

## Independent Review Report

Independent Review of the Integrated Report 2016 of Cementos Argos

### Scope of our work

We conducted our review of the adaptation of the contents of Cementos Argos 2016 Integrated Report align to the GRI Standards for the preparation of Sustainability Reports of the Global Reporting Initiative (GRI).

Compliance with the guidelines of the Cement Sustainability Initiative (CSI) was also reviewed for some environmental indicators that were included in the scope of the verification (See Annex 3) and the results of the Value Added Statement -VAS that the company develops (See Annex 4)

### Standards and verification processes.

We conducted our work in accordance with ISAE 3000 - *International Standard on Assurance Engagements Other than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accounts (IFAC)*.

Our review work consisted in formulating questions to the Directors and the various areas of Argos Cements who participated in the development of the Integrated Report and the application of certain analytical procedures and review testing sample described below:

- Interviews with staff members of Cementos Argos to know the principles, systems and management approaches used to develop the report and calculate the indicators.
- Analysis of how the process of definition of the content, structure and indicators was defined, based on the materiality exercise according to the GRI Standards.
- Evaluation of the process to collect and validate the data presented in the report.
- Checking, by testing based on sample selection and review of evidence of quantitative and qualitative information corresponding to the GRI and Argos internal indicators included in the integrated reporting and proper compilation from the data supplied by the sources of information of Cementos Argos in Colombia.

### Confirmation that the Integrated Report has been prepared in accordance with GRI Standards: Core option.

#### General aspects

It was confirmed that the report meets the requirements of the Core option of the general aspects of the GRI Standards.

#### Specific aspects

We reviewed the management approach and GRI and internal indicators of the material issues identified by the company and the validation of DJSI indicators. (See Annex 2).

### Responsibilities of the Management of Cementos Argos and Deloitte.

The preparation of the 2016 Integrated Report and its contents are the responsibility of the organization which is also responsible for defining, adapting and maintaining management systems and internal control, which information is obtained.

Our responsibility is to issue an independent report based on our review procedures applied.

This report has been prepared exclusively in the interests of the organization in accordance with the terms of our proposed services. We do not assume any liability to third parties other than the company Direction.

• We have performed our work in accordance with the Independence regulations required by the ethic code of the International Federation of Accountants (IFAC).

• The Scope of a limited Review is substantially less than an audit. Therefore we don't provide an audit opinion about the sustainability report.

DELOITTE & TOUCHE LTDA.  
Jorge Enrique Múnera D.  
Partner



Medellin, March 2017

## Conclusions

As a result of our review, there was nothing that make us believe that the integrated report contains significant errors or has not been prepared in accordance with the GRI Standards in its Core version.

## Recommendations

Additionally, we have presented our recommendations to Cementos Argos regarding areas for improvement to strengthen processes, programs and related sustainability management systems. The most important recommendations concern:

- Continue strengthening the process of standardization of reporting protocols in the different regions where the company operates.
- To continue perform a periodic monitoring of progress in the management of material issues, which will make the reporting process more efficient at year end.

## ANNEX 1 Declaration of Independence

Deloitte is one of the largest companies of professional services in audit, tax, consulting and financial advisory and sustainability to public and private clients in multiple industries. With a globally connected network of member firms in more than 185 countries, Deloitte brings world-class capabilities and high quality service to its customers. Approximately 250,000 professionals are committed to becoming the standard of excellence.

We confirm our independence from Cementos Argos. All our employees perform annual updates to the Ethics Policy which promptly declare that we have no conflicts of interest with Cementos Argos, its subsidiaries and its stakeholders.

## ANNEX 2

Material Issues	GRI or Internal Indicators
Innovation	A-IN1, A-IN2, A-IN3, A-IN4
Carbon Emissions	305-1, 305-2, 305-3, 305-4, 305-5, 201-2, A-EC1
Sustainable Construction and materials	301-1, 301-2, 301-3, A-CSM1
Biodiversity	304-1, 304-4, A-BI1, A-BI2
Energy and co-processing	302-1, 302-3, 302-4, A-ENE1
Water	303-1, 303-3, 306-1, A-A1
Other emissions	305-7, A-OE1
Compliance	206-1, 205-1, 205-2, 205-3, 307-1, 415-1,419-1, A-TAX1
Customer relations	417-2, 417-3, 418-1, A-RCL1, A-RCL2
Expansion and consolidation	A-X1, A-X2, A-X3
Profitability and capital structure	A-RE1, A-RE2, A-RE3, A-RE4
Occupational health and safety	403-1, 403-2, 403-3, A-SI1, A-SI2
Communities management	203-1, 413-1, 413-2, A-COM1, A-COM2
Talent Management	202-2, 401-1, 401-2, 402-1, 404-1, 404-2, 404-3, 405-1, 405-2
Supply Chain Management	308-1, 308-2, 414-1, 414-2, 204-1

DJSI Indicator
DJSI. 2.3.7 EP - Waste and 306-2

## ANNEX 3 – CSI

As part of the verification process of the CSI environmental indicators, we performed calls to Argos operations; the selection took into account quantitative and qualitative variables, as it sought cover operations in the three regions where the company operates:

- Cartagena Seca – Colombia
- Yumbo – Colombia
- Piedras Azules – Honduras
- Panamá
- Harleyville – USA
- Atlanta – Usa
- Zona Golfo – USA
- Miraflores – Panamá
- Caimito – Panamá
- Calle 80 – Colombia
- Fontibón – Colombia
- Mina arroyo de piedra - Colombia

In the calls, personnel responsible for internal reporting and data collection was interviewed, validating the consolidation process and sending that information to the corporate level.

### Criteria

For our review we considered the following CSI guidelines:

- WBCSD's CO<sub>2</sub> and Energy Accounting and Reporting Standard for the Cement Industry : The cement CO<sub>2</sub> and Energy Protocol
- WBCSD's CO<sub>2</sub> and Energy Accounting and Reporting Standard for the Cement Industry : Emissions monitoring and reporting
- WBCSD's Guidelines for the Selection and Use of Fuels and Raw Materials in the Cement Manufacturing Process
- WBCSD CSI Environmental and Social Impact Assessment (ESIA)
- WBCSD Guidelines on Quarry Rehabilitation

### Assessment indicators and information consolidation process

- We test based on samples for evidence calculations to measure the following indicators:

Indicators	Scope
<b>WATER</b>	
Total water withdrawal according to source	2016
Total water discharge according to quality and destination	2016
Total water consumption	2016
% Of plants with recirculation system	2016
% Of sites with process water – aggregates	2016
% Of sites with water recycling system – aggregates	2016
<b>BIODIVERSITY</b>	
Number and % of active quarries with Closure Plan in place	2016
Number and % of active quarries with high biodiversity value	2016
Number and % of active quarries with high biodiversity value and a Biodiversity Management Plan in place	2016
<b>CLIMATE PROTECTION</b>	
Total CO <sub>2</sub> emissions - gross (in million tonnes)	2016
Total CO <sub>2</sub> emissions - net (million tonnes)	2016
Specific CO <sub>2</sub> emissions - gross (kg CO <sub>2</sub> / t cementitious material)	2016
Specific CO <sub>2</sub> emissions .net (kg CO <sub>2</sub> / t cementitious material)	2016

<b>COMBUSTIBLES AND MATERIALS</b>	
Alternative fuels rate (%)	2016
Specific heat consumption of clinker production (MJ/ t clinker)	2016
Biomass fuel rate (%)	2016
Clinker / Cement Ratio (%)	2016
Use of alternative raw materials (%)	2016
<b>REDUCTION OF EMISSIONS</b>	
KPI 1 – Overall coverage rate :the percentage of clinker produced in by kilns covered by a monitoring system(continuous or discontinuous measurements) (%)	2015-2016
KPI 2 – Coverage rate continuousmeasurement : thepercentage of clinker produced by kilns which have installed continuous measurement for dust NOx and SO2. (%)	2015-2016
KPI 3-Absolute dust emissions from kiln (t/year)	2016
KPI 3 – Specific dust emissions f (g/t clinker)	2016
KPI 3-Absolute NOx emissions (t/year)	2016
KPI 3 - Specific NOx emissions (g/t clinker)	2016
KPI 3 - Absolute SO <sub>2</sub> emissions (t/year)	2016
KPI 3 - Specific SO <sub>2</sub> emissions (g/t clinker)	2016
KPI 4 - Coverage rate of dust emissions (%)	2015-2016
KPI 4 - Coverage rate of NOx emissions (%)	2015-2016
KPI 4 - Coverage ratefor SO <sub>2</sub> emissions (%)	2015-2016
KPI 3 -VOC / THC - Absolute emissions (t/year)	2016
KPI 3 -VOC / THC - Specific emissions in (g/t clinker)	2016
KPI 4 -VOC / THC - Coverage rate (%)	2016
KPI 3 -PCDD / F - Absolute emissions (mg/yr)	2016
KPI 3 -PCDD / F - Specific emissions in (ng/t clinker)	2016
KPI 4 -PCDD / F - Coverage rate (%)	2016
KPI 3 Hg - Absolute emissions (kg/year)	2016
KPI 3 Hg - Specific emissions (mg/t clinker)	2016
KPI 4 Hg - Coverage Rate (%)	2016
KPI 3 HM1 (Cd + Tl) - Absolute emissions in (kg/year)	2016
KPI 3 HM1 (Cd + Tl) - Specific emissions (mg/t clinker)	2016
KPI 4 HM1 (Cd + Tl) - Coverage rate (%)	2016
KPI 3 HM2 (Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V) - (kg/year)	2016
KPI 3 HM2 (Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V) - Specific emissions inmg/tclinker	2016
KPI 4 HM 2 (Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V) – coverage rate (%)	2016

## Conclusion

- The WBCSD CSI guidelines for reporting CO<sub>2</sub> emissions, energy, emissions (NO<sub>x</sub>, SO<sub>x</sub>, and dust), water and biodiversity are applied properly.
- The system of internal reporting and consolidation procedures of information for CO<sub>2</sub> emissions, energy, emissions (NO<sub>x</sub>, SO<sub>x</sub>, and dust), water and biodiversity are functioning and provide appropriate information be disclosed.

## ANNEX 4 – VALUE ADDED STATEMENT

### Scope of our work

Review the included indicators for the construction of the Value Added Statement model, which allows to measure the societal value that the company creates.

### Verification processes- Our review work has consisted of:

- Interviews with Cementos Argos staff to learn about the principles, systems and approaches used for the preparation of the Value Added Statement
- Analysis and identification of indicators used to prepare the Value Added Statement that are part of the verification process (GRI Standards, DJSI and / or CSI)
- Checking, by means of tests of review of the quantitative and qualitative information corresponding to the additional indicators that are not part of the verification process (GRI Standards, DJSI and / or CSI),:

Number of lost time injuries - short absence
Number of lost time injuries - long absence
Average salary (men & women)
Average retirement age in the region (men)
Average retirement age in the region (women)
Average departure age (men)
Average departure age (women)
Electricity provided to local communities
Extreme water scarcity areas
Scarcity areas
Water stress areas
Areas with sufficient water reserves
Water abundant areas
Net impacts to biodiversity per type of ecosystem (affected areas, restored areas, offset areas)

### Conclusion

We have performed a verification process for all the indicators for 2015 and 2016 that were necessary for Argos to develop its Value Added Statement. .

