

## Vale informs on Stability Condition Declarations

Rio de Janeiro, October 1<sup>st</sup>, 2020 - Vale S.A. ("Vale" or "Company") informs that it updated the records of Stability Condition Declarations (DCEs) for geotechnical structures to which the terms of Norm No. 70.389/2017, by the National Department of Mineral Production, currently the National Mining Agency (ANM), are applicable.

In this sense, Vale emphasizes the continuous improvement of its Tailings & Dams Management System (TMS), with the role of the Engineer of Record (EoR), which has been implemented since January 2020 as an additional step for the assessment of geotechnical structures. The EoR focuses on the continuous management of dam safety and performance, making it possible to issue or revoke a DCE at any time, once a change in the safety condition of some geotechnical structure is verified. This measure is more appropriate to the dynamics of a tailings disposal structure and reflects an evolution in Vale's practices of dam safety assessment. The EoR assessment is part of a multilayer protection system, to which other barriers and levels of audit and review have been incorporated, in order to strengthen even further the management process.

### About DCEs issued

Vale informs that, through the EoR continuous monitoring model, 104 structures were evaluated in the company's operational units in Brazil, of which 93 belong to the Ferrous Minerals business and 11 belong to the Base Metals business. The list of structures framed in the abovementioned norm, as well as the information on the respective DCEs and emergency levels, is available on Vale's ESG Portal, at [www.vale.com/esg](http://www.vale.com/esg).

A total of 71 positive DCEs were issued, of which 61 for geotechnical structures in Ferrous Minerals operations and 10 for Base Metal structures. Another 33 structures did not have positive DCEs issued, 32 of which belong to Ferrous Minerals operational units and 1 to a Base Metals operation.

- Structures at emergency levels<sup>1</sup> 2 or 3: 9 tailings and sediment dams remain without positive DCEs, with their respective Self-Rescue Zones (ZAS) evacuated. In addition to those, the Xingu dam had its emergency level raised to 2 from 1 on September 29, 2020. Originally classified as a drained stack, the structure was reclassified as a tailings dam with an upstream raising method in September 2020. All the tailings dams at emergency level 2 or 3 are included in Vale's de-characterization plan, which is available for consultation on Vale's ESG Portal.
- Structures at emergency level 1: 23 structures without positive DCEs, of which, considering the structures indicated in a press release on April 1<sup>st</sup>, 2020: (i) 15 maintained the emergency level; (ii) 1 structure (Dam VI) had the respective positive DCE issued, being in process of registering the emergency level lowering; (iii) 1 structure (Xingu) had its emergency level raised to 2; (iv) 5 structures had positive DCEs revoked in the months following the April's press release<sup>2</sup>; (v) 3 structures, assessed for the first time in 2020, did not have positive DCEs issued<sup>3</sup>. Additionally, the Itabiruçu dam, which has a positive DCE, remains at level 1. The level 1 protocol, as provided for in the respective Mining Dams Emergency Action Plans (PAEBM), does not require the evacuation of the ZAS.

<sup>1</sup> Emergency level according to the Mining Dams Emergency Action Plan (PAEBM) for each structure.

<sup>2</sup> Borrachudo II and Paracatu dikes, Taquaras, Dição Leste and 5 (Mutuca) dams.

<sup>3</sup> 6, 7A and Área IX dams, as per press release dated June 9th, 2020.

### **Actions to enhance safety**

Vale has adopted several measures to improve the safety conditions of its geotechnical structures. For structures in emergency levels 2 or 3, Vale has kept the reservoirs lowered and minimized the water disposal, with the implementation of bypass channels. Back-up dams downstream dams at emergency level 3 are also under construction, with one already completed in March 2020, relating to the Sul Superior dam. The first phase of the back-up dams related to the B3/B4 and Forquilha I, II and III and Grupo dams was completed, but due to adjustments in the project scope, a second phase is underway, expected to be concluded in the fourth quarter of 2020 (B3/B4) and second quarter of 2021 (Forquilha I, II and III and Grupo).

For structures at emergency levels 1 and 2, in addition to continuous monitoring and enhancement of information on the conditions of the structures, Vale has projects and works in progress to improve the safety condition or to de-characterize the structures.

### **Monitoring and update of emergency levels**

According to current TMS standards, the emergency level of each structure has also been continuously reviewed by Vale, together with the EoR, hence possible changes may occur as the understanding of the characteristics of each structure evolves and considering new information and parameters generated by the "As-Is" program<sup>4</sup>. Due to this dynamic, starting from today, Vale will update the information on geotechnical structures directly on the Company's ESG Portal<sup>5</sup>, available for consultation by society.

### **Adherence to the Global Industry Standard on Tailings Management**

In August 2020, the International Council on Metals and Mining (ICMM) published the Global Industry Standard on Tailings Management (GISTM), aiming to improve safety standards for tailings storage structures over all stages of their life cycle. In 2019 and 2020, Vale worked with the ICMM on the elaboration of the GISTM, being committed to its full implementation and within the appropriate timeframe.

Vale is working on the implementation of the GISTM together with its new TMS. An initial assessment indicates a good level of adherence between measures under implementation at Vale and the GISTM. Detailed assessments are ongoing, with completion expected by the first quarter of 2021, when a compliance protocol and guidance, both under elaboration by the ICMM, should be available.

Vale reinforces its commitment to safety, transparency and the adoption of best practices in the management of its tailings facilities. Vale reiterates that its priority is the safety of people and communities downstream of its operations, and of all its structures.

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<sup>4</sup> Technical analysis of the construction and raising history, in the absence or imprecision of information regarding the history.

<sup>5</sup> <http://www.vale.com/esg/en/Pages/ControlManagementDams.aspx>

**Annex - Structures with emergency level maintenance or alteration**

Structure	Location	Status in 2020	DCE Mar/2020	Emergency Level Mar/20	DCE Sep/2020	Emergency Level Sep/20
B3/B4	Mar Azul Mine	Inactive	Negative	3	Negative	3
Capitão do Mato	Capitão do Mato Mine	Inactive	Negative	2	Negative	2
Doutor	Timbopeba Mine	Inactive	Negative	2	Negative	2
Forquilha I	Fábrica Complex	Inactive	Negative	3	Negative	3
Forquilha II	Fábrica Complex	Inactive	Negative	2	Negative	2
Forquilha III	Fábrica Complex	Inactive	Negative	3	Negative	3
Grupo	Fábrica Complex	Inactive	Negative	2	Negative	2
Sul Superior	Gongo Soco Mine	Inactive	Negative	3	Negative	3
Sul Inferior	Gongo Soco Mine	Inactive	Negative	2	Negative	2
Xingu	Alegria Mine	Inactive	Negative	1	Negative	2
VI	Córrego do Feijão Mine	Inactive	Negative	1	Positive	-
Capim Branco	Paraopeba Mine	Inactive	Negative	1	Negative	1
Campo Grande	Alegria Mine	Inactive	Negative	1	Negative	1
Captação de Água	Igarapé Bahia	Inactive	Negative	1	Negative	1
B dike	Capitão do Mato Mine	Inactive	Negative	1	Negative	1
Forquilha IV	Fábrica Complex	Inactive	Negative	1	Negative	1
Itabiruçu <sup>1</sup>	Itabira Complex	Inactive	Positive	1	Positive	1
Maravilhas II	Vargem Grande C.	Inactive	Negative	1	Negative	1
Marés I	Fábrica Complex	Inactive	Negative	1	Negative	1
Marés II	Fábrica Complex	Inactive	Negative	1	Negative	1
Menezes II	Córrego do Feijão Mine	Inactive	Negative	1	Negative	1
Norte/Laranjeiras	Brucutu Mine	Inactive	Negative	1	Negative	1
Peneirinha	Capitão do Mato Mine	Inactive	Negative	1	Negative	1
Santana	Itabira Complex	Inactive	Negative	1	Negative	1
Sistema 5 (MAC)	Águas Claras Mine	Inactive	Negative	1	Negative	1
Sistema Pontal	Itabira Complex	Inactive	Negative	1	Negative	1
Vargem Grande	Vargem Grande C.	Inactive	Negative	1	Negative	1
Borrachudo II dike	Cauê Mine	Active	Positive	-	Negative	1
Paracatu dike	Fazendão Mine	Active	Positive	-	Negative	1
Taquara	Mar Azul Mine	Active	Positive	-	Negative	1
Dicão Leste	Fazendão Mine	Active	Positive	-	Negative	1
5 (Mutuca)	Mutuca Mine	Active	Positive	-	Negative	1
6	Águas Claras Mine	Inactive	-	-	Negative	1
7A	Águas Claras Mine	Inactive	-	-	Negative	1
Área XI	Fábrica Complex	Inactive	-	-	Negative	1

<sup>1</sup>The Itabiruçu dam has positive DCE, but it is at emergency level 1 emergency.



## Press Release

Ever since the Covid-19 outbreak began, our highest priority is the health and safety of our employees. Our IR team adopted work-from-home, and as we continue to face these new circumstances, we strongly recommend you prioritize e-mail and online engagement.

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