

NATIONAL ASSEMBLY

WRITTEN REPLY

QUESTION NO.2841

QUESTION 2841 FOR WRITTEN REPLY: MS C KING (DA): NATIONAL ASSEMBLY (NA): AUDIT ON BUILDINGS

“2841 Ms C King to ask the Minister of Science and Technology:

Whether an audit has been conducted on each building occupied by (a) her department and (b) each entity reporting to her for compliance; if not, why not; if so, what were the outcomes of each audit?”

NW3146E

REPLY:

(a) and (b) Institution Name	Building audit conducted/ not conducted for compliance?	If not, why not?	If so, what were the outcomes of the audit?
Department of Science and Technology (DST)	Building audit conducted for compliance.	N/A	See Annexure A on outcomes of the compliance audit conducted on the DST building
Technology Innovation Agency (TIA)	Building audit conducted for compliance.	N/A	See Annexure B on outcomes of the compliance audit conducted on the building(s) occupied by the entities reporting to the Minister.
South African National Space Agency (SANSA)	Building audit conducted for compliance.	N/A	See Annexure B on outcomes of the compliance audit conducted on the building(s) occupied by the entities reporting to the Minister.
Council for Scientific and Industrial Research (CSIR)	Building audit conducted for compliance.	N/A	See Annexure B on outcomes of the compliance audit conducted on the building(s) occupied by the entities reporting to the Minister.
National Research Foundation (NRF)	Compliance audits conducted on most of the NRFs buildings.	See Annexure B on outcomes of the compliance audit conducted on the building(s) occupied by the entities reporting to the Minister.	See Annexure B on outcomes of the compliance audit conducted on the building(s) occupied by the entities reporting to the Minister.

(a) and (b) Institution Name	Building audit conducted/ not conducted for compliance?	If not, why not?	If so, what were the outcomes of the audit?
Academy of Science of South Africa (ASSAf)	Building audit conducted for compliance.	N/A	See Annexure B on outcomes of the compliance audit conducted on the building(s) occupied by the entities reporting to the Minister.
Human Sciences Research Council (HSRC)	Compliance audit conducted on the HSRC's building in Pretoria. No audit conducted on the other buildings.	See Annexure B on outcomes of the compliance audit conducted on the building(s) occupied by the entities reporting to the Minister.	See Annexure B on outcomes of the compliance audit conducted on the building(s) occupied by the entities reporting to the Minister.
National Advisory Committee on Innovation (NACI)	Only Ventilation and ergonomics assessments conducted	N/A	See Annexure B on outcomes of the compliance audit conducted on the building(s) occupied by the entities reporting to the Minister
National Intellectual Property Management Office (NIPMO)	Only Ventilation and ergonomics assessments conducted	N/A	See Annexure B on outcomes of the compliance audit conducted on the building(s) occupied by the entities reporting to the Minister

Annexure A



Outcomes of the compliance audit conducted in the building occupied by the Department of Science and Technology

Entity	Outcomes of the compliance audit conducted on the building(s)
<p>Department of Science and Technology Building (DST)</p>	<p>The audit outcomes are based on the reports that were compiled during 2010/2011, 2012/2013 and 2017/2018 financial years.</p> <p>During the cursory inspection conducted by Brink Stokes and Mkhize Architects and Landscape Architects, (2012/2013), the following aspects were identified as having given rise to the state of disrepair of the DST building:-</p> <ul style="list-style-type: none"> • The choice of material and finishes used in the building which are in some cases not appropriate to the high intensity use of the building. • Lack of ongoing maintenance (due to technical expertise). • Poor workmanship in certain areas. • Detailing giving rise to accelerated weathering. • Building use (overcrowding).

ANNEXURE A

Entity	Outcomes of the compliance audit conducted on the building(s)
<p>Department of Science and Technology Building (DST)</p>	<p>The aspects mentioned above have therefore resulted in the DST experiencing the following major challenges:</p> <ul style="list-style-type: none"> • Malfunctioning Heating ventilation and air conditioning (HVAC) system • Leaking roof and basement – roof pitched incorrectly and no provision made for drainage of water from the roof • Malfunctioning automated windows • Building cracks / structural cracks – engineers still to determine cause of cracks • External wall tiles falling off. • Uneven paving, with damages due to tree roots. • Damaged timber flooring – due to exposure to rain (water from roof falling directly on the timber flooring. • Roof skylights which are causing water ingress (new design required to replace these glasses) • Damaged ceiling due to water ingress • Unconnected generator, which was only connected in 2014/15 financial year after the establishment of Auxiliary Services. • No gutters on the building resulting in rain water not being properly disposed

ANNEXURE A

Entity	Outcomes of the compliance audit conducted on the building(s)
<p>Department of Science and Technology Building (DST)</p>	<p>According to the latest building condition assessment report compiled by Durapi on behalf of the DPW (dated February 2018), the exterior of the building is seen as being in a poor to fair state and requiring maintenance and repairs. The interior of the building is regarded as being poor to fair condition with the need for <u>urgent</u> maintenance and repairs. Ablution facilities for the disabled are insufficient (only one walk in closet per floor instead of per block). There is a problem with the air conditioning system in the whole building and machine overhauling must be considered. There is also a need to install redundancy pumps and to change filters. The areas that do not have fire detection systems and fire proof doors (basement records rooms) must be attended to.</p> <p>A ventilation assessment was conducted and the following findings were raised:</p> <ul style="list-style-type: none"> • Fresh outside air was not supplied to the building at the time of survey. • Linear air velocities, with the exception of the parking basement that is naturally ventilated, did not conform to the recommended standard of at least 0.1m/s. The poor air motion is aggravated by the furniture and screens provided in offices (interfering with the distribution of air throughout the occupied space). • Carbon dioxide levels were found to be high in some areas (8 areas) within the building – this being due to lack of fresh outside air into the building

ANNEXURE A

Entity	Outcomes of the compliance audit conducted on the building(s)
	<ul style="list-style-type: none"><li>• Indoor Dry bulb temperature did not conform to the recommended thermal control range of 20° C to 21° C for the building during winter month this causing thermal discomfort, fatigue and possible increase in the risk of accidents and errors

Annexure B



science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

Entity	Outcomes of the compliance audit conducted on the building(s) occupied by the entities reporting to the Minister
TIA	<p>1. Indoor air quality survey outcome A planned maintenance programme for the current air conditioning units should be maintained to ensure that the units are kept in good working order, and when defective it must be replaced or repaired immediately.</p> <p>2. Carbon dioxide All indoor air quality readings were taken during normal working hours. The measured carbon dioxide readings ranged from a minimum of 333 parts per million (ppm) to a maximum concentration of 2,071 ppm. The majority (96%) of measured carbon dioxide levels complied with the recommended standard of 1,000 ppm as set by the American Society of Heating, Refrigeration and Air-Condition Engineers, Inc. (ASHRAE).</p> <p>3. Carbon Monoxide No carbon monoxide concentrations were detected in the TIA building on the day of the survey.</p>

Entity	Outcomes of the compliance audit conducted on the building(s)
	<p>4. Microbial Agents Microbiological air plate and surface swab samples were taken in the various offices. The results indicated that all of the air samples complied with the standard of not more than 100 colony forming units (cfu)/cm² for the total bacterial count and yeast & mold count. However, 33% of the surface swab samples did not comply with the recommended standard of not more than 100cfu/cm² for the total bacterial count and mold count. From this result, it is evident that micro biological agents are present in the ventilation system however likely haven't become airborne. Cleaning of the system is therefore a priority.</p> <p>5. Relative Humidity The relative humidity levels were representations of environmental condition on the day of the survey with outdoor humidity levels being below 60%. Relative humidity levels measured ranged from 33.4% to a maximum of 50.8%. It was noted that all of the measured areas conformed to the recommended limit of between 30-60%.</p> <p>6. General Illumination Illumination in workplaces as governed by Regulation 3 of the Environmental Regulations for Workplaces, Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) requires that workplaces be illuminated in accordance with the minimum levels (Task Specific) specified in the Schedule to the said Regulations. It is preferable to provide uniform illumination over the entire workplace by combining both natural and artificial lighting.</p>

Entity	Outcomes of the compliance audit conducted on the building(s)
	<p>7. Glass Inspection Survey</p> <p>(a) There are very concerning issues regarding the use of non-safety glass in areas protecting a change in level of more than one meter. These areas must be confirmed as safety glass or glass replaced and test are required to determine conformance to the National Building Regulations.</p> <p>(b) Marking is required on all safety glass installations.</p> <p>(c) Energy efficiency requirements appear to be compromised by leaking doors. Energy efficiency status to be confirmed by the project.</p> <p>(d) Water appears to be damaging one area in the building.</p> <p>8. Monthly building inspection</p> <p>(a) Leaking valley defects under repairs.</p> <p>(b) Upgrading requirements of parking light levels identified.</p> <p>The TIA Durban Regional Office: Relocated to new building in the Price Waterhouse Coopers building in March 2017, and the building was renovated before the occupancy. Most of the building defects were refurbished to meet the required National Building Standards and Regulations. The monthly building inspection was conducted on 29 September 2018 and Occupational Health and Safety (OHS) inspections should be conducted and maintained.</p> <p>The TIA Western Cape Regional Office: Consistent monthly building inspection were conducted. No major building defects are experience in the area. All building maintenance and repairs are procedurally required to be registered and authorised by the building or property manager to avoid any fire disaster, which might not be extinguished due to lack of water in the area.</p>

ANNEXURE B

Entity	Outcomes of the compliance audit conducted on the building(s)
SANSA	<p>From the assessments conducted by SANSA, it has been established that Agency complies with Safety, Health, Environment and Quality requirements and that all legal appointments are in place at all SANSA sites. No instances of non-compliance were found. In addition, the SANSA Space Operations site located at Hartebeesthoek complies with ISO 9000, 18000 and 14000.</p>
CSIR	<p>In 2015, the CSIR carried out building condition assessments across all of its buildings. The audit was completed in 2016 with no major findings recorded. The minor findings are being worked through a combination of normal maintenance programs and the capital renewal/replacement programs which also forms part of the Campus Master Plan (CMP). The CMP is intended to be a framework to assist the CSIR in making thoughtful, well-informed choices about infrastructure development and renewal in the next 10-20 years for the campus, in response to changing environment and priorities. The focus within the campuses will be the renovation and restoration of existing buildings, and only a very limited number of new buildings will be supported in the next 20 years. The plan has recommended a number of buildings to be renovated in the first phase, aligned to space optimisation plan and funding availability.</p>
NRF	<p>1. <i>NRF Head Office</i></p> <ul style="list-style-type: none"> (a) Research and Innovation Support and Advancement (RISA) – Pretoria: Somewhat compliant. Recommendations regarding evacuation plans and drills. (b) Corporate – Pretoria: No audit conducted. Newly completed, certificate of occupancy (August 2016). <p>2. <i>iThemba Laboratory</i></p> <ul style="list-style-type: none"> (a) iThemba Laboratory – Cape Town: Good compliance. No critical concerns recorded.

ANNEXURE B

Entity	Outcomes of the compliance audit conducted on the building(s)
	<p>(b) iThemba Laboratory – Gauteng: Good compliance. No critical concerns recorded.</p> <p>3. <i>South African Astronomical Observatory (SAAO)</i></p> <p>(a) Sutherland: No audit conducted. Upgraded facilities, certificate of occupancy (March 2016).</p> <p>(b) Observatory – Cape Town: Good compliance. No critical concerns recorded.</p> <p>4. <i>South African Institute for Aquatic Biodiversity (SAIAB)</i></p> <p>(a) SAIAB Building – Grahamstown: Good compliance. Recommendations on incident management.</p> <p>(b) Collections Facility – Grahamstown: Good compliance. Some minor recommendations around hazardous chemicals.</p> <p>5. <i>South African Agency for Science and Technology Advancement (SAASTA)</i></p> <p>(a) Didacta – Pretoria: Good Compliance. Recommendations regarding evacuation plans and drills.</p> <p>(b) Observatory – Johannesburg: Somewhat compliant. Recommendations regarding fire extinguishing equipment.</p> <p>6. <i>South African Environmental Observation Network (SAEON)</i></p> <p>Colbyn Head Office – Pretoria: No audit conducted. Newly completed, certificate of occupancy (August 2018).</p> <p>7. <i>South African Radio Astronomy Observatory (SARAO)</i></p> <p>(a) Rosebank Offices – Rosebank: Good compliance. Recommendations regarding evacuation plans and drills.</p> <p>(b) Black River Park Offices – Observatory: No audit conducted. Undergoing Refurbishment, Certificate of Occupancy expected in November 2018.</p>

Entity	Outcomes of the compliance audit conducted on the building(s)
	<ul style="list-style-type: none"> (c) Losberg Karoo Array Processor Building (KAPB) – Northern Cape: Good compliance. Recommendations regarding evacuation plans and drills. (d) Klerefontein Support Base: Good compliance. Recommendations regarding evacuation plans and drills. (e) Hartebeesthoek Radio Astronomy Observatory – Hartebeesthoek, Krugersdorp: Good compliance. Recommendations regarding evacuation plans and drills.
ASSAf	<p>The health and safety equipment in the building (rented premises) were serviced during October 2018. The fire equipment located inside the ASSAf offices, including those in the common areas, were also serviced during October 2018.</p>
HSRC	<p>1. <i>HSRC building (Pretoria) – Owned by the HSRC</i></p> <ul style="list-style-type: none"> (a) The fire pump for the sprinkler system was old, unreliable and the spare parts were obsolete. The fire pump system for the sprinkler was replaced. (b) The generator was old, unreliable and the spare parts were obsolete. A new generator was procured and installed. (c) Uninterrupted power supply (UPS) system needed to be upgraded. The UPS was procured and installed. (d) Public Announcement (PA) system for evacuation was not operational. Procurement of the PA system is in progress. (e) No OHS policy, guideline and procedures. OHS policy has been drafted. (f) Maintenance backlog of the building, steam and equipment. Maintenance plans are in place to deal with the backlog through a three-year renewal plan. <p>2. <i>HSRC building (Port Elizabeth) – Leased offices.</i></p> <p>No audit conducted. A request will be sent to the landlord regarding the condition assessment report.</p>

ANNEXURE B

Entity	Outcomes of the compliance audit conducted on the building(s)
	<p>3. <i>HSRC building (Durban) – Leased offices</i> No audit conducted. A request will be sent to the landlord regarding the condition assessment report.</p> <p>4. <i>HSRC building (Sweetwaters) – Leased offices</i> No audit conducted. A request will be sent to the landlord regarding the condition assessment report.</p> <p>5. <i>HSRC building (Cape Town) – Leased building</i> No audit conducted. Recently leased building. Compliance certificate pending settlement of dispute with contractor.</p>
NACI	<p>1. A ventilation assessment carried out in this building and no issues were raised</p>
NIPMO	<p>1. A ventilation assessment carried out in this building revealed that the temperatures on the ground floor remained below 15° C mainly due to cold outside air that rushed into the building from the parking basement via the stairs shaft, the large north facing glass panels and the absence of a means to regulate the indoor temperature</p>