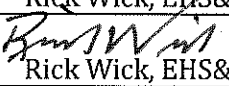
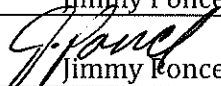


594-EHS-001

ENVIRONMENTAL, HEALTH, SAFETY and SECURITY MANUAL

Revision	Date	Approved By	QA Approval
Original	7/7/2017	Rick Wick, EHS&S Mgr.	Jimmy Ponce, GM
1	3/22/2018	 Rick Wick, EHS&S Mgr.	 Jimmy Ponce, GM

CONTROLLED

Environmental, Health, Safety and Security Manual

Table of Contents

1.0	Purpose.....	3
2.0	Scope of the EHS&S	6
3.0	Context of the Organization.....	6
4.0	Environmental Policy	6
5.0	Environmental Aspects and Impacts.....	7
6.0	Compliance Obligations	7
7.0	Environmental Management Program.....	7
8.0	Resources, Competence, Awareness, Roles and Responsibilities	8
9.0	Communication.....	9
10.0	Documentation.....	9
11.0	Operational Control	10
12.0	Emergency Preparedness and Response	10
13.0	Monitoring, Measurement, Analysis and Evaluation.....	10
14.0	Nonconformance, Corrective and Preventive Action.....	11
15.0	EHS&S Audit.....	11
16.0	Management Review	11
17.0	Continual Improvement.....	11
	Appendix 1-Stakeholder Registry.....	12
	Appendix 2-List of Operations Within the EHS&S Boundry	13
	Appendix 3-Environmental Policy	14
	Appendix 4-List of EHS&S Roles and Responsibilities	15
	Appendix 5-Master EHS&S Document Index	16
	Appendix 6-Operational Control Procedure Registry	18
	Appendix 7-Internal and External Issues Relevant to the Context of the Organization.....	22
	Appendix 8-Risk Matrix.....	23
	Appendix 9-Risk Register- Risk and Impact.....	24
	Appendix 10-Risk Register- Opportunities.....	25

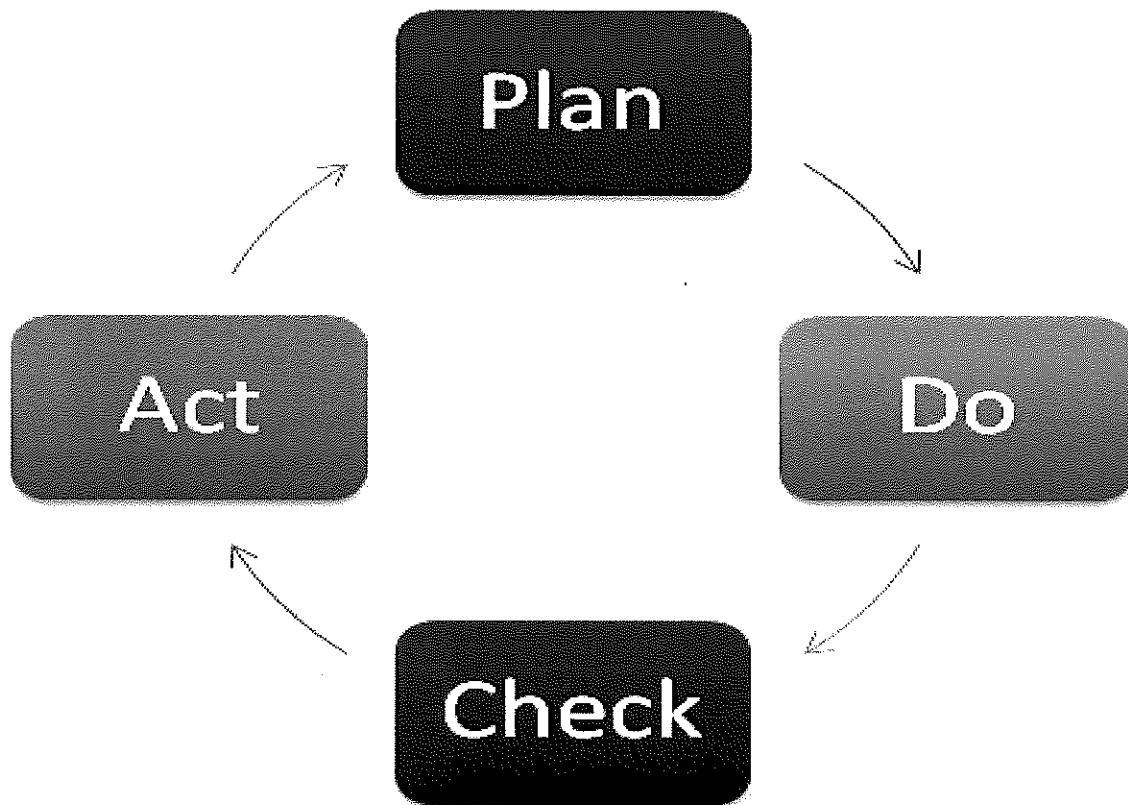
Environmental, Health, Safety and Security Manual

1.0 Purpose

- 1.1 Mistras Services has implemented an environmental safety and health management system (EHS&S) based on the ISO 14001:2015 standard and the underlying principles as a way of demonstrating environmental leadership, commitment to continual improvement and environmental responsibility to all stakeholders (identified in *Appendix 1. Stakeholder Registry*).
- 1.2 To ensure the development and maintenance of a complete and effective EHS&S, this manual has been prepared in compliance with the requirements of the ISO 14001:2015 international standard. This EHS&S manual is the central document for identifying and controlling all EHS&S-related information and material, and provides reference to all supporting documents.
- 1.3 The ISO 14001 EHS&S model is built on the “Plan, Do, Check, Act” model (Figure 1). The basic structure of an EHS&S, as defined by the ISO 14001 standard, includes a commitment to continual improvement. Within this structure, there are four primary components:
 - a) Planning;
 - b) Support and Operation;
 - c) Performance Evaluation;
 - d) Continual Improvement;
- 1.4 These components are all interrelated to produce a framework for managing and continually improving performance. The four components of EHS&S are further subdivided into the following 21 elements:
 - a) Organization and its Context
 - b) Expectations of Interested Parties
 - c) Environmental Management System
 - d) Leadership and Commitment
 - e) Environmental Policy
 - f) Organizational Roles, Responsibilities and Authorities
 - g) Planning Actions
 - h) Environmental Aspects and Impacts
 - i) Compliance Obligations
 - j) Environmental Objectives
 - k) Resources, Competence and Awareness
 - l) Internal and External Communication
 - m) Documentation
 - n) Documentation Control
 - o) Operational Control
 - p) Emergency Preparedness and Response
 - q) Monitoring, Measurement, Analysis and Evaluation
 - r) Internal Auditing
 - s) Management Review
 - t) Nonconformance and Corrective Actions
 - u) Continual Improvement

Figure 1. The EHS&S Model

The interdependency of these elements are depicted in Figure 2.



Environmental, Health, Safety and Security Manual

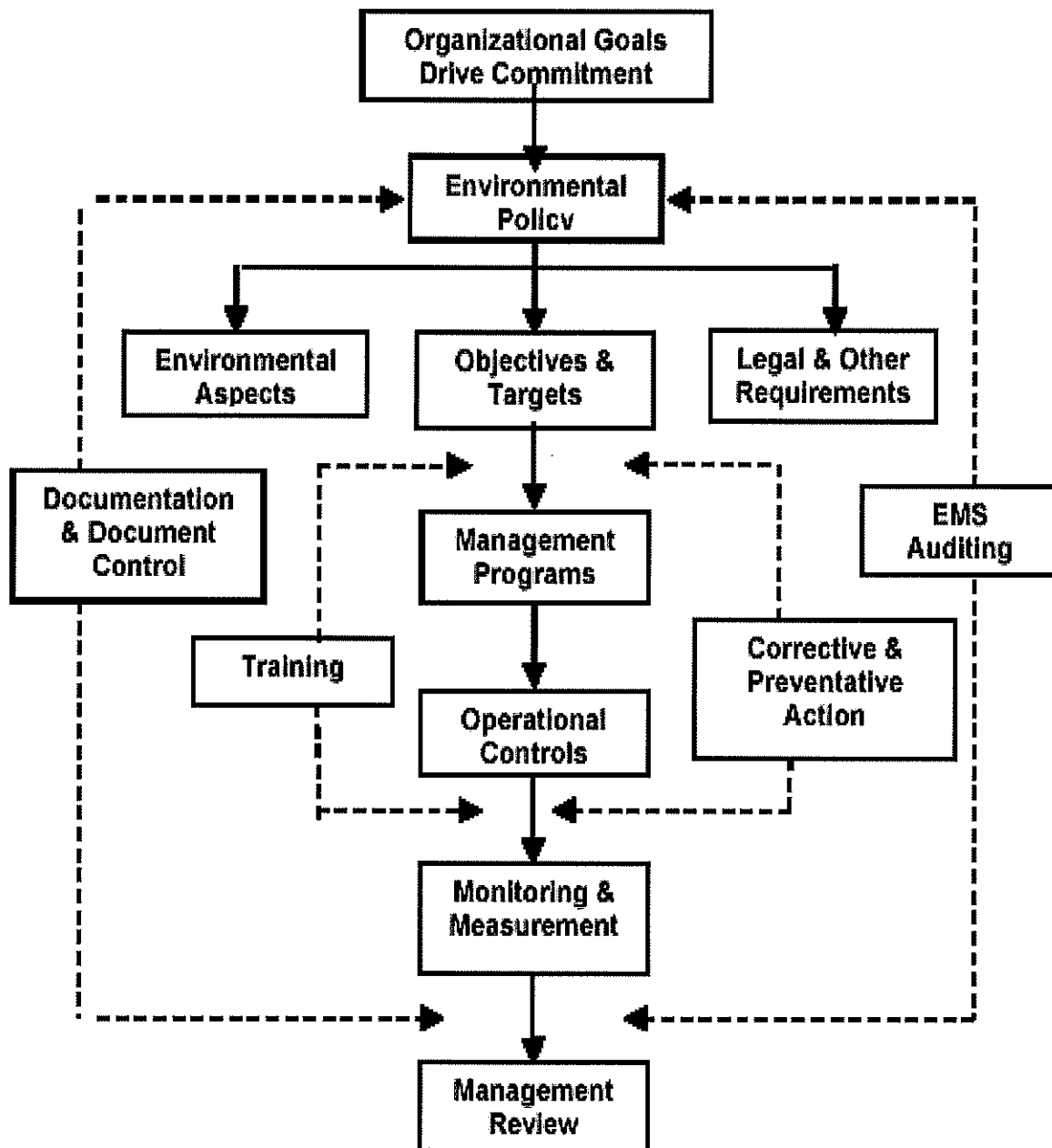


Figure 2 – Interdependence of EHS&S systems

2.0 Scope of the EHS&S

- 2.1 Mistras Services has developed and implemented its EHS&S to cover all activities occurring within a defined section of the operations known as the EHS&S boundary. These operations are listed in *Appendix 2, List of Operations within the EHS&S Boundary*. The EHS&S addresses all environmental aspects that may have a significant impact on the environment arising from activities within the EHS&S boundary and are defined in section 5.0 of this procedure and include compliance obligation requirements addressed in section 6.0 of this procedure. The EHS&S covers only those aspects for which Mistras Services is responsible or over which it can reasonably expect to have control or influence.

The scope of the EHS&S shall be made available to all interested parties upon request.

3.0 Context of the Organization

- 3.1 The EHS&S management team has identified those activities within its boundaries that can affect the organization and its ability to achieve their environmental goals.
- 3.2 Interested parties are identified in *Appendix 1 Stakeholder Registry*, including the expectations of those interested parties. Procedure 594-EHS-005 *Legal and Regulatory Requirements*, details the legal and regulatory requirements of the interested parties.
- 3.3 The EHS&S management team has established EHS&S procedures for the purpose of implementing, maintaining and continually improving its environmental management system.
- 3.4 The organization has determined internal and external issues which can be relevant to the purpose of the organization and affect its ability to achieve the intended outcomes of its environmental management system are addressed in *Appendix 7- Internal and External Issues Relevant to the Organization*.

4.0 Environmental Policy

- 4.1 Mistras Services has a publicly available Environmental Policy that has been endorsed by senior management. The policy sets forth the environmental commitments of Mistras Services, which cover all activities within the defined EHS&S boundary. As required by the ISO 14001, the policy includes the following key components:
- a) A commitment to continual improvement;
 - b) A commitment to the prevention of pollution; and
 - c) A commitment to meet or exceed relevant environmental legislation, regulations and other internal or external requirements.
- 4.2 *Appendix 3. Environmental, Health, Safety and Security Policy* is a copy of the Policy for Mistras Services. The policy is reviewed annually by senior management as part of the management review (covered in the section on Management Review, below), communicated to all personnel and made available to all interested parties as required.
- 4.3 The management review considers whether or not the policy is appropriate to the nature, scale and environmental impacts of the activities within the EHS&S boundary.
- 4.4 *Appendix 4. Roles and Responsibilities* designates the responsibility and authority for performance and

conformity to the environmental management system.

5.0 Environmental Aspects and Impacts

- 5.1 The EHS&S Team (See Appendix 4) identifies the environmental aspects of all activities within the EHS&S boundary that Mistras Services controls or over which it can be expected to have influence. The EHS&S Team then determines which of the aspects may have a significant impact on the environment. This is accomplished using operational control procedure *594-EHS-003 Aspect Evaluation Process*.
- 5.2 Aspects determined to have high significant impacts are reviewed annually by the EHS&S team as well as anytime there are new or changed activities to consider. Meeting discussions and procedures used to determine significant impacts are recorded in EHS&S team meeting minutes. The EHS&S responsible person (EHS&S Supervisor) maintains the EHS&S Team meeting minutes and other records, as required by Mistras Procedure *100-QC-002 Quality Assurance Records*.
- 5.3 All aspects identified in 594-EHS-003 shall be considered for their life cycle perspectives and shall be noted on form 94-EHS-009 as beginning (raw materials) and end (final disposition).

6.0 Compliance Obligations

- 6.1 As part of the EHS&S Policy's commitment to compliance obligations, Mistras Services has established a procedure (594-EHS-005 *Legal and Regulatory Requirements*) for ensuring compliance with environmental regulations and other requirements. This procedure involves identifying, accessing and communicating legal and other environmental requirements that are applicable to the activities within the EHS&S boundary.
- 6.2 Information necessary to ensure compliance is acquired through legal publications and other sources identified by the EHS&S responsible person (EHS&S Supervisor). The relevant requirements are identified, accessed and communicated to all personnel, as necessary. At least once a year, the EHS&S responsible person or contracted expert reviews the current national, state and local legal requirements and other requirements to ensure ongoing compliance.
- 6.3 The compliance obligations are audited annually on audit form *94-EHS-011 Mistras Legal/Regulatory Compliance Inspection*.
- 6.4 Results from the annual audits are reviewed at the annual EHS&S management review meeting, and records are maintained on file.

7.0 Environmental Management System

- 7.1 The EHS&S Team establishes environmental health and safety objectives and targets to set performance improvement goals for the aspects that may lead to reduction in these impacts. These are integrated into programs developed to stimulate action within individual units, departments or across all operations within the EHS&S boundary. Objectives and targets are developed for aspects considering significant environmental impacts, legal and other requirements, technical and financial feasibility, commitments in the environmental policy and operational requirements. The EHS&S Team develops objectives and targets to define:

Environmental, Health, Safety and Security Manual

- a) The performance objectives (e.g., monitor, study, control or improve) for each aspect with a high environmental impact.
 - b) The specific, quantified targets which define those performance objectives; and,
 - c) The planned schedule for achieving targets.
- 7.2 The objectives and targets are developed using environmental control procedure *594-EHS-004 SETTING AND TRACKING OF ENVIRONMENTAL, HEALTH AND SAFETY OBJECTIVES AND TARGETS*.
- 7.3 Objectives and targets are developed to stimulate action using environmental management programs. This element of the EHS&S translates objectives and targets into programs that direct Mistras Services towards achieving results.
- 7.4 The EHS&S Team establishes environmental management programs (EMPs) for all objectives and targets. EMPs are reviewed and approved by senior management (title of the person or name of the group) prior to implementation. The EMPs define the principal actions to be taken, the individuals responsible and the scheduled times for implementation that will achieve the desired results.
- 7.5 Management shall make available the resources required to establish, implement, maintain and continually improve the EMPs.
- 7.6 The organization has determined the risks, opportunities, compliance obligations identified in sections 5.0 and 6.0 and other issues and requirements that need to be addressed, and listed those in Appendix 7 *Internal and External Issues Relevant to the Context of the Organization*, Appendix 9 *Risk Register- Risk and Impact* and Appendix 10 *Risk Register- Opportunity*. Appendix 8-*Risk Matrix*, is used to grade the risks according to its probability and impact on the environment. A grade of 15 or higher requires mitigating action be taken.

8.0 Resources, Competence, Awareness, Roles and Responsibilities

- 8.1 The environmental management programs identify roles, responsibilities and authorities for all personnel. The EHS&S Team (Shown in Appendix 4) ensures that the resources (e.g., budget and personnel time) required for implementing and controlling the EHS&S are provided. Environmental management programs require resources for training, human resources, specialty services, financial resources, technical and informational services.
- 8.2 A key element of responsibility is the identification of an EHS&S responsible person with primary responsibility for establishing, operating and maintaining the EHS&S in accordance with the ISO 14001 standard. The EHS&S Team provides routine EHS&S support and reports directly to the EHS&S responsible person. A list of roles and responsibilities is available in *Appendix 4 Roles and Responsibilities*.
- 8.3 The environmental management team shall ensure that persons performing job tasks are competent and aware of the environment management program. To achieve competence and awareness, persons performing job tasks shall be educated, trained, tested and qualified in their duties and will be made aware of the environmental policy and safety procedures.
- 8.4 EHS&S implementation includes training for personnel on both general awareness and competency. Awareness training ensures that all personnel are familiar with the environmental policy and the relevance of the EHS&S, including the potential significant environmental impacts of their work

Environmental, Health, Safety and Security Manual

activities. Additional competency training addresses environmental procedures that are specific to personnel work activities. All personnel receive appropriate training based on a delivery procedure that matches training requirements with personnel job descriptions and work activities.

8.5 Mistras Services identifies, plans, monitors and records awareness and competency training needs and delivery for all personnel. Mistras Services has a procedure to ensure effective and timely training for employees at all levels to ensure awareness of:

- a) The importance of conformance with the environmental policy;
- b) The implementation of environmental management procedures and the EHS&S;
- c) The actual and potential significant environmental impacts of their work activities;
- d) The environmental benefits of improved personal performance;
- e) Their own roles and responsibilities for achieving conformance with the policy and procedures, and with the requirements of the EHS&S; and
- f) The potential consequences of departure from specified operating procedures.

8.6 Records are to be monitored and reviewed on a scheduled basis. Supervisors determine competency as outlined in control procedure *594-EHS-006 TRAINING REQUIREMENTS*.

9.0 Communication

9.1 EHS&S communication includes programs addressing internal and external parties. The purpose of internal communication is to ensure that environmental information is disseminated to all personnel and that all personnel feel they are able to participate in the EHS&S through available communication channels. Communication with individuals, groups, government, local businesses and others outside of the internal EHS&S provides insight into how the environmental performance of operations within the EHS&S boundary is perceived externally.

9.2 Mistras Services has established and is maintaining a procedure for internal and external communication relating to the EHS&S as described by operational control procedure *594-EHS-002 COMMUNICATION REQUIREMENTS*.

10.0 Documentation

10.1 Mistras Services has established and is maintaining information to describe the core elements of the EHS&S. All EHS&S-related documents are referenced in the EHS&S manual, and copies of EHS&S documents can be obtained from the EHS&S responsible person or designee, upon request.

10.2 Documents are controlled as per Mistras Procedure *100-QC-001 Document Control* and *100-SM-005 Document Control Safety*. All documents are created and updated as per Mistras Procedure *100-QC-002 Quality Assurance Records*. The EHS&S designated manager is responsible for adherence to these procedures.

10.3 The *Quality Assurance Records*, 100-QC-002, ensures that environmental, health and safety records are correctly identified, maintained and disposed of. Records relevant to the EHS&S include training records, monitoring and measurement records and the results of audits and reviews. Records are legible, identifiable, traceable, readily retrievable and protected against damage, deterioration and loss. Record and document retention is also specified in the procedure. Individual departments maintain environmental records according to the procedure. A list of relevant records is provided in the

procedure.

11.0 Operational Control

- 11.1 The EHS&S Team follows a process to identify aspects that may lead to significant impacts and uses these to establish objectives and targets, which are addressed in the environmental management programs. Environmental management programs are then used to develop specific operational control procedures.
- 11.2 Operational control procedures direct personnel work activities. Operational control procedures stipulate operating criteria to ensure operations and activities are carried out appropriately. *Appendix 6. Operational Control Procedure Registry* lists all operational control procedures for the management of the EHS&S and operations with potential for significant environmental impact.
- 11.3 The organization determines job processes and their environmental requirements considering life cycles of the items used. These processes are controlled and communicated to those performing the job tasks. Those processes that have may have a significant impact are identified in *594-EHS-003 Aspect Evaluation Process*.

12.0 Emergency Preparedness and Response

- 12.1 Emergency preparedness and response plans identify the potential for and response to environmental accidents and emergency situations. These plans also address the prevention and mitigation of the environmental impacts of accidents that do occur.
- 12.2 The EHS&S includes emergency preparedness and response plans outlined in *100-SP-002 Emergency Action Plan & Fire Protection Plan & Operating & Emergency Procedure Radiation Safety Manual*. The EHS&S Team reviews emergency plans annually and corporate RSO concerning radioactive safety and following any accidents or emergency situations that do occur.

13.0 Monitoring, Measurement, Analysis and Evaluation

- 13.1 The EHS&S Team establishes environmental performance objectives and targets that require monitoring and measurement to assess performance. The EHS&S Team establishes and maintains operational control procedures to monitor and measure the key characteristics of activities within the EHS&S boundary that have aspects that may lead to significant environmental impacts. This procedure, *100-QC-009 Control of Special Processes*, outlines requirements for performing work on behalf of Mistras Services, including the monitoring and measurement of internal processes. The procedure includes requirements for equipment calibration and maintenance and ensures that records are retained.
- 13.2 A key element of monitoring is the EHS&S audit program, which outlines a procedure for scheduling audits used to monitor the overall effectiveness of the EHS&S and particularly regulatory compliance. Mistras Services has established a regulatory compliance program to monitor regulatory requirements. Mistras Services procedure *594-EHS-005 Legal and Regulatory Requirements* outlines the requirements of the program and the need to periodically review regulatory compliance and report results to management on an annual basis.

14.0 Nonconformance, Corrective and Preventive Action

- 14.1 The operational control procedures, 100-QC-017 *Control of Non-Conforming Items* and 100-QC-019 *Corrective Action* address the NCR/CAR processes. These procedures define responsibility and authority for handling and investigating occurrences of non-conformance with the requirements of the EHS&S. This includes taking action to mitigate significant environmental impacts, and initiating and completing corrective and preventive action. Any changes in procedures resulting from corrective and preventive actions are implemented and recorded. The EHS&S responsible person maintains these records.

15.0 EHS&S Audit

- 15.1 Mistras Services conducts internal EHS&S audits to ensure that the EHS&S has been properly implemented and is being maintained. Audits include a review of documentation and records, personnel interviews, and a review of the results from monitoring and measurement.
- 15.2 The results of these audits are communicated to management for inclusion in the management review process described below. Audits are performed according to a regular schedule based on the management review cycle. The audit procedure is described in operational control procedure 100-QC-014 *Internal Audits*. The audit procedure covers the audit scope, frequency, methodologies applied and the responsibilities and requirements for conducting audits and reporting results. All auditors are properly trained, and the audit records are provided to the EHS&S responsible person for use in the management review process.

16.0 Management Review

- 16.1 The EHS&S review process includes a senior management (title of person or name of group) review of all elements of the EHS&S. Management reviews are conducted annually to ensure suitability, adequacy and effectiveness of the EHS&S, as defined in operational control procedure 100-QC-004 *Management Review*. All management review meeting minutes are recorded and kept by the EHS&S responsible person.

17.0 Continual Improvement

- 17.1 As stated in the Environmental Policy, Mistras will continuously strive to improve the Environmental, Health, Safety and Security performance. The EHS&S management team shall commit to ensuring the environmental management system is suitable, adequate and effective.

APPENDIX 1. STAKEHOLDER REGISTRY

Name of Stakeholder Group	Description of Stakeholder Group	Description of EHS&S Expectations	Is it a Regulatory or Other Requirement?
Neighbors	Residential and commercial neighbors around the facility	Pollution control, radiation safety, security of radioactive material	PA dep't of nuclear safety rules apply
In-House customers	Customers that bring parts to Mistras for inspection	Radiation contamination, radiation safety, safe work practices.	PA dep't of nuclear , local water and sewer authority, safety rules apply
Field site customers	Customers that Mistras visits in order to provide services	Radiation contamination, radiation safety, safe work practices. Environmental compliance	PA dep't of nuclear safety or NRC rules apply
Vendors	Service and supply providers at the Mistras facility	Radiation safety, safe work environment,	PA dep't of nuclear safety rules apply
Local Authorities	Police, Fire, water dep't. Emergency response groups	Radiation Safety Security of radioactive materials, Safe work practices	PA dep't of nuclear safety rules apply
Employees	Full time and part time employees	Safe work environment Secure work environment	PA dep't of nuclear safety rules apply

APPENDIX 2. LIST OF OPERATIONS WITHIN THE EHS&S BOUNDARY


Activity	Description
Lab X-Ray	Radiographic Inspection of customer supplied parts and the associated film processing.
Field X-Ray	Radiographic inspection at customer locations and the associated transportation of radioactive material and film processing chemicals.
Lab & Field NDE Inspection, not including X-Ray	Magnetic Particle, Ultrasonic, Eddy Current and Liquid Penetrant inspection of parts at field and shop locations. Universal waste collection and disposal.
Shop Maintenance	Maintenance of vehicles and equipment, including trucks, forklifts and shop tools.
Facility Maintenance	Housekeeping, climate control, lawn maintenance of shop and field offices.
Office activities	Waste paper collection, universal waste disposal.

APPENDIX 3. ENVIRONMENTAL POLICY

MISTRAS GROUP, INC. POLICY STATEMENT

It is the policy of MISTRAS GROUP, Inc. and this ENVIRONMENTAL, HEALTH SAFETY AND SECURITY Program to provide a safe and healthful place of employment and to do no harm to the environment by and for ALL EMPLOYEES, ITS CUSTOMERS AND NEIGHBORS. It is the purpose of this policy to:

1. Be in full compliance with all Federal, State and Local regulations as they pertain to the business interests of MISTRAS.
2. Take no unacceptable risks as concerns the operations impact on the environment and minimizes asset losses.
3. Apply safe practices in the procurement, marketing, utilization and disposal of product and services as dictated by locations, conditions and circumstances to all jobs.
4. Continuously strive to improve the Environmental, Safety, Health and Security performance of MISTRAS.
5. Commit to the prevention of pollution.
6. Take into account any and all public concerns or comments as received by MISTRAS.
7. MISTRAS commits to complying with other requirements that may be or become applicable to our interests.
8. MISTRAS will review the EHS&S Objectives, policies and performance during the Management Review Process.


Dennis Bertolotti
President

APPENDIX 4

ROLES AND RESPONSIBILITIES

	General * Manager	EHS+S * Manager	Office * Manager	Operations Supervisor	Radiation * Safety Manager	Site Supervisor	Employees
EMS Audit		X			X	X	
Regulatory Compliance	X	X	X		X		
Obtain and Maintain Permits / Licenses	X				X		
Coordination of EHS&S Training Programs		X	X		X	X	
Contractor EHS&S Performance	X	X		X			
Comply with regulatory requirements	X	X			X		X
Maintain equipment calibration and maintenance program	X			X	X	X	
Maintain the EHS&S program manual		X					
Coordinate emergency response planning	X			X	X	X	
Identify Environmental safety and health aspects of operations	X	X		X	X	X	X
Establish objectives and targets	X	X	X	X	X	X	X
Maintain EHS&S Records	X	X	X	X	X	X	
Coordinate document maintenance and control	X	X	X		X		

* - EHS&S Team Member

APPENDIX 5

MASTER EHS&S DOCUMENT INDEX

Procedure Number	Title	Revision
594-EHS-001	Environmental Health & Safety Program	1
594-EHS-002	Internal and External Communication	0
594-EHS-003	Aspect Evaluation Process	0
594-EHS-004	Setting And Tracking EHS Safety Objectives & Targets	0
594-EHS-005	Legal and Regulatory Requirements	0
594-EHS-005A	Silver Recovery Test Procedure	0
594-EHS-006	Training Requirements	0
100-RAD-001	Operating & Emergency Procedure	1

594-Trainer, Pa. EHS Controlled Documents & Forms

Title	Document Number	Issue/Revision Date
Emergency Exit Route Signs (All)	94-EHS-001A Rev. 0	12/15/2005
Emergency Light Inspection Form	EHS-FRM-001 Rev.0	12/15/2005
Exit Sign Inspection Form	94-EHS-001B Rev.0	12/15/2005
Management Review Attendance	EHS-FRM-005 Rev.0	12/15/2005
Controlled Document Log	EHS-FRM-004 Rev.1	4/2/2008

Appendix 5 (Continued)

594-Trainer, Pa. EHS Controlled Documents & Forms

Auditor Training / Test	94-EHS-006 Rev. 2	2/2/2012
Auditor Training Test Answer Key	EHS-FRM-006 Rev.2	1/23/2006
EHS Training Log	EHS-FRM-010 Rev.6	1/21/2017
Aspect Analysis Master List	EHS-FRM-007 Rev.0	3/20/2008
Aspect Analysis Form	94-EHS-008 Rev. 1	3/20/2008
Process Identification All List	94-EHS-009 Rev. 2	4/1/2008
EHS Goals and Objectives	EHS-FRM-008 Rev.0	2/13/2006
Annual Audit QA/EHS	94-QA/EHS-010 Rev.4	5/1/2016
Significant Aspects/Specific Controls	94-EHS-010 Rev.0	4/15/2009
Mistras Legal/Regulatory Compliance	94-EHS-011 Rev.7	5/23/2016
EHS&S Employee Feedback Report	EHS-FRM-012 Rev.0	1/11/2006
EHS&S Stakeholder Log	QC-8.4-Log	1/11/2006
Auditor Training Log	EHS-FRM-013 Rev.0	12/15/2005
Internal and External Issues Relevant to the Context of the Organization	94-EHS-012 Rev 0	3/22/2018
Risk Register- Risk and Impact	94-EHS-013 Rev 0	3/22/2018
Risk Register- Opportunity	94-EHS-014 Rev 0	3/22/2018
Risk Matrix	94-EHS-015 Rev 0	3/22/2018

APPENDIX 6

OPERATIONAL CONTROL PROCEDURE REGISTRY

Procedure Title	Number
Document Control	100-QC-001
Quality Records	100-QC-002
Managing Change	100-QC-003
Management Review	100-QC-004
Human Resources and Training	100-QC-005
Contract Review & Project Planning	100-QC-006
Project Execution	100-QC-007
Procurement	100-QC-008
Control of Special Processes	100-QC-009
Identification, Shipping, Handling, Storage and Preservation	100-QC-010
Control of Measuring & Test Equipment	100-QC--013
Internal Audits	100-QC-014
Control of Nonconforming Items	100-QC-017
Corrective Action	100-QC-019

Appendix 6 (Continued)

Procedure Title	Document ID
GENERAL SAFETY MANUAL	100-SM-001
ACCIDENT/INCIDENT REPORTING and INVESTIGATION	100-SM-002
CLAIMS MANAGEMENT	100-SM-003
EMPLOYEE SAFETY TRAINING REQUIREMENTS	100-SM-004
DOCUMENT CONTROL SAFETY	100-SM-005
PROCESS SAFETY MANAGEMENT	100-SP-001
EMERGENCY ACTION PLAN & FIRE PREVENTION PLAN	100-SP-002
FALL PROTECTION	100-SP-003
HEARING PROTECTION-NOISE AWARENESS	100-SP-004
HOT WORK PERMIT PROCEDURE	100-SP-005
PERSONAL PROTECTIVE EQUIPMENT& HAZARD ASSESSMENT PROCEDURE	100-SP-006
RESPIRATORY PROTECTION	100-SP-007
CONFINED SPACE	100-SP-008
ENTRY CONTROL PROCEDURE LOCKOUT/TAGOUT	100-SP-009
POWERED INDUSTRIAL TRUCK SAFETY	100-SP-010
SLINGS	100-SP-011
WORKING FROM SCAFFOLDING	100-SP-014
HEAT STRESS MANAGEMENT	100-SP-015
SHIPPING LIMITED QUANTITY HAZARDOUS MATERIALS 49 CFR Part 71	100-SP-016
EMERGENCY ACTION PROTOCOL for BIOLOGICAL/CHEMICAL THREATS	100-SP-017
EQUIPMENT GROUNDING CONNECTOR PROGRAM	100-SP-018
ELECTRICAL SAFETY (NON QUALIFIED)	100-SP-019
MEDICAL and FIRST AID PROGRAM	100-SP-020
BLOODBORNE PATHOGENS	100-SP-021
WORKING OVER or NEAR WATER	100-SP-022

Appendix 6 (Continued)

Procedure Title	Document ID
CADMIUM/LEAD/ASBESTOS/ AWARENESS	100-SP-023
SCISSORS/MARK LIFTS & OTHER POSITIONING DEVICES	100-SP-024
EQUIPMENT LIFTING PROCEDURE	99-SP-027
POLLUTION CONTROL and WASTE MANAGEMENT	100-SP-028
COLD WEATHER SAFETY	100-SP-029
FIELD SAFETY MANAGER PROCEDURE	100-SAFE-030
H ₂ S – HYDROGEN SULFIDE	100-SP-030
HAND and POWER TOOLS	100-SP-031
LADDER SAFETY	100-SP-032
RIGGING MATERIAL HANDLING	100-SP-033
BENZENE EXPOSURE CONTROL PLAN	100-SP-034
IONIZING RADIATION PROGRAM	100-SP-035
BEHAVIOR BASED SAFETY	100-SP-036
FIRE SAFETY	100-SP-038
AERIAL PERSONNEL LIFTS	100-SP-039
FATIGUE MANAGEMENT	100-SP-042
EXCAVATION and TRENCHING AWARENESS	100-SP-044
PANDEMIC INFLUENZA	99-SP-050
HAZARD COMMUNICATION	100-HCP-001
STOP WORK AUTHORITY	100-SP-051
LONE WORKERS	100-SP-052

Environmental, Health, Safety and Security Manual

AMMONIA AWARENESS PLAN	100-SP-053
SAFETY RISK MANAGEMENT	100-SP-054
HOUSEKEEPING	100-SP-055
BASIC SAFETY for ARC WELDING	100-SP-057
BASIC SAFETY for OXYACETYLENE WELDING	100-SP-058
WELDING SAFETY PROCEDURE	100-SP-059
OPERATING & EMERGENCY PROCEDURE MANUAL	100-RAD-001

APPENDIX 7. Internal and External Issues Relevant to the Context of the Organization

Internal Issues	Risks
Monitor and Measure Fixer Effluent	Noncompliance to DELCORA Requirements
Maintenance of Air Conditioners	Noncompliance to Clean Air Act
Maintenance of Vehicle Fleet	Noncompliance to Clean Air Act
Radiation Safety and Security	Noncompliance to PADEP Regulations
Building Maintenance	Safety Hazards
EHS&S Training	Noncompliance to ISO Standards
Resources	Noncompliance to all Requirements
External Issues	Risks
Compliance to Delcora Standards	Noncompliance With Effluent Limits Requirements
Compliance to PADEP Standards	Noncompliance With Radiation Safety Requirements
Compliance to OSHA Standards	Noncompliance With OSHA Standards
Compliance to Customer Requirements	Low Customer Satisfaction
Clean Air Act	Air Conditioner / Fleet Maintenance
Clean Water Act	Fixer Effluent / Water Wash Penetrants

		Impact Factor				
Probability Factor	Probability Impact	Slight (1)	Minor (2)	Significant (3)	Severe (4)	Major (5)
	Very Likely (5)	5	10	15	20	25
	Likely (4)	4	8	12	16	20
	Possible (3)	3	6	9	12	15
	Unlikely (2)	2	4	6	8	10
	Very Unlikely (1)	1	2	3	4	5

BOSTON SQUARE / P-I MATRIX

APPENDIX 8- Risk Matrix

Description of Risk and Impact	Risk Owner	Probability	Impact	Rating	Mitigation Strategy	Post Probability	Post Impact	Post Rating	Mitigation Verification
Danger of exposure to radiation to our neighbors while radiographic testing in the shop vaults	James Barragree	3	5	15	Add shielding materials to shooting vaults to reduce the radiation levels	1	5	5	Landauer reports from before improvements to after improvements show marked decrease in radiation dose from monitored areas.
Potential theft of radiographic sources from permanent or temporary storage.	James Barragree	3	5	15	Add security cameras and alarm systems to storage areas	1	5	5	Cameras and alarm systems were installed.
Vehicle fleet has the potential to pollute the air quality by release of excessive carbon gases.	Mike Baker	3	5	15	Fleet to be maintained and inspected at regular intervals.	1	5	5	Maintenance records for fleet of vehicles is maintained in Mike Bakers office.
Legal and regulatory requirements as they pertain to the operation of NDT services at the Trainer, Pa facility, must be adhered to.	Rick Wick	3	5	15	Conduct annual audit to verify compliance with applicable legal and regulatory requirements.	1	5	5	Annual audit records are maintained in accordance with procedure 100-QC-002 <i>Quality Records</i> .
Improper handling and transportation of radiographic hazardous materials could result in overexposure or nonconformance of State or Federal Laws.	James Barragree	3	5	15	Train the handlers of radiographic hazardous materials in the proper methods to be used. Train on the contents of the Mistras Operating and Emergency procedure book.	1	5	5	Training records are available on Sharepoint.
Not being aware of issues concerning our EHS&S performance from Internal and external parties.	Rick Wick	4	4	16	Create a link on Mistras website to our EHS&S policy and invite comments or complaints from external interested parties and make available to Internal interested parties a path for comments or complaints on a report form.	1	3	3	Link is available on Mistras website and forms are available in the Trainer lab for comments or complaints.
Silver in excess amounts in the effluent, from the radiographic film processing, as permitted by DELCORA standards that could have an adverse effect on water treatment.	Rick Wick	5	3	15	Have outside agency maintain the silver recovery process and periodically monitor the treated effluent for silver content.	1	2	2	Records of results from testing silver content after treatment confirms silver levels are below DELCORA standards.
Unwanted radiographic film entering the waste containers and potentially releasing the silver on the film into the environment.	Rick Wick	5	3	15	Collect the unwanted radiographic film for the purpose to recycle.	1	3	3	Bins for collecting unwanted radiographic film containing silver are available in the shop and given to silver recovery service. Records on file.
Aerosol can residuals from the liquid penetrant and magnetic particle processes could release hazardous materials into the environment.	Rick Wick	5	3	15	Employ an aerosol can puncture system to capture the residuals before disposing cans into waste stream.	1	3	3	Aerosol can residuals are collected in a 55 gallon drum from the puncturing process. The drum is removed by Safety Clean when full.
Untrained employees in EHS&S procedures may unwittingly cause harm to the environment.	Rick Wick	5	4	20	Train all employees on the EHS&S program at time of hire and whenever changes to the program are made.	2	3	6	Training documents for employees are saved electronically.

APPENDIX 9-Risk and Impact

Description of Opportunity	Opportunity Owner	Probability	Impact	Rating	Mitigation Strategy	Post Probability	Post Impact	Post Rating	Mitigation Verification
Certify the radiographic shooting vaults to meet PADEP compliance requirements.	James Barragree								
Consider changing the lighting in the building to a more environmental friendly type of system, which could reduce amount of energy used and reduce need to recycle metal halide bulbs.	Jimmy Ponce								
Adding green energy (solar panels) to building to reduce energy dependence.	Jimmy Ponce								
Switching the radiography film testing to both Computed radiography and Digital Radiography, (as allowed by codes), to reduce the need of film and chemicals required in that process.	Rick Wick								
Switch vehicle fleet to more fuel efficient models and / or alternate fuel types that are more environmental friendly.	Jimmy Ponce								

APPENDIX 10-Opportunities