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1 PURPOSE

- 1.1 This procedure defines the Environmental Health and Safety (EHS) Risk Management process and its application to the EHS Management System (MS) at MTS Test Division. It describes the method for identifying and evaluating hazards associated with the business activities, and describes the process for performing risk assessment for those hazards. This procedure also applies to those hazards arising from work carried out by MTS Test Division suppliers and contractors (indirect hazards). The procedure is intended to partially satisfy the requirements of OHSAS 18001:2007 under clause 4.3.1, “hazard identification, risk assessment and determining controls”, clause 4.4.6 “operational control” clause 4.5.1 “performance measurement and monitoring” and the requirements of ISO 14001:2004, clause 4.3.1 “environmental aspects”, 4.4.6 “operational control” and 4.5.1 “monitoring and measurement”.


2 SCOPE – APPLIES TO WHERE & WHEN THE WORK INSTRUCTION IS USED

- 2.1 This procedure applies to operations and activities, under normal conditions and reasonably foreseeable situations, in the office and facilities of MTS Test Division and applies as referenced within the scope of the EHS Manual.


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3 DEFINITIONS AND ACRONYMS

- 3.1 **Acceptable Risk** – Risk that has been reduced to a level that can be tolerated by the organization having regard to its legal and other obligations and its own EHS policy.
- 3.2 **Activity Description**– Risk Assessment database field that identifies the general action activity or item associated with the hazard identified
- 3.3 **Assessors** – Risk Assessment database field that identifies the Qualified Individuals and associated contributors evaluating a given hazard item or issue
- 3.4 **Close out Date** – Risk Assessment database field that identifies the completion/verification of a given risk assessment entry and any proposed controls that might be implemented and become the final/current controls
- 3.5 **Consequence** - degree of injury, ill health or damage to the environment.
- 3.6 **Controls**-Conditions required to produce the correct output. Constraints on the process (i.e. Policies, specifications, procedures, budgets, regulations).
- 3.7 **Corrective Action Number** – Risk Assessment database field that identifies an applicable or corresponding corrective action entry – note any and all such proposed controls in the CA, as needed
- 3.8 **Final Controls**- Risk Assessment database field that identifies all engineering and or administrative control measures that are actively in place = current controls and equate to a final risk evaluation rating (must be below the unacceptable risk level for all entries)
- 3.9 **Hazard** – Source, situation, act, products, activities, or services with a potential for harm in terms of human injury, ill health, or damage to the environment.
- 3.10 **Hazard / Cause**– Risk Assessment database field that identifies the hazards – health and safety or environmental identified for a given hazard (ie.. potential injuries, exposures, releases from a given hazard item/activity)
- 3.11 **Hazard Code**– Risk Assessment database field that indicates the general source category of the hazard (ie.. people, equipment, designs, infrastructure, human behavior etc..)
- 3.12 **Identification number (ID)**- Risk Assessment database field that identifies the RA number to be assigned to any given evaluation (automatic - progressive database number generation)
- 3.13 **Indirect Hazard:** A hazard resulting from contractors, suppliers or any non-MTS employee.
- 3.14 **Ill Health** – Identifiable, adverse physical or mental condition arising from and/or made worse by a work activity and/or work-related situation.


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- 3.15 **Impact**-Any change or potential change to the health and safety (harm) of employees or other workers (including temporary workers and contractor personnel), visitors, or any other person in the workplace or any change or potential change to the environment.
- 3.16 **Impact with monitoring records**- Risk Assessment database field that identifies the monitoring or records associated with the hazard (Ie... OSHA Recording logs, Near Miss Records, Environmental Spill Reporting etc..)
- 3.17 **Initial Controls**- Risk Assessment database field that identifies the initial hazard controls in place at the start of the assessment – any engineering and or administrative controls noted at the beginning of the examination – identify if the overall risk is at an acceptable or unacceptable level and proposed actions may be required
- 3.18 **Likelihood** - Frequency of the activity, which includes exposure to the hazard and the probability of harm to persons or the environment, when the hazard event occurs.
- 3.19 **Legal Requirements**: Risk Assessment database field that identifies the applicable or related legal requirements or provisions associated with the hazard (ie... machine guarding requirements, environmental reporting etc.. – may be local, state and or federal regulations)
- 3.20 **Means**- A method, a course of action, or an instrument by which an act can be accomplished, an end can be achieved or which support & enable the process (i.e. people, equipment, supplies, facility, Information System).
- 3.21 **Occupational Health and Safety** – Conditions and factors that affect, or could affect the health and safety of employees or other workers (including temporary workers and contractor personnel), visitors, or any other person in the workplace. NOTE Organizations can be subject to legal requirements for the health and safety of persons beyond the immediate workplace, or who are exposed to the workplace activities.
- 3.22 **Person(s) Responsible**: Risk Assessment database field that identifies those functional group members, supervisors and employees who can contribute and support the adoption and implementation of proposed control items to reduce hazards/risks
- 3.23 **Proposed Controls**- Risk Assessment database field that identifies any potential engineering and or administrative control measures that could be put into place to reduce the overall risk level noted in the initial control field and score evaluation (*Note: required for all items rated as unacceptable, options for items scored at the acceptable level)
- 3.24 **Risk** - Combination of the Likelihood of an occurrence of a hazardous event or exposure(s) and the severity or consequence of injury, ill health, or environmental damage that can be caused by the


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event or exposure(s).

- 3.25 **Risk Assessment** - The process of evaluating the risk(s) arising from a hazard(s) taking into account the adequacy of any existing controls and deciding whether or not the risk(s) is acceptable.
- 3.26 **Risk Score** – The calculated risk level value as determined by the combination of likelihood and consequence of a given hazard/risk evaluated (*Note: a score of 36 or above is classified as unacceptable and will require proposed actions be taken (within one calendar year), a score of 50 or greater must be addressed immediately – highest hazard/risk items
- 3.27 **Target Date:** Risk Assessment database field that, as applicable, attempts to identify a target to complete any and all proposed risk control and mitigation actions (*Note: required for any and all items with risk levels identified at 36 or higher)
- 3.28 **Environmental, Health and Safety Management System** - Part of an organization’s management system used to develop and implement its Environmental, Health and Safety Policy and manage its occupational health and safety and its environmental risks. *NOTE 1 A management system is a set of interrelated elements used to establish policy and objectives and to achieve those objectives. NOTE 2 A management system includes organizational structure, planning activities (including, for example, risk assessment and the setting of objectives), responsibilities, practices, procedures, processes and resources.*
- 3.29 **Environmental, Health and Safety Policy**- Overall intentions and direction of an organization related to its EHS performance as formally expressed by top management *NOTE 1 The EHS policy provides a framework for action and for the setting of EHS objectives.*
- 3.30 **EHS Core Team:** The Environmental Health and Safety Management System (EHS) team that is responsible in part for EHS policy and procedure development, implementation and maintenance. The team ideally has representation from Environmental Health and Safety, Facilities, Quality, Operations, Engineering, Development and Field Service.
- 3.31 **EHS Site:** Risk Assessment database field that identifies the location that best applies to the hazard – Eden Prairie, Field or Other
- 3.32 **EHS Type:** Risk Assessment database field that identifies an item as dealing primarily with an Environmental or Health and Safety issue
- 3.33 **QMS Process:** Risk Assessment database field that identifies the applicable local/immediate functional group or areas identified: Actuators, Calibration/Metrology, Checkout, Custom Electrical, Facilities etc...(*Note: the category “Risk Assessment in this field is used for items that apply to multiple/cross functional areas – widespread area impact)

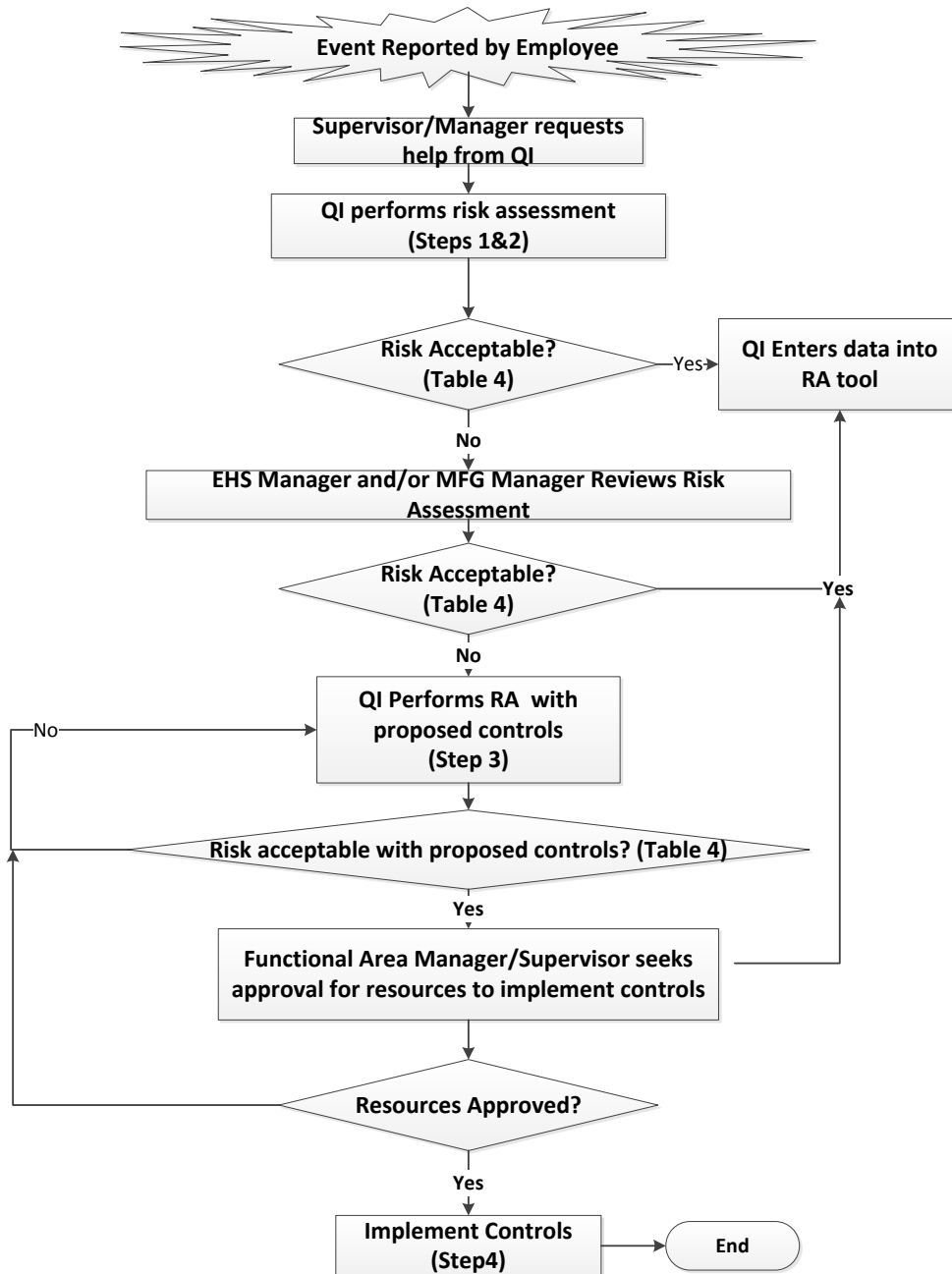
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- 3.34 **QMS System:** Risk Assessment database field that identifies the applicable general functional group or areas identified: EHS, Engineering & Product Quality, Manufacturing, Material Management, Product Development, Service, Other (administrative/cafeateria)
- 3.35 **Qualified Individual:** A person identified by MTS that has been trained and is qualified to perform risk assessments as identified by this procedure. Note: An EHS Core team member may also be a qualified individual, prefer at least two Qualified Individuals involved with each RA review
- 3.36 **Unacceptable Risk** - Risk that cannot be tolerated by the organization (under the current scoring system/protocols anything rating at a 36 or higher risk rating must be given a target/completion date and items driven to address at a minimum within a calendar year or earlier (highest hazards – 50 or above – attempt to address immediately).
- 3.37 **Workplace** – Any physical location in which work related activities are performed under the control of the organization. *NOTE When giving consideration to what constitutes a workplace, the organization should take into account the EHS effects on personnel who are, for example, travelling or in transit (e.g. driving, flying, on boats or trains), working at the premises of a client or customer, or working at home.*

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4 GRAPHIC (IF NEEDED)

Risk Assessment Process




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5 RESPONSIBILITIES

- 5.1 **Environmental Health and Safety Core Team**-The team is responsible to oversee the hazard identification and risk assessment process for the EHS Management System.
- 5.2 **EHS Manager/Mfg Manager**- Are included as responsible persons and are asked to review risk assessments generated by QI's and support the implementation and completion of proposed engineering or administrative controls to lower hazard/risk levels identified
- 5.3 **Functional Area Manager/Supervisor**- Is responsible to obtain approval for resources to implement identified controls.
- 5.4 **Qualified Individual (QI)** - Performs risk assessments as outlined in this procedure and documents the results. Meets with the EHS Manager and/ or Manufacturing Manager to approve risk assessments. Note: A EHS Core Team Member may also be a qualified individual.
- 5.5 **Responsible Persons** – Individuals directly associated with the functional group, area, process or item identified by the Risk Assessment evaluation that will be asked to support proposed control actions to reduce the hazard/risk identified
- 5.6 **Supervisor/Manager** – Requests assistance from a Qualified Individual(QI) to perform risk assessments for their respective areas, and makes necessary arrangements for employees to provide input to the risk assessment process.
 - 5.6.1 Works with the QI to ensure that for those risks that are unacceptable, that appropriate action is being taken to reduce or mitigate risk to an acceptable level for their respective areas of accountability.
 - 5.6.2 Ensures that proposed engineering or administrative controls are implemented within their areas of accountability.

6 PROCEDURE

- 6.1 **General Requirements:** An assessment of the occupational health and safety and environmental hazards of all operations and activities shall be performed, as needed, in order to evaluate the actual and potential impacts on the health and safety of employees, contractors, visitors and any other potential affected persons and actual and potential impacts on the environment.
- 6.2 A cross functional team of qualified individuals representing the major functions of the MTS Systems site will meet periodically, to evaluate its occupational health and safety hazards and environmental hazards. The EHS Manager shall schedule and coordinate the cross functional team


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meetings.

6.3 The qualified individuals will be requested, periodically, and at QI meetings to perform risk assessments as needed or required for incidents, management of change items, hazard recognition, audit findings, etc...

6.4 The qualified individuals shall take into account the following when identifying and performing risk assessments:

- 6.4.1.1 Routine and non-routine activities, shut-down and start-up conditions, as well as reasonably foreseeable emergency situations.
- 6.4.1.2 Activities of persons having access to the workplace and including visitors and contractors. (e.g. contracted electricians that are required to lock out/tag out a power source, or visitors walking by active site tests; painters required to follow company procedures for disposing of hazardous waste).
- 6.4.1.3 Human behavior (e.g. at-risk behavior), capabilities and other human factors.
- 6.4.1.4 Identified hazards originating outside the workplace capable of adversely affecting the health and safety of persons under the control of MTS Test Division within the workplace. (Example: hazard introduced by adjacent companies e.g. potential spills by neighboring facilities requiring evacuation and/or cleanup)
- 6.4.1.5 Hazards created in the vicinity of the workplace by work related activities under the control of MTS Test Division. (Example: paving, excavating contractor).
- 6.4.1.6 Infrastructure, equipment and materials at the workplace, whether provided by the MTS Test Division or others; (example: Use of MTS Test Division cranes and rigging by outside contractors, or forklift of a contractor introduced on site, outside contractor handling hazardous waste).
- 6.4.1.7 Changes or proposed changes within MTS Test Division, its activities, or materials – Management of Change process tie-in (e.g. Introduction of a new chemical or waste stream or a new piece of test equipment).
- 6.4.1.8 Modifications to the EHS Management System, including temporary changes, and their impacts on operations, processes and activities. (e.g. ISO 14001, OHSAS 18001 Policy or procedure change).
- 6.4.1.9 Any applicable legal obligations relating to risk assessment and implementation

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of necessary controls.


- 6.4.1.10 The design of work areas, processes, installations, machinery/equipment, operating procedures and work organization, including their adaptation to human capabilities.
- 6.4.1.11 Goods and services used by the organization and those related to products and services that it provides.

6.5 There are five major steps in the Hazard Identification and Risk Assessment Process:

- 6.5.1 Step 1-Identify hazards, impacts, existing controls, including the means and resources;
- 6.5.2 Step 2-Perform risk assessment with existing controls, including the means and resources; utilized at the time of the initial assessment – identify current risk value (likelihood/consequence score)
- 6.5.3 Step 3-Recommend proposed controls, including the means and resources; and determine impact to existing risk value/level scoring
- 6.5.4 Step 4-Implement proposed controls, including the means and resources to reduce risk values (required on all items rated/scored at an acceptable level, optional but encouraged for all evaluations when feasible)
- 6.5.5 Step 5- Note the Final(now Current) control value, as applicable for any and all proposed controls implemented = when completed the final control values should reflect the current controls observed and realized (as applicable, close item out with date upon verification)

6.6 Step 1 – Identify all related hazards, impacts, existing controls, including the means and resources:

- 6.6.1 This step consists of the following of 4 review items;
 - 6.6.1.1 Identify the occupational health and safety and environmental hazards and associated impacts.
 - 6.6.1.2 Identify any monitoring and measurement mechanisms applicable to those impacts.
 - 6.6.1.3 Identify the associated existing controls for these hazards, including the means and resources (e.g. mechanical controls, procedures, signs and labels, personal protective equipment).
 - 6.6.1.4 Identify the monitoring and measurement mechanisms (M&T measuring and test equipment and related devices) applicable to those controls, including the means and resources (MFG - 050 –Corporate Measurement and Test Equipment–Asset Control and Identification).

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6.6.2 There are three primary methods to identify occupational health and safety and environmental hazards (refer to appendix A for method detail) and associated controls, including the means and resources are;

6.6.2.1 Review documentation

6.6.2.2 Observe facility functions and operations

6.6.2.3 Interview personnel

6.6.3 This information is to be recorded/ compiled in the EHS Risk Assessment Database.

6.7 **Step 2-** Perform risk assessment with existing (/initial) controls, including the means and resources; utilized at the time of the initial assessment – identify all current hazards (note: depending on the item, area, or subject, multiple risk assessments may be identified (ie.. environmental issue – associated chemical use, connected to a health and safety issue as well –exposure to vapors etc..))

6.7.1 Enter all initial, basic field information items - date of assessment, Assessors involved, QMS System, QMS Process, EHS type, EHS site, Hazard code, Activity Description, Hazard/Cause, Impact to records, Persons Responsible, Corrective Action number (as applicable), Target date (as applicable * required for all items found to be at a risk level of 36 or above)

6.7.2 The risk assessment process consists of determining the risk of the hazard, which is defined as the likelihood times the consequence.

6.7.3 When performing the risk assessment take into consideration the following:

6.7.3.1 The controls, including the means and resources in place for controlling the hazard.

6.7.3.2 The associated monitoring and measurement of those controls, including the means and resources.

6.7.4 For each EHS hazard, an evaluation of the likelihood (table 1) that a hazard event would cause a consequence of a specific level (tables 2a and 2b) shall be performed.

6.7.5 Determine likelihood- When determining the Likelihood (table 1) for a specific level of consequence; consider the frequency of the activity, source or situation, which includes exposure to the hazard and the probability of harm to persons or the environment when the hazard event occurs.


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Table 1 Likelihood of a hazard event resulting in a specific consequence

Likelihood Ranking	Likelihood in a given year
10	Greater than 4 to 1
9	Greater than 1 in 1
8	Greater than 1 in 10
7	Greater than 1 in 25
6	Greater than 1 in 100
5	Greater than 1 in 250
4	Greater than 1 in 1,000
3	Greater than 1 in 10,000
2	Greater than 1 in 100,000
1	Greater than 1 in 1,000,000

6.7.6 For each hazard, the likelihood ranking must be associated with a level of severity of the consequence. A hazard may have more than one potential consequence; therefore it may have more than one risk.

6.7.7 Table 2a and 2b Severity of Consequence for EHS hazards

Table 2a: Safety & Health Severity of Consequence

Severity Ranking	Consequence
10	Fatality
9	Long term, disabling injuries, multiple severe injuries, terminal illness, chronic health risk, possible off-site health risk
8	Amputation of limb
7	Permanent impairment injury, recognized health risk
6	Severe life threatening injuries/illnesses requiring immediate hospitalization
5	Hospitalization over 3 days with full recovery, foreseeable health risk
4	Serious injuries (lost time) with full recovery
3	Injuries of low severity (recordable) with full recovery
2	Medical treatment injury with full recovery
1	First aid injury with full recovery, no foreseeable health risk


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Table 2b: Environmental Severity of Consequence

Severity Ranking	Consequence
10	Severe unrecoverable effects having adverse impact on community affecting drinking water supplies or air quality resulting in evacuation. Excessive waste of natural resources.
9	Severe unrecoverable effects involving major natural resources damage outside of the fence line resulting in neighbor and/or community complaints.
8	Severe unrecoverable effects involving major natural resources damage outside of the fence line not resulting in neighbor or community complaints.
7	Significant but recoverable effects requiring clean up and remediation outside the fence line. Very few controls in place to minimize use of natural resources.
6	Significant but recoverable effects requiring clean up and remediation inside the fence line.
5	Significant but recoverable effects not requiring clean up or remediation but exceeding air permit limits and/or Reportable Quantities.
4	Significant but recoverable effects not requiring clean up or remediation and not exceeding air permit limits and/or Reportable Quantities. Some controls in place to minimize use of natural resources
3	Minor and temporary effects on air, water, and/or soil quality and requiring clean up.
2	Minor and temporary effects on air, water, and/or soil quality with no cleanup required.
1	No perceivable effects on the environment. Very good controls in place to minimize use of natural resources.

- 6.7.8 For each combination of likelihood and severity of the consequence a risk score should be determined from the Quantitative Risk Matrix (Table 3) and entered into the Risk Assessment Database.
- 6.7.9 Any risk with a score of 36 or more is determined unacceptable (table 4) so that the associated hazard must be addressed by proposing additional controls to reduce the risks to an acceptable level (less than 36)
- For those items less than 36, proposed controls should also be considered and listed, as applicable, with the goal of, when possible, reducing/lowering the overall risk ratings, may not be required or needed immediately



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Table 3: Quantitative Risk Matrix

Severity	10	10	20	30	40	50	60	70	80	90	100
	9	9	18	27	36	45	54	63	72	81	90
	8	8	16	24	32	40	48	56	64	72	80
	7	7	14	21	28	35	42	49	56	63	70
	6	6	12	18	24	30	36	42	48	54	60
	5	5	10	15	20	25	30	35	40	45	50
	4	4	8	12	16	20	24	28	32	36	40
	3	3	6	9	12	15	18	21	24	27	30
	2	2	4	6	8	10	12	14	16	18	20
	1	1	2	3	4	5	6	7	8	9	10
		1	2	3	4	5	6	7	8	9	10
Likelihood											

- 6.7.10 Step 3- Recommend proposed controls, including the means and resources; and determine impact to existing risk value/level scoring
- 6.7.11 For those risks that are determined unacceptable, actions must be identified to reduce or mitigate those risks to an acceptable level. If the risk assessment indicates that the new proposed controls will reduce the risk to an acceptable level, those controls will be identified in the Risk Assessment Database and tracked by all those noted as responsible for the area/activity. Action items that can affect multiple areas or functions may then be identified as potential objectives on the EHS Objectives, Targets & Program. The time lines for implementation of proposed new controls are given in the following table 4 (for each item entered into the database).
- 6.7.12 When considering changes to existing controls, MTS qualified individuals shall consider reducing risks according to the following hierarchy:
 - Elimination
 - Substitution
 - Engineering controls
 - Signage/warnings and/or administrative controls
 - Personal protective equipment

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6.7.13 Unacceptable risks with action time frames are as follows;

Table 4: Time line for implementation of controls for unacceptable risks


Risk Score	Toleration Descriptor	Action Timeline
➤ 50-100	Unacceptable Risks	Immediate action must be taken to reduce the risk to acceptable levels.
➤ 36-49	Unacceptable Risks	Action must be taken within 12 months to reduce the risk to acceptable levels.
➤ 20-35	Conditionally Acceptable Risks	Risks are acceptable, but ensure that the controls are working correctly to manage the risk and the risk ranking score is accurate. Periodically evaluate the opportunities to reduce the risk.
➤ 6-19	Acceptable Risks	Risks are acceptable but ensure that the controls are working correctly to manage the risk and the risk ranking score is accurate.
➤ 1-5	Acceptable Risks	No further action required.

Note: (Refer to Quantitative Risk Matrix Table 3 for more detail on numeric risk scores)

6.8 Step 4-Implement proposed controls, including the means and resources to reduce risk to acceptable level.

6.8.1 Proposed actions that have been identified should be implemented given available resources. Those action items and objectives that cannot be implemented, according to the time line for implementation of controls for unacceptable risks above, shall be communicated to top management through the Management Review process and through other appropriate communication methods.

6.8.2 Training Needs Assessment: MTS Test Division EHS Manager will work with the team of qualified individuals to identify training needs associated with the implementation of this procedure. Based on this training needs assessment, the company will then provide training or take other appropriate action to meet these needs and retain necessary records.

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6.8 Step 5- Step 5- Note the Final(now Current) control value, as applicable for any and all proposed controls implemented = when completed the final control values should reflect the current controls observed and realized


- Verify with QI representatives, managers and supervisors/employees in the area alike that any engineering or administrative proposed controls are in place, active and utilized to address hazards
- Adjust the final risk assessment level to reflect any and all implementation and as applicable and close out the evaluation date
(*Note: for items at a level of 36 or above the final score should end up below the unacceptable threshold with implemented controls measures in place- verified and have a closed out date)

7 ASSOCIATED QUALITY RECORDS – AS STATED IN THE QUALITY RECORDS LIST

Required Record
Risk Assessment Database

8 REFERENCE FORMS / TEMPLATES / DOCUMENTS

Form / Template / Document Title	Location
Risk Assessment Report	http://groups.mts.com/ProjectSystem/ProcessHome.asp?mnuSys=EHSMS&mnuShortName=RA
MTS – EHS Manual – includes references to applicable ISO 14001:2004 and OHSAS 18001:2007 standards for risk evaluation/determination	EHS - website

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9 CURRENT REVISION'S TRAINING REQUIREMENTS


Training requirements are determined by the document owner.

1. Select Awareness **and/or** Formal training requirements.
2. List (below) the functions or groups that require the training.

Select (mark X)	Training Type	Training Definition
	Awareness	Awareness training is conducted by communication, which is sent/delivered by the approver/author/owner of the document to the affected employees/groups.
X	Formal	Formal training requires the approver/author/owner to collect/store evidence that the affected employees/groups were trained.

Functions/Groups that require Awareness to this procedure:


- Personnel authorized as qualified individuals by the EHS Manager to perform risk assessments.

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10 REVISION HISTORY & APPROVAL


Revision History			
Rev	Description of Change	Author	Effective Date
A	Developed initial procedure for conformance to OHSAS 18001§ 4.3.1(most current revision)	Bob Klenotich	5/14/12
B	Updated procedure to include provisions for monitoring the effectiveness of controls. Also included provisions for taking into account the adequacy of existing controls. Provided additional clarification relative to making decisions on whether the risks are acceptable.	Bob Klenotich	8/4/12
C	Integrated environmental aspects into risk assessment procedure and process. Added tables 2a & 2b, and included references to risk assessment database. Added flowchart in section 4 to clarify responsibilities.	Bob Klenotich	2/26/14
D	Added all associated definitions and section corresponding to the revised electronic Risk Assessment Database and processes - Sections 3-Definitions, Section 5-Roles/Responsibilities, Section 6 – Risk Assessment Procedure/process	James Kinney	7/30/16

Approval of Current Revision		
Name / Function	Signature	Date
Gene Simon – VP Operations and Global Supply Chain		
James Kinney EHS Manager-		

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<p>Procedure Owner(s) – list Functions: EHS Department, EHS Core Team, Qualified Individual</p>		<p>Revision's Training Requirements – select one or both (per section #9): Awareness <input type="checkbox"/> Formal <input checked="" type="checkbox"/></p>	


Appendix A

<p>A review of the documentation should consider;</p>
<p>Legal and regulatory requirements, permits and other requirements</p>
<p>List of Chemicals-Delivery of, use, disposal of, toxicological data</p>
<p>Material Safety Data Sheets (MSDSs) and Safety Data Sheets (SDS)</p>
<p>List of raw materials - supply, distribution and use</p>
<p>Accidents and incident investigations including spills</p>
<p>Near misses and near hits</p>
<p>Audit results including inspections</p>
<p>Corporate health and safety audits</p>
<p>External audits</p>
<p>Corrective and preventive actions</p>
<p>Issues that affect the bottom line may have associated HS issues - financial performance and investment</p>
<p>Quality issues may have associated EHS issues-objectives and targets-scrap, rework-look at quality and production metrics</p>
<p>Process Flow Charts</p>
<p>Occupational exposure and health assessments</p>
<p>Management of Change documents</p>
<p>Exposure assessments</p>
<p>Noise evaluations</p>
<p>Safety reviews</p>

	<p align="center">QMS Procedure MTS Systems Corporation – MTS Test</p>	<p>Document Number: EHS-200-102</p>	<p>Rev.: D</p>
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Insurance inspections
Job hazard analysis
Equipment reliability analyses/deficiency lists
The observation of facility and operations shall consider;
Processes under normal and abnormal operating conditions-loss of power, water
Start up and shut down processes
Maintenance-both scheduled and unscheduled
Equipment upgrades
Facilities operations including neighborhood Issues - traffic, odor, noise, dust, toxic fumes, waste disposal issues, chemical spills and stains,
Conditions of the facility and operations including buildings, grounds
Observe personnel working and their attitude towards safety and waste issues and use of natural resources.
Access to emergency response equipment
Activities of visitors, contractors and vendors
The interviewing of personnel may consider asking the following questions;
Describe the processes under normal operating conditions?
What are the major safety, health and environmental hazards?
What do you do to make sure that the hazard doesn't result in an injury or a chemical spill or a release of toxic fumes?
Is there a way to reduce the potential for injury or chemical spills?
What other safety, health and environmental hazards are in your area?

*Note: Ask the same questions above for processes under abnormal operating conditions (i.e. unscheduled down-time), under start up and shut down conditions.

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In addition, the following should be considered in the hazard assessment;

- Packing, delivery of products
- New and existing products,
- Changes to existing processes, Management of Change
- Misuse or misapplication of the service
- Emergencies/ Incidents associated with services

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<p>Procedure Owner(s) – list Functions: EHS Department, EHS Core Team, Qualified Individual</p>		<p>Revision's Training Requirements – select one or both (per section #9): Awareness <u> </u> Formal <u>X</u></p>	

- Appendix B – RA Online Database Format/Entry Fields

Save Cancel

ID: 1621 Date of Assessment: 5/22/2016

Assessors: Randy Stelen, Michael Moen

* OMS System: Environmental Health & Safety (EHS) * EHS Type: Environmental

* OMS Process: Product Development * EHS Site: Eden Prairie

Hazard Code: DO - Design of Machinery; equipment, operating procedures & work organization

Activity Description: Test item associated with the initiation of new equipment and evaluation of new products

Hazard Cause: potential issues/hazards and injuries associated with new product development and creation

Impact with monitoring and associated records: OSHA Logs, Near miss records

Person(s) Responsible: Stephen Vollmer, Brian Ellis Target Date:

Corrective Action number: 2929 Close Out Date:

Initial Controls - Step 1 Proposed Controls - Step 2 Final Controls - Step 3

Initial Engineering Controls - including means, resources, monitoring, and records:
Controlled access to the R & D labs, E-stops on both individual machines and for the room (room exit points),


Initial Administrative Controls - including means, resources, monitoring, and records:
General Awareness training, hydraulic training awareness, local system procedures and lab testing procedures

Likelihood: 4 - Greater than 1 in 1,000

Consequence: 4 - Significant but recoverable effects not requiring clean up or remediation and not exceeding air permit limits and/or Reportable Quantities. Some controls in place to minimize use of natural resources.

Risk Score: 16

Legal Requirements: OSHA general duty clause

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<p>Procedure Owner(s) – list Functions: EHS Department, EHS Core Team, Qualified Individual</p>		<p>Revision's Training Requirements – select one or both (per section #9): Awareness <input type="checkbox"/> Formal <input checked="" type="checkbox"/></p>	

- Appendix C – RA Online Database Entry Enhancements

Risk Assessment Enhancements

Changes:

- 1) Add two new items to the QMS Process dropdown menu. Servo-Hydraulic Products and Servo-Electric Products.

Change Details: No Change Needed. Users will use the existing admin functionality to add the needed items.

- 2) Is there a way to add an 'other' option to the QMS process and then have it followed with a fill in box?

Change Details: No action needed. The new request for a Smart Search (#9) will address the need for this request.


- 3) A new column/area for inputting a Corrective Action (CA) number if its applicable to the Risk Assessment

Change Details:

- i. Added a new text box to update a Risk Item with a CAS tracking number. The text box can be found below Person responsible Text box. User would need to know the CAS tracking number beforehand. No feature to search CAS is needed. The textbox is available for both Add and Edit.

Assessors:	<input type="text"/>		
* QMS System:	<input type="text"/>	* EHS Type:	<input type="text"/>
* QMS Process:	<input type="text"/>	* EHS Site:	<input type="text"/>
Hazard Code:	<input type="text"/>		
Activity Description:	<input type="text"/>		
Hazard/Cause:	<input type="text"/>		
Impact with monitoring and associated records:	<input type="text"/>		
Person(s) Responsible:	<input type="text"/>	Target Date:	<input type="text"/>
Corrective Action number :	<input type="text"/>	Close Out Date:	<input type="text"/>

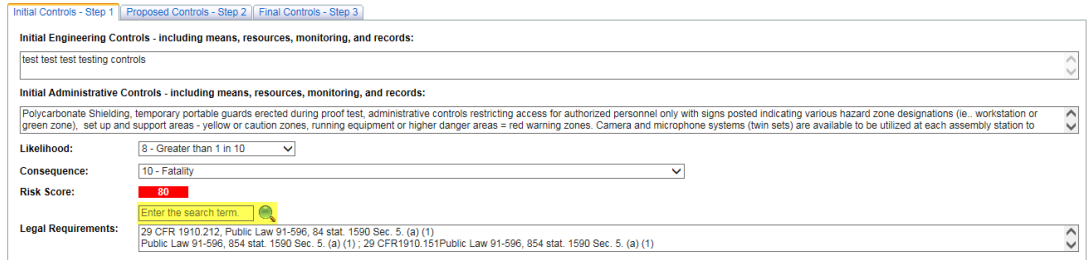
- ii. In view mode, if a CAS tracking number is present, a link to CAS system is displayed below Person Responsible and on clicking the link the CAS item will be displayed in a new window(contingent to the user having rights to access CAS)

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ID:	601	Date of Assessment:	1/12/2015
Assessors:	Mike Thomas		
QMS System:	Environmental Health & Safety (EHS)	EHS Type:	Safety & Health
QMS Process:	System Assembly	EHS Site:	Eden Prairie
Hazard Code:	MT - Materials		
Activity Description:	Pressure (Proof) Testing of hydraulic assemblies		
Hazard/Cause:	Human error (errors of omission, commission, sequence or timing)/Not following standardized procedures, lack of guarding e.g. enclosure to protect operators or visitors from flying projectiles)		
Impact with monitoring and associated records:	Potential fatality/Monitor OSHA 300 logs and near miss records		
Person(s) Responsible:	Andrew St. Martin, Tom Paal, John Furan, Joseph Daley, Joseph Marciw,	Target Date:	
Corrective Action number:	1003	Close Out Date:	

- 4) A pulldown menu for 'Legal Requirements' with all previously used entries as options.
Change Details:

- i. A new search feature added in the Initial Control tab in Edit and Add mode above the Legal Requirement Text box. The Search Feature will enable user to search for a Keyword in existing Legal Requirement database field and display a listing of matching entries. User can then choose an entry which will then be concatenated with the existing Text in the Legal Requirement box. The Legal Requirement Text box will remain a Free Text form and user can edit any part of it.



The screenshot shows a software interface with three tabs: 'Initial Controls - Step 1', 'Proposed Controls - Step 2', and 'Final Controls - Step 3'. Under 'Initial Engineering Controls', there is a text box containing 'test test test testing controls'. Below that, 'Initial Administrative Controls' includes a detailed description of safety measures. The 'Likelihood' is set to '8 - Greater than 1 in 10', 'Consequence' to '10 - Fatality', and 'Risk Score' to '80'. A search box with the placeholder 'Enter the search term' and a magnifying glass icon is present. The 'Legal Requirements' section shows a list of regulatory references, including '29 CFR 1910.212, Public Law 91-596, 84 stat. 1590 Sec. 5. (a) (1)'.


Steps to search and select an existing legal text:

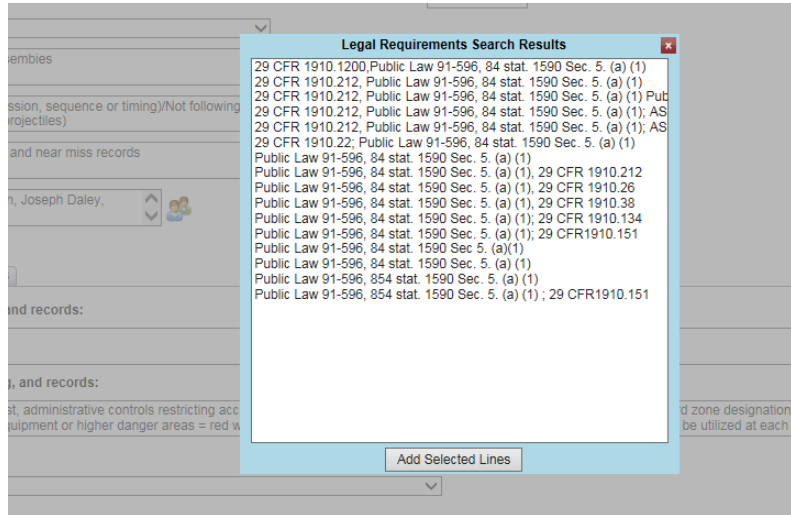
- 1) Enter search term in the search text box.

- 2) Click on the Search icon.

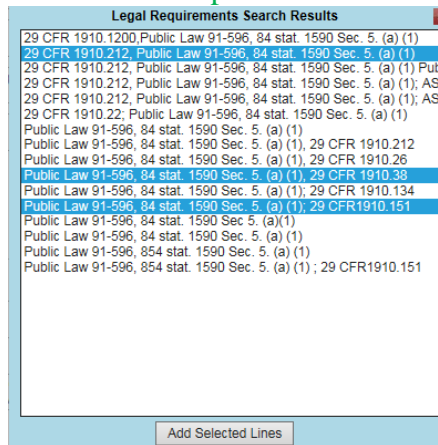


- 3) The Search Result pop up window is displayed:

	<p align="center">QMS Procedure MTS Systems Corporation – MTS Test</p>	<p>Document Number: EHS-200-102</p>	<p>Rev.: D</p>
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<p>Procedure Owner(s) – list Functions: EHS Department, EHS Core Team, Qualified Individual</p>		<p>Revision's Training Requirements – select one or both (per section #9): Awareness <u> </u> Formal <u>X</u></p>	



4) Select any line in the list. To select multiple line hold “Ctrl” Key and select multiple lines.



5) Click “Add Selected Lines to Copy the selected line to the Legal Requirements Text box. Pop will close automatically.


6) To close the pop up without selection, click on the x icon on the top right corner.

5) When editing text in the boxes, there seemed to be an issue with the text automatically moving down to the next line. It was just one really long line.

a. Change Details.

i. Changed related Text boxes to multi-line Text boxes

Polycarbonate Shielding, temporary portable guards erected during proof test, administrative controls restricting access for authorized personnel only with signs posted indicating various hazard zone designations (i.e. workstation or green zone), set up and support areas - yellow or caution zones, running equipment or higher danger areas = red warning zones. Camera and microphone systems (twin sets) are available to be utilized at each assembly station to

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6) Is it possible to show less information when looking at the whole grid/chart of RAs but then make that information available when you click on the specific RA? The idea is to condense the chart but still make all the information available once the specific RA is selected.

a. Change Details:

I. Following Fields shown in the initial search result screen:


- Identification Number
- EHS Site
- EHS Type (Health/Safety or Environmental)
- QMS System – Functional Group Designation
- QMS Process – Functional Area within the group – specific lab, process, area etc..
- Assessors
- Assessment Date
- Description of the Assessment
- Hazard/Cause
- ~~Current Engineering Controls~~
- ~~Current Administrative Controls~~
- Current Score
- ~~Proposed Engineering Controls~~
- ~~Proposed Administrative Controls~~
- Proposed Score
- Final Engineering Controls
- Final Administrative Controls
- Final Score
- Person Responsible
- Close out Date
- Legal Reference

II. Following Fields Removed from initial view:

- Hazard Code
- Impact
- Current Likelihood score
- Current Consequence score
- Proposed Likelihood score
- Proposed Consequence Score
- Final Likelihood score
- Final Consequence Score
- Target Date

RA ID	EHS Site	EHS Type	EHS System	EHS Process	Assessment	Assessment Date	Description	Hazard/Cause	Current Score	Proposed Score	Final Score	Person Responsible	Close out Date	Legal Reference
101	MTS	Health & Safety	Environmental Health & Safety (EHS)	Inventory	Material Storage	1/12/2016	Procedures for handling of hazardous materials	Hazardous material spillage	30	30	30	John Doe	1/15/2016	OSHA 1910.120

III. Updated the Report to reflect the same fields as the initial search screen


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ID	EHS Site	EHS Type	QMS System	QMS Process	Assessors	Assess Date	Hazard Code	Activity Description	Hazard Cause	Impact	Curr Eng Controls	Curr Admin Controls	Curr Likeli	Curr Conseq	Curr Risk Score	Proposed Eng Controls	Proposed Admin Controls	Prog Likeli	Prog Conseq	Prog Risk Score	Final Eng Controls	
597	Eden Prairie	Safety & Health	Manufacturing	System Assembly	Jason Gibson	11/12/2014		The Landmark actuator moves unexpectedly when there is no hydraulic power at the inlet to the machine ; movement can be as high as 6 inches (in high flow) Actuator also can move when commanded at the GUI when there is no hydraulic power.	Product design flaw		none	none		5	8	40 Add safety cylinder lock device to ensure plc compliance to stop cylinder drift on landmark and other MTS product to ensure safety within MTS and field (customer sites).	Training and awareness via formal record?		2	8	16	

- 7) Is there a way to have the ‘People Responsible’ for each RA receive an email or notice when their RA meets a certain age. Ex: receive an email every 30 days until the RA is closed.
- i. Initial creation alert – sent out to all responsible persons identified, and associated assessors, EHS – James, Randy, Evan
 1. Complete. When a New RA item is created an email is send out to all participants of the RA and their managers. Message of the email is as follows:

“This message is to notify you that RA#____, has been verified and closed; no further action is needed. We thank you for your efforts and support with this process.”
 - ii. RA Closure alert – sent out to all responsible persons identified, and associated assessors, EHS – James, Randy, Evan
 1. Complete. When a New RA item is closed (only issued when the close out date has been populated/saved into the RA system for all to be informed of closure) an email is send out to all participants of the RA and their managers. Message of the email is as follows:

“This notice is to form you that a new Risk Assessment entry has been created. If you are receiving this message you have been identified as a responsible person or contributing assessor for this item. Please review the evaluation content and the proposed controls for examination and action in support of this entry. (Note all items with a risk rating of 36 or higher = should be addressed within a calendar year, all items rated 50 or higher must be addressed immediately, all others- when possible to lower any associated hazards/risks identified – strive to lower all scores)
 - iii. RA Notification for items which are not closed and are 45, 90, 180, 270 and 360 days old. For notification 180 days and older include the person responsible’s manager.
 1. Complete. When any RA item is not closed and is older than either 360 or 270 or 180 or 90 or 45 days; an email is send out to all participants of the RA and their managers(only in case of 180,270 and 360). Message of the email is as follows:

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<p>Procedure Owner(s) – list Functions: EHS Department, EHS Core Team, Qualified Individual</p>		<p>Revision's Training Requirements – select one or both (per section #9): Awareness <input type="checkbox"/> Formal <input checked="" type="checkbox"/></p>	

“This is your {x} day Risk Assessment Notice – this message is to remind you that you have been noted as a responsible person associated with RA# _____”.

Please review this entry, the proposed control items listed, and contact the noted assessors or other Qualified Individuals for any updating, revising, or closure of this item.

8) Email ‘People Responsible’ for each RA when they are added/removed to the Risk Assessment Item.

Change Details:

- i. Added Active Directory Search icon next to the Person Responsible Text box which will allow user to search for users and allow selection of multiple users.

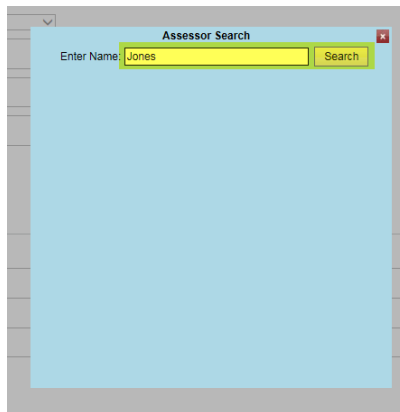
Person(s) Responsible: 

- ii. Added Active Directory Search icon next to the Assessors Text box which will allow user to search for users and allow selection of multiple users.


Assessors: 

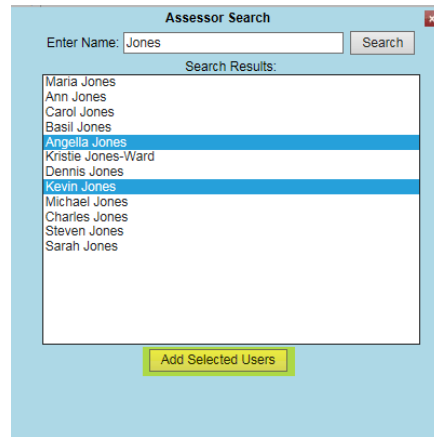
Step to search and select a user:

- 1) Click on the Active Directory Search Icon.
- 2) On the subsequent Pop window, enter any part of the name of the user to be found. And click Search



- 3) Select the desired user in the list. For multiple user selection hold down the “Ctrl” Key and select multiple users. And click on “Add Selected Users” button to add users.

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4) Repeat step 1-3 to add more users.

- iii. Any user added or removed, an email will be sending out to the recipient list described in 8.a.ii with the content provided in 8.a.i.
 - 1. Complete. Any user added /removed will receive an email with the following message. A CC would be marked to all participants of the RA and their managers:

New RA Contributor Notification: “This notice is to inform your name has been added to a Risk Assessment entry – RA# _____. Please review the evaluation content and the proposed controls for examination and action in support of this entry. (EHS- website – Risk Assessment tab)


Removed RA Contributor Notification: “This notice is to inform your name has been removed from a Risk Assessment entry - RA# _____. No further actions are needed at this time. Thank you for your support with this process.

9) Provide an ability to do splat search to filter records based on Keywords.

a. Change Details:

- i. Added a Smart Search feature on the initial screen which will look for a create a simple single word search or a more complex Boolean search on the fields listed below and display only records which match the criteria.

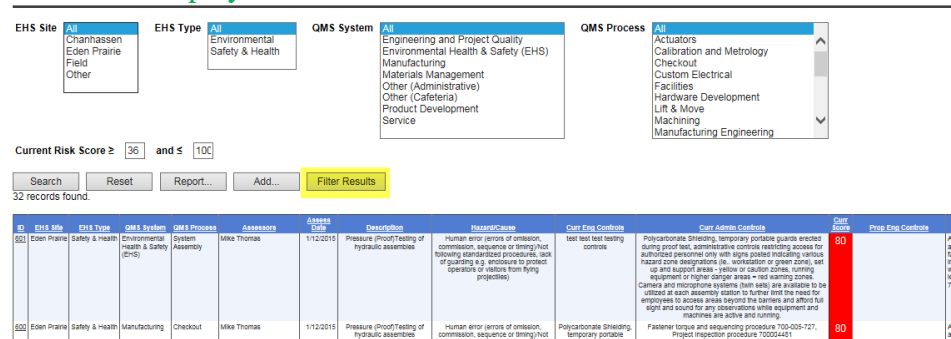
Fields to search:

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- 1) Description field
- 2) Hazard/Cause Field
- 3) Current Engineering Controls
- 4) Current Administrative Controls

Steps to Filter Records:

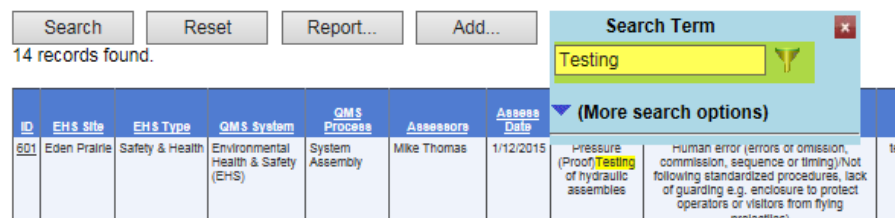
- 1) Once the Records are displayed on the initial Screen, a Filter Results button will be displayed above the Results table:



The screenshot shows the QMS interface with filter dropdowns for EHS Site, EHS Type, QMS System, and QMS Process. Below the filters are search criteria (Current Risk Score ≥ 36 and ≤ 100) and buttons for Search, Reset, Report..., Add..., and Filter Results. A table below shows 32 records found, with columns for ID, EHS Site, EHS Type, QMS System, QMS Process, Assessors, Assess Date, Description, Hazard/Cause, Current Engineering Controls, Current Administrative Controls, and Current Risk Score.

ID	EHS Site	EHS Type	QMS System	QMS Process	Assessors	Assess Date	Description	Hazard/Cause	Current Engineering Controls	Current Administrative Controls	Current Risk Score
502	Eden Prairie	Safety & Health	Environmental Health & Safety (EHS)	System Assembly	Mike Thomas	1/12/2015	Pressure (Proof) Testing of hydraulic assemblies	Human error (errors of omission, commission, sequence or timing) / Not following standardized procedures, lack of guarding e.g. enclosure to protect operators or visitors from flying projectiles	Test test test testing controls	Polycarbonate Shielding, temporary portable guards erected during proof test, administrative controls restricting access for authorized personnel only with signs posted including various hazard zone designations (ie. workstation or green zone), set up and support areas - restrict or caution zones, warning equipment or higher danger areas - not warning zones	80
500	Eden Prairie	Safety & Health	Manufacturing	Checkout	Mike Thomas	1/12/2015	Pressure (Proof) Testing of hydraulic assemblies	Human error (errors of omission, commission, sequence or timing) / Not following standardized procedures, lack of guarding e.g. enclosure to protect operators or visitors from flying projectiles	Polycarbonate Shielding, temporary portable	Fastener torque and sequencing procedure 700-009-727, Project Inspection procedure 700004441	80


- 2) Click the Filter Results and on the subsequent Pop up window, enter the search term in the Text box.



The screenshot shows a search filter pop-up window with a search term 'Testing' entered. Below the search term is a dropdown menu for '(More search options)'. The table below shows 14 records found, with columns for ID, EHS Site, EHS Type, QMS System, QMS Process, Assessors, Assess Date, Description, Hazard/Cause, Current Engineering Controls, Current Administrative Controls, and Current Risk Score.

ID	EHS Site	EHS Type	QMS System	QMS Process	Assessors	Assess Date	Description	Hazard/Cause	Current Engineering Controls	Current Administrative Controls	Current Risk Score
601	Eden Prairie	Safety & Health	Environmental Health & Safety (EHS)	System Assembly	Mike Thomas	1/12/2015	Pressure (Proof) Testing of hydraulic assemblies	Human error (errors of omission, commission, sequence or timing) / Not following standardized procedures, lack of guarding e.g. enclosure to protect operators or visitors from flying projectiles	Test test test testing controls	Polycarbonate Shielding, temporary portable	80

- 3) Click on the Filter icon to filter the results based on the search term entered. The Results table will highlight the all occurrences of the Search term in the fields used for searching.
- 4) To search with multiple Search term separate each term with a space. The Results table will highlight the all occurrences of Search terms in the fields used for searching. Any record containing either of the search term in the fields used to searching, will be displayed.

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Search Term
 Testing Proof Guards

14 records found.

ID	EHS Site	EHS Type	QMS System	QMS Process	Assessors	Assess Date	Description	Current Engineering Controls	Current Administrative Controls	Cost Score
501	Eden Prairie	Safety & Health	Environmental Health & Safety (EHS)	System Assembly	Mike Thomas	1/12/2015	Pressure Proof Testing of hydraulic assemblies. Human error (errors of omission, commission, sequence or timing) not following standardized procedures, lack of guarding e.g. enclosure to protect operators or visitors from flying projectiles)	test test test testing controls	Polycarbonate Shielding, temporary portable guards erected during proof test, administrative controls restricting access for authorized personnel only with signs posted indicating various hazard zone designations (i.e., workstation of green zone), set up and support areas - yellow or caution zones, running equipment or higher danger areas - red warning zones. Camera and microphone systems (dash sets) are available to be utilized at each assembly station to further test the need for employees to access areas beyond the barriers and afford full sight and sound for any observations while equipment and machines are active and running.	80
500	Eden Prairie	Safety & Health	Manufacturing	Checkout	Mike Thomas	1/12/2015	Pressure Proof Testing of hydraulic assemblies. Human error (errors of omission, commission, sequence or timing) not following standardized procedures, lack of guarding e.g. enclosure to protect operators or visitors from flying projectiles)	Polycarbonate Shielding, temporary portable guards erected during proof test.	Fastener torque and sequencing procedure 700-005-727, Project Inspection procedure 700054451	80
509	Eden Prairie	Safety & Health	Manufacturing	Checkout	Mike Thomas	1/12/2015	Pressure Proof Testing of hydraulic assemblies. Catastrophic failure of pressurized systems/Assembly error or insufficient parts received from vendor (e.g. under-rating of components), incompatibility of pressurized system components.	Portable polycarbonate shields	Testing performed in pit or crash sled room when possible	80
505	Eden Prairie	Safety & Health	Manufacturing	Actuators	Bob Klenotich, Cedric D'Souza	9/24/2014	Pressure Proof Testing of hydraulic assemblies. Catastrophic failure of pressurized systems/Assembly error or insufficient parts received from vendor (e.g. under-rating of components), incompatibility of pressurized system components.	Test Bench with side shields, steel reinforcement in wall panels, temporary guarding, EPO to HPU.	Actuator High Pressure Testing Procedure, Actuator and Manifold Test Access Control Procedure, with signs.	100
504	Eden Prairie	Safety & Health	Manufacturing	Actuators	Bob Klenotich, Cedric D'Souza	9/24/2014	Pressure Proof Testing of hydraulic assemblies. Human error (errors of omission, commission, sequence or timing) not following standardized procedures, lack of guarding e.g. enclosure to protect operators or visitors from flying projectiles)	Polycarbonate Shielding, red alert warning lights (active test environment), 300ms inch carbon plate steel inside walls in test area, temporary portable guards erected during proof test.	Actuator High Pressure Testing Work Instruction, Actuator and Manifold Test Access Control Procedure	50
502	Eden Prairie	Environmental	Manufacturing	Actuators	Bob Klenotich, Cedric D'Souza	9/24/2014	Pressure Proof Testing of hydraulic assemblies. Oil Release/Failure to automatically shut down HPU upon catastrophic failure of system components.	N/A	Spill absorbents in area	50


5) To search the term in specific fields, use the More Search options. Click on more search options and check the fields you want to search. Click filter icon to display records containing the search term in the fields checked for searching

Search Term
 proof testing

14 records found.

ID	EHS Site	EHS Type	QMS System	QMS Process	Assessors	Assess Date	Description	Current Engineering Controls
501	Eden Prairie	Safety & Health	Environmental Health & Safety (EHS)	System Assembly	Mike Thomas	1/12/2015	Pressure Proof Testing of hydraulic assemblies. Human error (errors of omission, commission, sequence or timing) not following standardized procedures, lack of guarding e.g. enclosure to protect operators or visitors from flying projectiles)	test test test testing controls
500	Eden Prairie	Safety & Health	Manufacturing	Checkout	Mike Thomas	1/12/2015	Pressure Proof Testing of hydraulic assemblies. Human error (errors of omission, commission, sequence or timing) not following standardized procedures, lack of guarding e.g. enclosure to protect operators or visitors from flying projectiles)	Polycarbonate Shielding, temporary portable guards erected during proof test.
509	Eden Prairie	Safety & Health	Manufacturing	Checkout	Mike Thomas	1/12/2015	Pressure Proof Testing of hydraulic assemblies. Catastrophic failure of pressurized systems/Assembly error or insufficient parts received from vendor (e.g. under-rating of components), incompatibility of pressurized system components.	Portable polycarbonate shields
505	Eden Prairie	Safety & Health	Manufacturing	Actuators	Bob Klenotich, Cedric D'Souza	9/24/2014	Pressure Proof Testing of hydraulic assemblies. Catastrophic failure of pressurized systems/Assembly error or insufficient parts received from vendor (e.g. under-rating of components), incompatibility of pressurized system components.	Test Bench with side shields, steel reinforcement in wall panels, temporary guarding, EPO to HPU.
504	Eden Prairie	Safety & Health	Manufacturing	Actuators	Bob Klenotich, Cedric D'Souza	9/24/2014	Pressure Proof Testing of hydraulic assemblies. Human error (errors of omission, commission, sequence or timing) not following standardized procedures, lack of guarding e.g. enclosure to protect operators or visitors from flying projectiles)	Polycarbonate Shielding, red alert warning lights (active test environment), 300ms inch carbon plate steel inside walls in test area, temporary portable guards erected during proof test.
502	Eden Prairie	Environmental	Manufacturing	Actuators	Bob Klenotich, Cedric D'Souza	9/24/2014	Pressure Proof Testing of hydraulic assemblies. Oil Release/Failure to automatically shut down HPU upon catastrophic failure of system components.	N/A
503	Eden Prairie	Safety & Health	Manufacturing	Actuators	Bob Klenotich, Tom Klenot, Dennis Harvey, Bruce Anderson	9/16/2014	Pressure Proof Testing of hydraulic assemblies. Pressure Intensification resulting in fluid injection/failure to isolate operator during proof test.	Polycarbonate Shielding, red alert warning lights (active test environment), 300ms inch carbon plate steel inside walls in test area, temporary portable guards erected during proof test.

6) To filter records such that only records which have all the search terms in the fields used searching, will be displayed; use the More Search options. Click on more search options and change the search mode to "AND"

	QMS Procedure MTS Systems Corporation – MTS Test	Document Number: EHS-200-102	Rev.: D
	Title: Hazard Identification, Risk Assessment & Control Determination		Page #: 31 of 34
Procedure Owner(s) – list Functions: EHS Department, EHS Core Team, Qualified Individual		Revision's Training Requirements – select one or both (per section #9): Awareness Formal X	


Search Reset Report... Add...

14 records found.

ID	EHS Site	EHS Type	QMS System	QMS Process	Assessors	Assess Date	Description	Curr Enn Controls
501	Eden Prairie	Safety & Health	Environmental Health & Safety (EHS)	System Assembly	Mike Thomas	1/12/2015		test test test testing controls
600	Eden Prairie	Safety & Health	Manufacturing	Checkout	Mike Thomas	1/12/2015		Polycarbonate Shielding, temporary portable guards erected during proof test.
599	Eden Prairie	Safety & Health	Manufacturing	Checkout	Mike Thomas	1/12/2015	Pressure Proof Testing of actuator assemblies	Portable polycarbonate shields
595	Eden Prairie	Safety & Health	Manufacturing	Actuators	Bob Klenotich, Cedric D'Souza	9/24/2014	Pressure Proof testing	Test Bench with side shields, steel reinforcement in wall panels, temporary guarding, EPO to HPU.
594	Eden Prairie	Safety & Health	Manufacturing	Actuators	Bob Klenotich, Cedric D'souza	9/24/2014	Pressure Proof Testing	Polycarbonate Shielding, red alert warning lights (active test environment), 3/8ths inch carbon plate steel inside walls in test area, temporary portable guards erected during proof test.
592	Eden Prairie	Environmental	Manufacturing	Actuators	Bob Klenotich, Cedric D'Souza	9/24/2014	Pressure Proof Testing Actuators	N/A
582	Eden Prairie	Safety & Health	Manufacturing	Actuators	Bob Klenotich, Tom Kilinski, Dennis Harvey, Bruce Anderson	9/16/2014	Pressure Proof testing actuator assemblies	Polycarbonate Shielding, red alert warning lights (active test environment), 3/8ths inch carbon plate steel inside walls in test area, temporary portable guards erected during

10) Documentation:
 Available at:
[Documentation](#)

- 11) Target Date Validation:
- a. Change Details:
 - i. Target Date is made mandatory while updating a Risk Assessment when the Initial Risk Score is greater than or equal to 36. Validation message is displayed next to the target date when Save button is clicked.

	QMS Procedure MTS Systems Corporation – MTS Test	Document Number: EHS-200-102	Rev.: D
	Title: Hazard Identification, Risk Assessment & Control Determination		Page #: 33 of 34
Procedure Owner(s) – list Functions: EHS Department, EHS Core Team, Qualified Individual		Revision's Training Requirements – select one or both (per section #9): Awareness <input type="checkbox"/> Formal <input checked="" type="checkbox"/>	

Person(s) Responsible: Abraham Thomas, Ta
 Corrective Action number: 1501 CI

Initial Controls - Step 1 | Proposed Controls - Step 2 | **Final (Current) Controls - Step 3**

Final (Current) Additional Engineering Controls - including means, resources, monitoring, and records:

Final (Current) Additional Administrative Controls - including means, resources, monitoring, and records:

Likelihood:

Consequence:

Risk Score: 0

Revision	Date	Revised By	Closeout date
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iii. On the Edit screen Tab header Final Controls – Step3 changed to Final (Current) Controls – Step3. Also Final labels within the tab changed to Final(Current)

Corrective Action number : 1501 Close Out Date: 8/18/2016

Initial Controls - Step 1 | Proposed Controls - Step 2 | **Final (Current) Controls - Step 3**

Final (Current) Additional Engineering Controls - including means, resources, monitoring, and records:

Final (Current) Additional Administrative Controls - including means, resources, monitoring, and records:

Likelihood:

Consequence:

Risk Score: 0

13) Change Current Control label in the search screen to Initial Control

a. Change Details


i. On the search screen table header label: Current Score changed to Initial Score

ID	EHS Site	EHS Type	QMS System	QMS Process	Assessors	Assess Date	Description	Hazard/Cause	Initial Score	Prog Score	Final/Current/Eng Controls	Final/Current/ Admin Controls	Final (Current) Score	Person Responsible	Close Out Date	Legal Refer
1000	Eden Prairie	Environmental	Other (Administrative)	Parts	Carolynn Fauc.				30	0			0	Abraham Thomas.	8/18/2016	slip and fall OSHA General
001	Eden Prairie	Safety & Health	Environmental Health & Safety (EHS)	System Assembly	Carolynn Fauc.	1/12/2015	Pressure (Proof)Testing of hydraulic assemblies	Human error (errors of omission, commission, sequence or timing)Not following standardized procedures, lack of guarding e.g. enclosure to protect operators or visitors from flying	80	30	test engineering final controls 121212121jdsdm.samd	test engineering final controls 121212121jdsdm.samd	12	Carolynn Fauc.		29 CFR 1910.212, Public Law 100-505, Sec. 5 (a) (1), 854 stat. 1650 Sec. 5 (a) CFR 1910.151 Public Law 100-505, Sec. 5 (a) (1)

14) Track close out date in history

a. Change Details

i. Added Close Out column to the Revision history table in the View page. This column will store the close out date in the revision history each time the RA is updated.

	QMS Procedure MTS Systems Corporation – MTS Test	Document Number: EHS-200-102	Rev.: D
	Title: Hazard Identification, Risk Assessment & Control Determination		Page #: 34 of 34
Procedure Owner(s) – list Functions: EHS Department, EHS Core Team, Qualified Individual		Revision's Training Requirements – select one or both (per section #9): Awareness <input type="checkbox"/> Formal <input checked="" type="checkbox"/>	

Revision	Date	Revised By	Closeout date
1	5/20/2016 9:15 AM	abrahamr	
2	5/20/2016 9:18 AM	abrahamr	
3	5/20/2016 9:50 AM	abrahamr	
4	5/20/2016 9:58 AM	abrahamr	
5	6/2/2016 12:34 PM	abrahamr	
6	6/2/2016 12:49 PM	abrahamr	
7	6/2/2016 12:56 PM	abrahamr	
8	6/3/2016 9:19 AM	abrahamr	
9	6/10/2016 10:11 AM	abrahamr	
10	6/14/2016 2:17 PM	abrahamr	
11	6/14/2016 2:18 PM	abrahamr	
12	6/14/2016 2:18 PM	abrahamr	
13	6/14/2016 2:39 PM	abrahamr	
14	6/14/2016 2:39 PM	abrahamr	
15	6/14/2016 2:44 PM	abrahamr	
16	6/14/2016 3:17 PM	abrahamr	6/16/2016
17	6/14/2016 3:19 PM	abrahamr	6/16/2016

15) On adding a Risk Assessment Item, copy initial control values to Final (current) if blank final controls are blank.

a. Change Details

- i. When a new RA item is added and if Final (current) Engineering Controls Final (current) Admin Controls Final (current) Likelihood ID Final (current) Consequence ID are blank, then corresponding Initial values are copied as the Final (Current) values.