THE standard
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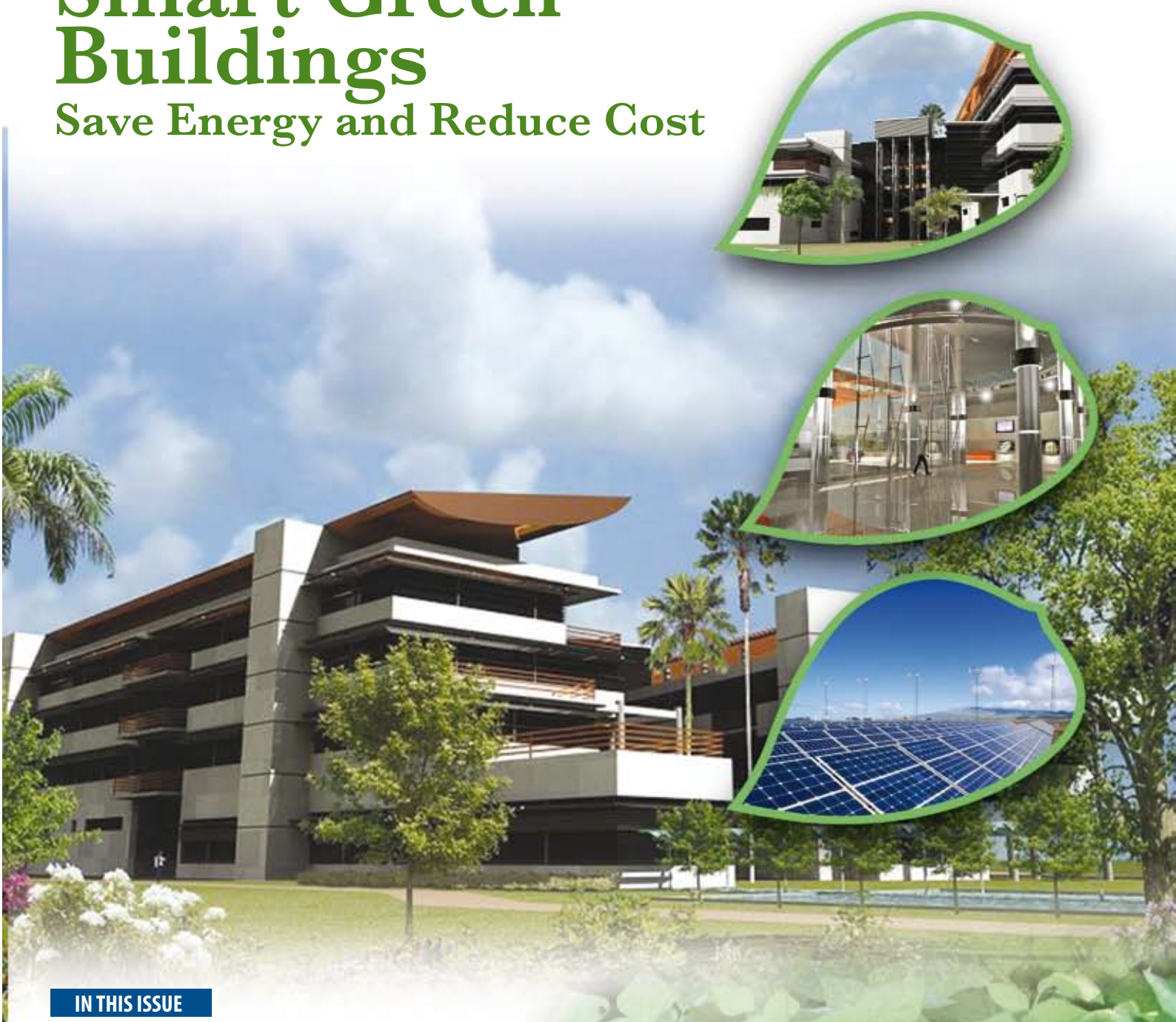
# Smart Green Buildings

## Save Energy and Reduce Cost



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# TTBS certifies CPI to ISO 9001:2000

***PROUD MOMENT*** *Mr. Darren Leigh Director of Operations- CPI , (third from left) displays his Certificate of Conformity after the award ceremony at TTBS' Head Office. Also present (from left to right): Mr. Terrence Awai, Head- Certification Division TTBS; Mr. Deryck Omar- Executive Director TTBS and Mr. Curtis Denner - Quality Assurance Manager, CPI.*

Trinidad and Tobago Bureau of Standards (TTBS) recently certified: Caribbean Packaging Industries (CPI) along with its subsidiaries Barbados Packaging Industries (BPI) and Jamaica Packaging Industries (JPI) respectively.

These companies were certified to the international standard, ISO 9001:2000 (Quality Management System – Requirements) in order to continue to improve CPI's operations thereby strengthening its competitive position in the marketplace.

To mark this occasion, TTBS held an award ceremony at its Head office on Tuesday 9th December, 2008, to present CPI with the Certificate of Conformity.

Speaking at the ceremony, Mr. Darren Leigh, Director of Operations at CPI said "CPI decided to switch from its former foreign Registrar, to TTBS for Quality Management System Certification Services. TTBS competence and superior knowledge in the local market was one of the factors that influenced this change" he explained.

Mr. Leigh was impressed with the level of service TTBS displayed in the process of certifying CPI. " The certification process was smooth, done in a relatively short time and in a very professional manner. This was applaudable", he added.

Mr. Leigh also said one of the key benefits of this certification is that it underscores CPI's commitment to quality and continual improvement of its operations, products and services to ensure the satisfaction of its employees, customers and other key stakeholders.

Also speaking at the ceremony was Mr. Deryck Omar, Executive Director, TTBS. He thanked CPI for choosing TTBS as its provider of ISO 9001 Certification Services. Mr. Omar also spoke of the ways in which this Service can improve the overall performance of organizations in both the private and public sectors. "ISO 9001 Certification strengthens an organization's capacity to improve the quality of its product and services as well as to increase productivity", he said. "This in turn is likely to result in lower costs and prices and this lead to increased market shares and profits".

CPI was founded in 1954 and is a fully owned subsidiary of Canadian Overseas Packaging Industries Group of Companies. It has affiliates with major manufacturing units in Nairobi and Mombassa in East Africa. CPI also has three plants in the United Kingdom. It manufactures corrugated containers and fittings such as banana boxes, soft drink trays, point of purchase display units and chipboard partitions for separation of glass bottles. All these products are environmentally-friendly, recyclable and biodegradable.

For further information on our ISO 9001 Certification Service, please contact our Certification Division at:
662-8827, ext 169.

## Quotes

*"Quality is everyone's responsibility."*
*W. Edwards Deming*

- — -

*"Quality is the result of a carefully constructed cultural environment. It has to be the fabric of the organization, not part of the fabric."*
*Philip Crosby*

- — -

*"Success is not the key to happiness. Happiness is the key to success.*

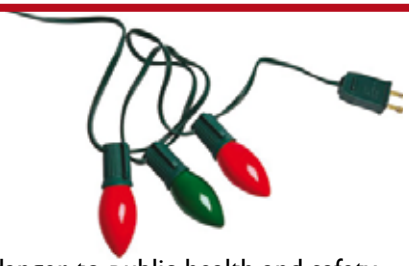
*If you love what you are doing, you will be successful."*
*Herman Cain*

PUBLIC OUTREACH

# TTBS Safeguards Public Health and Safety

The Trinidad and Tobago Bureau of Standards (TTBS) featured two of its services on television to heighten public awareness of the importance of these services in safeguarding public safety and health. Its inspection services for electrical household products and metrology were featured on the programme –The Inside Story on the following TV stations: CNC3, TV6, CNMG, IETV and Gayelle.

On the 11th January, 2009, The Inside Story programme , produced by the Government Information Services Limited(GISL) highlighted TTBS inspection activity undertaken during the Christmas season 2008. In this feature, Mr. Larry Gopeechand, Inspector spoke about TTBS intensified inspection activity of Christmas lights and decorations. He also explained the



danger to public health and safety by the sale of products that do not conform to safety standards. "These non conforming Christmas lights can cause fire, loss of property and even loss of life". Through the Bureau's on going surveillance, persons were found selling Christmas lights and decorations bearing false labelling. TTBS carried out these inspections in collaboration with the Underwriter's Laboratories (UL) of Illinois USA and the Trinidad and Tobago Police Service between 20th -22nd December, 2008 at two business premises .This resulted in the seizure of defective Christmas lights and decorations.

Also on the 15th February 2009 The Inside Story featured the TTBS metrology services. Mr. Theodore Reddock, Head Metrology Division was interviewed and he spoke on the importance of Metrology and the benefits that more accurate measuring devices can provide to consumers. He also indicated that the TTBS has been collaborating with the Regulatory Industries Commission (RIC) and the Trinidad and Tobago Electricity Commission (T&TEC) on the development of a system for ensuring T&TEC electrical domestic meters give accurate readings of electricity consumed. "This represents a whole new level of confidence for the consumers, in that we will take the responsibility of ensuring that the instrumentation consumers depend on is functioning properly." he said.

SME CORNER

# Regional Food Standards for SME's

TTBS hosted a number of workshops and conferences (national and regional) in the past two years with the aim of raising the awareness of Small and Medium sized Enterprise (SME's) to the existence of standards relevant to their respective industries and the role of CROSQ in harmonizing such standards. These workshops and conferences were also intended to encourage SME's to use such standards for enhancing their trade competitiveness in regional and international markets.

Another stakeholder consultation for SMEs was hosted by TTBS at its head office in Macoya on 4th December, 2008. This consultation was targeted at SME's operating in the food industry. The feature speaker was Mrs. Cheryl Lewis of the Barbados National Standards Institution (BNSI) who informed the local SMEs of the guidelines outlined in the CARICOM regional standard – Code of Practice on Food Hygiene. She said that this standard is one of thirty-four (34) standards being developed by the CARICOM Regional Organization for Standards and Quality (CROSQ) under a SME project which is being funded by the Inter-American Development Bank

(IDB). Mrs. Lewis further explained that the objective of the project was to enhance the trade potential of SMEs by encouraging them to comply with regional standards developed for tradable goods.

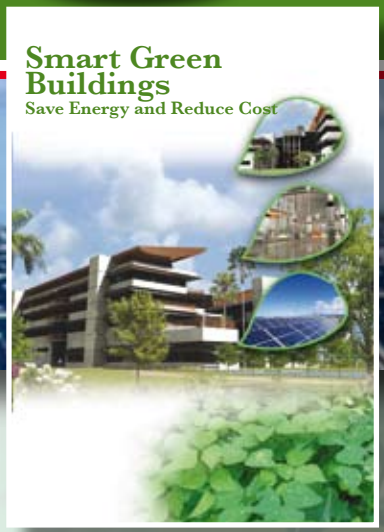
The Chief Executive Officer of CROSQ, Dr Vijayanthi Lopez, and the Project Manager, Dr Michael Seepersaud, were also present at the consultation. They encouraged the participants to get involved in the standardization process and highlighted the value of their contributions towards the process. The participants at the meeting included caterers, food processors and owners of food establishments. They were also informed of basic food safety measures and the elements of a Hazards Analysis Critical Control Points (HACCP) plan.

CROSQ is also developing other critical standards for indigenous products such as honey, cassava bread, kuchela, spices and sauces. The intention is to provide product specifications and guidelines to enable Member States easy access into niche markets. As a pilot project, selected local and regional SMEs that developed standards for use will be given specific financial and technical support to implement the standards through the IDB.

TTBS continues to work diligently with SMEs to increase awareness of the benefits of using standards and to ensure that local products and services meet the minimum requirements to facilitate regional trade.

FEATURE ARTICLE

# Smart Green Buildings




In response to the impending ecological crisis, governments and societies have begun reducing its collective human footprint by focusing on large and obvious consumers such as those of the transport, chemical, manufacturing and agriculture industries. Often overlooked in this analysis however, are buildings which accommodate the 6.7 billion inhabitants of our planet. In a little over 100 years the world's population quadrupled from 1.6 billion in 1900 to its current population of 6.7 billion, and is projected to increase even further to 7.9 billion by 2050 (United Nations Population Division, 2006).

Buildings have always been central to civilization. Humanity's shift from nomadic hunter-gatherer to farmer required among other things, the building of permanent settlements. Building styles, materials and construction methods have developed alongside man's own progress, growing to accommodate his ever increasing and varied needs, in activities such as housing, education, work, health care and entertainment. There is however an environmental cost for buildings. It has been estimated in the United States that buildings account for 70% of electricity use, 12% of water use, 40% of raw material use and 30% of landfill waste(Building energy databook, 2006) . Therefore, any solution towards sustainable use of the earth's resources cannot ignore the impact of buildings.

Much of the energy that goes into building maintenance and upkeep is expended on manipulating the internal environment by controlling the temperature, lighting, water and ventilation. The problem is that traditionally there has been no efficient way to regulate these factors independently across different parts of the building. Thus, the entire building may be cooled in response to an increased heat load in one area, similarly, an entire floor may be lit when only one office is in use. The development of 'smart' building technologies, make it possible to identify where a need is and to intelligently transfer resources to that building section to meet the need. A smart building can track the occupancy levels of different parts of the building and adjust the temperature and ventilation levels accordingly. Similarly, lighting can be enabled in parts of the building that are occupied while minimal lighting used for vacant sections of the building. Smart buildings can also integrate the systems that supply chilled water, hot water and water for the condenser water system into a mutually supporting and integrated system that efficiently uses the waste heat from one process to warm another process.

One such 'smart' building currently under construction in Trinidad and Tobago is the flagship complex of the Evolving Tecknologies and Enterprise Development Company Limited, (Eteck) now under construction in Tamana. The complex will employ a sophisticated system of remote monitoring with occupancy sensors increasing the efficiency of the building's lighting, ventilation and air conditioning systems. Efficient energy use will be facilitated by means of external shading and a solar cooling system with photovoltaic panels to utilize solar energy. The Eteck complex will also feature an advanced air conditioning system which mixes optimal

*Renderings of the 'smart' building currently under construction in Trini complex of the Evolving Tecknologies and Enterprise Development Com*

# Save Energy and Reduce Cost

amounts of fresh air with recirculated air in order to optimize indoor air quality.

Smart buildings, such as the Eteck complex, achieve this functionality by the use of sensors distributed throughout the building that are linked via a communication network. Sensors collect information from around the building on occupancy, room temperature, humidity, lighting levels, air pollutants and transmit this information over the communication network to a computerized controller which automatically adjusts to account for changing conditions. Smart buildings will therefore require integrated systems consisting of compatible sensors, actuators, network bridges and controllers seamlessly working together. An infrastructure based on common standards is therefore essential.

The network on which a smart building is based must be capable of accommodating a variety of sensors and actuators while being robust enough to handle the electronic 'noise' that accompanies modern office buildings. The importance of worldwide network standards is evident from the popularity of ubiquitous Wi-Fi networks, which is based on the ISO/IEC 8802-11 standard. Similarly, the integration of sensors and actuators into traditional building elements such as doors, ceilings and windows will also require extensive coordination and collaboration with existing product manufacturers in order to ensure that the increased functionality does not come at the expense of structural integrity or safety issues.

dad and Tobago is the flagship
pany Limited, (Eteck)

In an emerging area like smart building technologies there are some who may try to exploit the public's lack of information on the subject and may unethically promote their products or buildings as smart or green. Conformity assessment tools such as laboratory testing and certification schemes by recognized and respected institutions will go a long way towards raising public confidence in this technology as well as help protect governments and corporations from making bad investments.

The International Organization for Standardization (ISO) has extensive experience with developing and promoting standards which have been accepted worldwide as well its product testing standards and conformity assessment systems. When combined, these give the public confidence in the compliance of a product or system to a standard. The ISO JTC-1 for instance, which deals with information technology, has a critical role to play in ensuring that the standard for data communication network can handle the existing demands as well as future demands from next generation systems. Due to its large multidisciplinary scope, the ISO will be able to harness the expertise from the various construction and construction materials technical committees in order to prepare standards for system components, test requirements and conformity assessment guidelines.

Initiatives to promote the use and construction of 'smart' building technology are already well underway, particularly in the United States. The ISO however is uniquely well positioned to establish International Standards for this emerging field that will lead to new products, technologies and practices revolutionizing the way buildings are constructed. Smart green building technologies are relatively new, but they will assume increasing importance as the world prepares for housing 8 billion by 2050.

## UPCOMING EVENTS

### WORLD METROLOGY DAY - 20TH MAY

TTBS joins other countries in the celebration of World Metrology Day on 20th May 2009 and to commemorate this day TTBS will be hosting a sensitization seminar. The purpose of the seminar is to sensitize stakeholders such as, Chemists, Government Officials, Laboratories, Chemical Industries, OSH Agency and OSH Professionals, about the importance of Metrology in their scope of works.

The seminar is entitled "Chemical Metrology in Quality Infrastructure; Its Impact on Health, Safety, the Environment and Competitiveness". The seminar would be held at TTBS, Macoya on World Metrology Day, May 20th 2009 at 8:00am.

### THE TRADE & INVESTMENT CONVENTION (TIC) 24TH - 27TH JUNE

TTBS will be an exhibitor at TIC 2009. This Multi-Sectoral Trade show features local, regional, and international exhibitors, and attracts thousands of local, regional, and international buyers. TIC is a unique and effective forum for manufacturers, service providers, buyers and distributors. TIC networks global decision-makers, giving participants an opportunity to discover joint venture and business partnership prospects, and unleashing trade potential by promoting linkages between the Caribbean, the Americas, Asia and Europe.

TIC 2009 takes place from Wednesday 24th June to Saturday 27th June, 2009, at the Centre of Excellence in Macoya, Trinidad Look out for the TTBS booth at this event!



# Labels Help Consumers Get Value for Money

The global financial crisis is causing consumers to become more concerned about value for money. So the average consumer is now faced with the dilemma of attaining maximum return from a reduced disposable income. But how can local consumers be assisted in resolving this dilemma?

Product labels can play an important role in helping consumers obtain value for money. They provide valuable information to help consumers assess the quality of products as well as the products' health, safety and environmental impacts.

### QUALITY

Generally, performance and price are two key indicators of quality and labels can help in this respect. One emerging trend that is growing in popularity especially in "third world" countries is the sale of used and refurbished electrical items. These items are offered for sale generally at a price lower than new items. Goods that are classified as "used", "defective", "irregular", "imperfect" "seconds" or "rejects", must have labels clearly stating this .These labels will avoid consumer deception as it serves as a guide to the quality of the product and allows the buyer to determine what is considered to be an acceptable price for the item.

### HEALTH

Value is also attained when the consumer is informed about dangers to health, safety and the environment. The information provided helps to safeguard the end user from harmful effects that may occur through use or disposal of the product. The labels on items such as household cleaners and other hazardous chemicals must state along with other vital information first aid instructions in the event of an emergency. Expiry dates must also be stated in cases where potency and quality of the product decrease with age, such as liquid chlorine bleaches.

### SAFETY

Consumers need to have the confidence that the products they buy are not only price worthy but are also safe for use as intended by the manufacturer. Safety certification marks such as UL, CSA, and NOM are also required on labels. They serve as useful guides when purchasing for example, domestic electrical kitchen appliances.

### ENVIRONMENTAL

Many consumer markets are becoming increasingly environmentally- conscious and give consideration to environmentally responsible products, or "green" products as a criteria when making purchasing decisions. In addition, label information such as, the statement "contains mercury, dispose as hazardous waste" makes the consumer aware of any hazardous components of products and also helps consumers to safely use and properly recycle or dispose of both products and packaging so that it reduces or eliminates harm caused to the environment

As part of its mandate, TTBS is responsible for safeguarding consumer health and safety as well as protecting the environment. Towards this end, TTBS enforces National Compulsory Standards to ensure that product labels carry adequate information on the following goods: household electrical, pre-packaged, construction, garments, footwear, textiles and tyres. For further information on these standards you can contact the Standards Information Centre.

# TTBS Staff Attend Training in India

*Ronah Persad and Ryan Biran among participants in the training programme*

TTBS sent two of its technical officers for training at the National Institute of Training for Standardization, Quality and Management (NITSQM) in India. Ms. Ronah Persad, Quality Manager and Mr. Ryan Biran, Standards Officer I attended this training programme. The training was intended to enhance their understanding and skills in standardization .This annual International Training Programme on Standardization and Quality Assurance targets technical officers in National Standards Bodies in developing countries under the technical cooperation schemes of the Government of India. It was the 41st programme conducted over an eight- week period from 14th October to 6th December 2008 at Noida, India.

The training programme comprised four main phases: study, industrial visits, workshops and review of reports. During the programme the officers were exposed to the various aspects of standardization, certification, quality assurance and management systems; such as fundamentals of standardization, development of national standards, principles and practices of certification and the functions of national standards bodies.

They also gained practical experience from industrial site visits and workshops. The officers were awarded certificates of achievement for successful participation in this eight week programme.

As the Quality Manager, Ms Persad is responsible for implementing and monitoring TTBS quality management system consistent with ISO 9001and the recently implemented performance management system. She thought the programme was beneficial. "The training I received provided a comprehensive and holistic understanding of the functioning of a national standards body and its role in a developing country. The major benefits derived were contacts made with technical officers from over 15 National Standards Bodies of developing countries and the insight I gained from their approach into Standardization and Quality Assurance. This will be a valuable benchmarking tool for TTBS," she said.

Mr. Biran is a Standards Officer I in the Standardization Division and is responsible for the formulation of national standards for the Telecommunications and Information and Communication Technology (ICT) -based standards for the local industry. In speaking about the programme he said, "The standardization and quality assurance training programme offered a comprehensive view of the operations of one of the largest national standards bodies. For me, it was an opportunity to learn more about certification, accreditation and the various management systems that are now being implemented. Additionally, the manner in which standards impact and interact with these facets of the operation was profound. The information gathered from this training programme will certainly aid in the development of modern and relevant standards for our local sector."

# STAFF Profile

## TTBS CELEBRATES ITS RETIREES

***Terrence Awai***
Head Certification Division

Mr. Terrence Awai was employed with the Bureau since 1981. He held the position of a Standards Officer II in the Material Testing Unit within the Lab Services Division from 1981-1990. He was promoted to Head Certification Division in 1991 and was responsible for the development of the certification services for quality systems and products. He led the Division to expand from offering Product Certification to Management Systems Certification such as ISO 9001 Quality Management System, ISO 14001-Environmental Management System, Quality and Environmental Management Systems for small and medium sized enterprises (Q&EMS-SMEs), Trinidad and Tobago Tourism and Industry Certification (TTTIC) and Green Globe21. Mr. Awai proceeded on pre-retirement leave on the 1st February, 2009. His official retirement date is 17th July, 2009.

***Elizabeth Lewis***
Human Resource Development Officer

Ms. Elizabeth Lewis retired as the Human Resource Development Officer on the 7th January, 2009 after twenty seven years of dedicated service. She started her career at TTBS as an Administrative Officer II in December 1982 and was promoted to the position of Human Resource Development Officer in 1998 which she held until her retirement. Ms. Lewis was responsible for the human resource functions in the Bureau such as: industrial relations matters, recruitment, salary administration and pension administration.

***Ruth Mitchell***
Cleaner I

Ms. Ruth Mitchell was employed at the Bureau since 1997 and performed janitorial duties at the Bureau. Ms. Mitchell enjoyed working at the Bureau, she said that, the staff was very friendly and she had a wonderful experience working here. Ms. Mitchell was happy for the opportunity to work at the Bureau and to contribute to this organization. Her official date of retirement was the 10th January, 2009.

*The management and staff take this opportunity to thank Mr. Awai, Ms. Lewis and Ms. Mitchell for their many years of invaluable contribution to the growth and development of TTBS and extend best wishes for their future.*

# Services of the Trinidad and Tobago Bureau of Standards

***All standards are intended to improve the quality of life through sustainable development by promoting Economic Growth, Societal Equity and Environmental Integrity.***

## OUR VISION:

**To be a World-Class Standards Institution, dedicated to improving the quality of life of the people in Trinidad and Tobago.**

To fulfill this vision TTBS provides the following services: -

### • Standards Development

Formulation of National, Voluntary and Compulsory Standards through technical committees for all goods except food, drugs, cosmetics and agricultural products.

*Contact: Errol Rampaul,*
*Head Standardization Division - Ext. 121*

### • Inspection

Inspection of goods covered by National Compulsory Standards at ports of entry, importers' premises and retail outlets.

*Contact: Steve Williams,*
*Head Implementation Division - Ext.188*

### • Laboratory Services

Testing: Electrical, Fibre/Footwear, Material and Chemical Products.

*Contact: Violet Davis-Maurice,*
*Head Laboratory Services Division - Ext.216*

### • Metrology

Inspection, calibration, testing and certification of measuring devices and pre-packaged goods.

*Contact: Theodore Reddock,*
*Head Metrology Division - Ext. 230*

### • Certification

Product Certification
A license to use the Trinidad and Tobago Product Certification Mark is issued for certified products.

System Certification-
Quality and Environmental Management Systems (ISO 9001, ISO 14001), Trinidad and Tobago Tourism Certification (TTTIC) and Quality and Environmental Management for SME's (Q&EMS – SME's).

*Contact: Ronah Persad,*
*Head Certification Division (Ag.) - Ext.177*

### • Laboratory Accreditation

ISO 17025 for Testing/Calibration Laboratory, ISO 15189 for Medical Laboratories

*Contact: Violet Davis-Maurice,*
*Manager Laboratory Accreditation Division (Ag.) - Ext. 140*

### • Standards Information

Supply of local, regional, national and international standards.

*Contact: Devitra Maharaj-Dash,*
*Librarian, Information Centre - Ext. 159*

### • Quality Training

The Premier Quality Services Limited (PQSL), a subsidiary of the Trinidad and Tobago Bureau of Standards, offers training in:

ISO 9001 and 14001, Laboratory Practices, Calibration, Health and Safety.

*Contact: PQSL*
*Tel.: 645-9026/9268, 662-8827.*

### Facilities for rental

The Trinidad and Tobago Bureau of Standards also offers facilities for rental through its wholly-owned subsidiary, Premier Quality Services Limited (PQSL)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Website: www.ttbs.org.tt


PREMIER QUALITY SERVICES LIMITED

# Facilities for Rent

The Trinidad and Tobago Bureau of Standards offers the following facilities for rental through its wholly-owned subsidiary, Premier Quality Services Limited (PQSL) for business and social functions such as seminars, workshops, conferences, graduations, weddings and award ceremonies.

## ROOMS:

**Maracas Conference Room**
- Seating capacity for 60 persons, class room style
- Seating capacity for 110 persons, theatre style
- Ideal for seminars

**Bon Accord Meeting Room**
- Seating capacity for 20 persons
- Ideal for strategic meetings
- Equipped with white board and screen

**Naparima Training Room**
- Seating capacity for 20 persons
- Equipped with white board and screen

An audio/visual equipment also provided to clients upon request.

**Auditorium**
- Seating capacity for 199 persons
- Podium with built-in microphone
- Stage with head table for 6 persons
- Changing and washrooms (behind stage)
- External entrance to stage

**Dining/Reception Area**
- Seating capacity for 150 persons
- Tables and chairs provided
- Large Kitchen

Catering services also provided to clients upon request.

**Contact:** Giselle Taylor
Tel: 645-9026/9268, 662-8827 • Fax: 645-8879
Email: giselle.taylor@ttbs.org.tt

Conference Room

Auditorium

Dining/Reception Area

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