



Critical
Activities
Requirements

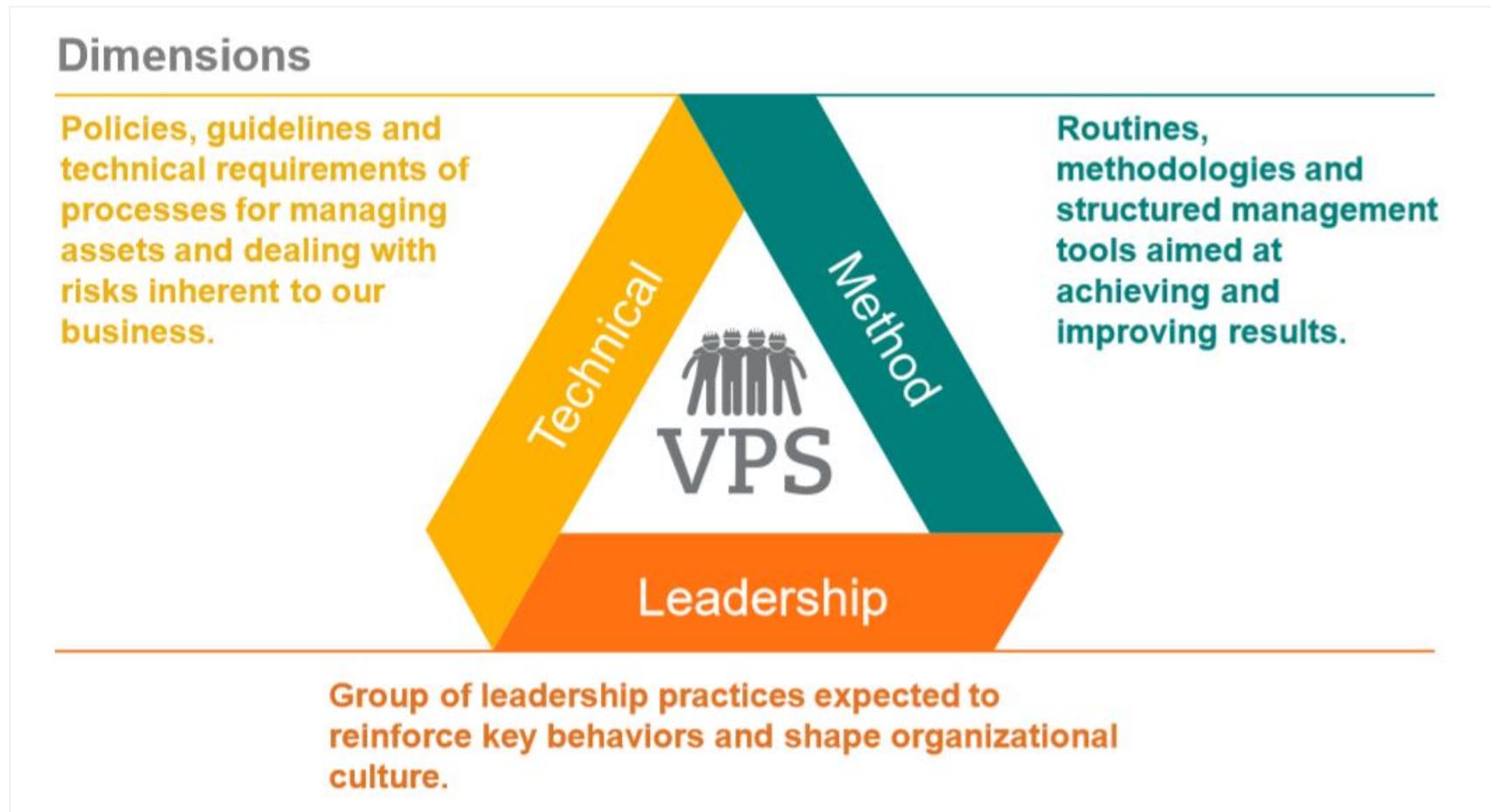
**TRAINING
GUIDELINES**

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1-Vale's Management Model – VPS

Vale's Management Model, known as VPS (Vale Production System), is focused on results and provides for the implementation of policies and practices to enable safe and environmentally responsible operations asset integrity.



The VPS model strength a safe workplace and reinforce accidents prevention controls. The requirements of critical activities are directly associated with the elements of the VPS, as below:

Elements

Leadership

1. Behaviours and Leadership Commitment
2. People Management and Training
3. Organizational Design

Technical

4. Perception and Risk Management
5. Health, Safety, Environment and Community (HSEC)
6. Projects and Construction
7. Operations
8. Maintenance
9. Change Management
10. Systems and Technologies
11. Supplies and Services
12. Emergency Planning

Method

13. Strategy Deployment
14. Routine Management
15. Processes and Standardization
16. Problem Solving and Continuous Improvement
17. Assessment of Management System and Results

Leadership

The elements of the Leadership dimension establish the leadership practices expected to reinforce key behaviours and shape organizational culture.

The CAR's trainings strength a leadership commitment to implement safe and sustainable operational practices, reinforcing the safety obsession key behavior.



Technical

The technical elements establish common policies, guidelines and technical process requirements to manage assets and address risks inherent to our business.

CARs are associated with the Technical dimension, element 05, as they are technical standards required for the execution of critical activities to be carried out with safety.

2- Purpose

This document presents guidelines for the implementation of the training actions associated with the CARs. The guidelines established in this document are applicable to CARs from 01 to 05, which were revised in 2020. The other RACs remain with a previous training model until they undergo the review process.

PTP-000813 - Critical Activity Requirements establishes requirements for the performance of critical activities at Vale, including training requirements, which aim to develop risk perception and increase the ability to anticipate and prevent incidents

3- Parties involved in creating this document

This document was developed by Valer – Vale Education in partnership with the Global Health, Safety and Operational Risks Department.

4- Scope of this document

This document must be applied throughout all Vale's employees, including contractors. The guidelines established in this document must be followed in all countries where Vale has operations and/or offices and are extended to companies providing services to Vale. For other companies in which Vale holds interest, we also recommend its application.

5- Target audience of this document

- Professionals from Health, Safety and Operational Risk Area and HR who are involved in planning, offering and managing CAR training, including third-party employees.
- Vale's Leaders

6- The new way to training in CARs

The training model for which this document establishes guidelines allows the employee to perform the critical activity regarding the requirements established in PTP 00813 – Critical Activities Requirements.

It is important to emphasize that the full qualification to perform critical activities depends on other training models in addition to CAR trainings, such as operational technical training or those that may be required by local legislation.

6.1- Difference between CAR Training and Legislation Training

The global CAR training does not correspond to the training required by local legislation. The HSOR area must complement the material and course load, if necessary, and thus ensure validation. The local HSOR area is responsible for developing and applying training based on regulatory standards associated with the critical activities.

The periodicity of this training must be defined according to the legislation, but it is suggested to apply it at the same time as the Global CAR and on local procedures (PROs) training. Thus, the local HSOR can apply all necessary training at the same time, optimizing time.

6.2- Local procedure associated with CAR training

The local HSOR area is responsible (in partnership with HR Area) for developing, offering and registering at VES the training connected to the local procedure that are related to the CARs - Critical Activities Requirements. The strategy for applying this training must be defined locally.

6.3- Operational and technical training

The global CAR training mentioned in this guideline is not a technical qualification for a position (such as: mobile equipment operator, electrician, scaffolder). It is essential that the employee has prior technical qualification as well as the necessary certifications to hold the position. The development, application or validation of this technical qualification is the responsibility of the local area.

For the effectiveness of the new training model, it is highly recommended that technical operational training be performed prior to CAR training to ensure that the employee starts CAR training accustomed to the technical concepts about that critical activity. The periodicity of this training must be defined locally.

6.4- Practical and simulation CAR training

In the first employee training, during or after the training in the local procedure, for CARs 01, 02, 04, 05 and 06 it is strongly recommended that the local HSOR areas develop practical training or simulations about CARs for better learning. Practical or simulation training can be carried out in practical or virtual simulation spaces, contact and handling the employee with equipment/accessories, or other forms of learning that do not put the employee at risk.

When practical training is impossible, it is recommended that the employee who never performed the critical activity undergo a period of observation of the execution of the activity with an experienced employee.

Practical training must be registered with VES. The local HR has the autonomy to create the local RAC practical courses at VES, as well as to register the conclusion of the training in each State and Country.

According to the specificities and needs of each location, the local SSRO area can define another periodicity for practical trainings.



7- Global strategy for CAR's training¹

The new CAR training model is based specifically on Vale's Critical Activities Requirements. It reinforces safety controls necessary to perform high-risk activities and prevent incidents.

See below the courses which are part of the new strategy for CAR's training:

CAR's online course for Leaders, aiming at reinforcing the strategic role of company leaders regarding compliance with CARs, actively contributing to the prevention of accidents and fatalities. This course does not have an expiration date.

CAR's online and traditional classroom courses for performers, aiming at training employees in the global requirements of each CAR. this course must be taken every 2 (two) years.

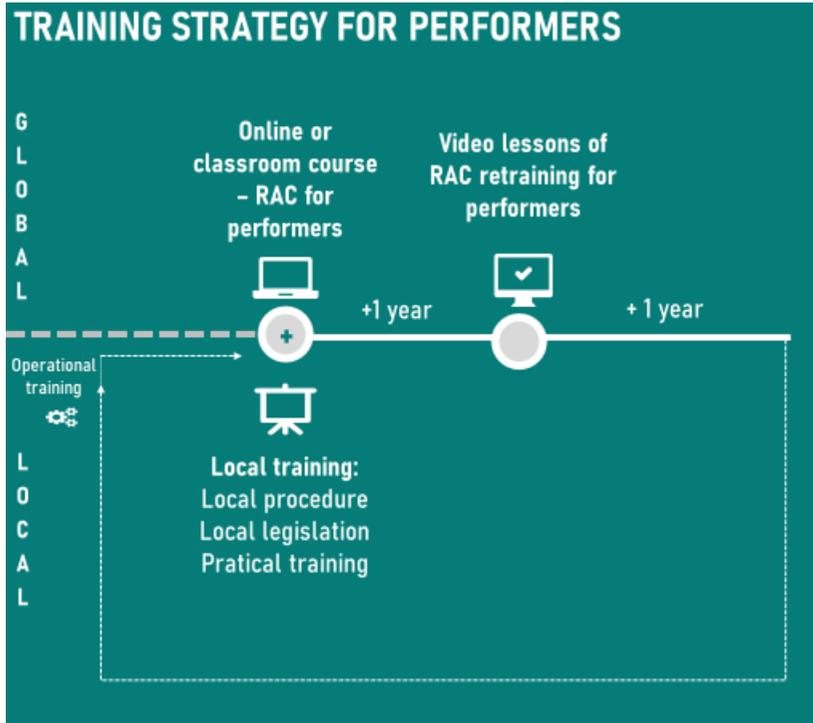
CAR's online recycling training for performers², aiming at reinforcing/remembering the main knowledge about the global requirements of each CAR. This course must be taken 1 (one) year after the online courses – CAR for performers.

Training in local procedures (PROs) associated with critical activities: this training must deepen employees' knowledge of the global requirements of each CAR, clarify their applicability in the local area and expose the risks associated with critical activities. This course must be taken every 2 (two) years.

¹ The local legislation training, which is related or similar with some global critical activity (RAC) is not part of the CAR's training strategy. However, due to the similarity between some CARs contents and the local legislation, it is allowed that these contents are offered in an integrated way. (The Local HSOR Area is responsible for systematizing and planning (in partnership with HR) CARs courses integrated with legislative training.)

² Only for Brazil yet

Flow for training strategy for performers of critical activities:



8. Types of CAR's training offer

CAR's new global training strategy focus main online and virtual training, available at VES and Valer Digital, globally.

Our belief that with this digital learning approach, using videos and online evaluation, the CARs trainings will be more attractive for employees to learn safety mandatory contents.

Even that online courses are the strategy priority to training in CARs, if some employee have no access to computers and internet, the CAR training can will be conducted in a traditional classroom way.

Aiming a best employee learning experience in CARs, is allowed that the local HSOR organize a traditional classroom training included the local legislation and the local procedure training.

There are 04 Types of CAR's training offer:

- 1) Online course (VES and Valer Digital)
- 2) Classroom transmission. (Just opening the online course from VES)
- 3) Traditional classroom using offline content. (PowerPoint presentation attached on VES)
- 4) Traditional classroom adding CARs trainings into a local legislative or a local operational procedure training.

9. Guidelines for implementing CAR's training - Vale employees

9.1. Employee Mapping:

Only professionals who will effectively perform critical activities must be mapped, as established in PTP-000813. It is not recommended to train professionals as a bank of exams so that critical activities are not performed by employees who do not perform them daily.

9.2. Online training platforms

CAR's curricula available at VES must be assigned to the employee's development plan. It will ensure the correct periodicity from each CAR trainings into the system

It is not allowed use the global CAR trainings to register legislative local trainings, on VES.

The local legislative trainings must be registered into local VES catalog's, according the country or state where the legislative training is required.

Operational procedure training (PROs) related to CARs should continue to be registered in the SIPAV catalog ate VES.

The courses must be registered individually on VES, describing each CAR training, legislative training and operational procedure training who had been completed in a sequential way.

9.3. Assessing the Learning

CAR's learning assessment aims to confirm the content learned during training. All CAR's training is only registered at the VES, after conducting a learning assessment.

For approval, the employee must obtain a score equal to or greater than 70.00 (seventy) in the result of his learning assessment.

There are two banks of questions which must be applied in CAR trainings:

1. Learning Assessments Bank - VES.
Responsible: Valer HQ and Global Health, Safety and Operational Risks Department.
Application: Online evaluation, performed at VES.
2. Learning Assessments Bank - Local ³.
Responsible: Local HSOR Area
Application: Printed assessment, in classroom lessons.

Below are the types of learning assessments for CAR training:

- New online courses (CAR 01-05): Online assessment into the online course or printed assessment in classroom lessons.

³ The local HSOR area is responsible for the develop the "local learning assessment questions". These assessments should follow the overall content of RAC training. These assessments must follow the global content of the RAC training.

- Online Recycling Training (CAR 01-05): Online assessment, available in an Item exam at VES, separately from online course content.

IMPORTANT: If the employee is not able to perform the online learning assessment, the training instructor must apply and correct the printed learning assessment. In this case, locally developed assessments, which are under the responsibility of local HSOR area, must be used.

9.4 Deadlines

TRAINING	TYPE	ACCOUNTABLE AREA	DEADLINES
CAR for Leaders	Online	Global HSOR Area	-
CAR's Online courses - for performers	Online or Classroom Training		Every 2 (two) years
CAR's Online Recycling Training - CAR for performers ⁴	Online		1 (one) year after the global RAC training.
Training in local procedures (PROs) associated with critical activities	local definition	Local HSOR Area	Every 2 (two) years

Detailed information about CAR courses, such as suggested workload and program content, are defined in ANNEX II of this document.

9.5. Instructor mapping

The minimum requirements for training instructors include:

- Internal Instructor (Vale's employee):
 - ✓ Be registered by the Educational Agents Training Program.
 - ✓ Specific technical knowledge of the qualification to be provided;
 - ✓ Experience in Safety Training applied in the daily routine of operational areas of at least two (2) years;
 - ✓ Acknowledged as a professional who works in line with Vale's values.

⁴ Only for Brazil yet.

- External Instructor (Training Vendor):
 - ✓ Complete high school education;
 - ✓ Experience as instructor or certified in didactic or similar qualification courses;
 - ✓ Specific technical knowledge of the qualification to be provided;
 - ✓ Experience in Safety Trainings applied in the daily routine of operational areas of at least two (2) years;

Local HSOR area must receive proof of the instructor's technical knowledge and proficiency/experience, according to aspects applicable to the external instructor, as listed in the paragraph above. The local Security area must guide the external instructor and provide proof of orientation according to the model provided attached to this document.

Evidences of instructor's technical knowledge and proficiency/experience must be sent through the link available at <http://www.vale.com/EN/suppliers/become-supplier/Pages/BeaSupplier.aspx>.

The HR area is responsible for evaluating the pedagogical proficiency of the internal instructor.

Note: Proof of knowledge is not required for the instructor certification. This decision must be made by those responsible for the local HSOR and HR areas, according to the local context.

9.6 Offering CARs Training

CAR's trainings must be implemented with a high level of quality, considering the types of CAR's training offer already mentioned and respecting the health and safety guidelines established by the World Health Organization (WHO).

Safety's local areas and local HR have autonomy to develop the strategy for implementing global CAR's training.

10. Guidelines for implementing CAR's training – Contracts

10.1 General orientation

Vale's critical activity requirements, present in the corporate documents of CARs, apply both to Vale's own employees and to third-party employees registered with companies providing services to Vale.

All third-party employees, whose service provision is controlled and monitored (as defined by each site) by Vale contractually, must be trained in the new global CAR courses from 01 to 05, as well as in the other CAR trainings in force considering the critical activities they perform.

The activities that have as a legal requirement, the realization of training courses that have content that is similar to the CAR's must have both pieces of training: CAR's and local legislation. In other words, the performance of training in CAR does not exempt the requirement for training following the local legislation applicable to the activity.

Third-party employees are allowed to be trained in person, in the same classroom with Vale employees, by internal instructors (Vale employees) or external instructors (educational partners hired by Vale, hired by the third party company, or third party company's employee), provided that they use the material made available by Vale and comply with the guidelines for its application, as set out on the following page:

<http://www.vale.com/EN/suppliers/become-supplier/Pages/BeaSupplier.aspx>

For training conducted with an external instructor, the local safety area must ensure compliance with the criteria set out in the chapter "Instructor Mapping", of this guideline.

CAR's new global training strategy focus main online and virtual training .

As most third-party employees do not have access to VES, CAR training for this public should be conducted in one of the following modalities:

- 1) Classroom through online course transmission.
- 2) 2) Traditional live class, using offline PowerPoint material, available in the article on the page <http://www.vale.com/EN/suppliers/become-supplier/Pages/BeaSupplier.aspx>)

It is mandatory that all training conducted by third-party employees, related to CARs or local legislation, be evidenced with attendance list signed by third-party employees, as well as through accessible records, presenting the data below:

- Title of the training;
- Date of course and duration (workload).
- Program content.
- Full name and signature of the trained third employee.
- Full name and signature of the instructor.
- Result (grade) obtained in the learning assessment of CAR trainings

Evidence of third-party employees training and proof of guidance from the external instructor should be used to substantiate the mobilization processes of third-party companies at Vale and audits. The presentation of the result (grade) obtained in the learning assessment of the CAR training, may also be requested in audits. In training classes where Vale provides CAR training, third-party employees must sign an exclusive attendance list for external companies, containing the name of the employing company. The local security area is responsible for the reliability of this evidence.

1. Class planning and organization of the necessary infrastructure
2. Download standard CAR offline material, to be used in training
3. Impression and signature of the attendance list
4. Printing and application of the evaluation.

10.2 Practical and simulation CAR training for contractors

In the first employee training, for CARs 01, 02, 04, 05 and 06, at the discretion of the local Vale HSRO area, practical training or simulations about CARs should be developed by the contractor. Practical or simulation training can be carried out in practical or virtual simulation spaces, contact and handling the employee with equipment/accessories, or other forms of learning that do not put the employee at risk.

According to the specificities and needs of each location, the local HSOR area can define another periodicity for practical trainings.

11. Annexes

ANNEX I - CAR's training curricula (VES - Vale Educational System)⁵

CAR	TYPE	CURRICULUM		TRAINING				PRÉ - REQUISITO	
		ID	ITEM TITLE	ID	TYPE	ITEM TITLE	DURATION	ID	ITEM TITLE
CAR 01	Online	CAR 01 - Curso online	CAR 01 - Global - Online Course (Working at heights)	1238062	ONL	CAR 01 - Global - Online Course (Working at heights)	1 h		
		CAR 01 - Video aula	CAR 01 - Global - *Online Recycling Training (Working at heights)	1233309	ONL	CAR 01 - Global - *Online Recycling Training (Working at heights)	1h	1238062 OR 1237491	CAR 01 - Global - Online Course (Working at heights) OR CAR 01 - Global - Classroom Training or Training using Teams (Working at heights)
	Classroom or Teams	CAR 01 - Curso Presencial	CAR 01 - Global - Classroom Training or Training using Teams (Working at heights)	1237491	COURSE	CAR 01 - Global - Classroom Training or Training using Teams (Working at heights)	1h		
CAR 02	Online	RAC 02 - Curso online	CAR 02 - Global - Online Course (Light motor vehicles)	1237461	ONL	CAR 02 - Global - Online Course (Light motor vehicles)	1 h		-
		RAC 02 - Video aula	CAR 02 - Global - *Online Recycling Training (Light motor vehicles)	00023488	ONL	CAR 02 - Global - *Online Recycling Training (Light motor vehicles)	1h	1237461 or 1237492	CAR 02 - Global - Online Course (Light motor vehicles) or CAR 02 - Global - Classroom Training or Training using Teams (Light motor vehicles)
	Classroom or Teams	RAC 02 - Curso Presencial	CAR 02 - Global - Classroom Training or Training using Teams (Light motor vehicles)	1237492	COURSE	CAR 02 - Global - Classroom Training or Training using Teams (Light motor vehicles)	1h		

⁵ The new RAC courses will be used as a prerequisite for RAC recycling video classes, starting in November/20.

CAR	TYPE	CURRICULUM		TRAINING				PRÉ - REQUISITO	
		ID	ITEM TITLE	ID	TYPE	ITEM TITLE	DURATION	ID	ITEM TITLE
CAR 03	Online	RAC 03 - Curso online	CAR 03 - Global - Online Course (Mobile Equipment Operation)	1237460	ONL	CAR 03 - Global - Online Course (Mobile Equipment Operation)	1 h		-
		RAC 03 - Video aula	CAR 03 - Global - *Online Recycling Training (Mobile Equipment Operation)	1233314	ONL	CAR 03 - Global - *Online Recycling Training (Mobile Equipment Operation)	1h	1237460 OR 1237493	CAR 03 - Global - Online Course Mobile Equipment Operation) or CAR 03 - Global - Classroom Training or Training using Teams Mobile Equipment Operation)
	Classroom or Teams	RAC 03 - Curso Presencial	CAR 03 - Global - Classroom Training or Training using Teams (Mobile Equipment Operation)	1237493	COURSE	CAR 03 - Global - Classroom Training or Training using Teams (Mobile Equipment Operation)	1h		
CAR 04	Online	RAC 04 - Curso online	CAR 04 - Global - Online Course (Lockout/tagout and no power)	1237463	ONL	CAR 04 - Global - Online Course (Lockout/tagout and no power)	1 h		
		RAC 04 - Video aula	CAR 04 - Global - *Online Recycling Training (Lockout/tagout and no power)	1233317	ONL	CAR 04 - Global - *Online Recycling Training (Lockout/tagout and no power)	1h	1237463 OR 1237494	CAR 04 - Global - Online Course (Lockout/tagout and no power) or CAR 04 - Global - Classroom Training or Training using Teams (Lockout/tagout and no power)
	Classroom or Teams	RAC 04 - Curso Presencial	CAR 04 - Global - Classroom Training or Training using Teams (Lockout/tagout and no power)	1237494	COURSE	CAR 04 - Global - Classroom Training or Training using Teams (Lockout/tagout and no power)	1h		
CAR 05	Online	RAC 05 - Curso online	CAR 05 - Global - Online Course (Lifting of loads)	1237465	ONL	CAR 05 - Global - Online Course (Lifting of loads)	1 h		
		RAC 05 - Video aula	CAR 05 - Global - **Online Recycling Training (Lifting of loads)	1233315	ONL	CAR 05 - Global - *Online Recycling Training (Lifting of loads)	1h	1237465 OR 1237495	CAR 05 - Global - Online Course ((Lifting of loads) or CAR 05 - Global - Classroom Training or Training using Teams (Lifting of loads)
	Classroom or Teams	RAC 05 - Curso Presencial	CAR 05 - Global - Classroom Training or Training using Teams (Lifting of loads)	1237495	ONL	CAR 05 - Global - Classroom Training or Training using Teams (Lifting of loads)	1h		

ANNEX II – Training action, frequency and workload of CAR trainings

MAIN TRAINING				REFRESHER TRAINING		
CURRICULUM	TRAINING ACTION	FREQUENCY	WORKLOAD	TRAINING ACTION	WORKLOAD	FREQUENCY
CAR 01 Working at heights	Context Requirements for falling people Scaffolds requirements Ladder requirements Requirements for people lifting equipment Requirements against falling objects, materials or tools Requirements for training	2 years	1 - 1:30 h	Equipment to working at heights Safety equipment Risks and preventive measures Rules and regulations	30 min - 1 h	2 years, 1 year after main training
CAR 02 Light motor vehicles	Context Bowtie Requirements for operational roads General requirements for light vehicles Specific requirements according to the type of vehicle Procedures requirements Requirements for training Accidents	2 years	1 - 1:30 h	Not applicable	Not applicable	Not applicable
CAR 03 Mobile equipment operation	Context Requirements for facilities and equipment General requirements for mobile equipment Specific requirements: underground mine equipment Specific requirements: detection, mitigation and prevention of fire on mobile equipment Requirements for procedures Requirements for training	2 years	1 - 1:30 h	Introduction about CAR 03 Mobile equipment Main requirement of CAR 03 Underground mine equipment Requirements for procedures Training requirements	30 min - 1 h	2 years, 1 year after main training

MAIN TRAINING				REFRESHER TRAINING		
CURRICULUM	TRAINING ACTION	FREQUENCY	WORKLOAD	TRAINING ACTION	WORKLOAD	FREQUENCY
CAR 04 Lockout, tagout and zero energy	Context Lockout, tagout and zero energy Steps for temporary change in the zero energy states Removal of locks and tags process Requirements in the absence of PRO, or when PRO not provided for lockout Requirements to prevent failures in the lockout procedures Requirements to prevent failure or lack of zero energy state test Requirements to prevent failure to lockout and tagout Requirements to prevent failure in the work planning Requirements to prevent failure of communication among working groups Requirements to prevent failure or lack of lockout in a potential gravitational energy source Requirements to prevent failure when performing temporary changes in the zero energy state Requirements to prevent failure to replace protection device/or guarantee in the Int. of safety conditions Requirements to prevent gaps in training process Roles and responsibilities	2 years	1 - 1:30 h	Introduction about lockout, tagout and zero energy Understanding hazardous energies Understanding isolation, lockout, tagout and zero energy Lockout efficiency test (zero energy) Exclusive lockout Case study Roles and responsibilities for CAR 04	30 min - 1 h	2 years, 1 year after main training
CAR 05 Lifting of loads	Context Activity planning Requirements for area isolation General requirements for execution of lifting activity Requirements that applicability vary according to the type of equipment Requirements for training	2 years	1 - 1:30 h	Concepts and equipment Communication in Lifting of Loads Outriggers leveling Rigging Plan Disassembly	30 min - 1 h	2 years, 1 year after main training

ANNEX III - certificate of orientation for external instructor

INSTRUCTOR NAME:

LOCAL ID:

According to the CAR Training Guideline (Rev02), the instructor mentioned possesses the requirements for training and received specific guidance about the training to be carried out, being able to be an external multiplier of CAR training.

Requirements for the instructor according to the Guideline:

- ✓ Complete high school education;
- ✓ Experience as an instructor or certified in didactic or similar qualification courses;
- ✓ Specific technical knowledge of the qualification to be provided;
- ✓ Experience in Safety Training applied in the daily routine of operational areas of at least two (2) years;

Date: __/__/_____

HSOR local representative signature (Vale)
IAM ID

