrode should be at least 15 cm from the surface
f. The electrode can be installed vertically, with an inclination of 45° or horizontally (at a depth of 75 cm), as long as it guarantees the fulfillment of its objective.

17. Have preventive measures such as:

a. Make inaccessible areas where the thresholds of bearability for human beings are expected to be exceeded.
b. Install highly insulated floors or pavements.
c. Isolate all devices that can be held by a person.
d. Establish equipotential connections in critical areas.
e. Isolate the conductor from the grounding electrode upon its entry into the ground.
f. Have signage in critical areas where competent professionals can work, provided that they have instructions on the type of risk and are equipped with personal protection elements with adequate insulation.

18. Grounding resistance measurements.

19. Inspections of earthing systems, where they must contain at least the following:

    a. General conditions of the system drivers
    b. Level of corrosion
    c. Condition of the joints of conductors and components
    d. Current resistance values
    e. Changes and findings compared to the last inspection
    f. Photo record

20. Procedure that guarantees the programming, execution, reporting and control of maneuvers (energized and sudden de-energized)
21. Workplace inspections containing at least the following:

    a. The equipment must be of the mains voltage class.
    b. That the operators have their personal protective equipment on.
    c. That the operators get rid of all metal objects.
    d. When using a basket truck, verify that both the controls in the basket and the lower controls are working correctly.
    e. Have the gloves inspected.
    f. That the operators are in perfect technical, physical and mental conditions for the performance of the work entrusted.
    g. That the workspaces have the appropriate dimensions and do not present obstacles that put the worker at risk.
    h. Before entering an underground chamber, the atmosphere must be gas-tested using the technique and instruments to detect for toxic, combustible or flammable gases, with levels above permissible limits.

22. Have a fall protection system for those workers who are located at a height equal to or greater than 2m.
23. Checklist for work in high-risk conditions, where it must contain at least the following:

REQUIREMENT	YES	NO
Do you have written or recorded authorization to do the work?		
Is the engineer or supervisor informed of the performance of the work?		
Have risk factors that cannot be ignored been identified and reported?		
Was there an attempt to modify the work to avoid risks?		
Were all staff instructed on the special condition of work?		
Was a person responsible for reporting to the health area, the joint committee or the head of the area appointed?		
Are the golden rules strictly followed?		
Do you have a means of communication?		
Are personal protective equipment available and used?		

Table 21 Checklist for work in high-risk conditions.

Note: If you are missing any YES, the work should NOT be carried out, until the corresponding correction is made.

24. A previously studied and approved safe work procedure that contains at least the following:

    a. A title indicating the nature of the installation intervened, the precise description of the work and the method of work.
    b. Physical resources (personal and collective protective materials and equipment) and human resources
    c. Orderly description of the different phases of the work, at the level of specific operations.
    d. Necessary sketches, drawings or diagrams.

25. The products used in electrical installations must meet at least the following requirements:

    a. Certificate of conformity of conforming product issued by an accredited certification body.
    b. Technical data sheet for each of the products specifying the following:

        I. Compatibility with other materials Short-circuit current Number and type of
        II. protections provided for each product Working current and voltage
        III. Operating frequency External influences (environment, climatic conditions,
        IV. corrosion, altitude, etc.).
        V.
        VI. etc.)
        Power factor, type of current, electrical and thermal conductivity) VIII.
        IX. Possibilities of mechanical clamping and cooling of X. equipment.
        Power Normal and extreme operating temperatures Installation manual
        XI.

    c. Have catalogs or instructions that indicate the operation of the equipment along with the list of the parts that make up the equipment

    In addition to the requirements mentioned above, the following requirements must be met that correspond to some products that are frequently used in the design or maintenance of electrical installations:

I. ELECTRICAL INSULATORS

TYPES OF ELECTRICAL INSULATORS	REQUIREMENTS
RESIN INSULATORS, POLE TYPE, FOR INDOOR USE AND VOLTAGES GREATER THAN 1000 V	Physical records of the following tests or assays: 1. Flammability: They must be self-extinguishing category V0 2. Dry lightning type flaming tension 3. Non-disruptive voltage at dry industrial frequency 4. Mechanical deflection 5. Torque tightening 6. Water absorption 7. Corrosion on metal parts 8. Dimensional Analysis
	Label or label with the following information: Manufacturer's brand, model, connection system dimension, and system voltage rating
RESIN INSULATORS, POLE TYPE, USED AS SUPPORT FOR BARS AND PHASE INSULATORS IN PANELS AND TERMINAL BLOCKS FOR VOLTAGES LESS THAN 1000 V	Physical records of the following trials: 1. Glow wire at 950°C 2. Resisted voltage to industrial frequency 3. Torque tightening 4. Corrosion for metal parts 5. Dimensional Analysis
MEDIUM AND HIGH VOLTAGE SUSPENSION INSULATORS IN POLYMERIC MATERIAL	A technical data sheet containing at least: 1. Galvanizing the fittings with a minimum value of 79 microns 2. Flammability: They must be self-extinguishing category V0. 3. Dimensional Analysis: Isolation Distance and Creepage Distance
	Label or label with the following information: Producer's brand, year of manufacture, rated breaking load and rated voltage
PIN INSULATORS USED IN MEDIUM VOLTAGE NETWORKS, MADE OF POLYMERIC MATERIAL	Physical records of the following trials: 1. Porosity 2. UV aging without cracks or fissures after 1000 hours of exposure 3. Mechanical load 4. Impact with a value of not less than 10J 5. Dry and wet fluttering tension 6. Electromechanical 7. Dimensional Analysis
	Label or label with the following information: Producer's brand, year of manufacture and mechanical load
INSULATORS MADE OF PORCELAIN OR GLASS USED IN LOW, MEDIUM AND HIGH VOLTAGE NETWORKS	Physical records of the following trials: 1. Thread verification 2. Torque when applying 3. From tensile strength to industrial dry and wet frequency 4. Dry lightning type flashback voltage 5. Dimensional Analysis

INSULATORS CALLED SPACERS	This type of insulators must meet at least the following technical requirements: 1. Sizing: the spacer should have four elastomeric rings 2. The distance between the mooring points must not be less than 27 cm for voltages up to 15 kV and 46 cm for voltages between 15 and 34.5 kV 3. V0-rated flammability 4. Impact tests with a value of not less than 10 J 5. The insulator should ensure that they are free of internal pores or bubbles
	Label or label with the following information: Name or brand of the producer, batch and/or month and year of manufacture, mechanical load in kN, nominal service voltage and BIL.

II. WIRES AND CABLES FOR ELECTRICAL USE

REQUIREMENTS
1. Product Certificate of Conformity
2. Product data sheet specifying at least: a. Electrical resistance b. Minimum breaking load c. Number of wires containing the aluminium cabed d. Insulation thickness and resistance based on RETIE e. Dielectric Strength
3. Verification of each of the conductors used in the performance of the work under IEC 603321-1, UL 1885 or an equivalent standard depending on the country of execution
4. Labelling of each wire or cable containing at least: a. Conductor Gauge b. Conductive material c. Rated Voltage d. Type of insulation e. Maximum Operating Temperature

6.1.5. Hot work

To carry out hot work, the contractor must comply with both the technical and documentary requirements named below:

1. Training or certification of the labor competence of workers who perform hot work from the following operations:

   a. Electric welding (SMAW).
   b. TIG welding.
   c. MIG welding.
   d. Oxyacetylene cutting and welding

e. Grinding
f. Using Open Flames
g. Other activities that generate sparks or flames

2. Have personal protection elements suitable for hot work, which must be certified.

3. Work permit to carry out hot work.
4. Safe working procedure
5. Have a lookout or observer who will have the following responsibilities:

   a. Know the correct use of firefighting equipment, first aid equipment and in case of emergency know the location of emergency telephone numbers.
   b. Inspect the hot work area before and 30 minutes after the work, verifying the removal of potential fire or explosion hazards and flame reactivation points

   c. Observe and extinguish any fire or hot spot resulting from work

6. The lookout must be certified in:

   a. Fire Prevention and Control
   b. Use of firefighting equipment.

7. Have a work supervisor, who will be in charge of:

   a. Ensure that all personnel under their charge know, understand and comply with this document
   b. Inspect the work area as well as the equipment used for hot work y ensure that they are free of defects and safe to use
   c. Identify all fire hazards and take appropriate corrective action

8. Contingency plan that contains at least measures for fires, explosions, accidents, accidents, accidents, sabotage, spills, etc.
9. Emergency plan in accordance with the activities to be carried out and that guarantees an organised and safe response to any incident or accident.
10. Technical data sheet of any combustible or flammable material that is going to be used in the development of the work
11. Records of Work Area and Equipment Inspections Before, During, and After Work
12. Safe Work Analysis Format
13. For extended work (night), submit a new hot work permit, as well as a new safe work analysis format.
14. Have the necessary signage in the workplace
15. Plan showing at least the layout of the following areas:

    a. Storage area for flammable materials
    b. Welding and cutting area

c. Energization Zone
d. Smoke extraction and ventilation system.

16. For protective screens or security screens:

a. Current quality certificate issued by a regulatory body
b. Curriculum vitae, where the data of: Date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.

17. Prior inspection of each of the fire extinguishers provided for emergencies
18. Technical data sheet of each extinguisher specifying at least: Dry powder– PQS, type ABC, minimum capacity 9 kg
19. In the event that the work is carried out at a height greater than 2m, have:

a. Fall protection program.
b. Personal protection elements suitable for safe work at heights, which must be certified
c. Engineering systems for fall prevention.
d. Permit to work at heights

20. Welding Machine Maintenance
21. Machine Data Sheet
22. Safety data sheet for insulating gas
23. Pre-operational list of welding machine

24. Analysis of risks associated with the development of the activity that contains at least:

TEAM	RISK	CONTROL MEASURES	EPP
ELECTRIC WELDING	• Contact with electricity • Contact with hot elements • Electric arc • Particle projection • UV exposure • Smoke inhalation • Fire	• Safe work analysis • Pre-use and grounding equipment inspection • Qualified personnel • Hot Work Permit • Proper use of PPE • Screens, signage	• Helmet • Lenses • Face shield • Earplugs • Filter respirators • Dielectric shoes • Long-cuffed gloves • Leather apron • Booties

OXY-FUEL EQUIPMENT	• Particle projection • Contact with hot particles • Intense luminosity • Fire, explosion	• Qualified personnel • Safe work analysis • Hot Work Permit • Use of flame return valves • Use of PPE • Screens and signage	• Helmet • Lenses • Welder's face shield • Earplugs • Filter respirators • Dielectric shoes • Long-cuffed gloves • Leather apron • Booties
EMERY	• Contact with electricity • Particle projection • Contact with cut-off wheel • Disc rupture	• Inspection of equipment with guard • Qualified personnel in use • Hot Work Permit • Use of PPE • Signage	• Helmet • Lenses • Face shield • Earmuffs • Filter respirators • Dielectric shoes • Long-cuffed gloves • Leather apron • Booties

Table 22 Risk analysis. SOURCE: http://fullseguridad.net/wp-content/uploads/2017/11/trabajos-en-caliente.pdf

25. Have preventive measures that mitigate the occurrence of occupational accidents such as:

a. Areas free of flammable/combustible materials
b. Use of fire blankets and non-combustible barriers
c. Fire extinguishers/hoses
d. Wetting of Floor and Materials
e. Cylinders with water and buckets provided with sand
f. Permanent lookout in the area
g. Flammable Gas Test
h. Isolation of energy sources
i. Non-return valves in cylinders
j. Barricading work areas
k. Warning signs and notices
l. Natural/forced ventilation system

26. Compliance with security measures associated with the type of activity being carried out:

a. Welding and cutting with oxygen and fuel gas

TOOL	REQUIREMENT
TORCHES	Current quality certificate issued by a regulatory body.
	Pre-operational inspection

	Resume, where the data of: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.
	Verification of connections: Documentary records of leak-seeking evidence.
	Hose purge
HOSES AND HOSE CONNECTIONS	Resume, where the data of: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.
	Certification of each of the hoses by a regulatory body
	Each hose must be color-coded according to the competent authorities
	Pre-inspection of each hose ensuring that the hoses must be manufactured so that they can withstand twice the pressure they are normally subjected to in service without leakage, but in no case less than 300 psi (2070 kPa)
	Approved quality certificate for oxygen and fuel gas systems
PRESSURE REDUCING REGULATORS	Current quality certificate issued by a regulatory body.
	Resume, where the data of: date of manufacture, useful life, history of use, inspection records, maintenance records, technical sheet, manufacturer's certification and observations are recorded.
	Checklist of regulator nuts and union connections
	Oxygen meter safety label
	Corrective and preventive maintenance records of oxygen regulators

b. Arc welding and cutting

I. Inspections of each of the solder terminals where special revision is made to the protections Quality certificate issued by a regulatory body of the
II. portable control devices Curriculum vitae of the autotransformers, where the data of: date of manufacture, useful life, history of use, inspection
III. records, etc. maintenance records, technical sheet, manufacturer's certification and observations. IV. V. VI.

VII. Have a type of grounding connection Verification of the correct operation of the ground cables Preoperational inspection of the operation of each mounted connection just before starting the operation Manuals and instructions for the correct use of the equipment Certificate of training of the welder to avoid electric shocks Safe work procedures when situations associated with live metal parts or insulation arise.

VIII.

IX.

X. Preventive and corrective maintenance of welding equipment as well as rotating electrical equipment switches Periodic inspections of welding equipment to prevent material from obstructing ventilation or insulation

XI.

NOTE: Welding cables must be of the flexible type specially designed for the rigors of welding service and of a size suitable for the reasonably anticipated current and duty cycles.

6.1.6. Work with hazardous energies

To carry out work with hazardous energies, especially electrical, pneumatic and mechanical, the contractor must comply with both the technical and documentary requirements named below:

1. Training or certification of the work competence of workers who are exposed to contact with hazardous energies
2. Valid certificate of medical-occupational fitness for each worker who is going to perform the work
3. Safety manuals or instructions necessary to operate machines, equipment and/or tools safely containing hazardous energies.
4. Procedures for controlling the energies present at work. (Isolation and control)
5. Certificate of skill of each worker in installation and removal of energy controls
6. Training plans in the identification of the sources of hazardous energy present in the activities to be carried out.
7. Energy control procedures for activities related to maintenance and cleaning of equipment and tools
8. Personal protection elements required for each task, which must have a quality certification issued by the manufacturer.
9. Work permit for the control of hazardous energies
10. Occupational Safety Analysis Format
11. Have a brigade/rescuer
12. Checklist completed at the beginning and end of the work that contains at least the following:

AT THE BEGINNING OF THE WORK				
WORK PLANNING				
No	DESCRIPTION	YES	NO	N/A
1	Have all sources of hazardous energy from machines, equipment, and tools been identified?			
2	Do you have specific and clear procedures for the work to be carried out?			
3	Are there elements or devices necessary to work?			
4	Are the staff qualified to carry out jobs?			
5	Have any disclosures been made about ATS?			
WORK AREA				
6	Is the work execution area clean, purged, isolated and optimal?			
7	Was the work area signposted and delimited, taking into account the area of influence of potential hazardous chemicals?			
EPP				
8	Dielectric helmet			
9	Dielectric gloves			
10	Gloves Mechanical resistance			
11	Safety Boots			
12	Safety Glasses			
13	Hearing protection			
14	Are workers authorized and trained in the use of PPE?			
15	Are the personal protection elements complete?			
VERIFICATION				
16	Has it been defined who will be the last to remove their padlock / tag before the restart of the machine's operation?			
17	Has it been verified that there is no interference of the activity with other maintenance activities?			
18	Does the activity to be carried out have an approved Hazardous Energy Control Sheet?			
19	Were all hazardous energy identified in the applicable Hazardous Energy Control Sheet blocked?			
20	Were locks as well as hazard cards and padlocks placed at power isolation points by ALL authorized workers, and CONTRACTORS?			
21	Have the locks and cards been verified to be properly installed?			
22	Are the measuring instruments for the different hazardous energies involved indicating an absence of energy?			
23	Have the hazard cards been verified to be fully filled out?			
AT THE END OF THE WORK				
24	Has the work area been left in perfect order and cleanliness?			
25	Were all blocks, tags, and cards removed?			
26	Were the guards and all safety controls of the machine, including light signals, sounds, warnings and pictograms, replaced?			

Table 23 Suggested checklist to evaluate the initial and final conditions of the equipment and work area.
SOURCE: https://www.arlsura.com/index.php?option=com_content&view=article&id=3859

13. Risk assessment and assessment matrix associated with:

    a. Mechanical Energies.

    Crushing Shear
    Cut IV. V.
    III.
    Entrapment
    Coupling VI.
    Impact
    VII. Punching
    VIII. Friction-abrasion
    IX. Fluid projection.

    b. Electrical Energies

    I. Short Circuits
    II. Electric Shock

    c. Pneumatic Energies

    I. Whiplash from hose rupture Leakage of particles,
    II. compressed air, water and/or oil Formation of
    III. mists in the air

14. Have protection measures integrated into the machine if applicable.

    a. Defenses and guards
    b. Interlocking devices
    c. Residual inertial devices
    d. Two-handed command
    e. Mobile Display
    f. Sensitive devices
    g. Sensitive gait
    h. Impulse March
    i. Body-Aparts

15. Have security measures not integrated into the machine such as:

    a. Personal protection
    b. Formation
    c. Working Methods and Effective Maintenance
    d. Internal rules (good practice)

16. Have energy blocking and isolation elements that meet at least the following requirements.

a. PNEUMATICS

PNEUMATIC ENERGY		
BALL, BUTTERFLY AND CURTAIN VALVES		
No	TECHNICAL CHARACTERISTICS REQUIRED	GUARANTEED VALUE
1	GENERAL REQUIREMENTS	
	Manufacturer Name	
	Valve reference or name	
	Country of manufacture	
	Jobs for which it is suitable	
2	TECHNICAL CHARACTERISTICS	
	Pressure rating equal to 16 bar or 232 psi	
	Ability to withstand pressure from both sides	
	Complete tightness when closed	
	Valve Type	
	Full Pitch or Free Clearance	
	Body is one piece	
	Manual Actuation 1/4 (Quarter Valve)	
	Type of valve actuation (Handle, handwheel or lever)	
	For levers or steering wheels: Material is stainless steel, bronze or rust-protected steel	
3	QUALITY TESTING	
	Hydrostatic test on the body of minimum 1.5 times the nominal pressure of 232 PSI	
	Factory body pressure test of 1.7 times the pressure rating of 232 psi	
	Insulation leak test minimum 1.1 times the nominal pressure of both sides	
	Permissible and Maximum Permissible Leakage Tests	
	Tensile testing of the element must withstand more than 400 psi	
	Aging test with a resistance greater than 1500 cycles	
	Handle or ore operating torque test to 17 lb. ft	
4	LABELING, LENGTH AND PACKAGING	
	Legibly engraved sign on the body indicating at least: name of the manufacturer or registered mark, nominal diameter, working pressure, material, batch or serial number	
	Packaging must be supplied for transport to protect against drops or shocks	
5	TECHNICAL DOCUMENTS	
	Valve data sheet including dimensions, materials, pressure and use, in the language you apply	
	Certification of compliance indicating that the item is fit for use	
	Manufacturer Quality Management System Certification	

Table 24 Minimum requirements for valves. ADAPTED FROM: https://www.epm.com.co/site/Portals/3/documentos/Aguas/ET_AS_ME03_08_Valvula_de_incorporacion_metalica_para_acometidas_acueducto.pdf?ver=2019-09-03-085718-887

b. ELECTRICAL

ELECTRICAL ENERGY	
ELECTRICAL CIRCUIT BREAKERS	REQUIREMENT
BRACKERS	Technical data sheet of the valve including dimensions, materials, maximum voltage and use, in the language that applies
	Certification of compliance indicating that the item is fit for use
	Item resume indicating: date of manufacture, useful life, usage history, inspection records, maintenance records, technical sheet, manufacturer's certification and observations.
	Note: you must take into account if you are dealing with brakers of a special size oversized, in which case you should look for the specific rope clamp.
PLUGS AND PINS	Technical sheet of each element to be implemented that contains at least: • Manufacturer's name or brand • Current rating in Amps (A) • Voltage rating in Volts • Symbol of feeding nature • Type reference • Degree of protection against access to dangerous parts and water ingress. • Insulation length • Electrical shock protection
	Certification of compliance indicating that the item is fit for use
	Item resume indicating: date of manufacture, shelf life, usage history, inspection records, maintenance records, manufacturer certification, and observations.

Table 25 Minimum requirements for electrical circuit breakers. SOURCE: https://www.arlsura.com/index.php?option=com_content&view=article&id=3861

c. MECHANICS

To control the mechanical energies present in the equipment, it is necessary to have locking systems such as:

I. Emergency stops Plugs and pins
II. De-energization control boards Safety
III. locks V. VI.
IV.
Padlock
Holder
Locking Kits

VII. Cables for locking.

17. Have hazard cards that contain at least the following:

    a. Name of the person placing the block - Photograph
    b. Reason for the block.
    c. Date.
    d. Signature of the person.
    e. Warning message.
    f. The blocking always takes precedence over the labeling, unless it is impossible to carry out the blocking, in which case only the card applies."

    In addition to this, the cards must meet the following requirements:

    a. Have a standardized shape, color, and size
    b. Be clearly differentiated from other cards used for other purposes
    c. Be easily understood by all workers, be individual for each Authorized Worker

    d. Made of resistant material according to the atmosphere in which they are to be used.
    e. Use a means of fastening the insulation mechanism in such a way as to prevent accidental falling. These media must be non-reusable, hand-attachable, self-locking, and cannot be removed with forces less than 50 lbs.
    f. Have text messages warning of hazards if the machine or equipment is energized.

18. Have warning cards suitable for the energy that is present in the development of the work.

6.2. HANDLING, TRANSPORT AND FINAL DISPOSAL OF SOLID AND LIQUID WASTE

The contractor that offers the service of Handling, transport and final disposal of solid and liquid waste, when applicable according to current legislation, must guarantee compliance -before, during and after the execution of the activities subject to the contract- of both the technical and documentary requirements named below:

1. Permitting Processing Before the Environmental Authority

    a. Obtaining an Environmental License, permits, authorizations and/or concessions for the loan of the Transportation and Final Disposal of solid and/or liquid waste services

2. Guarantee compliance with minimum requirements in the transport units, such as:

    a. Identification of the units with the company's data
    b. Units appropriate to the type of waste to be transported

c. Place the danger signage, in accordance with the characteristics of the waste transported
d. Transport only properly conditioned, labelled and documented waste

e. Protecting cargo during transport to minimise risks
f. Subject vehicles to regular roadworthiness tests
g. The unit must have communications equipment
h. Maintain accident and incident statistics for both units and personnel and implement continuous improvement measures
i. Have a spill control kit suitable for the waste you are transporting

3. Segregate the waste to be transported, according to its chemical compatibility
4. Guarantee the non-spillage of waste, during transport, through the use of containment pallets and/or containers in good condition
5. Waste transport must be carried out in accordance with the guidelines of current legislation, including permissible speed limits and use previously established low-risk routes

6. The best methods will be chosen, in accordance with advances in science and technology, for the collection, treatment, processing or final disposal of waste, garbage, waste and, in general, waste of any kind
7. Properly manage the cargo documents, in accordance with the corresponding requirements: Waste Manifests or Chain of Custody Records will be completed prior to the transport of the waste
8. Minutes of Treatment or Final Disposal of waste will be delivered
9. Design and execute a training program on proper driving, safe practices and contingency care, to:

    a. Personnel involved in the transport, handling, supply or unloading of fuels

    b. The personnel of THE CONTRACTOR who are present during the activities subject to the Contract

10. Definition, Establishment, Execution and Monitoring of Plans of:

    a. Contingency for Risks associated with the service to be provided.
    b. Operational: that loading and unloading manoeuvres are carried out by trained personnel, with the appropriate personal protective equipment and in such a way as to minimise risks, following established protocols

6.3. GROUND HANDLING.

The contractor offering the Ground Assistance service, when applicable according to current legislation, must guarantee compliance – before, during and after the execution of the activities subject to the contract – with both the technical and documentary requirements named below:

1. Permit Processing Before the Environmental Authority:

a. Obtaining Environmental License, permits, authorizations and/or concessions for the loan of the Ground Assistance service
b. Obtaining an Atmospheric Emissions Permit: Fixed and Mobile Sources

2. Have a kit for the control of spills of hydrocarbons and hazardous chemical substances
3. Monitor the Atmospheric Emissions generated by the equipment
4. Comprehensively manage the Hazardous Waste generated
5. Definition, Establishment, Execution and Monitoring of Plans of:

   a. Contingency for Risks associated with the service to be provided
   b. Air Emissions Management and Control: Fixed Sources and Mobile Sources

6. Design and execute a training program on proper driving, safe practices and contingency care, to:

   a. Personnel involved in the transport, handling, supply or unloading of fuels

   b. The personnel of the Employer who are present during the activities subject to the Contract.

6.4. FUMIGATION

The contractor offering the fumigation service, when applicable according to current legislation, must guarantee compliance – before, during and after the execution of the activities subject to the contract – with both the technical and documentary requirements named below:

1. Processing of Permits before the Environmental and Health Authority

   a. Obtaining Environmental License, permits, authorizations and/or concessions for the loan of the Fumigation service

2. Establishment of the Pest Control Program, by work center, which includes:

   a. Preventive physical control: Condition of each of the siphons, grates, cracks, false ceilings
   b. Insect Removal
   c. Elimination of rats
   d. Protection of the openings of each establishment (doors, windows, gates, ventilation ducts, among others) to the outside, with mesh and/or plastic or metal sieve

   e. Protection of the space between the wall and the ceiling, if any, with a sieve (plastic o r with polyurethane foam
   f. Installation of metal or rubber sheets at the bottom of doors that lead to the outside of the work center

g. Setting traps:

i. With bait on the outside of the establishments, they must be safe and well closed
ii. Rodent mechanics on each side of the entrance doors and on the inside of the establishments
iii. In all storage areas

3. The frequency of fumigations will be according to the type and degree of infestation.
4. The equipment used for the application of fumigation supplies must be completely removed once used.
5. Use of low-toxicity and biodegradable chemical inputs
6. Definition, Establishment, Execution and Monitoring of Plans of:

a. Waste Management
b. Contingency for Risks associated with the service to be provided

7. Delivery of Fumigation Execution Reports, which have at least:

a. Date of fumigation
b. Initial state of the work center
c. Material or Input Used
d. Dose applied
e. Observations: Pests or evidence found in the place
f. Manager (executor) and Supervisor
g. Signature and Seal

8. Delivery of Sanitation Certificates by work center

6.5. FOOD PREPARATION (CASINOS, CAFETERIAS, VIP LOUNGES, CATERING, ETC.)

The contractor that offers the service of food preparation in casinos, cafeterias, VIP lounges, Catering, etc., when applicable according to current legislation, must guarantee compliance -before, during and after the execution of the activities subject to the contract- of both the technical and documentary requirements named below:

1. Permitting Processing Before the Environmental and Health Authority

a. Obtaining a Sanitary License, permits, authorizations and/or concessions for the loan of the Food Preparation service
b. Obtaining a Discharge Permit for ordinary and special wastewater
c. Obtaining a permit for the construction of Grease Traps

2. Guarantee compliance with the minimum requirements in the reception and handling of raw materials (food):

a. Reception must be carried out at off-peak hours, allowing for an adequate inspection

b. Plan the receipt of products, ensuring an available place to store them
c. Verify the characteristics such as smell, color, flavor, aroma and texture that correspond a each type of product
d. Verify the arrival temperature of the food according to the guidelines for its preservation in freezing, refrigeration or hot
e. Store food immediately in appropriate places and at the appropriate temperature conditions
f. Avoid overloading refrigerators or freezers
g. Raw foods should be placed in the lower parts and those ready to eat o r that do not require cooking on top, to avoid cross-contamination
h. Consider the recommendations of the manufacturers of the equipment being used about the places where food should be placed
i. Avoid storing large quantities of hot food in large containers
j. All stored food must be properly covered

3. Ensure compliance with the minimum requirements in:

a. Food Cleaning and Disinfection
b. Storage of processed foods
c. Storage of chemical products used for cleaning and disinfection of equipment and work utensils
d. Food Handlers
e. Food Preparation
f. Place of Food Preparation and Consumption
g. Transportation and Distribution of Prepared Foods
h. Food Quality Monitoring

6.6. ENVIRONMENTAL CONTROLS: MEASUREMENTS (ATMOSPHERIC EMISSIONS, NOISE, QUALITY OF DISCHARGES, QUALITY OF DRINKING WATER, AMONG OTHERS)

The contractor that offers environmental control services such as measurements of atmospheric emissions, noise, quality of discharges, quality of drinking water, among others, when applicable according to current legislation, must guarantee compliance -before, during and after the execution of the activities subject to the contract- of both the technical and documentary requirements named below:

1. Permitting Processing Before the Environmental and Accreditation Authority

a. Obtaining Environmental License, permits, authorizations and/or concessions for the loan of the Measurement service
b. Obtaining Certification by an Authorized Accreditation Body

2. Integrated Management of Waste Generated
3. Calibration of measuring equipment

4. Delivery of information that evidences its good operational and environmental practices
5. Definition, establishment, execution and monitoring of the Contingency Plan for Risks associated with the service to be provided.

6.7. SUPPLY AND/OR TRANSPORT OF CHEMICAL SUBSTANCES

The contractor that offers services for the supply and/or transport of chemical substances, when applicable according to current legislation, must guarantee compliance – before, during and after the execution of the activities subject to the contract – with both the technical and documentary requirements named below:

1. Permit Processing Before the Environmental Authority and other competent authorities

    a. Obtaining Environmental Licenses, permits, authorizations and/or concessions for the provision of the Supply and/or Transportation of Chemical Substances service

2. Ensure compliance with current legislation, regulations or recommendations applicable to hazardous chemicals and/or dangerous goods, regarding:

    a. Chemical Labels and Labels
    b. Transport Vehicle Labels and Tags
    c. Packaging and Packaging

3. Guarantee the non-spillage of waste, during transport, through the use of containment pallets and/or containers in good condition
4. When the transport of chemical substances is carried out, the carrier must have:

    a. Invoices for the purchase/sale of chemical substances
    b. MSDS of the chemicals being transported
    c. Permits or Licenses relating to the acquisition, handling, transportation, and possession of the chemical substances transported
    d. Cargo manifests, when applicable
    e. Spill control kit suitable for the chemicals you are transporting

5. Definition, Establishment, Execution and Monitoring of Plans of:

    a. Contingency for Risks associated with the service to be provided
    b. Air Emissions Management and Control: Fixed Sources and Mobile Sources
    c. Remediation in the event of an impact on environmental components

6. The vehicle transporting the chemical substances must possess and/or comply with:

    a. Company ID
    b. Emergency card, requested from the importer, representative or manufacturer
    c. Telephone Directory required in case of emergencies
    d. Identification (labels and labels) of the chemicals it is transporting

e. Insurance against accidents and/or emergencies
f. Load securing systems
g. Do not travel on public roads with cargo that protrudes from its front end.
h. Use of fastening devices used to secure the containers in which the chemicals are stored, in such a way as to ensure the safety and stability of the cargo during transport

i. Chemicals should be compatible with each other and stowed separately
j. The load in the vehicle must be properly accommodated, stowed, stacked, secured and covered in such a way that it does not present a danger to the lives of people and the environment; that drags on the road, does not fall on it, does not interfere with the driver's visibility, does not compromise the stability or handling of the vehicle, does not hide the lights, including braking, turn signals, and position lights, as well as reflective identification devices and labels and other information
k. Do not dispatch the vehicle simultaneously carrying chemical substances, with people, animals, medicines or food intended for human or animal consumption, or packaging intended for any of these tasks.

7. Design and execute a training program on proper driving and safe practices to:

a. Personnel involved in the tasks of packing, loading, unloading, storage, handling, proper disposal of waste, decontamination and cleaning

b. The Buyer or Contracting Party

6.8. MAINTENANCE OF MACHINERY AND/OR EQUIPMENT

The contractor that offers maintenance services of machinery and/or equipment, when applicable according to current legislation, must guarantee compliance -before, during and after the execution of the activities subject to the contract- of both the technical and documentary requirements named below:

1. Permitting Processing Before the Environmental Authority

a. Obtaining an Environmental License, permits, authorizations and/or concessions for the provision of machinery and/or equipment maintenance services
b. Obtaining an Atmospheric Emissions Permit: Fixed and Mobile Sources
c. Obtaining a Permit for Ordinary and Special Wastewater Discharges.

2. To have programming and recording of the maintenance carried out on the machinery and/or equipment
3. Monitor the Atmospheric Emissions generated by the equipment
4. Have a kit for the control of oil spills and hazardous chemical substances
5. Comprehensively manage the Hazardous Waste generated

6. Definition, Establishment, Execution and Monitoring of Plans of:

    a. Contingency for Risks associated with the service to be provided
    b. Air Emissions Management and Control: Fixed Sources and Mobile Sources
    c. Management, control and monitoring of wastewater discharges
    d. Design and execute a training program on proper handling, safe practices and contingency care, for personnel involved in the maintenance of machinery and/or equipment

6.9. FUEL SUPPLY

The contractor that offers fuel supply services, when applicable according to current legislation, must guarantee compliance – before, during and after the execution of the activities subject to the contract – with both the technical and documentary requirements named below:

1. Processing of Permits Before the Environmental Authority and other competent authorities

    a. Obtaining Environmental License, permits, authorizations and/or concessions for the loan of the Fuel Supply service

2. Ensure compliance with the minimum requirements of:

    a. Characteristics of the fleet through which the fuels are transported
    b. Fuel tank management
    c. Periodic fleet maintenance

3. Deliver reports on the amount of Fuel supplied to THE CONTRACTING PARTY
4. Have a spill control kit suitable for the chemicals you are transporting
5. Definition, Establishment, Execution and Monitoring of Plans of:

    a. Contingency for Risks associated with the service to be provided
    b. Remediation in case of an impact on environmental components

6. Design and execute a training program on proper driving, safe practices and contingency care, to:

    a. Personnel involved in the transport, handling, supply or unloading of fuels

    b. The personnel of THE CONTRACTOR who are present during the activities subject to the Contract

6.10. CLEANING AND/OR WASHING

The contractor that offers cleaning and/or washing services, when applicable according to current legislation, must guarantee compliance -before, during and after the execution of the activities subject to the contract- with both the technical and documentary requirements named below:

1. Processing of Permits before the Environmental Authority

    a. Obtaining an Environmental License, permits, authorizations and/or concessions for the provision of the Cleaning and/or Washing service
    b. Obtaining a Discharge Permit for ordinary and special wastewater

2. Keep statistics on the amount of water consumed
3. Use of biodegradable, low-toxicity and low-hazard materials and supplies for cleaning and washing
4. Use of equipment that guarantees saving and efficient use of water: Pressurized water, dry cleaning, etc.
5. Management, control and monitoring of wastewater discharges generated
6. Treatment and adequate final disposal of wastewater.

6.11. SECURITY

The contractor offering the surveillance and private security service [1], when applicable according to current legislation, must guarantee compliance – before, during and after the execution of the activities subject to the contract – with both the technical and documentary requirements named below:

1. Permit, license or credential from the Superintendence of Surveillance and Private Security (or applicable entity) of each worker who is going to perform the work.
2. Certificate of the current introduction to Surveillance and Private Security course (50 hours) of each of the workers who are going to enter the company
3. Certificate of psychophysical aptitude of each worker.
4. Have personal protection elements suitable for safe work (Each EEP must be certified by a regulatory entity)
5. Valid certificate of medical-occupational fitness for each worker who is going to carry out work at heights

[1] For this document, surveillance and private security services are those carried out by natural or legal persons, aimed at preventing or stopping disturbances to individual security and tranquility in relation to their own or third parties' lives and property and the manufacture, installation, marketing and use of equipment for surveillance and private security. armoring and transport for this same purpose.

6. Valid certificate of medical-occupational fitness for each worker who is going to carry out work at heights
7. Authorization for the constitution of the Superintendence of Surveillance and Private Security (or entity that applies).
8. Transitory operating license issued by the Superintendence of Surveillance and Private Security (or applicable entity)
9. A non-contractual civil liability insurance policy, which covers the risks of improper use of firearms or other surveillance and private security elements.
10. Single Tax Registry
11. Document specifying the modality of the services to be developed
12. Matrix of means that it intends to use for the provision of the service with its technical characteristics, if applicable.
13. Risk assessment and assessment matrix
14. List of operational personnel by type of service, indicating the number of credentials and/or pending credentials filed
15. List of weapons and list issued by the Department of Arms Control and Trade with a validity of no more than 60 days.
16. Certificate of affiliation to the National Police Support Network (Applies to Colombia)

17. Have clear procedures for the development of each of the activities that will be carried out in the company.
18. Support for recently conducted internal and external audits
19. In the case of making use of authorized means such as weapons, canines and technological means, the following requirements must be met at least:

19. WEAPONS

REQUIREMENTS
Permit to possess weapons with a maximum validity of ten (10) years Certificate of suitability for the use of weapons for each collaborator Permit to carry weapons with a maximum validity of 1 year Reservist or provisional military card Medical certificate of psychophysical aptitude for the use of weapons of each collaborator Matrix of personnel who will use weapons Certificate of criminal and disciplinary record (Judicial certificate) of each collaborator who is going to handle weapons Certificate o Update of the specializations associated with the work to be carried out Ammunition Registry specifying at least:
a. Quantities present in the workplace b. Guy c. Class

Table 26 Minimum requirements for the use of weapons. SOURCE: Decree 2535 of 1993

20. CANINOS

REQUIREMENTS
List of canines owned by the company Registration and certification of training of each of the canines involved in the work by the Superintendence by specialty maximum of 1 year Folio of resume of the canines containing at least: a. Clinical Record b. Vaccines: Triple rabies, parvo virus c. Deworming d. Age, color, race e. Microchip f. Speciality g. Restrictions and special care NOTE: These documents may not have a maximum issue date of one year and must be issued by a veterinarian who accredits their professional registration and their identity document. h. Date of retraining i. Documents that show outstanding aspects of performance and behavior of each canine endorsed by the canine instructor, guide or supervisor.
Current contract for the provision of services with a veterinarian or clinic Credentials issued by the superintendence or competent entity of canine handlers. Veterinary medical concept of canines specialized in smell and controlled defense.
Photocopy of the non-contractual civil policy that covers risks, damages and injuries caused to third parties by canines, which does not have a sub-limit per event or per term.
List of jobs with a canine medium, informing the canines assigned per position. Physical and documentary records that demonstrate the current conditions of care of the canines by the contractors.
Certificate or specialization update of each canine handler associated with: a. Controlled Defense b. Explosive Substance Detection c. Detection of narcotic substances d. Currency Detection

Table 27 Minimum requirements for the provision of services with canines. SOURCE: Resolution 2852 of 2006

7. PROHIBITIONS FOR CONTRACTORS

At Avianca facilities it is forbidden to:

1. Transit or enter areas for which you are not authorized.
2. Operating and moving equipment or any other device in the company's facilities, without being previously authorized by the requesting area.
3. Using tools, equipment or elements owned by Avianca, without prior authorization.
4. Storing flammable or combustible material in higher quantities in the work area to 55 gallons total. Flammable or combustible material should not be stored near sources of heat, spark or open flame for any reason.
5. Making electrical connections without the authorization and supervision of Avianca's Physical Plant area.

6. Entering work areas without the personal protection elements that are required according to the risk to which they will be exposed.
7. Run within the company's facilities.
8. Making jokes or games that distract their attention.
9. Use audio players during the development of the work.
10. Discharge any chemical substance in any concentration into sanitary rainwater channels, siphons or soils.
11. Consuming alcoholic beverages or psychoactive substances (including cigarettes) within Avianca's facilities or in the course of their work, as well as arriving at their facilities under the influence of the above.
12. Allowing workers to carry out activities while they are consuming medications that affect their work capacity, alert attitude, coordination, threatening their own safety and that of others.
13. Leaving waste abandoned in areas, such as debris, containers of chemical substances, etc.
14. Store the waste generated in Avianca facilities.

8. PENALTIES

The contractor and the persons authorized by it to provide a service, who fail to comply with the HSE requirements, procedures, responsibilities and recommendations referred to in this document will be subject to sanctions such as:

- Suspension of activities or withdrawal of personnel as the case may be
- Temporary or permanent restriction to participate in future Avianca contracting processes.
- Discount of a contract amount.
- The problems generated by the violations of the HSE requirements will be totally attributable to the Contractor, so it will not have any right to request or require an extra cost to its contract and in the same way the original plan that had been established from the beginning of the work must be complied with.

The auditor must ensure that all the sanctions described above are included in the contract so that they are mandatory.

In this document, some brief basic safety standards have been indicated for some works carried out by the contractor personnel within Avianca's facilities, for the prevention of work accidents, occupational diseases and/or damage to property due to or as a consequence of the activities carried out here. Taking into account that these are technical measures, which can fail if the most important thing is not in place throughout this process, such as the attitude of people towards the issue of safety, a fundamental and definitive condition which the contractor must possess and instill in its workers, so that all of the above works and a safe work environment is achieved for all.

Follow the rules in every task you perform, it is up to you to protect your own, health and safety of the workers around you.

SSMA HAS THE AUTHORITY AND CAPACITY TO MAKE ANY TYPE OF CONSIDERATION THAT COULD CONTRIBUTE TO THE PREVENTION OF INCIDENTS AND IS NOT INCLUDED IN THIS DOCUMENT.

ANNEXES

ANNEX 1. MATRIX OF ENVIRONMENTAL ASPECTS AND IMPACTS

MATRIX OF ENVIRONMENTAL ASPECTS AND IMPACTS					
Name of the project/work:					
Contractor's Name:					
Prepared by:					
Date of production:					
N°	**Activity**	**Environmental Appearance***	**Environmental impact***	**Operational control****	**Evidence of Operational Control Application*****
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
	* In accordance with the provisions of the annex 1 table				
	** Refers to the strategy implemented to mitigate the environmental impact, it can be: procedures, training, waste separation, isolation, etc.				
	They can be minutes, photographs, analysis, etc.				

Attached below is the matrix of editable environmental aspects and impacts:

Matrix of environmental aspects and impacts

ANNEX 2. COMPREHENSIVE WASTE MANAGEMENT PLAN

Plan Manager:

Location of the project or work:

Base map or location plan

Activities to be covered: *Description of the activities to be covered within the Plan*

ENVIRONMENTALLY SAFE INTERNAL MANAGEMENT

CONVENTIONAL WASTE (includes debris)

1. Segregation of waste at the source

COLOUR	RESIDUE	ACTIVITY

Description of the colour code used for the segregation of conventional waste at source.

2. Temporary waste storage

Make a brief description of the way conventional waste is stored

3. Final disposal of waste

Frequency of waste collection Type of transport used to transport the waste Name of the company in charge of final disposal

RESIDUOS PELIGROSOS

4. Segregation at the source

COLOUR	RESIDUE	ACTIVITY

Description of the colour code used for the segregation of hazardous waste in the Fuen

5. Lettering

Hazardous waste must be labelled taking into account the following parameters:

- Name of the contractor that generates it

The editable integrated waste management plan document is attached below:

Comprehensive waste management plan C

ANNEX 3. PROCEDURE FOR CHEMICAL SPILL CONTROL

STANDARD OPERATING PROCEDURE FOR HANDLING.....		Contractor's Name Date of elaboration: Version: 0
Prepared by:		
Name of the project/work..		Scope: Activities where the procedure applies
Associated Risks	Occupational and environmental risks identified	
Aspects to be evaluated	Important aspects to be evaluated	
Inputs	Inputs required for the application of this procedure	
Contacts		
RESPONSIBLE / STEPS	Responsible 1 Responsible 2 Responsible 3	
DURING THE EMERGENCY		
1	Activity 1	
2		Activity 2
3		Activity 3
4		
5		
6		
7		
8		
9		
10		
AFTER THE EMERGENCY		
16		
17		

The following is the editable chemical spill control procedure:

Format contingencies ambien

ANNEX 4. SAFETY STANDARDS FOR HIGH-RISK JOBS

WORKING AT HEIGHTS

For Avianca, work at heights is considered to be work that is carried out more than 1.5 meters above sea level from the lower level.

To carry out an activity included in this definition, the corresponding work permit must be completed. In addition, for the execution of work at heights, there must be at least 2 people, one to carry out the work and the other to supervise the safety conditions, and a rescue procedure must be established in case of emergency.

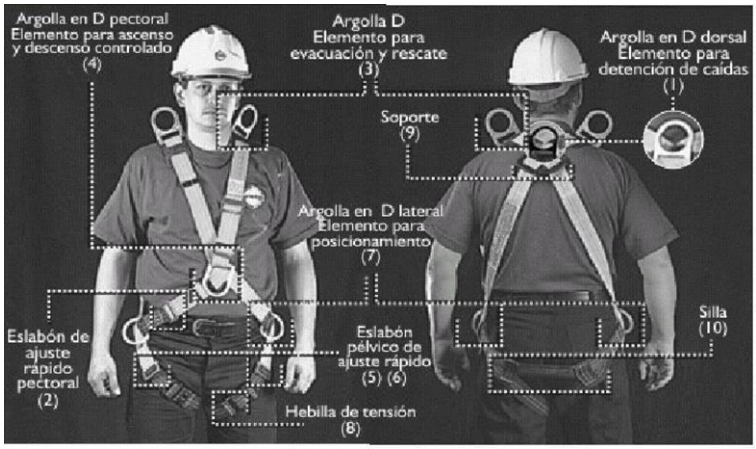
1. Task Suspension

In case of fortuitous or deteriorating environmental conditions, the task must be suspended, the work permit loses its validity; until the conditions are considered safe, in which case it will have to be revalidated before restarting the task.

2. PPE for working at heights

Fall protection equipment used by the Contractor must meet at a minimum the ANSI standard for the equipment or a similar standard issued by a recognized certifying body.

a. Type 1 safety helmet with chinstrap that meets ANSI Z89.1
b. Safety harness with " D" type rings on the chest and back that resist at least 5,000 Lb ANSI Z.359.1
c. Slings that resist at least 5,000 Lbs and comply with ANSI Z359.1, Z349.1 and A10.14
d. Job-based gloves that comply with ANSI Z81.
e. Safety shoes with non-slip toe cap and sole that comply with ANSI Z41 and Z195.
f. Safety glasses that comply with ANSI Z87.1
g. Work-based hearing protection that complies with ANSI S3.19 and Z84.
h. Job-based respiratory protection that meets ANSI Z88.2



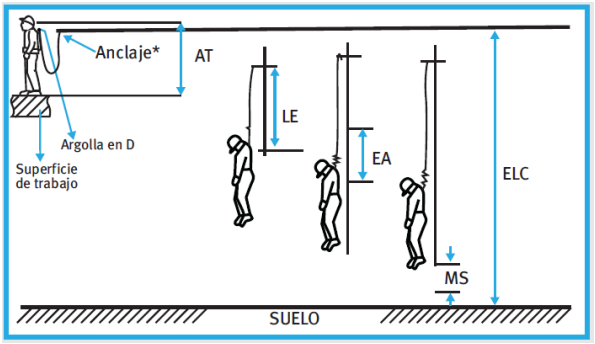
3. General safety requirements for working at heights

a. Check the condition of the elements to be used: safety harness, helmet with chinstrap, scaffolding, ladders, among others. (According to the activity to be developed, PPE is selected)
b. Organize all the material to avoid falling from it when climbing it by securing it from the floor level, it is forbidden to climb a lot of material that prevents proper movement and the ease of holding on the stairs.
c. According to the type of work to be carried out, verify that there is no flammable material in your area or that hot work is carried out that may affect your activity.
d. For Colombia, workers who perform work at heights must be certified in accordance with the provisions of resolution 4742 of 2021. In other countries, the worker who has the skills to carry out this work or the certificates required in each country will be required.

e. If there are unevenness or holes near or within the work area that represent a danger of falling from heights, the following must be used as a minimum: Protective covers such as grates of any material, boards or covers, with a resistance of twice the maximum load expected to be supported; placed on the hole (hole), delimited and signposted, when it comes to unevenness, measures must be used that allow communication between them, reducing the risk of falling, such as ramps with an angle of inclination of 15° to 30°, or stairs with a minimum footprint of 25 to 30 centimeters and the riser of a minimum of 16 centimeters and a maximum of 18 centimeters and must be of non-slip surfaces.

f. Under no circumstances will it be accepted that the worker has consumed alcoholic beverages or is under the influence of any substance or medication that alters his or her state of alertness y concentration at the time of executing the task or during it.
g. Visually verify that the work structure is free of bee and wasp nests.
h. All equipment for working at heights must have resumes where the inspections carried out on the equipment are recorded.
i. Lifelines must have a strength of 5000lb for each person who is anchored.

j. Consider the free-fall length to define the type of protection to be used. To calculate this length, follow the following formula.



Where: LE: Total Length of

the Sling EA: Shock Elongation (Between 0.7m and 1.06m) MS: Safety Margin (0.6 is recommended 1 meter) ET: Worker's Height

4. Safety recommendations for the use of scaffolding.

   a. Inspect all equipment before use. Never use equipment in poor condition.
   b. If you are going to use more than one section of the scaffolding, it must be secured by all four points, ensuring that there are no movements.
   c. Keep the equipment in good condition. Try not to use rusty equipment.
   d. Regularly inspect the scaffolds erected to ensure that they are in a safe condition.

   e. Use adjustment screws for leveling instead of shims.
   f. Plumb and level scaffolding so that it fits the structure without forcing it.
   g. Prevent the overturning of scaffolding towers with braces or other means.
   h. Equip the platforms with planks equipped with railings and skirting boards.
   i. Do not use ladders or improvised elements at the top of scaffolding to increase their height.
   j. Do not overload the scaffolding.

5. Safety recommendations for the use of stairs.

   a. Placement: when placing the stairs, the following rules must be observed:

      I. Do not use ladders in a horizontal position such as platforms or scaffolding. Single and extendable ladders are designed to be used in almost vertical position.

      II. Never place a ladder in front of a door that opens into it unless it is locked, locked, or protected.

      III. Do not place any ladders against glass or a window pane. Position the

      IV. ladder so that the two stringers rest securely at its base. On soft soil, shod it solidly to prevent it from sinking. (use wooden dowels or solid bricks) - Rest the feet of the ladder on a level, sturdy base.

      V. Never lean the ladder against unsafe objects; such as boxes or drums Loose.

      SAW. When using a ladder, tie it or secure it in some way to prevent it from slipping.

      VII. Secure the base and top when using a ladder to access scaffolding.

      VIII. Do not place the ladder next to live electrical conductors.

   b. Ascending and descending stairs: When going up or down stairs, the following safety practices should be observed:

      I. Hold on with both hands. II.

Always go up or down facing the stairs.

III. Do not let yourself slide down the stairs.

IV. Before climbing, make sure that your shoes do not have grease, mud or any slippery substances.

V. Do not climb higher than the third rung from top to bottom on stepladders.

c. Electrical hazards and metal ladders.

I. Since metal ladders are good conductors of electricity, they should not be used near or where they may come into contact with electrical circuits. Don't underestimate the importance of electrical hazards.

d. Other Safety Practices

I. Do not use temporary ladders, such as slats attached to a single stringer. Make

II. sure the ladder, if it is a scissor ladder, is fully open and the divider securely secured before you begin to climb it. Before using a ladder, inspect for defects.

III.

IV. Never use a defective ladder. Mark or sign it for separation or destruction.

V. If a ladder is to be discarded, cut it in half immediately to prevent its use and complete its destruction.

SAW. Do not splice stairs. They have been designed to work with their original length and they are not strong enough to work with longer lengths. In addition, most splicing methods are unsafe. Keep the stairs clean, free of dust and grease.

VII.

VIII. Do not use ladders on windy days, except in emergencies y then securing them well.

IX. Do not leave ladders in place unless they are in use.

6. Safety recommendations for harness use

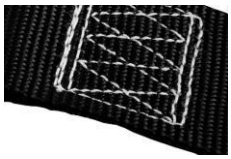
d. Before putting on the harness, verify that it is in perfect condition, the components of a harness that must be inspected are the following:

I. Metal Parts II. Reatas Seams

III. Manufacturer's labels.

IV.

For the inspection, consider the following elements:

Element	What to inspect	Item in good condition	Item in poor condition
Metal parts must be inspected (D rings, buckles, other rings).	Check for corrosion, kinks, worn or loose parts, and cracks.		
Seams	The threads must be in the same material as the reata, but in a different color that contrasts to facilitate ANSI inspection Z359.1. Check for seam damage or loose stitches. With three consecutive loose tips, the harness is removed		
Label	The label must be present and legible. The label must have the following elements: - Equipment manufacturing dates. - Certification that the team complies with. - Equipment limitations. - Previous inspections by competent persons.	 	
Reatas	Look for fraying, cuts, or broken fibers. Check worn, burned, discolored, strong stains. Weight bearing belts or straps shall be at least 1-5/8 inch (41 mm) wide and the ends shall be terminated in order to prevent fraying. (ANSI Z359.1).		 

	Any reatas that have: - Cut of 1mm or more in the edges of the reata. - Superficial abrasion around the faces of the reata and in the eyelets particularly if localized. - Chemical attack possible that may result in local weakening in and softening. - Heat or friction damage reflected in the fibers. - Loss of color and brittle surface. - Contamination (dirt, dirt, sand). Staples on the reatas.		

7. Safety recommendations for the use of slings

   a. Inspection of the positioning sling: It will be inspected at all times as follows:

      I. Rope or rope: They must not have torn, cut or broken fibers. The braided union o sewn of the sling with the hook must be intact, without affecting any branch or breaking of seams in the case of reata.
      II. Guardacabo: It must be intact and in place.
      III. Hooks: They must be operating normally, without allowing the gate to be left open; They must not be bent, splattered with solder, or incandescent materials with a high level of corrosion.

   b. Inspection of the sling with shock absorber: Each component will be inspected as follows:

      I. Straps or reatas: they must not have torn, cut or broken fibers. Tears, abrasions, mold, burns, or discoloration will be checked. At the same time, it is necessary to inspect the seams; check that there are no pulled or cut stitches; Broken stitches can be an indication that the equipment has suffered an impact and should be removed from service.
      II. Rings and buckles: they must not be damaged, broken, crooked; They must be free of sharp edges, roughness, cracks, spatter from welding or incandescent materials, worn parts, and high level of corrosion.

III. Energy-absorbing package: it must not have breakages or leakage of its contents. The joints with the sling and hook must be intact; In the case of spring-type slings, the impact indicator must be checked to ensure that it is

IV. intact. Hooks: they must be operating normally, without allowing the gate to be left open; they must not be bent; splattered with solder or incandescent materials or with a high level of corrosion.



ENTRY INTO CONFINED SPACES

For Avianca, the provisions of OSHA 3138 are considered Confined Space: "A confined space has limited or restricted means to enter and exit, is large enough for an employee to enter and perform an assigned job and is not designed for the employee to occupy it continuously. These spaces may include, among other things, underground chambers, tanks, storage vessels, wells, and areas enclosed by dikes, containers, and silos." [2]

A confined space that requires permission to enter is one that meets the definition of a confined space and has one or more of these characteristics:

- Contains or has the potential to contain a hazardous atmosphere (ambient concentrations or other characteristics of hazardous materials that pose a hazard to people, property, and the environment; The variables that determine it are: Flammability, Toxicity/Corrosivity, Radiation, Oxygen Level).
- It contains material that has the potential for someone who enters to be submerged in it.
- Has an internal configuration that could cause an enterer to become trapped or suffocated by walls converging inwards or by a downward-sloping floor that narrows to a smaller cross-section.
- Contains any other recognized serious safety or health hazards.

1. PPE for Confined Space Work

It depends on the type of activity to be carried out and the conditions of the atmosphere within the confined space that is determined, the PPE to be used is mentioned below, but the person in charge of HSE of the CONTRACTOR company must select the most appropriate PPE:

[2] OSHA 3138 - Confined Spaces Requiring Permission to Enter

a. Air Line Equipment– Full Face. Self-contained these can be used to ensure the supply of pure air, within an atmosphere whose level of toxicity and oxygen could not be controlled. But it must always be in a non-explosive atmosphere
b. Chemical cartridge respirator: The use of this equipment is recommended when it can be guaranteed that the degree of risk due to toxicity of the atmosphere is 0.5 or less y there is no oxygen deficiency.
c. Fastening system: Harness, rope, carabiners, tripod This system allows the rapid evacuation of the worker, on the other hand, from the outside, by means of a mechanical system. The space where the work is going to be carried out must be taken into account to define the best rescue system.
d. Coveralls with plastic zippers, non-sparking tools and accessories when working in explosive atmospheres.
e. Goggles, helmet, safety boots, hearing protection are supplied according to the work to be done.

2. General safety requirements for work in confined spaces.

a. Determine the confined space.
b. Set the areas that are affected by disabling the confined space feature and inform these areas about the date and time of execution of the work in the confined space, in order to obtain administrative permits for the work.
c. Determine the type of work to be performed.
d. Analyse the characteristics of the confined space in terms of access and quality of the atmosphere (pollutants, explosive substances, oxygen levels).

PARAMETER	VALUE
Or^2	21 %
H^2 S	1 ppm
CO^2	25 ppm
% LEL	0%

e. Determine the Work Group (previously trained), according to the characteristics of the confined space and the work itself.
f. Determine the characteristics of the monitoring equipment.
g. Determine the characteristics of the equipment, machines and tools to be used.

h. Determine personal protection elements.
i. Fill out the permit form to work within a confined space and obtain its approval.

j. Carry out the work under the given parameters and once completed, inform the areas of influence about the recommissioning of the confined space.
k. Establish the steps that make the work safe within the confined area and allow the areas not directly involved, but indirectly (cutting off the supply of water, electricity, gas, etc.) with the work, to prepare to adequately face the limitations that the confined work may generate.

l. To carry out work in explosive atmospheres, explosion-proof equipment must be used.

3. Precautions before entry

a. If necessary, the space should be cleaned to remove all residual contaminants, such as solvents and organics.
b. The atmosphere inside the confined space shall be monitored for the presence of toxic air pollutants and the concentration of oxygen.
c. Purge the space by ventilation for as long as necessary in order to reduce any contaminants until safety levels are achieved. All possible sources of ignition must be eliminated, provided that flammable or combustible products exist or can be generated.

d. Personnel will be provided with all the necessary protective clothing, respiratory protection equipment will also be available whenever they are necessary or may become necessary during work. Such equipment shall be of the type of breathing apparatus with a supply of air, to protect the worker in the oxygen-deficient or frequently polluted atmosphere.
e. The permit to work in confined space must have been filled out and its approval must have been obtained. A permit to work is essentially a document that explains the task to be performed, the hazards involved and the precautions to be taken, predetermines safe instructions and is a clear report that all foreseeable hazards have been taken into account in advance and that appropriate precautions are defined and taken in due order.

4. Precautions during the performance of the work

a. During all the time of work in the confined space, it must be ensured that the conditions under which its execution was authorized are respected; To do this, it is necessary to take into account the roles of those involved.

5. Precautions for Completion of Work

a. The completion of the work must be recorded, specifying: Total or partial completion and whether or not extension is required.
b. Remove from equipment, appliances, raw materials and tools used.
c. Determine any changes that have been generated with the work.
d. Establish whether or not normal operations can be continued.
e. General comments.

HOT WORK

For Avianca, hot work will be understood as that in which tools are generated or used
o

r devices that generate sparks, open flames, electric arcs and/or any source of ignition, which under certain conditions may constitute a potential fire hazard for adjacent installations or objects.

1. PPE for Hot Work

   a. Eye protection: Eye protection appropriate to the type of hot work to be carried out must be used. Similarly, make use of manual protective masks, safety glasses for gas or oxyfuel welding, face masks or goggles for resistance welding or brazing. The shade level of the lenses must be appropriate for the type of hot work to be carried out

   y must comply with the latest version of ANSI Z87.1 standards.
   b. Leather gloves that cover the wrist should be worn when cutting and welding.

   c. Respiratory protection: If mechanical ventilation is not adequate to keep smoke or gases at levels below permissible exposure limits, an appropriate respirator should be used, which reduces the worker's exposure to health hazards.

   d. Hearing protection: when hot work is carried out in areas with noise levels above 85 decibels.
   e. Sleeves, leather bibs and pants (the latter according to their convenience), to reduce the possibility that the welder can be burned by metal, slag or sparks.
   f. Work clothing shall not use polyester, acetate, nylon, rayon, or other synthetic fiber, which may increase damage due to burns, when there is exposure
   a flames, electric arcs or in areas where there are sources of ignition.
   g. Safety boots without laces or gaiters, with steel toe cap and non-slip sole.

   h. Hats or hoods made of non-flammable material.

2. General safety requirements for hot work

   a. Perform a pre-operational inspection of equipment before starting the activity
   b. Conduct an inspection of the work area verifying that no flammable products are found, All flammable and combustible materials must be kept at a distance of 10 meters from the work area. A meter may need to be used to monitor flammable gas, vapor, or dust levels. Combustible material that cannot be moved must be protected with tarpaulins and fireproof covers.

   c. Check that all fire control elements are working correctly.

   d. Use shields to protect others from the welding light.
   e. Enclosed equipment containing flammable or combustible materials should be cleaned and disposed of.
   f. If necessary, obtain a Confined Space Entry Permit and follow the guidelines established for the performance of this type of work.

g. Verify that the oxyfuel equipment has an adequate flame arrester for the type of gas being used.
h. Hazardous atmospheres (atmospheres with the presence of a flammable gas that in the specific concentration may burn or that is contained and may explode): when the presence of an explosive or flammable atmosphere is suspected, a measurement of gases in that atmosphere must be carried out. Work at levels equal to or greater than 10% of the lower explosive limit (LIE/LEL) will be prohibited.
i. Containers containing hazardous or flammable materials shall not be cut or welded until such container has been carefully cleaned and ventilated against explosive mixtures and materials which, when in contact with heat, may produce toxic gases.

j. Safeguarding and storage of cylinders and machines: when hot work is carried out in a confined space, gas machines or cylinders must be kept outside said space. Likewise, the cylinders must be secured against any accidental movement or overturning during operations. When not in use, cylinders should be stored and their valves should be closed and plugged. Flammable gas cylinders should be stored in a well-ventilated area and separated from oxygen cylinders and other gases.

3. Cylinder handling and storage

a. A suitable cylinder carrying system, with chains and other secure forms of attachment, should be used to prevent the cylinders from falling out during use.
b. Cylinders must be legibly marked to identify their contents.
c. Do not store oxygen cylinders near cylinders of acetylene or other combustible gas. Please note the storage requirements set out in the safety data sheets.

d. Do not locate cylinders where they come into contact with an electrical circuit.
e. Keep oxygen cylinders, cylinder valves, couplings, regulators, hoses, and appliances free of oil and grease.
f. Do not handle oxygen cylinders or devices with greasy hands or gloves.
g. Keep stored cylinders away from sources of heat, flames, and direct sunlight.

h. Remove the fuels from the storage area.
i. Close the valves of empty cylinders.
j. Keep valve protection hoods in your area, except when cylinders are in use or are connected for use.
k. Provide a suitable platform when moving cylinders with cranes, jib crane, cradle or ship. Do not use slings, gachos, or electric magnets. The cylinder hoods must remain installed on the cylinder until they are connected to the equipment. Keep the cylinder hood close to the cylinder when using it.
l. Fix compressed gas cylinders upright at all times, except for short periods when hoisting or transporting. Empty cylinders must be labeled "Empty." If a cylinder is not equipped with a valve turnwrench, keep a cylinder wrench on the valve stem when using it.

Acetylene cylinders must be protected in a holder when transported by cradle or jib crane.

m. Do not store compressed gas cylinders in enclosed areas or near elevators or stairs or bring them into these areas.
n. Store compressed gas cylinders in suitable, well-ventilated cargo storage racks, which are labeled for the type of gases to be stored. If a cylinder leak occurs and cannot be corrected immediately, move the cylinder to a safe location outside the building.

o. Visually inspect cylinders to make sure they are safe before use.

WORK WITH HAZARDOUS ENERGIES

For Avianca, work with hazardous energies will be understood as all that where forms of energy (electrical, mechanical, thermal, kinetic, pneumatic, hydraulic, radioactive, potential and others) that are present in the equipment or facilities, which may constitute risks against the safety and physical integrity of workers, equipment and facilities, are manipulated.

1. PPE for work with hazardous energies

According to the type of energy to be handled and the type of work to be carried out, the CONTRACTOR's HSE manager will select the most appropriate PPE for the execution of the work.

If live electrical work is to be performed, all PPE must be stamped to certify that it is dielectric. In the same way, it must be guaranteed that tests are carried out to guarantee that they are in perfect condition.

2. General Safety Requirements for Hazardous Energy Work

Please note the following steps for the lockout tagout process:

a. Preparation to shut down: To secure or label any equipment before turning it off, it is necessary to know: the type and amount of energy that makes it work, the dangers of said energy and the way to control it. It should be evaluated if the task is combined with other

high-risk tasks such as work at heights, work in confined spaces, hot work and follow safety guidelines if required.

b. Equipment reconnaissance: The power sources and where the disconnectors are located must be identified, the problem must be determined mechanical failure, jamming, cleaning or routine maintenance, determine if there are other systems or machines active by the same source, if more than one person works on the procedure make sure that there is a sufficient number of padlock holders, Make sure you have the right restraint devices such as blockers or chains for the machine to be repaired or the job to be done.

c. Shutting Down the Equipment: The second step in securing hazardous energy is to press the stop button on the machine. Any circuit breakers, valves, or power isolation mechanisms must be placed in a position that visibly indicates that it is off or disconnected.

d. Power Supply Cuts: Whenever possible, before blocking the main source, place the machine in its resting position, then make sure all controls, manual and automatic, are turned off, check the machine at the start button to make sure it has been turned off. Before isolating the main source, all the equipment that it feeds must be turned off to prevent the demand or load of this equipment from generating an accident.

e. Equipment isolation: Equipment needs to be isolated from all power sources, both secondary and primary suppliers.

f. Locking locks and cards: Once the disconnect device is open or in the OFF position, the lock must be placed on the power lock device with its card taking into account: use an additional piece if the lock cannot be connected directly to the power control, when using a belay system, Each employee must place his personal lock on the work equipment, try to open the locks to make sure they are properly closed, more than one employee can secure an energy isolation system using a multiple lock, the cards must be filled out completely and correctly by writing the following data: date of issue, the name of the equipment, the person in charge and the work to be done.

g. Stored energy control: Equipment after being isolated from its source may contain stored energy and this must be controlled to prevent accidental release, for this follow the following steps: inspect the system to ensure that all moving parts have stopped, verify the effectiveness of the block and ensure that it will not be accidentally removed, install grounding, let out any existing pressure, disconnect spring tension or block the movement of parts activated by the spring system, lock or secure parts that may fall due to gravity, block parts in hydraulic or pneumatic systems that may move due to lack of pressure in the air.

h. Verification of the insulation of the equipment: assuming that the blockage has worked to prevent the equipment from being energized is dangerous, so when all power sources have been blocked and all residual energy has been controlled or dissipated, the machine controls should be checked that there is no movement and that none of the indicator lights show power. Also: check that no one is in the danger areas, make sure

that the power sources cannot be energized, check for the absence of power by means of stopping equipment or by trying to operate their switches or controls.

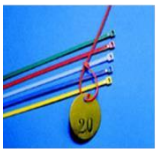
3. Other recommendations to be taken into account

For the removal of locks and cards, follow the following recommendations:

a. Define who is responsible for removing the locks and cards, it is preferred that the person who installed them removes them.
b. When the activity is finished (repair, maintenance among others) make sure that all tools and any other equipment are removed and that the guards have been put in place.

c. Keep in mind that if a worker finishes the shift and his lock is still on, because the maintenance operation has not yet been completed, the person who relieves him of his must place his own lock on the locking device before the first worker removes his.

d. The padlocks are personal and must be marked with the name of the person who uses them, they must not be lent, or used for any activity other than blocking and tagout.

ELEMENTS USED FOR LOCKOUT TAGOUT	
Locking Devices	  
Control Devices	     

Tags	

LIFTING LOADS

Those activities that allow a load to be mechanically moved between two different points, y they can be made by cranes, mechanical and electric tecs, hoists, pulleys, etc.

1. PPE for lifting loads

    a. Safety boots with steel toe cap
    b. Safety helmet
    c. Gloves of Flesh

2. General safety requirements for lifting loads

    a. Inspect the equipment before carrying out the survey.
    b. Verify that the equipment is designed to lift that type of load
    c. The handling of equipment for lifting loads by personnel who are not trained is not permitted.
    d. The person guiding the equipment operator must be trained.
    e. If the cargo is to be moved, it must be verified that the route by which the mobilization is to be carried out is clear and you are authorized to use this route.

    f. Do not allow personnel to be placed under a suspended load
    g. Verify that all the elements required to carry out the lifting of the load are in perfect condition and certified.