20151103 updated ESAP for Titan Egypt:

Issue and Mitigation measures:	**Schedule of implementation:**
The Beni Suef Cement Company line 2 operations has improved its dust emission control to maintain 30 mg/Nm^3 from all major emission point since end 2011. BSF line 1 will upgrade its kiln dust emission control to maintain within the limit of 100 mg/Nm3 as of end 2014 (if a complete replacement of the filters are needed the WBG guidelines for new units will be applied)	BSCC will provide compliance data in Annual Monitoring Reports (AMR). Line 2 compliance with 30 mg/Nm^3 has been documented. Line 1 compliance with the respective WBG guideline limit will be documented in the AMR for 2016.
Titan Egypt will upgrade the Alexandria Portland Cement Company (APCC) dust emission control during the summer 2012 to achieve 10 mg/Nm^3 in main gas flow, and maintain 30-50 mg/Nm^3 in the approximately 25-30% by-pass flow, resulting in final main Stack (kiln and bypass) emissions expected to meet the WBG guideline of 30 mg/Nm^3 (new plants) although only 100 mg/Nm^3 is requiored for compliance (existing plant).	APCC will provide compliance data in Annual Monitoring Reports (AMR). The data provided for autumn 2012 should reflect the new and WBG compliant levels, and the AMR for 2013 will document a full year compliance. ACTION COMPLETED
APCC has since 2010 removed old non-operational cement manufacturing lines and hereby created open areas within the production site. These areas have been used for open air storage of raw material during a period of transport interruptions. Such open air storage can cause difuse emissions and APCC will develop a material handling plan, which will ensurethat both active and non active materials will be either covered or coated to be secured against fugitive dust.	APCC has developed a raw material handling plan for the active and non active raw material storages. This plan will, once implemented, ensure that all raw materials are either covered or coated to secure against fugitive dust. The plan is being implemented and includes schedule and budget estimates ensuring a progressive implementation. Plan implementation will be further extended over a maximum of two additional years, to ensure completion of remaining raw material storage coverages and implementation of dust abatement measures for internal limestone storage and measures to improve housekeeping and mitigate visual impact. APCC will present an approved updated plan by first quarter 2016.
APCC has experienced increasing NO_x emission during the period 2008-2011. Initiatives are to be taken for relocating/replacing the secondary burners to achieve compliance with initial emission limits and WBG guidelines for NO_x (600 mg/Nm^3)	Following process optimization, NO_x emission and secondary measures needed, were evaluated and secondary de-NO_x initiatives have been initiated. SNCR systems will be installed by first quarter 2016 at both APCC and BSCC plants. Compliance with national emission limit and relevant WBG guidelines will be documented in the AMR for year 2016.
Both the BSCC and APCC plants have experienced changed access to their raw material situation over the past two years. This has been due to activities out of control of BSCC and APCC (for example execution of right of way for a highway corridor). As a result BSCC and APCC are now examining and developing new raw material and quarrying plans. The new plans have to cover all existing active quarries and future quarries and shall include: • Raw material utilization plans, including: * A full quarry plan with maximum utilization of available raw materials (including blending needs) and with expected contours at end of quarry life indicated, * a five year (rolling) extraction plan, * detailed extraction plans for the next 12 months, and * appropriate benching to allow, where applicable for rehabilitation and replanting. • The rehabilitation shall be part of daily operation and resulting in full rehabilitation at the end of operational life.	The 12 month and 5 year (rolling) extraction planning is a continuous process. Besides this APCC presented "end of usable lifetime" rehabilitation plan for each quarry. BSCC will present the rehabilitation plans by second quarter 2016. The rehabilitation plans shall include arrangements of benches until depletion for safety purposed and progressive rehabilitation, where application of top soil (where relevant) and replanting (where applicable) takes place during the year following the completion of an extraction level.

Both the BSCC and APCC plants have experienced natural gas shortages and have applied for the use of solid fuel, in addition to continue working on a plan to increase the use of alternative fuels (RDF and DSS). The transition to solid fuel has required the application for environmental permits, following an EIA process, per national requirements. The use of coal and petcoke has started in BSCC where a coal mill is operational and a second one is being constructed. The use of pulverized petcoke has started in APCC. A coal mill will be installed following permitting completion. Both BSCC and APCC will implement the regulatory requirements and good international industry practice to ensure safe operations, compliance with emission limits, and minimization of fugitive dust from the solid fuel storage areas.	BSCC and APCC will present fugitive dust mitigation plans for the solid fuel storage. BSCC will implement the plan by end 2016 and in compliance with the permit requirements; APCC will implement the plan according to the schedule that will be provided by the authorities in the permit.