

<i>QMS Manual</i>	<i>Revision</i>	<i>Revision Date</i>	<i>Approval Date</i>	<i>Approved By</i>
Buffalo Inspection	Rev 1	March 20, 2018	March 23, 2018	Andrew Crawford



BUFFALO INSPECTION SERVICES

QMS

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1. Scope

The scope of this Buffalo Inspection Services Quality Management System (QMS) is designed to cover: -

1. NDT examination and inspection services in AB, BC and SK in accordance with National and Provincial Regulatory requirements.
2. The management and analysis of data derived from the inspection information acquired.
3. The acquisition and retention of appropriately qualified Personnel.
4. The consistent delivery and execution of our services to our customers

It is established to enhance customer satisfaction through its effective application, system process improvement and assurance of conformity to customer and applicable statutory and regulatory requirements.

2. Normative References

ISO 9001:2008, Quality Management Systems: Requirements.

ISO 9000:2015, Quality Management Systems: Fundamentals and Vocabulary.

American Society for Nondestructive Testing (ASNT), Recommended Practice No. SNT-TC-1A, Personnel Qualification in Nondestructive Testing, 1984 & 1992 thru 2016.

CGSB ISO 9712

ANSI/ASNT CP-189, A Standard for Qualification and Certification of Nondestructive Testing Personnel, 1991 thru 2011.

3. Terms and Definitions

ACSA: Alberta Construction Safety Association

ACCP Certification: This document establishes the requirements for the ASNT Central Certification Program (ACCP). The ACCP has been developed by ASNT to improve NDT reliability by providing standardized requirements administered by an accredited certification body.

API: American Petroleum Institute

ASME: American Society of Mechanical Engineers

ASME Codes: Section I, Section III, Section V, Section VIII, Section IX, B31.1, B31.3

ASTM: American Society for Testing and Materials AWS: American Welding Society: Section D1.1, D1.2

BCSA: British Columbia Safety Association

BIS: Buffalo Inspection Services Inc.

CAR Corrective Action Request: Any condition that could ultimately or in the course of a service, compromise an item unacceptable or indeterminate for use because it may potentially not comply with the intended outcomes. Examples of Corrective Actions include circumstances that do not fit within the procedures being executed that could ultimately render the test invalid. Equipment that is not quite

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correct for the application being applied and potentially invalidating the inspection. Corrective actions are taken as part of a continuous improvement process.

CGSB: Canadian General Standards Board. An organization within Public Works and Government Services Canada. It offers standardization products and services including standards development, product evaluation, certification and quality assessment. CGSB is a member of Canada's National Standards System and is accredited by the Standards Council of Canada (SCC) as a standards-development, certification, and registration organization. CGSB supports the government's economic, regulatory, procurement, health and safety interests.

CSA: Canadian Standards Association: Z662, Z150, and W59

CSWIP Certification: Accredited scheme – the UK government's Department of Trade and Industry has accredited CSWIP for personnel certification in accordance with ISO/IEC 17024 through the United Kingdom Accreditation Service (UKAS).

CWB: Canadian Welding Bureau

COR: Certificate of Recognition. A certificate issued by the Alberta Construction Safety Association.

Certification: The action of determining, verifying and attesting to the qualification of personnel and material, and retaining this certification in job files

Client: The party of representatives issuing a contract for providing services.

Client's Representative: Representative designated by the Client to verify that the required inspection, examination and testing has been completed.

Company: Shall generally refer to Buffalo Inspection Services (2005) Inc.

Controlled Manual: A Quality System Manual issued upon request and current at the time of issuance, and which is maintained by subsequent revisions or updating.

DCS or DMS: Document Control System or Document Management System

Disposition: A specific action implemented to resolve a given non-conformance.

Documentation: Any written information describing, defining, specifying, reporting or certifying any activity, requirement or result.

Examiner: A company employee charged with the duty of interpreting, testing, and passing upon the validity of documents dealing with Non-destructive testing.

External Non-conformance: A deficiency in equipment, parts, or services provided by suppliers to Buffalo Inspection Services, or found during inspection of a client's product.

IAEA: International Atomic Energy Agency

IMTE: Inspection, Measuring, Testing Equipment

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Inspection: The examination, measurement and testing of a product or service to determine its acceptability.

Internal Non-conformance: A deficiency in Buffalo Inspection Services' process control or system.

Job File: A file developed to encompass the required details related to an activity. The Job File is organized by client or number.

NCR: Non-conformance Report

NDE: Non-destructive Examination MT: Magnetic Particle Testing PT: Liquid Penetrant Testing UT: Ultrasonic Testing VI: Visual Inspection and various other methods for non-destructively testing materials and welds.

Non-conformance: Any condition that renders an item unacceptable or indeterminate for use because it does not comply with the Alberta Safety Codes Act and Regulations, the Owner's specifications, the design specifications of the ASME or CSA Codes or this Quality System Manual. Examples of non-conformance include physical defects, test failures, incorrect or inadequate documentation, material identification/deviations from prescribed processing, inspection, or test procedures.

PCN Certification: The PCN Scheme is an international program for the certification of competence of non-destructive testing personnel which satisfies the requirements of a number of European and international standards.

Product Non-conformance: Any service, material, equipment or item in which one or more characteristics do not conform to the requirements specified in the contract documents.

QMS: Quality Management System.

Quality Manager (QM): An employee of Buffalo Inspection Services designated by the General Manager to have the responsibility and authority to maintain a Quality System Program, with the organizational freedom to recognize quality system problems and to provide solutions to those problems.

RSO: Radiation Safety Officer

REV: Revision

Technician: Performs basic quality techniques, possibly including calibration, to track, analyse and report on materials, processes and products to ensure they meet the company's quality standards.

TSASK: Saskatchewan Technical Authority

SN or S/N: Serial Number

SNT-TC-1A (latest ASME Code Adopted Edition): Latest ASME Code accepted edition "Recommended Practice for Non-destructive Testing Personnel Qualification and Certification" published by the American Society of Non-destructive Testing. Generally used in conjunction with the CP-189 ASNT publication in creating a company administered NDT qualification system.

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SO: Safety Officer

System Non-conformance: A failure to comply with the requirements of the quality program Manual or associated documents

Uncontrolled Manual: A Quality Manual issued upon request and current at the time of issuance, but which is not maintained by subsequent revisions or updating.

VER: Version.

4. Organization overview and context (ISO Clause 4.1)

Buffalo Inspection Services is a provider of Non-Destructive Testing services to manufacturers, Oil and Gas operators, Power Generation groups and infrastructure owners within the provinces of British Columbia, Alberta and Saskatchewan. It undertakes these inspections on newly built and operating plant using various forms of NDT as required by the customer and in accordance with approved procedural elements.

Buffalo operates in accordance with Provincial regulatory requirements such as BC Safety, Alberta Boiler Safety Association (ABSA) and TSask, Saskatchewan safety association. It also adheres to code and standard requirements for the certification of its personnel.

BIS has its own approved “Written Practice” as a basis for the certification of its technicians and service providers in accordance with ASME codes and standards along with certain jurisdictional needs. It also operates using other code specific requirements and international standards in support of customer needs.

Operationally we operate within an “Order to Cash” process flow system that accommodates all organizational interactions and processes to a controlled and managed level, that is supportive of the QMS. The “Order to Cash” process flow was built after undertaking a comprehensive analysis of our business processes. A formal SWOT analysis run by an experienced moderator was carried out in advance to clearly identify our market, its makeup, competitors and Risk. This is supported by a market analysis undertaken by an independent 3rd party entity. (Link to data folder)

Using this as a basis for assessment we undertake an annual strategic plan for the company to align with the budget in support of our interested party’s interests and expectations.

To maintain market position and a reputation for Quality and continuous improvement it must have an established and certifiable Quality System.

Buffalo are committed to adhering to those elements of ISO 9001 2015 except for the following: -

- Section 8.3 of the standard “Design and Development of products and Services”

Buffalo are not a design or development organization and only provide services in support. The removal or exception to this element will have no impact on our overall QMS implementation or effectiveness.

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5. Needs and Expectations of Interested Parties (ISO Section 4.2)

Buffalo Inspection are implementing this QMS to meet the needs and expectations of all interested Parties. We have put in place systems and processes to ensure these obligations are met through Compliance, Accuracy, Consistency and Efficiency in support of continuous improvement.

These generic components of needs and expectations described below shall all be controlled through our systems and processes with the ERP's and evaluated in our Management Reviews. The risk assessment was carried out in conjunction with the Order to Cash development and our internal management review process.

<i>Who are our interested parties</i>	<i>What are their interest and needs</i>				<i>Risk Assessment elements</i>	<i>Risk</i>
	<i>Compliance</i>	<i>Accuracy</i>	<i>Consistency</i>	<i>Efficiency</i>		
Our Customers	X	X	X	X	Technician Certification, experience and reputation. Technology, continuous improvement. Regulatory compliance	Low
Our Employees	X	X	X	X	Remuneration, benefits culture, career development	Med
Partners and Suppliers		X	X		Compliance and Accuracy through audit.	Low
Our Owners	X	X	X	X	Market penetration and customer retention	Med
The regulatory Authorities	X		X		Ongoing customer audits and regulatory audits.	Med
Our Management	X	X	X	X	Management reviews, KPI's trending	Low
Society	X	X	X		Compliance, safe and socially responsible.	Low

6. The Buffalo Quality Management System Details and Objectives (ISO Section 4.3)

6.1 External Quality Objectives

The regulatory environment under which we operate requires BIS to ensure the correct application of its NDT services in accordance with its approved procedures and "Written Practices" as it is applied on our defined scopes of work in 4.0. Our internal risk analysis, KPI's and Quality controls ensure our services are supplied consistently, accurately and efficiently. (SWOT, Dashboard, internal audits, Management Review)

Customers with Quality Management System obligations will be obliged to undertake process and operational audits upon request or on a scheduled basis. Customers who manufacture or construct using ASME, CSA or other codes require a service level that adheres to their construction requirements and the regulatory environment under which they operate.

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The Quality of our services on our projects through Accuracy and Consistency, ensures we reduce our risk of failure and protect our clients and ourselves from the potential for litigation through external and internal audits

6.2 Internal Quality Objectives

Internal considerations are met by ensuring adherence to our own processes and procedures as an assurance of our need to meet customer requirements and a measure of our efficiency, this is achieved through analysis, auditing and KPI's as well as management review. The following elements are also contributory internal considerations.

- Meeting the requirements of the ISO 9001 2015 standard through continuous ISO registration.
- Building all necessary processes to ensure our services are integrated and supportive of our Enterprise systems. (Continuous improvement and analysis through dashboard and management reviews)
- The measurement of BIS Quality Performance in support of Key Performance Indicators and to prove to our clients we can manage what we measure. (KPI's, dashboards, management reviews)
- Recruiting, training and retaining our skilled personnel
- Capturing non-conformances and analyzing their causes in support of continuous improvement.
- Documenting and retaining information to validate processes are correctly implemented.
- Supporting our culture through continuous improvement in all we do.

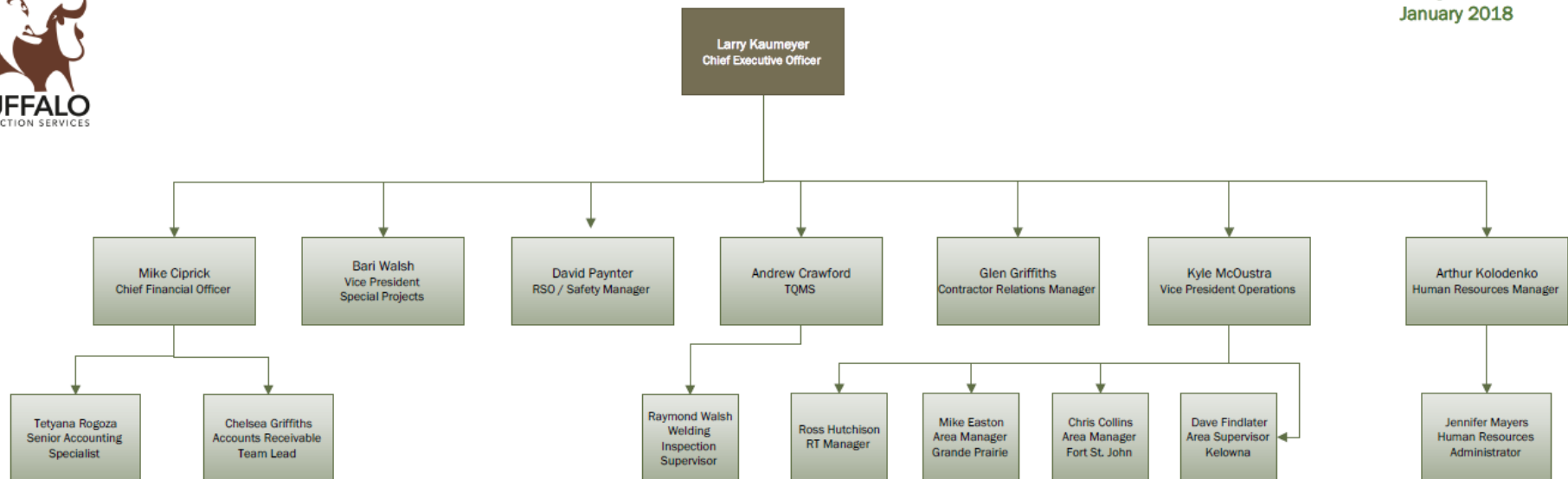
6.3 Quality Management System and Process. (ISO Clause 4.4)

The integration of individual QMS elements has been described in our Order to Cash Process flow diagram and our library of Quality Procedures and Forms that support the entire program. This is fully supported with our Enterprise program resources which are integral to the implementation

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Corporate Organizational Chart
January 2018



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7. Leadership (ISO Section 5)

7.1 General

BIS Senior Management are committed to the QMS program as a fundamental tenet of our organizations success. They have been given clear accountabilities and responsibilities with respect to its development, implementation and continuous improvement. These are outlined in the [Section 7.3](#) of this document and supported in their job descriptions. The CEO also approves the QMS in support of these commitments.

7.1.1 Leadership and Commitment (ISO Section 5.1)

BIS executive and management shall demonstrate leadership and commitment to our QMS by: -

- a) Being accountable for its effectiveness through management review meetings, resourcing and participating in QMS program elements e.g. audits.
- b) Ensuring that the Quality Policy and objectives are compatible with the strategic direction of the company through a review of annual performance and KPI elements that are relevant to their needs e.g. customer complaints and NCR's
- c) Ensuring the integration of the QMS requirements and processes into the organizations enterprise system e.g. Connex, NAV and Bison.
- d) Promoting the use of the Process approach and Risk based thinking through regular risk review meetings and quantification or analysis through Data analysis on Connex.
- e) Providing the necessary resources to maintain the QMS e.g. job descriptions and positions.
- f) Promoting the Quality Management system and its benefits through Business Development, achievement of ISO accreditation and continuous improvement in its processes.
- g) Engaging, directing and supporting persons to contribute to the effectiveness of the quality management system.

7.1.2 Customer Focus (ISO Section 5.1.2)

BIS Managements commitment to customer focus is through ensuring the customers applicable statutory and regulatory requirements are understood and consistently met. This is fully supported through appropriate training, task reviews and equipment provision to ensure accuracy, consistency and efficiency. Following up on a regular basis with our customers to ensure satisfactory levels of service have been maintained and documented through CRM D-base or personal calls.

7.2 Quality Policy (ISO Section 5.2)

7.2.1 General

BIS Executive management have established a Quality Policy intended to meet the requirements of our Customer focus, technical competency and continuous improvement. The Policy shall be reviewed annually in support of our ISO renewal. This document shall be promoted in all our technical procedure manuals.

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BUFFALO INSPECTION QUALITY POLICY

Buffalo Inspection Services recognizes that the disciplines of Quality, Health and Safety and Environmental Management are an integral part of its management function. The Organization views these as a primary responsibility and to be the key to our overall vision, the current business plan and is consistent with good business in adopting appropriate Quality standards. Our commitment to Quality will form the basis for the "Quality Objectives" of Buffalo Inspection. It is intended that BIS will adhere to the requirements of ISO 26000 – Social Responsibility, in parallel with the commitment to our QMS.

The Organization Quality Policy calls for continuous improvement in its Quality Management activities and business will be conducted according to the following principles:

We will:

- Comply with all applicable laws and regulations.
- Follow a concept of continuous improvement and make best use of our management resources in all Quality matters.
- Communicate our Quality objectives, and our performance against these objectives, throughout the Organization and to interested parties.
- Take due care to ensure that activities are safe for employees, associates, vendors and others who come into contact with our work
- Work closely with our customers and vendors to establish the highest Quality standards.
- Adopt a forward-looking view on future business decisions, which may have Quality impacts.
- Train our staff in the needs and responsibilities of Quality Management.
- Uphold our Quality expectations and standards by auditing and monitoring our team to ensure we are executing consistent with the quality understandings in place within Buffalo.

It is the aim of Buffalo Inspection Services that, with the total involvement and understanding of all staff, and through the implementation of the documented **ISO 9001:2015 Quality Management System**, we will exceed the expectations of our customers.

Buffalo Inspection Services Inc. strongly supports and is committed to a Quality Assurance Program that is accurate, effective and practical. Management is committed in providing support and the necessary resources to realize the effectiveness and success of the QA Management System. We are committed in designing, monitoring and improving the quality control process and associated programs to ensure that our Client is satisfied and that all work is completed safely, professionally, and accurately.

Larry Kaumeyer
Chief Executive Officer

January 10, 2018

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7.2.2 Communicating the quality policy (ISO Section 5.2.2)

BIS personnel assigned functional responsibilities shall be oriented on the QMS and their responsibilities within it at time of onboarding; they shall understand through this orientation how they contribute to the achievement of the company’s quality objectives.

Regular Lunch and Learn sessions shall also be put in place to both educate and communicate method and intent for individual elements of the QMS. Retention of all records of orientation, qualification, education, training and/or experience shall be maintained by the Quality Manager or designate, through our ERP Connex.

BIS personnel shall be made aware of the relevance of their activities to the overall success of the QMS

7.3 Organizational roles, responsibilities and authorities (ISO Section 5.3)

The following BIS personnel are Accountable or Responsible and have the authority for ensuring that the QMS will be implemented as outlined in this manual and that the services provided by Buffalo Inspection Services are in accordance with customer requirements, codes and standards and maintain independence of process for Quality within the organization.

CEO Chief Executive Officer

The CEO will clearly establish the Quality Policy and quality strategies of BIS and will finalize responsibility and authority relating to all QMS elements, the overall integrity of the services provided by Buffalo Inspection Services its ability to meet customer requirements and the approval of policies. Independence of process in the interests of safety and quality shall be a cornerstone of the program.

CFO

The CFO shall be responsible to ensure that all order to cash fiscal requirements are fully integrated with the provision of NDT services, the invoicing is accurate and necessary quality requirements are in accordance with client needs. This shall be accomplished through delegation or KPI’s that shall be established in support of this responsibility.

VP Operations

The VP Operations shall be accountable for the implementation of the Quality Management System throughout Buffalo and all its offices and projects. This shall be accomplished through resourcing and KPI’s that shall be established in support of this responsibility. Customer Focus shall be a key element of the allocated roles responsibilities

QM Quality Manager

The (QM) Quality Manager will ensure the Quality Policy and quality strategies of BIS are fully implemented and will assume full responsibility and authority relating to the quality system.

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The QM is responsible for managing and monitoring all functions as outlined in this manual and for ensuring its continued effectiveness and compliance with quality requirements.

The QM shall be responsible for: -

- Reporting to management on the performance of the quality system with a focus on continuous improvement
- The promotion and awareness of customer requirements throughout the organization.
- The evaluation and quantification of risk as required throughout the organization
- The integration and development of processes in support of continuous improvement
- The effective implementation of processes.
- Regulatory Compliance

The QM shall report directly to the CEO on the QMS performance and recommend requirements and resources in support of a continuous improvement strategy.

Functional Managers and designates

These persons are responsible to ensure the implementation of the QMS within their designated areas of responsibility.

Radiation Safety Officer/Safety Officer or designates

The Radiation Safety Officer (RSO) and the Company Safety Officer will ensure that all work proceeds in full compliance with all relevant safety requirements.

Level 3 and SME Technical Function

The Level 3 Technical Function shall be responsible for developing and controlling the Inspection and NDT procedures in accordance with customer and regulatory requirements and relevant codes and standards. They will uphold the role of Subject Matter Expert for all Inspection related activities.

This person shall be the point contact for Professional Memberships and the Presentation of Technical papers for the company.

As a minimum they must hold Relevant Degrees in Material science and Technology, Post Graduate specializations in NDT, CGSB Level 3 certification in RT, UT, MT, PT as a minimum together with ACCP Level 3 certification in the same to support our ASME programs. Advanced Inspection technologies (e.g. PAUT/TOFD) will be supported with PCN or CSWIP credentials. Visual certification in API/CWB or CSWIP should also be an attribute.

A minimum of 20 years' experience is required.

8. Actions to address Risk and Opportunities (ISO Section 6.1)

Our organizational structure and purpose influences our planning requirements and center around our execution to attain customer satisfaction in the prescribed service components and address risks and opportunities as identified and presented.

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The key elements of risk in the execution of this model are related to accuracy of communication, training, documentation, equipment, tasks and acceptance criteria. One of the key purposes of a QMS is to act as a preventive tool, to mitigate execution and deployment risks we need to ensure that: -

- Requests for Services are received and actioned within a set time.
- The information provided is accurate and sufficient to allow BIS personnel to undertake the work in accordance with the codes and specifications and to the satisfaction of the customer and regulatory entities.
- Personnel are adequately certified trained and experienced.
- Accuracy in invoicing is substantiated.

This is achieved using contract terms and conditions, Dispatch instructions and confirmations of understanding on client specifications and requirements. The consequence of this is that our resource base may need to be expanded or trained and this is fulfilled by the following procedures: -

- Tender and Contract Procedure (QP001)
- Procedure for Onboarding (Onboarding QF008)

In complex situations BIS would undertake a formal Risk analysis to determine if there are unknown or unincluded risks that should be considered in the development and execution of the submission. This review would also include an evaluation of whether our QMS can be applied successfully during the project execution in support of measurement and continuous improvement opportunities.

The Buffalo Risk Matrix shall form the basis for the Qualitative analysis of Risk and shall be undertaken with the Quality Manager, the VP Operations, the functional manager and the Safety Manager as a minimum.

A SWOT analysis has been undertaken and is updated regularly as conditions change, this has been the basis of our QMS along with the Order to Cash Process developed as part of this analysis.

CAR's are subject to routine 5 Why's analysis and can be replaced with Fault Tree's and FMEA's.

The BIS Project Management group will be the coordinators of our bids and submissions and will utilize their internal systems and processes within Connex and the Dispatch function to ensure customer satisfaction and BIS quality elements are fulfilled.

9. Quality objectives and planning to achieve them. (ISO Section 6.2)

Every project or Purchase order shall be undertaken in accordance with our QMS, and our quality Policy. The weekly dashboards collate all the key performance indicators the management have mandated and regularly review. These KPI's have been determined through risk analysis and management review and consider the applicable requirements of execution and delivery. By way of example, measurement of key trends in execution, may be through statistical evaluations to establish: -

- When High volumes are achieved that might impact Quality (Connex HV Report)
- When repair rates on certain codes fall outside normal limits (Averaging and Null Hypothesis as required)

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- When change occurs that can impact quality (Risk and performance triggers)

Additionally, line management responsibilities shall undertake routine quality audits in the form of process and procedural reviews, report analysis and review and in some cases physical cross checking. In accordance with the Auditing procedure guidelines.

These actions are implemented to ensure we achieve our key objectives with the QMS as defined within our Quality Policy and our Program. All shall be documented and analyzed in support of this objective.

10. Planning of changes (ISO Section 6.3)

Change in all its forms as identified by BIS can have an impact on customer satisfaction. As such BIS have identified the following elements of change that can impact the overall quality of the service: -

- People - Any change to the contractually identified personnel, their certifications and experience and client approvals shall warrant a change action.
- Infrastructure - Any change to equipment, situation or software shall warrant a change action.
- Environment for the operation of processes - Any change to Environment e.g. temperature limitations or weather outside of anticipated conditions shall warrant a change action.
- Monitoring and measuring resources - Any change to circumstance where calibration frequency or manner of calibration shall warrant a change action.
- Resources - Where equipment, vehicles or other resources are revised in any way, this shall warrant a change action.
- Competence - Where competency elements of the project are modified or expanded in any way, this shall warrant a change action.
- Communication - Communication protocols for contract management and reporting or tracking shall be established at contract start any change to these requirements, shall warrant a change action.
- Documented Information - Approved procedures and control documents are stored within the BIS enterprise system Connex and on Bison and the "ExtraNet". All such documents are controlled. Where changes occur to any documentation or reporting requirements this shall warrant a change action.
- Processes - Any change to personnel involved with processes or elements that impact the successful implementation of a process shall warrant a change request.
- Quality - Any change to the output quality or service quality intended or agreed shall warrant a change request.

Control of Change shall be managed through the Change Management Procedure (*QP005 Change Management*). All documentation shall be stored within Bison records Dbase.

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11. QMS Support (ISO Section 7.1)

Due to the Enterprise systems under which BIS operate all communications and reporting are undertaken through Connex, Bison and / or email, as every person within BIS has a dedicated email address.

This allows a coordinated approach to Dispatch, Reporting, billing, analysis and Quality management in support of Customer satisfaction and contract requirements. A library of key procedures and Quality Forms is available to ensure consistency and data is maintained on our system.

A list of key contacts is also provided within the system to enable direct contact to be made with all responsible individuals.

12. Monitoring and Measuring resources (ISO Section 7.1.5.1)

BIS shall provide a working log of all equipment that requires calibration on a prescribed frequency. This log located within the equipment dbase of our connex system, shall be maintained by the Operations functional managers and updated as required. All calibration requirements shall be determined from this Data base and dispatched to the approved vendor for calibration. The Control of Measuring and Testing Equipment Procedure shall be applied. (*QP004 Control of Measuring and Test Equipment*)

13. Organizational knowledge (ISO Section 7.1.6)

BIS recognizes that organizational knowledge is a valuable resource that supports our quality management activities and ensures continual product and service conformity. There is a strong link between Organizational knowledge and the competence of our people, the latter being peoples' ability to apply knowledge to their work.

All processes within the BIS QMS suite shall integrate through or around Connex our ERP system. A body of knowledge on how our processes integrate shall be established through the Order to Cash process flow which identifies the key processes and how they connect the QMS to Connex or the output documentation. This along with the collective experience and skills of our functional management are the key support mechanisms for the programs implementation.

To ensure that Organizational knowledge is retained and transferred, Organizational knowledge is recorded in documented information, and is embedded in our processes, products and services. Examples of Organizational knowledge include:

1. Documented information regarding a process, product or service;
2. Previous specifications and work instructions;
3. The experience of skilled people and their processes and operations;
4. Knowledge of technologies and infrastructure relevant to our Organization.

Sources of internal knowledge also include our intellectual property; knowledge gained from experience and coaching; lessons learnt from failures and successes; capturing and sharing undocumented knowledge and experience; the results of improvements in processes, products and

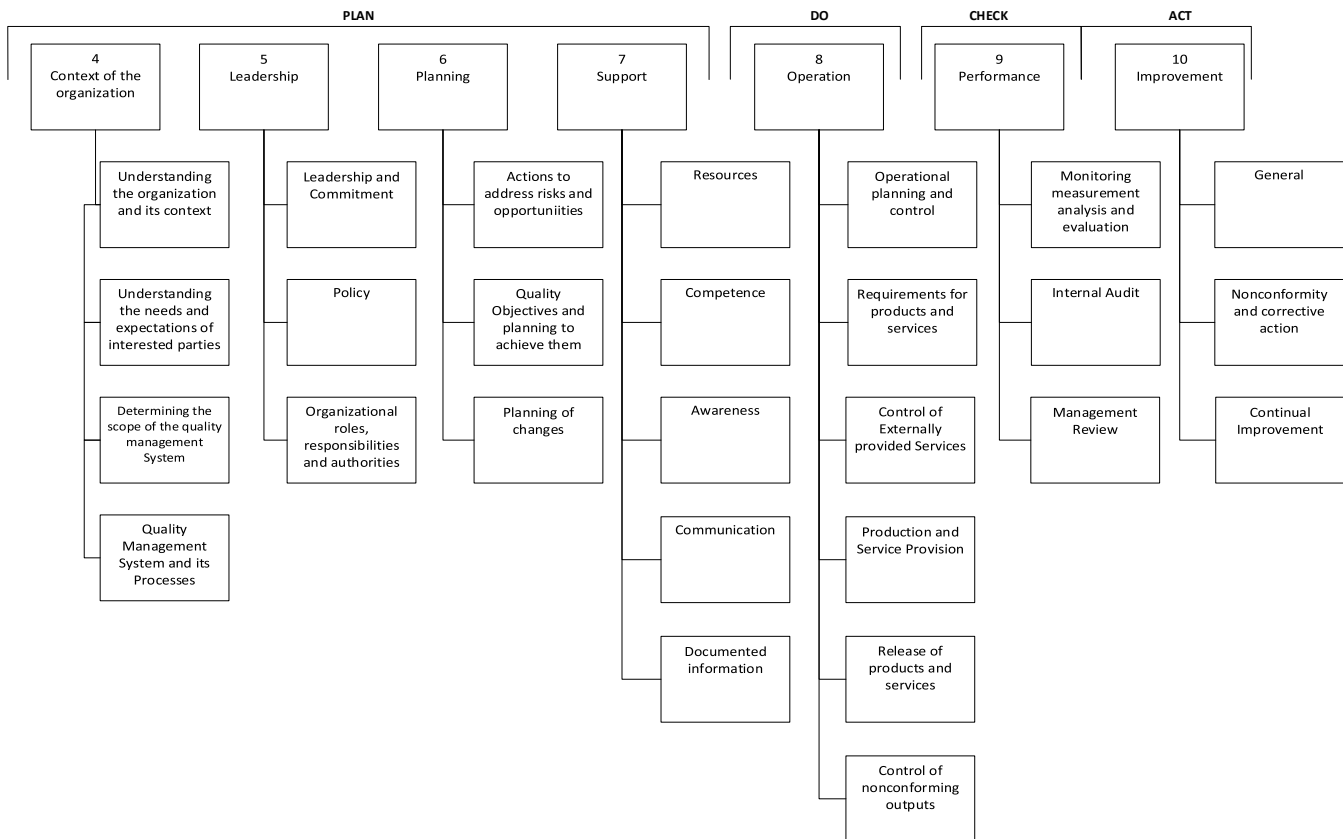
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services. This is done through procedural development and revision as required by code updates, or client requirements or lessons learned. It is included in our case studies for clients where specific problems are evaluated and resolved by recording an application format or procedure.

Sources of external knowledge often include other ISO standards; research papers; webinars from conferences; or knowledge gathered from customers, stakeholders or other external parties. Buffalo Inspection Services Ltd determines and reviews internal and external sources of knowledge, such as: -

1. Lessons learnt from non-conformities, corrective actions, and the results of improvement;
2. Gathering knowledge from customers, suppliers and partners, benchmarking against competitors;
3. Capturing knowledge existing within the Organization, e.g. through mentoring/succession planning;
4. Sharing knowledge with relevant interested parties to ensure sustainability of the Organization;
5. Acquiring knowledge through Professional development and membership of industry institutions such as ASNT, BINDT etc.
6. Knowledge from conferences, attending trade fairs, networking seminars, or other external events.

QMS Structure



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14. Training Skills and experience. (ISO Section 7.2)

BIS operate within an engineering and jurisdictional code environment so all personnel in key roles must have competencies that align with this situation.

The executive and senior management roles within BIS demand critical thinking skills that should be supported with a Tertiary education level and the necessary business experience to ensure the essential Body of Knowledge.

All technical roles shall have as a minimum CGSB (Canadian General Standards Board) credentials for the respective disciplines involved to support CSA and CWB requirements. In addition, code requirements such as API, ASME and SNT-TC-1A requirements shall be supported with the BIS Written Practice and procedures for each inspection discipline.

Additional international certifications in support of customer requirements may also be adopted e.g. PCN and CSWIP on an as required basis.

Buffalo Inspection Services Inc. shall only assign qualified personnel to perform examination and tests. All qualifications shall be documented, and shall as a minimum include the following:

- Subject Matter
- Date
- Instructor Name
- Approval of qualifications
- Supporting documentation when applicable, e.g. education, experience, or any quantified results of examination, etc.

Qualification records shall be documented and maintained in our HR records files by the Quality Manager or designate and shall be available to the customer's representative upon request. Document control records will be through Connex or the ExtraNet.

15. Control of documented information (ISO Section 7.5.3)

BIS shall utilize electronic documentation as frequently as possible and as comprehensively as possible. All documentation required by or integrated with the QMS shall be stored wherever and whenever possible in electronic form with clearly understandable nomenclature.

The principle repositories for documentation shall be Connex, Bison and the CRM Dbase. Dedicated files are allocated for key information on our servers. Inspection data in digital form such as Digitized Radiographic film and Phased Array ultrasonic scans are stored on a separate drive due to their size. These drives are maintained by the relevant functional managers and the QM as required and are backed up at least 3 times per day. This is validated on a report issued monthly by our IT service providers.

Responsibility for the structure management and updating of documentation shall reside with the relevant functional managers in Administration, Operations and Accounts; The QM shall have unlimited access to these repositories to ensure accuracy and completeness are being maintained.

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Core considerations of our Document management systems include but are not limited to: -

- Distribution, access retrieval and use (through Connex, Bison or CRM Dbase)
- Storage and preservation, including preservation of legibility (Server storage and back up)
- Control of changes (version control for procedures and control documents)
- Retention and disposition (Back up)
- Extra Net integration (to ensure client access to relevant information)
- Virus Scanning and deletion
- Continuous improvement to format and content through analysis and Management Review.

These are all designed to exceed regulatory requirements set forth in the operating codes and standards. Archival life for key data is derived from code requirements and can run from 2 years for construction data up to the life of an asset for some pipeline radiographs.

Documented information shall be controlled by: -

- Having a unique identification number or name
- A title
- A date of release
- Identification of the author

16. Control of External Documents (ISO Section 7.5.3.2)

All client documentation shall be retained electronically within the respective client files on the server. The exchange of information during the bidding and request process is all stored on BIS servers within the specific customer files. BIS server files are backed up 3 times daily

Customer complaints, NCR's or other noncommercial documents, would be stored within the respective areas of the ERP (Connex, Bison or the CRM)

17. Operational Planning and Control (ISO Section 8.1)

BIS as a service organization rely heavily on the efficient receipt of service orders and dispatch of our personnel and their respective equipment to the right place at the right time and with the correct certifications and equipment to fulfill customer requirements. *(QP001 Tender and Contract Procedure)*

The control of this process is a foundational element of our QMS and is heavily supported within our Quality management program through: -

- Dispatch and documenting all essential requirements for the work scope.
- Personnel competencies and experience
- Reporting and invoicing

NDT requests shall be documented on our NDT Request Form all NDT requests shall be documented with an NDE assignment form as well; and for RT there is a requirement that the client sign off in support of Code requirements and the accuracy of the information provided.

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Personnel orientations and training on the client specifications will be undertaken on an as required basis and the necessary reference specifications shall be placed into Bison for public access. Such specifications shall be updated as and when required.

All reports generated by the technicians appointed to undertake the work shall be reviewed on a random basis or in accordance with a specified analysis formula or filter. Any deviation from normal or expected results (repair rates or quantities inspected) shall trigger an audit by the functional manager or Level 3 or Quality Manager.

18. Communication (Internal and External) (ISO Section 8.2)

BIS shall inform all our customers and staff on the Quality Management System through our onboarding process for staff and as part of our contract kick off discussions with clients and contractors.

The control and accuracy of information in the QMS is a controlled distribution update and is managed through the Enterprise Management CRM Database. So, all our customers receive updated information at the same time and the updates are recorded within the system.

All QMS related communication shall be undertaken by the QM or designate. The Single Point of Contact with the Customer shall be established through the CRM or contract documentation and respective kick off meeting details.

Buffalo employ the following communication tools for both internal and external communications: -

- Common mailing address
- A facsimile machine
- A corporate phone line and phone directory
- Cell phones for key personnel
- Messaging functionality within the company cell phones
- Email addresses for all staff
- CRM linkage to email addresses for control and recording of client specific emails
- ExtraNet and Bison where access to external and internal clients can be given
- GPS for all field trucks to locate and communicate with as required
- Regular meetings for operations, Risk, Management and Contracts
- Conferencing facilities and technology to link distant meeting participants in.

19. Business Development / Requirements for products and services. (ISO Section 8.2.1 & 8.2.2)

BIS operate in a competitive environment and maintaining the confidence of our customers is essential to our growth. The ongoing education and introduction of new services and technology to our customer base is a fundamental element of the BIS business model.

Whenever new technology is introduced into our service offering we will ensure that all our clients are aware of the service through emails or direct visits. The amendment or updating of all procedures is also undertaken and such updates are transmitted via Connex or the Extranet to our customers. The CRM shall document all correspondence to our customer base.

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Should new customers be developed due to the introduction of new services or the competitive tendering process. The BIS CRM shall record all necessary details to ensure key information is recorded and all administrative information required for us to service and bill our client is maintained.

20. Supplier Selection and evaluation (ISO Section 8.4)

BIS are a large consumer of consumables such as RT Film and processing chemicals, MPI and Penetrant components and specialized etching and ultrasonic couplant. As a prerequisite to purchase BIS shall ensure that all product purchases are compliant with codes, regulations and customer requirements. This will be achieved through our purchasing request form.

Contractors and external office sites are also deemed to be Suppliers as they operate from a centralized QMS, Safety and ERP system and have audits undertaken upon them on a regular basis.

21. Control of production and service provision (ISO Section 8.5.1 and 8.6)

All service provision is controlled through the Dispatch process and as described in the order to cash process flow diagram. Key documents supporting this process are QF 009 NDE Request and QF009A the NDE Assignment form.

22. Property belonging to customers or external providers (ISO Section 8.5.3)

When product or test pieces are delivered to the BIS workshop for inspection or testing they shall be in a dedicated area either on a pallet or within a defined space and may have screens surrounding them if hazardous testing components are applied.

Upon completion of testing the components will be marked with visible marker to confirm they have been examined and are complete and ready for pick up. The reporting of all tests undertaken will be recorded in Connex and will be presented to the customer at pick up.

Should damage or loss occur during out control of components and NCR will be issued along with an incident report. These will be maintained as a mandatory record within the NCR files for that customer and retained on Bison.

23. Control of non-conforming outputs (ISO Section 8.7)

Non-Conformances are a key measurement tool for BIS in the effectiveness and implementation of our QMS. We have a dedicated procedure for the process and it is part of our onboarding training.

All NCR's are introduced into the system for review and action as required. BIS have a service level agreement for all NCR's of 2 weeks or less, from issuance to closure and acceptance. NCR's are tracked within a dedicated log and are a core part of the management review process.

The NCR process takes into consideration the following key elements as a minimum.

- Correction (All NCR's shall reference a process element for clarity)
- Containment or suspension of products and services (Persons or work shall halt until a compliant solution is implemented)
- Customer feedback (The customer shall always be made aware and copied on all NCR's)

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- Authorization for acceptance under concession (Unique circumstance or change shall all be authorized by the customer through a concession or other change mechanism)
- Conformance to requirements shall always be verified when non-conforming outputs are corrected.
- Documentary records

The NCR Procedure highlights the details of the BIS NCR process and how it links to our ERP systems. (QP006 NCR and CAR Procedure)

24. Monitoring, measurement, analysis and evaluation (ISO Section 9.1)

“What is not measured cannot be Managed” is how BIS approach their Quality Performance evaluation. Key Performance indicators adopted for the BIS Quality Management System shall consider: -

- Service compliance and conformity (internal and external audits)
- Customer Satisfaction (Evaluation results QF008))
- QMS Performance and effectiveness (NCR’s and customer complaints)
- Planning implementation and effectiveness (ROI and financial results)

A weekly dashboard shall document all key data analysis trends for management review.

25. Customer satisfaction (ISO Section 9.1.2)

Customer Satisfaction is the core element for our QMS and encompasses measurements on: -

- Customer surveys (Phone and Survey Forms)
- Customer feedback on executed projects (Project Close out Meetings)
- Meetings with customers
- Compliments

The compilation of these results in a graphical display can offer a perspective on our overall performance which should be included as part of our management review to spot negative or positive trending.

BIS aspire to a Customer satisfaction score of 80% or better based on the scoring reconciled from QF008 Customer Survey form. Formal market surveys are undertaken on a more objective evaluation basis and are documented accordingly.

Customer complaints shall follow the CAR and NCR procedure, when verified. They shall be forwarded to the Quality Manager for consideration and processing. Depending on the nature and severity of the complaint, most can be handled at the department level; customer complaints are dealt with in accordance with *(QF007 and QP007 Customer Complaints)*

If the customer complaint has been forwarded to the Quality Manager, the Quality Manager will issue a CAR or NCR number and log it in the CAR/NCR Log. (Following the CAR and NCR procedure)

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The Quality Manager shall forward the complaint to the relevant department manager to conduct the investigation into the cause of the complaint. If the complaint is valid and a corrective action is required to correct the problem, the assigned department manager will propose a corrective action.

The NCR is then forwarded to the Quality Manager for follow up and for verifying the effectiveness of the corrective action. The Quality manager shall close the NCR once deemed the corrective action is effective.

Update the NCR log.

The results of the action taken shall be reported to the customer in line with keeping our clients informed on all quality issues where services are undertaken that did not initially conform with the supplied requirements. Action taken to resolve customer complaints may be included in the reporting of the status of corrective action which is brought to the attention of senior management during the management review of the company Quality Management System.

26. Analysis (ISO Section 9.1.3)

BIS perform analysis using regression data and risk analysis tools. We employ the Principles of the Null Hypothesis in Binomial terms to evaluate both acceptance of results from technicians and projects as well as sample size auditing on an as required basis. NCR's and Customer feedback as part of our performance evaluation shall also be part of our overall analysis suite to ensure we have the full context of our measures in support of valid and focused continuous improvement and customer satisfaction. We shall plot data to identify trends where practicable.

27. Internal Audits (ISO Section 9.2)

All personnel within BIS have an obligation and a duty to ensure the QMS is effectively implemented. Line management have the additional responsibility of physically auditing and crosschecking where applicable all BIS field and shop activities on a technical and process level.

A focus shall be placed on BIS process adherence and execution along with the allocated requirements of the internal auditing procedure. *(QP003 Internal and External Auditing)*

Internal Auditing Procedure to include Corporate elements and will be undertaken on an annual basis. (QF006, QF017, 018, 019, 020, 021, 022)

Corporate Audits by the Quality Manager shall be undertaken on an annual basis in conjunction with the functional management assessments. Corporate audits will focus on holistic elements of the QMS and technical understanding of the processes and technical elements involved. These audits shall be formally documented, and updates stored on Bison/Connex or on the CRM subject to the focus of the audit. The scheduling of audits is open, but the focus is on one audit per tech per discipline per year. The technical supervisor shall be responsible for their respective discipline audits using the templated audit sheets provided.

All audit findings shall be actioned as required and NCR's or CAR's shall be documented as a result and retained for analysis.

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28. Management Review (ISO Section 9.3)

All senior management and personnel have a responsibility to uphold our QMS and our Quality Policy as outlined in the Organizational roles and responsibilities. The integration and outcomes of these accountabilities and responsibilities is achieved through our management review process and its deliverables. (*QP002 Management Review Procedure*)

Performance and effectiveness reviews by management shall include but not be limited to: -

- Customer feedback and relevant interested parties (Surveys)
- Performance targets for Quality (KPI's)
- Process performance (audit results)
- NCR's and CAR's
- Analysis outputs as part of monitoring and measuring results
- Resourcing
- Risk and opportunity reviews for effectiveness of any actions undertaken
- Performance of external providers
- Opportunities for Improvement

Management review outputs should include as a minimum decisions and actions related to: -

- Identified opportunities for Improvement
- Changes to the QMS
- Resource needs

All management reviews shall be minuted and documented for reference.

29. Continual improvement (ISO Section 10.1 and 10.3)

BIS shall continually improve the suitability, adequacy and effectiveness of the QMS and its services through consideration of all analysis and evaluation and the outputs from management review, to determine if there are needs or opportunities that shall be addressed as part of continual improvement.

The NCR and CAR process as above are an integral component of this activity and are regularly reviewed by management as part of the overall measure of performance and continuous improvement.

The weekly dashboards constitute a continuous trending of our key performance indicators for improvement.

The financial analysis for Gross Margin monitoring and measurement are continuously reviewed to ensure efficiency and optimization on key variables.

The fundamental driver for improvement and its ongoing continuity is data collected in support of our QMS and ongoing Risk analysis. The subsequent analysis and review of it and the incremental advancement of our Quality objectives wherever and whenever possible.