Software User Requirements

The Compliance Department

Bureau of Standards, Jamaica

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Note to Reader

This document is a *draft* of the User Requirements of software for the Compliance Department of the Regulatory Division. The portion that is yet to be validated includes the following sections:

- 3.1 Functional Requirements
- 3.2 System Quality Requirements
- 4.0 System Constraints

This draft is yet to be reviewed thoroughly by the Compliance Department. It is recommended that several meetings take place within the Compliance Department and a MIS team member (or a IS consultant) to review the document; this is likely to take many hours. In the near future, the User Requirements for *Compliance Connect* will be completed and signed off by the Director of the Regulatory Division.

The practical considerations of the Software Requirements are also not finalized. The Compliance Department should indicate the priority level for each element of the User Requirement; these requirements will then determine the scope of versions 1 and 2 of the *Compliance Connect* software.

The System Quality Requirements in the document is provisional; a template has been provided so when meetings are held between the Management Information Systems (MIS) department and the Compliance departments, these requirements can be finalized. Similarly, the System Constraints should be completed with the aid of the MIS department.

Finally, the flow of *Compliance Connect* should be discussed with the Software Developer, e.g. the designs of tabs (or 'windows') in the software are an important consideration for the ease and efficiency of the end-user. It is recommended that the layout of each online form be included in the User Requirements, if feasible. It is important that the software match the needs of inspectors at the Ports of Entry and the Domestic Marketplace.

1.0 Introduction

The User Requirements documentation for the Compliance Department of the Regulatory Division of the Bureau of Standards, Jamaica (BSJ) is the output of the requirements process performed by a Software Requirements Specialist. The requirements process is complex set of activities designed to provide a *high-level overview of the system*; the process is *not* a discrete activity performed at the outset of a software development project. Software Requirements is related to other important processes: Software Design, Software Testing, and Software Maintenance.

In this document, the term *User Requirements* is used interchangeably with the term *Software Requirements*. Software requirements describe software developed or adapted to solve a particular problem; as such, "the requirements on particular software are typically a complex combination of requirements from different people at different levels of an organization" (IEEE, 2004). The User Requirements of BSJ management and the inspectors in the Compliance Department were carefully analyzed using information from a series of interviews.

Persons that occupy the following positions were interviewed: Executive Director, Director Regulatory Division, Manager Regulatory Division, Team Leader Compliance Department, Operations Officer Compliance Department, Inspectors in the Compliance Department, Corporate and Inter-Agency Planner, Senior Director Business Process and Administration, Director Science and Technology Division, Director Standards Division, Librarian Technical Information Centre, Public Relations and Information Coordinator, Customer Service Representative, Manager Finance Division, Team Leader Chemistry, Trainee Analyst Microbiology Department, Team Leader Packaging, Team Leader Electrical Engineering, Team Leader Civil Engineering, Team Leader Mechanical Engineering, and the BSJ Software Developer. Note: Several Inspectors in the Compliance Department were interviewed individually and collectively.

2.0 System Overview

The User Requirements for the Standards Compliance Department of the Regulatory Division of the Bureau of Standards, Jamaica (BSJ) describes part of an enterprise system which involves several software projects [e.g. *Compliance Connect* boshrmapp:8080/cdb, *Job Management Tracking System (JTMS)*boshrmapp:8080/jmts], an integrated database (using a single data library) and other system requirements (include tablet computers, networking and middleware).

The *Compliance Connect* software involves five major functions: (i) Online Forms for data capture, (ii) Reports, (iii) Queries related to compliance levels, (iv) Message Alerts to appropriate person/s and (v) Data Mining to discover unexpected patterns and trends. The Online Forms are a departure from manual procedures that involve over twenty (20) printed forms in the Compliance Department. [Note: Many of the printed forms are redundant or not in

active use.] The Reports to be generated in *Compliance Connect* will create efficiencies – by eliminating the need for daily reporting by inspectors and reducing the time to create monthly reports. Moreover, annual reports will be vastly improved since software will include features for data analysis. The Queries of the database will address ad hoc questions posed by internal and external stakeholders about compliance to the national standards. The Message Alters will notify management and inspectors about urgent actions to be taken based on changes in the database, e.g. email notification when document/s are to be signed urgently.

BSJ is updating its documentation of the procedures for each division for continual improvement and better accountability; the Quality Environment Management System department is coordinating the process of preparing for ISO 9001/14001 certification and ISO/IEC 17025 accreditation. Moreover, the process flow diagrams of BSJ are being reviewed and redesigned to eliminate redundancies. To facilitate adherence to the regulations stipulated in the Standards Act of 1969, the implementation of the Importer and Local Manufacturer Management System (ILMMS) Policy was drafted in 2011.

The *Bureau of Standards web site* will include an online form that allows the Registration of Importers and Local Manufacturers of non-food items for which compulsory standards exist; the data will be stored in the integrated database system. As such, there will be an additional process (1.0 Registration of Importers / Local Manufacturers), which includes assigning of a risk factor to each local manufacturer and Importer. The risk factor assigned will drive frequency of inspection. The BSJ web site will also display up-to-date information from the database, e.g. comprehensive lists of approved products and registered importers/ manufacturers. It will be also used to facilitate consumer queries, e.g. products tested by BSJ.

The Standards Compliance Department has two (2) major process flows: (i) Ports of Entry and (ii) Domestic Marketplace. Software will be used in eight (8) processes:

Process	Software
1.0 Registration of Importers and Local Manufacturers (*not in place*)	BSJ web site (and/or email submission)
1.1 Assessment/ Evaluation of Products	Compliance Connect
1.2 Documentation of Breaches	Compliance Connect
1.3 Action for Rehabilitation of Products	Compliance Connect
1.4 Sampling	Compliance Connect / JMTS
1.5 Testing and/or Label Assessment	Job Management Tracking System
1.6 Verification by Laboratories	Job Management Tracking System
1.7 Compliance Analysis	Compliance Connect, BSJ web site

The master list of documents for the Compliance Department includes:
- Quality Plan Compliance Activity (REG42_M_01_00)
- Compliance Forms and Records List (REG42_L_01/00)
- Document Control Master List (REG42_L_02/00)

Seven (7) documented procedures in the Compliance Department are:
- Inspection of Imported Goods(REG42_P_02/00)
- Inspection and Sampling of Rice (REG42_P_01/00)
- Conducting Market Survey (REG42_P_06/00)
- Issuing Detention Notice (REG42_P_07/00)– *now incorporated in REG42_P_02*
- Acquiring, Recording and Routing of Samples (REG42_P_05/00)
- Destruction and Disposal of Non-Conforming Goods (REG42_P_03/00)
- Approving Imported Milk Powder (REG42_P_04/00)

Four (4) other procedures that are currently *being updated* include:
- Handling Labeling Violations (Volume3a: BSJ-ST03a/07)
- Handling of Appeals (Volume3a: BSJ-ST03a/12)
- Issuing Condemnation Notices – Domestic Marketplace (Volume3a: BSJ-ST03a/15)
- Issuing Seizure Notices – Domestic Marketplace (Volume3a: BSJ-ST03a/16)

Additional procedures in the Compliance Department [not *currently* listed in the Master Control Document] include:
- Stamping of Entry documents at Ports of Entry [including recording of documents stamped "To be inspected" at the One Stop Shop] – *incorporated* in **REG42_P_02/00**
- Scheduling (Preparing weekly inspection itinerary, Site Inspection Appointments)
- Handling Consumer Complaints including those coming from *Consumer Affairs*
- Used Tyre Inspections *(currently on hold)*

Apparently, the following five (5) procedures should be *redesigned* and/or automated urgently:
- Inspection of Imported Goods (REG42_P_02/00)
- Conducting Market Survey (REG42_P_06/00)
- Inspection and Sampling of Rice (REG42_P_01/00)
- Issuing Detention Notice (REG42_P_07/00)
- Acquiring, Recording and Routing of Samples (REG42_P_05/00)

Procedures conducted by other divisions that affect the Compliance Department include:
- Email Notification by a librarian at the Technical Information Centre to the Compliance Department of recalled products (pulled from overseas markets. marketplace)
- Documentation and Notification of New/ Updated Compulsory National Standards
- Registration of Jobs by Customer Service Department
- Collection of fees by Finance Department
- Laboratory Testing by both Engineering and the Science and Technology divisions
- Destruction of (non-conforming) goods by Facilities Management Department (FMD)
- Assignment of vehicles to teams with non-traveling officers by Facilities Management

3.0 User Requirements

User Requirements consists of Functional Requirements and System Quality Requirements.

3.1 Functional Requirements

Functional Requirements include online forms, reports, queries and message alerts.

3.1.1 Online Forms

The online forms will replace the following manual forms and logs in several processes.

Process	Form/s (Current and/or Prospective)
1.0 Registration of Importers	Importer Manufacturer Registration Form (REG42_F_20/00) [prospective form to be placed on BSJ web site]
1.1 Assessment/ Evaluation of Products/ (+ Stamping of Entry Documents at Ports of Entry)	Market Survey (REG42_F_06/00) – **will be printed in new system** *Product Survey (Airport, Cold Storages and Berths) Form (REG42_F_07/00)* – **will be printed in new system** *Product Survey (Imported Products) Form (REG42_F_08/00)* - **printed** Rice Checklist (REG42_F_036/00) "Documents to be Stamped" [Berth 11 Daily Report (REG42_F_024/00)] Site Appointment Schedule Log *Compliance Itinerary Schedule (REG42_F_028/00) – not urgent*
1.2 Documentation of Breaches	Detention Notice – Ports of Entry Form (REG42_F_01/00) – **will be printed** *Detention Notice – Domestic Market Form (REG42_F_02/00)* - **printed** Withdrawal Products from Sale Form (REG42_F_05/00) – **will be printed**
1.3 Action for Rehabilitation of Products	Application for Authorization to Rehabilitate Detained Goods(REG42_F_018/00) Ports of Entry Release Form (REG42_F_014/00) – **will be printed** *Application for Authorization to Rehabilitate Detained Goods – Application Response (REG42_F_019/00) – not urgent* *Rehabilitation Notice – Release from Withdrawal (REG42_F_037/00) – not urgent*
1.4 Sampling	Sample Request – Ports of Entry Form (REG42_F_03/00) – **will be printed** *Sample Request – Domestic Market Form (REG42_F_04/00)*– **printed** Technical Service Request (REG42_F_035/00)
1.5 Testing and/or Label Assessment	Various Forms (Science and Technology, Engineering)
1.6 Verification by Laboratories	Various Forms (Science and Technology, Engineering)
1.7 Compliance Analysis (+ Destruction / Condemnation / Seizure)	Verification: Release from Domestic Marketplace Form (REG42_F_015/00) Inspector's Verification Report (REG42_F_016/00) Milk Powder Certification of Analysis Submission (REG42_F_038/00)– *not urgent* Importation of Milk Powder Checklist (REG42_F_039/00)– *not urgent* Certification of Destruction (REG42_F_012/00)– *not urgent* Destruction Form (REG42_F_017/00)– *not urgent* *Notice of Condemnation – Domestic Marketplace (REG42_F_010/00) – not urgent* *Notice of Seizure (REG42_F_011/00) – not urgent*

Note: If networking is not available on the tablets, the inspectors should be able to enter data offline on Compliance Connect. This data will be uploaded whenever the system is online.

Moreover, in a worst case scenario, if tablets are unavailable/ not working, the inspectors will revert to the manual system for recording data and then enter data at the office to enable report generation. This data could also be entered by the clerical officers.

Descriptions of online forms below are *recommendations;* additional fields have been added in some cases, e.g. TRN. In the table that describes forms in this document, "Y" indicates that the field is required, "N" that the field is optional, and "N/A" that the field is not applicable. It is advisable to not display (or grey out) the N/A fields on the form to avoid confusion.

Forms related to Process 1.1 Assessment / Evaluation of Products

Several forms are part of the Process 1.1 Assessment/ Evaluation of Products: the Product Survey Form, the Rice Inspection Form and the Compliance Department Daily Team Form. The data captured in procedures "Inspection of Imported Goods" (REG42_P_02/00)and "Conducting Market Survey"(REG42_P_06/00) is represented in a form and sub form.

General Survey Form (Ports of Entry/ Site / Commercial Marketplace)

Field	Data Type	Ports of Entry	Site	Commercial Market
Survey Form No.	Number	Y	Y	Y
Type of Visit / Location	Menu (PE, S, DM)	Y	Y	Y
Type of Establishment	Menu(varies by location)	**N**	Y	Y
Business	String	Y	Y	Y
TRN	Number	Y	Y	**N**
Business Address	String	Y	Y	Y
Telephone	Number	Y	Y	Y
Email	String	**N**	**N**	**N**
Fax Number	Number	**N**	**N**	**N**
Address of Inspection	String	**N**	Y	Y
Parish of Inspection	String	Y	Y	Y
Date of Visit	Date	Y	Y	Y
Time	Time	Y	Y	Y
Inspector ID	Number	Y	Y	Y
Inspector's Signature	Image	**N**	**N**	Y
Representative	String	Y	Y	Y
Rep Contact No.	Number	**N**	**N**	**N**
Representative's Signature	Image	**N**	Y	Y
Document stamped	Menu (Seen, To be Inspected)	Y	**N**	**N/A**
Inspection Complete	Menu (Y,N)	Y	Y	Y
Type of Location (where Inspection will occur)	Menu	Y	**N**	**N/A**
Location Address (where Inspection will occur)	String	N	**N**	**N/A**
Location Phone # (where Inspection will occur)	Number	N	**N**	**N/A**
Finished Goods?	Boolean (Y, N)	**N**	**N**	**N/A**

When the representative's signature is required, it will be entered in a stylus on the tablet (or scanned from the manual form, if necessary).

Goods are either inspected at Ports of Entry or the Domestic Marketplace. A Port of Entry is a place where foreign goods may be cleared through a customhouse. There are two types of inspection in the domestic marketplace: Site (warehouse of importer) and Commercial Marketplace (e.g. supermarkets, wholesale stores).

The "Type of visit / location" field should list all "Ports of Entry" as well as "Site" and "Domestic Marketplace". (It will no longer be called "Survey Type".) The menu options for the "Type of Visit/Location" as well as the "Type of Location (where Inspection will occur)" fields include the following:
- Berth 1, Berth 2, Berth 3, Berth 4, Berth 5, Berth 6, Berth 7, Berth 8, Berth 9, Berth 10
- Berth 11 / One Stop Shop
- Zero Cold Storage, Harbour Cold Storage, Precision Cold Storage, CKL Cold Storage,
- Norman Manley International Airport: Airport Ajas 1, Airport Ajas 2, Airport Queens Warehouse, Airport Amerijet, Airport Air Jamaica Cargo, Airport American Airlines Cargo, Airport Fedex, Airport DHL, Baggage Hall, Airport
- Bonded Warehouse – Aldolph Levy, Bonded Warehouse –Universal Freight Handlers, Bonded Warehouse – Kingston Logistics Center
- Port Handlers, Seaboard Freight (Montego Bay)
- *Other Location for Inspection*

The "Type of Location (where Inspection will occur)" field also contains an additional option "As Above." If the user select "As Above" from the menu in that field, *Compliance Connect* will automatically display the "Business Address" in the "Location Address (where Inspection will occur)" field. Note: If the Inspector selects 'Other Location for Inspection' from the menu in the "Location to be Inspected" field, then the "Address of Location to be Inspected" *must* be noted.

In addition, the menu options for the Type of Establishment are different for each type of location. The menu options for the Type of Establishment for a Site are AEO and non-AEO. The menu options for the Type of Establishment in the Domestic Marketplace include Supermarket, Grocery Store, Gas Station, Pharmacy, Department Store, Hotel, Furniture Store, Appliance Store, and Hardware Store.

Entry Document Inspection Form

Field	Data Type	Ports of Entry	Site	Commercial Market
Container Number	Number	Y	Y	**N/A**
Country of Consignment	String	Y	Y	**N/A**
Container Size	String	Y	**N**	**N/A**
Entry. No.	Number	Y	**N**	**N/A**
CIF	Currency	Y	**N**	**N/A**
SCF	Currency	Y	**N**	**N/A**

An inspector at the Port of Entry will inspect the Entry Document; the Entry Document may also be available at a Site. If the document is stamped "To be inspected", the information should always be recorded in the "Entry Document Inspection Form".

[Note: Cost Insurance and Freight (CIF) is the value of the goods imported. The Standards Compliance Fee (SCF)is collected by Customs on behalf of BSJ.]

Product Survey "Sub Form"

Field	Data Type	Ports of Entry	Site	Commercial Market
Product Name	String	Y	Y	Y
Product Category	String	Y	Y	Y
Brand Name	String	Y	Y	Y
Model No.	String	Y	Y	**N**
Serial No.	String	Y	Y	**N**
Group Package type	String	Y	Y	**N**
Product Package type	String	Y	Y	**N**
No. of products per group package	Number	Y	Y	**N**
Country of Origin	"Checklist"	Y	Y	Y
Country of Origin	String	Y	Y	Y
Name and Address of Source	"Checklist"	Y	Y	Y
Name of Manufacturer	String	Y	Y	**N**
Address of Manufacturer	String	Y	Y	**N**
Country of Manufacturer	String	Y	Y	**N**
Name of Distributor	String	Y	Y	**N**
Address of Distributor	String	Y	Y	**N**
Country of Distributor	String	Y	Y	**N**
Name of Importer	String	Y	Y	**N**
Address of Importer	String	Y	Y	**N**
Country of Importer	String	Y	Y	**N**
Net Quantity Declaration in Metric	"Checklist"	Y	Y	Y
Net Quantity Declaration in Metric	String	**N**	**N**	**N**
Ingredient Listing	"Checklist"	Y	Y	Y
Ingredient Listing	String	**N**	**N**	**N**
Pictorial Representation	"Checklist"	Y	Y	Y
Instructions	"Checklist"	Y	Y	Y
Instructions	String	**N**	**N**	**N**
Precaution Statement	"Checklist"	Y	Y	Y
Precaution Statement	String	**N**	**N**	**N**
Batch Code	"Checklist"	Y	Y	Y
Batch Code	String	**N**	**N**	**N**
Date Mark	"Checklist"	Y	Y	Y
Date Mark	String	**N**	**N**	**N**
Comments	String	**N**	**N**	**N**
Status (Satisfies Labeling Standards?)	Menu (S, U)	**N**	**N**	**N**

Product categories that are inspected are categorized into Prepackaged goods, Construction goods, Appliance and Safety, Textile and Footwear, Foods (and Drinks), Household Utensils, as well as Sports and Games. Note: in the near future, more product categories may be added. [See Appendix II for examples of each product category.]

During an inspection, the labels should be reviewed to see whether it satisfies labeling standards using a checklist. The checklist options are S (satisfactory), U (unsatisfactory), NG (Not given/displayed) and NA (Not Applicable). When all of the following criteria on the checklist are checked as satisfactory during inspection, the specific item conforms to labeling standards for that product type.

The Survey Form (REG42_F_06/00) may be printed for the Domestic Marketplace; it is *not* printed for the Ports of Entry.

Examples of some terms on the Product Form follow:
- *Group Package type*, e.g. case, bail
- *Product Package type*, e.g. bag, bottle

Note: The rules that indicate whether each type of product satisfies the labeling standards will be compiled by the Compliance Department *at a later date*, using a table that indicates "S" or "N/A" for each item below.

Product Type	Product Name	Country of Origin	Name / Address of Source	Net Quantity Declaration in Metric	Ingredient Listing/ Material Listing	Instruc-tions	Batch Code	Date Mark	Precaution Statement
Foods									
Construction goods									
Appliance and Safety									
Textile and Footwear									
Prepackaged goods									
Household Utensils									
Sports & Games									

Note: Some foods require ingredient listing while others require precautionary listing.

The "Product Inspection" sub form is used for *all* products that are inspected. When rice is imported, the following form should also be used during inspection. The "Rice Inspection" form should pop-up when "Rice" is entered in 'Product Name' field in the Product Survey Form. Since more than one bag of rice may be inspected, there is a Visual Inspection Checklist sub form.

Rice Inspection Form

Field	Data Type	Ports of Entry	Site
Company Name (Display Field)	String	Y	Y
TRN (Display Field)	Number	Y	Y
Inspector Name (Display Field)	String	Y	Y
Inspector's Signature	Image	**Y**	**Y**
Representative (Display Field)	String	Y	Y

Visual Inspection Checklist "Sub Form"

Field	Data Type	Ports of Entry	Site
Container No.	String	Y	Y
Signs of Insects	"Checklist"	Y	Y
Signs of Other Foreign Bodies	"Checklist"	Y	Y
Samples Taken for Testing	"Checklist"	Y	Y
Further Fumigation Necessary	"Checklist"	Y	Y

The checklist options for rice inspection are S (satisfactory), U (unsatisfactory), and IN (Inadequate). [Note: The Rice Inspection Form will *not* be printed.]

Compliance Department Daily Team Form (Ports of Entry/ Site/ Domestic Marketplace)

Field	Data Type	Ports of Entry	Site	Commercial Market
Date	Date	Y	Y	Y
Location of Inspection	Menu (Port, Site, Market)	Y	Y	Y
Address of Inspection	String	**N**	Y	Y
Parish of Inspection	String	Y	Y	Y
ID of 1st Team Member	Number	Y	Y	Y
Name of 1st Team Member	String	Y	Y	Y
ID of 2nd Team Member	Number	**N**	**N**	**N**
Name of 2nd Team Member	String	**N**	**N**	**N**
ID of Driver	Number	**N**	**N**	**N**
Name of Driver	String	**N**	**N**	**N**
# of Documents Stamped "Document Seen"	Number	Y	**N/A**	**N/A**
# of Documents Stamped "To be Inspected"(Display field - calculated by *Compliance Connect*)	Number	Y	**N/A**	**N/A**

A summary of each team will be recorded in an online form, shown above, **only if necessary**. This form is a subset of a previous daily reports; see Section 3.2 to review the list. Note: Each Compliance Department Daily Team Form will *not* be printed since it is used only within BSJ.

Note: The result of each inspection will be recorded in the online Product Survey form (see above). A Daily Report (of all inspections) will be generated by *Compliance Connect*; this report is only required until monthly reports are generated.

If a clerical officer enters the details about each entry document seen in the Entry Document Inspection form, the Number of Documents Stamped "Document Seen" will be calculated automatically by *Compliance Connect*. If a clerical officer does not enter these details, the inspectors will be required to manually count the number of documented stamped "Document Seen" and enter it into this form.

Forms Related to Related Processes 1.2 and 1.3

The forms related to processes 1.2 Documentation of Breaches and 1.3 Action for Rehabilitation of Products includes: Detention Request Form, Notice to Withdraw Products Form, Application for Rehabilitation Form, Service Contract Form, and Release Request Form.

The Detention Request form is related to the General Survey form and Product Survey form.

Detention Request Form

Field	Data Type	Ports of Entry	Site	Commercial Market
Business / Importer	String	Y	Y	Y
TRN (display field)	Number	Y	Y	**N**
Address (display field)	String	**N**	Y	Y
Parish (display field)	String	**N**	Y	Y
Representative (display field)	String	**N**	Y	Y
Entry Document No. (display field)	Number	Y	**N**	N/A
Container No. (display field)	Number	Y	**N**	N/A
Country of consignment (display)	String	Y	**N**	N/A
Inspector ID (display)	Number	Y	Y	Y
Inspector Name (display)	String	Y	Y	Y
Product Name (display)	String	Y	Y	Y
Job No. (assigned from JMTS)	Number	Y	Y	Y
Size of Container	Menu (20 ft, 40ft)	Y	**N**	N/A
Amount of goods in container	Menu (½, ¼, full)	Y	**N**	N/A
No. of Cases detained	Number	Y	Y	Y
No. of Units per case	Number	Y	Y	Y
Date of Detention (display)	Date	Y	Y	Y
Reason for Detention	String	Y	Y	Y
Detention Tag Number (PE/DM)	Number	Y	Y	Y
Signature of Inspector	String	Y	Y	Y
Name of Representative	String	**N**	Y	Y
Signature of Representative	String	**N**	Y	Y

Note: The Detention *Tag* Number is automatically numbered BSJ-PE42-YYYYMMDD-XX if it is created at the Ports of Entry orBSJ-DM42-YYYYMMDD-XX at the Domestic Marketplace.

The Detention Form is printed both at the Ports of Entry (REG42_F_01/00) and Domestic Marketplace (REG42_F_02/00) for the representative. Note that a Job No. is automatically assigned to a detention.

The Notice to Withdraw Products Form is used *only* at the Domestic Marketplace. The Notice to Withdraw Products Form (REG42_F_018/00) is printed for the representative.

Notice to Withdraw Products Form

Field	Data Type	Ports of Entry	Site	Commercial Market
Date of Withdrawal (display)	Date	N/A	N/A	Y
Job No.	Number	Y	Y	Y
Reference Number	Number	N/A	N/A	Y
Business (display field)	String	N/A	N/A	Y
TRN (display field)	Number	Y	Y	**N**
Inspector ID (display)	Number	N/A	N/A	Y
Inspector Name (display)	String	N/A	N/A	Y
Product Name (display)	String	N/A	N/A	Y
No. of Units collected (display)	Number	N/A	N/A	Y
Description of Breach	String	N/A	N/A	Y
Signature of Inspector	Image	N/A	N/A	Y
Name of Representative	String	N/A	N/A	Y
Signature of Representative	Image	N/A	N/A	Y

The Application for Authorization to Rehabilitate Goods form is filled out by the representative of Importer/Domestic Marketplace. It has a form and a sub form. The sub form records all of the products that are to be rehabilitated. This Form is *not* printed.

Application for Authorization to Rehabilitate Goods form

Field	Data Type	Ports of Entry	Site	Commercial Market
Job No.	Number	Y	Y	Y
Business / Importer	String	Y	Y	Y
TRN (display field)	String	Y	Y	**N**
Address (display field)	String	Y	Y	Y
Parish (display field)	String	Y	Y	Y
Address where Rehabilitation to be conducted	String	Y	Y	Y
Estimated Days to complete Rehabilitation	Number	Y	Y	Y
Name of Applicant	String	Y	Y	Y
Signature of Applicant	Image	Y	Y	Y

Application for Authorization to Rehabilitate Goods sub form

Field	Data Type	Ports of Entry	Site	Commercial Market
Product	String	Y	Y	Y
Number of Samples Collected	Number	Y	Y	Y

The Online Payment Form is associated with fines as well as services provided by BSJ. It is used primarily by the Finance Division and Customer Service Department. It stores information that was traditionally recorded on the *Service Contract Form* as well as payment data. Payments related to the Compliance Department include Rehabilitation, Label Registration and Tyre Certificates.

The Online Payment Form

Field	Data Type	Ports of Entry	Site	Commercial Market
Job No. (assigned from JMTS)	Number	Y	Y	Y
Receipt No. (assigned by *AccPac*)	Number	**N**	**N**	**N**
Date /time (display field)	Date	Y	Y	Y
Sample Condition	String	**N**	**N**	**N**
Business / Importer (display field)	String	Y	Y	Y
TRN (display field)	String	Y	Y	**N**
Address (display field)	String	Y	Y	Y
Parish (display field)	String	Y	Y	Y
Fax (display field)	String	**N**	**N**	**N**
Email (display field)	String	**N**	**N**	**N**
Representative (display field)	String	Y	Y	Y
Address to Send Invoice *(if different from above)*	String	**N**	**N**	**N**
Size of Container (display)	Menu (20 ft, 40ft)	Y	**N**	N/A
Amount of goods in container (display)	Menu (½, ¼, full)	Y	**N**	N/A
No. of Cases detained (display)	Number	Y	Y	Y
No. of Units per case (display)	Number	Y	Y	Y
No. of Products Withdrawn?	Number	**N/A**	**N/A**	Y
No. of Units Withdrawn?	Number	**N/A**	**N/A**	Y
Type of Service/ Type of Fee	Menu	**Y**	**Y**	**Y**
Payment / Deposit	Currency	**N**	**N**	**N**
Date paid	Date	**N**	**N**	**N**
Submitted by (Name)	String	Y	Y	Y
Signature	Image	**N**	**N**	**N**
Cashier ID	String	**Y**	**Y**	**Y**
Cashier signature	Image	**Y**	**Y**	**Y**
Additional Services (Urgent, Fax/ Email Results, Telephone presumptive results, other)	String	**N**	**N**	**N**

The menu options for the "Service to be performed/ Type of Fee" include **Rehabilitation, Label Registration,** Testing, Calibration, Label Evaluation, Inspection, Consultancy, Training, **Tyre Certificate,** and Other.

Generally, the Fees related to the Compliance Department include:
- Rehabilitation Fee - Currently based on size of container being detained (¼, ½, or full container). [Please note that rehabilitation fee is refunded if shipments detained for conformance pass test conducted.]
- Cement Tests – Shared between Compliance, Civil and Chemistry
- Tyre Inspections – Used Tyre inspection fee
- Label Registration – Programme to deal with non-complaint labels
- Tyre Certificates - Issued to approved 'retreaders' to import casings for re-treading

Note: In the short run, the cash payment advice / invoice book will be used to record the payment manually. This book will be delivered to the Accounts department along with the POS machine at the end of each day.

The Payment Online Form is associated with fines as well as services provided by BSJ. It is used primarily by the Finance Division and Customer Service Department. It stores information from the *Service Contract Form* as well as payment data.

The Release Request Form that is issued after submission of the application for rehabilitation form and payment made associated with the Service Contract form. It is used for goods detained at the Ports of Entry and the Domestic Marketplace. Two copies of this form (REG42_F_014/00) are usually printed; one is handed to the representative. [Note: The Release Request may or may not be followed by the Notice of Release from the Domestic Marketplace, described later in this document.]

The Release Request form

Field	Data Type	Ports of Entry	Site	Commercial Market
Job No.	Number	Y	Y	Y
JBS Reference No.	Number	Y	N/A	N/A
Entry Document No.	Number	Y	N/A	N/A
Container No. (display field)	Number	Y	N/A	N/A
Business / Importer (display field)	String	Y	N/A	N/A
Address (display field)	String	Y	N/A	N/A
Parish (display field)	String	Y	N/A	N/A
Representative (Display)	String	Y	**N**	**N**
Product Name (display)	String	Y	Y	Y
No. of Units collected (display)	Number	Y	Y	Y
Inspector ID (display)	Number	N/A	N/A	Y
Inspector Name (display)	String	N/A	N/A	Y
Signature of Inspector	Image	N/A	N/A	Y
Approved by Manager ID	**String**	**N/A**	**N/A**	**Y**
Manager Name (display)	**String**	**N/A**	**N/A**	**Y**
Signature of Manager	Image	N/A	N/A	Y

Security Issues: The Release Request can **only be authorized** by authorized personnel: Team Leader Compliance Department, Operations Officer Compliance Department, and the Senior Inspector Compliance Department. Appropriate steps should be taken to ensure that the system is secure to mitigate/ prevent fraud.

Forms Related to Process 1.4 Sampling

Two forms are part of Process 1.4 Sampling: the Sample Request Form and Technical Services Request Form. The sample request form is used for Consignments at the Port of Entry and at a Site Visit. It is also used at the Daily Visits to Domestic Marketplace. A Sample is collected for a particular consignment or daily visit to a site or domestic marketplace; as such, **the Sample Request Form *is linked to* the General Survey Form**. When a sample is requested, the following form is completed:

Sample Request Form

Field	Data Type	Ports of Entry	Site	Commercial Market
Business *(display only)*	String	Y	Y	Y
Representative	String	Y	Y	Y
Representative Signature	Image	Y	Y	Y
Inspector ID	String	Y	Y	Y
Inspector Signature	Image	Y	Y	Y
Job Number	Number	Y	Y	Y
Sample Request Issued	Boolean	Y	Y	**N**
Option Selected by Client	Menu	Y	Y	**N**

The field "Option selected by Client" has a menu with two choices: "To be destroyed by BSJ" or "To be collected within 30 days".

A Sample is collected for a particular product inspected; as such, **the Sample Request sub form *is linked to* the Product Survey Form.** The sample request sub form is used after the inspector reviews the checklist for the product. As such, the form should be shown *after* the checklist is completed by the inspector.

Sample Request "Sub Form"

Field	Data Type	Ports of Entry	Site	Commercial Market
Product Name (display only)	String	Y	Y	Y
Number of Units Collected	Number	Y	Y	Y
Sample Collected for Testing	Boolean	Y	Y	Y
Sample Collected for Labeling Assessment	Boolean	Y	Y	Y
Sample Collected for Investigation	Boolean	Y	Y	Y

The Sample Request Form will be printed at the Ports of Entry (REG42_F_03/00) and the Domestic Marketplace (REG42_F_04/00).

Technical Service Request Form
The Technical Service Request Form has two sections: the portion used by Compliance Department as well as the portion used in the laboratories. Other data is displayed on the form that was already collected when the product was inspected, e.g. product name, batch code. It is not printed since it is used internally by BSJ.

Portion of Form used by Compliance Department

Field	Data Type	Ports of Entry	Site	Commercial Market
Job Number	Number	Y	Y	Y
Department (Lab)	String	Y	Y	Y
Priority Rating	Number	Y	Y	Y
Product Name (display)	String	Y	Y	Y
Brand Name(display)	String	**N**	**N**	**N**
Batch Code (display)	String	Y	Y	Y
Model Number (display)	Number	Y	Y	Y
Serial Number (display)	Number	Y	Y	Y
Number of Units Collected (display)	Number	Y	Y	Y
Name of Company (display)	String	Y	Y	Y
Address of Company (display)	String	Y	Y	Y
Consignment Detained/ Withdrawn	Boolean	Y	Y	Y
Container Number(display)	Number	Y	Y	**N**
Detention Number	Number	Y	Y	**N**
Customer Complaint	Boolean	Y	Y	Y
Nature of Complaint	String	Y	Y	Y
Service Required	String	Y	Y	Y
Inspector ID (display)	Number	Y	Y	Y
Inspector Name (display)	String	Y	Y	Y
Inspector Signature	Image	Y	Y	Y
Date Service Completed	Date	Y	Y	Y

Note: The "Service Required" could include several tests performed by more than one department in Engineering as well as Science and Technology Divisions.

Portion of form filled by Labs in Engineering as well as Science and Technology divisions

Date Received by Lab	Date	Y	Y	Y
Staff ID Received	Number	Y	Y	Y
Staff Name Received	Number	Y	Y	Y
Expected Turnaround time	Number	Y	Y	Y
Staff ID Assigned	Number	Y	Y	Y
Staff Name Assigned	Number	Y	Y	Y

Forms for Processes 1.5 and 1.6

The work flow for the Compliance Department includes work performed by other departments: Process 1.5 Testing & Labeling Assessment and Process 1.6 Verification by Labs. Each job has one or more tests. As such the Lab Report Form below has a sub form for each test performed.

Short term measure: Currently when the testing is complete, the labs currently create reports in a word processing application; the report is stored on the BSJ server. The following data will be entered in the software system to summarize the laboratory report. This step is redundant since the information is also stored in the official report. [In the future, the test reports will be integrated in the enterprise system for easy access by the Compliance Department.]

Lab Report Summary Form

Field	Data Type	Ports of Entry	Site	Commercial Market
Job. No.	Number	Y	Y	Y
Department (Display)	Number	Y	Y	Y

Lab Report Summary Sub Form

Field	Data Type	Ports of Entry	Site	Commercial Market
Test Type	String	Y	Y	Y
Date Completed	Date	Y	Y	Y
Test Result	Menu (S, N)	**N**	**N**	**N**
Summary of test results	String	**N**	**N**	**N**
Recommendations	String	**N**	**N**	**N**
Location on BSJ Server	String	**N**	**N**	**N**

The Lab Report Summary Form will *not* be printed since it is used only within BSJ.

Forms Related to Process 1.7 Compliance Analysis

Two forms are used as part of Process 1.7 Compliance Analysis: the "Site Inspection Schedule" Form and the "Inspector Verification Notice of Release from Domestic Marketplace" Form.

As part of compliance analysis, inspectors are sent to follow-up on goods on the Ports of Entry that was stamped "To be inspected". The Site Inspection Schedule form will be generated automatically by *Compliance Connect*, based on entry documents stamped "To be inspected".

Site Inspection Schedule Form

Field	Data Type	Ports of Entry	Site	Commercial Market
Business / Importer (display field)	String	Y	Y	N/A
Location Address (where Inspection will occur)	String	Y	Y	N/A
Telephone	Number	Y	Y	N/A
Representative	Name	Y	Y	N/A
Product Name (display)	String	Y	Y	N/A
Date Stamped "to be inspected" (display)	Date	Y	Y	N/A

Site Inspection Schedule Sub form

Field	Data Type	Ports of Entry	Site	Commercial Market
ID of employee scheduling appointment	Number	Y	Y	N/A
Employee Name (display)	String	Y	Y	N/A
Date of call (by business or inspector)	Date	Y	Y	N/A
Date Inspection Scheduled	Date	Y	Y	N/A

Site Inspection Schedule

Business Name	Phone #	Product Name	Date Stamped "To be inspected"
Business Name	Phone #	Product Name	Date Stamped "To be inspected"
Business Name	Phone #	Product Name	Date Stamped "To be inspected"

Business Name
Location Address (where Inspection will occur)
Telephone No. – can be changed
Representative – can be changed
Container #
ID Employee
Employee Name
Date of call (by business of inspector)
Date Inspection Scheduled

Note: The telephone number and representative (from the Survey) will be displayed in the Site Inspection Schedule online form; however, it can be changed by the user, if necessary.

After the verification is complete, the inspector completes the Inspector Verification form. The Inspector Verification Form has a form and a sub form. (Note: This form will be redesigned.)

Inspector Verification Form ("Revised" Version)

Field	Data Type	Ports of Entry	Site	Commercial Market
Company Name	String	N/A	Y	Y
TRN (display)	String	N/A	Y	**N**
Address (display)	String	N/A	Y	Y
Telephone Number (display)	Number	N/A	Y	Y
List of Product/s	String	N/A	N	N
Inspector ID (display)	Number	N/A	Y	Y
Inspector Name (display)	String	N/A	Y	Y
Inspector Signature	Image	N/A	Y	Y
Representative (display)	String	N/A	Y	Y
Representative Signature	Image	N/A	Y	Y
Date (display)	Date	N/A	Y	Y

Inspector Verification Reporting Sub Form

Field	Data Type	Ports of Entry	Site	Commercial Market
Reference No.	String	N/A	Y	Y
Product Name (display)	String	N/A	Y	Y
Goods Corrected as Authorized	Boolean (Y/N)	N/A	Y	Y
Quantity Corrected(or "Quantity of Goods Actually Rehabilitated")	Number	N/A	Y	Y
Quantity approved for sale(or "Quantity of Shipment Certified for Release")	Number	N/A	Y	Y
Quantity **not** rehabilitated (or "Quantity of Goods Left to be Rehabilitated")	Number	N/A	Y	Y
Date of next verification visit	Number	N/A	Y	Y
Comments (display)	String	N/A	**N**	**N**

The Reference Number refers to the detention number.

Note: The Verification Notice of Release from Domestic Marketplace Form (REG42_F_16/**01**) is printed.

Note: The Inspector's Verification Reporting Form is *not* printed since it used only within BSJ.

3.1.2 Reports

Currently, the Compliance Department of the Bureau of Standards Jamaica creates daily, monthly, quarterly, and annual reports. Note: Daily reports will **not** be prepared by each inspector at the end of day since data will be entered into *Compliance Connect*. Digital daily reports will be available in PDF and/or Excel for review, as needed.

The following daily reports are *currently* prepared by inspector officers after product inspections (during Process 1.1 Assessment / Evaluation of Products):
- Site Daily Report (REG42_F_021/00)
- Domestic Market Daily Report (REG42_F_022/00)
- Berth 5 Daily Report (REG42_F_023/00)
- Berth 11 Daily Report (REG42_F_024/00)
- Port of Entry Daily Report (REG42_F_026/00)

The following daily report is prepared as part of the Process 7.0 Compliance Analysis:
- Follow-up Daily Report (REG42_F_025/00)

In the near future during the pilot project, a daily report will be generated by *Compliance Connect* to replace the multiple reports listed above, as required, since data will be stored while (or soon after) inspection is done. As soon as the automated monthly reporting has been created in *Compliance Connect*, **daily reports will no longer be necessary**.

Currently and in the future, the monthly reports will include the following information for the executive summary:
- Monthly Earnings for Compliance Department and Percentage (%) of Division Earnings
- Percentage (%) performance over/under target re # of inspections at ports of entry
- Percentage (%) performance over/under target re number of inspections at domestic marketplace
- Percentage (%) of Compliance of products at Ports of Entry
- Percentage (%) of Compliance of products at domestic marketplace

The following information is required for Ports of Entry:
- Number of inspections scheduled at ports of entry
- Number of inspection visits at ports of entry
- Number of consignments inspected at ports of entry
- Number of units inspected at ports of entry*(NEW)*

- Bar chart of last three (3) months at ports of entry
  showing "visits made" vs. "consignments inspected"
- Pie chart of Compliance of Imported Products
  - Consignments inspected without detention,
  - Consignments detained for conformance testing,
  - Consignments detained for label breaches, and
  - Consignment detained for both label breaches and conformance testing

- Summary of Non-Compliance of Imported Products
  - Consignments detained for conformance testing
    - Number of consignments detained for conformance testing
    - Types of nonconformance
    - Product Type
    - Performance tests (Result / Awaiting Test Result)
    - Laboratory analyses
  - Consignments detained for labeling breach
    - Number of consignments detained for labeling breach
    - Types of nonconformance
    - Product Type
    - Rehabilitation status
      (Still under detention/ To be rehabilitated/ Released)
    - Result of labeling assessments
  - Consignments for inadequate labeling and conformance testing
    - Number of consignments detained for conformance testing
    - Types of nonconformance
    - Product Type
    - Performance tests (Result / Awaiting Test Result)
    - Laboratory analyses
    - Result of labeling assessments
    - Rehabilitation status
      (Still under detention/ To be rehabilitated/ Released)
  - Summary of Enforcement actions taken for non-conforming consignments
- Summary of Products Sampled from Ports of Entry
  due to non-conformance and for investigative purposes
  - Type of Product Sampled
  - Reason for Sampling (New Product, Fail Previous Test, Investigation)
  - Results of Laboratory Analyses
- Summary of Products Sampled from Premises of Importers (Site)
  due to non-conformance and for investigative purposes
  - Type of Product Sampled
  - Reason for Sampling
  - Results of Laboratory Analyses

- Summary of Milk Powder Permits
  - Company
  - Number of Applications per Product

The following information is required for the Domestic Marketplace and Premises of Importers:
- Number of inspections scheduled at domestic marketplace
- Number of establishment visits at domestic marketplace

- Number of product types inspected at domestic marketplace *(NEW)*
- Number of units inspected at domestic marketplace*(NEW)*

- Bar chart of last three (3) months at domestic marketplace showing "visits made" vs. "products inspected"
- Bar chart of Compliance Level of Products Inspected at Domestic Marketplace
  - Products inspected
  - Products withdrawn
- Summary of Non-compliance of Products Inspected
  - Type of Product
  - Reason for Withdrawal
- Summary of Samples Collected from the Domestic Marketplace
  - Type of Product Sampled
  - Reason for Sampling
  - Results of Laboratory Analyses
- Summary of Establishments Visited to Investigate Complaints
  - Location
  - Nature of Complaints
  - Action Taken
  - Result of Investigation

The following general reports are also expected:
- List of Importers(including AEOs) persistently non-compliant *(required)*
- List of Companies in the Domestic Marketplace persistently non-compliant *(required)*
- List of Countries persistently non-compliant – place manufactured & shipped*(required)*
- List of compliance level for all products per brand with compulsory standards *(required)*

- Average turnaround time for testing/ verification per product type *(required)*
- Average turnaround time from detention to conclusion of case for products with labeling non-conformance*(required)*
- Average turnaround time from detention to conclusion of case for products that fail laboratory tests *(required)*
- Levels of Compliance per Region / Parish *(required)*
- Regional Reports: Earnings, Percentage performance, number of visits, number of products and consignments inspected, number of samples collected, complaints and follow-up investigations

- % of products *sampled for investigation* at Ports of Entry/ Domestic Marketplace (NEW)
  - Result of Investigation
    - Product Type
    - Performance tests (Result / Awaiting Test Result)
    - Laboratory analyses
    - Result of labeling assessments

- - Products detained/withdrawn after conformance testing
    - Number of products detained/withdrawn due to test results
    - Types of nonconformance
  - Products detained/withdrawn after labeling assessments
    - Number of consignments detained/withdrawn due to labeling breach
    - Types of nonconformance
    - Product Type
    - Rehabilitation status
      (Still under detention/ To be rehabilitated/ Released)
  - Products detained /withdrawn due to inadequate labeling & test results

- Follow-Up to Companies issued warnings, e.g. incorrect labeling on store shelves
- Result of Market Surveys (i.e. systematic investigation of risky / hazardous product)
- Number of steps taken per month to effectively manage possibly unsafe products (detention, testing, and destruction)
- Results of Investigations about Customer Complaints and other allegations
  – not urgent
- Percentage (%) of containers inspected compared to number of containers in Customs each month [This will be possible *only* if data is accessible from Customs.]**– not urgent**

3.1.3 Queries

The following queries will be possible using BSJ software:

- Documents due to be inspected at a particular port of entry (based on the data entered in the General Survey Form)
- Tracking of specific Job/s from detention on ports of entry to rehabilitation
- Tracking of specific Job/s from withdrawal from domestic marketplace to rehabilitation
- Products tested by BSJ – query by Model # or Brand
- List of approved products – query by type of product or all products
- List of registered importers / manufacturers – query by region or type of product
- Countries most non-compliant (with list of most common type of products imported to Jamaica) - specified start date to end date
- Importers most non-compliant - specified start date to end date
- Products most non-compliant - specified start date to end date
- # of visits during specific period (specified start date to end date)
- # of consignments/ products inspected (specified start date to end date)
- Level of compliance of product (specified start date to end date)
- Level of compliance of Importer (specified start date to end date)
- List of Retail Establishments, Address, Last Visit, Outcome for specified Parish or time period
- List of Sites (Warehouses), Address, Last Visit, Outcome for specified Parish or time period
- # of inspections and visits per inspector (specified start date to end date)
- Bar chart with patterns of detentions and withdrawals per inspector (for last x months)
- Seasonal Pattern in Product Type imported for specific start date to end date– Product Types most commonly imported for upcoming season (e.g. fans common in summer)
- Detentions most common per season/ month/ time period
- Information on specific container/s that have products with compulsory standards
    - Container #
    - Bill of laden
    - Date/Time of arrival
    - Name of ship (vessel)
    - Port of entry
    - Date/time released from port
- Identify Job Number for a particular Invoice No.

3.1.4 Message Alerts

There are two types of message alerts for the Compliance Department: email messages and pop-up messages in *Compliance Connect*. The following message alerts are required:

- Scrolling lists and email notification to Inspectors of hazardous products to detain / withdraw, based on recent product recalls globally
- Email notification and pop-ups in *Compliance Connect* when document/s are to be signed after payments are made to clear goods detained for breaches
- After client has paid and 5 minutes has elapse without release completion, then a email should be sent to 2nd person in hierarchy at Compliance Department
- After client has paid and 10 minutes has elapse without release completion, then a email should be sent to 3rd person in hierarchy at Compliance Department
- When an importer has three (3) breaches for the same product, a pop-up message will automatically appear in *Compliance Connect* to the inspector/s that the product *must* be re-exported.
- Email notification to Director, Manager and Team Leader of importer/s and companies in the domestic marketplace that regularly breach standards
- Email Notification to Team Leader / Manager about companies whose documents are stamped at one stop shop who do not call for site inspection after two (2) days
- Email Notification to Inspector when testing of sampling should be complete (to follow-up status of lab report/s)
- Email Notification to Inspector 30 days after sample collected (Reminder to call Importer/ Company in Domestic Marketplace from which sample was taken)
- Email notification and pop-ups in *Compliance Connect* to inspector assigned to each port when documents are to be inspected at that port of entry (possible if the weekly schedule for inspectors are to be entered on the system)
- Email Notification to Inspector re 30 day limit by law for Detentions
- Email notification each month to all inspectors in Compliance Department (and simultaneously to all BSJ managers) about new gazetted standards

The following message alerts are desirable:

- Email Notification to Inspector when testing of sampling is recorded as complete in Job Management Tracking System (to follow-up status of lab report/s)
- Notification by email and pop-ups in *Compliance Connect* of new and/or revised national standards to *all personnel in the Regulatory Division*.
- Flag to detain or sample products when checklist not matching BSJ standards **[in future]**

3.2 System Quality Requirements

This section specifies the required system quality factors that are not related to the specific functional requirements described in Section 3.1.

3.2.1 Accessibility

This subsection specifies the following requirements associated with the degree to which the system must be accessible to people with disabilities:

- ACC-1) Any graphical user interfaces shall be usable by persons with color blindness.
- ACC-2) Any graphical user interfaces shall use an adequate font size to be usable by persons with limited visual acuity. *TBD – to be determined*

3.2.2 Audibility

This subsection specifies the following requirements associated with the degree to which the system must support independent auditing of its transactions and finances:

- AUD-1) The system shall maintain a record for 1 year of each payment. TBD
- AUD-2) The system shall maintain a record for 1 year of each detention. TBD
- AUD-3) The system shall maintain a record for 1 year of each sample. TBD
- AUD-4) The system shall maintain a record for 1 year of each user inquiry and response. TBD

3.2.3 Correctness

This subsection specifies the following requirements concerning the degree to which the system can contain defects and still be acceptable to the customer.

3.2.3.1 Latent Defects

This subsection specifies the following requirements concerning the maximum number of allowable latent defects in released work products.

- COR-1) The maximum number of latent bugs per unit of software shall not exceed TBD for any release.
- COR-2) The maximum total number of known latent bugs shall not exceed:
  Minor = TBD.
  Significant = TBD.
  Critical = TBD.
  [Note: Critical defects prevent the use of essential system capabilities and have no way to work-around. Significant defects do have work-around. Minor defects are merely inconvenient or annoying to the user.]
- COR-3) The maximum number of tests that can fail when the system is shipped shall not exceed TBD.

3.2.3.2 Accuracy

This subsection specifies the following requirements concerning the degree of correctness of the system's outputs:

- COR-4) Values of money shall be correct to the nearest cent.

- COR-5) Values of time shall be correct to the nearest minute.

3.2.3.3 Precision
This subsection specifies the following requirements concerning the resolution of the system's numerical outputs:
- COR-6) Values of money shall be precise to the nearest cent.
- COR-7) Values of time shall be precise to the nearest minute.

3.2.3.4 Timeliness
This subsection specifies the following requirements concerning the degree to which the system must ensure that its persistent information is current (i.e., up-to-date):
- COR-8) When one user updates some data, the system shall ensure that other users shall automatically see the update within 2 seconds.
- COR-9) The system shall not return requested information to an external that is more than one second obsolete.
- COR-10) The system shall automatically transfer "old" information from on-line storage to off-line archives after **TBD** days.
- COR-11) The system shall permanently delete "obsolete" information from all storage after **TBD** days.

3.2.4 Installation
This subsection specifies the following usability requirements associated with the ease with which the system can be installed.
- INS-1) The typical user shall not average more than 5 minutes to install or upgrade any required CC software on the tablet or the personal computer used at work.
- INS-2) The user and employee shall be clearly informed about all system requirements for successfully installing any CC software (e.g., required browser, operating system, memory, etc.).
- INS-3) It shall not average more than 5 minutes to install or upgrade the software on employee's personal computers.
- INS-4) It shall not average more than 10 minutes to install or upgrade the software.

3.2.5 Maintainability
This subsection specifies the following requirements associated with the ease with which the system can be maintained:
- M-1) The system shall permit the swapping and upgrade of hardware without down time.
- M-2) The system shall permit the upgrade of software without down time.
- M-3) The Mean Time To Fix (MTTF) shall not exceed one person day.

3.2.6 Operational Availability
This subsection specifies the following requirements associated with the percent of time that the system must function correctly.

- OA-1) By release 0, the system shall provide actors with a minimum operational availability of 90%.
- OA-2) By release 1, the system shall provide actors with a minimum operational availability of 99%.
- OA-3) By release 2, the system shall provide users a minimum operational of 99.9%.
- OA-4) By release 3, the system shall provide actors a minimum operational availability of 99.99%.

3.2.7 Portability
This subsection specifies the following requirements associated with the ease with which the system can be moved from one environment (e.g., hardware, operating system) to another. The system shall enable users to use the following environments (e.g., platform and operating system) to interact with the system:
- User Computer:
    - POR-1) Tablet with minimum of XXX chip, XXX RAM, and network connection (TBA)
    - POR-2) PC with minimum of XXX chip, XXX RAM, and network connection (TBA)
- Operating Systems: TBD

3.2.8 Reliability
This subsection specifies the following requirements associated with the reliability (e.g., mean time between failures, number of failures per unit time) of the system.
- REL-1) The mean time between failures (MTBF) shall exceed 3 months.

3.2.9 Reusability
This subsection specifies the following requirements associated with the degree to which the system can be used for purposes other than originally intended (e.g., as part of other applications).
- REU-1) The system shall incorporate a database continuous availability layer.
- REU-2) The system shall reuse common classes such as name, address, telephone number, and currency.
- REU-3) The system shall reuse software for sending emails.

3.2.10 Robustness
This subsection specifies the following requirements associated with the degree to which the system continues to properly function under abnormal circumstances.
- ROB-1) The system should gracefully handle invalid input (i.e., detect invalid input, request valid input, and not crash) from all externals:
    * The human actors.
    * The Authorization Processor Gateway.
- ROB-2) The system should gracefully handle hardware failures (i.e. provide hot failover, notify the system operator, and not crash).

3.2.11 Security Requirements

This subsection documents the security requirements that specify the extent to which the system shall protect itself and its sensitive data and communications from accidental, malicious, or unauthorized access, use, modification, destruction, or disclosure.

3.2.11.1 Identification Requirements

This subsection documents the identification requirements that specify the extent to which the system shall identify its externals (e.g., human users and external applications) before interacting with them:

- **Inspector** – A minimum of 99.999% of the time, the system shall identify the inspector before permitting him or her to perform the following tasks:
  Inspect Products
  Sample Products
  Detain Products
  Withdraw Products
  Issue Technical Service Requests
  Issue Destruction, Condemnation or Seizure

- **Compliance Manager/ Senior Inspector** – A minimum of 99.99% of the time, the system shall identify the manager before permitting him or her to perform the following tasks:
  Issue Release Request (after detention)
  All tasks performed by Inspector

- **Clerical Officer / Customer Service Agents** – A minimum of 99.% of the time, the system shall identify the clerical officer before permitting him or her to perform the following tasks:
  Enter entry document information
  Enter Payment details (replicates information in Finance software package)

- **Employee** – A minimum of 99.99% of the time, the system shall identify the employee before permitting him or her to perform the following tasks:
  Enter details about Site Inspections

3.2.11.2 Authentication Requirements

This subsection documents the authentication requirements that specify the extent to which the system shall verify the identity of its externals (e.g., human users and external applications) before interacting with them:

   As above in 3.2.11.1

3.2.11.3 Authorization Requirements

This subsection documents the authorization requirements that specify the access and usage privileges of authenticated users and client applications:

As above in 3.2.11.1

3.2.11.4 Immunity Requirements

This subsection documents the immunity requirements that specify the extent to which the system shall protect itself from infection by unauthorized harmful programs (e.g., computer viruses, worms, and Trojan horses):

- **Scanning** – The system shall scan all entered or downloaded data and software against the published definitions of known computer viruses, worms, Trojan horses, and other similar harmful programs.
- **Disinfection** – If possible, the system shall disinfect any data or software found to contain such a harmful program.
- **Prevention** – The system shall delete the infected file if it cannot disinfect the infected data or software.
- **Current Definitions** – The system shall daily update its list of published definitions of known harmful programs.
- **Notification** – The system shall notify a member of the security team if it detects a harmful program during a scan.

3.2.11.5 Integrity Requirements

This subsection documents the integrity requirements that specify the extent to which the system shall protect its data and communications from intentional corruption via unauthorized creation, modification, or deletion:

- **Communications** – The system shall protect a minimum of 99.999% of its communications from unauthorized intentional corruption during transit including communications with the:
  - Inspectors
  - Compliance Managers / Senior Inspectors
  - Clerical Officers
  - Employees
  - Accountants
  - Authorization Processing Gateway (for Credit Card Authorizations)
- **Persistent Data** – The system shall protect a minimum of 99.999% of its persistent data from unauthorized intentional corruption including:
  - Survey Information
  - Account Information
  - Transaction Information
  - Security Information
  - User Inquiry Information

3.2.11.6 Intrusion Detection Requirements

This subsection documents the intrusion-detection requirements that specify the extent to which the system shall detect attempted access or modification by unauthorized individuals or programs:

- **Repeated Authentication Failure** – A minimum of 99.99% of the time, the system shall notify the security officer within one minute if it cannot successfully verify the identity of any actor in less than four attempts within any one-hour period.
- **Authorization Failure** – A minimum of 99.99% of the time, the system shall notify the security officer within one minute if any actor attempts to perform a use case for which it is unauthorized.

3.2.11.7 Nonrepudiation Requirements

This subsection documents the nonrepudiation requirements that specify the extent to which the system shall prevent a party to one of its interactions (e.g., message, transaction) from denying having participated in all or part of the interaction:

- **TBD**

3.2.11.8 Privacy Requirements

The privacy goal of the system is to ensure the confidentiality of all information entrusted to it, whether stored or communicated, except for such information that an operational requirement explicitly makes public.

The following privacy requirements specify the extent to which the system shall support anonymity and keep its confidential data and communications private from unauthorized individuals and programs.

User Privacy – A minimum of 99.999% of the time, the system shall restrict access as indicated to the following confidential user information, whether communicated or stored:

- Credit Card Information (restricted to the user, accountants, and user support agents):
- The credit card number (employees may only see the last 4 digits)
- The credit card expiration date
- The name on the credit card

Financial Information (restricted to accountants, clerical officers and customer service agents):

- Account Balance
- Past Due Amount
- Password Information (restricted to the user and user support agents):
- Password
- Password Confirmation
- Postal Address (restricted to the user and user support agents):
- Street Address
- City
- State

- Zip Code
- Telephone Number (restricted to the user and user support agents)

3.2.11.9 Security Auditing Requirements
This subsection specifies the following privacy requirements:
- TBD

3.2.11.10 Survivability Requirements
This subsection specifies the following privacy requirements:
- TBD

3.2.11.11 Physical Protection Requirements
This subsection specifies the following privacy requirements:
- TBD

3.2.11.12 System Maintenance Security Requirements
This subsection specifies the following system-maintenance requirements:
- SEC-20) The system shall ensure that authorized modifications during maintenance will not inadvertently allow unauthorized individuals access to the system.

3.2.12 Testability
This subsection specifies the following requirements associated with the ease with which the system can be tested.
- TST-1) TBD

3.2.13 Usability
This subsection specifies the following requirements associated with the ease with which the system can be used.
The application shall enable at least 90% of a statistically valid sample of representative novice users to:

- Record survey within **10** minutes.
- Record a sample to be taken within **2** minutes.
- Record a detention within **2** minutes.
- Record a withdrawal within **2** minutes.

4 System Constraints

The system constraints include hardware, software and legal constraints.

4.1 Hardware Constraints
TBD (To be decided)

4.2 Software Constraints
TBD (To be decided)

4.3 Legal and Regulatory Constraints
Bureau of Standards Jamaica (BSJ) are guided by several acts in law:
- Standards Acts (1968)
- Weights and Measures Acts (1976)
- Processed Food Act (1959)

Other acts are also relevant to BSJ include:
- Petroleum Quality and Control Act (1990)
- Road Traffic Act – Protective Devices Regulations (1999)
- Customs Act (Prohibition and Inspection of Goods) Order (1991)

Declaration of Acceptance

I have reviewed the document and accepted the provisions and recommendations as stated in the document" Version 1 User Requirements Compliance Department.

_____ ____2013-09-26_____

Orine Henry Blair, Director, Regulatory Division   Date

_____ ____2013-09-26____

Desmond Bennett, Software Engineer   Date

Appendices

5.1 Glossary of Terms

Business Process

A business process is a set of logically related tasks performed to achieve a defined business outcome.

Business Process Redesign

Business Process Redesign (BPR) is "the analysis and design of workflows and processes within and between organizations" (Davenport & Short 1990). Teng et al. (1994) define BPR as "*the critical analysis and radical redesign of existing business processes to achieve breakthrough improvements in performance measures.*"
http://www.kmbook.com/bpr.htm
Davenport & Short (1990) argue that BPR requires taking a broader view of both IT and business activity, and of the relationships between them. IT should be viewed as more than an automating or mechanizing force: to fundamentally reshape the way business is done.*IT capabilities should support business processes, and business processes should be reviewed in terms of the capabilities IT can provide.*

Data Mining

Data mining is about processing data and identifying patterns and trends.

Enterprise System

Enterprise systems are software applications that have cross-organizational capabilities as opposed to specific to a single department or group. They allow for coordination and communication across the organization through collection of data, accessible by multiple divisions. It is noteworthy that an enterprise system is one which will have a major impact on an organization whether it fails *or* works.
The ideal enterprise system could control all major business processes in real time via single software architecture. The scope of enterprise software is expanding to include external stakeholders such as clients, suppliers and business partners.

Form

An online form is an interface that allows a user to enter data. A form may permit the user to retrieve or modify data.

Integrated Database

An integrated database can be defined in two ways: (i) database Integration in a Multi database System, where there is Access to a heterogeneous distributed collection of databases which can be simplified by providing users with a logically integrated interface or global view, or (ii) several separate software programs connected to a central database system.

Middleware

Middleware has two separate but related meanings. One is software that enables two separate programs to interact with each other. Another is a software layer inside a single application that allows different aspects of the program to work together. The most common type of middleware is software that enables two separate programs to communicate and share data within the same environment or across different hardware and network environments.

Query

A query is a request for information from a database. There are three general methods for posing queries:
   o Choosing parameters from a menu: In this method, the database system presents a list of parameters from which you can choose. This is perhaps the easiest way to pose a query because the menus guide you, but it is also the least flexible.
   o Query by example (QBE): In this method, the system presents a blank record and lets you specify the fields and values that define the query.
   o Query language: Many database systems require you to make requests for information in the form of a stylized query that must be written in a special *query language*. This is the most complex method because it forces you to learn a specialized language, but it is also the most powerful.

Report

A report from a database presents information retrieved from a table or query in a preformatted, attractive manner.

Tablet Computers

For the purposes of this document, a tablet computer is a 9"-10" touchscreen tablet form factor device with wireless connectivity to network systems; a keyboard is recommended for long periods of data entry.

5.2 Review of Policies and Procedures

Some policies approved in 2007 *may be obsolete or withdrawn*; this is being reconciled by the Regulatory Division. Based on the current master list July 2013, there is one new procedure, *Approving Imported Milk Powder* (REG42_P_04/00). There is also another procedure that is newly documented, *Destruction and Disposal Goods* (REG42_P_03/00).

The BSJ policies (and procedures) presented and approved by the Standards Council in Volume 3a Inspectorate (2007-01-29) include items related to the Ports of Entry:

- Inspection of Imported Goods (BSJ-ST03a/03)   (updated as REG42_P_02/00)
- Rice Inspection (BSJ-ST03a/04)   (updated as REG42_P_01/00)
- Acquiring, Recording and Routing of Samples (BSJ-ST03a/05)   (now REG42_P_05/00)
- Recording Samples in the Sample Receival Register (BSJ-ST03a/06)(now REG42_P_05/00)
- *Handling Labeling Violations*(BSJ-ST03a/07)   [to be updated]
- Requesting Detention of Goods at Ports of Entry (BSJ-ST03a/08)   (now REG42_P_02/00)
- Handling Detained Goods and Rehabilitation Applications (BSJ-ST03a/09)
                                                            (now REG42_P_02/00)
- Documenting Information Related to Detaining and **Releasing Goods** (BSJ-ST03a/10)
                                                            [to be updated]
- **Handling of Appeals** (BSJ-ST03a/12)   [to be updated]

The BSJ policies (and procedures) presented and approved by the Standards Council in Volume 3a Inspectorate (2007-01-29) include items related to the Domestic Marketplace:

- Conducting Market Surveys (BSJ-ST03a/13)   (now REG42_P_06/00)
- Issuing Detention Notice – Domestic Marketplace (BSJ-ST03a/14)   (now REG42_P_07/00)
- **Issuing Condemnation Notices – Domestic Marketplace** (BSJ-ST03a/15)   [to be updated]
- **Issuing Seizure Notices – Domestic Marketplace** (BSJ-ST03a/16)   [to be updated]

The remaining approved policies and procedures in Volume 3a are generic (e.g. "Implementing the Quality Policy" or "Handling of Investigations of Products, Processes and Practices (BSJ-ST03a/11) or related to the other two departments in the Regulatory Division: Food Inspectorate and Legal Metrology.

5.3 Products Inspected by Compliance Department

Product categories that are inspected are categorized into Prepackaged goods, Construction goods, Appliance and Safety, Textile and Footwear, Foods (and Drinks), Household Utensils, as well as Sports and Games.

Prepackaged Goods

Sample Listing of Pre-Packaged Items
- Bathroom accessories
- Batteries
- Bleaches
- Calculators
- Cameras
- Candles
- Cassettes (including music and video)
- Cigarettes, cigars and lighters
- Cleaning pads
- Clocks
- Compact discs (including music and video)
- Computer accessories
- Cookware (including glassware)
- Crayons and markers
- CKD furniture
- Diapers
- Dyes
- Film
- Garden hoses
- Hand dishwashing detergent
- Household and automotive cleaning chemicals
- Disinfectants
- Laundry detergents (liquid and powder)
- Matches
- Paper products
- Pet food
- Polishes and waxes
- QAC based aromatic disinfectant
- Sanitary ware – cups, spoons, plates
- Sanitizers
- Sealants
- Stationary items (including paper)
- Toilet paper
- Toys
- Watches

Construction Goods

Sample Listing of Construction Goods Items

- Adhesives (example, Mastic cements)
- Aluminum fittings
- Anchor bolts
- Bathroom accessories
- Carbon steel bars
- Caulk
- Caulking gun
- Caution tape
- Cement
- Cement binder
- Cement degreaser
- Chisels
- Circular saw blades
- Door locks/dead bolts
- Drill bits
- Faucet fittings and parts
- Faucets
- Flex lines
- Grinding discs
- Grout
- Gypsum
- Hand tools
- Hoses
- Joint compound
- Joint tape
- Latches
- Masking tape
- Measuring tape
- Mixers
- Moulding
- Paint brushes
- Paint rollers
- Paint sponge
- Paint trays
- Painters tape
- Paints
- Plywood
- Portable electric tools
- (Welding plants, drills, saws etc.)
- Portland cement
- Putty
- PvC fittings

- PVC waste and vent pipe and fittings
- Resins
- Sand paper/production paper
- Sanitary ware
- Sanitary ware fittings
- Saw blades
- Scrapers
- Shelving
- Silicone
- Slip-joint spanners
- Spirit levels
- Steel brush
- Steel nails
- Steel wool
- Taps
- Tarpaulin
- Thinners
- Thin set
- Tile adhesives
- Tile cutters (non-electrical)
- Tile sealants
- Tile spacers
- Tiles
- Varnishes
- Vertical hollow clay blocks
- Weather strips
- Welding electrodes
- Window frames
- Wood glue

Appliance and Safety Products
Sample Listing of Prepackaged Goods for Inspection
- Domestic Electrical Appliances
- Portable Electric Tools
- Christmas Tree Lights And Decorative Lighting Outfits
- Electric Toys
- Food Preparation Machines
- Incandescent And Fluorescent Lighting Fixtures
- Stereo And Television Equipment
- Computers
- Software
- Electronic Instruments
- Scientific Appliances
- Grooming Equipment

- Household Bulbs
- Water Heaters

Textile Products and Footwear
- Clothing
- Bed Coverings
- Textiles
- Towels
- Footwear
- Curtains
- Thread
- Elastic
- Trimmings
- Headwear
- Handkerchiefs
- Paper
- Paper Products
- Stationery Items
- Yarns

Foods
- Spices
- Baked Products
- Confectionery
- Dairy
- Frozen Meat
- Frozen Fish
- Dried/Salted Fish
- Processed and Preserved Foods
- Jellies and jams
- Edible oils and fats
- Coffee
- Tea
- Cocoa
- Artificial coffee
- Rice
- Tapioca and sago
- Flour
- Preparations made from cereals

Drinks
- Beer
- Ales

- Stout
- Shandy
- Carbonated Drinks
- Juices
- Bottled Water
- Wines
- Spirits
- Liqueurs
- Cordials
- Syrups

Household Utensils
- Household or kitchen utensils
- Containers
- Combs and sponges
- Brushes (except paint brushes)
- Brush-making materials
- Articles for cleaning purposes
- Steel wool
- Unworked or semi-worked glass (except glass used in building)
- Glassware, porcelain and earthenware not included in other classes

Sports and Games
- Games and playthings
- Gymnastic articles
- Sport equipment
- Sport apparel

5.4: Listing of Compulsory Standards and Technical Regulations

The Compulsory Standards in Jamaica include the following list:

- Animal Feeds
- Building and Associated Materials
- Cosmetics
- Engineering – Electrical
- Engineering – Mechanical
- Food
- Labeling
- Wines and Spirits
- Miscellaneous

A list of Technical Regulations follows the list of compulsory standards.

ANIMAL FEEDS

1. JS 117:   - Milk replacers
2. JS 118:   - Poultry rations
3. JS 119:   - Swine starter rations
4. JS 120:   - Ruminant starter rations
5. JS 71:   - Animal Feeds (general)
6. JS 278:   - Puppy rations

BUILDING & ASSOCIATED MATERIALS

1. JS 32   - Portland Cement (ordinary and rapid hardening)
2. JS 33:   - (metric)Hot rolled bars for the reinforcement of concrete
3. JS 35:   - Standard hollow concrete blocks
4. JS 112: Part 1: - Method for sampling and testing of mineral, aggregates, sand and fillers. Sampling, size, shape, and classification
5. JS 112: Part 2: - Method for sampling and testing of mineral, aggregates, sand and fillers. Physical properties
6. JS 112: Part 4: - Method for sampling and testing of mineral, aggregates, sand and fillers. Chemical properties
7. JS 124:   - Aggregates for concrete
8. JS 133:   - Ready mixed concrete
9. JS 268:   - Bituminous materials
10. JS 286:   - Aggregates for bituminous mixtures
11. JS 301:   - Blended hydraulic cements
12. JS 302:   - Chemical test methods for hydraulic cements
13. JS 303:   - Physical test methods for hydraulic cements
14. JS 304:   -Quality management requirements for manufacturers, processors and packers of cement
15. JS 320: - General purpose hydraulic cement

COSMETICS

1. JS 170: Part 2: - Water used in the preparation of cosmetics

ENGINEERING – ELECTRICAL

1. JS 20:   - Panel boards and panel board enclosures
2. JS 21:   - Electrical installations
3. JS 22:   - Lead-acid batteries of the automobile type
4. JS 92:   - Insulated flexible cords
5. JS 93:   - PVC-insulated cables for electricity supply
6. JS 94:   - PVC insulated cables (non-armored) for electrical power cord lighting
7. JS 132:   - Tungsten filament lamps for general service
8. JS 144:   Part 1:- Safety of household and similar electrical appliances. General requirements
9. JS 144:   Part 2: - Safety of household and similar electrical appliances. Particular requirements for electric irons
10. JS 144:   Part 3:- Safety of household and similar electrical appliances. Particular requirements for vacuum cleaners
11. JS 144:   Part 4:- Safety of household and similar electrical appliances. Particular requirements for washing machines.
12. JS 151:   -Wooden base blocks (for mounting electrical accessories)
13. JS 164:   - Service –entrance and branch circuit breakers
14. JS 168:   - Construction and test of electric storage-tank water heaters
15. JS 178:   - Method of test for measuring the performance of household
16. JS 195:   -Electrical appliance protectors
17. JS 216:   - Safety requirements for electric fans and regulators
18. JS 219:   - Meter mounting devices
19. JS 226 :   - The power requirement of data processing equipment
20. JS 247:   - Dry type transformers
21. JS 253:   - Ballasts for tubular fluorescent lamps
22. JS 257:   -Safety requirements for mains operated electronic and related apparatus for household and similar general use
23. JS 263:   Single-phase and three-phase distribution transformers
24. JS 283:   - The use and installation of standby and emergency power equipment

ENGINEERING - MECHANICAL

1. JS 30:   - Manhole step irons
2. JS 42:   - Manufacturing of steel wire rope slings
3. JS 25:   - Transportable gas containers
4. JS 262:   - Motor vehicle brake fluid
5. JS 31:   - Repair and rebuilding of welded steel cylinders containing liquefied petroleum gases.
6. JS 239:   - Domestic cooking appliances using kerosene
7. JS 267:   - Electronic Taximeters
8. JS 41:   - Inspection, retesting and use of transportable gas containers
9. JS 76:   - Construction of portable metal ladders
10. JS 277:   Household-cooking appliances using liquefied petroleum gases
11. JS 244 : - Pneumatic tyres for passenger cars
12. JS 269: -Pneumatic tyres for vehicles other than passenger cars
13. JS 33:   - Hot rolled steel bars for the reinforcement of concrete
14. JS 296: - Hot-dip zinc and hot-dip aluminum/zinc profile steel sheets for roofing
15. JS 322: - Transportable gas cylinders- Fully wrapped composite cylinders
16. JS 322: - Transportable gas cylinders – Periodic inspection & testing of composite gas cylinders

FOOD
Regulations
The Processed Food (Grades and Standards) Regulations, 1964

1.   Frozen foods (General requirements)
      2.   Frozen ackee and salt fish
3.   Frozen beef balls
4.   Frozen boiled rice
5.   Frozen chicken (Maryland style)
      6.   Frozen curried mutton
7.   Frozen fried plantain
8.   Frozen macaroni and mince
      9.   Frozen mackerel and banana
10.   Frozen oxtail in wine
11.   Frozen rice and peas
      12.   Frozen stew peas
13.   Frozen stew beef
14.   Frozen sweet potato mix
15.   Canned ackee
16.   Canned mango
      17.   Canned pineapple
18.   Canned tomatoes
19.   Guava cups
20.   Guava halves
      21.   Mango with rum
      22.   Pickled cucumbers
23.   Susumber
      24.   Tomatoes in skin
      25.   Jams
      26.   Jellies
27.   Canned concentrated grapefruit juice
      28.   Concentrated orange juice
29.   Canned pineapple juice
30.   Tomato juice
      31.   Tomato juice cocktail
32.   Marmalade (citrus fruits origin)
      33.   Meat products
34.   Fruit nectar
      35.   Tamarind nectar
      36.   Hot pepper sauce
      37.   Hot sauce
      38.   Canned soups
39.   Canned yams
      40.   The Processed Food (Prepared Syrups) Regulations
41.   JS 36:   - Processed foods: General requirements
      42.   JS 60:   - Grapefruit segments
 43.   JS 61:   - Coffee

44. JS 62: - Macaroni and noodle products
45. JS 74: - Mayonnaise, salad dressing and French dressing
46. JS 75: - Vinegar
47. JS 84: - Grapefruit juice
48. JS 87: - Salt
49. JS 88: - Ketchup
50. JS 91: - Orange juice
51. JS 96 - Cocoa powders and dry cocoa –sugar mixtures for direct consumption
52. JS 101: - White sugar
53. JS 102: -Brown sugar
54. JS 103: - Powdered (icing) sugar
55. JS 104: - Sugar for canning
56. JS 171: - Liquid whole milk (cow's)
57. JS 172: - Reconstituted milk
58. JS 173: - Recombined milk
59. JS 174: - Liquid low fat (half skimmed or partly skimmed)
cow's milk and liquid non-fat (skimmed) cow's milk
60. JS 215 - Jerk seasoning and jerk sauces
61. JS 261: - Jams Jellies and marmalade
62. JS 145: - Bread and rolls
63. JS 276: - Canned ackee in brine
64. JS CCS 41 - - Brewery products: beer, stout, shandy, malt
65.JS CCS 0046 - Rice specification sampling tests and analysis
66. JS CCS 52 - Grading and quality requirements of table eggs
67. JS CRS 1 - Packaged water
68. JS CRS 3 - Packaged natural coconut water
69. JS CRS 19 - Cassava bread
70. JS CRS 27 - Fruit and vegetable juices and drinks and fruit nectars
71. JS CRS 35 - Spices and sauces

LABELLING

1. **JS 1: Part 1:** - The labelling of commodities
2. JS 1: Part 2: - The labelling of footwear
3. JS 1: Part 3: -The labelling of precious metals and their alloys
4. JS 1: Part 4: - The labelling of household electrical appliances
5. JS 1: Part 6: -The labelling of panty hose
6. JS 1: Part 8: - The labelling of animal feeds
7. JS 1 : Part 9: - The labelling of toys &playthings
8. JS 1: Part 10: - The labelling of adhesives (for wood) [synthetic resin
(phenolic and aminoplastic) and polyvinyl acetate]
9. JS 1: Part 11: - The labelling of furniture
10. JS 1: Part 12: - The labelling of industrial gloves
11. JS 1: Part 13: - The labelling of phonograph records, tapes cassettes and sheet music
12. JS 1: Part 14: - The labeling of staples and nails (previously labelling
of fasteners
13. JS 1: Part 15: - The labelling of household chemicals
14. JS 1: Part 17: - The precautionary labelling of hazardous industrial

chemicals
15. JS 1: Part 18:   - The labelling of textiles
16. **JS 1: Part 20:**   -The labelling of pre-packaged goods
17. JS 1: Part 21:   - Energy labelling of appliances and products
18. JS 1: Part 22:   - The labelling of agricultural seed packages
19. JS 1: Part 23:   - The labelling of finishes
20. JS 1: Part 24:   - The labelling of fruit juices
21. JS 1: Part 25:   - The labelling of cigarette packages
22. JS 1: Part 26:   - The labelling of tissue products
23. JS 165:   - Content of warranties for goods
24. The Standards (Labelling of Processed Food) Regulations
25. JS 1: Part 27:   - The labelling of retail packages of pesticides
26. JS 1: Part 29: - The labelling of products and equipment containing or manufactured using depleting substances and/or their substitutes
27. JS 1: Part30:   −The labelling of brewery products (beer, stout, shandy, malta
28. **JS CRS 5**   - Labelling of pre-packaged foods
29. JS CRS   37   - Labelling of retail packages of aerosol insecticides

WINES AND SPIRITS
1. JS CRS 25: -   Rum
2. JS 214:   - Wines
3. JS 211:   - Liqueurs/Cordials

MISCELLANEOUS
1. JS CCS 0045: - Safety matches
2. JS 73: - Synthetic laundry detergent powder
3. JS 90: - Safety of toys and playthings
4. JS 279 – Performance packaging for the transportation of dangerous goods
5. JS 282 - General purpose disinfectant

TECHNICAL REGULATIONS
1. The Zinc Coated Roofing Sheets Control Order, 2000
2. The Trade (Plastic Furniture Control) Order, 2003
3. The Trade (Plastic Furniture Control) (Amendment) Order, 2004
4. The Trade (Wooden Furniture Control) Order, 2004
5. The Trade (Sleep Product Control) Order, 2004
6. The Trade (Household Paints Control) Order, 2004
7. The Zinc Coated and Aluminum/Zinc Coated Roofing Sheets Control Order, 2004
8. Jamaican Standard Specifications for Blended Hydraulic Cements Order, 2006
10. The Trade (Prohibition of Importation) (Used Tyres) Order, 2012
11. The Trade (Prohibition of Importation) (Used Tyres) (No. 2) Order, 2012

5.5 Recommendations

The following five (5) recommendations are suggested to the Bureau of Standards Jamaica (BSJ), based on an analysis of my sojourn: apply best practices of software development, review procedures and forms, match goals to resources realistically, address communication issues and use numbers that will assist with tracking and follow-up activities.

The following is an outline of these recommendations:
1) Apply Best Practices of Software Development to BSJ
 i. Prepare *ongoing* User Requirements
 ii. Schedule ongoing *user acceptance testing*, then *pilot testing* before project launch
 iii. After initial pilot test in Kingston, conduct a second pilot including the Regional Offices. [If necessary, let the clerical officers use *Compliance Connect* on the desktops at the regional offices, if sufficient tablets are not yet available during the test phase.]
 iv. Create and update technical documentation (including data dictionary, entity relationship diagrams) and user documentation (online help).

2) Review procedures and forms of the Compliance Department
 i. Revise procedures that will use the IS platform, e.g. *Compliance Connect*
 ii. Review all forms; Revise printed forms that should include additional fields, e.g. TRN.

3) Match goals to resources *realistically*
 i. Hire additional developer(s) or limit project scope
 ii. Add more staff, including Software Analyst (or Business Analyst)
  (Note: The Software Analyst could be the MIS Team Leader or Manager. A MIS Director is not mission-critical.)
 iii. Assign current MIS team to a higher percentage of the project, e.g. to assist with user and technical documentation
 iv. Set realistic deadlines for each phase of project
   a. Consult key members of team *before* setting deadlines
   b. Allow lead time for unexpected problems

4) Address misunderstandings and systematic lack of communication
 i. Schedule regular meetings between developer and department representatives
 ii. Create and execute communication plan. Note: communication should be *collaborative*, not only top-down, for best results.
 iii. Communicate each revision of project schedule to key stakeholders.

5) Use numbers that will assist with tracking and follow-up activities.
 i. Require TRN (Tax Registration Number) for interactions with clients, especially for the Regulatory Division
 ii. Use Job Number for *all* activities within the BSJ for tracking purposes, regardless of whether it is associated with payment.

5.6 Public Health Implications of Software Requirements Specialist

Standards ensure that products and services are safe, reliable and of good quality (http://www.iso.org/iso/home.html).A Standard is a document, established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context. Standards should be based on the consolidated results of science, technology and experience, and aimed at the promotion of optimum community benefits (ISO/IEC Guide 2:2004). An International standard is a standard that is adopted by an international standardizing/standards organization and made available to the public (ibid).

There are three (3) areas where governments are expected to take responsibility in creating standards: safety, health and environment (ISO 1992, p. 151). The Secretary General of the International Organization for Standardization (ISO) recommended in 1992 that developing countries "try to stay with the high risk category and limit their mandatory standards to those areas which are absolutely necessary" (ibid). As such, it is appropriate that the mandated standards in Jamaica affect health and safety (ISO 1992, p. 138).

Important benefits of standardization include:
- Improvement of the suitability of products, processes and services for their intended purposes,
- Prevention of barriers to trade,
- Facilitation of technological cooperation, and
- Consumer confidence that products are safe, reliable and of good quality.

According to Robert Kennedy, the consumer has fundamental rights including the right to safety, the right to be correctly informed, and the right to be heard. The application of standardization in a country protects consumers' interests, e.g. informative labeling (Verman, 1973). Note: Currently, ISO has over 19,500 standards touching almost all aspects of daily life.

The mandate of the *Bureau of Standards Jamaica* is primarily related to two national outcomes in Vision 2030: Item 1) Healthy and Stable Population, and Item 8) An Enabling Business Environment. In particular, the safety of our foods (for local consumption and export) affects both aforementioned outcomes. In Jamaica, areas of food safety include these items:
- Cyanide in Bitter Cassava (Bammy, Cassava Chips)
- Hypoglycin in Canned Ackee
- Benzoate in Syrup, Bag Juice
- Melanin in Imported Milk Products from China

Due to the high risk associated with some of the products with mandatory standards, the standard operating procedure in BSJ is to test a sample of each batch of these imported goods:
- Cement
- Reinforcing Steel beams
- Canned foods (can seam analysis)
- High risk electrical items, e.g. fans
- Stoves

Currently, Jamaica has just over 100 mandatory standards and over 300 voluntary standards. In addition, Jamaica is currently developing 68 other standards through several technical standards committees. (Most countries do not need over 19,000 standards which are considered ideal in some circles.)

It is critical that the Jamaican mandatory standards be adhered to in practice. As such, increasing the efficiency of the inspectors in the Compliance Department by the use of an integrated enterprise-wide software is expected to increase the quality and quantity of inspections conducted. The successful implementation of the User Requirements (for software programs such as *Compliance Connect* and *Job Management Tracking System*) should improve the health and safety of the Jamaican public.

References

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International Organization for Standardization (ISO) and World Bank (1992) *The Role of Standardization in Economic Development: Proceedings of an International Seminar*, Washington, D.C.

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