



The Rice-Tinsley Corporation

Health, Safety and Environment Manual

HSE MANUAL REVISION HISTORY	12
Revision History Table	12
HSE MANAGEMENT SYSTEM REVIEW	13
Management System Review Sign-Off	13
INTRODUCTION	14
Overview	14
Scope.....	14
Terms and Definitions.....	14
Health, Safety, and Environmental Elements	15
General Requirements	16
POLICY OVERVIEW	18
Objective	18
Responsibilities	18
Procedure.....	18
HEALTH & SAFETY POLICY STATEMENT	19
Statement	19
ENVIRONMENTAL POLICY STATEMENT	21
Statement	21
DRUG & ALCOHOL POLICY STATEMENT	22
Statement	22
HSE PLANNING	23
Objectives	23
Responsibilities	23
HSE Planning Process Overview.....	23
Hazard Identification	24
Hazard Identification Procedure.....	24
Risk Assessment	26
Risk Control	27
Legal and Other Requirements	28
HSE OBJECTIVES & TARGETS	31
Purpose	31
Scope.....	31
Definitions.....	31
Requirements.....	31

DOCUMENT CONTROL POLICY	33
Purpose	33
Scope	33
Policy & Procedure	33
Responsibilities	33
List of Controlled Documents	33
FORMAL SAFETY PROGRAMS	34
ACCESS TO EMPLOYEE MEDICAL & EXPOSURE RECORDS	35
Purpose	35
Key Responsibilities	35
Overview	35
Definitions	35
Procedure	37
Records Retention	38
Transfer of Records Should the Company Cease to Do Business	38
Employee Information	38
AERIAL LIFTS	41
Purpose	41
Scope	41
Key Responsibilities	41
Procedure	41
Definitions	42
General Use Requirements	42
Training - Employees Using Aerial Lift Devices Will Be Trained In:	46
BLOODBORNE PATHOGENS	47
Purpose	47
Scope	47
Key Responsibilities	47
Procedure	47
Methods of Compliance	48
Vaccination Declination Form	53
Post-Exposure Evaluation And Follow-Up Checklist	54
COLD WEATHER SAFETY / COLD STRESS	55
Purpose	55
Scope	55
Responsibilities	55

Cold Temperature Procedures.....	55
Training	57
CONFINED SPACES.....	59
Purpose	59
Scope.....	59
Definitions.....	59
Responsibilities	61
Procedure.....	64
Training	70
COVID-19 HEALTH, SAFETY, PREVENTION & RESPONSE	71
Policy Statement.....	71
COVID-19 Compliance Officers	71
COVID-19 Screening and Assessment Protocols	71
Critical Infrastructure Employees	72
Worker Hygiene Policy.....	72
Workplace Sanitation	73
Physical Distancing.....	73
Personal Protective Equipment (PPE).....	74
Training	74
Travel	74
Recordkeeping	75
Worksite Flexibility	75
Employee Well-Being.....	75
Resources.....	76
Screening Method: Visual Scan and Temperature Check	76
Steps to Perform a Visual Scan and Temperature Check	77
Employee Assessment Flowchart	82
CORONAVIRUS & COVID-19: PREVENTION AND RESPONSE.....	83
Purpose	83
Risk in the U.S. and Canada	83
Transmission & Exposure.....	83
Signs, Symptoms & Treatment	84
Preventing & Limiting the Spread of the Virus: Protect Yourself and Others	85
Preventing & Limiting the Spread of the Virus: Frontline Workers.....	86
Essential Travel & Alternatives	86
Additional Resources	86
DISCIPLINARY PROGRAM.....	87

Purpose	87
Scope.....	87
Responsibilities	87
Requirements.....	87
Procedure.....	88
Safety Reprimand Form	89
DRIVING SAFETY	90
Purpose	90
Key Responsibilities	90
Vehicle and Transportation Related	90
ELECTRICAL SAFETY AWARENESS.....	94
Purpose	94
Scope.....	94
Definitions.....	94
Responsibilities	96
Safe Work Practices	97
Training	101
EXCAVATIONS/TRENCHING/SHORING	102
Purpose	102
Scope.....	102
Definitions.....	102
Key Responsibilities	104
Procedure.....	104
Training	110
FALL PROTECTION	111
Purpose	111
Scope.....	111
Definitions.....	111
Responsibilities	114
Procedure.....	115
Training	120
FIRE PROTECTION/ EXTINGUISHERS.....	121
Purpose	121
Scope.....	121
Responsibilities	121
Procedure.....	121

FIRST AID/CPR	124
Purpose	124
Scope.....	124
Responsibilities	124
Requirements.....	124
FORKLIFT & INDUSTRIAL TRUCKS	126
Purpose	126
Scope.....	126
Definitions.....	126
Key Responsibilities	126
Procedure.....	127
GENERAL WASTE MANAGEMENT	132
Purpose	132
Scope.....	132
Procedure.....	132
Education and Training	137
GROUND FAULT PROTECTION / GFCI	138
Purpose	138
Definitions.....	138
Responsibilities	138
Procedures and Guidelines to Eliminate Injuries	138
HAND AND/OR POWER TOOLS / TOOL SAFETY.....	141
Purpose	141
Scope.....	141
Responsibilities	141
Requirements.....	141
HAZARD COMMUNICATION (HAZCOM).....	153
Purpose	153
Scope.....	153
Definitions.....	153
Responsibilities	154
Requirements.....	155
GHS (Global Harmonization System)	159
Hazard Communication Standard: Safety Data Sheets	161
The Rice-Tinsley Corporation Responsibilities.....	169
New HCS Pictograms and Hazards.....	170

Allocation of Label Elements (Examples).....	171
HEAT ILLNESS PREVENTION	173
Purpose	173
Scope.....	173
Definitions.....	173
Requirements.....	173
LADDER SAFETY	179
Purpose	179
Scope.....	179
Definitions.....	179
Key Responsibilities	179
Procedure.....	180
LOCKOUT/TAGOUT	183
Purpose	183
Scope.....	183
Definitions.....	183
Key Responsibilities	184
Employee Training	188
Specific Equipment Lockout Procedures	190
Sample Tag.....	191
Isolation Log.....	192
Annual Audit Of The Control Of Hazardous Energy Program	193
NFPA 70E	194
Purpose	194
Scope.....	194
Responsibilities	194
Safe Work Practices For Working Within The Limited Approach Boundary	195
Additional Training Requirements.....	201
NOISE EXPOSURE / HEARING CONSERVATION	203
Purpose	203
Scope.....	203
Definitions.....	203
Key Responsibilities	203
Procedure.....	203
Training	206
PANDEMIC PREPAREDNESS	207

Purpose	207
Lessons Learned.....	209
Training	211
PERSONAL PROTECTIVE EQUIPMENT/ASSESSMENTS – (PPE)	212
Purpose	212
Scope.....	212
Key Responsibilities	212
Procedure.....	213
Training	217
RESPIRATORY PROTECTION	224
Purpose	224
Scope.....	224
Respiratory Program Administrator	224
Medical Requirements.....	225
Work Site Procedures	227
Respirator Selection Criteria.....	227
Respirator Fit Testing	230
Workplace Monitoring.....	239
Recordkeeping	239
Program Evaluation	239
Training	239
The Rice-Tinsley Corporation Qualitative Respiratory Fit Test Record Sheet	240
RIGGING MATERIAL HANDLING	241
Purpose	241
Scope.....	241
Key Responsibilities	241
Procedure.....	241
SCAFFOLDS	243
Purpose	243
Scope.....	243
Definitions.....	243
Key Responsibilities	244
Procedure.....	244
Training Requirements	247
SPILL PREVENTION / RESPONSE	250
Purpose	250

Scope.....	250
Requirements.....	250
STOP WORK AUTHORITY	252
Purpose	252
Scope.....	252
Key Responsibilities	252
Stop Work Authority Procedure	252
Follow-Up.....	252
Training	253
Stop Work Form.....	253
WELDING, CUTTING AND HOT WORK.....	254
Purpose	254
Scope.....	254
Definitions.....	254
Key Responsibilities	254
Procedure.....	255
Training	262
QMS PROGRAMS.....	263
QMS COMPETENCE, AWARENESS AND COMMUNICATION - GLOBAL	264
Purpose	264
Scope.....	264
Definitions.....	264
Procedure.....	265
Training	267
QMS CONTEXT OF THE ORGANIZATION - GLOBAL.....	269
Introduction	269
Context of The Rice-Tinsley Corporation.....	269
Planning	274
QMS CONTROL OF NON-CONFORMING OUTPUTS - GLOBAL	278
Purpose	278
Scope.....	278
Definitions.....	278
Responsibility And Authority	278
Procedure.....	278
Retained Documented Information.....	279
Process Flow Chart.....	280

QMS DESIGN AND DEVELOPMENT - GLOBAL	281
Purpose	281
Scope.....	281
Definitions.....	281
Information	281
Process Flow Chart.....	284
Document History.....	285
QMS IMPROVEMENT - GLOBAL	286
Purpose	286
Policy Statement.....	286
Core Values	286
8 Elements of QMS	287
Level 1, 2, And 3 Descriptions.....	288
QMS INTERNAL AUDIT - GLOBAL.....	292
Purpose	292
Scope.....	292
Leadership's Responsibilities and Commitment.....	294
QMS LEADERSHIP AND COMMITMENT - GLOBAL	299
Purpose	299
Management Responsibility	299
Management Commitment	301
Availability of Resource	303
Quality Leadership.....	305
QMS MANAGEMENT REVIEW - GLOBAL	307
Purpose	307
Quality System	307
What are the required Management Review Inputs	309
What are the Required Management Review Outputs.....	310
General.....	311
QMS MONITOR AND MEASUREMENT - GLOBAL	312
Purpose	312
Terms and Definitions.....	312
Scope.....	312
Goal of Monitoring, Measurement, Analysis, and Evaluation.....	313
Defining the Methods for Monitoring, Measurement, Analysis, and Evaluation	314
QMS PLANNING - GLOBAL.....	315

Purpose	315
Responsibilities	315
Procedure.....	315
Key Requirements.....	317
QMS POLICY AND OBJECTIVES - GLOBAL	318
Quality Policy	318
Objectives	318
QMS PROCESSES- GLOBAL	320
Purpose and Scope	320
Terms And Definitions	320
Processes	320
Measurement, Analysis, And Improvement.....	322
Control of Documented Information	323
QMS PRODUCT AND SERVICE REQUIREMENTS - GLOBAL	325
Product and Service	325
QMS RESOURCES (EXTERNAL AND INTERNAL) - GLOBAL.....	328
Resources.....	328
QMS ROLES AND RESPONSIBILITIES - GLOBAL	334
Purpose and Scope	334
Responsibilities	334
Customer Focus	336
END	337

HSE MANUAL REVISION HISTORY

REVISION HISTORY TABLE

The following table contains the revision history of this document.

Change	Version	Date	Modified By	Authorized By
Initial Issue	1.0	07/01/2020	Kristin Hunsaker	Daren DeGeorge

HSE MANAGEMENT SYSTEM REVIEW

MANAGEMENT SYSTEM REVIEW SIGN-OFF

The following HSE Manual was reviewed by a committee of management on 07/12/2020 to ensure that the information contained within the document was accurate.

The following management/reviewing committee has signed off:

Printed Name	Title	Signature
Daren DeGeorge	CFO	
Eddie Oliver	HSE Coordinator	
Kristin Hunsaker	HSE Manager	

INTRODUCTION

OVERVIEW

The The Rice-Tinsley Corporation Health, Safety, and Environmental manual has been developed to provide a systematic approach to safety and health in order to have an incident free culture of safety.

SCOPE

The The Rice-Tinsley Corporation Safety & Health Management System applies to all operations conducted by The Rice-Tinsley Corporation. Any new acquisition, project, joint venture or contract controlled by The Rice-Tinsley Corporation shall follow its requirements.

TERMS AND DEFINITIONS

Audit — the systematic and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled.

Audit program — a set of one or more audits planned for a specific time frame and directed towards a specific purpose. Note: An audit program includes all activities necessary for planning, organizing, and conducting the audits.

Competence — demonstrated ability to apply Health, Safety, and Environmental knowledge and skills.

Continual improvement — the process of enhancing the Health, Safety, and Environmental to achieve ongoing improvement in overall safety management performance.

Contractor — an organization or individual providing services to another organization in accordance with agreed-upon specifications, terms, and conditions.

Document — a medium containing information related to the Health, Safety, and Environmental .

Employee — a person employed by the organization or a person under the day-to-day control of the organization.

Employee representative — a non-managerial employee who is:

- (a) a representative of other employees according to the requirements of law or collective agreements; or
- (b) selected by non-managerial employees for other reasons.

Ergonomics — integrated knowledge derived from the social and technical sciences, used to match jobs, systems, products, and environments with the physical and mental attributes of the people involved.

Hazard — a source of potential harm to an employee.

Incident — an occurrence, arising in the course of work, that could result in an injury or illness (includes near misses).

Legal requirements — requirements of applicable OHSA, OS&H, federal, provincial/territorial, and municipal laws, regulations, and bylaws, and where applicable, provisions of the organization's collective agreements that relate to health and safety.

Organization — a The Rice-Tinsley Corporation, operation, undertaking, establishment, enterprise, institution, or association, or a part or combination thereof, that has its own management. An organization may be incorporated or **unincorporated, public or private**.

Other requirements — other occupational health and safety provisions to which the organization subscribes.

Procedure — a documented method to carry out an activity.

Process — a set of interrelated or interacting activities, that transforms inputs into outputs.

Record — a document that states results achieved or provides evidence of activities performed.

Risk — a combination of the likelihood of the occurrence of a hazardous event and the severity of harm caused by the event.

Safety health and Environmental (HSE) safety management system — part of the overall management of the organization that addresses occupational, health and safety hazards and risks associated with its activities.

System — a set of interrelated or interacting elements.

Workplace parties — managers (including supervisors), employees, and employee representatives.

HEALTH, SAFETY, AND ENVIROMENTAL ELEMENTS

The following is a general listing and description of the The Rice-Tinsley Corporation Health, Safety, and Environmental (HSE) elements and their application.



GENERAL REQUIREMENTS

Management Commitment and Leadership

Senior management of The Rice-Tinsley Corporation shall provide leadership for safety and health activities and assume overall responsibility for the HSE. This responsibility includes:

- Establishing, actively promoting, and maintaining the HSE;
- Providing appropriate financial, human, and organizational resources to plan, implement, check, review, and correct the HSE;
- Defining roles, assigning responsibilities, establishing accountability, and delegating authority to implement an effective HSE;
- Establishing and implementing a safety and health policy and measurable objectives;
- Reviewing the organization's HSE at planned intervals;
- Ensuring that employees and employee representatives are consulted; and
- Encouraging active participation on the part of employees and contractors in the establishment and maintenance of the HSE.

Management Representatives

The The Rice-Tinsley Corporation senior management shall, if warranted due to The Rice-Tinsley Corporation workforce size, designate one or more representatives of management who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for ensuring that this HSE is established, maintained and reviewed to support:

- Effective processes to identify and eliminate or control work-related hazards and risks;
- Reporting on the performance of the HSE to senior management, employees, and employee representatives (if present) as appropriate for review and as the basis for improvement.

Employee Participation

Employee participation is an essential aspect of the HSE. The Rice-Tinsley Corporation shall provide employees and employee representatives, if warranted due to The Rice-Tinsley Corporation workforce size, with time and resources to participate effectively in the development of the safety and health policy and in the process of HSE planning, implementation, training, evaluation, and corrective action; and encourage employee participation by providing mechanisms that:

- Support employee participation, such as identifying and removing barriers to participation;
- Establish workplace health and safety committees or employee representatives where required by legislation and, where applicable, collective agreements or other requirements; and
- Ensure that employees and employee representatives are trained in, and consulted on, all aspects of HSE associated with their work.

Commitment Statement

The The Rice-Tinsley Corporation Health, Safety, and Environmental (HSE) is driven by leadership and commitment from senior management and its readiness to provide resources for HSE matters. The Rice-Tinsley Corporation is

committed to providing a productive, safe and healthy work environment for our employees, contractors, clients, customers and visitors.

Our commitments are communicated to all employees, contractors and suppliers and include:

- To instill a corporate culture where harm to our staff through work is totally unacceptable;
- To be proactive in assessing health, safety and environmental hazards for new business, new and existing work systems, practices and equipment;
- To encourage team problem solving at all levels of the organization to implement work practices that continually improve safety, environmental standards and productivity;
- To report and investigate incidents and implement systems and practices that prevent reoccurrence;
- To ensure compliance with legal requirements and industry standards;
- To train managers and employees to competently perform work described in safe work procedures;
- To provide information to all employees, contractors and customers that inform them of health safety and environmental issues relevant to The Rice-Tinsley Corporation operations;
- To ensure products are safe and without adverse environmental impact.
- All The Rice-Tinsley Corporation staff have a responsibility for implementing this Health, Safety, and Environmental policy by striving to achieve a zero tolerance towards hazards, incidents and injuries.
- We continuously improve safety and health management by setting objectives, plans and performance measures and regularly reviewing progress against the targets set.
- We involve our staff in safety and health management through training and by contributing in identifying, assessing and controlling hazards.

POLICY OVERVIEW

OBJECTIVE

The objective of the The Rice-Tinsley Corporation Safety & Health Policy is to state its commitments to provide safe and healthy working conditions. It outlines the steps that are taken to meet these commitments and provides the framework for the The Rice-Tinsley Corporation Safety & Health Management System.

RESPONSIBILITIES

Corporate Management

- Adopts the The Rice-Tinsley Corporation Health & Safety Policy and all legal requirements;
- Requires that the policy be distributed to all operations for display;
- Supports the implementation of the policy throughout all operations.

Managers and Supervisors

- Discusses the policy during induction orientation;
- Communicates the requirements of the policy to all employees through safety & tailgate meetings;
- Ensures the posted policy is current and easily visible.

All Employees

- Comply with the requirements of the policy and support implementation of the policy.

PROCEDURE

In consultation with employees and employee representatives, The Rice-Tinsley Corporation shall establish and maintain the safety and health policy and shall ensure that the policy:

- Is appropriate to the nature, scale, and safety and health hazards and risks associated with The Rice-Tinsley Corporation activities;
- Includes a commitment to comply with applicable safety and health legal requirements and other requirements;
- Includes a commitment to protect employees and to ensure continual improvement;
- Provides the framework for setting and reviewing safety and health objectives and targets;
- Is documented, implemented, and maintained;
- Is posted and communicated to all employees;
- Is available to external interested parties, as appropriate;
- Is discussed during safety meetings on an as-needed basis and is included in all site specific HSE plans which are received by employees; and
- Every year the policy is reviewed for relevance and appropriateness to our The Rice-Tinsley Corporation and amended as appropriate and disseminated again.

HEALTH & SAFETY POLICY STATEMENT

STATEMENT

We are committed to comply with all applicable safety and health legal requirements. We are committed to our guiding principles which include ensuring that Safety, Health and Environment is First – never compromise on the health and safety of our customers and our people and to manage responsibly the impact that our business has on the environment. The following points summarize our employee's commitments to Health and Safety:

- Comply with Health and Safety regulations and related The Rice-Tinsley Corporation policy and procedures.
- Use all required personal protective equipment where indicated.
- Decline to operate any machinery or equipment without proper instruction regarding safety and general operation.
- All employees shall report unsafe conditions and/or hazards to their supervisors promptly.
- Follow all The Rice-Tinsley Corporation Safety Procedures and Practices.
- Promptly report all injuries/incidents and work-related diseases and actively participate in the Return to Work process in accordance with our Return to Work Policy.
- Attend all required health and safety training.
- Follow safe work instructions and assist in prevention.

All The Rice-Tinsley Corporation Managers and Supervisors are committed to take ownership of their areas of responsibility by ensuring that the following important activities occur:

- Accept direct responsibility and accountability for all matters relating to Health and Safety for the employees and/or contractors they supervise directly and/or indirectly.
- Deal promptly with employees' Health and Safety concerns and advise employees of actual and potential hazards that are known by the manager or supervisor.
- Maintain and ensure transfer of knowledge of all duties and obligations under all relevant legislation, client requirements and The Rice-Tinsley Corporation policies and procedures.
- Ensure that employees use Personal Protective Equipment as prescribed in addition to following all safety procedure and practices.
- Provide appropriate training in use of equipment, safe work practices and procedures and handling of hazardous materials.
- Ensure that all contractors, suppliers, vendors and other visitors adhere to all The Rice-Tinsley Corporation policies and procedures.
- Investigate accidents/incidents and perform workplace inspections.
- Review any accident investigation and facilitate the corresponding corrective action plan.

- Assist any injured employee to the fullest possible extent including facilitating the Return to Work process in accordance to our Corporate Return to Work policy.
- Continue to improve our health, safety, environmental and operational standards in all sites.
- Take every other reasonable precaution to protect employees.
- Implement and enforce Health and Safety rules, regulations, policies, procedures and prescribed instructions.



Daren DeGeorge
CFO [The Rice-Tinsley Corporation]

ENVIRONMENTAL POLICY STATEMENT

STATEMENT

The Rice-Tinsley Corporation recognizes that environmental concerns are of critical importance. The Rice-Tinsley Corporation encourages its employees to join with the The Rice-Tinsley Corporation in full acceptance of and compliance with this policy. We will create procedures that fully comply with federal, state and local regulations. We will provide adequate training to our employees to ensure our workers are aware of these procedures and are capable of following them.

Protection of the Environment

We will employ practical measures to protect the environment. We will conserve and protect the water, air, and land resources we use. We will strive to eliminate any releases to land, air or water that may harm human health or the environment. Continuous improvement in our environmental performance will be a principal objective.

Waste Management Policy Statement

We will work to prevent waste and pollution at the source whenever possible. New facilities and improvements of existing operations will use processes designed to minimize the environmental effects of our operations and will incorporate functional pollution control equipment.

Recycling and Waste Disposal

We will support recycling programs where practical and will use environmentally safe treatment and disposal practices for waste that is not eliminated at the source or recycled.

Compliance

We will manage existing facilities so that we meet or exceed legal requirements. We will implement programs and procedures to satisfy compliance. We will conduct compliance audits and monitor procedures and practices to evaluate our performance.

Disclosure

We will inform our employees of our progress in environmental issues. We will cooperate with the authorities and regulatory agencies in responding to inquiries. We will encourage our employees to report to the The Rice-Tinsley Corporation conditions that they reasonably believe could be harmful to the environment or pose health or safety hazards so the The Rice-Tinsley Corporation can initiate prompt corrective actions.

Commitment

Management will consider the environmental and cultural implications of its decisions.



Daren DeGeorge
CFO [The Rice-Tinsley Corporation]

DRUG & ALCOHOL POLICY STATEMENT

STATEMENT

Any employee or contractor on duty or on The Rice-Tinsley Corporation property who possesses, sells, receives, is impaired or is determined to have measurable levels of any alcohol or illegal drug in their blood or urine (no matter the amount), post drug/alcohol screen, will be subject to immediate disciplinary action or contract dismissal.

Any employee or contractor involved in a job related incident while on duty or involving The Rice-Tinsley Corporation equipment will be subject to a post-incident drug/alcohol screen.

If an employee or contractor returns to work following an absence of more than 90 days a return to work screening shall occur. Follow up drug screening shall be applied when appropriate as determined by management.

We reserve the right to conduct random drug and alcohol screenings on employees and contractors who perform safety-sensitive functions, such as driving The Rice-Tinsley Corporation property or entering any worksite. Additionally, we also reserve the right to conduct unannounced random drug and alcohol screening on employees or contractors entering any worksite. We will require an employee or contractor to submit to a drug/alcohol screen if we have reasonable suspicion to believe that he/she has violated the prohibitions concerning alcohol and/or controlled substances based on observations concerning the appearance, behavior, speech or body odors of that person.

Contractors or employees maintaining or using prescribed medications shall report the circumstances and effects to their supervisor. Some types of medications could have undesirable effects, and these can create a safety risk and endanger other contractors.

Periodically, unannounced inspections will be made of persons entering or leaving The Rice-Tinsley Corporation work sites by authorized The Rice-Tinsley Corporation representatives. Entry onto The Rice-Tinsley Corporation or client property is deemed to have provided consent to an inspection of a person, locker, vehicle, or any other personal effects.

Any refusals to submit to a drug/alcohol screen will be treated as a positive test, resulting in immediate contract dismissal or disciplinary action, up to and employment termination. The contractor or employee refusing to submit to the test will be asked to sign a refusal document. If they refuse to sign the document, it will be noted and kept on file.

Drug and alcohol screening will be performed by an approved and qualified medical clinic with a medical review officer authorized to perform the tests. All results are treated with confidentiality.

If another contractor or employee comes to management with concern regarding another contractor or employee in reference to alcohol or substance abuse, we will treat that with discretion and confidentiality. We will pursue investigation and decide accordingly whether a drug and or alcohol screen is the appropriate step to take.

All contractors and employees are subject to the policies explained above.



Daren DeGeorge
CFO [The Rice-Tinsley Corporation]

HSE PLANNING

OBJECTIVES

- To identify, assess, record and control risks in the workplace for routine and non-routine activities while ensuring employees are involved during risk management processes;
- To eliminate, as far as is practicable, the risk of human injury, illness or damage to property;
- To promote planning as a means of achieving continuous improvement in our safety and health performance by utilizing risk management procedures when establishing our annual safety and health objectives.

RESPONSIBILITIES

The Rice-Tinsley Corporation Safety Manager

- Introduces planning and risk management procedures and assists site managers with implementation;
- Determines risk levels for identified hazards and continually reviews legal and other requirements;
- Utilizes risk management procedure results when establishing annual safety and health objectives.

Managers and Supervisors

Implements planning and risk management procedures and ensures employees are involved.

Employees

Provide input to risk identification and assessment and follow risk control procedures.

HSE PLANNING PROCESS OVERVIEW



HAZARD IDENTIFICATION

Objectives

- To provide guidelines for identifying workplace hazards;
- To ensure the potential hazards of new processes and materials are identified before they are introduced into the workplace;
- To identify the jobs/tasks which require risk assessment.

Responsibilities

The Rice-Tinsley Corporation Safety Manager, site managers, supervisors and employees as identified specific reference procedures and safety programs.

HAZARD IDENTIFICATION PROCEDURE

The Rice-Tinsley Corporation operations personnel notify the The Rice-Tinsley Corporation Safety Manager if a new project is to begin. The The Rice-Tinsley Corporation Safety Manager then conducts a baseline worksite hazard assessment which identifies the various tasks that are to be performed and the actions to be taken to correct the identified hazards. Inputs into the baseline hazard identification include, but are not limited to:

- Scope of work
- Legal and other requirements
- Previous incidents and non-conformances
- Sources of energy, contaminants and other environmental conditions that can cause injury
- Walk through of work environment

Defining Hazards

A hazard is anything with the potential to harm life, health or property. Classifications of workplace hazards are divided into six groups:

- Physical hazards such as noise, electricity, heat and cold
- Chemical hazards such as toxic gases, noxious fumes and corrosive liquids
- Ergonomic hazards such as the height of a workbench, the shape of a vehicle seat
- Radiation hazards, for example, from x-ray machines, high powered lasers, radioactive materials
- Biological hazards such as syringes containing potentially infected blood, etc.

Hazards identifications (as examples) are to include:

- Working Alone
- Thermal Exposure
- Isolation of Energy
- Hearing Protection
- Musculoskeletal Disorders
- Bloodborne Pathogens
- Confined Spaces
- Driving

- General Safety Precautions

Identifying Hazards

A complete inspection of all work site tasks will be carried out by the Safety Manager in conjunction with employees. This will develop an inventory of all of the tasks conducted throughout the work site. Examples of types of tasks: grinding metal samples; transporting material from one area to another; decanting and mixing paints and solvents; operating machinery such as cranes, hoists and forklift trucks; undertaking repair work inside confined spaces (such as holding tanks); undertaking cleaning and housekeeping work or spraying chemicals.

Additional areas for hazard identification include:

- Activities of all persons having access to the workplace including contractors and visitors.
- Infrastructure, equipment and materials at the workplace
- Changes or proposed changes in The Rice-Tinsley Corporation, its activities or materials
- Modifications to the HSE including temporary changes and their impacts on operations, processes and activities.
- The design of work areas, processes, installations, machinery, operating procedures including their adaption to staff capabilities.

Continued Hazard Identification

At existing locations employees shall be continually involved in the identification of hazards. Unidentified hazards are to be reported immediately and assessed for risk. Additional sources for ongoing hazard identification shall include:

Routine Activities

- Job Hazard Analyses
- Field Level Risk Assessments
- Ergonomic assessments
- Industrial hygiene surveys
- Workplace Inspections
- Purchasing and procuring
- Job observations
- Audits
- Document review

Non-routine Activities

- Accident/incident investigations
- Following emergency situations

It is also necessary to consider future tasks or situations that involve a change to the existing premises or process, or those which are non-routine.

Recording Hazard Identification Data

Once gathered, the hazard identification data will be recorded by the Safety Manager on the Worksite Hazard Assessment form. It shall be dated and signed.

Certification of Hazard Assessment

The The Rice-Tinsley Corporation Safety Manager signs the certification portion of Worksite Hazard Assessment Form and includes it within the site specific HSE plan.

Review of Hazard Assessment

Hazard assessments are formally reviewed annually.

RISK ASSESSMENT

Objectives

- To assess the risk posed by each identified hazard
- To prioritize the risks so recommended risk controls can be assigned

Responsibilities

The Rice-Tinsley Corporation Safety Manager, site managers, supervisors and employees as identified specific reference procedures and safety programs.

Risk Assessment Procedure

Each identified hazard is assessed for risk based on potential consequences of effecting injury to people, damage to assets, the environment or reputation of The Rice-Tinsley Corporation. The frequency of risk exposure is then considered.

Following risk assessment steps each risk assessed becomes classified as low, medium or high in accordance with the The Rice-Tinsley Corporation Risk Assessment Matrix shown below.

Risk Assessment Matrix

The risk level of the hazard is recorded with the associated task on the worksite hazard assessment portion within the site specific HSE plan for the job site.

RISK ASSESSMENT MATRIX

FREQUENCY	CONSEQUENCES				
	Insignificant Severity 0 (no injuries; no issue for environment)	Minor Severity 1 (slight health; minor env effect; slight impact)	Moderate Severity 2 (moderate health; localized env effect; work delay)	Major Severity 3 (extensive injuries; majef env effect; loss of production)	Catastrophic Severity 4 (multiple fatalities; extensive damage, massive effect)
Almost certain – multiple times a day	Use Risk Controls (Medium)	Use Risk Controls (Medium)	Use Risk Controls (Medium)	Intolerable (High Risk)	Intolerable (High Risk)
Likely – several times in a week	Use Risk Controls (Medium)	Use Risk Controls (Medium)	Use Risk Controls (Medium)	Intolerable (High Risk)	Intolerable (High Risk)
Possible – once a week possibly	Review for Improvement (Low)	Use Risk Controls (Medium)	Use Risk Controls (Medium)	Intolerable (High Risk)	Intolerable (High Risk)
Unlikely – could occur at some time	Review for Improvement (Low)	Review for Improvement (Low)	Use Risk Controls (Medium)	Use Risk Controls (Medium)	Intolerable (High Risk)
Not Performed – work is not performed	Review for Improvement (Low)	Review for Improvement (Low)	Review for Improvement (Low)	Use Risk Controls (Medium)	Use Risk Controls (Medium)

RISK CONTROL

Objectives

- To provide guidelines to control identified and assessed risks;
- To emphasize the importance of understanding the hierarchy of controls for the effective elimination of identified risks within our workplaces.

Responsibilities

The Rice-Tinsley Corporation Safety Manager, site managers, supervisors and employees as identified specific reference procedures and safety programs.

Hierarchy of Controls

The Rice-Tinsley Corporation shall use the following priorities when determining controls to identified hazards:

- Elimination
- Substitution
- Engineering controls
- Signage/Warning and or administrative controls
- Personal Protective Equipment

Risk Controls

Risk assessed hazards are compiled with risk control methods including engineering or administrative controls and PPE required into the Worksite Hazard Assessment of the site specific HSE plan. No work will begin before the worksite hazard assessment is completed. Additionally, no risk assessed as High (Intolerable) shall be performed.

Emergency Control of Hazards

Only those employees competent in correcting emergency controls of hazards may be exposed to the hazard and only the minimum number of competent employees may be exposed during hazard emergency control. An example is a gas leak in a building. Only those competent personnel with training on fire safety, gas supply shut off and other related controls will attempt to resolve the emergency control of a hazard. The Rice-Tinsley Corporation will make every possible effort to control the hazard or under the supervision of client emergency response personnel in every emergency.

Job Safety Analysis (JSA)

For those jobs with the highest injury or illness rates, jobs that are new to our operation, jobs that have undergone major changes in processes and procedures or jobs complex enough to require written instructions will have a Job Safety Analysis performed. JSAs are to be maintained in the Safety Manager's office for reference.

Field Level Risk Assessment (FLRA)

Prior to beginning any work task, a Field Level Risk Assessment shall be conducted. The senior or designated person of the work team will conduct the FLRA with the participation of other employees. The FLRA shall be documented and submitted to the designated supervisor after the task is completed.

PPE Assessment & Matrix

Personal Protective Equipment shall be identified via the The Rice-Tinsley Corporation PPE Hazard Assessment Certification Form which shall be signed and dated by the Safety Manager.

Site Specific HSE Plan

Each work location has a site specific HSE plan when required.

Each employee reporting to a location shall receive a documented orientation from a The Rice-Tinsley Corporation supervisor that includes the SSHP for that site.

The SSHP contains the The Rice-Tinsley Corporation Health and Safety Policy, site specific safety requirements as well as a PPE matrix and a signed site specific worksite hazard assessment for that location, which the The Rice-Tinsley Corporation has a responsibility to provide.

LEGAL AND OTHER REQUIREMENTS

Objectives

- To describe the process developed to identify and have access to legal and other requirements;

- To keep the information up to date and to communicate these requirements to those with compliance responsibilities.

Responsibilities

The Rice-Tinsley Corporation Safety Manager

- Identify and ensure access to legal and other requirements.
- Identifies, tracks and monitors legal and other requirements for work performed;
- Provides updates and ensure accuracy and completeness of the The Rice-Tinsley Corporation Safety & Health Compliance Matrix and communicates requirement changes to the site manager and supervisors.

Site Manager and Supervisors

- Notifies the The Rice-Tinsley Corporation Safety Manager of new projects and communicates responsibilities to our employees;
- Communicates facility and operational changes to the The Rice-Tinsley Corporation Safety Manager.

Employees

- Follows all legal and other requirements.

Procedure

The Rice-Tinsley Corporation operations personnel notify the The Rice-Tinsley Corporation Safety Manager if a new project is to begin.

The The Rice-Tinsley Corporation Safety Manager then conducts an analysis which identifies the legal and other requirements that apply to the scope of work being performed.

Employees are to have ready access to the current safety and applicable legislation as required. The bulletin board shall be utilized for this purpose.

Legal Requirements

- Regulatory statutes applicable to the jurisdiction
- Hazard or industry specific statutes and regulations
- Municipal laws/regulations/by-laws
- Collective Agreements (e.g. those containing provisions for personal protective equipment)

Other Requirements

- Client requirements
- Agreements with contractors
- Industry and trade association codes
- Standards that must be adhered to in the organization – e.g. ACGIH Threshold Limit Values

Identified legal and other requirements are listed on the The Rice-Tinsley Corporation Safety & Health Compliance Matrix.

Legal and other requirements are incorporated into the Worksite Hazard Assessment which is included in the site specific HSE plan for the project.

Means of Tracking Requirements

Establish means of tracking all of the above (through internet, e-mail, safety bulletin boards etc.)

- The Rice-Tinsley Corporation subscribes to those identified information services as required to be continually informed of regulatory scope changes.
- The Rice-Tinsley Corporation uses the internet to check on safety and health new or revised legislation for the scope of work being conducted.

Review of Requirements

Legal and other requirements are reviewed annually.



Daren DeGeorge
CFO [The Rice-Tinsley Corporation]

HSE OBJECTIVES & TARGETS

PURPOSE

The purpose of this document is to clearly define the process used to develop HSE objectives and targets and HSE management plans for The Rice-Tinsley Corporation. It is important to focus our effort on what needs to be done to protect people and the environment. We must also recognize that we cannot do everything at once and therefore efforts must be prioritized. This policy works in tandem with The Rice-Tinsley Corporation's Behavior Based Safety Program.

SCOPE

The The Rice-Tinsley Corporation. HSE Objectives & Targets policy applies to all staff. Employees are permitted to participate in HSE Objectives & Target initiatives already in place at customer locations if required by the customer. Employees are required to participate in the The Rice-Tinsley Corporation. HSE Objectives & Targets policy development process and follow the guidelines.

DEFINITIONS

HSE Objective

An HSE goal arising from a policy or standard that the organization sets itself to achieve and which is quantified.

HSE Target

A detailed performance requirement, quantified, applicable to the organization or parts thereof, that arises from the HSE objectives and that needs to be set in order to achieve those objectives.

Risk factor

A measure of the risk to humans or the environment based on the average of the values assigned to the "significance" and "probability" of occurrence from the HSE risk ranking analysis process.

REQUIREMENTS

It is essential for The Rice-Tinsley Corporation. to develop objectives and targets, which meet or exceed the minimum industry objectives and targets. In selecting the appropriate objectives and targets, The Rice-Tinsley Corporation. operation must, at a minimum, consider the following:

1. The facilities HSE risks including past performance
2. Technological options
3. Financial, operational and business requirements
4. Legal and other requirements

- 5. Views of interested parties
- 6. Audit results
- 7. Association Objectives and Targets

The Rice-Tinsley Corporation.' HSE Objectives & Targets are based on Zero Incidents policy. Objectives and targets are realistic, measurable and achievable. The number of objectives and targets may vary by jobsite depending on the above listed criteria. Having too many objectives and targets can result in a loss of focus and therefore it is recommended that each facility focus on no more than 2-4 annually. This does not mean that we will not improve in areas outside of our defined objectives and targets; in fact, improvements in one area often result in improvements in other areas. It also does not suggest that because we do not have HSE objectives and targets for all HSE risks that we will not take steps to manage and minimize the HSE impacts of all of our activities.



Daren DeGeorge
CFO [The Rice-Tinsley Corporation]

DOCUMENT CONTROL POLICY

PURPOSE

The purpose of this policy is to identify the process for which all documents will be controlled. The The Rice-Tinsley Corporation. Document Control Policy (DCP) process used to control the printing and dissemination of The Rice-Tinsley Corporation. information in hard and soft copy.

SCOPE

The The Rice-Tinsley Corporation. Document Control Policy applies to all staff. Employees are required to adhere to the document controls procedures and policies.

POLICY & PROCEDURE

1. All Documents will be controlled utilizing date and revision numbers.
2. All Documents will be stored electronically.
3. Printed documents will only be considered current for 24 hours from print date and must clearly state this on the document.
4. Only the most current versions of documents will be available for distribution.
5. All earlier revisions will be archived electronically and saved for a period of no less than 12 months.
6. The most current copy of all documents must be obtained from the Human Resources or DOT/ Safety department.
7. All employees shall be trained on where to find documents.
8. All Documents will be reviewed annually. At this time the issue date will be changed to reflect the review date and latest revision numbers will be changed if changes are made within the documents.
 - A) Major changes in documentation will be a whole number increment (i.e. 1.0 to 2.0)
 - B) Minor changes will be incremented fractionally (i.e. 1.0 to 1.1)
9. Any changes to a document will require the date and revision number be changed.
10. All Documents will be formatted with a footer that has the document name, date, and current revision number.

RESPONSIBILITIES

It is the responsibility of the Safety Department and Human Resources to assure all documents are current, available, and identified correctly.

LIST OF CONTROLLED DOCUMENTS

- eHSE Manual
- Employee Handbook
- Employment Application
- Job Descriptions
- Workplace Instructions

FORMAL SAFETY PROGRAMS

ACCESS TO EMPLOYEE MEDICAL & EXPOSURE RECORDS

PURPOSE

The purpose of this procedure is to insure right of access to relevant exposure and medical records to employees and/or their designated representatives.

KEY RESPONSIBILITIES

The Rice-Tinsley Corporation Safety Manager

- Develops local medical records practices for all worksites in accordance with this procedure and ensures employees are aware of the requirements of this procedure.
- Responsible for the review, implementation and maintenance of the local worksite medical records procedure.

Project Manager

- Responsible for the implementation and maintenance of the medical records procedure for their facility and ensuring all assets are made available for compliance with the procedure.

Employees

- All shall be familiar with this procedure and have access to their records.

OVERVIEW

This section applies to all employee exposure and medical record, and analysis thereof, made or maintained in any manner, including on an in-house or contractual (e.g., fee-for-service) basis.

- Trade secret information disclosure must follow requirements as stated in 29 CFR 1910.1020 (f) (8).
- Recognized collective bargaining agents who have statutory authority to represent the interests of the employees within the bargaining unit are automatically considered designated representatives. While these representatives do not have the right to secure individual medical records without written consent of the employee, they have the right of access to employee exposure records and analysis without employee consent.

DEFINITIONS

Access means the right and opportunity to examine and copy.

Analysis of exposure or medical records means any compilation of data, and research, or other studies based, at least in part, on information collected from individual employee exposure or medical records or other sources including information from health insurance claim forms provided that either the analysis must have been reported to the employer or no further work is being done by the person responsible for preparing the analysis.

Designated representative will mean any individual or organization to which an employee gives written authorization to exercise a right of access. For the purposes of access to employee exposure records and analyses using exposure

or medical records, a recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

Employee exposure records could include any of the types of information listed below:

- Environmental (workplace) monitoring or measuring of a toxic substance or harmful physical agent, including personal, area, grab, wipe, or other form of sampling, as well as related collection and analytical methodologies, calculations, and other background data relevant to interpretation of the results obtained;
- Biological monitoring results which directly assess the absorption of a toxic substance or harmful physical agent by body systems (e.g., the level of a chemical in the blood, urine, breath, hair, fingernails, etc.) but not including results which assess the biological effect of a substance or agent or which assess an employee's use of alcohol or drugs;
- Material safety data sheets indicating that the material may pose a hazard to human health; or In the absence of the above, a chemical inventory or any other record which reveals where and when used and the identity (e.g., chemical, common, or trade name) of a toxic substance or harmful physical agent.

Employee medical records are records that concern the health status of an employee and are made or maintained by a physician, nurse, or other health care personnel or technician. "Employee medical record" means a record concerning the health status of an employee which is made or maintained by a physician, nurse or other health care personnel, or technician.

NOTE: The following will not be considered a medical record:

- Physical specimens, such as blood or urine samples, which are routinely discarded.
- Health insurance claims, accident investigation reports and other non-medical correspondence if maintained separately from the medical file.
- The record of any voluntary employee assistance program (alcohol, drug, etc.) if maintained separately.
- Records created solely in preparation for litigation which are privileged from discovery under applicable rules of procedure or evidence.

Specific Written Consent means a written authorization containing the following:

- The name and signature of the employee authorizing the release of medical information.
- The date of the written authorization.
- The name of the individual or organization that is authorized to release the medical information.
- The name of the designated representative (individual or organization) that is authorized to receive the released information.
- A general description of the medical information that is authorized to be released.
- A general description of the purpose for release of the medical information.
- A date or condition upon which the written authorization will expire (if less than one year).

A toxic substance or harmful physical agent is defined as any chemical substance, biological agent (bacteria, fungus, virus, etc.) or physical stress (noise, heat, cold, ionizing radiation or non-ionizing radiation, hypo or hyperbaric pressure, etc.) which:

- Is regulated under federal law or rule due to a hazard to health.
- Is listed in the National Institute of Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS).

- Shows positive evidence of acute or chronic health hazard in human, animal or other biological test by or known to the employer.
- Has a Material Safety Data Sheet indicating that the substance may pose hazard to human health.

PROCEDURE

The Safety Manager will maintain applicable medical and exposure records for all employees. All requests to access medical and exposure records and analysis based on those records must be submitted to using the forms provided for that purpose.

Access to records is provided in a reasonable time, place and manner. Access to records must be provided in a reasonable time, place and manner. If access to records cannot reasonably be provided within fifteen (15) working days, The Rice-Tinsley Corporation shall within the fifteen (15) working days apprise the employee or designated representative requesting the record of the reason for the delay and the earliest date when the record can be made available.

Personal identifiers (name, address, social security number, payroll number, etc.) are removed from records before access is granted. Whenever access is requested to an analysis which reports the contents of employee medical records by either direct identifier (name, address, social security number, payroll number, etc.) or by information which could reasonably be used under the circumstances indirectly to identify specific employees (exact age, height, weight, race, sex, date of initial employment, job title, etc.), personal identifiers must be removed before access is provided.

The Rice-Tinsley Corporation, upon request, will assure the prompt access of representatives of the Assistant Secretary of Labor for Occupational Safety and Health to employee exposure and medical records and to analyses using exposure or medical records.

Except for a recognized collective bargaining agent, any designated representative must have the employee's written permission for access to exposure records and analyses. It is necessary however, for the union representative to specify the occupational need for access to records absent the employees consent. Union representatives must have the employee's written permission to access medical records.

Copies of medical records are provided at no cost to employees. Whenever an employee or designated representative requests a copy of a record, that record must be provided at no cost.

Any review of medical or exposure records by an employee or union representative shall be done on his or her own time, outside of normal working hours, at a time mutually agreeable to the parties. The review will be conducted in person with the individual requesting access to the records.

The employee is entitled access to his or her medical records except when a physician determines that this knowledge would be detrimental to the employee's health as in such cases of terminal illness or psychological conditions. However, if the employee provides a designated representative with specific written consent, access to medical records must be provided even if the physician has denied the employee access to the records.

The authorized physician, nurse or other responsible health care personnel maintaining employee's medical records may delete the identity of anyone who has provided confidential information concerning the employee's health status but cannot withhold the information itself.

When an analysis of medical records identifies the employee, a physician may remove direct or indirect personal identification. If this cannot be done, the personally identifiable portions need not be provided to the person seeking such information.

Employees and their designated representatives will be permitted upon request access to past and present exposure data to toxic substances or harmful physical agents.

Copies of exposure records of other employees with past or present job duties or working conditions like or similar to those of the employee will also be provided upon request.

Any employee or designated representative is also permitted access to any record of exposure information which pertains to a new workplace or condition(s) to which the employee is being assigned or transferred.

RECORDS RETENTION

- Medical records must be preserved and retained for the duration of employment plus 30 years.
- Employee exposure records must be retained for 30 years.

TRANSFER OF RECORDS SHOULD THE COMPANY CEASE TO DO BUSINESS

Whenever The Rice-Tinsley Corporation ceases to do business it shall transfer all records subject to this section to the successor employer. Whenever The Rice-Tinsley Corporation either is ceasing to do business and there is no successor employer to receive and maintain the records, or intends to dispose of any records required to be preserved for at least thirty (30) years, The Rice-Tinsley Corporation shall transfer the records to the Director of the National Institute for Occupational Safety and Health (NIOSH) if so required by a specific occupational safety and health standard.

EMPLOYEE INFORMATION

Employees are informed of the provision of recordkeeping upon initial assignment and annually thereafter. Upon an employee's first entering into employment, and at least annually thereafter, information must be given to current employees of the existence, location, availability and the person responsible for maintaining and providing access to records and each employee's rights of access to these records.

The Access to Employee Exposure and Medical Records Standard (29 CFR 1910.1020) will be readily available for review by employees upon request.

A copy of the employee notice that will be used to comply with the employee information requirements is included with policy. This notice will be posted on those bulletin boards where other notices normally appear.

AUTHORIZATION LETTER FOR THE RELEASE OF EMPLOYEE MEDICAL RECORDS

I, _____ hereby authorize the _____
(Full name of employee) (Name of Organization)

to release to The Rice-Tinsley Corporation the following medical record(s):

Give specific description of the information to be released)

I give my permission for the medical information to be used for the following purpose(s):

_____ I do not give permission for any other use or reason.

_____ I understand that this authorization expires twelve (12) months from today's date unless I specify a particular date less than twelve months which is _____

Signature of employee or
his/her legal representative

Date of Signature

Reviewed on: _____ with: _____
(Date) (Signature of Organization's Representative)

Copies given: Yes _____ No _____

ACCESS TO MEDICAL/EXPOSURE RECORDS NOTICE

Federal Regulation 29 CFR 1910.1020 requires us to inform you that The Rice-Tinsley Corporation does keep records designated as Employee Exposure and Employee Medical Records.

The above regulation gives you the right to review those records with certain exceptions.

The records are maintained in the Safety Department and the Safety Manager is responsible for the records.

A copy of CFR 1910.1020 is available for viewing upon request to the Safety Manager.

Signature

Date

Note: This notice must be posted annually

AERIAL LIFTS

PURPOSE

The purpose of this program is to define the requirements for safely operating an aerial lift device.

SCOPE

This policy shall cover all aerial lift devices used on The Rice-Tinsley Corporation property or jobsites.

KEY RESPONSIBILITIES

Supervisors

- Shall ensure that all aerial devices are properly operated by trained personnel.
- Shall ensure that aerial lift devices are designed and constructed in conformance with applicable requirements of the American National Standards for “Vehicle Mounted Elevating and Rotating Work Platforms” ANSI A92.2-1969, including appendix.

Employees

- Shall follow all aspects of this program.

PROCEDURE

- Aerial lifts may be “field modified” for uses other than those intended by the manufacturer provided the modification has been certified in writing by the manufacturer or by an equivalent entity.
- Lift controls shall be tested each day prior to use to determine that such controls are in safe working conditions. Tests shall be made at the beginning of each shift during which the equipment is to be used to determine that the brakes and operating systems are in proper working condition.
- Only authorized persons shall operate an aerial lift and boom and basket load limits specified by the manufacturer shall not be exceeded.
- Aerial lifts shall have a working back-up alarm audible above the surrounding noise level or the vehicle is backed up only when an observer (spotter) signals that it is safe to do so.
- The minimum clearance between electrical lines and any part of the equipment (i.e. crane or load) shall be 10 feet for lines rated 50 kV or below.
- Employees shall always stand firmly on the floor of the basket and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.
- An approved fall restraint system shall be worn when working from an aerial lift. The fall restraint system must be attached to the boom or basket. An approved fall restraint system shall be attached to the boom or basket when working from an aerial lift and it is not permitted to be attached to adjacent poles or structures.
- Aerial ladders shall be secured in the lower traveling position by the locking device on top of the truck cab, and the manually operated device at the base of the ladder before the truck is moved for highway travel.

- All employees who operate an aerial lift device shall be trained in the safe operation of the specific device they will operate. Training must conform to all OSHA requirements.
- A worker may enter or exit an aerial lift (at heights above 6 feet) provided that fall protection such as guardrails or a fall arrest system is used while the worker moves between the lift and the working surface. A fall arrest system and its components must meet the criteria.

DEFINITIONS

- An aerial device, by definition, includes any vehicle-mounted device, telescoping or articulating, or both, which is used to position personnel.
- An articulating boom platform, by definition, is an aerial device with two or more hinged boom sections.
- An extensible boom platform, by definition, is an aerial device (except ladders) with a telescopic or extensible boom. Telescopic derricks with personnel platform attachments are considered to be extensible boom platforms when used with a personnel platform.
- A mobile unit, by definition, is a combination of an aerial device, its vehicle, and related equipment.
- A platform, or elevated platform, by definition, is any personnel-carrying device (basket or bucket) which is a component of an aerial device.
- A vehicle, by definition, is any carrier that is not manually propelled.
- A vertical tower, by definition, is an aerial device designed to elevate a platform in a substantially vertical axis.

GENERAL USE REQUIREMENTS

- Boom Supported Elevating Work Platforms, including Appendix items, specify the design and construction requirements for aerial lift devices.
- Boom and basket load limits specified by the manufacturer shall not be exceeded.
- The brakes shall be set and when outriggers are used, they shall be positioned on pads or a solid surface. Wheel chocks shall be installed before using an aerial lift on an incline, provided they can be safely installed.
- An aerial lift truck may not be moved when the boom is elevated in a working position with men in the basket, except for equipment which is specifically designed for this type of operation.
- Aerial lift devices are used to elevate personnel to job sites above the ground. These include extensible boom platforms, aerial ladders, aerial ladder trucks, articulating boom platforms, vertical towers, and any combination of these devices.
- Aerial lift devices may be constructed of metal, wood, fiberglass, reinforced plastic (RFP), or other materials.
- Aerial lift devices may be "field modified" for use other than those intended by the manufacturer, provided the modification has been approved, in writing, by the manufacturer or by an equivalent authority such as a nationally recognized testing laboratory, to be in conformity with ANSI/SIA A92.5-1992 requirements, to be at least as safe as the equipment prior to modification.
- Aerial lift devices and personnel working near electrical power lines must meet the requirements contained

in the OSHA Standard 1910.333 (c) (3), Subpart S-Electrical, Selection and Use of Work Practices (e.g. de-energizing procedures; grounding overhead lines; required work distances relative to overhead electrical power lines; unqualified and qualified employees working in the vicinity of overhead electrical power lines; and vehicular and mechanical equipment in the vicinity of overhead power lines). See OSHA Standard 1910.333 (c) (3) for details.

- Articulating boom and extensible boom platforms, primarily designed as personnel carriers, shall have both platform (upper) and lower controls. Lower level controls shall not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.
- Before moving an aerial lift for travel, the boom(s) shall be inspected to see that it is properly cradled and outriggers are in stowed position.

General Aerial Lift Device Use Practices Include:

- On ladder trucks and tower trucks, secure aerial ladders in the lower traveling position by locking the device on top of the truck cab, and the manually operated device at the base of the ladder prior to moving the truck. Ensure outrigger devices (if equipped) are properly stored prior to moving.
- Set the brakes and position the outrigger devices (if equipped) on pads or similar solid surfaces and install the wheel chocks before using aerial lift equipment (especially on inclines).
- Do not move aerial lift trucks with employees located in the elevated work boom position, except for equipment specifically designed or certified as "field modified" for this type of operation.
- Ensure that aerial lift devices equipped with working elevated platforms contain both elevated platform (upper) and lower controls. Upper controls are located in or beside the elevated platform, within easy reach of the operator. Lower controls are designed to override the upper controls.
- Check to be sure that controls are plainly marked as to their function.
- Test lift controls each day prior to use to Ensure safe working conditions.
- Ensure loads and distribution on working platforms and platform extensions are in accordance with manufacturer's rated capacity and do not exceed rated load limits. Affix stickers to vehicle that indicate manufacturer's rated load capacity of the working elevated platform and/or elevated platform extensions.
- Ensure all personnel in the working elevated platform are wearing appropriate personal protective devices at all times (e.g. hard hats to protect from overhead falling objects, being struck with nearby objects, struck by flying objects; safety shoes/boots; goggles/safety glasses with side shields/hard hat with shield; gloves; other protective clothing).
- Ensure that each employee uses an appropriate body belt/harness and lanyard device attached to the boom or basket or other appropriate passenger device as fall protection when working from an aerial lift device or anything else that is working from heights. For example, ladders.
- Ensure that only trained and authorized employees operate aerial lift devices.
- Keep feet firmly on the floor of the basket or elevated platform at all times.
- Do not sit, climb or position yourself on the edge of the basket or elevated platform.
- Do not use planks, ladders or other devices as substitute work positions.

- Do not operate lower controls unless permission has been obtained from the employee(s) in the elevated platform, except in case of an emergency.
- Do not position the aerial lift device against another object to steady the elevated platform.
- Do not use aerial lift devices as a crane or other lifting device.
- Do not operate aerial lift devices from trucks, scaffolds, or similar equipment unless approved in writing by the manufacturer.
- Limit travel speeds of aerial lift devices according the conditions of the ground surface, congestion, visibility, slope, location of personnel and other factors that may cause hazards to other nearby personnel.
- Shut down the aerial life device engine prior to fueling. Fuel engines or charge fuel cylinders in well ventilated areas free of flames, sparks or other hazards which may cause fires or explosions.
- Charge batteries in well ventilated areas free of flames, sparks or other hazards which may cause fires or explosions.
- Be sure to maintain a clear view of the path of travel, maintain a safe distance from other obstacles, debris, drop offs, holes, depressions, slopes and other hazards. Maintain a safe distance from overhead obstacles (including overhead electrical power lines).
- Stunt driving and horseplay are prohibited.
- Do not position booms and elevated platform devices in an attempt to jack the wheels off the ground.
- Do not operate aerial lift devices on grades, side slopes or ramps that exceed the manufacturer's recommendations.
- If elevated platforms or elevated work areas become caught, snagged or otherwise do not operate properly, remove personnel from the platform prior to freeing the elevated platform using ground controls.
- Do not alter the insulated portion of an aerial lift device in any manner that might reduce its insulating effectiveness.
- Ensure the area surrounding the elevated platform is clear of personnel and equipment prior to lowering the elevated platform.
- Perform inspections of aerial life devices per manufacturer's, ANSI/SIA and other regulatory agency schedules. Make repairs immediately.
- Do not operate aerial lift devices with noted, reported deficiencies until repairs are made and equipment is authorized for use.
- Perform electrical system safety tests on aerial lift devices per ANSI/SIA A92.5-1992 requirements.
- Inspect hydraulic and pneumatic system components (Bursting Safety Factor) on aerial lift devices per ANSI/SIA A92.5-1992 requirements.
- Conduct welding operations on aerial lift devices per Automotive Welding Society (AWS) Standards.
- An approved full body harness and appropriate lanyard must be worn at all times while working inside or exiting the platform. If a self-extracting lifeline/lanyard is used, it cannot allow more than 6 ft (1.8 m) of free fall. Also, workers MUST enter or exit the platform only through the sliding mid-rail entry or gate provided and should never climb over the platform guardrails.

Special Requirements

When positioning the machine for entry/exit, the platform should be situated within 12 in (304.8 mm) of the surface, and workers should not enter/exit the elevated platform in winds exceeding 20 mph (32.2 km/h). The operator must ensure 100% tie-off when entering/exiting the platform.

The Rice-Tinsley Corporation must have an existing letter that outlines owner, employer, user and operator responsibilities for exiting at height as well as detailing requirements for 100% tie-off and personal fall protection requirements. A copy of the authorization letter must be kept in the weather resistant storage compartment located on the equipment at all times.

To ensure 100% tie-off, the operator's primary lanyard must remain attached to the platform lanyard attachment point before exiting and attaching his/her secondary lanyard to the approved attachment point on the adjacent structure. Only then may the operator detach his/her primary lanyard from the platform. When returning to the platform, the operator must attach the primary lanyard to the platform anchor point before detaching the secondary lanyard from the adjacent structure.

A person trained in the operation of the aerial boom must remain on the ground near the machine base controls to prevent unauthorized use and to prevent the machine from being used.

Safety Considerations For Operating A Crane On A Windy Day

It's important to know the wind rating of the crane being used. The crane's wind rating indicates the wind speed that the crane can withstand and still operate safely. This rating can vary based on the type of crane, the construction setup and how you're using the crane.

Mobile cranes are designed to withstand 31 mph winds, tower cranes are designed to operate in 45 mph winds and secured dockside and container cranes can withstand 64 mph winds. These are just general standards - you should always check the specific wind rating of the crane you are planning to use.

Operating the crane when wind speeds exceed the wind rating of the crane is a significant safety hazard. High winds can blow the load on the crane off balance. This can make both the load and the lower part of the crane unstable. This could cause the crane to tip or fall, or the load may swing around and damage nearby buildings and people. On a construction site, it's important that you have the right equipment for the job and that you're operating it safely. Paying close attention to the wind speed rating before using your crane helps ensure the safety of your work site.

Before operating a crane each day, consult the local weather report. Pay particular attention to the wind speeds projected for the day. On days where high wind speeds are projected, the crane operator needs to pay special attention to the wind speeds throughout the day.

The Rice-Tinsley Corporation will equip all cranes in use with an anemometer, which is a tool that allows you to determine the speed of the wind. The anemometer should be placed somewhere where it is clearly in the line of sight and easy for the crane operator to read.

When you expect high winds, the crane operator should check the anemometer frequently so they can stop operations immediately after wind speeds reach unsafe levels. The foreman on the job site should also keep an eye on wind speeds and alert the crane operator if the wind speeds reach unsafe conditions.

Keep in mind that an anemometer is just a tool. If the wind speeds do not exceed the speed rating but are particularly gusty and leave the crane operator feeling that the crane is not safe to operate, listen to the crane operator's instincts. A crane should never be operated under conditions that do not feel safe or comfortable to the crane operator.

High Wind Conditions

Lower the jib on the crane when wind speeds meet or exceed the limits of your crane. Lower and place the load somewhere safe instead. Do not extend the jib when you're experiencing high winds that exceed the crane's wind rating. Additionally, the jib on your crane should not be left permanently extended. Rather, it should be brought down at the end of each work-day to protect the jib from winds, even when it's not in operation.

Because cranes operate so high up in the sky, they can be affected by windy conditions you may not notice or feel on the ground. This makes it easy to underestimate the effects of wind on a construction job site. It's always important to pay close attention to recommended safety precautions.

TRAINING - EMPLOYEES USING AERIAL LIFT DEVICES WILL BE TRAINED IN:

- Employees authorized to use aerial lift devices will receive training in accordance with manufacturer's operating instructions and routine maintenance requirements (as appropriate) prior to actual operation.
- Employees authorized to use aerial lift devices will receive hands on training on the actual aerial lift device (or duplicate model) he/she will be expected to operate prior to actual use.
- Training will be under the direction of a qualified, competent individual capable of determining an employee's proficiency in knowledge and actual operation of the aerial lift device.
- Only properly trained and authorized employees are permitted to operate aerial lift devices. Employees will be given and display, when requested, cards, certificates or other form of identification that denotes successful completion and authorization to operate specific aerial lift devices.
- Records Retention
- Departments will retain initial employee training records for individuals authorized to operate specific aerial lift devices for a minimum of 3 years. Subsequent refresher and other specialized training records will be maintained for a similar period. Previous employee training records may be replaced with copies of subsequent and other specialized training records.
- Departments will retain written records of initial and subsequent inspections performed on each aerial lift device for a minimum of 3 years. Subsequent inspection records will be maintained for a similar period. Previous inspection records may be replaced with copies of subsequent inspection records.
- Departments will retain written records of repairs performed on each aerial lift device for a minimum of 3 years. Records will include the date of repair, a description of the work accomplished and identification of persons performing the repair. Previous repair records may be replaced with copies of subsequent repair records.
- Departments will retain written records of all paperwork in connection with authorized "field modifications" made with respect to specific aerial lift devices.

All The Rice-Tinsley Corporation training will be documented.

BLOODBORNE PATHOGENS

PURPOSE

This Bloodborne Pathogen Exposure Control Plan has been established to ensure a safe and healthful working environment and act as a performance standard for all employees. This program applies to all occupational exposure to blood or other potentially infectious materials. The content of this plan complies with OSHA Standard 29 CFR 1910.1030 (Occupational Exposure to Bloodborne Pathogens).

SCOPE

This program addresses all occupational exposure to blood or other potentially infectious materials (examples of potentially infectious materials include bodily fluids containing hepatitis B, HIV). OSHA requires that all employers that can "reasonably anticipate exposure" of employees to infectious material to prepare and implement a written exposure control plan.

The Rice-Tinsley Corporation shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

KEY RESPONSIBILITIES

Exposure Control Officer (The Rice-Tinsley Corporation Safety Manager)

Has overall responsibility for developing and implementing the Exposure Control Procedure for all facilities.

The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

Site Project Manager and Supervisors

Site project manager and supervisors are responsible for exposure control in their respective areas.

Employees

- Know what tasks they perform that have occupational exposure.
- Plan and conduct all operations in accordance with our work practice controls.
- Develop good personal hygiene habits.

PROCEDURE

Training

The Rice-Tinsley Corporation shall ensure that all employees with occupational exposure participate in a training program. Training is conducted for all employees with occupational exposure before initial assignment and within 1

year of previous training. Training shall be provided at the time of initial assignment & within 1 year of an employee's previous training. Training shall include:

- What bloodborne pathogens are; how to protect themselves from exposure
- Methods of warnings (signs, labels, etc.)
- The OSHA requirements of bloodborne pathogens
- The Hepatitis B vaccine shall be made available to all employees that have occupational exposure at no cost to the employee(s).



Biohazard Label

Availability of Procedure to Employees

All employees will have access to a copy of the exposure control plan. Access to a copy of the exposure control plan shall be provided in a reasonable time, place, and manner.

Reviews and Update of the Procedure

The procedure is reviewed annually and updated whenever we establish new functional positions within our facility that may involve exposure to biohazards.

Exposure Determination

- There are no job classifications in which some or all employees have occupational exposure to bloodborne pathogens that may result from the performance of their routine duties.
- Designated employees are trained to render first aid and basic life support. Rendering first aid or basic life support will expose employees to bloodborne pathogens and will require them to adhere to this program.
- In addition, no medical sharps or similar equipment is provided to, or used by, employees rendering first aid or basic life support.
- This exposure determination has been made without regards to the Personal Protective Equipment that may be used by employees.
- A listing of all first aid and basic life support trained employees in this work group shall be maintained at each work site and at each first aid kit.

METHODS OF COMPLIANCE

Universal Precautions

Under circumstances in which differential between body fluids is difficult or impossible, all body fluids will be considered potentially infectious.

Engineering Controls

Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Engineering controls should be examined and maintained or replaced on a regular schedule to ensure their effectiveness. Hand washing facilities shall be readily available at all work locations. If provision of hand washing facilities is not feasible, then an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes shall be provided by The Rice-Tinsley Corporation.

Containers for contaminated reusable sharps that our clients provide have the following characteristics: Puncture-resistant; Color-coded or labeled with a biohazard warning label; Leak-proof on the sides and bottom.

Secondary containers which are: Leak-proof; Color-coded or labeled with a biohazard warning label; Puncture-resistant, if necessary.

Work Practice Controls

- Employees shall wash their hands immediately, or as soon as feasible, after removal of potentially contaminated gloves or other personal protective equipment.
- Following any contact of body areas with blood or any other infectious materials, employees wash their hands and any other exposed skin with soap and water as soon as possible.
- Hand washing facilities shall be available. If hand washing facilities are not feasible The Rice-Tinsley Corporation will provide either an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes.
- Contaminated needles and other contaminated sharps should not be handled if you are not AUTHORIZED or TRAINED to do so. Contaminated needles and other contaminated sharps are not bent or recapped.
- Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses is prohibited in work areas where there is potential for exposure to biohazardous materials.
- Food and drink is not kept in refrigerators, freezers, on countertops or in other storage areas where potentially infectious materials are present.
- All equipment or environmental surfaces shall be cleaned and decontaminated after contact with blood or other infectious materials.
- Specimens of blood or other potentially infectious materials must be put in leak proof bags for handling, storage and transport.
- If outside contamination of a primary specimen container occurs, that container is placed within a second leak proof container, appropriately labeled, for handling and storage.
- Bloodborne pathogens kits are located on top of first aid kits and are to be used in emergency situations by the caregiver. Once the seal is broken on kit and any portion has been used it is not to be reused. Pathogen Kits shall be ordered and replaced promptly. Biohazard bags are identified by stickers and located in the first aid area. Contaminated supplies are to be disposed at once.

Personal Protective Equipment

When the possibility of occupational exposure is present, PPE is to be provided at no cost to the employee such as gloves, gowns, etc. PPE shall be used unless employees temporarily declined to use under rare circumstances. PPE shall be repaired and replaced as needed to maintain its effectiveness. All PPE shall be of the proper size and readily accessible.

The employer shall ensure that PPE is used unless the employee temporarily and briefly declined to use PPE in rare circumstances.

Our employees adhere to the following practices when using their personal protective equipment:

- Any garments penetrated by blood or other infectious materials are removed immediately.
- All potentially contaminated personal protective equipment is removed prior to leaving a work area.

- Gloves are worn whenever employees anticipate hand contact with potentially infectious materials or when handling or touching contaminated items or surfaces.
- Disposable gloves are replaced as soon as practical after contamination or if they are torn, punctured or otherwise lose their ability to function as an "exposure barrier".
- Masks and eye protection (such as goggles, face shields, etc.) are used whenever splashes or sprays may generate droplets of infectious materials.
- Any PPE exposed to bloodborne pathogens shall be disposed of properly.
- PPE shall be used unless employees temporarily declined to use PPE under rare circumstances.
- PPE should be cleaned, laundered & properly disposed of if contaminated.
- The Rice-Tinsley Corporation will repair and replace PPE as needed to maintain its effectiveness.

Housekeeping

Our staff employs the following practices:

- All equipment and surfaces are cleaned and decontaminated after contact with blood or other potentially infectious materials.
- Protective coverings (such as plastic trash bags or wrap, aluminum foil or absorbent paper) are removed and replaced.
- All trash containers, pails, bins, and other receptacles intended for use routinely are inspected, cleaned and decontaminated as soon as possible if visibly contaminated.
- Potentially contaminated broken glassware is picked up using mechanical means (such as dustpan and brush, tongs, forceps, etc.).

Post-Exposure and Follow Up

Post-Exposure Evaluation & Follow-Up

If there is an incident where exposure to bloodborne pathogens occurred we immediately focus our efforts on investigating the circumstances surrounding the exposure incident and making sure that our employees receive medical consultation and immediate treatment.

The The Rice-Tinsley Corporation Safety Manager/ Supervisor investigates every reported exposure incident and a written summary of the incident and its causes is prepared and recommendations are made for avoiding similar incidents in the future. We provide an exposed employee with the following confidential information:

- Documentation regarding the routes of exposure and circumstances under which the exposure incident occurred.
- Identification of the source individual (unless not feasible or prohibited by law).

Once these procedures have been completed, an appointment is arranged for the exposed employee with a qualified healthcare professional to discuss the employee's medical status. This includes an evaluation of any reported illnesses, as well as any recommended treatment.

Information Provided to the Healthcare Professional. We forward the following:

- A copy of the Biohazards Standard.

- A description of the exposure incident.
- Other pertinent information.

Healthcare Professional's Written Opinion

After the consultation, the healthcare professional provides our facility with a written opinion evaluating the exposed employee's situation. We, in turn, furnish a copy of this opinion to the exposed employee. The written opinion will contain only the following information:

- Whether Hepatitis B Vaccination is indicated for the employee.
- Whether the employee has received the Hepatitis B Vaccination.
- Confirmation that the employee has been informed of the results of the evaluation.
- Confirmation that the employee has been told about any medical conditions resulting from the exposure incident which require further evaluation or treatment.
- All other findings or diagnoses will remain confidential and will not be included in the written report.

Record Keeping

All records shall be made available upon request of employees, OSHA's Assistant Secretary and the Director of OSHA for examination and copying. Medical records must have written consent of employee before released. The Rice-Tinsley Corporation shall meet the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

The respective Human Resources representative shall maintain Bloodborne Pathogen exposure records.

Employee medical records shall be kept confidential and are not to be disclosed without the employee's written consent, except as required by 29 CFR 1910.1030 or other law.

Accurate medical records for each employee with occupational exposure must be maintained for at least the duration of employment plus 30 years and shall include at least the following:

- Employee's name, Social Security number and The Rice-Tinsley Corporation employee number.
- Employee's Hepatitis B vaccination status, including vaccination dates.
- All results from examinations, medical testing and follow-up procedures, including all health care professional's written opinions.
- Information provided to the health care professional.
- Any Hepatitis B Vaccine Declinations.

Training records shall be maintained for 3 years from the date on which the training occurred and shall include at least the following:

- Outline of training program contents.
- Name of person conducting the training.
- Names and job titles of all persons attending the training.
- Date of training.

Disposing of Contaminated Materials

The OSHA rules state that regulated waste must be placed in containers which are:

- Closable;
- Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;
- Labeled or color-coded in accordance with the standard; and
- Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.
- If outside contamination of the regulated waste container occurs, it must be placed in a second container meeting the above standards.

Labels and Signs

Biohazard warning labeling shall be used on containers of regulated waste; Sharps disposal containers; contaminated laundry bags and containers; contaminated equipment.

Warning labels and signs shall be used to warn employees of items containing blood or other potentially infectious material.

Information

Information provided to our employees includes:

- The Biohazards Standard itself.
- The epidemiology and symptoms of bloodborne diseases.
- The modes of transmission of bloodborne pathogens.
- Our facility's Exposure Control Procedure (and where employees can obtain a copy).
- Appropriate methods for recognizing tasks and other activities that may involve exposure.
- A review of the use and limitations of methods that will prevent or reduce exposure.
- Selection and use of personal protective equipment.
- Visual warnings of biohazards within our facility including labels, signs and "color-coded" containers.
- Information on the Hepatitis B Vaccine.
- Actions to take and persons to contact in an emergency involving potentially infectious material.
- The procedure to follow if an exposure incident occurs, including incident reporting.
- Information on the post-exposure evaluation and follow-up, including medical consultation.

VACCINATION DECLINATION FORM

Date: _____

Employee Name: _____

Employee ID#: _____

I understand that due to my occupational exposure to blood or other potential infectious materials I may be at risk of acquiring Hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with Hepatitis B vaccine, at no charge to myself. However, I decline the Hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring Hepatitis B, a serious disease. If, in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee Signature

Date

Facility Representative Signature

Date

POST-EXPOSURE EVALUATION AND FOLLOW-UP CHECKLIST

The following steps must be taken, and information transmitted, in the case of an employee's exposure to bloodborne pathogens:

ACTIVITY

COMPLETION DATE

Employee furnished with documentation
regarding exposure incident.

Source individual identified.
() Source individual

Appointment arranged for employee
with healthcare professional.
()
Professional's name

Documentation forwarded to healthcare professional

_____	Bloodborne Pathogens Standard
_____	Description of exposed employee's duties
_____	Description of exposure incident, including routes of exposure

COLD WEATHER SAFETY / COLD STRESS

PURPOSE

The purpose of this program is to address control measures to protect The Rice-Tinsley Corporation employees from stress or injuries when working in cold temperatures.

SCOPE

Each The Rice-Tinsley Corporation worksite shall implement a site specific cold weather/cold stress hazard assessment and have the control plan approved by the The Rice-Tinsley Corporation Safety Manager.

RESPONSIBILITIES

Safety Manager

- identify and conduct an assessment of , tasks and occupations where there is the potential for cold stress
- implement and/or provide controls (engineering, administrative or personal protective equipment) to minimize cold stress
- provide training and education regarding cold stress, including early signs and symptoms of cold-related exposure

Worker Responsibilities

- adhere to all control measures or work procedures that have been designed and implemented to reduce exposure to conditions that could cause cold stress
- leave cold environments if signs or symptoms of cold-related stress appear
- wear all required cold temperature clothing and PPE
- immediately report any signs or symptoms of cold-related stress

COLD TEMPERATURE PROCEDURES

Health Effects of Cold Stress

Warning signs of hypothermia can include complaints of nausea, fatigue, dizziness, irritability or euphoria. Workers can also experience pain in their extremities (hands, feet, ears, etc.), and severe shivering. Workers should be moved to a heated shelter and seek medical advice when appropriate.

Hazard Assessment

An assessment will be conducted by the Safety Manager to identify the types of jobs or employees who are at risk for cold exposure. Jobs that are at risk for cold exposure include, but are not limited to: airport ground personnel, auto repair and refueling, cold storage, construction and demolition, ice making, logging, mining, oil and gas drilling, pulp and paper, railroad and trucking, snow and trash removal, utility repair and warehousing. The assessment must also consider employees who work inside but have to go outside for any portion of the shift to either perform work or to travel to transportation departure or arrival points.

Facilities

- Regularly used walkways and travel ways shall be sanded, salted or cleared of snow and ice as soon as practicable.
- Employees will be informed of the dangers associated with working around unstable snow and ice build-ups. All employees will be informed of the dangers and destructive potential caused by unstable snow build-up, sharp icicles, ice dams and know how to prevent incidents caused by them.
- When dangerous overhead build-ups of snow or ice are present barricades will be used to prevent staff from walking or driving into potential fall zones.

Clothing, PPE and Supplies

Proper cold weather protection must be worn by employees when working in cold, wet and windy conditions. Protective clothing is the most important way to avoid cold stress. The type of fabric also makes a difference.

Cotton loses its insulation value when it becomes wet. Wool, silk and most synthetics, on the other hand, retain their insulation even when wet. The following are recommendations for working in cold environments:

- Wear at least three layers of clothing. An inner layer of wool, silk or synthetic to wick moisture away from the body – a middle layer of wool or synthetic to provide insulation even when hot - an outer wind and rain protection layer that allows some ventilation to prevent overheating.
- Wear a hat or hood. Up to 40% of body heat can be lost when the head is left exposed.
- Keep a change of dry clothing available in case work clothes become wet.
- With the exception of the wicking layer do not wear tight clothing. Loose clothing allows better ventilation of heat away from the body.
- Do not underestimate the wetting effects of perspiration. Oftentimes wicking and venting of the body's sweat and heat are more important than protecting from rain or snow.
- Wear insulated boots or other footwear. Felt-lined, rubber bottomed, leather-topped boots with removable felt insoles are best suited for heavy work in cold since leather is porous, allowing the boots to "breathe" and let perspiration evaporate.
- Liner socks made from polypropylene will help keep feet dry and warmer by wicking sweat away from the skin. Always wear the right thickness of socks for your boots.
- In extremely cold conditions, where face protection is used, eye protection must be separated from the nose and mouth to prevent exhaled moisture from fogging and frosting eye shields or glasses.
- Clothing must be dry. Moisture should be kept off clothes by removing snow prior to entering heated shelters.

Cold weather supplies will be regularly inspected and restocked when necessary by The Rice-Tinsley Corporation. Regular inspections on cold weather supplies such as hand warmers, jackets, shovels, etc. will be carried out to ensure that supplies are always in stock.

Preventative Controls That Are Implemented to Avoid Cold Induced Injuries

- Workers will be under constant protective observation by a co-worker or supervisor. The Rice-Tinsley Corporation will implement a "Buddy System" to ensure that no employee is working alone in cold work environments.
- Some preventive measures include drinking plenty of liquids, avoiding caffeine and alcohol.
- It is easy to become dehydrated in cold weather. If possible, heavy work should be scheduled during the warmer parts of the day.
- Take breaks out of the cold.

- Try to work in pairs to keep an eye on each other and watch for signs of cold stress.
- Avoid fatigue since energy is needed to keep muscles warm.
- Take frequent breaks and consume warm, high calorie food such as pasta to maintain energy reserves.
- If a worker exposed to cold shows signs or reports symptoms of cold stress or injury the worker must be removed from further exposure and treated by an appropriate first aid attendant, if available, or a physician.
- For continuous work in temperatures below the freezing point, heated warming shelters such as tents, cabins or rest rooms should be available. The work should be paced to avoid excessive sweating. If such work is necessary, proper rest periods in a warm area should be allowed and employees should change into dry clothes.
- New employees should be given enough time to get acclimatized to cold and protective clothing before assuming a full workload.
- For work below the freezing point, metal handles and bars should be covered by thermal insulating material. Also, machines and tools should be designed so that they can be operated without having to remove mittens or gloves.

TRAINING

The Rice-Tinsley Corporation employees who are required to work in cold weather conditions will receive initial and annual training regarding the health effects of cold exposure and proper rewarming procedures, recognition of and first aid for frostbite and hypothermia, required protective clothing, proper use of warming shelters, the buddy system, maintaining communications, vehicle breakdown procedures and proper eating and drinking habits for working in the cold.

Health Effects

Where employees are exposed to work conditions that may present a hazard because of excessive cold The Rice-Tinsley Corporation shall ensure that a competent person provides training to ensure the employees are familiar with the signs and symptoms of cold weather induced health problems such as hypothermia, frostbite and trench foot. Training will include:

- Hypothermia occurs when body heat is lost faster than it can be replaced. When the core body temperature drops below the normal 98.6°F to around 95°F the onset of symptoms normally begins. The person may begin to shiver and stomp their feet in order to generate heat. Workers may lose coordination, have slurred speech and fumble with items in the hand. The skin will likely be pale and cold.
- Frostbite occurs when the skin actually freezes and loses water. In severe cases, amputation of the frostbitten area may be required. While frostbite usually occurs when the temperatures are 30°F or lower, wind chill factors can allow frostbite to occur in above freezing temperatures. Frostbite typically affects the extremities, particularly the feet and hands. The affected body part will be cold, tingling, stinging or aching followed by numbness. Skin color turns red, then purple, then white and is cold to the touch. There may be blisters in severe cases.
- Trench Foot or immersion foot is caused by having feet immersed in cold water at temperatures above freezing for long periods of time. It is similar to frostbite but considered less severe. Symptoms usually consist of tingling, itching or a burning sensation. Blisters may be present.

Workers and supervisors involved with work in cold environments should be informed about symptoms of adverse effect exposure to cold, proper clothing habits, safe work practices, physical fitness requirements for work in cold, and emergency procedures in case of cold injury. While working in cold, a buddy system should be used. Look out for one another and be alert for the symptoms of hypothermia.

First Aid Training

Employees will be trained to administer proper first aid treatment on cold induced injuries or illnesses. All The Rice-Tinsley Corporation employees who are required to perform work in cold conditions will be knowledgeable on how to administer first aid treatment on cold induced injuries or illnesses.

All training shall be documented.

CONFINED SPACES

PURPOSE

The purpose of this program is to ensure the safety of all employees and contractors working for The Rice-Tinsley Corporation and to comply with all regulations and host clients that pertain to confined spaces.

SCOPE

This program covers all employees and other workers that may be involved in confined space entry. When work is performed on a non-owned or operated site, the operator's program shall take precedence. This document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

DEFINITIONS

Acceptable entry conditions - the conditions that must exist in a confined space to allow entry and to ensure that employees involved with a confined space entry can safely enter into and work within the space.

Attendant - an individual stationed outside one or more Confined spaces who monitors the authorized Entrants and who performs all Attendant's duties assigned in the The Rice-Tinsley Corporation Confined Spaces Program. Attendants must have sufficiently completed and fully understands the Confined Space training and is approved by the HSE Manager to work in a confined space as an Attendant.

Authorized Entrant - an individual who is authorized by The Rice-Tinsley Corporation to enter a confined space. Entrants must have sufficiently completed and fully understands the Confined Space training and is approved by the HSE Manager to work in a confined space as an Authorized Entrant.

Blanking or Blinding - the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

Confined Space

- A space that is large enough and so configured that an employee can bodily enter and perform assigned work;
- Has limited or restricted means for entry or exit (for example, tanks, vessels, coolers, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and
- Is not designed for continuous occupancy.

Double block and bleed - the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

Emergency - any occurrence (including any failure of hazard control or monitoring equipment) or an event internal or external to the confined space that could endanger Entrants.

Engulfment - the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

Entry - the action by which a person passes through an opening into a confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the Entrant's body breaks the plane of an opening into the space.

Entry permit – means the written or printed document that is provided by The Rice-Tinsley Corporation to allow and control entry into a confined space that contains the information specified in this program.

Entry Supervisor - the person responsible for determining if acceptable entry conditions are present at a confined space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

- Entry Supervisors must have sufficiently completed and fully understands the Confined Space training and is approved by the HSE Manager to work in a confined space.
- An Entry Supervisor also may serve as an Attendant or as an authorized Entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of Entry Supervisor may be passed from one individual to another during the course of an entry operation.
- The Entry Supervisor is responsible to test and monitor the atmosphere conditions.

Hazardous atmosphere - an atmosphere that may expose employees to the risk of death, incapacitation, and impairment of ability to self-rescue (that is, escape unaided from a confined space), injury, or acute illness from one or more of the following causes:

- Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL), (0% is normal).
- Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent, (20.9 % is normal).
- Any other atmospheric condition that is immediately dangerous to life or health. (Ex.-H2S 10%, 0% is normal).
- Note: For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Material Safety Data Sheets that comply with the Hazard Communication Standard, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

Hot work permit - the written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

Immediately dangerous to life or health (IDLH) - any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a confined space.

- Note: Some materials -- hydrogen fluoride gas and cadmium vapor, for example -- may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" from recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately dangerous to life or health".

Inerting - the displacement of the atmosphere in a permit space by a non-combustible gas (such as nitrogen) to such an extent that the resulting atmosphere is non-combustible. This procedure produces an IDLH oxygen deficient atmosphere.

Isolation - the process by which a confined space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.

Line Breaking - the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

Non-Permit Confined Space - A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Oxygen deficient atmosphere - an atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen enriched atmosphere - an atmosphere containing more than 23.5 percent oxygen by volume.

Permit-Required Confined Space - a confined space that has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere.
- Contains a material that has the potential for engulfing an Entrant.
- Has an internal configuration such that an Entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.
- Contains any other recognized serious safety or health hazard.

Permit system - the employer's written procedure for preparing and issuing permits for entry and for returning the confined space to service following termination of entry.

Prohibited condition - any condition in a confined space that is not allowed by the permit during the period when entry is authorized.

Rescue service - the personnel designated to rescue employees from Permit-Required Confined Spaces.

Retrieval system - the equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from confined spaces.

Testing - the process by which the hazards that may confront Entrants of a confined space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

RESPONSIBILITIES

Managers/Supervisor

- Shall ensure that all employees have been trained and fully understand the requirements of this program.

- Shall provide the necessary equipment to comply with these requirements and ensure that all employees are trained on its use.
- Shall ensure that all confined space assessments have been conducted and documented.
- Shall ensure that provisions and procedures are in place for the protection of employees from external hazards including but not limited to pedestrians, vehicles and other barriers and by use of the pre-entry checklist verifying that conditions in the permit space are acceptable for entry during its duration.
- Shall ensure that all Permit-Required Confined Spaces permits are posted.
- Shall ensure an annual review of the program including all entry permits issued that during that annual period.
- Shall ensure that confined spaces are identified properly as either a Non-Permit Confined Space or a Permit-Required Confined Space.
- Shall ensure that all confined spaces that have been identified as “no entry” have signs that state, “DANGER-DO NOT ENTER”.
- Shall ensure signs have been posted at all Permit-Required Confined Space areas that state, “DANGER – PERMIT ENTRY CONFINED SPACE” along with the proper warning word such as “ASPHYXIAN, FLAMMABILITY or TOXIC HAZARD”
- Shall file all permits at the area offices for review. Permits shall be kept on file for one year.

Affected Employee

- Shall attend Confined Space Entry training commensurate with their duties and when duties change as required.
- Shall comply with all aspects of this program.
- Authorized Entrants, Attendants and Entry Supervisors may be any The Rice-Tinsley Corporation employee that is authorized by management to work in a confined space setting and that has been trained and is proficient in the understanding of program requirements.

Authorized Entry Supervisor Duties

- Shall have a tailgate safety meeting, with all workers to be involved in the confined space entry and review the job to be performed and what safety concerns may be present.
- Shall confirm that all isolation, Lock/out and Tag/outs have been completed prior to entry into a confined space.
- Shall ensure that the requirements of this program are followed and maintained.
- Shall test all atmosphere conditions prior to entry and shall complete and maintain the confined space permit form and have it accessible for review on the job site at all times.
- Shall notify The Rice-Tinsley Corporation supervisor of entry into a confined space and notify the supervisor of any changes that may occur, during an entry.
- If the confined space poses a hazard that cannot be eliminated, the Entry Supervisor must arrange for a rescue services.
- If the confined space poses no hazards to the Entrants, the Entry Supervisor can reclassify the confined space to a Non-Permit Confined Space.
- A stand-by rescue team is not required to be on site for Non-Permit Confined Space entries.

Authorized Attendant Duties

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.

- Is aware of possible behavioral effects of hazard exposure in authorized Entrants.
- Continuously maintains communication and an accurate count of authorized Entrants in the confined space and ensures that the means used to identify authorized Entrants, and accurately identifies who is in the confined space.
- Remains outside the confined space during entry operations until relieved by another Attendant.
- The Rice-Tinsley Corporation has procedures to be used by a single attendant monitoring several confined spaces during an emergency. If more than one confined space is to be monitored by a single attendant, the program must include the means and procedures that will be used in order to enable the attendant to respond to emergencies in one or more permit spaces that he/she is monitoring without distraction from all responsibilities. This will include radio communications with emergency responders or other methods of summoning aid, directing entrants to leave the confined spaces, etc. The procedures shall be on the confined space permit.
- Monitors activities inside and outside the confined space to determine if it is safe for Entrants to remain in the space and orders the authorized Entrants to evacuate the confined space immediately under any of the following conditions:
 - If the Attendant detects a prohibited condition;
 - If the Attendant detects the behavioral effects of hazard exposure in an authorized Entrant;
 - If the Attendant detects a situation outside the space that could endanger the authorized Entrants;
 - If the Attendant cannot effectively and safely perform all the duties required.
- Summon rescue and other emergency services as soon as the Attendant determines that authorized Entrants may need assistance to escape from confined space hazards.
- Takes the following actions when unauthorized persons approach or enter a confined space while entry is underway:
 - Warn the unauthorized persons that they must stay away from the confined space;
 - Advise the unauthorized persons to exit the confined space immediately, if they have entered the space;
 - Inform the authorized Entrants and the Entry Supervisor if unauthorized persons have entered the confined space.
- Performs no duties that might interfere with the Attendant's primary duty to monitor and protect the authorized Entrants.
- Authorized Attendants shall not monitor more than one confined space at a time.

Authorized Entrant Duties

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- Uses appropriate personal protective equipment properly, e.g., face and eye protection, and other forms of barrier protection such as gloves aprons, coveralls, and breathing equipment;
- Is aware of possible behavioral effects of hazard exposure in authorized Entrants;
- Shall witness and verify calibrated air monitoring data and if approved, sign off, before entry is made.
- Is entitled to request additional monitoring at any time.
- Maintain communication with the Attendants to enable the Attendant to monitor the Entrants status as well as to alert the Entrant to evacuate if needed; and

- Exit from confined spaces as soon as possible when ordered by an Attendant or Entry Supervisor, when the Entrant recognizes the warning signs or symptoms of an exposure exists, or when a prohibited condition exists, or when an alarm is activated.

PROCEDURE

Non-Permit Confined Space Entry

If testing of the confined space atmosphere is within acceptable limits without the use of forced air ventilation and the space is properly isolated, the space can be entered by following the requirements for Level I confined space entry.

- Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.
- Entrants shall review and sign the confined space permit.

Employees may enter and work in the confined space as long as LEL, O₂, and toxicity hazards remain at safe levels.

- Complete the The Rice-Tinsley Corporation Confined Space Entry Permit to document that there are no confined space hazards. Make this certification available to all personnel entering the space.
- A trained Attendant must always be outside the confined space. The Attendant must monitor the authorized Entrants for the duration of the entry operation.

Exception: The Attendant requirements for Level I confined space entry may be exempted, if the job assessment is performed and has determined that there are no inherent dangers to allow single person entry.

- This provision is intended to permit field operations to enter crankspace, shallow valve boxes, cellars, excavations, etc. without an Attendant being present and all other aspects of the entry permit complied with.
- When there are changes in the use and configuration of a confined space that might increase the hazards to the Entrants (e.g., using epoxy coating on a tank floor, welding, painting, etc.), re-evaluate the space. If necessary, reclassify the space as a Permit-Required Confined Space.
- Continuously monitor the confined space atmosphere to ensure that it is still safe.
- The space must not contain a hazardous atmosphere while personnel are inside.
- If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.
- Re-evaluate the space to determine how the hazardous atmosphere developed.
- The Entry Supervisor shall cancel the entry permit.
- Take action to protect personnel before any subsequent activity to re-enter the space takes place.
- Reissue the The Rice-Tinsley Corporation Confined Space Entry Permit before allowing Entrants to re-enter the space.
- If necessary, reclassify the space as a Permit-Required Confined Space.
- Ensure that vehicle or other equipment exhaust does not enter the space.

Permit-Required Confined Space Entry

If the space is properly isolated and results of air monitoring are above acceptable parameters without local exhaust ventilation in operation, classify the entry as a Permit-Required Confined Space.

- Complete the The Rice-Tinsley Corporation Confined Space Entry Permit before proceeding with work in a Permit-Required Confined Space.

- Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.
- Entrants shall review and sign the confined space permit.
- At least one trained Attendant must always be outside the Permit-Required Confined Space.
- The Attendant must monitor the authorized Entrants for the duration of the entry operation.
- Only authorized Entrants may enter a Permit-Required Confined Space.
- All Entrants must sign in and out on the entry permit when entering and leaving a Permit-Required Confined Space.
- The back of the permit or a sign-in sheet must be used for this purpose.
- Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and unauthorized entry is prohibited.
- Conditions must be continuously monitored where Entrants are working to determine that acceptable conditions are maintained during entry.
- If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.
 - The Entry Supervisor shall cancel the entry permit.
 - Re-evaluate the space to determine how the hazardous atmosphere developed.
 - Take action to protect personnel before any subsequent activity to re-enter the space takes place.
 - Re-issue the The Rice-Tinsley Corporation Confined Space Entry Permit before allowing Entrants to re-enter the space.
 - Employees or their representatives are entitled to request additional monitoring at any time.
- The permit must be terminated when the entry operations are complete or when permit conditions change (i.e., hazardous air monitoring results are noted, unsafe behaviors are observed, etc.).
- The minimum rescue equipment required for Permit-Required Confined Space entry is covered in the Rescue & Emergency section of this program.
- Permit-Required Confined Space entry operations will be reviewed when The Rice-Tinsley Corporation believes that the requirements of this confined space program may not adequately protect personnel.
- If deficiencies are found in the program, the program will be revised and personnel will be trained in the new revisions before subsequent entries are authorized.

Pre-Job Planning and Space Preparation

The Entry Supervisor must determine that the confined space is properly isolated by blinding, disconnecting, and/or by following local Lockout/Tagout procedures.

The Entry Supervisor must discuss with all Entrants the hazards of the space, communication methods and emergency procedures during the confined space entry.

Eliminate any condition making it unsafe to open the equipment to atmosphere.

Promptly guard the opening to prevent an accidental fall through the opening and to protect each employee working in the space from foreign objects entering the space.

If applicable, wash, steam, ventilate or degas the confined space to properly free it of possible contaminants. Vent vapors to a safe location.

Do not allow unauthorized personnel to enter a confined space. Barricade and/or guard all confined spaces to prevent entry of unauthorized Entrants.

If performing hot work in the confined space, precautions must be taken consistent with the The Rice-Tinsley Corporation Hot Work Permit procedure.

Ensure that vehicle or other equipment exhaust does not enter the space.

Pre-Entry Safety Meeting

The Entry Supervisor must declare when the confined space is ready for entry.

The Entry Supervisor shall hold a pre-entry safety meeting to discuss all requirements and procedures with all authorized Entrant(s) and Attendant(s) involved with the entry. He/she will discuss other concerns such as previous contents, vessel coating, PPE required etc., during this meeting.

The Entry Supervisor must coordinate entry operations when employees of more than one company are working simultaneously in the confined space. This coordination is necessary so that one company's work does not endanger the employees of another company.

Equipment

Check all work equipment to ensure that it has the proper safety features and is approved for the locations where it will be used. The Entry Supervisor shall ensure that all equipment is properly maintained in a safe condition and that Entrants use the equipment properly.

The following equipment must be considered and may be required when entering a confined space:

- Atmospheric Testing and Monitoring Equipment.
- Barriers, Shields, and Signs – Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and unauthorized entry is prohibited. Any signs used must state "Danger – Permit Entry Confined Space" along with the proper warning word such as "Asphyxiant, Flammability or Toxic Hazard". All barricades must be capable of preventing a person from inadvertently walking into or kicking an object into the space.
- Communications Equipment – Only use intrinsically safe equipment in areas where a hazardous atmosphere may exist. Use a communication system that will keep the Attendant in constant, direct communication with the Entrant(s) working in the confined space. Also, use a communication system that allows the Attendant to summon help from rescue or emergency service.
- Entry and Exit Equipment – (For example: ladders may be needed for safe entry and exit).
- Lighting Equipment – Needed for safe entry, work within the space and exit. Lighting equipment used in the confined space must be certified safe for the location.
- Portable electric lighting used in wet and/or other conductive locations (drums, tanks, vessels) must be operated at 12 volts or less. 120 volt lights may be used if protected by a ground-fault circuit interrupter.
- Personal Protective Equipment – Ensure that personnel wear the required personal protective equipment. For respiratory protection requirements, refer to the Respiratory Protection Program.
- Rescue and Emergency Equipment – Except if provided by outside rescue services.
- The Attendants must also have an approved first aid kit.
- Vacuum Trucks – When used, trucks must be properly grounded or bonded to prevent static sparks.

- Ventilating Equipment – Local exhaust air movers used to obtain acceptable atmospheric entry conditions (e.g., Copus air movers).
- Other – Any other equipment necessary for safe entry into and rescue from permit required confined spaces.

Air Monitoring

- Before an employee enters the space, the internal atmosphere shall be tested, with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order. Monitoring of the space must inform the entrants of the potential hazards and results and they must participate in the permit review and signing.
- Air shall be periodically test while continuous ventilation is applied.
- Any employee, who enters the space, or that employee's authorized representative, shall be provided an opportunity to observe the pre-entry testing required by this paragraph.
- Employees or their representatives are entitled to request additional air monitoring at any time.

Ventilation

Continuous forced air ventilation must be used and tested as follows:

- An employee may not enter the space until the forced air ventilation has eliminated any hazardous atmosphere;
- The forced air ventilation shall be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space;
- The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.
- The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee, who enters the space, or that employee's authorized representative, shall be provided with an opportunity to observe the periodic testing and may request additional monitoring at any time.
- If a hazardous atmosphere is detected during entry each employee shall leave the space immediately and the space shall be evaluated to determine how the hazardous atmosphere developed; and measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.

Multiple Employer Procedure

In order not to endanger the employees of any other employer, the Entry Supervisor shall:

- Verify that all contractor employees have been trained in confined space and that all contractor employees fully understand the The Rice-Tinsley Corporation procedures pertaining to Confined Space.
- Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this section.
- Apprise the contractor of the elements, including the hazards identified and the employees experience with the space, that make the space in question a permit space.
- Inform the contractor of any precautions or procedures that The Rice-Tinsley Corporation has implemented for the protection of employees in or near permit spaces where contractor personnel will be working.
- Coordinate entry operations with the contractor, when both The Rice-Tinsley Corporation personnel and contractor personnel will be working in or near confined spaces.

- Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in confined spaces during entry operations.
- In addition to complying with the confined space requirements that apply to all employees; each contractor, who is retained to perform permit space entry operations, shall:
 - Obtain any available information regarding confined space hazards and entry operations from the The Rice-Tinsley Corporation Entry Supervisor.
 - Coordinate entry operations with the The Rice-Tinsley Corporation Entry Supervisor, when both The Rice-Tinsley Corporation personnel and contractor personnel will be working in or near permit spaces.
 - Inform The Rice-Tinsley Corporation of the confined space program that the contractor will follow and of any hazards confronted or created in the confined space, either through a debriefing or during the entry operation.

Rescue and Emergency Services

General

Rescue service must be on-site for immediately dangerous to life and health (IDLH) conditions while work is being performed. Rescue services must be either:

- Provided by the host facility,
- Provided by an outside service which is given an opportunity to examine the entry site, practice rescue and decline as appropriate, or
- Provided by The Rice-Tinsley Corporation by selecting a rescue team that is equipped and trained to perform the needed rescue services.
- The Attendant shall order the other Entrants not to move the injured nor allow untrained or unauthorized workers into the space that are not trained to handle a confined space rescue.
- Material Safety Data Sheet's for substances that an injured Entrant was exposed to must be provided to the medical facility treating the injured worker.

Permit-Required Confined Space Rescue:

- When the Attendant becomes aware of the need for rescue, the Attendant shall immediately summon the onsite rescue team by the agreed upon communication method, verbally, radio or cell phone, without leaving the vicinity of the confined space.
- The Attendant shall prevent unauthorized personnel from attempting a rescue.
- After the rescue team has been notified, the Attendant shall alert the Entry Supervisor of the emergency via the same communication methods.
- The preferred means of providing rescue service is through the use of a qualified outside rescue service vendor (client host). The outside rescue service vendor must be:
 - Informed of the hazards that they may confront during a rescue;
 - Provided access to the Permit-Required Confined Space to examine the entry site, practice rescue, and decline as appropriate.
 - Access to the space allows the rescue service and local supervision to jointly develop appropriate rescue plans.

- If the host operator is designated to provide rescue services for The Rice-Tinsley Corporation, the agreement of services must be included in contract for the job.
- If The Rice-Tinsley Corporation employees are to perform Permit-Required Confined Space rescues, they must be:
 - Provided and trained in the use of the proper personal protective equipment necessary to make the rescue;
 - Provided PPE at no cost
 - Trained to perform the assigned duties;
 - Required to practice making rescues at least once every 12 months;
 - Trained in basic first aid and CPR.
 - A minimum of one member of the rescue team must hold a current certification in first aid and CPR.

Non-entry Rescue

- To facilitate non-entry rescue, an Entrant must be attached to a retrieval system whenever he/she enters a Permit-Required Confined Space with a vertical depth of more than 5 feet.
- The retrieval equipment is not required if it will increase the overall risk of the entry, e.g., creating an entanglement hazard, or will not contribute to the rescue of the Entrant.
- Each Entrant shall use a full body harness equipped with a “D” ring located between the shoulders or above the head.
- Wristlets may be used instead of the full body harness, if the use of the full body harness is not feasible or creates a greater hazard *and* that using wristlets is the safest and most effective alternative.
- The retrieval line must be attached to the “D” ring and the other end of the retrieval line attached to a retrieval device or fixed point located outside the space so that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.

Issuance/Reviewing of Permit

Only when all pre-entry requirements are satisfied, the Entry Supervisor shall issue a completed and signed confined space permit. The confined space permit is valid for one shift.

In the event of any unauthorized entry, employee complaints, a hazard not covered by the permit, the occurrence of an injury or near miss the entry permit shall be cancelled and a review shall be conducted to provide employee protection and for revising the program prior to authorizing subsequent entries.

An annual review of this program, using the cancelled permits retained within 1 year after each entry shall be conducted by the HSE Manager to revise the program as necessary, to ensure that employees are protected. If no confined space entries were performed during a 12 month period, no review is necessary.

Termination and Closing or Cancelling of Permits

The Entry Supervisor shall terminate the confined space permit, at the end of the job operation, at the end of the shift or when the Entry Supervisor or Attendant determine that conditions in or near the confined space have changed and is hazardous to the Entrants.

The Entry Supervisor shall, at the conclusion of entry operation, close out the permit and provide the safety department the original copy of the Confined Space Permit.

TRAINING

Training shall be provided so that all employees whose work is regulated by this program acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned to them.

Training shall be provided to each affected employee, before the employee is first assigned duties under this program, if a new hazard has been created or special deviations have occurred and before there is a change in assigned duties.

The employee shall be retrained:

- Whenever there is a change in confined space operations that presents a hazard about which an employee has not previously been trained.
- Whenever the supervisor has reason to believe either that there are deviations from the permit space entry procedures required by this section or that there are inadequacies in the employee's knowledge or use of these procedures.

The training shall establish employee proficiency in the duties required by this program and shall introduce new or revised procedures, as necessary.

The supervisor shall certify that the training required by this program has been accomplished.

- The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training.
- The certification shall be available for inspection by employees, their authorized representatives, management, clients and the safety department.

COVID-19 HEALTH, SAFETY, PREVENTION & RESPONSE

POLICY STATEMENT

At The Rice-Tinsley Corporation we are committed to ensuring the safety and health of our workforce, including taking the appropriate steps to limit the spread of the novel coronavirus known as SARS-CoV-2 and the disease it causes, COVID-19. The health and safety of our employees, customers, vendors, subcontractors and their families is our top priority. This plan will be communicated clearly to all employees, in their preferred languages, with opportunities for them to give feedback. Because the future of the COVID-19 pandemic is uncertain and circumstances change frequently, we will continue to update this program to follow construction industry best practices to prevent infection and protect our employees. All employees have the right to refuse unsafe work and the obligation to report it to their supervisor.

While we are experiencing this pandemic, The Rice-Tinsley Corporation will develop, implement, communicate and review workplace flexibilities and protections. We are actively encouraging sick employees to stay home. Employees who have symptoms are expected to notify their supervisor and stay home. Employees who are well but who have a family member at home with COVID-19 should notify their supervisor and follow CDC recommended precautions at a minimum. Sick employees should follow CDC recommended precautions and not return to work until the criteria to discontinue home isolation are met, in consultation with healthcare providers and state and local health departments.

Note: All policies herein may not be applicable to all employees, depending on their job task; some may apply only to field staff or supervisors in temporary office spaces (e.g., construction trailers).

COVID-19 COMPLIANCE OFFICERS

Eddie Oliver and Kristin Hunsaker are designated as the COVID-19 Compliance Officers to ensure that The Rice-Tinsley Corporation, and all subcontractors are in full compliance with these guidelines. The COVID-19 Compliance Officers will perform risk assessments, make company policy recommendations and implement guidelines. It is expected that the COVID-19 Compliance Officers will use an array of public health guidance, including but limited to OSHA, NIOSH, the CDC and the industrial hygiene hierarchy of controls to eliminate, isolate and mitigate COVID-19 hazards on the worksite. The COVID-19 Compliance Officers will work with management to ensure an adequate level of cleaning supplies, tissues and paper towels, hand sanitizer, first-aid supplies, face coverings, respirators (e.g., N95s) and other personal protective equipment (PPE) and other items needed to implement this policy are available on the worksite.

COVID-19 SCREENING AND ASSESSMENT PROTOCOLS

The Rice-Tinsley Corporation will institute worker screening and assessment protocols for everyone who enters the workplace, including employees and visitors (e.g., vendors, inspectors, subcontractors and state officials). The COVID-19 Compliance Officers will ensure these screenings and assessments occur before employees and visitors gain entry to the site. Screening and assessment protocols may include a visual scan and temperature check, self-certification or a questionnaire regarding symptoms and exposure or a combination of these strategies.

The COVID-19 Compliance Officers will choose appropriate and feasible screening and assessment protocols based on the needs of the worksite. The COVID-19 Compliance Officers will communicate these protocols clearly to all employees and subcontractors prior to their implementation.

CRITICAL INFRASTRUCTURE EMPLOYEES

The CDC advises that critical infrastructure workers may be permitted to continue work following a potential exposure to COVID-19, provided they remain asymptomatic and additional precautions are implemented to protect them and the community.

For critical infrastructure workers who have had a potential exposure to COVID-19 but remain asymptomatic, the COVID-19 Compliance Officers will ensure adherence to the following practices prior to and during their work shift:

- **Pre-screening:** Measurement of the employee's temperature and assessment of symptoms prior to starting work. If possible, temperature checks will happen before the employee enters the facility.
- **Social distance:** The employee will maintain a distance of six feet from other workers and practice social distancing as work duties permit while in the workplace.
- **Regular monitoring:** As long as the employee remains asymptomatic, the employee will self-monitor and be under supervision.
- **Clean and disinfect work-spaces:** Clean and disinfect all equipment and areas such as trailers, bathrooms, common areas and shared tools.
- **Wear a mask:** The employee will wear a face mask without an exhalation valve at all times while in the workplace for 14 days after last known exposure.

If any critical infrastructure employee becomes symptomatic during the day, they will be sent home immediately. Surfaces in their workspace will be cleaned and disinfected. Information on persons who had contact with the sick employee during the time the employee had symptoms and two days prior to symptoms will be compiled. Others at the facility with close contact within six feet of the employee during this time are considered exposed. These workers will follow exposure protocols detailed in this document.

WORKER HYGIENE POLICY

Good hygiene and infection control practices will be followed according to CDC guidelines, as a minimum. Employees are required to wash hands frequently with soap and water for at least 20 seconds or use hand sanitizer when soap and water are not available. Workers should be following handwashing practices:

- Upon arriving at the workplace and before going home at the end of the day
- Before and after eating
- Between tasks
- After using the bathroom

Temporary handwashing stations will be supplied when there is no ready access to an indoor bathroom or washing facilities. Garbage cans will be supplied next to handwashing stations and toilets for disposal of tissues/towels.

Employees are required to practice good cough/sneezing etiquette – cover their mouth and nose during coughs or sneezes and use their sleeve or elbow when tissues are not available. Employees will not use their hands to cover coughs and sneezes and will avoid touching their eyes, nose and mouth as much as possible.

WORKPLACE SANITATION

The Rice-Tinsley Corporation is instituting a regimen of frequent cleaning and disinfection of high-touch surfaces, including but not limited to toilets, machinery, tools, PPE, handles, touch screens, smartphones, doors, doorknobs, railings, laptops and furniture. EPA-approved cleaning disinfectants will be used. Disinfectants will be allowed to saturate surfaces for a minimum time of one minute in order to adequately disinfect them. Regular cleaning and disinfecting of all common and meeting areas will occur at least once and preferably twice a day. The COVID-19 Compliance Officers will ensure there is a schedule for cleaning, sanitizing and stocking of all restroom facilities, porta-potties and handwashing stations. In addition, workers must clean and disinfect all machines, tools or vehicles before use.

All employees performing sanitation and disinfecting will:

- Wear PPE. This will include N95 respirators or similar (if a respirator cannot be obtained because of PPE shortages, a facemask or covering will be worn until a respirator can be obtained), disposable gloves, protective clothing and eye protection.
- Discard gloves after each cleaning.
- Clean dirty surfaces using a detergent or soap and water prior to disinfection.
- Be trained on safe donning, doffing and disposal of PPE to avoid infectious disease transmission.
- Clean hands immediately after PPE is removed.
- Be medically able to wear the type of respirator needed and trained on how to use it.
- Be aware of the differences between dust masks and N95s. Dust masks do not reliably protect the wearer from airborne respiratory droplets.

PHYSICAL DISTANCING

The Rice-Tinsley Corporation will practice physical (also called social) distancing by limiting person-to-person contact within six feet (Six-Foot Rule). All employees will follow the Six-Foot Rule at the workplace, whether indoors or outdoors.

Specific Six-Foot Rule guidelines include:

- Instituting a “No Congregation” policy to maintain physical distancing during breaks and when eating. Employees may take a lunch break, but the Six-Foot Rule does not.
- Practicing physical distancing at all times, including at crew meetings/toolbox talks. Toolbox talks will be conducted outdoors.
- Limiting face-to-face meetings to 10 people or less. As much as possible, meetings between office staff will be conducted via conference call or other virtual meeting tools. Meetings at the jobsite or requiring in-person discussion will be held outdoors if possible and will follow the Six-Foot Rule.
- Eliminating coffee and lunch trucks and the use of centralized gathering or eating areas. All employees are advised to bring their own food, drink and utensils.

- Adjusting meeting and lunchroom seating to eliminate large gatherings. Small break areas will be used with limited seating. If break areas cannot be adjusted, employees will take steps to follow the Six-Foot Rule (e.g., sit adjacent to rather than directly across from each other, eat outside of work areas).
- Reviewing and adjusting project schedules to allow for the Six-Foot Rule, including arranging for staggered shifts or longer break times so employees can maintain distance during breaks, including lunch.
- Supplying employees with facial coverings and PPE according to the risk and job task (e.g., face mask or N95 respirator, face shield, gloves and eye protection) in work conditions where the Six-Foot Rule is impossible to achieve.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

The Rice-Tinsley Corporation will allow voluntary use of N95 respirators or equivalent. The company will implement a mandatory face covering policy. Although not recognized as PPE, surgical masks and facial coverings will also be permitted. This policy will be continually reviewed and updated according to the specific risks encountered on the jobsite.

All appropriate and required PPE will be provided to employees. The decision to provide specific PPE (e.g., gloves, respirators, protective clothing, eye protection, etc.) to protect against COVID-19 will follow a risk assessment conducted by the COVID-19 Compliance Officers. Use of PPE required by regulatory standards will not be affected by this program.

TRAINING

All employees will receive training regarding this policy and exposure control. This training will include the signs and symptoms of COVID-19, how to prevent exposure and transmission of COVID-19, the reasons for staying home from work when sick and how to use COVID-19 safety supplies and PPE.

TRAVEL

International

All international travel activities will be terminated and future travel activities will be postponed until the COVID-19 outbreak is officially declared over by the federal government. After it has been determined it is safe to travel, international travel will be gradually phased back into our business continuity plan.

Regional and Local

We will examine our travel policy and modify it based on the specific state or local guidance in the area where work is being performed. If there is significant community spread within a geographic area, non-essential work travel and work sponsored conferences, trade shows, etc., within that area will be canceled until further notice. We will take into account the circumstances along the travel route and at the destination of an employee's proposed travel. The Rice-Tinsley Corporation will abide by any travel restrictions in the destination area and be aware of state or local government policies that may be in place, such as mandatory quarantine upon arrival.

RECORDKEEPING

The Rice-Tinsley Corporation will follow OSHA's recordkeeping requirements (29 CFR Part 1904) as it relates to recording cases of COVID-19. Under OSHA's COVID-19 Interim Guidance for Recordkeeping Requirements, COVID-19 is a recordable illness if all of the following apply:

- Is a confirmed case of COVID-19
- Is work-related (as defined by 29 CFR 1904.5)
- Involves one or more of the general recording criteria (29 CFR 1904.7), such as medical treatment beyond first aid or days away from work

WORKSITE FLEXIBILITY

The Rice-Tinsley Corporation will establish additional policies and practices to increase compliance with the COVID-19 Worksite Safety & Health Program. Strategies under consideration include:

- Flexibility regarding in-person attendance for office staff (e.g., telework)
- Implementing flexible work hours (e.g., staggered shifts)
- Downsizing operations
- Developing non-punitive leave policies
- Not requiring a healthcare provider's note for employees who are sick with acute respiratory illness to validate their illness to return to work, as healthcare provider offices and medical facilities may be extremely busy and not able to provide such documentation in a timely way
- Assigning employees who may be at higher risk for serious illness, such as older adults and those with chronic medical conditions, work tasks that allow them to maintain a distance of six feet from other employees, customers and visitors or to telework if possible
- Implementing plans to continue essential business functions in the circumstance that higher than usual absenteeism occurs
- Delivering products through curbside pick-up or delivery

EMPLOYEE WELL-BEING

The Rice-Tinsley Corporation will take opportunities to support employee well-being and resilience by helping to address potential health impacts, such as depression, posttraumatic stress disorder (PTSD), substance use disorder and other mental health related disorders.

- Provide frequent and comprehensive communication with employees before, during and after the transition back to work/jobsites
- Provide resources related to physical, mental, emotional and financial well-being
- Provide available employee assistance program (EAP) or member assistance program (MAP) information to support workers in addressing their mental health
- Provide materials on bereavement, loss and grief to help employees cope with the loss of co-workers, family members or loved ones

- Consider coordination of critical incident stress management services through the EAP or the Laborers' Health & Safety Fund of North America if an employee passes away due to COVID-19 or a jobsite critical incident

RESOURCES

Recommendations to limit the spread of COVID-19 and mitigate the risk to employees may change as public health officials learn more about the virus. The contents of this program were developed based on guidance and best practices from the following sources:

CDC – Coronavirus (COVID-19) – www.cdc.gov/coronavirus/2019-ncov

OSHA – OSHA Guidance on Preparing Workplaces for COVID-19 – www.osha.gov/Publications/OSHA3990.pdf

NIOSH – Coronavirus Disease-2019 – www.cdc.gov/niosh/emres/2019_ncov.html

Employers should consider implementing a screening and assessment program for employees, visitors and vendors before allowing them to access the workplace. This program could utilize screenings, assessments or both options. This document provides employers with guidance on conducting those screenings and assessments. Return to work scenarios for individual employees who are exposed to COVID-19, experience COVID-19 symptoms or are advised by their healthcare provider or a local public health official to self-quarantine or self-isolate are also provided.

Please contact the Laborers' Health & Safety Fund of North America (LHSFNA) at 202-628-5465 for specific questions or concerns not addressed below. The LHSFNA can develop a screening and/or assessment program tailored to the specific needs and circumstances of your workplace.

SCREENING METHOD: VISUAL SCAN AND TEMPERATURE CHECK

Screening employees, visitors and vendors for COVID-19 through temperature checks and visual scans is one strategy employers can implement in an effort to protect the work environment.

There are several steps employers can take to protect the employee conducting temperature screenings. The most protective methods incorporate social distancing (maintaining a distance of six feet from others) or physical barriers to eliminate or minimize the screener's potential exposure due to close contact during screening.

If social distancing or barrier controls cannot be implemented during screening, personal protective equipment (PPE) can be used when the screener is within six feet of an employee. However, reliance on PPE alone is a less effective control and is more difficult to implement given PPE shortages and training requirements.

Temperature screening is a time-intensive process. Depending on the space available and layout of the workplace, multiple screening stations may be necessary.



People with COVID-19 may experience these symptoms or a combination of symptoms:

- Cough
- Shortness of breath or difficulty breathing
- Fever (temperature of 100.4°F or greater)
- Chills
- Repeated shaking with chills
- Muscle pain
- Headache
- Sore throat
- Loss of taste or smell

STEPS TO PERFORM A VISUAL SCAN AND TEMPERATURE CHECK

1. Before screening begins, the screener should wash their hands with soap and water for at least 20 seconds or, if soap and water are not available, use hand sanitizer with at least 60 percent alcohol.
2. Screener puts on the following PPE:
 - A gown
 - A single pair of disposable gloves
 - Eye protection (goggles or disposable face shield that fully covers the front and sides of the face)
 - Respiratory protection such as a NIOSH-approved N95 or higher-level respirator or facemask (if a respirator is not available)
3. The screener makes a visual inspection of the employee for signs of illness, which could include flushed cheeks or fatigue, and confirms the employee is not experiencing coughing or shortness of breath.
4. Conduct temperature screening using the protocols described under these three scenarios:
 - A. Distancing Scenario**
 - An employee, visitor or vendor would be informed in advance to take their own temperature prior to coming into the workplace.
 - The screener stands at least six feet away from the employee and asks them to confirm their temperature is less than 100.4°F.
 - B. Barrier Scenario**
 - During screening, the screener stands behind a physical barrier, such as a glass or plastic window or partition, that can protect the screener's face and mucous membranes from respiratory droplets that may be produced when an employee sneezes, coughs or talks.

- To check the person's temperature, reach around the partition or through the window. Make sure the screener's face stays behind the barrier at all times.
- When using a thermometer that requires physical contact with an employee, use a clean pair of gloves for each employee and ensure that the thermometer is thoroughly cleaned between each screening. Follow these directions: Remove and discard gloves, wash hands with soap and water for at least 20 seconds or use hand sanitizer with at least 60 percent alcohol.
- If disposable or non-contact thermometers are used and the screener does not have physical contact with an employee, changing gloves before the next screening is not required. If non-contact thermometers are used, clean and disinfect them according to manufacturer's instructions and facility policies.
- If at any point the screener does have physical contact with an employee, changing gloves before the next screening is required. Follow the glove removal and handwashing instructions above.

C. PPE Only Scenario

- When using a thermometer that requires physical contact with an employee, use a clean pair of gloves for each employee and ensure that the thermometer is thoroughly cleaned between each screening. Follow these directions: Remove and discard gloves, wash hands with soap and water for at least 20 seconds or use hand sanitizer with at least 60 percent alcohol.
 - If disposable or non-contact thermometers are used and the screener does not have physical contact with an employee, changing gloves before the next screening is not required. If non-contact thermometers are used, clean and disinfect them according to manufacturer's instructions and facility policies.
 - If at any point the screener does have physical contact with an employee, changing gloves before the next screening is required. Follow these directions: Remove and discard gloves, wash hands with soap and water for at least 20 seconds or use hand sanitizer with at least 60 percent alcohol.
5. At the end of the screener's shift, remove and discard all PPE into a trash can, wash hands with soap and water for at least 20 seconds or use hand sanitizer with at least 60 percent alcohol.

Screening Results

Employees, visitors and vendors with a temperature of 100.4°F or greater should immediately be separated from other people in the workplace, sent home and advised to contact their healthcare provider.

Assessing employees, visitors and vendors is another strategy employers can implement in an effort to protect the work environment. Two possible options for assessing exposure to COVID-19 or symptoms of the virus are a questionnaire and self-certification.

The questionnaire can be given in-person or online. An in-person questionnaire is more time-intensive for the employer and requires protections and distancing measures be in place between the screener and the employee. Please refer to the **Distancing, Barrier or PPE Only Scenarios** above for more information. The online questionnaire method, implemented through a platform such as Google forms, may also be time-intensive, but removes concerns about in-person interactions.

SAMPLE ASSESSMENT QUESTIONNAIRE

1. **Exposure.** Have you, or anyone in your household, come in close contact (within six feet) with someone who has a suspected or confirmed COVID-19 diagnosis?
2. **Symptoms.** Are you currently experiencing:
 - a. Cough
 - b. Shortness of breath or difficulty breathing
 - c. Or at least two of these symptoms:
 - i. Fever (temperature of 100.4°F or greater)
 - ii. Chills
 - iii. Repeated shaking with chills
 - iv. Muscle pain
 - v. Headache
 - vi. Sore throat
 - vii. Loss of taste or smell
3. Are you currently under self-quarantine or self-isolation orders by your healthcare provider or a local public health official?

Assessment Results: No to All Questions

An employee, visitor or vendor responding “no” to all three questions should be granted access to the workplace and proceed with their normal workday.

Assessment Results: Yes to Exposure Question

An employee, visitor or vendor responding “yes” to exposure but “no” to symptoms should self-quarantine for 14 days. According to the CDC, self-quarantine is appropriate when a person feels healthy but recently had close contact with a person with COVID-19. A person in self-quarantine should do the following:

- Stay home for 14 days
- Practice social distancing
- Check their temperature twice a day
- Self-monitor for COVID-19 symptoms
- Contact their healthcare provider if symptoms develop

Discontinuing Self-Quarantine

While in self-quarantine, the employee may or may not develop symptoms. If the employee does not develop symptoms, they should contact their employer about returning to work after 14 days in self-quarantine. If the employee does develop symptoms, they should begin self-isolation (see details below) and contact their healthcare provider.

Assessment Results: Yes to Symptoms Question

An employee, visitor or vendor responding “yes” to symptoms should be isolated from other people in the workplace and, if they’re an employee, their supervisor should be notified. Prior to the symptomatic person leaving the premises, employers should determine which employees may have been exposed to the virus and need to take additional precautions; this process is known as contact tracing. According to the CDC:

"Most workplaces should follow public health recommendations for community-related exposure. This guidance indicates that employees who had close contact (within six feet) with the symptomatic person during the period from 48 hours before symptom onset until the symptomatic person meets the criteria to discontinue home isolation should self-quarantine, self-monitor for symptoms and practice social distancing for 14 days."

If an employee is confirmed to have COVID-19, employers should inform fellow employees of their possible exposure to COVID-19 in the workplace but maintain confidentiality as required by the Americans with Disabilities Act.

The symptomatic person should be sent home, advised to self-isolate and contact their healthcare provider. According to the CDC, self-isolation is appropriate when someone has been diagnosed with COVID-19, is waiting for diagnostic test results or has symptoms. A person in self-isolation should do the following:

- Stay in a specific "sick room" or area and away from other people or pets; if possible, use a separate bathroom
- Stay home except to get medical care
- Monitor symptoms and stay in contact with their healthcare provider
- Follow care instructions from their healthcare provider and local or state health department

The employee may or may not be able to receive a COVID-19 diagnostic test from their healthcare provider or health department. Decisions about testing are at the discretion of state and local health departments and/or individual healthcare providers.

Discontinuing Self-Isolation

According to the CDC*, there are two ways to discontinue self-isolation: a test and based on symptoms. These methods are for people with COVID-19 who have symptoms and were directed to care for themselves at home. The test-based approach is contingent on the availability of ample testing supplies and laboratory capacity as well as convenient access to testing.

Conditions indicating recovery with the test-based approach:

- No longer have a fever (without the use of medicine that reduces fever) **AND**
- Other symptoms have improved **AND**
- Two negative test results in a row, 24 hours apart

Conditions indicating recovery with the symptom-based approach:

- No fever for at least 3 days (72 hours) – without the use of medicine that reduces fever **AND**
- Other symptoms have improved **AND**

- At least 10 days have passed since symptoms first appeared

*CDC guidance for COVID-19 may be adapted by state and local health departments to respond to rapidly changing local circumstances.

After an employee meets the criteria to discontinue home isolation, they should contact their employer about returning to work.

Employers should not require sick employees to provide a COVID-19 test result or healthcare provider's note to validate their illness, qualify for sick leave or return to work. Healthcare provider offices and medical facilities may be extremely busy and not able to provide such documentation in a timely manner.

Assessment Results: Yes to Self-Isolate or Self-Quarantine Question

An employee who responds "yes" to being advised to self-isolate or self-quarantine by their healthcare provider or a local public health official should return to their self-isolation or self-quarantine immediately. They should also contact their healthcare provider or local public health official and inform them of breaking self-quarantine or self-isolation, then follow their recommendations on how to proceed.

What happens if an employee becomes symptomatic during the workday?

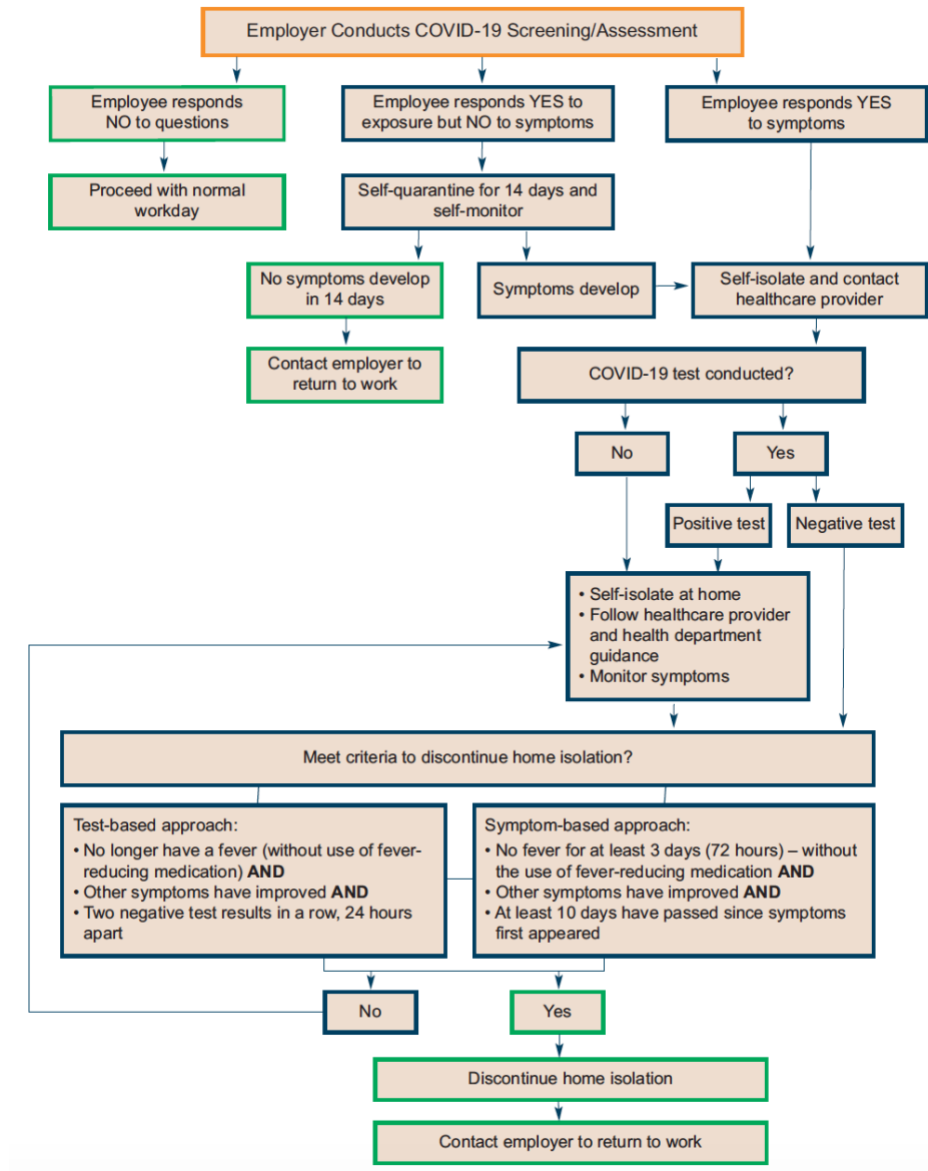
Employees who become sick during the day should immediately be separated from other employees, sent home and advised to contact their healthcare provider. Prior to the symptomatic person leaving the premises, employers should determine which employees may have been exposed to the virus and need to take additional precautions; this process is known as contact tracing. According to the CDC:

"Most workplaces should follow public health recommendations for community-related exposure. This guidance indicates that employees who had close contact (within six feet) with the symptomatic person during the period from 48 hours before symptom onset until the symptomatic person meets the criteria to discontinue home isolation should self-quarantine, self-monitor for symptoms and practice physical distancing for 14 days."

Under this circumstance, the employer should close off areas used by the person who is sick. Companies do not necessarily need to cease operations if they can close off affected areas. If possible, open outside doors and windows and use ventilating fans to increase air circulation in the area. Employers should wait 24 hours before cleaning and disinfecting to minimize potential for other employees being exposed to respiratory droplets. If waiting 24 hours is not feasible, wait as long as possible. All items and surfaces that the employee had contact with should be cleaned and disinfected.

EMPLOYEE ASSESSMENT FLOWCHART

The following flowchart is intended to aid The Rice-Tinsley Corporation in understanding an employee's experience with the COVID-19 assessment process at a glance. It is not intended to be used without the accompanying guidance and instructions above.



CORONAVIRUS & COVID-19: PREVENTION AND RESPONSE

PURPOSE

The novel coronavirus (SARS-CoV-2) and the disease it causes (COVID-19) are a global pandemic. It's critical that everyone does their part to limit the spread of the virus, as people without symptoms or with mild symptoms can still spread the virus to others.

RISK IN THE U.S. AND CANADA

- Current risk of contracting COVID-19 in the U.S. and Canada varies by community based on the extent of the outbreak and the success of mitigation efforts.
- While the majority of people who contract COVID-19 will experience only mild symptoms, the disease does bring risk for serious and life-threatening health conditions. Even people at low risk for serious health complications should take steps to protect groups who would be at higher risk if they got the disease.
- Risk for more serious health effects is highest among:
 - Older adults (age 65 and up)
 - People with underlying health conditions (e.g., heart disease, lung disease, diabetes, cancer)
 - People with weakened immune systems
 - The majority of deaths caused by COVID-19 have occurred among people falling into at least one of these higher risk categories.

TRANSMISSION & EXPOSURE

- Transmission: Spread primarily through airborne respiratory droplets during coughing, sneezing and regular breathing. Being in close proximity (less than six feet) to an infected person, especially in enclosed spaces, may result in transmission. Close personal contact, such as touching or shaking hands, or touching an object with the virus on it, followed by touching your mouth, nose or eyes before washing your hands can spread the virus.
- Secondary spread: People who have recovered from COVID-19 may still be able to transmit the virus to others. The risk of transmission after recovery is likely substantially less than during illness.
- Asymptomatic spread: The CDC reports that about 25 percent of people who get the virus remain asymptomatic and never get sick. However, these people are still able to spread the virus to others.
- Diagnosis: If you suspect you have COVID-19, call your healthcare provider. A lab test may be performed and sent to the CDC.
- Known or suspected exposure: If you have been exposed or suspect exposure to someone with COVID-19, self-quarantine for 14 days to prevent potentially spreading the virus to others.
- Secondary infection: The duration of immunity to SARS-CoV-2 is not yet known. The World Health Organization suggests people are not immune to getting the virus again.

SIGNS, SYMPTOMS & TREATMENT

- **Incubation:** For people who develop symptoms, it takes between 2-14 days for symptoms to appear after exposure. During this time period, people are contagious and able to pass on the virus. The average onset of symptoms is around 5 days.
- **Symptoms:** Mild to moderate respiratory symptoms similar to the flu. People may experience these symptoms or a combination of symptoms:
 - Cough, shortness of breath or difficulty breathing
 - At least two of these symptoms: fever (100.4°F or greater), chills, repeated shaking with chills, muscle pain, headache, sore throat, loss of taste or smell body aches and pain, headache, fatigue, diarrhea and loss of smell or taste.
 - In serious cases, these symptoms progress to pneumonia and other life-threatening respiratory conditions.
 - Emergency warning signs include trouble breathing, persistent pain in the chest, confusion or sluggishness and bluish lips or face; seek medical attention.
- **Treatment:** There is currently no vaccine for COVID-19 and no specific treatment beyond those typically prescribed for seasonal flu. If you are sick with COVID-19 or suspect COVID-19 is causing your illness, focus on supportive care to relieve symptoms. Do the following to help prevent the disease from spreading:
 - Keep in contact with your healthcare provider.
 - **Stay home except to get medical care.** Don't go to work, school or public areas and avoid public transportation.
 - If you must go out in public, wear a surgical mask or similar facial covering and avoid close contact with other people.
 - Call ahead before visiting your doctor so the office can take steps to keep other people from getting infected or exposed.
 - Seek medical attention if your conditions worsen (e.g., difficulty breathing).
 - Clean "high-touch" surfaces every day with a household cleaning spray or wipe.
 - Avoid sharing personal household items like drinking glasses, utensils or bedding. Wash these items thoroughly with soap and water after use.
- Employers should encourage workers with known exposure or who are symptomatic to stay home or use available telework options. Employers should consider the feasibility of allowing workers who are sick or suspected of being sick to stay home without punitive measures such as loss of pay.



PREVENTING & LIMITING THE SPREAD OF THE VIRUS: PROTECT YOURSELF AND OTHERS

- Follow orders, guidance and recommendations from federal and state agencies. Examples include respecting requests to stay indoors, practicing social distancing and avoiding non-essential travel.
- Avoid close contact with people who are sick.
- Follow CDC recommendations to wear a facial covering in public places (e.g., grocery stores, pharmacies) when close proximity to other people may be unavoidable.
- Practice social distancing by limiting person-to-person contact within six feet, especially in large groups or in enclosed spaces.
- Wash your hands frequently with soap and water for at least 20 seconds. Use hand sanitizer with at least 60 percent alcohol when soap and water aren't available.
- Cover your mouth and nose with a tissue when you cough or sneeze, then throw the tissue in the trash and wash your hands.
- Avoid touching your eyes, nose or mouth with unwashed hands.
- Clean "high-touch" surfaces every day with a household cleaning spray or wipe.

COVID-19 PROTECTION:
DIFFERENCES BETWEEN SURGICAL MASKS, PAPER MASKS AND N95S

Surgical Mask

Intended Use and Purpose
Provides a protective barrier against large droplets, splashes or sprays of bodily fluids. Protects others from the wearer's respiratory emissions.

Face Seal Fit
Loose-fitting

Fit-Testing Requirement
No

Filtration
Does **NOT** provide the wearer with a reliable level of protection from inhaling smaller airborne particles and is **NOT** considered respiratory protection.

Paper Mask

Intended Use and Purpose
Can be worn for comfort against non-toxic nuisance dusts during activities like mowing, sweeping and dusting. These masks are **NOT** respirators and do **NOT** offer protection against hazardous dusts, gases or vapors.

Face Seal Fit
Loose-fitting and many only have one strap.

Fit-Testing Requirement
No

Filtration
These masks are **NOT** NIOSH-approved disposable filtering facepieces. Does **NOT** provide the wearer with a reliable level of protection from inhaling smaller airborne particles and is **NOT** considered respiratory protection.

N95 Mask

Intended Use and Purpose
Reduces wearer's exposure to particles including small particle aerosols and large droplets (only non-oil aerosols).

Face Seal Fit
Tight-fitting

Fit-Testing Requirement
Yes

Filtration
Filters out at least 95% of airborne particles, including large and small particles. Provides the wearer with a reliable level of protection from inhaling smaller airborne particles and is considered respiratory protection.

Construction N95

Surgical N95

PREVENTING & LIMITING THE SPREAD OF THE VIRUS: FRONTLINE WORKERS

In addition to the guidelines above, workers who come in contact with infected persons, such as healthcare workers, should take additional precautions. In addition to the steps above, these workers should:

- Wear personal protective equipment (PPE). This may include N95 respirators, gloves, gowns or other protective clothing and eye protection. If an N95 respirator is not available due to supply, workers should wear the most protective mask available until an N95 becomes available.
- Be trained on safe donning, doffing and disposal of PPE to avoid infectious disease transmission.
- Be medically able to wear the type of respirator needed and fit-tested to wear it. A respirator can't protect you if it doesn't fit your face.
- Be aware of the differences between surgical masks and N95s. Surgical masks do not protect the wearer from airborne respiratory droplets. Remember: surgical masks protect others from you; N95s protect you from others.

Note: The CDC provides additional guidance on how critical infrastructure workers who may have been exposed but remain asymptomatic can continue to work to ensure continuity of essential functions.

www.cdc.gov/coronavirus/2019-ncov/community/critical-workers/implementing-safety-practices.html

ESSENTIAL TRAVEL & ALTERNATIVES

- If you are sick or suspect you have the virus, do not travel.
- The CDC recommends you stay home as much as possible, especially if your trip is not essential. Avoid non-essential travel on commercial airlines, trains and buses for work or personal use.
- Consider the importance of attending events in person versus the risk and act accordingly.
- Travel options may vary across the country. When making travel plans, take into account the circumstances where you live, where you're going and the planned route.

ADDITIONAL RESOURCES

For more information on guidance for employers and workers, household preparation, dealing with mental health impacts and other topics related to the novel coronavirus and COVID-19, visit the Fund's homepage or the Coronavirus & COVID-19 Resource page at www.lhsfna.org/index.cfm/coronavirus/. For specific questions not covered above, contact the Fund at 202-628-5465 or by email at communications@lhsfna.org.

To prevent stigma and discrimination in the workplace, The Rice-Tinsley Corporation will use only the guidance described above to determine risk of COVID-19. The Rice-Tinsley Corporation will not make determinations of risk based on race or country of origin and will be sure to maintain confidentiality of people with confirmed COVID-19. There is much more to learn about the transmissibility, severity, and other features of COVID-19 and investigations are ongoing.

CDC: www.cdc.gov/coronavirus/2019-nCoV/index.html

WHO: www.who.int/emergencies/diseases/novel-coronavirus-2019

OSHA: www.osha.gov/SLTC/covid-19/index.html

DISCIPLINARY PROGRAM

PURPOSE

The purpose of this program is to establish a firm but fair disciplinary action policy to enforce the safety system.

SCOPE

This document is applicable to all employees.

RESPONSIBILITIES

It is the responsibility of each and every person employed by The Rice-Tinsley Corporation to work in a safe and efficient manner. The safety system provides guidelines and procedures to help ensure that safe work practices are observed. In the event that any employee violates provisions of the The Rice-Tinsley Corporation safety system or works in a manner that threatens his own health and safety or the health and safety of the employees around him, he will be subject to disciplinary action, up to and including termination of employment.

The safety manager, operations managers, supervisors and foremen hold positions responsible for enforcing the safety system and for issuing disciplinary action as required by this section of the safety manual.

The Rice-Tinsley Corporation is committed to safety and senior management holds all supervisory staff responsible and accountable for safety within their respective areas.

Physical inspections by The Rice-Tinsley Corporation officials or insurance representatives shall occur. Company officials must conduct periodic inspections of work areas to ensure compliance with safety rules and policies.

REQUIREMENTS

Safety is a core value and a condition of employment at The Rice-Tinsley Corporation. The following actions constitute a safety violation:

- Not following verbal or written safety procedures, guideline or rules of The Rice-Tinsley Corporation or our clients
- Horse play, failure to wear required PPE, and or abuse of PPE
- Being under the influence of drugs or alcohol during work
- Bringing weapons on the job site
- Failure to report incidents or injuries
- Attempted or actual physical force to cause injury, threatening statements or other actions to cause an employee to feel they are at risk of injury.

PROCEDURE

The following procedures will be following after issuing a safety violation notice:

- The first offense will result in a verbal warning. The employee will be met with and informed that he or she is being issued a verbal warning and informed of the infraction, rule or procedure that was violated and the corrective action to be taken. Proper procedure will be discussed to clarify the situation and allow the employee to correct his behavior. The person making this verbal warning will inform the operations manager of his branch that this warning has been issued so the operations manager may make a written record of the warning.
- The second offense will result in a written reprimand and additional training. The reprimand will be written on the standard Safety Reprimand form (see below) and will describe the unsafe activity or behavior that needs correction. Refer to the section of the safety program that was violated (when applicable). The employee receiving the reprimand has the right to submit a written rebuttal to the reprimand. The employee must sign the reprimand. The reprimand and any rebuttal will become a part of the employee's employment records.
- The third offense will result in another written reprimand (using the standard form) and punitive layoff, the duration of which will be decided at the time of the disciplinary action and is to be weighed by the severity of the offense. Again, the employee may submit a written rebuttal to the reprimand. The employee must sign the reprimand. The reprimand and any rebuttal will become a part of the employee's employment records.
- The fourth offense may result in the termination of the offending employee.

The above actions are to be placed against a sliding twelve month scale. If an employee receives a reprimand on January 1 and commits his fourth offense on or before December 31st of the same year, he is terminated. The employee does not have to commit the same violation each time to receive further reprimands. He could receive a verbal reprimand for smoking in a no smoking area on his first offense and get a written reprimand for his second offense which might be a forklift violation and yet another for failing to use proper personal protective equipment. He will be terminated upon his fourth offense in the last twelve months.

In the case of serious safety violations such as by-passing guarding or other unsafe activities that put the violator or other employees at serious risk of injury, the manager may move the violator directly to the second or third warning level. If the violator's actions put him or others at risk of death or dismemberment the manager has the option to terminate him with no further warning.

SAFETY REPRIMAND FORM

Date: _____ Reprimand # _____

Issued To: _____

Signature: _____

Issued By: _____

Signature: _____

Violation (Describe in Detail):

Follow up Training: _____

Presented by: _____

Date of Training: _____

Trainee Signature: _____

DRIVING SAFETY

PURPOSE

This program is written to be in compliance with local regulatory requirements and provide directives to managers, supervisors, and employees about their responsibilities in the operations and management of The Rice-Tinsley Corporation vehicle safety.

KEY RESPONSIBILITIES

The Rice-Tinsley Corporation Safety Manager

- The designated Safety Manager is responsible for developing and maintaining the program and related procedures. These procedures are kept in the designated safety manager's office.

Site Manager

- Responsible for the implementation and maintenance of the program for their site and ensuring all assets are made available for compliance with the plan.

Employees

- All shall be familiar with this procedure and the local workplace vehicle safety program.
- Follow all requirements, report unsafe conditions, and follow all posted requirements.

VEHICLE AND TRANSPORTATION RELATED

Driving Safety

Operators of The Rice-Tinsley Corporation or client on or off road vehicles shall be qualified by possession of a valid, current driver's license for the type of vehicle being driven.

Only authorized employees will drive a motor vehicle in the course and scope of work or operate a company owned vehicle.

Drivers shall have 3 years of driving experience on the vehicle he/she is licensed to drive & regularly drives.

Drivers will be appropriately assessed, licensed and trained to operate the vehicle they have been authorized to operate.

No passengers shall be on trucks used to deliver goods.

Backing is prohibited whenever practicable. Where backing is required, drivers, when parking, should make every effort to park the vehicle in a manner that allows the first move when leaving the parking space to be forward.

Drivers must have either a reversing alarm, use a spotter or walk around the truck/trailer prior to backing.

Passenger compartments are to be free from loose objects that might endanger passengers in the event of an incident. Any vehicle with non-segregated storage shall be equipped with a cargo net or equivalent to separate the storage area.

Vehicles (light vehicles, heavy vehicles and trailers) may not be modified without the endorsement of the manufacturer.

Signs, stickers or labels are to be fitted in such a manner that they do not obstruct the driver's vision or impede the driver's use of any controls.

Employees driving vehicles are required to follow safe driving practices:

- Obey all federal and local driving laws or regulations as well as requirements of clients;
- Immediately report any citation, warning, traffic violation, collision, vehicle damage or near miss associated with company or client vehicle operation or while driving on company duties to the supervisor;
- Immediately report any restriction or change to their driving privileges to the supervisor.
- Seat belts shall always be worn by all occupants whenever the vehicle is in motion; only seats fitted with three-point inertia-reel type seatbelts shall be used. All vehicles capable of more than 10 mph/15 kph shall have seat belts installed.
- Defensive drivers continually assess conditions and hazards and remain prepared for any challenge that may approach them;
- When speaking with a passenger, always keep your eyes on the road;
- Both hands on the wheel;
- No use of cell phones, radios or other electronic devices while driving any vehicle - vehicle must be safely parked prior to using a mobile phone or 2-way radio.
- Slow down around construction, large vehicles, wildlife, fog, rain, snow, or anything else that adds a hazard to your driving;
- Drive for conditions, not just the speed limit;
- Alcohol or illegal drugs are not allowed to be in a company, client or leased vehicle at any time;
- Drivers shall not operate a motor vehicle while under the influence of alcohol, illegal drugs, or prescription or over-the counter medications that might impair their driving skills.

Drivers are to be prepared before leaving:

- Perform 360 walk around – report new damage;
- Check windshield for cracks that could interfere with vision;
- Inspect for vehicle damage and immediately report any damage to the supervisor if not previously observed;
- Make sure dirt or snow is removed from lights on all sides of the vehicle;
- Brush or clean off snow or ice on all windows to ensure complete vision;
- Check fuel level to be certain the destination can be reached;
- Check to ensure the license plates and inspection tag on vehicle are current;
- Ensure that there is a first aid kit and inspected fire extinguisher in the company vehicle;
- Ensure driver is rested and alert for driving;
- Employees are not to perform repairs or maintenance other than routine fluid additions.

Vehicle Requirements

- All vehicles shall be fit for the purpose and shall be maintained in safe working order.
- No vehicle less than 1000 kg is to be used on public roads.
- Tires, including spares if full size, are to be of same type, profile and tread pattern, except when the vehicle or tire Manufacturer recommends a different type for certain axles.
- Tire type and pattern is to be recommended by the vehicle or tire manufacturer for use on the vehicle in the area of operation.
- Vehicles are to be fitted with a spare wheel and changing equipment to safely change a wheel, or a suitable alternative.
- Vehicles longer than 6 meters/20 feet or with restricted rear view (i.e. pickup trucks that are fully loaded) are to be fitted with an audible reversing alarm.

- All seats are to be fitted with headrests
- All light duty vehicles (including buses) are to be equipped with an adjustable left, right and central rear view mirrors
- Loads shall be secure and shall not exceed the manufacturer's specifications and legal limits for the vehicle.
- All vehicles are to be equipped with a multipurpose fire extinguisher with a capacity of at least 0.9 kg/2 lb. The fire extinguisher shall be securely mounted on a bracket and located so that it is easily accessible in an emergency without becoming a hazard in case of an incident.
- All light vehicles shall be equipped with a securely stowed first aid kit.
- All drivers of light vehicles shall carry a high visibility jacket for use in case of emergency stops.
- All light duty vehicles carry a minimum of one collapsible hazard warning triangle.
- Rollover protection will be installed in any vehicle to address high risk environments. The rollover protection engineered will conform to recognized regulatory standard and industry preferred practices.
- All light equipment vehicles shall be outfitted with two red high-intensity lights located as high, as far apart, and as far back as practical, wired to the headlight switch, but also with an override switch, if permitted by local regulations.

Transportation

If workers are required to travel in a worker transportation vehicle The Rice-Tinsley Corporation must ensure that reasonable measures are taken to evaluate road, weather and traffic conditions to ensure the safe transit of the workers.

The operator of a worker transportation vehicle must ensure that the worker transportation vehicle has been inspected by a qualified person before first use on a work shift.

Seated workers must wear seat belts while being transported in a vehicle equipped with seat belts.

A worker must not ride in a vehicle in a standing position, unless protected from being thrown off balance.

A worker must not ride in a vehicle with any part of the body outside the vehicle unless essential to the work process and then only if the worker is adequately restrained.

Materials, goods, tools or equipment carried in a portion or compartment of a vehicle in which workers are riding must be located and secured to prevent injury to the operator or workers.

Any enclosed portion or compartment of a vehicle in which workers are transported must have:

- effective ventilation, independent of doors, providing clean air,
- adequate lighting and means for heating and cooling,
- an effective means of communication between the operator and passengers, and
- more than one means of exit.

Traffic Control

The Rice-Tinsley Corporation shall develop, in writing, and implement a traffic protection plan for its workers at a worksite if any of them may be exposed to a hazard from vehicular or pedestrian traffic that may endanger the safety of any worker. It shall include the following control measures:

- Effective means of traffic control shall be provided whenever the unregulated movement of vehicular traffic constitutes a hazard to workers.

- Traffic control shall include barricades and cones as the primary control and, where required, signs, flagmen or other techniques and devices made necessary by the prevailing circumstances.
- Operations or equipment, encroaching on the traveled way, shall be protected by barricades and cones as the primary control and, where required other effective devices.
- The Rice-Tinsley Corporation must train workers in the traffic control safe work procedures.
- The Rice-Tinsley Corporation will ensure that before a worker is designated as a flag person, the worker is trained in the safe work procedures for the safe control of traffic operations and wears the appropriate high visibility outer clothing and/or equipment.
- If a worker at a project on a highway may be endangered by vehicular traffic unrelated to the project, the project shall make use of as many measures as necessary to adequately protect the worker.
- A worker who is required to set up or remove traffic control measures on a roadway or a shoulder of a roadway shall be a competent worker, shall be equipped with the appropriate high visibility apparel, shall not perform any other work while setting up or removing the measures and shall be given adequate written and oral instructions in a language that he or she understands, with respect to setting up or removing the measures.

ATV Vehicles

If a The Rice-Tinsley Corporation work site utilizes ATV vehicles then the following shall apply:

- If the manufacturer has not set limits for operation of the ATV on sloping ground, 5% is the maximum allowable slope unless The Rice-Tinsley Corporation has developed and implemented written safe work procedures appropriate for any steeper slope on which the equipment is to be used.
- The Rice-Tinsley Corporation must ensure that each ATV operator is properly licensed and trained in the safe operation of the vehicle. The training program for an ATV operator must cover:
 - the operator's pre-trip inspection,
 - use of personal protective apparel,
 - operating skills according to the ATV manufacturer's instructions,
 - basic mechanical requirements, and
 - loading and unloading the vehicle, if this is a job requirement.
- An ATV operator and any passenger on an ATV must wear approved eye and hearing protection as required by local regulatory requirements and the The Rice-Tinsley Corporation PPE Program. An ATV operator and any passenger on an ATV must wear clothing suitable for the environmental conditions and when necessary to protect against the hazards presented at the worksite, suitable gloves and clothing which covers the ankles and legs and the arms to the wrists and appropriate footwear.
- The Rice-Tinsley Corporation requires that approved helmets shall be worn by the operator and passenger.
- Loading and unloading of an ATV onto or off a carrier vehicle must be done in a safe manner. If ramps are used when loading or unloading an ATV they must be placed at a suitable angle, be sufficiently wide and have a surface finish which provides an adequate grip for the ATV's tires.

ELECTRICAL SAFETY AWARENESS

PURPOSE

The purpose of the Electrical Safety program is to set forth procedures for the safe use of electrical equipment, tools, and appliances at The Rice-Tinsley Corporation.

SCOPE

This program applies to all The Rice-Tinsley Corporation employees, temporary employees, and contractors. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

DEFINITIONS

Affected Personnel - Personnel who normally use and work with electrical equipment, tools, and appliances, but who do not make repairs or perform lock out/tag out procedures.

Appliances - Electrical devices not normally associated with commercial or industrial equipment such as air conditioners, computers, printers, copiers, coffee pots, microwave ovens, toasters, etc.

Circuit Breaker - A device designed to open and close a circuit by non-automatic means and to open the circuit automatically on a predetermined over current without injury to itself when properly applied within its rating.

Disconnecting Means - A device, or group of devices, or other means by which the conductors of a circuit can be disconnected from their source of supply.

Disconnecting Switch - A mechanical switching device used for isolating a circuit or equipment from a source of power.

Double Insulated Tool - Tools designed of non-conductive materials that do not require a grounded, three wire plug.

Ground - Connected to earth or some conducting body that serves in place of the earth.

Grounded Conductor - A conductor used to connect equipment or the grounded circuit of a wiring system to a grounding electrode or electrodes.

Ground Fault Circuit Interrupter (GFCI) - A device whose function is to interrupt the electric circuit to the load when a fault current to ground exceeds some predetermined value that is less than that required to operate the over current protective device of the supply circuit. The Rice-Tinsley Corporation shall use GFCIs in lieu of an assured grounding program.

Insulated - A conductor encased within material of composition and thickness that is recognized as electrical insulation.

Premises Wiring - That interior and exterior wiring, including power, lighting, control, and signal circuit wiring together with all of its associated hardware, fittings, and wiring devices, both permanently and temporarily installed, which extends from the load end of the service drop, or load end of the service lateral conductors to the outlet (s). Such wiring does not include wiring internal to appliances, fixtures, motors, controllers, motor control centers, and similar equipment.

Qualified Person - One that has been trained in the repair, construction and operation of electrical equipment and the hazards involved.

Strain Relief - A mechanical device that prevents force from being transmitted to the connections or terminals of a cable or extension cord.

Class I Locations - Are those in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

Class 1 Division 1 - Is a location (a) in which hazardous concentrations of flammable gases or vapors may exist under normal operating conditions; or (b) in which hazardous concentrations of such gases or vapors may exist frequently because of repairs or maintenance operations or because of leakage; or (c) in which a breakdown or faulty operation of equipment or processes might release hazardous concentrations of flammable gases or vapors, and might also cause simultaneous failure of electrical equipment.

Class 1 Division 2 - Is a location (a) in which volatile flammable liquids or flammable gases are handled, processed, or used, but in which the hazardous liquid, vapors, or gases will normally be confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown of such containers or systems, or in of abnormal operation of equipment or (b) in which hazardous concentrations of gases or vapors are normally prevented by positive mechanical ventilation, and which might become hazardous through failure or abnormal operations of the ventilating equipment; or (c) that is adjacent to a Class 1, Division 1 location, and to which hazardous concentrations of gases or vapors might occasionally be communicated unless such communication is prevented by adequate positive-pressure ventilation from a source of clean air, and effective safeguards against ventilation failure are provided.

Class II locations - Class II locations are those that are hazardous because of the presence of combustible dust. Class II locations include the following:

Class II, Division 1 - A Class II, Division 1 location is a location (a) in which combustible dust is or may be in suspension in the air under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures; or (b) where mechanical failure or abnormal operation of machinery or equipment might cause such explosive or ignitable mixtures to be produced, and might also provide a source of ignition through simultaneous failure of electric equipment, operation of protection devices, or from other causes, or (c) in which combustible dusts of an electrically conductive nature may be present.

NOTE: This classification may include areas of, areas where metal dusts and powders are produced or processed, and other similar locations that contain dust producing machinery and equipment (except where the equipment is dust-tight or vented to the outside).

- These areas would have combustible dust in the air, under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures.
- Combustible dusts that are electrically nonconductive include dusts produced in the handling and processing produce combustible dusts when processed or handled.
- Dusts containing magnesium or aluminum are particularly hazardous and the use of extreme caution is necessary to avoid ignition and explosion.

Class II, Division 2 - A Class II, Division 2 location is a location in which: (a) combustible dust will not normally be in suspension in the air in quantities sufficient to produce explosive or ignitable mixtures, and dust accumulations are normally insufficient to interfere with the normal operation of electrical equipment or other apparatus; or (b) dust may be in suspension in the air as a result of infrequent malfunctioning of handling or processing equipment, and dust accumulations resulting there from may be ignitable by abnormal operation or failure of electrical equipment or other apparatus.

NOTE: This classification includes locations where dangerous concentrations of suspended dust would not be likely but where dust accumulations might form on or in the vicinity of electric equipment. These areas may contain equipment from which appreciable quantities of dust would escape under abnormal operating conditions or be adjacent to a Class II Division 1 location, as described above, into which an explosive or ignitable concentration of dust may be put into suspension under abnormal operating conditions.

RESPONSIBILITIES

Managers/Supervisor

The HSE Manager will develop electrical safety programs and procedures in accordance with OSHA requirements and/or as indicated by events and circumstances.

Operations Managers and Supervisors are responsible for ensuring that only qualified employees and or qualified contractors perform electrical repairs or installations.

Operations Managers are also responsible for ensuring all applicable electrical safety programs are implemented and maintained at their locations.

Employees are responsible to use electrical equipment, tools, and appliances according to this program, for attending required training sessions when directed to do so and to report unsafe conditions to their supervisor immediately.

Only qualified employees may work on electric circuit parts or equipment that has not been de-energized. Such employees shall be made familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools.

SAFE WORK PRACTICES

Inspections

- Electrical equipment, tools, and appliances must be inspected prior to each use.
- The use of a hard fixed GFCI or a portable GFCI adapter shall be used with all portable hand tools, electric extension cords, drop lights and all 110 volt equipment.
- Faulty equipment, tools, or appliances shall be removed from service immediately and tagged "Out of Service", dated and signed by the employee applying the tag.

Repairs

- Only Qualified Personnel, who have been authorized by the department supervisor or manager, may make repairs to supply cords on electrical tools and to extension cords.
- The names of employees authorized to make repairs will be posted in the workplace.
- Only certified electricians shall be allowed to make repairs to electrical equipment and wiring systems.
- The supervisor obtaining the services of a certified electrician is responsible to verify the electrician's credentials.
- Employees shall not enter spaces containing exposed energized parts unless qualified and proper illumination exists to enable employees to work safely.
- Employees shall not wear conductive apparel such as rings, watches, jewelry, etc. (unless they are rendered non-conductive by covering, wrapping, or other insulating means) while working on or near open energized equipment this includes batteries on trucks, forklifts, phone backup systems or other such equipment.
- If employees are subject to handle long dimensional conductor objects (ducts or pipes), steps for safe work practices shall be employed to ensure the safety of workers.

Extension Cords

- Use only three-wire, grounded, extension cords and cables that conform to a hard service rating of 14 amperes or higher, and grounding of the tools or equipment being supplied.
- Only commercial or industrial rated-grounded extension cords may be used in shops and outdoors.
- Cords for use other than indoor appliances must have a rating of at least 14 amps.
- Cords must have suitable strain relief provisions at both the plug the receptacle ends.
- Work lamps (drop light) used to power electrical tools must have a 3 wire, grounded outlet, unless powering insulated tools.
- Adapters that allow three wire, grounded prongs, connected to two wire non-grounded outlets are strictly prohibited.
- Cords must have a service rating for hard or extra-hard service and have S, AJ, ST, SO, SJO, SJT, STO, or SJTO printed on the cord.
- Cords may not be run through doorways, under mats or carpets, across walkways or aisles, concealed behind walls, ceilings or floors, or run through holes in walls, or anywhere where they can become a tripping hazard.
- High current equipment or appliances should be plugged directly into a wall outlet whenever possible.
 - All extension cords shall be plugged into one of the following:
 - A GFCI outlet;
 - A GFCI built into the cord;
 - A GFCI adapter used between the wall outlet and cord plug.

- All extension cords and or electrical cords shall be inspected daily or before each use, for breaks, plug condition and ground lugs, possible internal breaks, and any other damage. If damage is found, the extension cord or electrical cord shall be removed from service and repaired or replaced.
- Extension cords shall not be used on compressor skid to operated heat tapes or any other type of equipment on a temporary basis. Heat tapes or other equipment shall be hard wired per applicable electrical codes.

Outlets

- Outlets connected to circuits with different voltages must use a design such that the attachment plugs on the circuits are not interchangeable.

Multiple Outlet Boxes

- Multiple outlet boxes must be plugged into a wall receptacle.
- Multiple outlet boxes must not be used to provide power to microwave ovens, toasters, space heaters, hot plates, coffeepots, or other high-current loads.

Double Insulated Tools

- Double insulated tools must have the factory label intact indicating the tool has been approved to be used without a three wire grounded supply cord connection.
- Double insulated tools must not be altered in any way, which would negate the factory rating.

Switches, circuit breakers, and disconnects

- All electrical equipment and tools must have an on and off switch and may not be turned on or off by plugging or unplugging the supply cord at the power outlet.
- Circuit breaker panel boxes and disconnects must be labeled with the voltage rating.
- Each breaker within a breaker panel must be labeled for the service it provides.
- Disconnect switches providing power for individual equipment must be labeled accordingly.

Ladders

- Only approved, non-conductive ladders, may be used when working near or with electrical equipment, which includes changing light bulbs.
- Ladders must be either constructed of wood, fiberglass, or have non-conductive side rails.
- Wood ladders should not be painted, which can hide defects, except with clear lacquer.
- When using ladders they shall be free from any moisture, oils, and greases.

Energized and Overhead High Voltage Power Lines & Equipment

- A minimum clearance of 10 feet from high voltage lines must be maintained when operating vehicular and mechanical equipment such as forklifts, cranes, winch trucks, and other similar equipment.
- When possible, power lines shall be de-energized and grounded or other protective measures shall be provided before work is started.
- Minimum approach distance to energized high power voltages lines for unqualified employees is 10 feet.
- Minimum approach distance for qualified employees shall be followed per 29 CFR 1910.333(c)(3)(i) Qualified – Table S5 Selection and Use of Work Practices - Approach Distances for Qualified Employees – Alternating Current). Approach distances are 10' for 50kV plus 4" for every additional 10kV.

Confined or Enclosed Workspaces

- When an employee works in a confined or enclosed space that contains exposed energized parts, the employee shall isolate the energy source and turn off the source and lock and tag out the energy source (Only qualified electricians can work on an exposed energy source).
- Protective shields, protective barriers or insulating materials as necessary shall be provided.

Enclosures, Breaker Panels, and Distribution Rooms

- A clear working space must be maintained in the front, back and on each side of all electrical enclosures and around electrical equipment for a safe operation and to permit access for maintenance and alteration.
- A minimum two-foot working floor space in front of panels and enclosures shall be painted yellow.
- Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely.
- Housekeeping in distribution rooms must receive high priority to provide a safe working and walking area in front of panels and to keep combustible materials to the minimum required to perform maintenance operations.
- All enclosures and distribution rooms must have “Danger: High Voltage – Authorized Personnel Only” posted on the front panel and on entrance doors.
- Flammable materials are strictly prohibited inside distribution rooms (Boxes, rags, cleaning fluids, etc.)

Lock Out/Tag Out

- No work shall be performed on (or near enough to them for employees to be exposed due to the dangers of tools or other equipment coming into contact with the live parts) live parts and the hazards they present.
- If any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both.
- Conductors and parts of electrical equipment that have been de-energized but not been locked or tagged out shall be treated as live parts.
- Per The Rice-Tinsley Corporation policy all electrical will be outsourced and performed only by qualified and licensed electrical contractors who are familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools. Any equipment being made ready for maintenance will be locked out using The Rice-Tinsley Corporation’s Control of Hazardous Energy – Lock Out/Tag Out Program. Lockouts are performed by the HSE Manager, Shop Foreman or Branch Manager. Designated employees in some branches may be trained by local management to lock out equipment. If live sources are to be worked it will only be performed with the knowledge of local management. Only certified electricians may work on electric circuit parts or equipment.
- Only authorized personnel may perform lock out/tag out work on electrical equipment and will follow The Rice-Tinsley Corporation’s Control of Hazardous Energy – Lock out/Tag Out Program.
- Authorized personnel will be trained in lock out/tag out procedures.
- Affected personnel will be notified when lock out/tag out activities are being performed in their work area.

Contractors

- Only approved, certified, electrical contractors may perform construction and service work on The Rice-Tinsley Corporation or client property.
- It is the Manager/Supervisors responsibility to verify the contractor’s certification.

Fire Extinguishers

- Approved fire extinguishers must be provided near electrical breaker panels and distribution centers.
- Water type extinguishers shall not be located closer than 50 feet from electrical equipment.

Electric Shock-CPR

- If someone is discovered that has received an electric shock and is unconscious, first check to see if their body is in contact with an electrical circuit. Do not touch a person until you are sure there is no contact with an electrical circuit.
- When it is safe to make contact with the victim, begin CPR if the person's heart has stopped or they are not breathing.
- Call for help immediately.

Electric Welders

- A disconnecting means shall be provided in the supply circuit for each motor-generator arc welder, and for each AC transformer and DC rectifier arc welder which is not equipped with a disconnect mounted as an integral part of the welder.
- A switch or circuit breaker shall be provided by which each resistance welder and its control equipment can be isolated from the supply circuit. The ampere rating of this disconnecting means may not be less than the supply conductor ampacity.

Equipment Grounding

- All gas compressors, air compressors, separators, vessels, etc. shall be grounded by means of using a lug and ground strap, nominal in size to a ½" bolt or larger, attached to a ground rod six feet or longer.
- Equipment bonding jumpers shall be of copper or other corrosion-resistance material.
- The transfer of hazardous or flammable material from a metal or plastic container with a flash point of 100 degrees F or less shall have a ground strap from the container and attached to the skid or a ground rod placed in the ground.

Assured Grounding

OSHA requires that employers shall use either ground fault circuit interrupters (GFCI) or an assured equipment grounding conductor program to protect personnel from electrical shock while working.

- The Rice-Tinsley Corporation shall use GFCI's in lieu of an assured grounding program.

Ground Fault Circuit Interrupters

All 120-volt, single-phase 15 and 20 ampere receptacle outlets on construction or maintenance sites, which are not part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground fault circuit interrupters for personnel protection.

- All hand portable electric tools and extension cords shall use a GFCI.
- Additionally, approved GFCI's shall be used for 240-Volt circuits in the same service as described above.
- GFCI's must be used on all 120 volt, single-phase 15 amp and 20 amp receptacles within 6 feet of a sink, damp areas or on installed outdoor equipment.
- The GFCI must be the first device plugged into a permanent receptacle.
- The GFCI must be tested before each use.

TRAINING

All regular full time and temporary employees will be trained in electrical safety utilizing the The Rice-Tinsley Corporation Electrical Safety Training course or an approved equivalent.

Employees who face a risk of electric shock, but who are not qualified persons, shall be trained and familiar with electrically related safety practices.

Employee shall be trained in safety related work practices that pertain to their respective job assignments.

Employees shall be trained on clearance distances.

Safe work practices shall be employed to prevent electric shock or other injuries resulting for either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized.

Qualified employees must adhere to the approach distances in Table S5 of CFR 1910.333 (below). The Rice-Tinsley Corporation only has unqualified employees.

Voltage Range (phase to phase)	Minimum Approach Distance
Over 300V, not over 750V.....	1 ft. 0 in. (30.5 cm).
Over 750V, not over 2kV.....	1 ft. 6 in. (46 cm).
Over 2kV, not over 15kV.....	2 ft. 0 in. (61 cm).
Over 15kV, not over 37kV.....	3 ft. 0 in. (91 cm).
Over 37kV, not over 87.5kV.....	3 ft. 6 in. (107 cm).
Over 87.5kV, not over 121kV.....	4 ft. 0 in. (122 cm).
Over 121kV, not over 140kV.....	4 ft. 6 in. (137 cm).

EXCAVATIONS/TRENCHING/SHORING

PURPOSE

The purpose of this training program is to protect employees from safety hazards that may be encountered during work in trenches and excavations.

SCOPE

The Rice-Tinsley Corporation is required to participate as a contract employer at client locations with trenching and excavation work; however The Rice-Tinsley Corporation does not initiate trenching operations.

When work is performed on a non-owned or operated site, the operator's program shall take precedence; however, this document covers The Rice-Tinsley Corporation employees for basic awareness purposes that addresses all items and shall be used when an operator's program doesn't exist.

DEFINITIONS

Accepted engineering practices means the standards of practice required by a registered professional engineer.

Aluminum Hydraulic Shoring means a manufactured shoring system consisting of aluminum hydraulic cylinders (crossbraces) used with vertical rails (uprights) or horizontal rails (wales).

Bell-bottom pier hole means a type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a belled shape.

Benching (Benching system) is a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or more horizontal steps, usually with vertical or near-vertical surfaces between levels.

Cave-in means the movement of soil or rock into an excavation, or the loss of soil from under a trench shield or support system, in amounts large enough to trap, bury, or injure and immobilize a person.

Cross braces mean the horizontal members of a shoring system installed from side to side of the excavation. The cross braces bear against either uprights or Wales.

Excavation means any man-made cut, cavity, trench, or depression in an earth surface formed by earth removal.

Faces or sides mean the vertical or inclined earth surfaces formed as a result of excavation work.

Failure means the movement or damage of a structural member or connection that makes it unable to support loads.

Hazardous atmosphere means an atmosphere that is explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, which may cause death, illness, or injury.

Health Safety Officer means the individual at The Rice-Tinsley Corporation responsible for developing and implementing this program, conducting unannounced work site inspections, and ensuring that the departments comply with the program requirements.

Kickout means the accidental movement or failure of a cross brace.

Protective system means a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

Ramp means an inclined walking or working surface that is used to gain access to one point from another. A ramp may be constructed from earth or from structural materials such as steel or wood.

Sheeting means the members of a shoring system that retain the earth in position and in turn are supported by other members of the shoring system.

Shield (Shield system) means a structure used in an excavation to withstand cave-ins and which will protect employees working within the shield system. Shields can be permanent structures or portable units moved along as work progresses. Shields used in trenches are usually referred to as "trench boxes" or "trench shields."

Shoring (Shoring system) means a structure that is built or put in place to support the sides of an excavation to prevent cave-ins.

Sides - See "Faces."

Sloping (Sloping system) means sloping the sides of the excavation away from the excavation to protect employees from cave-ins. The required slope will vary with soil type, weather, and surface or near surface loads that may affect the soil in the area of the trench (such as adjacent buildings, vehicles near the edge of the trench and so forth).

Stable rock means natural solid mineral material that can be excavated with vertical sides that will remain intact while exposed.

Structural ramp means a ramp built of steel or wood, usually used for vehicle access. Ramps made of soil or rock are not considered structural ramps.

Support system means a structure such as underpinning, bracing, or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.

Tabulated data means tables and charts approved by a registered professional engineer and used to design and construct a protective system.

Trench (Trench excavation) means a narrow excavation (in relation to its length) made below the surface of the ground.

Trench box or shield - See "Shield".

Uprights mean the vertical members of a trench shoring system placed in contact with the earth and usually positioned so that individual members do not contact each other. Uprights placed so that individual members are closely spaced, in contact with or interconnected to each other, are often called "sheeting."

Wales are horizontal members of a shoring system placed in the direction of the excavation face whose sides bear against the vertical members of the shoring system or earth (the uprights or sheeting).

KEY RESPONSIBILITIES

Management shall determine if this program is required for regulatory compliance within his/her region. If this program is deemed necessary, then management shall determine which employees within his/her region is required to receive this training. Management shall select a training facility or use an in-house qualified trainer to supply the training.

Only trained personnel can be involved in working in trenches or excavations. The Rice-Tinsley Corporation personnel DO NOT initiate trenching.

PROCEDURE

Competent Person Duties – The Safety Manager or their designee shall have the following duties:

Protective Systems or Equipment

- Monitoring water removal equipment and operations.
- Removal of workers if conditions dictate.
- Atmospheric testing.
- Inspecting excavations subject to runoff from heavy rains to determine need for diversion ditches, dikes, or other suitable protection.
- Determining cave-in potential to assess need for shoring or other protective system.
- Examining damaged material or equipment used for protective systems to determine its suitability for continued use.
- Classifying soil and rock deposits, by both visual analysis and by testing, to determine appropriate protection; re-classifying, if necessary, based on changing conditions.
- Determining the appropriate slope of an excavation to prevent collapse due to surcharge loads from stored material or equipment, operating equipment, adjacent structures, or traffic, and assuring that such slope is achieved.

Inspecting Trench and Protective Systems

- Inspections prior to entry and authorizing immediate removal of employees from the hazardous area where evidence of possible cave-in, failure of protective systems, hazardous atmospheres, or other hazardous conditions exists.

Unsafe Access/Egress

- Designing structural ramps that are used solely by employees as a means of access or egress. Structural ramps used for access or egress of equipment must be designed by a competent person qualified in structural design.
- OSHA requires safe access and egress to all excavations, including ladders, steps, ramps, or other safe means of exit for employees working in trench excavations 4 feet (1.22 meters) or deeper. These devices must be located within 25 feet (7.6 meters) of all workers.

Utilities and Pre-work Site Inspection

The location of underground installations shall be determined before excavation.

When utility companies or owners cannot respond to a request to locate underground utility installations within 24 hours, or cannot establish exact location of these installations, The Rice-Tinsley Corporation may proceed, provided it does so with caution and provided detection equipment or other acceptable means to locate utility installations are used.

Excavation shall be done in a manner that does not endanger the underground installations or the employees engaged in the work. Utilities left in place shall be protected by barricades, shoring, suspension or other means as necessary to protect employees.

Protection of the Public

Barricades, walkways, lighting and posting shall be provided as necessary for the protection of the public prior to the start of excavation operations.

Guardrails, fences, or barricades shall be provided on excavations adjacent to walkways, driveways and other pedestrian or vehicle thoroughfares. Warning lights or other illumination shall be maintained as necessary for the safety of the public and employees from sunset to sunrise.

Wells, holes, pits, shafts and all similar hazardous excavations shall be effectively barricaded or covered and posted as necessary to prevent unauthorized access. All temporary excavations of this type shall be backfilled as soon as possible.

Protection Against Falls

Walkways or crossings shall be protected by standard guardrails or railings shall be provided where employees and the general public are permitted to cross over excavations. Where workers in the excavation may pass under these walkways or bridges, a standard guardrail and toe board shall be used.

Protection of Workers in Excavations

Access and Means of Egress

Stairs, ladders or ramps shall be provided where employees are required to enter trench excavations over 4 feet deep. The maximum distance of lateral travel (e.g., along the length of the trench) required to reach the means of egress shall not exceed 25 feet.

Structural Ramps

Structural ramps used solely by employees as a means of access or egress from excavations shall be designed by a competent person. Structural ramps used for access or egress of equipment shall be designed by a person qualified in structural design and shall be constructed in accordance with the design.

Ramps and runways constructed of two or more structural members shall have the structural members connected together to prevent movement or displacement.

Structural members used for ramps and runways shall be of uniform thickness.

Cleats or other appropriate means used to connect runway structural members shall be attached to the bottom of the runway or shall be attached in a manner to prevent tripping.

Structural ramps used in place of steps shall be provided with cleats or other surface treatments on the top surface to prevent slipping.

Ladders

When portable ladders are used, the ladder side rails shall extend a minimum of 3 feet above the upper surface of the excavation.

Ladders shall have nonconductive side rails if work will be performed near exposed energized equipment or systems.

Two or more ladders, or a double-cleated ladder, will be provided where 25 or more employees will be conducting work in an excavation where ladders serve as the primary means of egress, or where ladders serve two-way traffic.

Ladders will be inspected prior to use for signs of damage or defects. Damaged ladders will be removed from service and marked with "Do Not Use" until repaired.

Ladders shall be used only on stable and level surfaces unless secured. Ladders placed in any location where they can be displaced by workplace activities or traffic shall be secured, or barricades shall be used to keep these activities away from the ladder.

Non-self-supporting ladders shall be positioned so that the foot of the ladder is one-quarter of the working length away from the support.

Employees shall not be allowed to carry any object or load while on the ladder that could cause them to lose their balance and fall.

Exposure to Vehicular Traffic

Employees exposed to vehicular traffic shall be provided with and shall wear vests or other suitable garments marked with or made of reflectorized or high-visibility material. Warning vests worn by flagmen shall be red or orange and shall be of reflectorized material if worn during night work.

Employee Exposure to Falling Loads

No employee shall be permitted underneath loads (or where loads may fall) handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles provide adequate protection for the operator during loading and unloading operations.

Warning System for Mobile Equipment

A warning system shall be used when mobile equipment is operated adjacent to the edge of an excavation if the operator does not have a clear and direct view of the edge of the excavation. The warning system shall consist of barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.

Hazardous Atmospheres

The atmosphere shall be tested for air contaminants (oxygen, flammable gases, etc.) in excavations over 4 feet deep or if a hazardous atmosphere exists or could reasonably be expected to exist. A hazardous atmosphere could be expected,

for example, in excavations in landfill areas, in excavations in areas where hazardous substances are stored nearby, or in excavations near or containing gas pipelines.

Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. These precautions include providing proper respiratory protection or forced ventilation of the workspace.

Forced ventilation will be provided where necessary to ensure the atmosphere is safe.

When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, continuous air monitoring will be performed. The device used for atmospheric monitoring shall be equipped with an audible and visual alarm.

Atmospheric testing will be performed using a properly calibrated direct reading gas monitor. Direct reading gas detector tubes or other acceptable means may also be used to test potentially toxic atmospheres.

Personal Protective Equipment

All employees working in trenches or excavations shall wear approved hard-hats and steel toed shoes or boots.

Employees exposed to flying fragments, dust, or other materials produced by drilling, sawing, sanding, grinding and similar operations shall wear approved safety glasses with side shields.

Employees exposed to hazards produced by, or performing, welding, cutting, or brazing operations shall wear approved spectacles or a welding faceshield or helmet.

Employees entering bell-bottom pier holes or other similar deep and confined footing excavations shall wear a harness with a lifeline securely attached to it. The lifeline shall be separate from any line used to handle materials and shall be individually attended at all times while the employee wearing the lifeline is in the excavation.

Employees shall wear approved gloves or other suitable hand protection.

Employees using, or working in the immediate vicinity of, hammer drills, masonry saws, jackhammers or similar high noise producing equipment shall wear suitable hearing protection.

Each employee at the edge of an excavation 6 feet or more deep shall be protected from falling. Fall protection shall be provided by guardrail systems, fences or barricades.

Emergency rescue equipment, such as breathing apparatus, a safety harness and line, and a basket stretcher shall be readily available where hazardous atmospheric conditions exist or may develop during work in an excavation. This equipment shall be attended when in use. Only personnel that have received approved training and have appropriate equipment shall attempt retrieval that would require entry into a hazardous atmosphere.

Protection from Hazards Associated with Water Accumulation

Employees shall not work in excavations that contain or are accumulating water unless precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions taken must include inspection by

a competent person before work begins, special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water or use of safety harnesses and lifelines.

If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operation shall be monitored by a competent person trained in the use of the equipment.

If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation. Precautions shall also be taken to provide adequate drainage of the area adjacent to the excavation.

The competent person shall inform workers of the precautions or procedures that are to be followed if water accumulates or is accumulating in an excavation.

Stability of Adjacent Structures

The competent person will determine if the excavation work could affect the stability of adjoining buildings, walls, sidewalks or other structures.

Support systems (such as shoring, bracing, or underpinning) shall be used to assure the stability of structures and the protection of employees where excavation operations could affect the stability of adjoining buildings, walls, or other structures.

Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably expected to pose a hazard to employees shall not be permitted.

Protection of Employees from Falling Objects and Loose Rocks or Soil

Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of:

- Scaling to remove loose material;
- Installation of protective barricades, such as wire mesh or timber, at appropriate intervals on the face of the slope to stop and contain falling material; or
- Benching sufficient to contain falling material.

Excavation personnel shall not be permitted to work above one another where the danger of falling rock or earth exists.

Employees shall be protected from excavated materials, equipment or other materials that could pose a hazard by falling or rolling into excavations.

Protection shall be provided by keeping such materials or equipment at least 2 feet from the edge of excavations, by the use of restraining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

Materials and equipment may, as determined by the competent person, need to be stored further than 2 feet from the edge of the excavation if a hazardous loading condition is created on the face of the excavation.

Materials piled, grouped or stacked near the edge of an excavation must be stable and self-supporting.

Using the following categories, soil is classified into different types, which determine the kind of cave-in protection required. Only a competent and trained person can determine the soil type by using these classifications.

- Grain sizes are usually classified into four types: gravel, sand, silt, clay. Gravel is the least stable, and clay is the most stable.
- Saturation is the amount of water that the soil is currently holding. Complete saturation is much less stable than soil that is only slightly damp. However, soil with no water content is unstable.
- Cohesiveness is a test that determines how well the soil sticks together. The more it sticks together, the more stable the trench walls will be. The field test usually consists of rolling the soil in your hand into the shape of a worm and observing how and when it separates.
- Unconfined compressive strength determines how much weight per square foot the soil can withstand. This will determine how easily the soil will shear and cave in

Soil Types

Soil classifications must be determined by testing and protective systems designed according to soil classifications.

- The most stable type of soil is Type A. It is dense and heavy and consists primarily of clay.
- Type B has a medium level of stability and is made of soils such as silt, sandy loam, and medium clay.
- The least stable soil is Type C, which consists of gravel, loamy sand, and soft clay.

Timber shoring or aluminum hydraulic shoring must be determined according to the appendixes A & C of 29 CFR 1926 (Excavations).

The devices should be used while in good repair and maintenance. If damaged they must be inspected.

Employees should be protected from hazards of falling, rolling or sliding materials or equipment. Shields should not be subjected to excessive forces and will be installed to protect employees from lateral loads. Employees are restricted from being in the shield when installing or removing. The shield must be designed to resist calculated trench forces.

Daily Inspection

The competent person shall conduct daily inspections of excavations, adjacent areas, and protective systems for evidence of a situation that could result in possible cave-ins, failure of protective systems, hazardous atmospheres or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence. These inspections are only required when the trench will be or is occupied by employees.

Where the competent person finds evidence of a situation that could result in a possible cave-in, failure of protective systems, hazardous atmosphere, or other hazardous conditions, exposed employees shall be immediately removed from the hazardous area until precautions have been taken to assure their safety.

There shall be a written log of all inspections conducted. This log shall include the date, work site location, results of the inspection, and a summary of any action taken to correct existing hazards.

TRAINING

All personnel involved in trenching or excavation work shall be trained in the requirements of this program and regulatory requirements.

Training shall be performed before the employee is assigned duties in excavations.

Retraining will be performed whenever work site inspections conducted by the competent person or Health Safety Officer indicate that an employee does not have the necessary knowledge or skills to safely work in or around excavations.

Training records shall include the date(s) of the training program, the instructor(s) of the training program, a copy of the written material presented, and the names of the employee(s) to whom the training was given.

FALL PROTECTION

PURPOSE

The purpose of this program is to provide fall protection procedures to prevent injury to employees while performing work assignments at elevated levels.

Qualifications of the Person or Position That Prepares Plans

Any changes to this Fall Protection Program must be approved by the Safety Manager, who is designated the Qualified Person to prepare plans for specified work sites. This is based on training received in fall protection planning and has demonstrated skills and knowledge in the preparation of fall programs, plans and the hazards involved.

SCOPE

Applies to all The Rice-Tinsley Corporation employees who have work assignments at work levels that exceed **4** feet in height where guardrails or nets are not utilized. This includes work near and around excavations. Guardrails, safety nets, or personal fall arrest systems shall be used where feasible. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

DEFINITIONS

"Anchorage" means a secure point of attachment for lifelines, lanyards or deceleration devices.

"Body belt (safety belt)" means a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

"Body harness" means straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.

"Buckle" means any device for holding the body belt or body harness closed around the employee's body.

"Carabineer" - see Snaphook

"Connector" means a device which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabineer, or it may be an integral component of part of the system (such as a buckle or D-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).

"Deceleration device" means any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

"Deceleration distance" means the additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of an employee's body belt or body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

"Equivalent" means alternative designs, materials, or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

"Failure" means load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

"Free fall" means the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

"Free fall distance" means the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

"Guardrail system" means a barrier erected to prevent employees from falling to lower levels.

"Infeasible" means that it is impossible to perform the inspection work using a conventional fall protection system (i.e., guardrail system, safety net system, or personal fall arrest system) or that it is technologically impossible to use any one of these systems to provide fall protection.

"Lanyard" means a flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.

"Leading edge" means the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.

"Lifeline" means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

"Lower levels" means those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.

"Personal fall arrest system" means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

"Positioning device system" means a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

"Rope grab" means a deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

"Safety Nets...Safety nets shall be provided when workplaces are higher than 25 feet above ground or water surfaces or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines or safety belts are impractical.

Nets shall extend 8 feet beyond the edge of the work surface where employees are exposed and shall be installed as close under the work surface as practical but in no case more than 25 feet below the work surface. Nets shall be positioned in a manner to prevent the user from coming into contact with below surfaces or structures. Proper clearance positioning of nets shall be determined by impact load testing. Work procedures shall not begin until nets are in place and have been properly tested.

New nets shall meet accepted performance standards of 17,500 foot pounds minimum impact resistance as determined and certified by the manufacturers and shall bear a label of proof test. Edge ropes shall provide a minimum breaking strength of 5000 pounds.

"Self-retracting lifeline/lanyard" means a deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

"Snaphook" means a connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snaphooks are generally one of two types: (1) The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection; or (2) The non-locking type with a self-closing keeper which remains closed until pressed open for connection or disconnection. As of January 1, 1998, the use of a non-locking snaphook as part of personal fall arrest systems and positioning device systems is prohibited.

"Unprotected sides and edges" means any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway where there is no wall or guardrail system at least 39 inches (1.0 m) high.

"Walking/working surface" means any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

"Work area" means that portion of a walking/working surface where job duties are being performed.

Drawing of Components



Figure A

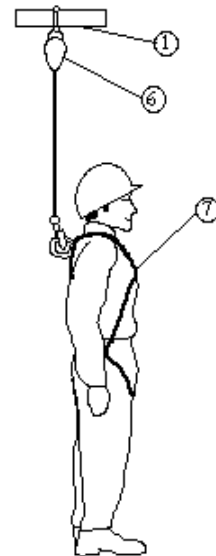


Figure B

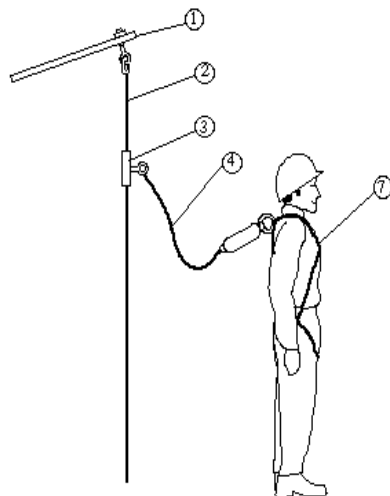


Figure C

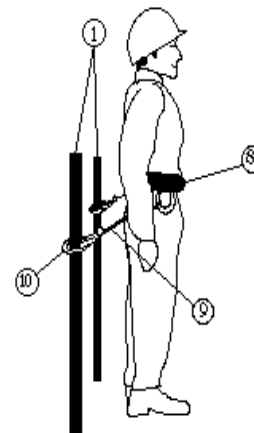


Figure D

1. Tie-off Point
2. Lifeline
3. Rope Grab
4. Shock Absorbing Lanyard
5. Cross-Arm Strap
6. Retractable Lifeline
7. Full-Body Harness
8. Restraining Belt
9. Restraining Lanyard
10. Carabineer

RESPONSIBILITIES

Operations Manager

It is the responsibility of the local operations manager (designated competent person) to implement this Fall Protection Program. Continual observational safety checks of work operations and the enforcement of the safety policy and procedures shall be regularly enforced. All jobs shall be pre-planned prior to the start of work.

Supervisor

The Supervisor shall ensure that all persons assigned to work at elevated levels, exceeding 6 feet in height or more above lower level and where guardrails or nets are not utilized, be protected by personal fall protection equipment.

- Supervisors shall make exposure determinations and shall discuss with their employees the extent to which scaffolds, ladders or vehicle mounted work platforms can be used.
- Ensure that fall protection equipment is available and in safe working condition.
- Provide for emergency rescue in the event of a fall. Pre-plan the job to ensure that employees have been properly trained in the use, limitations, inspections and rescue procedures and that training records are on file.

Employees

Employees shall ensure they have and use the fall protection equipment as required by this program and:

- Understand the potential hazards of working at elevated levels as well as gaining access to and from the work location.
- Understand the use and limitations of such equipment.
- Pre-plan the job with his/her supervisor to agree that the job can be done safely.
- Inspect such equipment before each use and to report defective equipment immediately to their supervisor.

PROCEDURE

Fall protection is required whenever employees are potentially exposed to falls from heights of six feet or greater to lower levels. This includes work near and around excavations. Use of guard rails, safety net, or personal fall arrest systems should be used when the standard methods of protection are not feasible or a greater hazard would be created.

Fall protection equipment will meet the requirements of applicable ANSI, ASTM or OSHA requirements. When purchasing equipment and raw materials for use in fall protection systems all applicable ANSI and ASTM requirements should be met.

Minimum Standards

Fall protection must be provided to employees working at heights that exceed applicable regulatory thresholds.

Fall protection is required whenever employees are potentially exposed to falls from heights that exceed applicable regulatory thresholds. Guard rails, safety nets or personal or fall arrest systems should be used. Some applicable regulatory thresholds may include:

- General Industry 1910.23(b) - Protection for wall openings and holes. Every wall opening from which there is a drop of more than 4 feet shall be guarded.
- Construction Industry 1926.501(b)(1) - Unprotected sides and edges. Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.
- Marine Terminals 1917.112(b)(1) - Guardrails shall be provided at locations where employees are exposed to floor or wall openings or waterside edges, including bridges or gangway-like structures leading to pilings or vessel mooring or berthing installations, which present a hazard of falling more than 4 feet (1.22 m) or into the water.
- Shipyard Industry 1915.73(d) - When employees are exposed to unguarded edges of decks, platforms, flats, and similar flat surfaces, more than 5 feet above a solid surface, the edges shall be guarded by adequate guardrails.
- Steel Erection 1926.760(a)(1) - Each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge more than 15 feet (4.6 m) above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.

The following are minimum standards for The Rice-Tinsley Corporation employee personal fall protection systems:

- All D-rings must be a minimum of 2¼ inches (inside diameter).
- All snap hooks shall not allow pressure to be applied to the gate in the opening direction.
- No pelican hooks on lanyards should be used as a primary connection.
- Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials.
- Connectors shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of the system.
- D-rings and snap hooks shall have a minimum tensile strength of 5,000 pounds.
- D-rings and snap hooks shall be proof-tested to a minimum tensile load of 3,600 pounds without cracking, breaking, or taking permanent deformation.
- Snap hooks shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snap hook. Only a locking type snap hook designed and used to prevent disengagement of the snap hook by the contact of the snap hook keeper by the connected member shall be used.
- Horizontal lifelines shall be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.
- Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds. Where vertical lifelines are used, each employee shall be attached to a separate lifeline.
- Lifelines shall be protected against being cut or abraded.
- Self-retracting lifelines and lanyards which automatically limit free fall distance to 2 feet or less shall be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
- Self-retracting lifelines and lanyards which do not limit free fall distance to 2 feet or less, rip stitch lanyards, and tearing and deforming lanyards shall be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.

- Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached, or shall be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least two and under the supervision of a qualified person.
- Systems used by an employee having a combined person and tool weight in excess of 310 pounds shall be modified to provide proper protection for such heavier loads.
- The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head, except when climbing.
- Body harnesses and components shall be used only for employee protection and not to hoist materials.
- Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.
- Provide for prompt rescue of employees in the event of a fall or assure that employees are able to rescue themselves.
- Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.
- Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists unless prior approval is obtained from a competent person.
- If and when a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the walking/working surface.

Stopping a Fall

The arresting force on an employee stopped by a fall shall be limited to a maximum arresting force of 1,800 pounds when wearing a body harness.

The fall arrest system shall be rigged such that an employee can neither free fall more than 6 feet, nor contact any lower level.

The fall arrest system shall bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet.

The fall arrest system shall have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet, or the free fall distance permitted by the system, whichever is less.

Protection From Falling Objects

When employees are required to work in the near vicinity of others working with materials, tools, or equipment at elevated levels, Barricades around the immediate area of the overhead work shall be erected to prohibit employees from entering the barricaded area.

Employees performing work at elevated levels shall keep tools, materials, and equipment away from the edge to keep potential objects from falling over the side. Where practical, tools, etc. shall be secured with rope, wire, etc. to keep them from falling.

Portable Ladders

Three point climbing is required while ascending/descending ladders. While on ladders, both hands and one foot, or both feet and one hand shall always be in contact with the ladder.

Tools required to perform a task shall be transported by a mechanical carrier such as a tag line, suspended bucket or tool belt.

- Tools shall not be carried by hand while climbing.
- Hands must be free to grip the ladder.
- Tools shall not be carried in clothing pockets.
- Tools shall be pulled up to the job site only after reaching the area of work.

When work is to be performed from straight/extension ladders, fall protection shall be utilized when heights exceed 6 feet.

Straight ladders shall be tied off at the top to prevent them from moving. A second person shall steady the ladder at the base while it is being tied off at the top by another employee. Do not tie off fall protection equipment to the ladder.

Storage

A dedicated storage area shall be provided for the storage of fall protection equipment and all components. The storage area shall keep the equipment clean, dry, and free from oils, chemicals, paints, and excessive heat.

Inspections

Fall protection equipment shall be inspected before each use for wear, damage, other deterioration, or other defects.

Elevated Personnel Platforms

Work performed, regardless of the nature of the work, from personnel platforms raised by forklifts, cranes, scissor lifts, etc., shall require the use of a full body harness and shall be connected to the platform.

Prompt Rescue of an Employee in the Event of a Fall

The Rice-Tinsley Corporation shall provide for prompt rescue of employees in the event of a fall or shall assure the employees are able to rescue themselves.

The pre-planning stage prior to the beginning of each elevated work assignment shall be evaluated by the supervisor to provide rescue of employees involved in a fall.

Fall Protection Plan

This option is available only to employees engaged in leading edge work who can demonstrate that it is infeasible or it creates a greater hazard to use conventional fall protection equipment. The fall protection plan shall conform to the following provisions:

- The fall protection plan shall be prepared by a qualified supervisor and developed specifically for the site where the leading edge work is being performed.
- The fall protection plan shall document the reasons why the use of conventional fall protection systems (guardrail systems, personal fall arrest systems, or safety net systems) are infeasible or why their use would create a greater hazard.

- The fall protection plan shall identify each location where conventional fall Protection methods cannot be used.
- These locations shall then be classified as controlled access zones.

Controlled Access Zones

When used to control access to areas where leading edge or other operations are taking place the controlled access zone shall be defined by a control line or by any other means that restricts access.

When control lines are used, they shall be erected not less than 6 feet (1.8 m) nor more than 25 feet (7.7 m) from the unprotected or leading edge.

The control line shall extend along the entire length of the unprotected or leading edge and shall be approximately parallel to the unprotected or leading edge.

The control line shall be connected on each side to a guardrail system or wall.

- Control lines shall consist of ropes, wires, tapes, or equivalent materials.
- Each line shall be flagged or otherwise clearly marked at not more than 6-foot (1.8 m) intervals with high-visibility material.
- Each line shall be rigged and supported in such a way that its lowest point (including sag) is not less than 39 inches (1 m) from the walking/working surface and its highest point is not more than 45 inches (1.3 m).
- Each line shall have a minimum breaking strength of 200 pounds.

Only employees engaged in the related work shall be permitted in the controlled access zone.

Safety Monitoring System

When the use of conventional fall protection equipment is deemed infeasible or the use of this equipment creates a greater hazard a Fall Protection Plan which includes a safety monitoring system shall be implemented by the supervisor.

Supervisors shall designate a competent person to monitor the safety of other employees. The competent person shall be assigned to:

- Recognize fall hazards;
- Warn employees if they are unaware of fall hazard or are acting in an unsafe manner;
- Be on the same working surface and in visual contact of working employees;
- Stay close enough for verbal communication; and
- Not have other assignments that would take his/her attention from the monitoring function.

Incident Investigations

The Rice-Tinsley Corporation shall conduct accident investigations in the event of a fall, near miss or any other serious incident.

Accident investigations shall be conducted to evaluate the fall protection plan for potential updates to practices, procedures or training in order to prevent reoccurrence.

Changes to the fall protection program shall be implemented if deemed appropriate from incident corrective actions.

TRAINING

Employees receive training pertaining to the recognition and elimination of fall hazards. A training program shall be provided for each employee who might be exposed to fall hazards. Training shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to follow to minimize these hazards.

The employee will be trained in the use and operation of fall arrest systems, inspections and maintenance procedures.

Retraining – Retraining shall be provided when the following are noted:

- Deficiencies in training,
- Workplace changes
- Fall protection systems or equipment changes that render previous training obsolete.

All training is documented. Written certification records must be maintained showing the following:

- Who was trained
- When and dates of training
- Signature of person providing training
- Date The Rice-Tinsley Corporation determined training was deemed adequate.

Training records shall be retained in the corporate office.

FIRE PROTECTION/ EXTINGUISHERS

PURPOSE

The purpose of this program is to provide fire extinguisher procedures to ensure equipment is operable and employees have the knowledge to safely operate in case of a fire incident.

SCOPE

Applies to all The Rice-Tinsley Corporation employees and all The Rice-Tinsley Corporation locations.

RESPONSIBILITIES

The Safety Manager is responsible for developing procedures for the use and care of fire extinguishers and for developing a training program for the proper use of these devices. The Manager is responsible for implementing fire extinguisher training at his location. The shop foremen are responsible for enforcing the provisions of this section of the safety manual. All employees are responsible for following these provisions.

PROCEDURE

Selection and Distribution

Portable fire extinguishers shall be provided for employee use and selected and distributed based on the classes of anticipated workplace fires and on the size and degree of the hazard which would affect their use. Fire extinguishers used by this company are for four classes of fires:

- Class A Fire Extinguishers. Use on ordinary combustibles or fibrous material, such as wood, paper, cloth, rubber and some plastics. Travel distance for employees to any extinguisher is 75 feet (22.9 m) or less.
- Class B Fire Extinguishers. Use on flammable or combustible liquids such as gasoline, kerosene, paint, paint thinners and propane. Travel distance from the Class B hazard area to any extinguisher is 50 feet (15.2 m) or less.
- Class C Fire Extinguishers. Use on energized electrical equipment, such as appliances, switches, panel boxes and power tools. Travel distance from the Class C hazard area to any extinguishing agent is 50 feet (15.2 m) or less.
- Class D Fire Extinguishers. Use on combustible metals, such as magnesium, titanium, potassium and sodium. Travel distance from the combustible metal working area to any extinguishing agent is 75 feet (22.9 m) or less.

Labeling Of Fire Extinguishers

Fire extinguishers are to be mounted in easily accessible locations that are indicated by a sign that reads "Fire Extinguisher". Fire extinguishers are to be located so that no employee will ever be more than 75 feet from an extinguisher. No equipment, boxes or product may be placed (even temporarily) in the way of a fire extinguisher.

Each fire extinguisher will be assigned a unique number.

Maintenance

All fire extinguishers shall be mounted no higher and no lower than four (4) feet from the floor. All fire extinguishers shall be maintained as follows:

- Numbered to identify their proper location
- Fully charged and in operable condition
- Clean and free of defects
- Readily accessible at all times

Inspection, Maintenance and Testing

All fire extinguishers are to be visually inspected by The Rice-Tinsley Corporation employees monthly. All fire extinguishers are to receive an annual maintenance check by certified personnel from a fire extinguisher dealer. Fire extinguishers are to be inspected and re-charged by certified personnel after any use.

Any fire extinguisher that shows a loss of pressure during the monthly inspection will be inspected and re-charged by certified personnel. Completed fire extinguisher inspection logs will be maintained in the safety files and become a part of the safety records. They are to be maintained for 5 years.

Use

In the event of a fire, one employee will get the nearest fire extinguisher and use it to attempt to put the fire out. All other employees in the immediate area will prepare to evacuate if needed. All other employees in the building need to be advised that a fire is in progress.

The employee attempting to extinguish the fire will break the safety seal on the handle and pull the pin. He will then aim his extinguisher at the base of the fire and discharge it with a sweeping motion from side to side; continuing until the fire is out or the extinguisher is emptied.

Remember that a standard fire extinguisher will be emptied in about 10 to 15 seconds. If the fire is not out when the extinguisher has been completely discharged, the employees must evacuate the area.

Training and Education

The purpose of this section is to establish training procedures which are necessary for the proper use and understanding of a fire extinguisher and incipient stage fire fighting. Training will occur prior to initial assignment and at least annually thereafter.

On even numbered years this training will be conducted by a member of the local fire department (where possible) and will include "live fire" hands on use of the extinguisher. On odd number years this training will be conducted by the Safety Manager and will include a demonstration of the use of a fire extinguisher, without actually discharging the unit.

New employees will be given the odd number year training upon hire.

Initial Training Outline

- General principles of a fire
- Hazards employed with an incipient stage fire(s)

- When to "back off" (evacuate) of an incipient stage fire(s)
- General fire principles of a fire extinguisher
- Hazards employed with the use a fire extinguisher
- Use of a fire extinguisher

Retraining

Retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary. Retraining shall be provided for all authorized and affected employees whenever there is:

- An annual basis or
- A change in job assignment or
- The Rice-Tinsley Corporation has reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of fire extinguishers or fire prevention procedures.

Training Documentation

- All training will be documented and each employee's understanding will be subject to a "hands-on" test.
- Documentation will consist of; as a minimum, the employee's name, the trainer's name, the date of the training, and an outline of training provided.

FIRST AID/CPR

PURPOSE

The purpose of this program is to establish the minimum first aid/CPR supplies, equipment and actions to properly respond to injuries.

SCOPE

This program is applicable to all The Rice-Tinsley Corporation employees while engaged in work at The Rice-Tinsley Corporation facilities and/or facilities operated by others.

RESPONSIBILITIES

- It is the responsibility of the site manager to ensure that first aid/CPR kits are provided and maintained.
- All employees are responsible for using first aid/CPR materials in a safe and responsible manner.
- The HSE Manager is responsible for corresponding with the Red Cross or an equivalent to keep employee training levels current.

REQUIREMENTS

Planning

The site manager will:

- Ensure that a minimum of one employee, with a valid first aid/CPR certificate, shall be present to render first aid/CPR at all times when work is being performed.
- Ensure that provisions shall have been made prior to commencement of a project for prompt medical attention, including transportation, in case of serious injury.
- Ensure adequate first aid/CPR supplies and equipment are easily accessible when required.
- Ensure that in areas where 911 is not available, the telephone numbers of the physicians, hospitals, or ambulances to be used shall be conspicuously posted.

Medical Response

All minor first aid is to be self-rendered. Because of the risks presented by certain bloodborne pathogens, only certified persons are allowed to tend to the minor injuries of another.

In the absence of an infirmary, clinic, hospital, or physician, that is reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees, a person who has a valid certificate in first-aid/ CPR shall be available at the worksite to render first aid/CPR. A valid certificate in first-aid/CPR training must be obtained from the U.S. Bureau of Mines, the American Red Cross or equivalent training that can be verified by documentary evidence.

Employees authorized to render first aid/CPR will always observe universal precautions. (Universal Precautions means that the aid giver treats all bodily fluids as if they were contaminated).

If 911 is not available refer to the list of posted phone numbers for prearranged medical response providers. All The Rice-Tinsley Corporation authorized first responders shall have a cell phone as a means of communications; otherwise hand-held radios or telephones shall be used as a means of communication.

Supplies and Equipment

First aid/CPR supplies shall be easily accessible when required. Always follow the manufacturer's instructions when using the materials in the first aid/CPR kits.

All The Rice-Tinsley Corporation first aid/CPR kits contain appropriate items determined to be adequate for the environment in which they are used and if on a construction site are stored in a weather-proof container with individual contents sealed from the manufacturer for each type of item.

The Rice-Tinsley Corporation is responsible to ensure the availability of adequate first aid/CPR supplies and to periodically reassess the availability for supplies and to adjust its inventories. First Aid kits are to be inspected:

- On the first working day of each week to verify that they are fully stocked and that no expiration dates have been exceeded, and
- Before being sent out to each job, and
- Replace any items that have exceeded their expiration dates or that have been depleted.

Where the eyes or body of any person may be exposed to injurious corrosive materials, a safety shower and/or eye wash (suitable facilities) or other suitable facilities shall be provided within the work area. Ensure expiration dates are checked and water used in storage devices is sanitized.

An assessment of the material or materials used shall be performed to determine the type flushing/drenching equipment required. At client job sites, portable or temporary stations must be established prior to the use of corrosive materials.

Transportation

Based on the first responder's assessment of the injuries involved, decide whether the injured requires to be taken directly to a hospital's emergency room, occupational medicine provider or administer first aid/CPR on location.

Examples of serious injuries that result in the injured being transported to a medical provider are those resulting in severe blood loss, possible permanent disfigurement, head trauma, spinal injuries, internal injuries and loss of consciousness. Keep in mind that the needs and wellbeing of the injured are the first priority.

Proper equipment for prompt transportation of the injured person to a physician or hospital or a communication system for contacting necessary ambulance service shall be provided.

Choices to consider include private automobile, company vehicle, helicopter, crew boat, EMS vehicles, including medivac helicopters, or any other transportation that can provide safe transportation to the hospital or doctor's office in order to provide medical attention to the injured in the quickest manner without any additional complications or injuries to the injured employee.

Transportation needs must be preplanned and coordinated with the transportation provider prior to an incident requiring such service.

Training

Volunteers or selected employees are trained by the American Red Cross or equivalent in CPR and first aid. Each of these trained and certified employees are equipped with protective gloves and other required paraphernalia.

FORKLIFT & INDUSTRIAL TRUCKS

PURPOSE

The purpose of this program is to establish requirements for the safe operation and use of Powered Industrial Trucks.

SCOPE

This program applies to all The Rice-Tinsley Corporation employees who operate a Powered Industrial Truck in the scope of their job duties and assignments. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent. NOTE: All employees are required to be trained and certified prior to operating each specific type of forklift equipment. The Rice-Tinsley Corporation shall certify all authorized employees regarding competency on all types of equipment. Forklift training is provided by a qualified instructor. (All Trainers have the knowledge and ability to teach and evaluate operators.)

DEFINITIONS

Authorized Employee – A person, at least 18 years of age and who has completed the company's required safety training for the safe operations of forklifts.

Forklift (Powered Industrial Truck) – Any mechanical device used for the movement of supplies, material or finished a product that is powered by an electric motor or an internal combustion engine.

KEY RESPONSIBILITIES

Manager/Supervisor

- Shall ensure that each powered forklift operator is competent to operate a forklift safely, as demonstrated by the successful completion of the training and evaluation program.
- Shall ensure that all forklifts are inspected before each shift and all repairs are made before the forklift is operated.

Employees

- Shall be current on applicable training.
- Operate forklift in accordance to the forklift standards and manufacture requirements.
- Inspect forklift at the start of shift and remove from service if defects are found until they are corrected.
- Operate forklift in a safe manner.

PROCEDURE

General

All approved forklifts shall have a manufacturer's identification plate attached showing all specifications of the forklift and that the forklift is accepted by a nationally recognized testing laboratory.

Modifications and additions, that affect capacity and safe operation, shall not be performed without manufacturer's prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed to reflect the modification or addition.

If the forklift is equipped with front-end attachments other than factory installed attachments, the supervisor shall ensure that the forklift is marked to identify the attachments and show the approximate weight of the forklift and attachment combination at maximum elevation with load laterally centered.

The operator shall see that all nameplates and markings are in place and are maintained in a legible condition.

All forklifts shall be equipped with safety seat belts. All forklifts shall be equipped with a horn, backup alarm, beacon light, headlights and taillight.

Safety Guards

Forklifts shall be fitted with an overhead rollover cage, as per manufacturer's specifications.

If the type of load presents a hazard to the operator, the forklift shall be equipped with a vertical load backrest extension, as per manufacturer's specifications.

Training

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, and written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee) and evaluation of the operator's performance in the workplace.

All operator training and evaluation shall be conducted by authorized persons who have the knowledge, documented training, and experience to train powered industrial truck operators and evaluate their competence.

Training shall include the following topics, except in topics for locations where they are not applicable to safe operation of the truck due to type of equipment or facility conditions.

1. Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate,
2. Differences between the truck and the automobile,
3. Truck controls and instrumentation: where they are located, what they do, and how they work,
4. Engine or motor operation,
5. Steering and maneuvering,
6. Visibility (including restrictions due to loading),
7. Fork and attachment adaptation, operation, and use limitations,
8. Vehicle capacity,
9. Vehicle stability,

10. Any vehicle inspection and maintenance that the operator will be required to perform,
11. Refueling and/or charging and recharging of batteries,
12. Operating limitations,
13. Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate,
14. Surface conditions where the vehicle will be operated,
15. Composition of loads to be carried and load stability,
16. Load manipulation, stacking, and unstacking,
17. Pedestrian traffic in areas where the vehicle will be operated,
18. Narrow aisles and other restricted places where the vehicle will be operated,
19. Hazardous (classified) locations where the vehicle will be operated,
20. Ramps and other sloped surfaces that could affect the vehicle's stability,
21. Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust,
22. Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation, and
23. The requirements of CFR 1910.178 (Powered Industrial Trucks).

Mandatory refresher training shall be provided when unsafe operations are observed, after an incident, if operating a different vehicle type, changes in conditions or any time The Rice-Tinsley Corporation feels an operator requires refresher training.

Certification

Only trained and certified operators, including supervisors, are allowed to operate the device (this includes refresher training requirements).

The trainer shall certify in writing that each operator has been trained and evaluated as required.

The certification shall include the name of the operator, the date of the training, the date of the evaluation and the identity of the person(s) performing the training and/or evaluation.

Operations

General

- All operators shall wear a safety seat belt when operating a forklift.
- Forklifts shall not be driven up to anyone standing in front of a bench or other fixed object.
- No person shall be allowed to stand or pass under the elevated portion of any forklift, whether loaded or empty.
- Unauthorized personnel shall not be permitted to operate forklifts.
- No riders or passengers are permitted.
- It is prohibited for arms or legs to be placed between the uprights of the mast or outside the running lines of the forklift.
- When a forklift is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set.
- Wheels shall be blocked if the forklift is parked on an incline.

- A forklift is unattended when the operator is 25 ft. or more away from the vehicle, which remains in view, or whenever the operator leaves the forklift and it is not in view.
- When the operator of a forklift is dismounted and within 25 ft. of the forklift still in view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement.
- A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car.
- Forklifts shall not be used for opening or closing freight doors.
- Brakes shall be set and wheel blocks shall be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading.
- Fixed jacks may be necessary to support a semi-trailer during loading or unloading when the trailer is not coupled to a tractor.
- The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto.
- There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.
- An overhead guard (cages) shall be used as protection against falling objects.
- An overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.
- Fire aisles, access to stairways, and fire equipment shall be kept clear.

Traveling

- The operator shall slow down and sound the horn at cross isles and other locations where vision is obstructed.
- If the load being carried obstructs forward view, the operator shall be required to travel with the load trailing.
- The operator shall be required to look in the direction of and keep a clear view of the path of travel.
- Grades shall be ascended or descended slowly.
- When ascending or descending grades in excess of 10 percent, loaded forklifts shall be driven with the load upgrade.
- On all grades the load and load engaging means shall be tilted back if applicable and raised only as far as necessary to clear the road surface.
- Under all travel conditions the forklift shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
- Stunt driving and horseplay are prohibited.
- The operator shall slow down for wet and slippery floors.
- Dock board or bridge plates shall be properly secured before they are driven over.
- Dock board or bridge plates shall be driven over carefully and slowly and their rated capacity never exceeded.
- While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion.

- Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

Loading

- Only stable or safely arranged loads shall be handled.
- Caution shall be exercised when handling off-center loads, which cannot be centered.
- Only loads within the rated capacity of the forklift shall be handled.
- Forklifts equipped with attachments shall be operated as partially loaded forklifts when not handling a load.
- A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.
- Extreme care shall be used when tilting the load forward or backward, particularly when high tiering.
- Tilting forward with load engaging means elevated shall be prohibited except to pick up a load.
- An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack.
- When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

Operation of the Truck

- If at any time a forklift is found to be in need of repair, defective, or in any way unsafe, the forklift shall be taken out of service until it has been restored to safe operating condition.
- Fuel tanks shall not be filled while the engine is running.
- Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.
- When fueling with Liquefied Petroleum Gas (LPG), precautions and handling requirements set forth in the "Safe Handling of LPG" program shall be followed.
- No forklift shall be operated with a leak in the fuel system.
- Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.
- Operator must verify trailer chocks, supports, and dock plates are secured prior to loading/unloading.

Maintenance and Inspection of Forklifts

- Only authorized personnel shall perform maintenance and make repairs.
- Those repairs to the fuel and ignition systems of forklifts, which involve fire hazards, shall be conducted only in locations designated for such repairs.
- Forklifts in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.
- Only parts equivalent with those used in the original design shall replace all parts of any forklift requiring replacement parts.
- Forklifts shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts.
- Additional counter weighting of fork trucks shall not be done unless approved by the truck manufacturer.

- Forklifts shall be inspected daily by the operator before being placed in service and shall not be placed in service if the inspection shows any condition adversely affecting the safety of the forklift.
- Inspection shall be made at least daily – prior to each shift. (visual – non documented) Inspection items shall be posted on each forklift. Operators must ensure the vehicle is safe prior to operating.
- Where forklifts are used on a round-the-clock basis, they shall be inspected before each shift.
- Defects when found shall be immediately reported to the supervisor and corrected before operating the forklift.
- When the temperature of any part of any forklift is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the forklift shall be removed from service and not returned to service until the cause for such overheating has been eliminated.
- Forklifts shall be kept in a clean condition, free of lint, excess oil, and grease.
- Noncombustible agents, where at all possible, shall be used for cleaning trucks.
- Low flash point (below 100 degrees F.) solvents shall not be used.
- High flash point (at or above 100 degrees F.) solvents may be used if precautions regarding toxicity, ventilation, and fire hazard are mitigated with the agent or solvent used.

An evaluation of all operator's performance shall be conducted at least once every three years.

Refresher training shall be provided to the operator when: operates in an unsafe manner, involved in an accident or near-miss, assigned to drive a different type of truck, or a condition in the workplace changes.

Employers must certify that each operator has been trained and evaluated in accordance with the OSHA standard.

The certification must include:

- Operator name.
- Training date.
- Evaluation date.
- Name of person(s) performing the training or evaluation.

GENERAL WASTE MANAGEMENT

PURPOSE

The purpose of this waste management strategy was developed to provide guidance and requirements necessary for efficient, effective and compliant waste management during construction and operations.

SCOPE

This procedure applies to all The Rice-Tinsley Corporation employees. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

PROCEDURE

The The Rice-Tinsley Corporation Safety Manager or other designated person in his or her absence is accountable for managing waste and disposition of wastes generated at the work site.

Waste Estimation

Each work site will estimate the waste, trash and/or scrap that will be generated and taken into consideration prior to work being performed so the need for containers and waste removal, if necessary, can be determined.

Each site will utilize the following for planning of dumpster scheduling and total non-hazardous dry waste material. These figures do not include neither recycling nor waste minimization efforts and reflect no use of an incinerator. Dumpster figures are based on a 40 yard container and can be modified if another size is used by changing the table below.

SAMPLE ONLY - SOLID WASTE						
	Number of Employees	10	25	35	50	100
<u>Total Estimated Square Feet of Waste (@ 0.675 cu ft per person daily)</u>						
	Daily	7	17	24	34	68
	Weekly	47	118	165	236	473
	Monthly (4.33 wks)	205	511	716	1,023	2,046
	Annual	2,455	6,138	8,593	12,276	24,551
<u>Total Estimated Weight of Waste (@ 4lb per person daily)</u>						
	Daily	40	100	140	200	400
	Weekly	280	700	980	1,400	2,800
	Monthly (4.33 wks)	1,212	3,031	4,243	6,062	12,124
	Annual	14,549	36,372	50,921	72,744	145,488
<u>Number of Total Dumpster Fills</u> 40 yard dumpster 7x8x22 = 1,232 square feet						
	Daily	0.0	0.0	0.0	0.0	0.1
	Weekly	0.0	0.1	0.1	0.2	0.4
	Monthly (4.33 wks)	0.2	0.4	0.6	0.8	1.7
	Annual	2.0	5.0	7.0	10.0	19.9

The Rice-Tinsley Corporation must coordinate with the project site or owner to ensure proper disposal of wastes or scrap materials.

The Rice-Tinsley Corporation must ensure the owner client is aware of whether wastes and scrap materials will be taken off site by The Rice-Tinsley Corporation or will be disposed of on the owner client's site.

Waste Segregation

- Do not mix waste streams
- Only place waste in the designated container, satellite accumulation area (SAA), recyclable accumulation area (RAA), universal waste accumulation area (UWAA) or designated dumpster.

Recycling

Wastes should be recycled whenever practicable. The Rice-Tinsley Corporation will encourage proper segregation of waste materials to ensure opportunities for reuse or recycling occurs at each work site. The collection of recycled material will reduce the total load on the environment. Bins of sufficient size must be lined with a plastic bag and clearly labeled for use. Posters from The Rice-Tinsley Corporation will be posted throughout the work site to encourage recycling. Collection bins will also be placed in administrative areas will follow the following color guiding:

- Blue - Paper
- Green - Aluminum cans
- Yellow - Plastic

Cardboard will be flattened, staples and excess shipping tape removed. No cardboard shall be placed in the dumpster used for the landfill.

Waste Handling Matrix

Each work site will develop a Waste Handling Matrix (sample shown) that will:

- Address safe practices related to the immediate storage and handling of waste, scrap or leftover material.
- The handling, organization and storage of waste and scrap materials to minimize potential impact to the environment. Waste materials shall be properly stored and handled to minimize the potential for a spill or impact to the environment. During outdoor activities receptacles must be covered to prevent dispersion of waste materials and to control the potential for runoff.

Waste Stream	Location	Activity Generating Waste	Hazardous/Non Hazardous	Safe Storage Practice	Disposal Method	PPE or Other Precautions
Aerosol Can Contents	Equipment Repair Shop	Puncturing of aerosol cans	Hazardous	SAA is self-contained in the equipment repair shop	Ship to assigned site for recycling or disposal	Read warnings before use of unit.
Aerosol Can Puncturing Unit Filter	Equipment Repair Shop	Filter Changes	Hazardous	Place in designated labeled container	Ship to assigned site for recycling or disposal	Change filter every 3 months
Aerosol Cans	Various Locations	Painting, lubricants, cleaning	Non-Hazardous if aerosol can is punctured and drained	Place punctured aerosol can in RAA storage drum	Crush RAA storage drum and place in the scrap metal dumpster from client.	See "Scrap Metal" for waste stream management

Waste Stream	Location	Activity Generating Waste	Hazardous/Non Hazardous	Safe Storage Practice	Disposal Method	PPE or Other Precautions
Ash	Smart Ash Unit	Incineration of acceptable waste	Non Hazardous	Dispose of Immediately	Place in the Burnable Waste Dumpster	Gloves Goggles
Automotive and Heavy Equipment Parts-Used	Equipment Repair Shop and Fab Shop	Replacement	Non-Hazardous	Place in RAA	Returned to vendors for recycling	Starters, Alternators, Pumps, Transmissions
Batteries (Alkaline)	Various Locations	Battery Failures	Universal Waste	Place in the UWAA	"D" cell and below are acceptable in the Non-Burnable Waste Dumpster	Ship to designated site for recycling or disposal
Batteries (Lead Acid)	Equipment Repair Shop and Fab Shop	Battery Failures	Universal Waste	No storage allowed. Containment boxes are labeled and available in the shops.	Lead acid batteries are returned to the Vendor upon removal	Ship to designated site for recycling
Batteries (NiCad)	Various Locations	Battery Failures	Universal Waste	UWAA in the equipment repair shop.	Ship to assigned site for recycling or disposal	Cell phones, radios
Butane Torch Bottle	Various Locations	Mechanic activities	Excluded Hazardous if recycled	Place drained Butane Torch Bottles in RAA storage drum	Crush RAA storage drum and place in the scrap metal dumpster	Prosolv Butane Bottle processor I
Cardboard/Office Paper	Parts Department & Offices	Shipping Boxes & Office Activities	Non-Hazardous	Place in RAA	Place on pallet in RAA and band for shipment to assigned site for recycling.	
Computers Discarded	Parts Department & Offices	Replacement	Non-Hazardous	Place in RAA	Ship to assigned site for recycling or disposal	
Diesel Filters-Used	Equipment Repair Shop and Fab Shop	Filter Changes	Non-Hazardous	RAA for drained and crushed used filters	Drain for 12 hrs., crush and incinerate in Smart Ash unit	Place metal in recycle metal dumpster
Diesel Rags	Various Locations	Mechanic activities	Non-Hazardous	Oily waste rag in clear bags w/yellow stripes.	Incinerated in Smart Ash unit	See "Ash" for management and disposal

Waste Stream	Location	Activity Generating Waste	Hazardous/Non Hazardous	Safe Storage Practice	Disposal Method	PPE or Other Precautions
Drained Diesel	Equipment Repair and Fab Shop	Draining diesel fuel and filters	Non-Hazardous when burned as off-Spec fuel	Place in "used oil" tank in the equipment repair shop and fab shop.	Burned for energy recovery in clean burn multi-oil heating system.	
Empty Paint Cans	Various Locations	Painting activities	Non-Hazardous	No storage allowed	Ship to assigned site for recycling or disposal	Paint cans must be RCRA empty.
Fluorescent Light Ballast	Various Locations	Failure	Non-Hazardous unless they contain PCB's or DEHP	None	Place in Non-Burnable Dumpster	Ballast will say on the label if it contains PCB's
Fluorescent Light Bulbs	Shops, Office Areas	Bulb replacement	Universal Waste	Place bulbs in their original container in the RAA in the shop area	Ship to assigned site for recycling or disposal	Label bulbs "Used Bulb" when put into RAA.
Glass	Various Locations	Replacement	Non-Hazardous	None	Place in Non-Burnable Dumpster	Ensure glass containers are empty.
Glycol Rags	Equipment Repair Shop and Fab Shop	Fluid Changes	Non-Hazardous	Oily waste rag WAA's lined w/clear bags w/yellow stripes.	Incinerated in Smart Ash unit	Minimize use of absorbent rags
Glycol-Used	Equipment Repair Shop and Fab Shop	Fluid Changes	Non-Hazardous	RAA - self-contained tank on recycling unit	Recycled in glycol recycling unit	Recycling unit stored in shop
Grinding Wheels	Equipment Repair Shop and Fab Shop	Grinding activities	Non-Hazardous	None	Place in Non-Burnable Dumpster	
Hoses & Belts	Equipment Repair Shop and Fab Shop	Replacement	Non-Hazardous	Place in Non-Burnable Dumpster	Place in Non-Burnable Dumpster	Drain all fluids from hoses
Metal Shavings/Cuttings	Equipment Repair Shop and Fab Shop	Fabricating activities	Excluded Hazardous if recycled	Placed in recycle metal dumpster or metal only RAA's	Place in recycle metal dumpster	Ensure there are no free flowing cutting fluids present before disposal.

Waste Stream	Location	Activity Generating Waste	Hazardous/Non Hazardous	Safe Storage Practice	Disposal Method	PPE or Other Precautions
Oil Filters-Used	Equipment Repair Shop and Fab Shop	Oil filter changes	Excluded Hazardous	RAA for drained and crushed used filters	Drain for 12 hrs., crush and incinerate in Smart Ash unit	Place metal in recycle metal dumpster
Oil-Used	Equipment Repair Shop, Fab Shop, Service Trucks	Draining oil and filters	Excluded Hazardous if burned for energy recovery	Receiving sumps are located in the Equipment Repair Shop and Fab Shop	Burned for energy recovery in clean burn multi-oil heating system.	Keep lids on receiving sumps at all times. DO NOT PUT SOLVENTS INTO USED OIL
Oily Waste (rags, absorbents)	Various Locations	Mechanic activities, equipment drips and leaks	Non-Hazardous	Oily waste rag WAA's lined w/clear bags w/yellow stripes.	Incinerated in Smart Ash unit	Collected daily. See "Ash" for management and disposal
Paint Waste (rags, rollers, brushes, etc.)	Various Locations	Painting activities	Determine on per occurrence basis. Use SDS or testing	If hazardous, store in the assigned area. If non-hazardous, no storage is required.	If hazardous, ship to assigned site for disposal. If non-hazardous, place in burnable waste dumpster.	Need to review SDS, do analytical test, or use generator knowledge to make waste determinations.
Parts Cleaner Rags	Equipment Repair Shop	Cleaning parts	Non-Hazardous	Oily waste rag WAA's lined w/clear bags w/yellow stripes.	Incinerated in Smart Ash unit	See "Ash" for management and disposal
Scrap Metal	Various Locations	Fabrication activities & house cleaning	Excluded Hazardous if recycled	Placed in recycle metal dumpster or metal only RAA's	Place in recycle metal dumpster	Eye Protection Gloves
Sodium Vapor/ Metal Halide Light Bulbs	Various Locations	Bulb replacement	Universal Waste	Place bulbs in their original container in the RAA.	Ship to assigned site for recycling or disposal	Label bulbs "Used Bulb" when put into RAA.
Tires	Various Locations	Replacement	Non-Hazardous	None	Place tires up to 20" rim diameter into dumpster.	
Toner Cartridges	Offices	Copiers, printers, fax machines	Non-Hazardous	Placed in original container in RAA	Ship to assigned site for recycling or disposal	Verify toner is expended before disposal.

Waste Stream	Location	Activity Generating Waste	Hazardous/Non Hazardous	Safe Storage Practice	Disposal Method	PPE or Other Precautions
Water Scrubber Filter & Absorbents	Equipment Repair Shop and Fab Shop	Filtering sump water in shops	Non-Hazardous	None	Incinerated in Smart Ash unit	See "Ash" for management and disposal
Welding Rods	Various Locations	Welding activities	Excluded Hazardous	Placed in recycle metal dumpster or metal only RAA's	Ship to assigned site for recycling or disposal	See "Scrap Metal" for waste stream management
Wood Waste	Various Locations	Various activities and shipping pallets	Non-Hazardous	Store on the far back corner of the pad or in the dump truck box if available.	Place in recycle wood dumpster	Pallets are refurbished and recycled when possible

Storage Requirements

The Rice-Tinsley Corporation must ensure project related wastes are stored and maintained in an organized fashion to encourage proper disposal and minimize risks to employees. Proper waste receptacles must be provided for trash and materials that may be reused or recycled during a project.

PPE

For each site waste management plan The Rice-Tinsley Corporation shall determine a PPE matrix that includes gloves, hand protection, eye and face protection and/or other necessary PPE.

EDUCATION AND TRAINING

Employees shall be instructed on managing waste generated at the work site and on the proper disposal method of wastes. Examples include:

- Instruction on the proper handling, storage and disposal of wastes and depending on the waste generated at the site to also include general instruction on disposal of non-hazardous wastes, trash or scrap materials. If wastes generated are classified as hazardous then employees shall be trained to ensure proper disposal and compliance with regulations.
- Minimization methods to reduce waste.
- Recycling methods and proper PPE to be utilized.

Ground Fault Protection / GFCI

PURPOSE

The purpose of this program is to provide procedures and guidelines to eliminate all injuries resulting from possible malfunctions, improper grounding and/or defective electrical tools. This program applies to all sites, employees and contractors and shall be used on all jobsites and owned premises.

DEFINITIONS

Competent Person - one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Ground Fault Circuit Interrupter - a device for the protection of personnel that functions to de-energize a circuit or portion thereof within an established period of time when a current to ground exceeds some predetermined value that is less than that required to operate the overcurrent protective device of the supply circuit.

RESPONSIBILITIES

Supervisors are designated as competent persons for the Assured Equipment Grounding Conductor Program and are responsible for program execution. One or more competent persons must be designated (as defined in 1926.32(f)) to implement and execute the program.

Employees are responsible for following the requirements of this program, to perform visual inspections and to take defective equipment out of service.

PROCEDURES AND GUIDELINES TO ELIMINATE INJURIES

The following procedures and guidelines are designed to eliminate all injuries resulting from possible malfunctions, improper ground and/or defective tools.

Assured Grounding Site Program Requirement

An assured grounding conductor program must be implemented on all The Rice-Tinsley Corporation sites covering all cord sets, receptacles which are not part of the building or structure & equipment connected by cord and plug which are available for use or used by employees.

Ground Fault Circuit Interrupters

All 120-volt, single-phase 15 and 20 ampere receptacle outlets on construction or maintenance sites, which are not part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground fault circuit interrupters for personnel protection.

- All hand portable electric tools and extension cords shall use a GFCI.
- Additionally, approved GFCI's shall be used for 240-Volt circuits in the same service as described above.
- GFCI's must be used on all 120 volt, single-phase 15 amp and 20 amp receptacles within 6 feet of a sink, damp areas or on installed outdoor equipment.

- The GFCI must be the first device plugged into a permanent receptacle.
- The GFCI must be tested before each use.

Assured Equipment Grounding Conductor Program

The Assured Equipment Grounding Conductor Program (AEGCP) shall cover all cord sets, receptacles not a part of the permanent wiring of a structure and equipment connected by cord and plug on all construction and maintenance sites.

This written description of the program shall be kept at the jobsite for inspection and copying by OSHA and any affected employee.

Removing Equipment

Restrictions for the use of equipment that does not meet requirements or if is found to be defective shall be applied and enforced. Any equipment which has not met the requirements of this program shall not be available or permitted to be used by The Rice-Tinsley Corporation. Damaged items shall not be used until repaired.

How Often Inspection of Cords and Equipment are to be Made

Daily Visual inspections – The following shall be visually inspected before each day's use for external defects (such as deformed or missing pins or insulation damage) and for indication of possible internal damage:

- Cord sets;
- Attachment caps;
- Plug and receptacle of cord sets;
- Any equipment connected by cord and plug (with the exception of cord sets and receptacles which are fixed and not exposed to damage) such as deformed or missing plug, and
- Insulation damage
- Damaged items shall not be used until repaired or shall be discarded.

How and When Tests are Performed and What Records are Maintained

All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.

Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment grounding conductors. The equipment grounding conductor shall be connected to its proper terminal.

When tests are performed:

- Before each use.
- Before equipment is returned to service following any repairs.
- Before equipment is used such as when a cord has been run over.
- At intervals not to exceed 3 months, except that cord sets and receptacles which are fixed and not exposed to damage shall be tested at intervals not exceeding 6 months.

Tests performed as required by this program shall be recorded as to the identity of each receptacle, cord set and cord and plug connected equipment that passed the test and shall indicate the last date tested or interval for which is was tested. This record shall be kept by means of logs, color coding or other effective means and shall be maintained until replaced by a more current record. These records shall be made available at the job site for inspection by the Assistant Secretary and any affected employees.

All tested cord sets and cord and plug-connected equipment shall be marked, one or both ends, with colored tape to denote the month that the tests were performed. The below color code chart that must be followed for marking.

Month #	Month	Color of Tape to Apply to Cords
1	Jan	Red
2	Feb	Yellow
3	Mar	Green
4	Apr	Blue
5	May	Brown
6	Jun	White
7	Jul	Start over with Red and repeat

HAND AND/OR POWER TOOLS / TOOL SAFETY

PURPOSE

The purpose of this program is to provide establish requirements for the safe operation of hand and power tools and other portable tools, including proper guarding. All hand and power tools shall be maintained in a safe condition.

This program applies to all The Rice-Tinsley Corporation employees who use hand and power tools.

SCOPE

This program is applicable to all The Rice-Tinsley Corporation employees while engaged in work at The Rice-Tinsley Corporation facilities and/or facilities operated by others.

RESPONSIBILITIES

Any tool which is not in compliance with any applicable requirement of this plan is prohibited and shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from its place of operation.

Managers/Supervisors

- Ensure that all employees using portable tools have been trained and fully understand the operations and maintenance procedures of such tools, including their proper use.
- Provide and train employees with all additional PPE that may be needed for the safe operation of portable tools.

Employees

- Shall ensure they have and properly use the correct tool for each task.
- Shall follow manufactures safety and operating instructions before using

REQUIREMENTS

General

All tools, regardless of ownership, shall be of an approved type and maintained in good condition.

- Tools are subject to inspection at any time.
- All employees have the authority and responsibility to condemn unsafe tools, regardless of ownership.

Unsafe tools shall be tagged with a "DO NOT USE OR OPERATE" tag to prevent their use.

Employees shall always use the proper tool for the job to be performed. Makeshift and substitute tools shall not be used.

Hammers with metal handles, screwdrivers with metal continuing through the handle, and metallic measuring tapes shall not be used on or near energized electrical circuit or equipment.

Tools shall not be thrown from place to place or from person to person; tools that must be raised or lowered from one elevation to another shall be placed in tool bags/buckets firmly attached to hand lines.

Tools shall never be placed unsecured on elevated places.

Impact tools such as chisels, punches, and drift pins that become mushroomed or cracked shall be dressed, repaired, or replaced before further use.

Chisels, drills, punches, ground rods, and pipes shall be held with suitable holders or tongs (not with the hands) while being struck by another employee.

Shims shall not be used to make a wrench fit.

Wrenches with sprung or damaged jaws shall not be used.

Tools shall be used only for the purposes for which they have been approved.

Tools with sharp edges shall be stored and handled so that they will not cause injury or damage. They shall not be carried in pockets unless suitable protectors are in use to protect the edge. They shall not be carried in pockets unless suitable protectors are in use to protect the edge.

Wooden handles that are loose, cracked, or splintered shall be replaced. The handle shall not be taped or lashed with wire. The handle shall not be taped or lashed with wire.

Tools shall not be left lying around where they may cause a person to trip or stumble.

When working on or above open grating, a canvas or other suitable covering shall be used to cover the grating to prevent tools or parts from dropping to a lower level where others are present, or the danger area shall be barricaded or guarded.

The insulation on hand tools shall not be depended upon to protect users from high voltage shock (except approved live line tools).

Portable Electric Tools

The non-current carrying metal parts of portable electric tools such as drills, saws, and grinders shall be effectively grounded when connected to a power source unless:

- The tool is an approved double-insulated type, or
- The tool is connected to the power supply by means of an isolating transformer or other isolated power supply.

All powered tools shall be examined prior to use to ensure general serviceability and the presence of all applicable safety devices.

Powered tools shall be used only within their design and shall be operated in accordance with manufacturer's

instructions. The use of electric cords for hoisting or lowering tools shall not be permitted.

All tools shall be kept in good repair and shall be disconnected from the power source while repairs or adjustments are being made.

Electrical tools shall not be used where there is hazard of flammable vapors, gases, or dusts without a valid Hotwork Permit.

Ground fault circuit interrupters or use of an Assured Grounding Program shall be used with portable electric tools. This does not apply to equipment run off of portable or truck mounted generators at 5kw or less that are isolated from ground or to equipment ran directly off of secondaries.

Pneumatic Tools

Pneumatic tools shall never be pointed at another person.

Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.

Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.

Compressed air shall not be used for cleaning purposes, except where reduced to less than 30 psi and then only with effective chip guarding and personal protective equipment.

Compressed air shall not be used to blow dust or dirt from clothing.

The manufacturers stated safe operating pressure for hoses, pipes, valves, filters, and other fitting shall not be exceeded.

The use of hoses for hoisting or lowering tools shall not be permitted.

Before making adjustments or changing air tools, unless equipped with quick-change connectors, the air shall be shut off at the air supply valve ahead of the hose. The hose shall be bled at the tool before breaking the connection.

Compressed air tools, while under pressure, must not be left unattended.

All connections to air tools shall be made secure before turning on air pressure.

Air at the tool shall not be turned on until the tool is properly controlled.

All couplings and clamps on pressurized air hose shall be bridged (pinned) with suitable fasteners.

Hose and hose connections used for conducting compressed air to utilization equipment shall be designed for the pressure and service to which they are subjected.

Use only approved end-fitting clamps (screw type heater hose clamps are not acceptable).

While blowing down hose, do not point it toward people.

Power tools are to be operated only by competent persons who have been trained in their proper use.

Conductive hose should not be used near energized equipment.

Foot protection shall be worn while operating paving breakers, tampers, rotary drills, clay spades, and similar impactor-type tools or at other times when instructed by supervision.

All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operate at more than 100 psi. pressure at the tool shall have a safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface.

Airless spray guns of the type which atomize paints and fluids at high pressures (1,000 pounds or more per square inch) shall be equipped with automatic or visible manual safety devices which will prevent pulling of the trigger to prevent release of the paint or fluid until the safety device is manually released.

In lieu of the above, a diffuser nut (which will prevent high pressure), high velocity release (while the nozzle tip is removed), plus a nozzle tip guard (which will prevent the tip from coming into contact with the operator), or other equivalent protection, shall be provided.

Powder Actuated Tools (Tools actuated by an explosive charge)

Only those employees who have been certified in their use shall operate these tools.

Explosive charges shall be carried and transported in approved containers.

Operators and assistants using these tools shall be protected by means of eye, face, and hearing protection.

Tools shall be maintained in good condition and serviced regularly by qualified persons. The material upon which these tools are to be used shall be examined before work is started to determine its suitability and to eliminate the possibility of hazards to the operator and others.

Prior to use, the operator shall ensure that the protective shield is properly attached to the tool.

Before using a tool, the operator shall inspect it to determine to his satisfaction that it is clean, that all moving parts operate freely, all guards and safety devices are in place, and that the barrel is free from obstructions.

Before using tools, the operator shall read and become familiar with the manufacturers operating guidelines and procedures.

When a tool develops a defect during use, the operator shall immediately cease to use it, until it is properly repaired in accordance with the manufacture's specifications.

Tools shall not be loaded until just prior to the intended firing time, nor shall an unattended tool be left loaded. Empty tools are to be pointed at any workmen.

In case of a misfire, the operator shall hold the tool in the operating position for at least 30 seconds. He shall then try to operate the tool a second time. He shall wait another 30 seconds, holding the tool in the operating position; then he shall proceed to remove the explosive load in strict accordance with the manufacturer's instructions.

A tool shall never be left unattended in a place where it would be available to unauthorized persons.

Fasteners shall not be driven into very hard or brittle materials including, but not limited to, cast iron, glazed tile, surface hardened steel, glass block, live rock, face brick, or hollow tile.

Driving into materials easily penetrated shall be avoided unless such materials are backed by a substance that will prevent the pin or fastener from passing completely through and creating a flying missile hazard on the other side.

Tools shall not be used in an explosive or flammable atmosphere.

Hydraulic Power Tools

The fluid used in hydraulic powered tools shall be fire-resistant fluids approved under Schedule 30 of the U.S. Bureau of Mines, Department of the Interior, and shall retain its operating characteristics at the most extreme temperatures to which it will be exposed.

The manufacturer's safe operating pressures for hoses, valves, pipes, filters, and other fittings shall not be exceeded.

All hydraulic tools, which are used on or around energized lines or equipment, shall use non-conducting hoses having adequate strength for the normal operating pressures.

Hydraulic Jacks

Loading and Marking

- The operator shall make sure that the jack used has a rating sufficient to lift and sustain the load.
- The rated load shall be legibly and permanently marked in a prominent location on the jack by casting, stamping, or other suitable means.

Operation and Maintenance

- In the absence of a firm foundation, the base of the jack shall be blocked. If there is a possibility of slippage of the cap, a block shall be placed in between the cap and the load.
- The operator shall watch the stop indicator, which shall be kept clean, in order to determine the limit of travel. The indicated limit shall not be overrun.
- After the load has been raised, it shall be cribbed, blocked, or otherwise secured at once.
- Hydraulic jacks exposed to freezing temperatures shall be supplied with adequate antifreeze liquid.
- All jacks shall be properly lubricated at regular intervals.

Each jack shall be thoroughly inspected before each use. Jacks, which are in unsafe condition, shall be tagged accordingly, and shall not be used until repairs are made.

Abrasive Blast Cleaning Nozzles

The blast cleaning nozzles shall be equipped with an operating valve, which must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.

Fuel Powered Tools

All fuel-powered tools shall be stopped while being refueled, serviced, or maintained, and fuel shall be transported, handled, and stored in accordance with the Flammable and Combustible Liquids Program.

When fuel powered tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases and use of personal protective equipment, shall be adhered too.

Guarding Portable Tools

Guards shall be in place and operable at all times while the tool is in use. The guard may not be manipulated in such a way that will compromise its integrity or compromise the protection in which intended. Guarding shall meet the requirements set forth in ANSI B15.1.

Portable Circular Saws

- All portable, power-driven circular saws having a blade diameter greater than 2 in. shall be equipped with guards above and below the base plate or shoe.
- The upper guard shall cover the saw to the depth of the teeth, except for the minimum arc required to permit the base to be tilted for bevel cuts.
- The lower guard shall cover the saw to the depth of the teeth, except for the minimum arc required to allow proper retraction and contact with the work.
- When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to covering position.
- All cracked saw blades shall be removed from service.

Switches and Controls

- All handheld powered tools, circular saws, drills, tappers, fastener drivers, horizontal or vertical angle grinders, etc., shall be with a constant pressure switch or control, and may have a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.
- All hand-held powered circular saws having a blade diameter greater than 2 inches, electric, hydraulic or pneumatic chain saws, and percussion tools without positive accessory holding means shall be equipped with a constant pressure switch or control that will shut off the power when the pressure is released. All hand-held gasoline powered chain saws shall be equipped with a constant pressure throttle control that will shut off the power to the saw chain when the pressure is released.
- The operating control on hand-held power tools shall be so located as to minimize the possibility of its accidental operation, if such accidental operation would constitute a hazard to employees.
- Grounding of portable electric powered tools shall meet the electrical requirements that can be found in the Electrical Safety Program. All electric power tools shall be equipped with a three-prong plug.

Portable Abrasive Wheels

Safety Guards Exceptions

- Wheels used for internal work while within the work being ground.
- Mounted wheels used in portable operations 2 inches and smaller in diameter.
- Types 16, 17, 18, 18R, and 19 cones, plugs, and threaded hole pot balls where the work offers protection.
- Guards shall be made of steel or other material with adequate strength.
- A safety guard shall cover the spindle end, nut and flange projections. The safety guard shall be mounted so as to maintain proper alignment with the wheel, and the strength of the fastenings shall exceed the strength of the guard.

- Exception: safety guards on all operations where the work provides a suitable measure of protection to the operator may be so constructed that the spindle end, nut and outer flange are exposed. Where the nature of the work is such as to entirely cover the side of the wheel, the side covers of the guard may be omitted.
- Exception: the spindle end, nut, and outer flange may be exposed on portable machines designed for, and used with, type 6, 11, 27, and 28 abrasive wheels, cutting off wheels, and tuck pointing wheels.

Mounting and Inspection of Abrasive Wheels

- Immediately before mounting, all wheels shall be closely inspected and a ring test performed, to make sure they have not been damaged in transit, storage, or otherwise.
- Ring test – “tap” wheels about 45 degrees each side of the vertical centerline and about 1 or 2 inches from the periphery; then rotate the wheel 45 degrees and repeat the test; a sound and undamaged wheel will give a clear metallic tone - If cracked, there will be a dead sound and not a clear “ring.”
- The spindle speed of the machine shall be checked before mounting of the wheel to be certain that it does not exceed the maximum operating speed marked on the wheel.
- Grinding wheels shall fit freely on the spindle and remain free under all grinding conditions.
- A controlled clearance between the wheel hole and the machine spindle (or wheel sleeves or adaptors) is essential to avoid excessive pressure from mounting and spindle expansion.
- The machine spindle shall be made to nominal (standard) size plus zero minus .002 inch, and the wheel hole shall be made suitably oversize to assure safety clearance under the conditions of operating heat and pressure.
- All contact surfaces of wheels, blotters, and flanges shall be flat and free of foreign matter.
- When a bushing is used in the wheel hole it shall not exceed the width of the wheel and shall not contact the flanges.

Portable Grinders

Special “revolving cup guards” which mount behind the wheel and turn with it shall be used. They shall be made of steel or other material with adequate strength and shall enclose the wheel sides upward from the back for one-third of the wheel thickness. It is necessary to maintain clearance between the wheel side and the guard. The clearance shall not exceed one-sixteenth inch.

Vertical portable grinders, also known as right angle grinders, shall have a maximum exposure angle of 180 degrees and the guard shall be located between the operator and the wheel during use. Adjustment of the guard shall ensure that pieces of an accidentally broken wheel will be deflected away from the operator.

Other Portable Grinders

The maximum angular exposure of the grinding wheel periphery and sides for safety guards used on other portable grinding machines shall not exceed 180 degrees and the top half of the wheel shall be enclosed at all times.

Personal Protective Equipment

Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dust, fumes, mists, vapors or gases shall be provided with the particular PPE necessary to protect them from the hazard.

Ergonomic

The Rice-Tinsley Corporation has designed and implemented an Ergonomic Program to effectively control and/or eliminate work related Musculoskeletal Injuries or Hazards by providing identification of ergonomic hazards,

training, and continuous evaluation of these procedures.

The Rice-Tinsley Corporation will ensure that all employees have information on the following:

- Common Musculoskeletal Disorders (MSD) and their signs and symptoms
- How to and the importance of reporting Musculoskeletal Disorders in the workplace as soon as possible
- The risk factors, job and work activities or hazards associated with Musculoskeletal Disorders

All employees are encouraged to bring their concerns regarding Musculoskeletal Disorders to their immediate Supervisors who will investigate these concerns thoroughly and provide a response with recommended corrective actions if required.

Musculoskeletal Injuries:

Musculoskeletal Injuries have a range of signs and symptoms involving muscles, bones, tendons, blood vessels, nerves and other soft tissues. The most common term used to describe these injuries is Repetitive Strain Injury and examples of musculoskeletal injuries are Carpal Tunnel Syndrome, Tendinitis, Tennis Elbow and Bursitis.

Carpal Tunnel Syndrome:

One of the most commonly recognized of the cumulative trauma disorders. Caused by tendon swelling, which causes compression of the median nerve inside of "carpal tunnel" of wrist. Symptoms of the illness are characterized by burning, itching, or prickling sensation of wrist and first three fingers of hand. If condition is allowed to progress, the muscles of the thumb may atrophy, and a significant loss of grip strength is realized. Condition is caused by overextension or excessive twisting of the wrist.

Conservative Treatment:

Involves proactive intervention to the problem and eliminate or lessen the physical discomfort associated with cumulative trauma disorders. Physician may recommend anti-inflammatory to reduce swelling, upper extremity exercises, and nocturnal immobilization of upper extremities. Purpose of treatment is to stop progression of tendon irritation into a cumulative trauma disorder.

Direct Pressure On Nerves:

A problem most often associated with hand tools when direct pressure may be exerted on the hands or wrists.

Epicondylitis:

Commonly known as "Tennis Elbow". Caused by irritation of flexor or extensor tendons connected to the elbow. Characterized by sharp elbow pain and is frequently induced by rotating the palm against extreme resistance (i.e. Excessive usage of screwdrivers).

Ergonomics:

Field of study which utilizes an understanding of the human body structure to design an appropriate work environment that will not place undue stress on these body structures and allow the associate to perform the task in a safe and efficient manner.

Excessive Force:

As a general rule, the higher amount of physical force associated with a task, the higher the risk for cumulative trauma disorders.

Excessive Static Loading Of Muscle Groups:

Principle involves minimizing the amount of load that a muscle group must sustain for the performance of a particular task.

High Repetition Rate:

Tasks requiring the performance a high number of repetitions often place the associate at risk for a cumulative trauma disorder (i.e. Office personnel for extensive KEY ENTRY).

Posture:

As a general rule, the more awkward or difficult is the posture, the higher the probability for the occurrence of a cumulative trauma disorder.

Reynaud's Phenomenon:

Characterized by numbness and pain in the fingers and increased sensitivity to conditions of extreme heat and cold. In the shop, the usage of pneumatic tools (i.e. Impact Tools) generating low frequency vibrations have the potential for causing this disorder.

Tendinitis:

Condition where an inflammation occurs within a tendon and is characterized by localized pain at the site of the tendon. This condition is often an early indication of potential problems, and conservative treatment for the correction of the condition is indicated.

Tenosynovitis:

Tendons in wrists or fingers become sore or inflamed due to irritation of the tendon sheath. Prevalent in workers who are not used to extreme forearm exertion. May be corrected by changes in work habits, tool design, or workplace layout.

Thoracic Outlet Syndrome:

Disorder of the shoulder which affects the nerves of the upper arm. Caused or aggravated by performing overhead tasks for an extended period of time.

Who Is At Risk?

Every worker is at risk if they:

- Maintain a fixed position whilst working
- Perform repetitive movements of the limbs – hands, arms, shoulders, legs
- Overloads or applies pressure on particular muscle groups

Signs and Symptoms of Musculoskeletal Injuries:

- Pain in the hands, arms, shoulders, neck, back, legs or feet
- May include swelling, numbness, tingling and a feeling of heaviness and/or tiredness in the affected area
- Some persons may experience multiple symptoms due to more than one injury

How To Prevent Musculoskeletal Injuries:

- Avoid periods of repetitive motion lasting longer than 10 minutes
- Avoid sitting for long periods of time – take short breaks
- Use safe lifting and carrying techniques

- Use wrist rest for the keyboard and mouse when using a computer
- Pre-stretch to warm up muscles before starting work
- Evaluate work tasks thoroughly to ensure they will not cause Musculoskeletal Injuries

Postures To Avoid:

- WRISTS - Excessive bending of wrist for extended periods of time
- ARMS - Excessive reaching or maintenance of outstretched arms for extended periods
- ELBOWS - Working with elbows away from body

Corrective Actions For Posture Problems:

- Set up job or task to eliminate “bent wrist” position
- Place objects within reach to minimize excessive reaching or leaning
- Eliminate work which requires that arms be suspended for long periods of time
- Allow sufficient room for operators to be able to move about or utilize different muscle groups
- Avoid working in a stooped posture

Forces To Avoid:

- Pinch Grip Postures
- Usage of Hands or Body as Tool Rests
- Usage of Manual Tools When Power Tool is Available
- Manual Lifting of Heavy Materials

Corrective Actions for Force Problems:

- Usage of Power Grip for Heavy Objects
- Usage of Proper Fixtures for Tools
- Usage of Hoists for Transport of Heavy Objects

Repetition Situations To Avoid:

- Usage of Manual Tools for Highly Repetitive Tasks (i.e. Screwdrivers or wrenches)
- Extensive data entry without task variation
- Usage of “Pick and Place” motions

Corrective Actions For Repetition Situations:

- Use power assisted tools whenever possible to reduce extensive repetitions associated with manual tool usage
- Office personnel should take periodic breaks or task changes to eliminate extensive keying activities

Vibratory Sources To Watch Out For:

- Pneumatic Wrenches
- Grinding Equipment
- Compressed Air Tools

Corrective Actions For Vibratory Problems:

- Purchase of replacement pneumatic wrenches with shock absorbing insulation
- Usage of gloves for reduction of low frequency vibration associated with pneumatic and grinding activities

- Usage of tool grips with vibration absorbing material

Static Loading Situations To Avoid:

- Tasks requiring the elevation of the elbow from side of body for extended periods of time
- Manual lifting of heavy tools and holding these tools in position during the performance of the task
- Use of “pinch grip” for removal of heavy tool parts or machined parts

Corrective Actions for Static Loading Problems:

- Adjust the work posture or task to eliminate excessive elbow elevation or extension
- Use of tool balancers for supporting heavy tools or hoses
- Avoidance of “Pinch Grip” posture for handling of heavy parts or components

Pressure Points To Avoid:

- Placement of excessive hand pressure at base of wrist during usage of pliers or other hand tools
- Usage of palm of hand as “hammer”

Corrective Actions For Nerve Pressure Problems:

- Use hand tools with good gripping surface and do not apply excessive force to palm or base of hand
- Do not use palm of hand as hammer; this action places direct pressure on the median nerve of hand and may induce Carpal Tunnel Syndrome

If You Think You Have A Work Related Musculoskeletal Injury:

- Report the injury to your immediate Supervisor
- Seek medical help as soon as possible and describe in detail your work practices to assist in a proper diagnosis
- Do not continue any task that has caused a Musculoskeletal injury unless adjustments have been made to prevent the injury from recurring

Ergonomics is intended to help address the risk of overextension injuries of the back as well as strain and sprain injuries to other parts of the body. It will also help to lower the risk of Musculoskeletal Injuries or conditions such as tendonitis, bursitis, hand/arm vibration syndrome, carpal tunnel syndrome, and others.

Education And Training:

People have different physical capabilities and limitations and they also have different risk factors and predisposition for musculoskeletal disorders. Poor ergonomics in work procedures can result in compromised work quality, employee injury, and lost productivity. The effectiveness of the ergonomic program and the measures taken to eliminate or control these issues must be reviewed annually to ensure deficiencies are identified and corrected without delay.

Daily activities can put stress on your back and neck, causing pain. By changing how you perform simple everyday activities, you can lessen the stress, avoiding injury and pain:

1. Workers should ensure that they know their physical limitations
2. When lifting, take two trips rather than carrying twice the load
3. Ensure a good grip before lifting and employ proper lifting techniques
4. Workplace conditions – reach, posture, sitting, etc.
5. Type of tools being used – size, weight, etc.

6. Environmental conditions – hot, cold

Line Of Fire

Line of fire is a term that refers to when workers place themselves in harm's way by virtue of the type of work they perform. Line of fire injuries can occur in virtually any work environment.

One of the core components of line of fire safety is the ability to identify hazards to avoid preventable injuries.

Tips The Rice-Tinsley Corporation Uses To Avoid Line Of Fire Risks:

- Never pull tools or equipment toward your body or face. Instead, you should work the equipment away from your body.
- Since hazard identification is a key component of line of fire safety, a Job Safety Analysis should always be performed to effectively identify all hazards prior to any work beginning.
- Anytime you're hoisting materials, make sure to barricade the area surrounding the hoisting zone.
- If someone is working around equipment, it's vital the operator knows where they are at all times.
- When someone is working around equipment that could possibly start up or is controlled remotely, it's imperative to lock and tag it out.
- Workers should never attempt to work with or around equipment that has missing guard controls.
- Anytime equipment has been tagged out or locked, employees should never attempt to operate it. Employees should also never attempt to remove the tag or lock.
- Make sure to be cognizant of any and all weather conditions that could possibly put someone in the line of fire. (For example, if winds are severe and materials are not properly secured, it could place workers in the line of fire.)

Four Behavioral States That Result In Line-Of-Fire- Incidents And Accidents:

1. Fatigue — A tired employee is a dangerous employee.
2. Rushing — When someone is in a hurry, they're much more likely to take unnecessary risks to complete the job.
3. Frustration — If someone is angry, annoyed, or irritated, the likelihood of them stepping into the line of fire is increased.
4. Complacency — Just because an employee may have completed a task several times and never been hurt before, it doesn't mean complacency will not guide them into the line of fire.

HAZARD COMMUNICATION (HAZCOM)

PURPOSE

The purpose of this program is to ensure that the hazards of all chemicals and substances are evaluated and the information concerning their hazards is communicated to employees, including emergency response organizations, state and federal agencies, other employers and contractors, as necessary. This hazard information will be communicated and displayed in accordance with this Hazard Communication Program.

The Rice-Tinsley Corporation is firmly committed to providing each of its employees a safe and healthy work environment. It is recognized that workers may use chemicals or substances that have potentially hazardous properties. When using these substances, workers must be aware of the identity, toxicity or hazardous properties of a chemical or substance, since an informed employee is more likely to be a safe employee. To this end, The Rice-Tinsley Corporation has established a written Hazard Communication Program.

SCOPE

This program is applicable to all The Rice-Tinsley Corporation employees who may be exposed to hazardous chemicals. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

DEFINITIONS

Chemical - any element, chemical compound, or mixture of elements and/or compounds.

Chemical Inventory List - a list of chemicals used at this facility, or by personnel that report to this facility.

Electronic Access – using electronic media (telephone, fax, internet, etc.) to obtain Safety Data Sheets or health information.

Facility - an establishment at one geographical location containing one or more work areas.

Hazardous chemical - any chemical that is a physical hazard, a health hazard, or has a Permissible Exposure Limit established for it.

Hazardous substance - see hazardous chemical.

Hazard Communication Program Coordinator - the person who has overall responsibility at a facility for that facility's Hazard Communication Program.

Health hazard - a substance for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic adverse health effects may occur in exposed employees.

IDLH - immediately dangerous to life and health.

Immediate Use - the chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Jobsite - an area remote from a The Rice-Tinsley Corporation facility where hazardous chemicals are stored or used and employees are present for the purpose of The Rice-Tinsley Corporation business.

(SDS) Safety Data Sheet - a written or printed document containing chemical hazard and safe handling information, prepared in accordance with the OSHA Occupational Safety & Health Standards, Section 1910.1200, paragraph (g).

(NFPA) National Fire Protection Association Labeling - a common industry labeling method developed by the National Fire Protection Association to identify the hazards associated with a particular chemical.

(PEL) Permissible Exposure Limit - the maximum eight-hour time weighted average of any airborne contaminant to which an employee may be exposed.

Readily available - when an employee has access during the course of his/her normal work shift.

Substance - see Chemical.

(TLV) Threshold Limit Value - the airborne concentration of a substance that represents conditions under which it is believed that nearly all normal workers may be repeatedly exposed day after day without adverse effect.

Work area - a room or defined space in a facility where hazardous chemicals are stored or used and where one or more employees are present.

Workplace - see Facility.

Workplace Chemical List - see Facility Chemical List.

RESPONSIBILITIES

A written hazard communication program shall be developed, implemented and maintained at each The Rice-Tinsley Corporation workplace that describes how labels and other forms of warning, Safety Data Sheets and employee information will be met.

The Safety Manager is responsible for developing and implementing the Hazard Communications Program. Managers are responsible for maintaining Safety Data Sheets and the Chemical Inventory List for their locations. The Safety Manager reviews the SDS files and Chemical Inventory List at each location at least annually to ensure that they are complete and up to date.

Employees are responsible for following the requirements in the Hazard Communication Program, to use proper personal protective equipment, to report containers without labels immediately and to not deface any label.

Any employee who transfers any material from one container to another is responsible for labeling the new container with all required information.

Before employees perform special (non-routine) tasks that may expose them to hazardous chemicals, their supervisors will inform them about the chemicals' hazards. Their supervisors also will inform them about how to control exposure and what to do in an emergency. The employer will evaluate the hazards of these tasks and provide appropriate controls including Personal Protective Equipment all additional training as required.

Methods will be documented as how and by whom employees will be informed of the hazards of non-routine tasks (i.e., the cleaning of reactor vessels, etc.) & the hazards associated with chemicals contained in unlabeled pipes in their work areas.

All employees are responsible for learning the requirements of this section and for applying them to their daily work routine.

REQUIREMENTS

Introduction

This Hazard Communication Program was prepared for use by The Rice-Tinsley Corporation to explain how The Rice-Tinsley Corporation meets the requirements of the federal Occupational Safety and Health Administration's Hazard Communication Standard (29 CFR 1910.1200). It spells out how The Rice-Tinsley Corporation will inventory chemicals stored and used, obtain and use Safety Data Sheets, maintain labels on chemical substances, and train employees about the hazards of chemicals they are likely to encounter on the job.

Preparation of this program indicates our continuing commitment to safety among our employees in all of our locations.

- Each facility is expected to follow this program and maintain its work areas in accordance with these requirements.
- Employees, their designated representatives, and government officials must be provided copies of this program upon request.
- In addition to the program, other information required as part of our hazard communication effort is available to workers upon request.
- Asking to see this information is an employee's right.
- Using this information is part of our shared commitment to a safe, healthy workplace.

List of Hazardous Chemicals

The Rice-Tinsley Corporation maintains a listing of all known hazardous chemicals known to be present or used at each job site by using the identity that is referenced on the appropriate Safety Data Sheet (SDS). This identity is often a common name, such as the product or trade name (i.e., Lime-A-Way).

The Chemical Inventory List is updated as necessary and at least annually by the Hazard Communication Program Coordinator or their designee.

The facility Chemical Inventory List must be available for review upon request.

Safety Data Sheets

Chemical manufacturers are responsible for developing SDSs. The Rice-Tinsley Corporation shall have an SDS for each chemical used with the exception of consumer products. SDSs must be obtained for each required chemical from the chemical manufacturer, supplier or vendor. The purchasing of any potentially hazardous chemical products from any supplier that does not provide an appropriate Safety Data Sheet in a timely fashion is prohibited.

SDSs shall be maintained and readily accessible in each work area. SDSs can be maintained at the primary work site. However, they should be available in case of an emergency. SDSs must be made available, upon request, to employees, their designated representatives, the Assistant Secretary of Labor and the Director of OSHA.

Safety Data Sheets are filed alphabetically, by material classification, in the SDS Book. A Chemical Inventory List is provided in the front of the SDS Book, listing all SDS' contained therein. This inventory serves as the index of the SDS Book. The SDS Book shall be displayed in a prominent location in the work area where it is accessible to all employees.

A copy of an SDS request form is located in the first section of the SDS Book. An employee may use a copy of this form to request an SDS or he may ask the Manager for one. In either case the requested SDS must be given to the employee within 24 hours.

The Safety Data Sheet must be kept in the SDS library for as long as the chemical is used by the facility.

Electronic access (telephone, fax, internet, etc.) may be used to acquire and maintain SDS libraries and archives.

The Manager is responsible for seeing that the Chemical Inventory List inventory is maintained, is current and is complete. He will review the inventory and the SDS Book at least annually. When a hazardous material has been permanently removed from the workplace, its SDS is to be removed from the SDS Book and the Chemical Inventory List. A file copy is to be maintained in a "dead file".

SDS' for hazardous materials to which The Rice-Tinsley Corporation employees have been exposed must be maintained after the employee leaves the employment of The Rice-Tinsley Corporation.

Before any non-routine task is performed, employees will be advised of methods and special precautions, PPE and the hazards associated with chemicals and the hazards associated with chemicals contained in unlabeled pipes in their work areas. In the unlikely event that such tasks are required, the Manager will provide SDS for involved chemical.

Employees have the right to request SDS on any chemical and it must be provided without any issues.

Labels, Labeling and Warnings:

The Manager will ensure that all hazardous chemicals used or stored in the facility are properly labeled.

- Damaged labels or labels with incomplete information shall be reported immediately.
- Damaged labels on incoming containers of chemicals shall not be removed.
- New labels shall be provided as needed so that all containers are properly labeled.
- Only containers into which an employee transfers a chemical for their own immediate use will not require labeling.

- Employees who are unsure of the contents of any container, vessel or piping must contact their supervisor for information regarding the substance including:
 - The name of the substance
 - The hazards related to the substance
 - The safety precautions required for working with the substance.

Labels, tags or markings on containers shall list as a minimum:

- Identity of hazardous chemical.
- Name and address of the chemical manufacturer, importer or other responsible party.
- Words, pictures, symbols or combinations thereof may be used.
- The trade name of the product as listed on the Safety Data Sheet.
- Appropriate hazard warnings to help employees protect themselves from the hazards of the substance.
- Labels shall be legible, in English. However, for non-English speaking employees, information shall be presented in their language as well.
- The Rice-Tinsley Corporation or employees shall not remove or deface labels on incoming containers of hazardous chemicals.

All containers must be labeled. When an employee transfers the contents of one container to another, he must label the new container with all required information. This information can be obtained from the labeling of the original container or from the material's SDS. Any container of a potentially hazardous material that will not be emptied during one shift must be labeled, without exception.

Personnel in the Shipping and Receiving Departments are responsible for proper labeling of all containers shipped by The Rice-Tinsley Corporation and for the inspection of all incoming materials to ensure correct labeling. Chemicals received from vendors that are not properly labeled must be rejected.

NFPA Standard 704 labels shall be the preferred hazard identification method used in The Rice-Tinsley Corporation facilities and on materials containers used on client sites. All employees, clients, subcontractors and visitors who may come in contact with a The Rice-Tinsley Corporation hazardous substance must be briefed to ensure understanding of the NFPA 704 labeling system.

Training

Employees shall be provided with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and Safety Data Sheets.

Additional training will be provided whenever a new chemical hazard is introduced into the work area. To reinforce the importance of handling chemicals properly when performing new or non-routine tasks supervisors will conduct supplementary training as needed.

Formal training will be conducted by facility employees or individuals who are knowledgeable in the Hazard Communication program.

The Manager shall ensure records of employee training are maintained.

When an outside contractor, such as a pest control worker or a carpenter enters a The Rice-Tinsley Corporation site to perform a service for the The Rice-Tinsley Corporation, he must first present SDS' for any and all hazardous chemicals he will use. These SDS' will be treated as above with the same training requirements. The Manager will be responsible for contacting each contractor before work is started to gather and disseminate any information concerning chemical hazards the contractor is bringing into the workplace.

The Hazard Communication Program documented training shall, as a minimum, include:

- Requirements, details and rights of the employee as contained in the Hazard Communication regulation
- Operations and work areas where hazardous chemicals are present.
- Location of the written Hazard Communication Program, SDSs and the Chemical Inventory List.
- How to access SDS' or SDS information.
- How to read and an explanation of labels and Safety Data Sheets for pertinent hazard information and how employees can obtain and use the appropriate hazard information.
- Methods and observations that may be used to detect the presence or release of hazardous chemicals by use of monitoring devices, visual appearance or odor.
- The physical & health hazards of chemicals in the work area.
- Protection measures to be utilized to prevent exposure.
- Appropriate work practices.
- Emergency procedures.
- Proper PPE to be used.

Multi-Employer Job Sites/Multi-Work Site

Multi-Work Sites

Where employees must travel between workplaces during a work shift, the written HAZCOM Program shall be kept at a primary job site. If there is no primary job site, then the program shall be sent with employees.

The program shall be made available, upon request, to employees, their designated representatives, the Assistant Secretary and the Director in accordance with requirements of 29 CFR 1910.1020(e).

Multi-Employer Job Sites

A pre-job briefing shall be conducted with the contractor prior to the initiation of work on the site.

- During this pre-job briefing, contractors shall notify The Rice-Tinsley Corporation and present current copies of Safety Data Sheets and label information for every hazardous substance brought on-site.
- The Rice-Tinsley Corporation shall notify and provide required SDS and label information for all hazardous materials the contractor may encounter on the job.
- The facilities labeling system and any precautionary measures to be taken by contractor during normal conditions and emergencies shall be addressed.
- By providing such information to other employers, The Rice-Tinsley Corporation does not assume any obligations that other employers have for the safety of their employees.
- In this regard, other employers working on The Rice-Tinsley Corporation property or for The Rice-Tinsley Corporation on client's property remain fully responsible for developing and implementing their own compliant hazard communication programs.

Hazard Warnings / NFPA 704

The NFPA 704 Diamond is a means of disseminating hazard warning and information for a material. The diamond is divided into four sections. Each of the first three colored sections has a number in it associated with a particular hazard. The higher the number is, the more hazardous a material is for that characteristic. The fourth section includes special hazard information. The four sections and an explanation of the numbers in them are provided below:

					
RATING NUMBER	HEALTH HAZARD	FLAMMABILITY HAZARD	INSTABILITY HAZARD	RATING SYMBOL	SPECIAL HAZARD
4	Can be lethal	Will vaporize and readily burn at normal temperatures	May explode at normal temperatures and pressures	ALK	Alkaline
3	Can cause serious or permanent injury	Can be ignited under almost all ambient temperatures	May explode at high temperature or shock	ACID	Acidic
2	Can cause temporary incapacitation or residual injury	Must be heated or high ambient temperature to burn	Violent chemical change at high temperatures or pressures	COR	Corrosive
1	Can cause significant irritation	Must be preheated before ignition can occur	Normally stable. High temperatures make unstable	OX	Oxidizing
0	No hazard	Will not burn	Stable		Radioactive
					Reacts violently or explosively with water
					Reacts violently or explosively with water and oxidizing

GHS (GLOBAL HARMONIZATION SYSTEM)



Introduction

The Globally Harmonized System (GHS) is an international approach to hazard communication, providing agreed criteria for classification of chemical hazards, and a standardized approach to label elements and safety data sheets. The GHS was negotiated in a multi-year process by hazard communication experts from many different countries, international organizations, and stakeholder groups. It is based on major existing systems around the world, including OSHA's Hazard Communication Standard and the chemical classification and labeling systems of other US agencies.

The result of this negotiation process is the United Nations' document entitled "Globally Harmonized System of Classification and Labeling of Chemicals," commonly referred to as The Purple Book. This document provides harmonized classification criteria for health, physical, and environmental hazards of chemicals. It also includes standardized label elements that are assigned to these hazard classes and categories, and provide the appropriate signal words, pictograms, and hazard and precautionary statements to convey the hazards to users. A standardized order of information for safety data sheets is also provided. These recommendations can be used by regulatory authorities such as OSHA to establish mandatory requirements for hazard communication, but do not constitute a model regulation.

Overview

The revised Hazard Communication Standard (HCS) is a modification to the existing standard. The parts of the standard that did not relate to the GHS (such as the basic framework, scope, and exemptions) remained largely unchanged. There have been some modifications to terminology in order to align the revised HCS with language used in the GHS. For example, the term "hazard determination" has been changed to "hazard classification" and "Safety Data Sheet" was changed to "safety data sheet." OSHA stakeholders commented on this approach and found it to be appropriate.

Under both the current Hazard Communication Standard (HCS) and the revised HCS, an evaluation of chemical hazards must be performed considering the available scientific evidence concerning such hazards. Under the current HCS, the hazard determination provisions have definitions of hazard and the evaluator determines whether or not the data on a chemical meet those definitions. It is a performance-oriented approach that provides parameters for the evaluation, but not specific, detailed criteria. The hazard classification approach in the revised HCS is quite different. The revised HCS has specific criteria for each health and physical hazard, along with detailed instructions for hazard evaluation and determinations as to whether mixtures or substances are covered. It also establishes both hazard classes and hazard categories—for most of the effects; the classes are divided into categories that reflect the relative severity of the effect. The current HCS does not include categories for most of the health hazards covered, so this new approach provides additional information that can be related to the appropriate response to address the hazard. OSHA has included the general provisions for hazard classification in paragraph (d) of the revised rule and added extensive appendixes (Appendix A and B) that address the criteria for each health or physical effect.

Major changes to the Hazard Communication Standard?

A. The three major areas of change are in hazard classification, labels, and safety data sheets.

- **Hazard classification:** The definitions of hazard have been changed to provide specific criteria for classification of health and physical hazards, as well as classification of mixtures. These specific criteria will

help to ensure that evaluations of hazardous effects are consistent across manufacturers, and that labels and safety data sheets are more accurate as a result.

- **Labels:** Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.
- **Safety Data Sheets:** Will now have a specified 16-section format.

HAZARD COMMUNICATION STANDARD: SAFETY DATA SHEETS

The information required on the safety data sheet (SDS) will remain essentially the same as that in the current standard (HazCom 1994). HazCom 1994 indicates what information has to be included on an SDS but does not specify a format for presentation or order of information. The revised Hazard Communication Standard (HazCom 2012) requires that the information on the SDS be presented using specific headings in a specified sequence.

Paragraph (g) of the final rule provides the headings of information to be included on the SDS and the order in which they are to be provided. In addition, Appendix D provides the information to be included under each heading. The SDS format is the same as the ANSI standard format which is widely used in the U.S. and is already familiar to many employees.

The format of the 16-section SDS should include the following sections:

- Section 1. Identification
- Section 2. Hazard(s) identification
- Section 3. Composition/information on ingredients
- Section 4. First-Aid measures
- Section 5. Fire-fighting measures
- Section 6. Accidental release measures
- Section 7. Handling and storage
- Section 8. Exposure controls/personal protection
- Section 9. Physical and chemical properties
- Section 10. Stability and reactivity
- Section 11. Toxicological information
- Section 12. Ecological information
- Section 13. Disposal considerations
- Section 14. Transport information
- Section 15. Regulatory information
- Section 16. Other information, including date of preparation or last revision

The SDS must also contain Sections 12-15, to be consistent with the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Although the headings for Sections 12-15 are mandatory, OSHA will not enforce the content of these four sections because these sections are within other agencies' jurisdictions.

The Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), revised in 2012, requires that the chemical manufacturer, distributor, or importer provide Safety Data Sheets (SDSs) (formerly SDSs or Safety Data Sheets) for each hazardous chemical to downstream users to communicate information on these hazards. The information contained in the SDS is largely the same as the SDS, except now the SDSs are required to be presented in a consistent user-friendly, 16-section format. This brief provides guidance to help workers who handle hazardous chemicals to become familiar with the format and understand the contents of the SDSs.

The SDS includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. The information contained in the SDS must be in English (although it may be in other languages as well). In addition, OSHA requires that SDS preparers provide specific minimum information as detailed in Appendix D of 29 CFR 1910.1200. The SDS preparers may also include additional information in various section(s).

Sections 1 through 8 contain general information about the chemical, identification, hazards, composition, safe handling practices, and emergency control measures (e.g., fire fighting). This information should be helpful to those that need to get the information quickly. Sections 9 through 11 and 16 contain other technical and scientific information, such as physical and chemical properties, stability and reactivity information, toxicological information, exposure control information, and other information including the date of preparation or last revision. The SDS must also state that no applicable information was found when the preparer does not find relevant information for any required element.

The SDS must also contain Sections 12 through 15, to be consistent with the UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS), but OSHA will not enforce the content of these sections because they concern matters handled by other agencies.

A description of all 16 sections of the SDS, along with their contents, is presented here:

Section 1: Identification

This section identifies the chemical on the SDS as well as the recommended uses. It also provides the essential contact information of the supplier. The required information consists of:

- Product identifier used on the label and any other common names or synonyms by which the substance is known.
- Name, address, phone number of the manufacturer, importer, or other responsible party, and emergency phone number.
- Recommended use of the chemical (e.g., a brief description of what it actually does, such as flame retardant) and any restrictions on use (including recommendations given by the supplier). [1](#)

Section 2: Hazard(s) Identification

This section identifies the hazards of the chemical presented on the SDS and the appropriate warning information associated with those hazards. The required information consists of:

- The hazard classification of the chemical (e.g., flammable liquid, category¹).
- Signal word.
- Hazard statement(s).
- Pictograms (the pictograms or hazard symbols may be presented as graphical reproductions of the symbols in black and white or be a description of the name of the symbol (e.g., skull and crossbones, flame).
- Precautionary statement(s).
- Description of any hazards not otherwise classified.
- For a mixture that contains an ingredient(s) with unknown toxicity, a statement describing how much (percentage) of the mixture consists of ingredient(s) with unknown acute toxicity. Please note that this is a total percentage of the mixture and not tied to the individual ingredient(s).

Section 3: Composition/Information on Ingredients

This section identifies the ingredient(s) contained in the product indicated on the SDS, including impurities and stabilizing additives. This section includes information on substances, mixtures, and all chemicals where a trade secret is claimed. The required information consists of:

Substances

- Chemical name.
- Common name and synonyms.
- Chemical Abstracts Service (CAS) number and other unique identifiers.
- Impurities and stabilizing additives, which are themselves classified and which contribute to the classification of the chemical.

Mixtures

- Same information required for substances.
- The chemical name and concentration (i.e., exact percentage) of all ingredients which are classified as health hazards and are:
 - Present above their cut-off/concentration limits or
 - Present a health risk below the cut-off/concentration limits.
- The concentration (exact percentages) of each ingredient must be specified except concentration ranges may be used in the following situations:
 - A trade secret claim is made,
 - There is batch-to-batch variation, or

- The SDS is used for a group of substantially similar mixtures.

Chemicals where a trade secret is claimed

- A statement that the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret is required.

Section 4: First-Aid Measures

This section describes the initial care that should be given by untrained responders to an individual who has been exposed to the chemical. The required information consists of:

- Necessary first-aid instructions by relevant routes of exposure (inhalation, skin and eye contact, and ingestion).
- Description of the most important symptoms or effects, and any symptoms that are acute or delayed.
- Recommendations for immediate medical care and special treatment needed, when necessary.

Section 5: Fire-Fighting Measures

This section provides recommendations for fighting a fire caused by the chemical. The required information consists of:

- Recommendations of suitable extinguishing equipment, and information about extinguishing equipment that is not appropriate for a particular situation.
- Advice on specific hazards that develop from the chemical during the fire, such as any hazardous combustion products created when the chemical burns.
- Recommendations on special protective equipment or precautions for firefighters.

Section 6: Accidental Release Measures

This section provides recommendations on the appropriate response to spills, leaks, or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment. It may also include recommendations distinguishing between responses for large and small spills where the

spill volume has a significant impact on the hazard. The required information may consist of recommendations for:

- Use of personal precautions (such as removal of ignition sources or providing sufficient ventilation) and protective equipment to prevent the contamination of skin, eyes, and clothing.
- Emergency procedures, including instructions for evacuations, consulting experts when needed, and appropriate protective clothing.
- Methods and materials used for containment (e.g., covering the drains and capping procedures).
- Cleanup procedures (e.g., appropriate techniques for neutralization, decontamination, cleaning or vacuuming; adsorbent materials; and/or equipment required for containment/clean up)

Section 7: Handling and Storage

This section provides guidance on the safe handling practices and conditions for safe storage of chemicals. The required information consists of:

- Precautions for safe handling, including recommendations for handling incompatible chemicals, minimizing the release of the chemical into the environment, and providing advice on general hygiene practices (e.g., eating, drinking, and smoking in work areas is prohibited).
- Recommendations on the conditions for safe storage, including any incompatibilities. Provide advice on specific storage requirements (e.g., ventilation requirements)

Section 8: Exposure Controls/Personal Protection

This section indicates the exposure limits, engineering controls, and personal protective measures that can be used to minimize worker exposure. The required information consists of:

- OSHA Permissible Exposure Limits (PELs), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.
- Appropriate engineering controls (e.g., use local exhaust ventilation, or use only in an enclosed system).
- Recommendations for personal protective measures to prevent illness or injury from exposure to chemicals, such as personal protective equipment (PPE) (e.g., appropriate types of eye, face, skin or respiratory protection needed based on hazards and potential exposure).

- Any special requirements for PPE, protective clothing or respirators (e.g., type of glove material, such as PVC or nitrile rubber gloves; and breakthrough time of the glove material).

Section 9: Physical and Chemical Properties

This section identifies physical and chemical properties associated with the substance or mixture. The minimum required information consists of:

- Appearance (physical state, color, etc.);
- Upper/lower flammability or explosive limits;
- Odor;
- Vapor pressure;
- Odor threshold;
- Vapor density;
- pH;
- Relative density;
- Melting point/freezing point;
- Solubility(ies);
- Initial boiling point and boiling range;
- Flash point;
- Evaporation rate;
- Flammability (solid, gas);
- Upper/lower flammability or explosive limits;
- Vapor pressure;
- Vapor density;
- Relative density;
- Solubility(ies);
- Partition coefficient: n-octanol/water;
- Auto-ignition temperature;
- Decomposition temperature; and
- Viscosity.

The SDS may not contain every item on the above list because information may not be relevant or is not available. When this occurs, a notation to that effect must be made for that chemical property. Manufacturers may also add other relevant properties, such as the dust deflagration index (Kst) for combustible dust, used to evaluate a dust's explosive potential

Section 10: Stability and Reactivity

This section describes the reactivity hazards of the chemical and the chemical stability information. This section is broken into three parts: reactivity, chemical stability, and other. The required information consists of:

Reactivity

- Description of the specific test data for the chemical(s). This data can be for a class or family of the chemical if such data adequately represent the anticipated hazard of the chemical(s), where available.

Chemical stability

- Indication of whether the chemical is stable or unstable under normal ambient temperature and conditions while in storage and being handled.
- Description of any stabilizers that may be needed to maintain chemical stability.
- Indication of any safety issues that may arise should the product change in physical appearance.

Other

- Indication of the possibility of hazardous reactions, including a statement whether the chemical will react or polymerize, which could release excess pressure or heat, or create other hazardous conditions. Also, a description of the conditions under which hazardous reactions may occur.
- List of all conditions that should be avoided (e.g., static discharge, shock, vibrations, or environmental conditions that may lead to hazardous conditions).
- List of all classes of incompatible materials (e.g., classes of chemicals or specific substances) with which the chemical could react to produce a hazardous situation.
- List of any known or anticipated hazardous decomposition products that could be produced because of use, storage, or heating. (Hazardous combustion products should also be included in Section 5 (Fire-Fighting Measures) of the SDS.)

Section 11: Toxicological Information

This section identifies toxicological and health effects information or indicates that such data are not available. The required information consists of:

- Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact). The SDS should indicate if the information is unknown.
- Description of the delayed, immediate, or chronic effects from short- and long-term exposure.
- The numerical measures of toxicity (e.g., acute toxicity estimates such as the LD50 (median lethal dose)) - the estimated amount [of a substance] expected to kill 50% of test animals in a single dose.

- Description of the symptoms. This description includes the symptoms associated with exposure to the chemical including symptoms from the lowest to the most severe exposure.
- Indication of whether the chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest editions) or found to be a potential carcinogen by OSHA

Section 12: Ecological Information (non-mandatory)

This section provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment. The information may include:

- Data from toxicity tests performed on aquatic and/or terrestrial organisms, where available (e.g., acute or chronic aquatic toxicity data for fish, algae, crustaceans, and other plants; toxicity data on birds, bees, plants).
- Whether there is a potential for the chemical to persist and degrade in the environment either through biodegradation or other processes, such as oxidation or hydrolysis.
- Results of tests of bioaccumulation potential, making reference to the octanol-water partition coefficient (K_{ow}) and the bioconcentration factor (BCF), where available.
- The potential for a substance to move from the soil to the groundwater (indicate results from adsorption studies or leaching studies).
- Other adverse effects (e.g., environmental fate, ozone layer depletion potential, photochemical ozone creation potential, endocrine disrupting potential, and/or global warming potential).

Section 13: Disposal Considerations (non-mandatory)

This section provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices. To minimize exposure, this section should also refer the reader to Section 8 (Exposure Controls/Personal Protection) of the SDS. The information may include:

- Description of appropriate disposal containers to use.
- Recommendations of appropriate disposal methods to employ.
- Description of the physical and chemical properties that may affect disposal activities.
- Language discouraging sewage disposal.
- Any special precautions for landfills or incineration activities

Section 14: Transport Information (non-mandatory)

This section provides guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail, or sea. The information may include:

- UN number (i.e., four-figure identification number of the substance)¹.
- UN proper shipping name¹.
- Transport hazard class(es)¹.
- Packing group number, if applicable, based on the degree of hazard².
- Environmental hazards (e.g., identify if it is a marine pollutant according to the International Maritime Dangerous Goods Code (IMDG Code)).
- Guidance on transport in bulk (according to Annex II of MARPOL 73/78³ and the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code (IBC Code))).
- Any special precautions which an employee should be aware of or needs to comply with, in connection with transport or conveyance either within or outside their premises (indicate when information is not available).

Section 15: Regulatory Information (non-mandatory)

This section identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS. The information may include:

- Any national and/or regional regulatory information of the chemical or mixtures (including any OSHA, Department of Transportation, Environmental Protection Agency, or Consumer Product Safety Commission regulations)

Section 16: Other Information

This section indicates when the SDS was prepared or when the last known revision was made. The SDS may also state where the changes have been made to the previous version. You may wish to contact the supplier for an explanation of the changes. Other useful information also may be included here.

THE RICE-TINSLEY CORPORATION RESPONSIBILITIES

The Rice-Tinsley Corporation ensures that the SDSs are readily accessible to employees for all hazardous chemicals in their workplace. This may be done in many ways. For example, employers may keep the SDSs in a binder or on

computers as long as the employees have immediate access to the information without leaving their work area when needed and a back-up is available for rapid access to the SDS in the case of a power outage or other emergency. Furthermore, employers may want to designate a person(s) responsible for obtaining and maintaining the SDSs. If the employer does not have an SDS, the employer or designated person(s) should contact the manufacturer to obtain one.

References

OSHA, 29 CFR 1910.1200(g) and Appendix D. United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), third revised edition, United Nations, 2009. These references and other information related to the revised Hazard Communication Standard can be found on OSHA's Hazard Communication Safety and Health Topics page, located at: <http://www.osha.gov/dsg/hazcom/index.html>.

Disclaimer: This brief provides a general overview of the safety data sheet requirements in the Hazard Communication Standard (see 29 CFR 1910.1200(g) and Appendix D of 29 CFR 1910.1200). It does not alter or determine compliance responsibilities in the standard or the Occupational Safety and Health Act of 1970. Since interpretations and enforcement policy may change over time, the reader should consult current OSHA interpretations and decisions by the Occupational Safety and Health Review Commission and the courts for additional guidance on OSHA compliance requirements. Please note that states with OSHA-approved state plans may have additional requirements for chemical safety data sheets, outside of those outlined above.

For more information on those standards, please visit: <http://www.osha.gov/dcsp/osp/statestandards.html>.

This is one in a series of informational briefs highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

¹ Chemical, as defined in the HCS, is any substance, or mixture of substances.

² Found in the most recent edition of the United Nations Recommendations on the Transport of Dangerous Goods.

³ MARPOL 73/78 means the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, as amended

NEW HCS PICTOGRAMS AND HAZARDS

There are nine pictograms under the GHS to convey the health, physical and environmental hazards. The final Hazard Communication Standard (HCS) requires eight of these pictograms, the exception being the environmental pictogram, as environmental hazards are not within OSHA's jurisdiction. The hazard pictograms and their corresponding hazards are shown below.

Health Hazard 	Flame 	Exclamation Mark 
• Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	• Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	• Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non Mandatory)
Gas Cylinder 	Corrosion 	Exploding Bomb 
• Gases under Pressure	• Skin Corrosion/ burns • Eye Damage • Corrosive to Metals	• Explosives • Self-Reactives • Organic Peroxides
Flame over Circle 	Environment (Non Mandatory) 	Skull and Crossbones 
• Oxidizers	• Aquatic Toxicity	• Acute Toxicity (fatal or toxic)

ALLOCATION OF LABEL ELEMENTS (EXAMPLES)

In the revised Hazard Communication Standard (HCS), OSHA has provided classifiers with the option of relying on the classification listings of IARC and NTP to make classification decisions regarding carcinogenicity, rather than applying the criteria themselves. OSHA believes that this will make classification easier for classifiers, as well as lead to greater consistency. In addition, OSHA has provided in non-mandatory Appendix F of the revised rule, guidance on hazard classification for carcinogenicity. Part A of Appendix F includes background guidance provided by GHS based on the Preamble of the IARC "Monographs on the Evaluation of Carcinogenic Risks to Humans" (2006). Part B provides IARC classification information. Part C provides background guidance from the National NTP "Report on Carcinogens" (RoC), and Part D is a table that compares GHS carcinogen hazard categories to carcinogen

classifications under IARC and NTP, allowing classifiers to be able to use information from IARC and NTP RoC carcinogen classifications to complete their classifications under the GHS, and thus the HCS.

CARCINOGENICITY		
Category 1A	Category 1B	Category 2
Danger	Danger	Warning
		
May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
Not required under the UN Recommendations on the Transport of Dangerous Goods, Model Regulations.		

OSHA is retaining the requirement to include the American Conference of Government Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) on the safety data sheet (SDS) in the revised Standard. OSHA finds that requiring TLVs on the SDS will provide employers and employees with useful information to help them assess the hazards presented by their workplaces. In addition to TLVs, OSHA permissible exposure limits (PELs), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet are also required.

The Rice-Tinsley Corporation strictly adheres to these guidelines.

HEAT ILLNESS PREVENTION

PURPOSE

This program is designed to reduce the risk of work-related heat illnesses.

SCOPE

This procedure applies to all work being performed in hot environments.

DEFINITIONS

"Acclimatization" means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

"Heat Illness" means a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.

"Preventative recovery period" means a period of time to recover from the heat in order to prevent heat illness.

"Shade" means blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning.

REQUIREMENTS

All managers and supervisors are responsible for implementing and maintaining the Heat Illness Program in their work areas. Work plans must include who, on site, is responsible for overseeing the plan throughout the workday.

Responsible persons are accountable for:

- Using the OSHA-NIOSH Heat mobile application to determine the heat index
- Developing and maintaining a safe work plan based on the heat index
- Making sure site personnel are staying hydrated and taking breaks in the shade
- New workers get acclimated to the heat
- Implementing additional controls as needed

Provision of Water

Employees shall have access to potable drinking water. Employees shall have access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift.

Access to Shade

Employees will be provided with access to shade. Employees suffering from heat illness or believing a preventative recovery period is needed shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling. Such access to shade shall be permitted at all times. It's important to go to a shaded area, especially when workers are exposed to temperatures at or above 80 degrees Fahrenheit. See definition of "Shade".

Control Measures

Each work location involved in working in hot environments shall implement measures that must be in place to control the effects of environmental factors that can contribute to heat related illnesses. The most common environmental factors are air temperature, humidity, radiant heat sources and air circulation.

Physical factors that can contribute to heat related illness shall be taken into consideration before performing a task. The most common physical factors that can contribute to heat related illness are type of work, level of physical activity and duration, and clothing color, weight and breathability.

Supervisors must ensure personal factors that contribute to heat related illness are taken into consideration before assigning a task where there is the possibility of a heat-related illness occurring. The most common personal factors that can contribute to heat related illness are age, weight/fitness, drug/alcohol use, prior heat-related illness, etc.

Safe Work Practices

- Safe work practices must be developed and implemented during work planning/JSA development.
- Safe work practices focus on acclimatization, hydration, breaks, shade and additional controls.
- Contractors must have their own programs that must be at least as stringent as other contractors they are working with.
- Contractors must ensure appropriate controls are identified and in place before beginning their work.

Each work site shall develop site specific procedures but shall include the minimum:

- Bring at least 2 quarts per employee at the start of the shift and the supervisors/designated persons will monitor water containers every 30 minutes, and employees are encouraged to report to supervisor/designated person low levels or dirty water.
- Supervisors will provide frequent reminders to employees to drink frequently.
- Every morning there will be short tailgate meetings to remind workers about the importance of frequent consumption of water throughout the shift during hot weather.
- Place water containers as close as possible to the workers.
- When drinking water levels within a container drop below 50%, the water shall be replenished immediately or water levels should not fall below the point that will allow for adequate water during the time necessary to effect replenishment.
- Disposable/single use drinking cups will be provided to employees or provisions will be made to issue employees their own cups each day.
- Supervisors will set-up an adequate number of umbrellas, canopies or other portable devices at the start of the shift and will relocate them to be closer to the crew, as needed.

- Non-agricultural employers can use other cooling measures if they demonstrate that these methods are as effective as shade.
- Working hours will be modified to work during the cooler hours of the day, when possible.
- When a modified or shorter work-shift is not possible, more water and rest breaks will be provided.
- Supervisors will continuously check all employees and stay alert to the presence of heat related symptoms.
- Supervisors will carry cell phones or other means of communication, to ensure that emergency services can be called and check that these are functional at the worksite prior to each shift.
- Every morning, workers will be reminded about address and directions to the worksite to inform medical responders and emergency procedures.
- All newly hired workers will be assigned a buddy or experienced coworker to ensure that they understood the training and follow the company procedures.

High-heat procedures

The Rice-Tinsley Corporation implement high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures shall include the following to the extent practicable:

- Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable.
- Observing employees for alertness and signs or symptoms of heat illness. The Rice-Tinsley Corporation shall ensure effective employee observation/monitoring by implementing one or more of the following:
 - (A) Supervisor or designee observation of 20 or fewer employees, or
 - (B) Mandatory buddy system, or
 - (C) Regular communication with sole employee such as by radio or cellular phone, or
 - (D) Other effective means of observation.
- Designating one or more employees on each worksite as authorized to call for emergency medical services and allowing other employees to call for emergency services when no designated employee is available.
- Reminding employees throughout the work shift to drink plenty of water.
- Pre-shift meetings before the commencement of work to review the high heat procedures, encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary.
- An employee who has been newly assigned to a high heat area shall be closely observed by a supervisor or designee for the first 14 days of the employee's employment.

All employees and contractors should:

- Always come to work fit for duty,
- report heat-related illness/injury symptoms early,
- stay hydrated
- and take breaks in the shade.

Training

Training in the following topics shall be provided to all supervisory and non-supervisory employees:

- The environmental and personal risk factors for heat illness;
- The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties;
- The importance of acclimatization;
- The different types of heat illness and the common signs and symptoms of heat illness;
- The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers;
- The Rice-Tinsley Corporation procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;
- The Rice-Tinsley Corporation procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider;
- The Rice-Tinsley Corporation procedures for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

Supervisors must receive training in the prevention of heat related illnesses prior to supervising employees working in heat. Supervisors will be trained in the The Rice-Tinsley Corporation heat illness emergency response procedures to prevent heat illness and procedures to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

Communication for employees shall be in a form readily understandable by all affected employees.

Using the Heat Index

The U.S. National Oceanographic and Atmospheric Administration (NOAA) developed the heat index system.

Outdoor workers who are exposed to hot and humid conditions are at risk of heat-related illness. The risk of heat-related illness becomes greater as the weather gets hotter and more humid. This situation is particularly serious when hot weather arrives suddenly early in the season, before workers have had a chance to adapt to warm weather.

Air temperature and humidity affect how hot a person feels. The "**heat index**" is a single value that takes both temperature and humidity into account. The higher the heat index, the hotter the weather feels, since sweat does not readily evaporate and cool the skin. The heat index is a better measure than air temperature alone for estimating the risk to workers from environmental heat sources.

Heat-related illness can be prevented.

Established four Heat Risk Levels associated with heat index ranges. Each level has specific requirements (see picture below):

Heat Index	Risk Level	3URWHFWLYH 0HDVXUHV
Less than 91°F	Lower (Caution)	Basic heat safety and planning
91° to 103°F	Moderate	Implement precautions and heighten awareness
103° to 115°F	High	Additional precautions to protect workers
Greater than 115°F	Very High to Extreme	Triggers even more aggressive protective measures

The Rice-Tinsley Corporation has a duty to protect workers from recognized serious hazards in the workplace, including heat-related hazards. Workers new to outdoor jobs are generally most at risk for heat-related illnesses. It's important to gradually increase the workload or allow more frequent breaks to help new workers and those returning to a job after time away build up a tolerance for hot conditions.

There are two primary sources of heat for workers which cause them to become overheated:

1. the environmental conditions in which they work and
2. the internal heat generated by physical labor.

Heat-related illnesses occur when the body is not able to lose enough heat to balance the heat generated by physical work and external heat sources. Weather conditions are the primary external heat sources for outdoor workers.

Workers are at risk of heat-related illness when the heat index is high. These must be taken into consideration even when the heat index is lower:

- Working in direct sunlight-adds up to 15 degrees to the heat index.
- Performing prolonged or strenuous work.
- Wearing heavy protective clothing or impermeable suits.

The heat index combines both air temperature and relative humidity into a single value that indicates the apparent temperature in degrees Fahrenheit, or how hot the weather will feel. The higher the heat index, the hotter the weather will feel, and the greater the risk that outdoor workers will experience heat-related illness.

NOAA's National Weather Service

Heat Index

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	126	130					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution
 Extreme Caution
 Danger
 Extreme Danger

NOAA issues extreme heat advisories to indicate when excessive, extended heat will occur. The advisories are based mainly on predicted heat index values:

- **Excessive Heat Outlook:** issued when the potential exists for extended excessive heat (heat index of 105-110°F) **over the next 3-7 days**. This is a good time to check on supplies, such as extra water coolers, and refresh worker training.
- **Excessive Heat Watch:** issued when excessive heat could occur within the **next 24 to 72 hours**, but the timing is uncertain.
- **Excessive Heat Warning:** issued when the heat index will be high enough to be **life threatening in the next 24 hours**. This warning indicates that the **excessive heat is imminent or has a very high probability of occurring**.
- **Excessive Heat Advisory:** similar to an Excessive Heat Warning, but less serious. This is issued when the heat index could be **uncomfortable or inconvenient, but is not life threatening if precautions are taken**.

The Rice-Tinsley Corporation shall ensure all contractors, subcontractors, staffing companies, etc. employees (including temporary) working outdoors have been trained in heat illness prevention.

LADDER SAFETY

PURPOSE

The purpose of the program is to prescribe rules and establish minimum requirements for the construction, care, and use of the common types of ladders.

All ladders that are purchased and placed into service; or, any ladders that are engineered, manufactured and installed on any The Rice-Tinsley Corporation equipment shall follow the requirements set forth by this program.

SCOPE

This program is applicable to all employees who may utilize ladders. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

DEFINITIONS

Ladder - an appliance usually consisting of two side rails joined at regular intervals by cross- pieces called steps, rungs, or cleats, on which a person may step in ascending or descending.

Stepladder - a self-supporting portable ladder, nonadjustable in length, having flat steps and a hinged back. Its size is designated by the overall length of the ladder measured along the front edge of the side rails.

Single ladder - a non-self-supporting portable ladder, nonadjustable in length, consisting of but one section. The overall length of the side rail designates its size.

Extension ladder - a non-self-supporting portable ladder adjustable in length. It consists of two or more sections traveling in guides or brackets so arranged as to permit length adjustment. Its size is designated by the sum of the lengths of the sections measured along the side rails.

Fixed ladder - a ladder permanently attached to a structure, building, or equipment.

Individual-rung ladder - a fixed ladder each rung of which is individually attached to a structure, building, or equipment.

Cage - a guard that may be referred to as a cage or basket guard, which is an enclosure that is fastened to the side rails of the fixed ladder or to the structure to encircle the climbing space of the ladder for the safety of the person who must climb the ladder.

KEY RESPONSIBILITIES

Managers and Supervisors

- Managers and supervisors are responsible for ensuring that all employees, and/or contractors have been trained in the use and inspection of ladders in accordance to the manufactures guidelines.

- Managers and supervisors are responsible for ensuring that all employees and contractors are aware that if an inspection discovers a defect, the ladder shall not be used and taken out of service.

Employees

- Employees shall inspect ladders prior, during and at the completion of each use to ensure the condition of the ladder and the safety of its occupants.
- Employees are responsible for following this program and reporting any damage or repairs that may be needed to their supervisor.

PROCEDURE

Inspection, Care and Safe Work Practices of Ladders

Inspection

Ladders shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use.

- Ladder rungs must be uniformly spaced or meet OSHA/ANSI specifications. Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced, when the ladder is in position for use.
- Portable and fixed ladders with structural defects, such as, but not limited to, broken or missing rungs, cleats, or steps, broken or split rails, corroded components, or other faulty or defective components, shall either be immediately marked in a manner that readily identifies them as defective, or be tagged with "Do Not Use" or similar language, and shall be withdrawn from service until repaired
- If a ladder is tipped over, it shall be inspected by a competent person for side rail dents or bends, or excessively dented rungs; check all rung to side rail connections; check hardware connections; check rivets for shears.
- Ladders with broken or missing steps, rungs, or cleats, broken side rails, or other faulty equipment shall not be used; improvised repairs shall not be made.
- All wood parts shall be free from sharp edges and splinters; sound and free from accepted visual inspection from shake, or other irregularities.

Care

Ladders shall be maintained in good condition at all times, the joint between the steps and side rails shall be tight, all hardware and fittings securely attached, and the movable parts shall operate freely without binding or undue play.

Metal bearings of locks, wheels, pulleys, etc., shall be frequently lubricated.

Frayed or badly worn rope shall be replaced. Safety feet and other auxiliary equipment shall be kept in good condition to ensure proper performance.

Rungs shall be kept free of grease and oil.

Ladders shall be stored in a well-ventilated area in a manner to prevent sagging and warping.

Ladder Safe Work Practices

Ladders shall be used only for the intended purpose for which they were designed.

The ladder shall be secured at the top or held by another person at the base.

The footing of the ladder shall be placed on a stable and level surface.

Extension ladders shall be placed at a 4:1 ratio. Ladders shall be used at an angle such that the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder (the distance along the ladder between the foot and the top support).

When ladders are not able to be extended then the ladder shall be secured at its top to a rigid support that will not deflect.

Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height.

Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds.

Ladders shall not be used by more than one man at a time.

Ladders shall not be placed in front of doors opening toward the ladder unless the door is blocked open, locked, or guarded.

If a ladder is used in a high traffic area, barricades shall be placed to avoid accidental displacement due to collisions.

Do not stand on the top two rungs or top of step ladders.

On two-section extension ladders the minimum overlap for the two sections in use shall be as follows:

Size of Ladder (feet)	Overlap (feet)
Up to and including 36'	3
Over 36 up to and including 48'	4
Over 48 up to and including 60'	5

Ladders shall extend a minimum of 3 feet above top of upper landing surface. The ladder side rails shall extend at least 3 feet (.9m) above the upper landing surface. When ladders are not able to be extended then the ladder shall be secured at its top to a rigid support that will not deflect.

The employee shall maintain a three (3)-point grip on the ladder at all times and carry tools/equipment on a belt or hoist up. Do not carry anything in the hands that could cause injury in case of fall.

The employee shall face the ladder while ascending or descending.

The bracing on the back legs of stepladders is designed solely for increasing stability and not for climbing.

The ladder shall not be moved while occupied.

Portable Ladders

Stepladders shall not be longer than 20 feet. Single ladders shall not be longer than 30 feet.

A two-section extension ladders shall not be longer than 60 feet. All ladders of this type shall consist of two sections, one to fit within the side rails of the other and arranged in such a manner that the upper section can be raised and lowered.

Keep all ladders at least ten (10) feet away from power lines.

Ladders shall have the correct load capacity for the task and not be loaded beyond the maximum intended load for which they were built nor in excess of the manufacturer's rated capacity. Weight includes the combined weight of the climber and his tools/equipment. Ladders are rated as the following:

- I (holds 250 lbs)
- I-A (holds 300 lbs)
- II (holds 225 lbs)
- III (holds 200 lbs)

Fixed Metal Ladders

Ladders shall be constructed to withstand a minimum of 200 pounds.

All metal rungs shall have a minimum diameter of $\frac{3}{4}$ inches and wooden rungs shall have a minimum diameter of 1 $\frac{1}{8}$ inches.

Rungs shall not be more than 12 inches apart and shall be uniform throughout the length of the ladder.

Rungs shall be a minimum length of 16 inches and provide protection so a foot cannot slip off the end.

Rungs shall have a minimum of 7 inches between itself and the structure behind it.

A fall restraint system must be provided for all fixed ladders greater than six feet in length.

- A Cage is required when the fixed ladder is at least twenty feet tall.
- Cages on fixed ladders shall not begin at a point less than 7 feet nor greater than 8 feet from the walking surface below the cage.
- Cages shall provide a clear width of 15 inches in each direction of the rung's centerline.
- Cages shall not extend less than 27 inches, but not greater than 28 inches from the centerline of the rung.
- A climbing fall restraint system may be substituted for a ladder cage.

LOCKOUT/TAGOUT

PURPOSE

The purpose of this program is to establish procedures for affixing appropriate lockout/tagout equipment to energy isolating devices and to otherwise disable machines or equipment to prevent unexpected energization, start up or release of stored energy to prevent injury or incident.

SCOPE

This program covers the servicing and maintenance of machines and equipment where the unexpected energization or startup of the machine or equipment, or the release of stored energy could cause an incident. This program establishes minimum performance requirements for the control of such hazardous energy. When work is performed on a nonowned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent. Lockout and tagout devices shall meet the following requirements: durable, standardized, substantial, and identifiable.

DEFINITIONS

Affected employee - An employee whose job requires them to operate or use a machine or equipment on which servicing and maintenance is being performed under lockout/tagout, or whose job requires the employee to work in an area in which such servicing or maintenance is being performed.

Authorized employee - A person that performs lockout/tagout procedures on machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes authorized when that employee's duties include performing servicing or maintenance covered under this program.

Capable of being locked out - An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild or replace the energy isolating device or permanently alter its energy control capability.

Energized - Connected to an energy source or containing residual or stored energy.

Energy isolating device - A mechanical device that physically prevents the transmission or release of energy including, but not limited to, the following:

- A manually operated electrical circuit breaker, a disconnect switch, a manually operated switch by which the conductors and no pole can be operated independently, a line valve, a block and any similar device used to block or isolate energy.
- Push buttons, selector switches and other control circuit type devices are not isolating devices.

Lockout - The placement of a lockout device on an energy isolating device in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device - A device that utilizes a positive means, such as either a key or combination type lock, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

Normal operation - The utilization of a machine or equipment to perform its intended operation.

Potential Energy Sources - Any source of gas, electrical, mechanical, hydraulic, pneumatic, chemical, gravity, steam, thermal, tension or other energy sources.

Servicing and/or maintenance - Workplace activities such as constructing, setting up, adjusting, inspecting, modifying and maintaining and/or servicing machines and equipment, where the employee may be exposed to an unexpected energization or startup of the equipment or release of a hazardous energy source.

Setting up - Any work performed to prepare a machine or equipment for performing its normal operation.

Tagout - The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout device - A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until tagout device is removed.

KEY RESPONSIBILITIES

Managers and Supervisors

- Responsible to control and enforce this plan and to see that all their employees and contractors that are affected by lockout/tagout procedures, have the knowledge and understanding required for safe application, usage, and removal of all energy controls and devices.
- Ensure employees are trained and comply with the requirements of this program.
- Shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees.

Employees

- Employees who are affected by this program are required to attend training on an annual basis.
- Are required to follow the provisions of this program.

Procedure

General

Only an authorized employee or employees performing the servicing or maintenance shall perform lockout or tagout.

Devices

Lockout Device - If an energy source can be locked out a device that utilizes a lock to hold an energy isolating device in a safe position shall be used. Each site shall have the same type of lock as specified by The Rice-Tinsley Corporation.

Tagout Device – If an energy source cannot be locked out with a lockout device then a tagout device shall be used. Tagout devices are a warning only level of protection and shall be weather and chemical resistant, standardized in color with clear written warning of hazardous energy; i.e. Do Not Operate, Do Not Start, Do Not Energize, etc. Each site shall have the same style of tags specified by The Rice-Tinsley Corporation.

Specific Energy Control Procedures

Each manager or supervisor is responsible for developing specific step-by-step shutdown and startup procedures for a particular machine or piece of equipment in their respective area.

- A written, step-by-step isolation procedure for shutdown and startup shall be prepared for each type of machine or piece of equipment.
- This procedure shall include:
 - Equipment number if assigned.
 - Equipment location.
 - Energy Source(s) (i.e. electrical, hydraulic, gas pressure, etc.)
 - Location of isolating controls (i.e. breaker switches, valves, etc.)
 - Quantity of isolating controls
 - Quantity of locks required to isolate the equipment
 - Other hardware required to isolate the equipment (i.e. chains, valve covers, blocks, etc.)
 - List any residual energy required to be dissipated before work begins.

Specific Sequence for Application of Energy Control

1. Notification

Authorized employees must notify all other affected employees of the application and removal of lockout/tagout devices. Notification shall be given before the controls are applied and before they are removed from the machine or equipment.

2. Preparation for Shutdown

Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled and the methods or means to control the energy.

3. Machine or Equipment Shutdown

The machine or equipment shall be turned off or shutdown using the procedures established for the machine or equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage.

4. Machine or Equipment Isolation

All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source.

5. Lockout/Tagout Devices and Application

- Each authorized employee shall have the proper number of locks and devices to be able to perform proper lockout/tagout procedures for machines or equipment that they may be working on.
- Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees.
- Lockout and tagout devices shall include name of individual placing device. Devices shall indicate the identity of the employee applying the device.
- Lockout devices shall be affixed in a manner to hold the energy isolating devices in a safe or off position.
- Tagout devices shall be affixed in a manner that will clearly indicate that the operation or movement of isolating devices from the safe or off position.
- Tagout devices used with energy isolating devices with the capability of being locked out shall be fastened at the same point at which the lock would have been attached. If a tag cannot be directly attached to the energy isolation device it shall be located as close as safely as possible to the device in a position that will be immediately obvious to anyone attempting to operate the device.
- Each energy source shall be locked out completely isolating the equipment.
- Isolating machines or equipment shall include, but are not limited to:
 - Pumps, compressors, generators, electric distribution, storage tanks, etc.
 - Each type of equipment to be isolated shall have specific procedures for isolation, i.e. for compressors: suction, discharge, power, starting, fuel, dumps shall be closed, locked and tagged out properly. The blow-down valve shall be opened, locked and tagged out properly. (NOTE): If compressor has a side stream hooked up, the side stream shall be closed, locked and tagged out properly.

6. Stored Energy and the Possibility of Reaccumulation

Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained and otherwise rendered safe.

If there is a possibility of re-accumulation of stored energy, verification of isolation shall be continued until the servicing or maintenance operation is completed, or until the possibility of such accumulation no longer exists.

7. Verification of Isolation

Prior to starting work on machines or equipment that have been locked or tagged out; the authorized employee shall verify that isolation and deenergization of the machine or equipment have been accomplished.

Procedures for Handling Multiple Groups of Workers Involved in a Group Lockout

A crew of authorized employees may use a group lockout or tagout device. This will afford the group of employees a level of protection equal to that provided by a personal lockout or tagout device. Procedures include:

- A tailgate meeting shall be conducted to review the lockout procedures and other information as required for safe work to continue – all crafts and effected departments shall be involved.
- An authorized employee will isolate the equipment and ascertain the exposure status of individual group members.
- All workers will then place their individual locks on the device's group lockout or tagout device after they have verified the procedure.
- An authorized employee has primary responsibility for a set number of employees working under the protection of a group lockout or tagout device. The authorized employee should ascertain the exposure

status of individual group members. Each The Rice-Tinsley Corporation employee or contractor shall attach a personal lockout or tagout device to the group's device while he/she is working and then removes it when finished.

- During shift change or personnel changes, there are specific procedures to ensure the continuity of lockout or tagout procedures. These include:
 - In the event shift or personnel changes occur during maintenance and/or repair activities, the designated The Rice-Tinsley Corporation employee in charge shall take the necessary steps to maintain the continuity of the lockout/tagout protection. This includes maintaining that all provisions in this procedure are adhered to and the transfer of lockout/tagout devices between authorized employees is accomplished.
 - No work shall be allowed to proceed following personnel or shift change unless these requirements are met. The job supervisor must observe that all personnel or shift change locks or tags are properly transferred during the process.
 - Before the last outgoing person is allowed to leave they must remove their lock (or warning tag) and the incoming The Rice-Tinsley Corporation person shall affix their lock or (warning tag) to prevent the lock out device or tag warning device from ever not being locked or warning if a lock out device is not practicable.
 - This also applies to all group lockout tagout situations.
 - This also applies to all contract personnel working on The Rice-Tinsley Corporation or client projects.
 - If any outgoing person leaves the site and their lock/tag is still attached then follow Removal of Locks guidelines below.

Release from Lockout/Tagout

When servicing or maintenance is completed or when Lockout / Tagout devices must be temporarily removed, the equipment requires testing and the machine or equipment is ready for testing or to return to normal operating conditions, the following steps shall be taken, in this order:

- Check the machine or equipment and the immediate area surrounding the machine or equipment to ensure that all nonessential items such as tools have been removed and that the machine or equipment components are operationally intact.
- Check the work area to ensure that all personnel have been safely positioned or removed from the area.
- Remove the Lockout/Tagout device
- Energize and proceed with testing
- Deenergize and reapply control methods including Lockout / Tagout devices
- Document the procedure by use of the completed isolation log and provide to supervisor for filing.

Removal of Locks

The authorized employee who applied the lock shall be the one to remove their lock. However, after all work has been completed, certain conditions may arise which prohibit this person from being present to remove the lock.

The following procedures shall be followed to allow for the removal of a lock that another person has applied:

- Every effort shall be made to contact the authorized employee who applied the lock to obtain the key(s).
- If the key(s) cannot be made available, the employee who requests removal of the lock shall contact their supervisor.

- The supervisor shall verify that every effort was made to contact the original authorized employee who applied the lock and to obtain the key(s).
- The employee removing the lock shall note on the Service Report that the lock(s) were removed with permission by supervisor.
- All reasonable efforts will be made by supervisor to notify that employee their lock has been removed, ensuring that the authorized employee has this knowledge before they return to work.
- If the equipment is client owned, the supervisor or employee requesting to remove the lock(s) shall contact the client to get the lock removed. Clients must remove their lock(s).
- NOTE: The Rice-Tinsley Corporation employees shall not remove any client locks.

Contractors

Contractors performing lockout procedures on The Rice-Tinsley Corporation property shall comply with this procedure. Contractors shall supply their own locks. The Rice-Tinsley Corporation shall initially lockout The Rice-Tinsley Corporation machines and equipment before the contractor will be allowed to apply their own lock in addition to the The Rice-Tinsley Corporation's.

Periodic Inspections of the Energy Control Procedure

Periodic inspections of the energy control procedure are conducted and documented at least annually to ensure procedures and requirements are being followed. Periodic inspections of the energy control procedure must be conducted at least annually to ensure that the procedure is being followed.

The The Rice-Tinsley Corporation Safety Manager or their designee performs the inspection (it must be someone other than those actually using the lockout/tagout in progress). The inspector will produce a certified review of the inspection including date, equipment, employees and the inspection shall be documented. They will verify that:

- Each authorized and/or affected employee has been trained as required.
- Any new equipment added has specific lockout procedures developed and documented.
- Current procedures are adequate for performing complete isolation of equipment and resulting in a zero energy state.
- A copy of the audit maintained on file at the managers/supervisors office.

EMPLOYEE TRAINING

The training must include recognition of hazardous energy source, type and magnitude of energy available, methods and means necessary for energy isolation and control.

Each authorized employee shall receive adequate training.

All affected employees are instructed in the purpose and use of the energy control procedure.

Any other employees whose work operations are or may be in an area where energy control procedures may be utilized are instructed in the purpose and use of the energy control procedure.

Additional training includes:

- The purpose and use of energy control procedures.

- When tagout systems are used, employees shall also be trained in the following limitations of tags:
 - Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.
 - When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated in any way.
 - Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.
 - Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
 - Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.
 - Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.

Retraining

Retraining shall be conducted whenever a periodic inspection reveals, or whenever The Rice-Tinsley Corporation has reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.

Retraining is required when there is a change in job assignments, in machines, a change in the energy control procedures, or a new hazard is introduced.

The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

Training Documentation

The Rice-Tinsley Corporation shall certify that employee training has been accomplished and is being kept up to date. All training and/or retraining must be documented, signed and certified.

SPECIFIC EQUIPMENT LOCKOUT PROCEDURES

Department _____

Equipment No. _____

Energy Source _____

Procedure for Shutdown and Isolation:

(List number of steps required to isolate machine or equipment - write N/A on lines not used or add additional steps if necessary)

STEP NO.

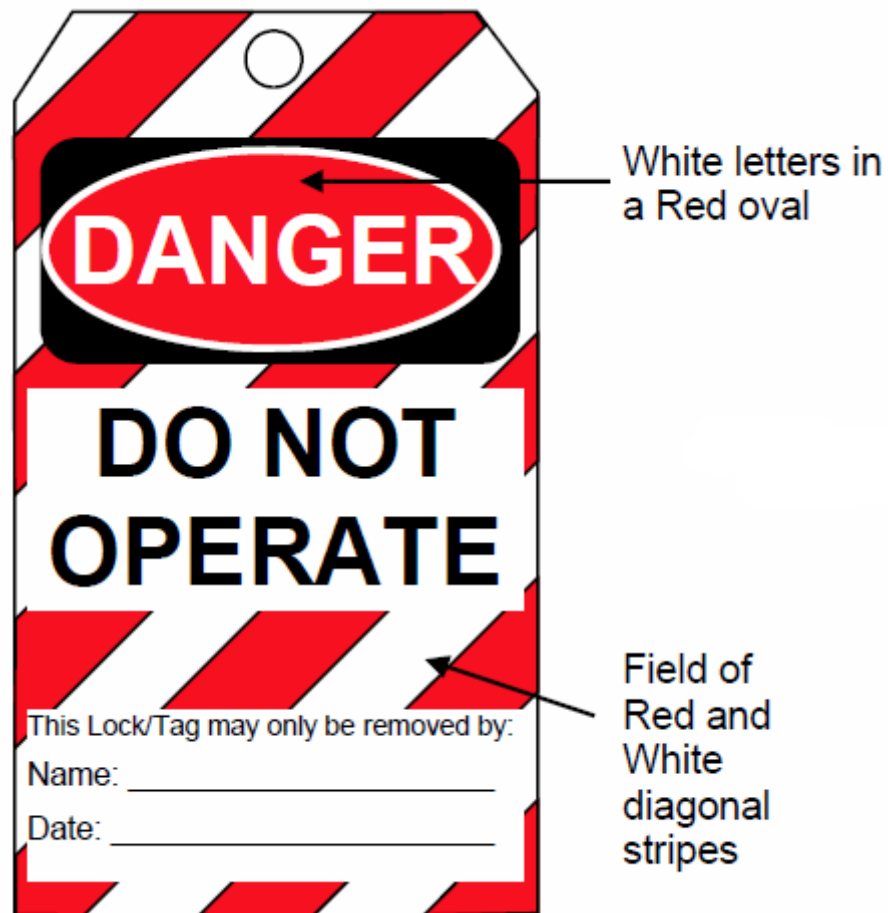
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Additional Information: _____

Prepared By: _____ Date: _____

(This procedure to be communicated to all authorized and affected employees and kept on file at location of machine or equipment)

SAMPLE TAG



ISOLATION LOG

Date of Isolation:

Description of Work:

List of Equipment out of Service:

Necessary Requirements of Clear Isolation:

Authorized Employee Signature: _____

Person Continuing Work Signature: _____

Locks/Tags for GROUP LOCKOUT or Multiple Locks/Tags

Lock # or Tag	Date Installed	Date Removed	Print Name (for Group Lockout)	Signature

(If additional space is needed, please attach an additional page)

ANNUAL AUDIT OF THE CONTROL OF HAZARDOUS ENERGY PROGRAM

I certify that an audit of the The Rice-Tinsley Corporation "Control of Hazardous Energy" Program was conducted and that each employee has been trained in the recognition and procedures to lockout equipment they may be required to work on or may be affected by.

I further acknowledge that the current procedure is adequate to safely lockout equipment in this department for servicing and maintenance.

Department: _____

Manager (or representative): _____

Date: _____

Original to file: _____

NFPA 70E

PURPOSE

The purpose of this program is to set forth procedures for the safe use of electrical equipment, tools, and to comply with NFPA 70E requirements. NFPA 70E requirements for safe work practices to protect personnel by reducing exposure to major electrical hazards. Originally developed at OSHA's request, NFPA 70E helps companies and employees avoid workplace injuries and fatalities due to shock, electrocution, arc flash, and arc blast, and assists in complying with OSHA 1910 Subpart S and OSHA 1926 Subpart K.

SCOPE

This program applies to all The Rice-Tinsley Corporation employees, temporary employees, and contractors. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

The Rice-Tinsley Corporation shall advise the host employer of:

- Any unique hazards presented by the contract employer's work,
- Any unanticipated hazards found during work by The Rice-Tinsley Corporation that the host employer did not mention, and
- The measures The Rice-Tinsley Corporation took to correct any hazards reported by the host employer to prevent such hazards from recurring in the future.

RESPONSIBILITIES

The HSE Manager will develop electrical safety programs and procedures in accordance with OSHA requirements and/or as indicated by events and circumstances.

Operations Managers and Supervisors are responsible for ensuring that only qualified employees and or qualified contractors perform electrical repairs or installations.

Operations Managers and Supervisors shall ensure a documented job briefing is held prior to the commencement of work. A job briefing should be held before starting each job and include all employees involved. The briefing should cover hazards associated with the job, work procedures involved, special precautions, energy source controls, PPE requirements, and the information on the energized electrical work permit, if required. Additional job briefings shall be held if changes that might affect the safety of employees occur during the course of work. Operations Managers and Supervisor shall also ensure PPE must comply with all applicable laws and regulations.

Operations Managers are also responsible for ensuring all applicable electrical safety programs are implemented and maintained at their locations.

Employees are responsible to use electrical equipment, tools, and appliances according to this program, for attending required training sessions when directed to do so and to report unsafe conditions to their supervisor immediately.

Only qualified employees may work on electric circuit parts or equipment that has not been de-energized. Such employees shall be made familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools.

Unqualified persons shall not be permitted to enter spaces that are required to be accessible to qualified employees only, unless the electric conductors and equipment involved are in an electrically safe work condition.

Performing an Audit of Field Work on an Annual Basis

An audit must be performed every year to ensure the requirements in the written program are being performed by the employees. The written program must be updated if auditing determines that employees are not following it or if another issue is identified with potential hazardous exposure.

SAFE WORK PRACTICES FOR WORKING WITHIN THE LIMITED APPROACH BOUNDARY

Program elements might include evaluations, anticipating unexpected events, all electrical parts are considered live until proven otherwise, work permits, electrical flash arc hazard analysis.

The limited approach boundary is the distance from an exposed live part within which a shock hazard exists.

Prior to any work being done within the Limited Approach Boundary a risk evaluation shall be performed prior to work being done within the Limited Approach Boundary. Risk Assessment should contain event severity, frequency, probability and avoidance to determine the level of safe practices employed. The Risk Assessment must be completed by The Rice-Tinsley Corporation before work is started and account for hazards at the limited approach and arc flash boundaries. The Risk Assessment Procedure must identify the hazards, assess risks, and implement risk control in accordance with a hierarchy of control. This hierarchy places elimination of a hazard as the primary method of control and identifies PPE as the last option if all other options have been exhausted.

Only qualified persons complete tasks such as testing, troubleshooting and voltage measuring within the limited approach boundary. Only qualified persons shall perform tasks such as testing, troubleshooting and voltage measuring within the limited approach boundary of energized electrical conductors or circuit parts operating at 50 volts or more or where an electrical hazard exists.

The restricted approach boundary is the closest distance to exposed live parts a qualified person can approach with without proper PPE and tools. Inside this boundary, accidental movement can put a part of the body or conductive tools in contact with live parts or inside the prohibited approach boundary. To cross the restricted approach boundary, the qualified person must:

- Have an energized work permit that is approved by the supervisor or manager responsible or the safety plan.
- Use PPE suitable for working near exposed live parts and rated for the voltage and energy level involved.
- Be certain that no part of the body enters the prohibited space.
- Minimize the risk from unintended movement, by keeping as much of the body as possible out of the restricted space; body parts in the restricted space should be protected.

The prohibited approach boundary is the minimum approach distance to exposed live parts to prevent flashover or arcing. Approaching any closer is comparable to making direct contact with a live part. To cross the prohibited approach boundary, the qualified person must:

- Have specified training to work on exposed live parts.
- Have a permit with proper written work procedures and justifying the need to work that close.
- Do a risk analysis.

- Use PPE appropriate for working near exposed live parts and rated for the voltage and energy level involved.

The Flash Protection Boundary is the approach limit at a distance from exposed live parts within which a person could receive a second degree burn if an electrical arc flash were to occur.

- Use PPE appropriate for working near exposed live parts and rated for the voltage and energy level involved.
- For systems of 600 volts and less, the flash protection boundary is 4 feet, based on an available bolted fault current of 50 kA and a clearing time of 6 cycles for the circuit breaker to act, or any combination of fault currents and clearing times not exceeding 300 kA cycles.
- When working on de-energized parts and inside the flash protection boundary for nearby live exposed parts - If the parts cannot be de-energized, use barriers such as insulated blankets to protect against accidental contact or wear proper PPE.

Arc Flash Hazard Analysis

An arc flash hazard analysis includes the following:

- Collect data on the facility's power distribution system.
 - Arrangement of components on a one-line drawing with nameplate specifications of every device.
 - Lengths and cross-section area of all cables.
- Contact the electric utility for information including the minimum and maximum fault currents that can be expected at the entrance to the facility.
- Conduct a short circuit analysis followed by a coordination study is performed.
- Feed the resultant data into the NFPA 70E equations.
 - These equations produce the necessary flash protection boundary distances and incident energy to determine the minimum PPE requirement.
 - The flash protection boundary is the distance at which PPE is needed to prevent incurable burns (2nd degree or worse) if an arc flash occurs. (It is still possible to suffer 1st or 2nd degree burns.)
- For systems of 600 volts and less, the flash protection boundary is 4 feet, based on an available bolted fault current of 50 kA (kiloamps) and a clearing time of 6 cycles (0.1 seconds) for the circuit breaker to act, or any combination of fault currents and clearing times not exceeding 300 kA cycles (5000 ampere seconds).

Reviewing Arc Flash Risk Assessment

Arc flash risk assessments include determining appropriate safety related work practices, the arc flash boundary requirements and the PPE required to minimize the risk of electric shock. Assessments must be documented and equipment field marked with a label. These assessments must be reviewed prior to beginning work.

When working on de-energized the parts, but still inside the flash protection boundary for nearby live exposed parts:

- If the parts cannot be de-energized, barriers such as insulated blankets must be used to protect against accidental contact or PPE must be worn.
- Employees shall not reach blindly into areas that might contain exposed live parts.
- Employees shall not enter spaces containing live parts unless illumination is provided that allows the work to be performed safely.
- Conductive articles of jewelry and clothing (such as watchbands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, metal headgear, or metal frame glasses) shall not be worn where they present an electrical contact hazard with exposed live parts.
- Conductive materials, tools, and equipment that are in contact with any part of an employee's body shall be handled in a manner that prevents accidental contact with live parts. Such materials and equipment include but are not limited to long conductive objects such as ducts, pipes, tubes, conductive hose and rope, metal-lined rules and scales, steel tapes, pulling lines, metal scaffold parts, structural members, and chains.

- When an employee works in a confined space or enclosed spaces (such as a manhole or vault) that contains exposed live parts, the employee shall use protective shields, barriers or insulating materials as necessary to avoid contact with these parts. Doors, hinged panels, and the like shall be secured to prevent them from swinging into employees. Refer to the confined space entry program.

Inspections

- Electrical equipment, tools, and appliances must be inspected prior to each use.
- The use of a hard fixed GFCI or a portable GFCI adapter shall be used with all portable hand tools, electric extension cords, drop lights and all 110 volt equipment.
- Faulty equipment, tools, or appliances shall be removed from service immediately and tagged "Out of Service", dated and signed by the employee applying the tag.

Equipment Rated and Verified

All test instruments, equipment and their accessories be rated for circuits and equipment to which they will be connected. Test instruments, equipment, and their accessories shall meet the requirements of ANSI/ISA-61010-1- Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use Part 1 General Requirements, for rating and design requirements for voltage measurement and test instruments intended for use on electrical systems 1000 Volts and below.

Test instruments are verified to be in proper working order before and after an absence of voltage test is performed. When test instruments are used for the testing for the absence of voltage on conductors or circuit parts operating at 50 volts or more, the operation of the test instrument shall be verified before and after an absence of voltage test is performed.

Personal Protective Equipment (PPE)

All insulating PPE must be inspected before each day's use and immediately following any incident that can reasonably be suspected of having caused damage. Insulating gloves shall be given an air test, along with the inspection.

Maximum test intervals for rubber insulating personal protective equipment shall include:

- Blankets-before first issue/every 12 months thereafter
- Gloves-before first issue and every 6 months
- Sleeves before first issue and every 12 months
- Covers and line hose shall be testing if insulating value is suspect.

PPE Compliance with 130.7 (C) (14)

All PPE used must meet the requirements in Table 130.7(C) (14). PPE requirements in the table apply to many different kinds of PPE: arc rated apparel, insulating aprons, general eye and face protection, arc rated face protection, fall protection, testing methods and specifications for footwear, glove and sleeve testing and care, hard hats, arc rated rainwear, visual inspections of rubber protective products and sleeves. The related standards for each kind of PPE are found in their ASTM or ANSI document in the table.

Requirement For An Energized Electrical Work Permit

Work on energized electrical conductors or circuit parts that cannot be placed in an electrically safe work condition shall be performed by written permit only. Work performed on electrical conductors and circuit parts operating at less than 50 volts shall not be required to be de-energized if it is determined that there will be no increased exposure to electrical burns or explosion.

Proper Illumination of Work Areas

Employees shall not enter spaces containing electrical hazards unless illumination is provided that enables the employees to perform the work safely. Where lack of illumination or an obstruction precludes observation of the work to be performed, employees shall not perform any task within the Limited Approach Boundary of energized electrical conductors or circuit parts operating at 50 volts or more or where an electrical hazard exists.

Extension Cords

- Use only three-wire, grounded, extension cords and cables that conform to a hard service rating of 14 amperes or higher, and grounding of the tools or equipment being supplied.
- Only commercial or industrial rated-grounded extension cords may be used in shops and outdoors.
- Cords for use other than indoor appliances must have a rating of at least 14 amps.
- Cords must have suitable strain relief provisions at both the plug the receptacle ends.
- Work lamps (drop light) used to power electrical tools must have a 3 wire, grounded outlet, unless powering insulated tools.
- Adapters that allow three wire, grounded prongs, connected to two wire non-grounded outlets are strictly prohibited.
- Cords must have a service rating for hard or extra-hard service and have S, AJ, ST, SO, SJO, SJT, STO, or SJTO printed on the cord.
- Cords may not be run through doorways, under mats or carpets, across walkways or aisles, concealed behind walls, ceilings or floors, or run through holes in walls, or anywhere where they can become a tripping hazard.
- High current equipment or appliances should be plugged directly into a wall outlet whenever possible.
 - All extension cords shall be plugged into one of the following
 - A GFCI outlet;
 - A GFCI built into the cord;
 - A GFCI adapter used between the wall outlet and cord plug.
- All extension cords and or electrical cords shall be inspected daily or before each use, for breaks, plug condition and ground lugs, possible internal breaks, and any other damage. If damage is found, the extension cord or electrical cord shall be removed from service and repaired or replaced.
- Extension cords shall not be used on compressor skid to operated heat tapes or any other type of equipment on a temporary basis. Heat tapes or other equipment shall be hard wired per applicable electrical codes.

Outlets

- Outlets connected to circuits with different voltages must use a design such that the attachment plugs on the circuits are not interchangeable.

Multiple Outlet Boxes

- Multiple outlet boxes must be plugged into a wall receptacle.
- Multiple outlet boxes must not be used to provide power to microwave ovens, toasters, space heaters, hot plates, coffeepots, or other high-current loads.

Double Insulated Tools

- Double insulated tools must have the factory label intact indicating the tool has been approved to be used without a three wire grounded supply cord connection.

Double insulated tools must not be altered in any way, which would negate the factory rating. Switches, Circuit Breakers and Disconnects

- All electrical equipment and tools must have an on and off switch and may not be turned on or off by plugging or unplugging the supply cord at the power outlet.
- Circuit breaker panel boxes and disconnects must be labeled with the voltage rating.

- Each breaker within a breaker panel must be labeled for the service it provides.
- Disconnect switches providing power for individual equipment must be labeled accordingly.

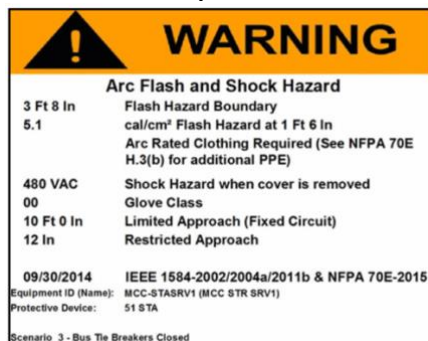
Alerting Techniques to Inform Employees of Potential Hazards

Alerting techniques include safety signs and tags, barricades, and attendants. Safety signs must meet the requirements of ANSI Z535 Table 130.7(F). Barricades must be used in conjunction with safety signs and never by themselves. Any technique used must not increase the potential for employee injury.

Labels

Labels must include nominal system voltage, arc flash boundary and at least one of the following: available incident energy and the corresponding working distance or the arc flash PPE category; minimum arc rating of clothing and site-specific level of PPE.

Sample Label



Ladders

- Only approved, non-conductive ladders, may be used when working near or with electrical equipment, which includes changing light bulbs.
- Ladders must be either constructed of wood, fiberglass, or have non-conductive side rails.
- Wood ladders should not be painted, which can hide defects, except with clear lacquer.
- When using ladders, they shall be free from any moisture, oils, and greases.

Energized and Overhead High Voltage Power Lines & Equipment

- A minimum clearance of 10 feet from high voltage lines must be maintained when operating vehicular and mechanical equipment such as forklifts, cranes, winch trucks, and other similar equipment.
- When possible, power lines shall be de-energized and grounded or other protective measures shall be provided before work is started.
- Minimum approach distance to energized high power voltages lines for unqualified employees is 10 feet.
- Minimum approach distance for qualified employees shall be followed per 29 CFR 1910.333(c)(3)(i) Qualified – Table S5 Selection and Use of Work Practices - Approach Distances for Qualified Employees – Alternating Current).

Confined or Enclosed Workspaces

- When an employee works in a confined or enclosed space that contains exposed energized parts, the employee shall isolate the energy source and turn off the source and lock and tag out the energy source (Only qualified electricians can work on an exposed energy source).

- Protective shields, protective barriers or insulating materials as necessary shall be provided.

Enclosures, Breaker Panels, and Distribution Rooms

- A clear working space must be maintained in the front, to permit access for maintenance and alteration.
- A minimum two-foot working floor space in front of panels and enclosures shall be painted yellow.
- Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely.
- Housekeeping in distribution rooms must receive high priority to provide a safe working and walking area in front of panels and to keep combustible materials to the minimum required to perform maintenance operations.
- All enclosures and distribution rooms must have “Danger: High Voltage – Authorized Personnel Only” posted on the front panel and on entrance doors.
- Flammable materials are strictly prohibited inside distribution rooms (Boxes, rags, cleaning fluids, etc.)

Lockout/Tagout

- No work shall be performed on (or near enough to them for employees to be exposed due to the dangers of tools or other equipment coming into contact with the live parts) live parts and the hazards they present.
- If any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both.
- Conductors and parts of electrical equipment that have been de-energized but not been locked or tagged out shall be treated as live parts.
- Per The Rice-Tinsley Corporation policy all electrical will be outsourced and performed only by qualified and licensed electrical contractors who are familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools. Any equipment being made ready for maintenance will be locked out using The Rice-Tinsley Corporation’s Control of Hazardous Energy – Lock Out/Tag Out Program. Lockouts are performed by the HSE Manager, Shop Foreman or Branch Manager. Designated employees in some branches may be trained by local management to lock out equipment. If live sources are to be worked it will only be performed with the knowledge of local management. Only certified electricians may work on electric circuit parts or equipment.
- Only authorized personnel may perform lock out/tag out work on electrical equipment and will follow The Rice-Tinsley Corporation’s Control of Hazardous Energy – Lock out/Tag Out Program.
- Authorized personnel will be trained in lock out/tag out procedures.
- Affected personnel will be notified when lock out/tag out activities are being performed in their work area.

Contractors

- Only approved, certified, electrical contractors may perform construction and service work on The Rice-Tinsley Corporation or client property.
- It is the Manager/Supervisors responsibility to verify the contractor’s certification.

Fire Extinguishers

- Approved fire extinguishers must be provided near electrical breaker panels and distribution centers.
- Water type extinguishers shall not be located closer than 50 feet from electrical equipment.

Electric Shock-CPR:

- Employees responsible for responding to medical emergencies shall take part in initial and refresher training (CPR and AED) annually.

- If someone is discovered that has received an electric shock and is unconscious, first check to see if their body is in contact with an electrical circuit. Do not touch a person until you are sure there is no contact with an electrical circuit.
- When it is safe to make contact with the victim, begin CPR if the person's heart has stopped or they are not breathing.
- Call for help immediately.

Electric Welders

- A disconnecting means shall be provided in the supply circuit for each motor-generator arc welder, and for each AC transformer and DC rectifier arc welder which is not equipped with a disconnect mounted as an integral part of the welder.
- A switch or circuit breaker shall be provided by which each resistance welder and its control equipment can be isolated from the supply circuit. The ampere rating of this disconnecting means may not be less than the supply conductor ampacity.

Equipment Grounding

- All gas compressors, air compressors, separators, vessels, etc. shall be grounded by means of using a lug and ground strap, nominal in size to a ½" bolt or larger, attached to a ground rod six feet or longer.
- Equipment bonding jumpers shall be of copper or any other corrosion-resistance material.
- The transfer of hazardous or flammable material from a metal or plastic container with a flash point of 100 degrees F or less shall have a ground strap from the container and attached to the skid or a ground rod placed in the ground.

ADDITIONAL TRAINING REQUIREMENTS FOR QUALIFIED PERSONS WHO ARE ALLOWED TO WORK WITHIN THE LIMITED APPROACH BOUNDARY

Employees shall be trained to understand the specific hazards associated with electrical energy. Employees shall be trained in safety-related work practices and procedural requirements as necessary to provide protection from the electrical hazards associated with their respective jobs. Employees shall be trained to identify and understand the relationship between electrical hazards and possible injury.

Employees shall be trained in the skills and techniques to distinguish exposed energized electrical conductors and circuit parts from other parts of electrical equipment, to determine the nominal voltage of exposed energized electrical conductors and circuit parts, the approach distances specified in Table 130.4(D)(a) and 130.4(D)(b) (below), and the decision making process necessary to determine the degree and extent of the hazard and the personal protective equipment and job planning necessary to perform the task safely.

Table 130.4(D)(a) Limited Approach Boundary to Energized Electrical Conductors or Circuit Parts for Shock Protection, for Alternating-Current Systems			
Nominal system voltage range, phase to phase	Exposed movable conductor	Exposed fixed- circuit part	Restricted Approach Boundary (includes inadvertent movement adder)
<50 volts	Not specified	Not specified	Not specified
50V-50V*	3.0 m (10 ft. 0 in.)	1.0 m (3 ft. 6 in.)	Avoid Contact
151 to 750 volts	3.0 m (10 ft. 0 in.)	1.0 m (3 ft. 6 in.)	0.3 m (1 ft. 0 in.)
751 V to 15 kV	3.0 m (10 ft. 0 in.)	1.5 m (5 ft. 0 in.)	0.7 m (2 ft. 2 in.)
15.1 kV to 36 kV	3.0 m (10 ft. 0 in.)	1.8 m (8 ft. 0 in.)	0.8 m (2 ft. 7 in.)
36.1 to 46 kV	3.0 m (10 ft. 0 in.)	2.5 m (3 ft. 6 in.)	0.8 m (2 ft. 7 in.)

46.1 to 72.5 kV	3.0 m (10 ft. 0 in.)	2.5 m (3 ft. 6 in.)	1.0 m (3 ft. 3 in.)
72.6 to 121 kV	3.3 m (10 ft. 8 in.)	2.5 m (3 ft. 6 in.)	1.0 m (3 ft. 3 in.)
138 to 145 kV	3.4 m (11 ft. 0 in.)	3.0 m (10 ft. 0 in.)	1.2 m (3 ft. 10 in.)
161 to 169 kV	3.6 m (11 ft. 8 in.)	3.6 m (11 ft. 8 in.)	1.3 m (4 ft. 3 in.)
230 to 242 kV	4.0 m (13 ft. 0 in.)	4.0 m (13 ft. 0 in.)	1.7 m (5 ft. 8 in.)
345 to 362 kV	4.7 m (15 ft. 4 in.)	4.7 m (15 ft. 4 in.)	2.83 m (9 ft. 2 in.)
500 to 550 kV	5.8 m (19 ft. 0 in.)	5.8 m (19 ft. 0 in.)	3.6 m (11 ft. 10 in.)
765 to 800 kV	7.2 m (23 ft. 0 in.)	7.2 m (23 ft. 0 in.)	4.93 m (15 ft. 11 in.)

*This includes circuits where the exposer does not exceed 120V.

Table 130.4(D)(b) Limited Approach Boundary to Energized Electrical Conductors or Circuit Parts for Shock Protection, for Direct-Current Systems			
Nominal Potential Difference	Exposed Movable Conductor	Exposed Fixed Circuit Part	Restricted Approach Boundary (includes inadvertent movement adder)
<100 volts	Not specified	Not specified	Not specified
100 V to 300 V	3.0 m (10 ft. 0 in.)	1.0 m (3 ft. 6 in.)	Avoid Contact
301 V to 1 kV	3.0 m (10 ft. 0 in.)	1.0 m (3 ft. 6 in.)	0.3 m (1 ft. 0 in.)
1.1 kV to 5 kV	3.0 m (10 ft. 0 in.)	1.5 m (5 ft. 0 in.)	0.7 m (2 ft. 2 in.)
5 kV to 15 kV	3.0 m (10 ft. 0 in.)	1.8 m (6 ft. 0 in.)	0.8 m (2 ft. 7 in.)
15.1 kV to 45 kV	3.0 m (10 ft. 0 in.)	2.5 m (8 ft. 0 in.)	0.8 m (2 ft. 7 in.)
45.1 kV to 75 kV	3.0 m (10 ft. 0 in.)	2.5 m (8 ft. 0 in.)	1.0 m (3 ft. 3 in.)
75.1 kV to 150 kV	3.3 m (10 ft. 8 in.)	2.5 m (8 ft. 0 in.)	1.0 m (3 ft. 3 in.)
150.1 kV to 250 kV	3.4 m (11 ft. 0 in.)	3.0 m (10 ft. 0 in.)	1.2 m (3 ft. 10 in.)
500.1 kV to 800 kV	3.6 m (11 ft. 8 in.)	3.6 m (11 ft. 8 in.)	1.3 m (4 ft. 3 in.)

Employees shall be trained in safety related work practices that pertain to their respective job assignments.

Retraining

Retraining will be conducted when the employee is not complying with safety-related work practices or when workplace changes necessitate the use of safety-related work practices that are different from those that the employee would normally use. An employee shall receive additional training (or retraining) under any of the following conditions:

- If the supervision or annual inspections indicate that the employee is not complying with the safety-related work practices
- If new technology, new types of equipment, or changes in procedures necessitate the use of safety-related work practices that are different from those that the employee would normally use
- If he or she must employ safety-related work practices that are not normally used during his or her regular job duties

Retraining shall be performed at intervals not to exceed 3 years. Safe work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized. Training shall be documented and maintained for the duration of the employee's employment. Documentation shall be made when the employee demonstrates proficiency, be maintained for the duration of the employee's employment and contain each employee's name and date of training.

NOISE EXPOSURE / HEARING CONSERVATION

PURPOSE

The purpose of this program is to provide a process to minimize employee-hearing loss caused by excessive occupational exposure to noise.

SCOPE

This program is applicable to all employees who may be exposed to noise in excess of 85 decibels (decibels). When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

DEFINITIONS

Audiometric testing - means detection by the person being tested of a series of pure tones. For each tone, the person indicates the lowest level of intensity that they are able to perceive.

Decibels – means the sound energy measured by a sound level meter using the “A” scale. The “A” scale is electronically weighted to simulate the response of the human ear to high and low frequency noise.

Slow Response – means the setting on the sound level meter that averages out impulses of brief duration that would cause wide fluctuation in the sound level meter reading.

Standard Threshold Shift – means a change in hearing threshold relative to the baseline audiogram of an average of 10 dB (corrected for age) at 2000, 3000 and 4000 Hz in either ear.

KEY RESPONSIBILITIES

Managers and Supervisors

- Ensure requirements of this program are established and maintained.
- Ensure employees are trained and comply with the requirements of this program.

Employees

- Wear hearing protection when required, attend the training, and cooperate with testing and sampling.

PROCEDURE

Occupational hearing loss is a cumulative result of repeated or continued absorption of sound energy by the ear; employee protection is based on reduction of the noise level at the ear or limiting the employee's exposure time. The Rice-Tinsley Corporation shall offer hearing protection to all employees exposed to potential high noise levels in working areas and to those employees requesting hearing protection.

Hearing Conservation Program

The Rice-Tinsley Corporation shall implement a hearing conservation program for employees exposed to sound levels 85dbA or greater. A continuing effective hearing conservation program shall be administered when employees are exposed to sound levels greater than 85 dbA on an 8 hour time-weighted average basis.

Employees will wear hearing protection in signed areas while on an owner client facility.

Monitoring Procedures to be Used When Exposure Limits Exceed the Established Level

When information indicates that employee exposure may equal/exceed the 8 hour time-weighted average of 85 decibels, a monitoring program shall be implemented to identify employees to be included in the hearing conservation program.

Surveys

Surveys will be conducted by a qualified employee or third party.

To evaluate noise exposure in terms of possible hearing damage, it is necessary to know the overall sound level ("A" scale measurement), the exposure time of the individual in hours per day and the length of time the individual has worked in the area being surveyed. This data shall be supplemented by the following:

- Name of area and location
- Date and time of survey
- Name of person conducting survey
- Description of instrument used, model and serial number
- Environmental conditions
- Description of people exposed

The Rice-Tinsley Corporation shall notify each employee of their monitoring results, or, if their job is exposed to noise 85 decibels or greater.

A plot of noise levels must be made for owned facilities. The plot must be filed or posted at the facility.

The Rice-Tinsley Corporation shall evaluate hearing protector attenuation for the specific noise environments in which the protector will be used. The adequacy of hearing PPE shall be reevaluated whenever noise exposures increase to the point that the PPE provided may no longer provide adequate protection. The Rice-Tinsley Corporation shall then provide more effective PPE where necessary.

All sound measuring equipment must be calibrated before and after each survey. Records of sound measuring equipment calibration and noise level surveys shall be kept for 20 years.

Noise Surveys must be repeated whenever changes in the workplace may expose additional personnel to high noise or hearing protection being used by employees may not be adequate to reduce the noise exposure to a level below 85 decibels.

Sound Level Surveys

- All owned facilities that are suspected of having noise levels exceeding 85 decibels must be screened.

Exposure Surveys:

- A representative sampling of employees shall be conducted to determine the exposure to noise over a period of time.
- Noise dosimeters must be capable of integrating all continuous, intermittent and impulsive sound levels from 80 dB to 130 dB and must be calibrated so a dose of 50% corresponds to a time weighted average of 85 dB.

Signage

Clearly worded signs shall be posted at entrances to, or on the periphery of, areas where employees may be exposed to noise levels in excess of 85 decibels. These signs shall describe the hazards involved and the required protective actions.

Audiometric Testing

The Rice-Tinsley Corporation shall establish and maintain an audiometric testing program by making audiometric testing available to all employees whose exposures equal or exceed an 8 hour time-weighted average 85 decibels. The program shall be provided at no cost to employees.

Baseline Testing Guidelines

- The Rice-Tinsley Corporation shall establish a baseline audiogram for each exposed employees within 6 months of their first exposure. Within 6 months of an employee's first exposure at or above the action level, a valid baseline audiogram shall be established against which future audiograms can be compared.
- When a mobile van is used the baseline shall be established within one year.
- A qualified third party shall perform all audiometric testing, evaluation, reporting and retesting.
- Prior to establishment of a baseline audiogram at least 14 hours without exposure to workplace noise is observed. Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. Hearing protection may be used to meet the requirement. Employees shall also be notified to avoid high levels of noise.

Annual Testing Guidelines

The Rice-Tinsley Corporation shall provide an annual audiogram and if a standard threshold shift has occurred the employee will be notified in writing within 21 days of determination. At least annually after obtaining the baseline audiogram, The Rice-Tinsley Corporation shall obtain a new audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels. Each employee's annual audiogram shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift has occurred. If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift, the employee shall be informed of this fact in writing, within 21 days of the determination.

Steps That Are Taken When Standard Threshold Shift Occurs

- Hearing protection shall be re-evaluated and/or refitted and,
- If necessary a medical evaluation may be required and
- The employee shall be advised to wear hearing protection and if necessary a reassignment of duties may be deemed appropriate.

Required Recordkeeping

The Rice-Tinsley Corporation shall maintain accurate records of all employee exposure measurements and all records are maintained as required by CFR 1910.95 (Occupational Noise Exposure).

Employee audiograms are considered medical/exposure records. These records must be kept for the length of employment plus 30 years.

Hearing Protection Devices

- Hearing protectors are available to all employees exposed to an 8 hour time-weighted average of 85 decibels at no cost to the employee.
- Hearing protection shall be replaced as necessary.
- The Rice-Tinsley Corporation shall ensure that hearing protectors are worn. Employees shall be properly trained in the use, care and fitting of protectors. This is done at no cost to employees.
- Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors provided by The Rice-Tinsley Corporation.

TRAINING

Employees must be provided with training on at least an annual basis and shall be updated to be consistent with changes in the PPE and work processes.

A training program shall be provided for all employees who are exposed to action level noise.

The training shall be repeated annually for each employee. Training shall be updated consistent to changes in PPE and work processes. The Rice-Tinsley Corporation shall make available to affected employees copies of the noise exposure procedures and shall also post a copy in the workplace. The Rice-Tinsley Corporation shall also allow the Assistant Secretary and the Director access to records.

All training must and shall be documented.

All staff shall have a copy of this program, noise exposure procedures and it shall be posted at the worksite and a copy made available to all employees and their representatives if applicable.

PANDEMIC PREPAREDNESS

PURPOSE

Business continuity means ensuring that essential business functions can survive a natural disaster, technological failure, human error, or other disruption. Many existing business continuity plans anticipate disruptions such as fires, earthquakes, and floods. These events are restricted to certain geographic areas and the time frames are fairly well defined and limited. Pandemic disease, however, demands a different set of continuity assumptions since it will be widely dispersed geographically and potentially arrives in waves that could last several months at a time.

Development of a Pandemic Disease Plan and the Appointment of a Coordinator

A pandemic disease plan or disease containment plan has been developed for the company and a coordinator appointed. There is a workplace coordinator who is responsible for dealing with disease issues and their impact at the workplace. This may include contacting local health department and health care providers in advance and developing and implementing protocols for response to ill individuals. The Rice-Tinsley Corporation's current coordinators are Eddie Oliver and Kristin Hunsaker.

Assumptions

A pandemic disease will spread rapidly and easily from person to person, affecting all businesses due to absenteeism. Businesses that are relied upon by other businesses will be facing the same massive absentee rates and will be unable to provide essential components to maintain the daily operations.

Risk assessments to identify the essential/critical components of our business operation need to be conducted. Recognize that a pandemic includes:

- Healthcare services not being available (they are already full at present with the usual ailments).
- Schools, churches and other public places not being open.
- Borders are partially or fully closed, especially airports, leaving people (our families, employees, business partners, customers and suppliers) "stranded".
- Essential materials and supplies may be limited due to distribution chains that are affected by the travel restrictions or absentee workers supporting those transportation means.
- Essential services around utilities, food distribution/access and banking systems may not be at "normal levels"; access to cash flow could be tight.
- People may not be willing to or able to come to work.

Communications

Communications during a pandemic involves both internal communications and external communications. Internal communication will be provided to employees to educate them about pandemic diseases and measures they can take to be prepared.

Key contacts, a chain of communications and contact numbers for employees and processes for tracking business and employees status have been developed as described in this section.

Risk communication is critical to inform employees regarding changes in the pandemic status. The following is one method for providing such information.

Alert: conveys the highest level of importance; warrants immediate action or attention.

Advisory: provides key information for a specific incident or situation; might not require immediate action.

Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

Provide continuous updates through internal & external communications when a pandemic is imminent:

- Notification to employees of operational changes
- Provide frequent updates about the pandemic status
- Provide advisories and alerts as conditions change
- Ensure vendors and suppliers have available a dedicated communications contact
- Monitor local, state, and federal pandemic updates

We will notify key contacts including both customers and suppliers in the event an outbreak has impacted our company's ability to perform services. This procedure also includes notification to customers and suppliers when operations resume.

We will use our phone systems that can perform automatic dialing from a database with each employees contact number to send notifications and messages about alerts. The use of the company web-site also will serve as a portal for sharing information with employees and vendors.

Business Continuity Planning

During an emergency, employees look to management to provide leadership for the company. If a large percentage of personnel become ill our business continuity plans will be initiated so that if significant absenteeism or changes in business practices are required business operations can be effectively maintained.

Pandemic Response by Pandemic Phase

Currently the WHO has created various phases for a pandemic but does not always relate to events locally.

Level 0 (WHO Phase 3) - Novel virus alert- not human-to-human transmission

Level 1 (WHO Phase 4) - Confirmed cases of human-to-human transmission of novel disease virus.

Level 2 (WHO Phase 5) - Suspected/confirmed cases in the area.

Level 3 (WHO Phase 5) - Numerous suspected/confirmed cases in the area.

Work At Home Considerations

There is a work-at-home and stay-at-home policy when employees are ill or are caring for others. Flexible work policies will be developed as much as possible. Employees are encouraged to stay at home when ill, when having to care for ill family members or when caring for children when schools close, without fear of reprisal. Tele-commuting or other work-at-home strategies will be developed.

Infection Control Measures

Guidelines for infection control are important to clarify the routes of transmission and the ways to interrupt transmission through measures of hygiene. Infection control is an essential component of pandemic management and a component of public health measures. Essential measures include:

- Hand washing and use of hand sanitizers shall be encouraged by The Rice-Tinsley Corporation supervision. Hand washing facilities, hand sanitizers, tissues, no touch trash cans, hand soap and disposable towels shall be provided by The Rice-Tinsley Corporation to all employees.
- Workers are encouraged to obtain appropriate immunizations to help avoid disease. Granting time off work to obtain the vaccine is considered when vaccines become available in the community.
- Social distancing including increasing the space between employee work areas and decreasing the possibility of contact by limiting large or close contact gatherings will be considered.
- We will clean all areas that are likely to have frequent hand contact (like doorknobs, faucets, handrails) routinely and when visibly soiled. Work surfaces will also be cleaned frequently using normal cleaning products.

Additional examples of infection control measures include:

- Stay at home when you are sick. If possible, stay away from work, school and from running errands. You will help others from catching your illness.
- Cover your coughs and sneeze into tissue, or cough into your shirt sleeve.
- Enhance existing housekeeping service by wiping down and disinfecting work areas (i.e. keyboards, telephones, desks, etc.) frequently.
- Enhance housekeeping services for general public use areas several times throughout the work period.
- Use personal protective equipment where appropriate to minimize exposure (i.e. gloves- for handling money, masks- for ill employees)

Implementation, Testing, and Revision of the Plan

The plan and emergency communication strategies will be periodically tested (at least annually) to ensure it is effective and workable.

Testing the plan will be accomplished by conducting exercises. Exercises range from low stress to full scale, hands on drills. A tabletop exercise is the easiest way to begin testing the plan. This type of exercise involves having discussions regarding a scenario that challenges the plan and the decision makers during an emergency. Functional exercises take on an additional level of complexity, in that they actually require participants to conduct functional components of the plan. This usually involves planning specific scenarios, creating pretend data and present issues that target an area within the plan to be tested.

EACH OF THESE METHODS OF TESTING THE PLAN REQUIRES EXTENSIVE PLANNING FOR THE EXERCISE AND THE EVALUATION. THE EVALUATION IS CRITICAL TO REVISING THE PLAN, BY CAPTURING ACTUAL RESPONSES DURING THE EXERCISE OR DRILL OBJECTIVELY. ONCE THIS DATA IS CAPTURED, AN AFTER-ACTION REPORT WITH RECOMMENDATIONS TO REVISING THE PLAN SHOULD BE COMPLETED WITHIN A FEW WEEKS OF THE EXERCISE.

LESSONS LEARNED

Immediately after an exercise or incident response, The Rice-Tinsley Corporation will conduct multi-level post incident reviews, gather conclusions from these interviews, and identify lessons learned. Emergency managers will

incorporate these ideals into emergency plans, highlight any additional training measures, and inject new responses measures into exercise simulations. The Rice-Tinsley Corporation will evaluate actual recovery times for critical business processes and attempt to mitigate any obstacles that led to perpetuating the business disruption.

The post-incident review is an evaluation of incident response used to identify and correct gaps, errors, and deficiencies, as well as determine strengths. Timing of a post-incident review is critical. An effective review requires that response and preparedness discussions take place while a disaster or exercise is fresh in the minds of decision makers, responders, regulators, and the public. From this review, lessons learned can be identified and preparedness improvement work can begin.

The post-incident review process is intended to identify which response procedures, equipment, and techniques were effective or ineffective, and the reason(s) why.

Post-incident review checklists will include, at a minimum:

- Name and typical duties of personnel being debriefed
- Date, time and location during incident
- Specific actions performed
- Responder's view of the positive aspects of the response and areas for improvements
- Recovery time and possible mitigation measures for improvement
- Potential lessons learned
- Necessary program and plan revisions
- Effectiveness of equipment used
- Overall post-incident perception and implications on The Rice-Tinsley Corporation

Key areas of consideration that will be analyzed by a review team will include, at a minimum:

- Mobilization procedures for personnel and equipment
- Implementation plans and procedures
- Internal and external communications
- Management and coordination of emergency response
- Stakeholder reaction
- The short and long term consequences of the incident

Emergency response shortfalls can come from a variety of areas or functions. Applying lessons learned to a crisis management or emergency response program allows procedures to align with proven and realistic scenarios. Utilizing this information provides The Rice-Tinsley Corporation the means of improving applicable programs to better prepare for future situations.

The following five concepts will be examined and incorporated for lesson learned preparedness.

1. Unidentified potential risk or hazard: A hazard and vulnerability analysis will be performed, and processes and procedures will be developed and added to the plans.
2. Management gaps and weaknesses: If the post incident reviews reveal weaknesses or gaps in The Rice-Tinsley Corporation, the emergency response management structure will be modified, and emergency plans will be revised.
3. Ineffective policies and procedures: If the policies and procedures fail to address key issues during the incident, policies and procedures will be modified to address inadequacies.

4. Lack of response proficiency: If response was faulty due to deficient training, exercising, or planning, these efforts will be amplified, and personnel will be familiarized with these modifications
5. Planning deviations: If participants successfully diverged from existing processes, procedures, or plans, these areas will be modified to reflect the reality of the performance.

Applying lessons learned to an emergency management program enables the ability to use experiences as a means to improve preparedness for future emergency scenarios. By analyzing the past, executing enhancements, and reinforcing strengths, The Rice-Tinsley Corporation will be better prepared to not repeat history.

TRAINING

Employees will be trained on health issues of the pertinent disease to include prevention of illness, initial disease symptoms, preventing the spread of the disease and when it is appropriate to return to work after illness. Disease containment plans and expectations should be shared with employees. Communicating information with non-English speaking employees or those with disabilities must be considered.

Documentation of all training is required.

PERSONAL PROTECTIVE EQUIPMENT/ASSESSMENTS – (PPE)

PURPOSE

The purpose of the Personal Protective Equipment section is to set forth the procedures for the use, care, and maintenance of personal protective equipment required to be used by employees for the prevention of injuries.

SCOPE

Applies to all The Rice-Tinsley Corporation employees. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

KEY RESPONSIBILITIES

HSE Manager

- Assists in the selection of appropriate PPE. If a task exposes an employee to hazards which cannot be eliminated through engineering or administrative controls, the HSE Manager assists the supervisor and project manager to identify and select PPE suitable for the specific task performed, conditions present, and frequency and duration of exposure. Employees need to give feedback to the supervisor about the fit, comfort, and suitability of the PPE being selected. Employees are provided reasons for selection of PPE.
- Assists supervisor and site managers in assuring all PPE obtained meets regulatory and this procedure's requirements.
- Performs Worksite Hazard Assessments - The hazard assessment must indicate a determination if hazards are present or are likely to be present, which necessitate the use of PPE. Sources of hazards include but are not limited to hazards from impact/motion, high/low temperatures, chemicals, materials, radiation, falling objects, sharp objects, rolling or pinching objects, electrical hazards, and workplace layout.
- Certifies in writing the tasks evaluated, hazards found, and PPE required to protect employees against hazards and ensures exposed employees are made aware of hazards and required PPE before they are assigned to the hazardous task. Certificate shall include certifier's name, signature, dates and identification of assessment documents.

The Rice-Tinsley Corporation shall verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; the date(s) of the hazard assessment; and, which identifies the document as a certification of hazard assessment.

Managers and Supervisors

- Supervisors and managers shall regularly monitor employees for correct use and care of PPE and obtain follow-up training if required to ensure each employee has adequate skill, knowledge, and ability to use PPE.
- Supervisors and managers shall enforce PPE safety rules following the guidance of the The Rice-Tinsley Corporation progressive disciplinary procedures and ensure Required PPE Poster is posted properly.

Employees

- Complying with the correct use and care of PPE.
- Reporting changes in exposure to hazardous conditions that might require a follow-up assessment of the task for PPE.
- Reporting and replacing defective or damaged PPE, which shall not be used.
- Wearing of required PPE is a condition of employment.

PROCEDURE

General

Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

Employee owned equipment is NOT permitted, except for safety toe footwear and prescription safety glasses. The Rice-Tinsley Corporation is still responsible for the assurance of its adequacy, maintenance and sanitation of those two items.

All PPE issued shall be at no cost to the employee. All employees will know and follow the procedures outlined in this Program.

Eye Protection

Employees must use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids or chemical gases or vapors. Eye and Face PPE must comply with ANSI Standard Z87.1-2003 (Z87+), *Occupational and Educational Personal Eye and Face Protective Devices*.

Safety Glasses

Safety glasses, with side shields, that meet ANSI Z-87.1-2003 standards with “high Impact lenses” are required to be worn by all employees, subcontractors, and visitors while on The Rice-Tinsley Corporation property, at all times, as described below:

- At field locations, in shops and warehouses, except in approved, designated, striped safety zones.
- In all yard work zones or by everyone when in the vicinity of loading or unloading equipment, performing mechanic or maintenance work, test stand operations, operating equipment such as forklifts, welding, or any type of work which has the potential to inflict an eye injury.
- In any office, restroom, or any other building while performing any type of work where a potential eye injury may be present.
- Visitors will be provided with visitor glasses. In the absence of approved prescription safety glasses, “Over the glass” type safety glasses or goggles, must be worn over the nonsafety glasses until approved prescription safety glasses are obtained.
- Workers assisting welders must wear absorbent safety glasses that protect the wearer from ultra-violet (UV) and/or infrared rays (IR).

- Dark shaded lens (sunglasses) darker than a # 1 shade is prohibited to be worn indoors unless welding or assisting a welder.
- A doctor must support “exceptions for medical reasons” in writing to exempt safety eyewear requirements.
- Safety glasses are not required:
 - Inside offices.
 - Parking lots when traveling from vehicles to and from office buildings by way of main doors that do not pass through shops.

Goggles

- Chemical splash proof goggles shall be worn when handling or mixing liquid chemicals, solvents, paints, etc., and/or as recommended on the Material Safety Data Sheet of the material being handled.
- Dust proof goggles shall be worn when blowing equipment down with air or while performing other jobs where safety glasses are not adequate to prevent airborne particles from entering the openings around the lenses and side shields.

Face Shields

- Full face shields shall be worn over safety glasses when operating handheld or stationery grinders with abrasive or wire wheels, while chipping paint or concrete or, performing jobs where there is the potential for flying objects striking the face and safety glasses or goggles would not provide adequate protection.

Head Protection

Employees must wear protective helmets when working in areas where there is a potential for injury to the head from employee initiated impact or impact from falling or other moving objects. Helmets must comply with ANSI Standard Z89.1-1997 Class E, *American National Standard for Industrial Head Protection* for Type II head protection or be equally effective.

- Employees must wear protective helmets when working in areas where there is a potential for injury to the head from falling objects.
- Hardhats are to be worn at all field, shop and warehouse locations, or where deemed necessary as per each location’s PPE Hazard Assessment.
- Hardhats will not be altered in any way.
- Do not paint or apply unauthorized stickers, name plates, etc.
- Do not drill, cut, bend, or apply heat.
- Do not alter the suspension system.
- Hardhats will be inspected by the employee regularly for cracks, chips, scratches, signs of heat exposure (sun cracks), etc.
- Defective hardhats will be replaced immediately.
- Hardhats shall not be placed in rear windows of vehicles where they will be exposed to the sun or become projectiles during an accident.
- A supply of hardhats must be made available to visitors.
- The Rice-Tinsley Corporation shall provide hardhats.
- Employees will be trained in the use, care and maintenance of head protection equipment.

Hearing Protection

Hearing protection is required to be worn by all employees, subcontractors, and visitors while in posted “High Noise” areas. Refer to the The Rice-Tinsley Corporation Hearing Conservation Program for more information.

Warning signs will be posted in areas known or suspected to have noise levels exceeding 85 dBA either constantly or intermittently.

When signs are not posted, employees shall wear hearing protection when noise caused by machinery, tools, etc., prevents normal conversations to be heard clearly.

Rule of thumb: If you have to yell to be heard, hearing protection is required

Types

- Molded Inserts (ear plugs)
- Canal Caps (head band type)
- Muff, either headband or hard hat mounted Earmuffs and earplugs shall be provided to the employee in sizes and configurations that will be comfortable to the employee.

Care and Maintenance

- Inspect hearing protection prior to each use.
- Hearing protection must be kept clean to prevent ear infections.
- Most earplugs used today are disposable and must be discarded when they become dirty, greasy, or cracked.
- Earmuffs that have deteriorated foam inserts, cracked seals or are defective must be replaced.

Fit

- Due to individual differences, not everyone can wear the same type of hearing protection. A variety of styles may have to be tried before one is found to be comfortable and provide adequate protection.
- Employees shall be instructed how to obtain the proper fit.

Hand Protection

Gloves

- Gloves are required to be worn when performing work, which may expose the hands to extreme temperatures, cuts and abrasions, or exposure to chemicals.
- Welding: Welding gloves made of leather or other heat resistant materials shall be worn when performing arc welding or oxy/gas cutting.
- Chemical: Impervious (chemical resistant) gloves shall be worn when handling chemicals that specify gloves as personal protection equipment when handling.
- Refer to the specific chemical's Material Safety Data Sheet for the correct glove type.
- Persons assigned to working with chemicals, i.e., solvent vats, shall be issued their own individual gloves for hygiene purposes.
- Leather: Leather gloves should be worn when working with sharp materials or when handling rigging equipment.
- Cloth: Cloth gloves should be worn when handling objects or materials, which could cause blisters, splinters, cuts, etc.
- Heat Resistant: Heat resistant gloves shall be worn when handling hot bearings, races, or other materials or objects that have been heated beyond ambient temperatures.
- Insulated: Insulated gloves shall be worn to prevent frostbite in extreme cold climates.

- Glove Inspections
 - Gloves shall be inspected before each use for holes, tears, and worn areas.
 - Chemical gloves shall be periodically air tested for pinholes by twisting the cuff tightly, apply low air pressure to expand the glove, and then submersing in water to check for bubbles.
 - Defective gloves shall be discarded immediately. Exception: machinists are exempted from wearing gloves while working with rotating machinery.

Foot Protection

Safety footwear shall be worn by all employees with regularly assigned duties at field locations, in shops and warehouses.

- Office workers and visitors who enter these areas on an infrequent basis will not be required to wear foot protection provided they stay clear of the work being performed.
- If required to be in the close proximity of the work, the work will be stopped while visiting the area or safety footwear will be worn.
- Shops, Field Locations, Warehouses and Parts Departments: Leather or equivalent boots, either lace up or pull up, shall be worn.
- The boot must provide ankle protection and have soles designed to protect from punctures with defined heels for climbing ladders.
- Metatarsal guards will be worn when duties present a hazard of equipment or material crushing the foot.
- All safety footwear must meet ANSI Z41-1999 standards.
- Client locations may require safety footwear to be worn by everyone; check with the local supervisor for client requirements before visiting field locations.

Fall Protection

Personal fall protection is required when performing certain elevated jobs in excess of six feet. Consult the The Rice-Tinsley Corporation Fall Protection Program.

Electrical Protection

Consult the The Rice-Tinsley Corporation Electrical Safety Program.

Worksite Hazard Assessment

A written hazard assessment shall be performed. During the hazard assessment a determination if hazards are present or are likely to be present, this necessitates the use of PPE. The following sample hazard sources will be identified:

- High or low temperatures; Chemical exposures (use SDS for guidance)
- Flying particles, molten metal or other eye, face, or skin hazards
- Falling objects or potential for dropping objects; employee falling from a height of 6' or more
- Sharp objects; Rolling or pinching that could crush the hands or feet;
- Electrical hazards

Where these hazards could cause injury to employees, personal protective equipment must be selected to substantially eliminate the injury potential. Employees will be notified for the selection and reason.

The results of this assessment shall be communicated to each affected employee and kept at the local office.

Selected/identified PPE shall be fitted to each affected employee. Fitting, including proper donning, doffing, clean and maintenance of PPE is addressed in the Training section. Exemptions for use of PPE must be supported by the PPE hazard assessment.

Monitoring

Supervisors and site managers monitor worksite tasks for changes in, or the introduction of new hazards. If new hazards are discovered, they advise the HSE Manager who then conducts a hazard assessment for appropriate PPE. The HSE Manager monitors the effectiveness of the PPE Procedure and makes recommendations to management to improve the procedure.

If hazards are present, or likely to be present, The Rice-Tinsley Corporation shall select and have each affected employee use the type of PPE necessary, communicate selection decisions, and select PPE that properly fits each affected employee.

TRAINING

Employees who require or may need to wear PPE shall be properly trained and PPE must be fitted to each affected employee. Training shall include:

- When PPE is necessary.
- What PPE is necessary.
- How to properly don, doff, adjust and wear PPE.
- The limitations of PPE.
- Useful life and disposal of PPE.
- How to clean and maintain PPE in a sanitary and reliable condition.
- Reporting and replacing defective or damaged PPE, which shall NOT be used.

Retraining

Retraining is required when:

- The workplace changes, making the previous training obsolete.
- The type of PPE changes.
- When the employee demonstrates lack of use, improper use, or insufficient skill or understanding in PPE selection, necessity, use and limitations.

Documentation

Training shall be documented and records kept at the local office. The training certification shall include:

- Name of employee(s) trained;
- The dates of training; and
- The certification subject.

PPE FORMS & MATRIX

PPE Matrix For COMPANY

Location: Insert Location or Work

Site

D = Depends on situation M = Mandatory - = Not Mandatory unless hazards become present

SUBJECT TO CHANGE BASED ON INDIVIDUAL WORKSITE HAZARD ASSESSMENT

CHANGE ALL AS NEEDED

CATEGORY	EQUIPMENT	HAZARD	INSPECTION	MAINTENANCE	Job/Task	Field Tech	Housekeeping	Shop Work	Driving	Office	Winter Conditions
Head Protection:											
	Hard Hat (Class G or E Only)	Striking Head or Falling Objects	Each use	Dispose		-	-	D	-	-	-
Eye and Face Protection:											
	Safety Glasses w/shields	Objects Striking Eyes	Each use	Dispose		D	D	M	*	-	M
	Impact Vented Goggles	Small Particles in Eyes	Each use	Dispose		-	-	D	-	-	D
	Chemical Splash Goggles	Chemicals or Oil in Eyes	Each use	Dispose		D	D	D	-	-	-
Hearing Protection:											
	Disposable Earplugs	Damage to Hearing (85 dB)	Each use	Dispose		D	D	D	-	-	-
	<u>Ear Muffs</u> (w/Disposables)	Damage to Hearing (105 dB)	Each use	Dispose		D	D	D	-	-	-
Personal Protective Clothing:											
	Cold Weather Clothing	Cold Temperature	Each use	Clean & Repair		D	D	D	D	-	D
	Rainwear	Wet body	Each use	Dispose		-	-	D	-	-	-
	Protective Sleeves	Biohazardous materials	Each use	Dispose		-	M	-	-	-	-
	Insert more or delete as needed										
Foot Protection:											
	Slip Resistant Footwear	Injury to Body	Each use	Replace		M	M	M	-	-	-
	Anti-Slip Cleats during Winter	Injury to Body	Each use	Dispose		M	M	M	-	-	M
Hand Protection:											
	Anti-cut Gloves	Cuts	Each use	Dispose		M	D	M	-	-	-
	Vinyl Disposable Gloves	Biohazardous materials	Each use	Dispose		-	M	-	-	-	-
	Heavy Duty Gloves	Injuries to Hands	Each use	Dispose		-	-	M	-	-	-
	Cold weather Gloves	Environmental Exposure	Each use	Dispose		-	-	-	-	-	M
	Rubber Gloves	Hot Water Burns	Each use	Dispose		M	-	-	-	-	-

PPE Hazard Assessment Certification Form

Name of work place: _____ Conducted by Name/Signature: _____
Work place address: _____ Date of assessment: _____
 Work area(s): _____ Job/Task(s): _____

(Use a separate sheet for each job/task or work area)

EYES		
Work activities, such as: ☐ abrasive blasting ☐ chopping ☐ cutting ☐ drilling ☐ welding ☐ soldering ☐ torch brazing ☐ working outdoors ☐ computer work ☐ punch press operations ☐ other:	Work-related exposure to: ☐ airborne dust ☐ dirt ☐ UV ☐ flying particles/objects ☐ blood splashes ☐ hazardous liquid chemicals mists ☐ chemical splashes ☐ molten metal splashes ☐ glare/high intensity lights ☐ laser operations ☐ intense light ☐ hot sparks ☐ other:	Can hazard be eliminated without the use of PPE? Yes ☐ No ☐ If no, use: ☐ Safety glasses ☐ Safety goggles ☐ Dust-tight goggles ☐ Impact goggles ☐ Welding helmet/shield ☐ Chemical goggles ☐ Chemical splash goggles ☐ Laser goggles ☐ Shading/Filter (# _____) ☐ Welding shield ☐ Other:
FACE		
Work activities, such as: ☐ cleaning ☐ cooking ☐ siphoning ☐ painting ☐ dip tank operations ☐ metal pouring ☐ other:	Work-related exposure to: ☐ hazardous liquid chemicals ☐ extreme heat ☐ extreme cold ☐ potential irritants: ☐ other:	Can hazard be eliminated without the use of PPE? Yes ☐ No ☐ If no, use: ☐ Face shield ☐ Shading/Filter (# _____) ☐ Welding shield ☐ Other:

HEAD		
Work activities, such as: ☐ building maintenance ☐ confined space operations ☐ construction ☐ electrical wiring ☐ walking/working under catwalks ☐ walking/working on catwalks ☐ walking/working under conveyor belts ☐ working with/around conveyor belts ☐ walking/working under crane loads ☐ other:	Work-related exposure to: ☐ beams ☐ pipes ☐ exposed electrical wiring or components ☐ falling objects ☐ fixed object ☐ machine parts ☐ other:	Can hazard be eliminated without the use of PPE? Yes ☐ No ☐ If no, use: ☐ Protective Helmet ☐ Type A (low voltage) ☐ Type B (high voltage) ☐ Type C ☐ Bump cap (not ANSI-approved) ☐ Hair net or soft cap ☐ Other:
HANDS/ARMS		
Work activities, such as: ☐ baking ☐ cooking ☐ grinding ☐ welding ☐ working with glass ☐ using power tools ☐ using computers ☐ working outdoors ☐ using knives ☐ dental and health care services ☐ garbage disposal ☐ computer work ☐ other:	Work-related exposure to: ☐ blood ☐ irritating chemicals ☐ tools or materials that could scrape or cut ☐ extreme heat ☐ extreme cold ☐ animal bites ☐ electric shock ☐ vibration ☐ musculoskeletal disorders ☐ sharps injury ☐ other:	Can hazard be eliminated without the use of PPE? Yes ☐ No ☐ If no, use: ☐ Gloves ☐ Chemical resistance ☐ Liquid/leak resistance ☐ Temperature resistance ☐ Abrasion/cut resistance ☐ Slip resistance ☐ Latex or nitrile ☐ Anti-vibration ☐ Protective sleeves ☐ Ergonomic equipment _____ ☐ Other:

FEET/LEGS		
Work activities, such as: ☐ building maintenance ☐ construction ☐ demolition ☐ food processing ☐ foundry work ☐ working outdoors ☐ logging ☐ plumbing ☐ trenching ☐ use of highly flammable materials ☐ welding ☐ other:	Work-related exposure to: ☐ explosive atmospheres ☐ explosives ☐ exposed electrical wiring or components ☐ heavy equipment ☐ slippery surfaces ☐ impact from objects ☐ pinch points ☐ crushing ☐ slippery/wet surface ☐ sharps injury ☐ blood ☐ chemical splash ☐ chemical penetration ☐ extreme heat/cold ☐ fall ☐ other:	Can hazard be eliminated without the use of PPE? Yes ☐ No ☐ If no, use: ☐ Safety shoes or boots ☐ Toe protection ☐ Electrical protection ☐ Heat/cold protection ☐ Puncture resistance ☐ Chemical resistance ☐ Anti-slip soles ☐ Leggings or chaps ☐ Foot-Leg guards ☐ Other:
BODY/SKIN		
Work activities such as: ☐ baking or frying ☐ battery charging ☐ dip tank operations ☐ fiberglass installation ☐ sawing ☐ other:	Work-related exposure to: ☐ chemical splashes ☐ extreme heat ☐ extreme cold ☐ sharp or rough edges ☐ irritating chemicals ☐ other:	Can hazard be eliminated without the use of PPE? Yes ☐ No ☐ If no, use: ☐ Vest, Jacket ☐ sleeves ☐ Coveralls, Body suit ☐ Raingear ☐ Apron ☐ Welding leathers ☐ Abrasion/cut resistance ☐ Other:

BODY/WHOLE		
<u>Work activities such as:</u> ☐ building maintenance ☐ construction ☐ logging ☐ computer work ☐ working outdoors ☐ utility work ☐ other:	<u>Work-related exposure to:</u> ☐ working from heights of 10 feet or more ☐ impact from flying objects ☐ impact from moving vehicles ☐ sharps injury ☐ blood ☐ electrical/static discharge ☐ hot metal ☐ musculoskeletal disorders ☐ sparks ☐ chemicals ☐ extreme heat/cold ☐ elevated walking/working surface ☐ working near water ☐ injury from slip/trip/fall ☐ other:	<u>Can hazard be eliminated without the use of PPE?</u> Yes ☐ No ☐ <u>If no, use:</u> <u>With:</u> ☐ Fall Arrest/Restraint ☐ Hood ☐ Traffic vest ☐ Full sleeves ☐ Static coats/overalls ☐ Flame resistant jacket/pants ☐ Insulated jacket ☐ Cut resistant sleeves/wristlets ☐ Hoists/lifts ☐ ergonomic equipment: ☐ Other:
LUNGS/RESPIRATORY		
<u>Work activities such as:</u> ☐ cleaning ☐ mixing ☐ painting ☐ fiberglass installation ☐ compressed air or gas operations ☐ confined space work ☐ floor installation ☐ ceiling repair ☐ working outdoors ☐ other:	<u>Work-related exposure to:</u> ☐ dust or particulate ☐ toxic gas/vapor ☐ chemical irritants (acids) ☐ welding fume ☐ asbestos ☐ pesticides ☐ organic vapors ☐ oxygen deficient environment ☐ paint spray ☐ extreme heat/cold ☐ other:	<u>Can hazard be eliminated without the use of PPE?</u> Yes ☐ No ☐ <u>If no, use:</u> <u>With/Type:</u> ☐ Dust mask ☐ Disposable particulate respirator ☐ Replaceable filter particulate w/cartridge ☐ half faced ☐ full face ☐ PAPR (Air recycle) ☐ PPSA (Air supply)

EARS/HEARING		
Work activities such as: ☐ generator grinding ☐ ventilation fans machining ☐ motors routers ☐ sanding sawing ☐ pneumatic equipment sparks ☐ punch or brake presses ☐ use of conveyors ☐ other:	☐ ☐ ☐ ☐ ☐	Work-related exposure to: ☐ loud noises ☐ loud work environment ☐ noisy machines/tools ☐ punch or brake presses ☐ other:
		Can hazard be eliminated without the use of PPE? Yes ☐ No ☐ If no, use: ☐ ear muffs ☐ ear plugs ☐ leather welding hood

RESPIRATORY PROTECTION

PURPOSE

It is the intention of The Rice-Tinsley Corporation to provide a respirator protection program that meets or exceeds all federal standards. The Rice-Tinsley Corporation will attempt to engineer potential harmful vapors and oxygen deficient atmosphere exposure hazards out of the work environment. If engineering control measures are not feasible or during emergency situations with high exposure, then respirators shall be provided which are applicable and suitable for purpose intended.

SCOPE

This program applies to all The Rice-Tinsley Corporation projects and operations.

RESPIRATORY PROGRAM ADMINISTRATOR

Overall responsibility for the respiratory protection program is assigned to the The Rice-Tinsley Corporation Safety Manager in order to ensure that specific requirements are followed.

The Administrator must be knowledgeable of the complexity of the program, able to conduct evaluations and have the proper training.

This assignment is made, however, with the understanding that individual supervisors will have to implement and enforce major portions of the program. It is understood that the Program Administrator will report performance problems to the appropriate manager for resolution. The person who will have responsibility for administering all the aspects of this program will be the Project Manager or their designee.

The Rice-Tinsley Corporation shall designate a program administrator by name or job title who is qualified by appropriate training or experience to oversee the program and conduct the required evaluations of program effectiveness.

Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition. All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the facepiece and exhalation valve.

The responsibilities of the Program Administrator will include, but are not limited to:

- Conducting an annual written evaluation of the program. The program evaluation should be completed no later than December 31, of each year.
- Ensuring an adequate supply of respirators, cartridges, and repair/replacement parts. The Program Administrator may delegate this duty but will retain overall responsibility. The person(s) to whom this duty has been delegated is the Project Manager and/or Field Supervisor.
- Identifying hazards and ensuring only NIOSH certified respirators must be selected and provided based on those hazards and factors affecting performance.

- Ensuring that all respirator users have been trained in the use, selection and limitations of the type of respirators they will be using prior to the first time the respirator must be used. While the duty of conducting the training may be delegated, the Program Administrator retains final responsibility for seeing that all employees are appropriately trained.
- Ensuring that all respirator users have been medically evaluated and found fit to use the type of respirators that will be required in their job. The medical evaluation must be completed prior to assigning any employee to a task that requires use of a respirator.
- Ensuring that all respirator users are fit-tested at least annually and more often if other federal requirements apply.
- Ensuring that respirators are individually issued, are cleaned and sanitized on a regular basis, and respirators are stored in a clean and accessible location. This duty may also be delegated but the Program Administrator retains final responsibility for seeing that it is done.
- Ensuring that respirators are selected based on the hazard that will be encountered. This program describes the basic respirators that will be used at this site and the tasks for which they will be required. In special circumstances, the Program Administrator will contact the corporate health and safety staff for guidance in selecting the correct respirator.
- Ensuring that employee exposure is monitored to assure correct respirator type is used. Exposure monitoring may be delegated to others; however, the Program Administrator has final responsibility of monitoring completion and to request assistance when necessary.
- Ensuring surveillance of employees who wear respirators shall leave the area to wash, change cartridges or if they detect break through or resistance.
- Ensuring that the elements of the Respiratory Protection Program for the selection, use, cleaning/maintenance, storage and fit-testing of respirators are followed.
- Ensuring that respirator parts are not exchanged between brands of respirators.
- Ensuring medical evaluations, respirators and required training are provided at no cost to the employee.

MEDICAL REQUIREMENTS

General

The Rice-Tinsley Corporation shall provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace. The Rice-Tinsley Corporation may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.

Medical Evaluation Procedures

The Rice-Tinsley Corporation shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations using a medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire. The medical evaluation shall obtain the information requested by the Medical Questionnaire in Forms section (or equivalent).

The medical evaluation prior to fit-testing will be confidential, conducted during normal working hours, be at a convenient time and location, be understandable and the employee will be given a chance to discuss the results with the PLHCP.

Supplemental Information for the PLHCP

The following information must be provided to the PLHCP before the PLHCP makes a recommendation concerning an employee's ability to use a respirator:

- The type and weight of the respirator to be used by the employee;
- The duration and frequency of respirator use (including use for rescue and escape);
- The expected physical work effort;
- Additional protective clothing and equipment to be worn; and
- Temperature and humidity extremes that may be encountered.

The Rice-Tinsley Corporation shall provide the PLHCP with a copy of the The Rice-Tinsley Corporation Respiratory Protection Program.

Note: When The Rice-Tinsley Corporation replaces a PLHCP, The Rice-Tinsley Corporation must ensure that the new PLHCP obtains this information, either by providing the documents directly to the PLHCP or having the documents transferred from the former PLHCP to the new PLHCP. However, OSHA does not expect employers to have employees medically re-evaluated solely because a new PLHCP has been selected.

Medical Determination

In determining the employee's ability to use a respirator, The Rice-Tinsley Corporation shall obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP. The recommendation shall provide only the following information:

- Any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;
- The need, if any, for follow-up medical evaluations; and
- A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

All recommendations are to be sent to The Rice-Tinsley Corporation's Safety Manager.

Additional Medical Evaluations

At a minimum, The Rice-Tinsley Corporation shall provide additional medical evaluations that comply with the requirements of this program if:

- An employee reports medical signs or symptoms that are related to ability to use a respirator;
- A PLHCP, supervisor, or the respirator Program Administrator informs The Rice-Tinsley Corporation that an employee needs to be re-evaluated;
- Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee re-evaluation; or
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.

WORK SITE PROCEDURES

Each work site where respirators are required to protect the health of the worker shall have work site procedures that follow the guidelines of this program. Specific procedures may also be required by our client which will be followed. The following areas shall be included:

- Identification of specific hazard requiring respiratory protection
- The selection of the appropriate respiratory protection equipment based on the specific hazard and concentration levels, characteristics, etc. Specific brand and models of respiratory equipment to be used shall be identified in the procedures.
- Verification that each user of respiratory protection is qualified (medical approval, current fit test, annual training and demonstrates competency).

The Rice-Tinsley Corporation will ensure that at least one employee is located outside the IDLH atmosphere, maintains communication, is properly trained and equipped to provide emergency rescue, has notification procedures, and provides necessary assistance appropriate to the situation.

RESPIRATOR SELECTION CRITERIA

The selection of the respiratory equipment is based on the hazards the employee is exposed to. The Rice-Tinsley Corporation shall:

- Perform hazard identification,
- Select and provide respirators based on those hazards and factors affecting performance,
- Establish brands and models to be used, and
- Estimate exposures and contaminant information.

Hazard Identification

Due to the many varied work locations The Rice-Tinsley Corporation's identification of respiratory hazards will be contained in the various work site specific safety plans. However, common respiratory hazards that will be encountered include:

- Dust
- Fumes
- Gases
- Chemical particles
- Oxygen Deficiency

Characteristics of Hazardous Operation or Process

- Hot operations: welding, chemical reactions, soldering, melting, melding and burning
- Liquid operations: painting, degreasing, dipping, spraying, brushing, coating, etching, cleaning, pickling, plating, mixing, galvanizing and chemical reactions
- Solid operations: pouring, mixing, separations, extraction, crushing, conveying, loading, bagging and demolition.
- Pressurized spraying: cleaning parts, applying pesticides, degreasing, sand blasting and painting
- Shaping operations: cutting, grinding, filing, milling, melding, sawing and drilling

Gaseous Contaminants

- Inert gases (helium, argon, etc.), which do not metabolize in the body but displace air to produce an oxygen deficiency.
- Acid gases (SO₂, H₂S, HCl, etc.) which are acids or produce acids by reaction with water.
- Alkaline gases (NH₃, etc.), which are alkalies or produce alkalies by reaction with water.
- Organic gases (butane, acetone, etc.), which exist as true gases or vapors from organic liquids.
- Organometallic gases (tetraethyl lead, organo-phosphates, etc.), which have metals attached to organic groups.

Particulate contaminants

- Dusts are mechanically generated solid particulates (0.5 to 10µm)
- Fumes are solid condensation particles of small diameter (0.1 to 1.0 µm)
- Mists are liquid particulate matter (5 to 100 µm)
- Smoke is chemically generated particulates (solid and liquid) of organic origins (0.01 to 0.3 µm)

Selection of Respirator

The following factors shall be taken into account when selecting the proper respirator:

Concentration and Type of Contaminant

The concentration and type of contaminant will determine the model and type of respirator and cartridges/filters or filters to be used. The concentration is based on a sampling of the atmosphere.

Location of Hazardous Area

(Confined Space, nearby contaminants, etc.)

Worker Activity

(Extreme heat, cold, welding hood requirement, etc.)

Types of Respirators

Air-purifying respirators can be either full-face or half masks with mechanical or chemical cartridges to filter dusts, mists, fumes, vapors or gases.

Powered air-purifying respirators use a blower to pass the contaminated air through a filter. The purified air is then delivered into a mask or hood. They filter dusts, mists, fumes, vapors and gases, just like ordinary air-purifying respirators.

Air-purifying respirators cannot be used in oxygen-deficient atmospheres, which can result when another gas displaces the oxygen or consumption of oxygen by a chemical reaction occurs. Oxygen levels below 19.5% require either a source of supplied air or supplied-air respirator protection. Levels below 16% are considered to be unsafe and could cause death. To determine the proper cartridge for air-purifying respirators contact the The Rice-Tinsley Corporation Safety Manager or a qualified on-site safety representative of the client. You should also consult the Material Safety Data Sheet of the substance that needs to be filtered.

All cartridges are assigned a color designating the type of contaminant they will filter:

White:	Acid gas
Black:	Organic vapors
Green:	Ammonia gas
Yellow:	Acid gas and organic vapors
Purple:	Radioactive materials
Orange:	Dust, fumes and mists
Olive:	Other gases and vapors

Once the wearer of the respirator can detect an odor, irritation, or taste of the contaminant, the cartridge should be replaced. All cartridges and/or filters shall be changed at the beginning of each shift.

Supplied-air respirators provide the highest level of protection against highly toxic and unknown materials. Supplied air refers to self-contained breathing apparatuses (SCBAs) and air-line respirators. SCBAs have a limited air supply that is carried by the user, allowing for good mobility and fewer restrictions than air-line respirators.

Air-line respirators have an air hose that is connected to a fresh air supply from a central source. The source can be from a compressed air cylinder or air compressor that provides at least Grade D breathing air.

Emergency Escape Breathing Apparatuses (EEBAs) provide oxygen for 5, 10 or 15 minutes depending on the unit. These are for emergency situations in which an employee must escape from environments immediately dangerous to life or health (IDLH).

SCBA (Self Contained Breathing Apparatus)

The Rice-Tinsley Corporation does NOT allow employees to work in an Immediately Dangerous to Life and Health (IDLH) environment.

In order to maintain the NIOSH/MSHA approval of any respirator, mixing parts from other respirator manufacturers is prohibited. This includes airline hoses, valves, gaskets, cartridges, etc. For example, do not use North cartridges or valve gaskets with an MSA product.

Brand and Models

The Rice-Tinsley Corporation has selected North Safety as its NIOSH-certified respirator. Only this brand of respirator shall be used in compliance with the conditions of the certification of its Respiratory Protection Program (fit testing model, no mixing of different manufacturer parts, cartridges, filters, etc.).

The specific model will be based on the hazard, concentration of contaminant, oxygen level, work environment and type of work being performed. To aid in the selection process the following will be used to identify the proper North respiratory equipment for the work being performed and hazard that is present.

- NIOSH Pocket Guide to Chemicals
- North Cartridge Selection Guide
- North Respirator Selection Guide

Estimate of Exposures and Contaminant Information

- No employee shall enter an IDLH environment.
- Normal oxygen levels shall be maintained.

- No employee shall be exposed to an atmosphere containing concentrations that would exceed the STEL or PEL for the identified atmospheric hazard.

RESPIRATOR FIT TESTING

Before an employee may be required to use any respirator with a negative or positive pressure tight-fitting face piece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used. This section specifies the kinds of fit tests allowed, the procedures for conducting them, and how the results of the fit tests must be used.

All respirator users are fit-tested at least annually and more often if other federal requirements apply.

Supplied Air Respirators are required to be fit tested as well.

The Rice-Tinsley Corporation shall ensure that employees using a tight-fitting face piece respirator pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT) as stated in this program.

The Rice-Tinsley Corporation shall ensure that an employee using a tight-fitting face piece respirator is fit tested prior to initial use of the respirator, whenever a different respirator face piece (size, style, model or make) is used, and at least annually thereafter.

The Rice-Tinsley Corporation shall conduct an additional fit test whenever the employee reports, or The Rice-Tinsley Corporation's PLHCP, supervisor, or Program Administrator makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

If after passing a QLFT or QNFT, the employee subsequently notifies The Rice-Tinsley Corporation, Program Administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator face piece and to be retested.

The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol. The OSHA-accepted QLFT and QNFT protocols and procedures are contained in this section.

QLFT may only be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less. Half face air filtering respirators may be fit tested with irritant smoke while full face air filtering respirators require Portacount fit testing.

If the fit factor, as determined through an OSHA-accepted QNFT protocol, is equal to or greater than 100 for tight-fitting half face pieces, or equal to or greater than 500 for tight-fitting full face pieces, the QNFT has been passed with that respirator.

Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.

Qualitative fit testing of these respirators shall be accomplished by temporarily converting the respirator user's actual face piece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air-purifying respirator face piece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator face piece.

Quantitative fit testing of these respirators shall be accomplished by modifying the face piece to allow sampling inside the face piece in the breathing zone of the user, midway between the nose and mouth. This requirement shall be accomplished by installing a permanent sampling probe onto a surrogate face piece, or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the face piece.

Any modifications to the respirator face piece for fit testing shall be completely removed, and the face piece restored to NIOSH-approved configuration, before that face piece can be used in the workplace.

Fit Test Procedures

The requirements in this section apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator sizes so that the respirator is acceptable to, and correctly fits, the user.

Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, because it is only a review.

The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

The test subject shall be instructed to hold each chosen face piece up to the face and eliminate those that obviously do not give an acceptable fit.

The more acceptable face pieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the following points:

- If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.
- Position of the mask on the nose
- Room for eye protection
- Room to talk
- Position of mask on face and cheeks

The following criteria shall be used to help determine the adequacy of the respirator fit:

- Chin properly placed;
- Adequate strap tension, not overly tightened;

- Fit across nose bridge;
- Respirator of proper size to span distance from nose to chin;
- Tendency of respirator to slip;
- Self-observation in mirror to evaluate fit and respirator position.

Use the Fit Test form.

User Seal Check

Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. The test subject shall conduct a user seal check, either the negative or positive pressure seal checks described below:

Positive Pressure Check

Close off the exhalation valve and exhale gently into the face piece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the face piece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

Negative Pressure Check

Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the face piece collapses slightly, and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the face piece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

The test shall not be conducted if there is any hair growth between the skin and the face piece sealing surface, such as stubble beard growth, beard, moustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed, including glasses.

If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.

Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.

Test Exercises

Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds. The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon

completion of the protocol. If it has become unacceptable, another model of respirator shall be tried. If due to medical or health conditions the employee cannot perform the test exercises the fit test shall not be performed and the employee not allowed to use a respirator until all elements of the fit test can be achieved.

The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.

The following test exercises are to be performed for all fit testing methods prescribed in this procedure:

- Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.
- Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.
- Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.
- Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).
- Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject shall read from the Rainbow Passage

Rainbow Passage

“When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.” Continue to read for one minute.

- Grimace. The test subject shall grimace by smiling or frowning. (This applies only to QNFT testing; it is not performed for QLFT)
- Jogging in place. The test subject shall jog in place being careful to be aware of their surroundings.
- Normal breathing. Same as exercise (1).

Qualitative Fit Test (QLFT) Protocols

General

The Rice-Tinsley Corporation shall ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order. The Rice-Tinsley Corporation shall ensure that QLFT equipment is kept clean and well maintained so as to operate within the parameters for which it was designed.

Irritant Smoke (Stannic Chloride) Protocol

This qualitative fit test uses a person's response to the irritating chemicals released in the “smoke” produced by a stannic chloride ventilation smoke tube to detect leakage into the respirator.

General Requirements and Precautions. The respirator to be tested shall be equipped with high efficiency particulate air (HEPA) or P100 series filter(s).

Only stannic chloride smoke tubes shall be used for this protocol. No form of test enclosure or hood for the test subject shall be used.

The smoke can be irritating to the eyes, lungs, and nasal passages. The test conductor shall take precautions to minimize the test subject's exposure to irritant smoke. Sensitivity varies, and certain individuals may respond to a greater degree to irritant smoke. Care shall be taken when performing the sensitivity screening checks that determine whether the test subject can detect irritant smoke to use only the minimum amount of smoke necessary to elicit a response from the test subject.

The fit test shall be performed in an area with adequate ventilation to prevent exposure of the person conducting the fit test or the build-up of irritant smoke in the general atmosphere.

The person to be tested must demonstrate his or her ability to detect a weak concentration of the irritant smoke.

- The test operator shall break both ends of a ventilation smoke tube containing stannic chloride and attach one end of the smoke tube to a low flow air pump set to deliver 200 milliliters per minute, or an aspirator squeeze bulb. The test operator shall cover the other end of the smoke tube with a short piece of tubing to prevent potential injury from the jagged end of the smoke tube.
- The test operator shall advise the test subject that the smoke can be irritating to the eyes, lungs, and nasal passages and instruct the subject to keep his/her eyes closed while the test is performed.
- The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its irritating properties and to determine if he/she can detect the irritating properties of the smoke. The test operator shall carefully direct a small amount of the irritant smoke in the test subject's direction to determine that he/she can detect it.

Irritant Smoke Fit Test Procedure

- The person being fit tested shall don the respirator without assistance and perform the required user seal check(s).
- The test subject shall be instructed to keep his/her eyes closed if wearing a half face respirator.
- The test operator shall direct the stream of irritant smoke from the smoke tube toward the face seal area of the test subject, using the low flow pump or the squeeze bulb. The test operator shall begin at least 12 inches from the face piece and move the smoke stream around the whole perimeter of the mask. The operator shall gradually make two more passes around the perimeter of the mask, moving to within six inches of the respirator.
- If the person being tested has not had an involuntary response and/or detected the irritant smoke, proceed with the test exercises.
- The exercises identified in the Test Exercises of this procedure shall be performed by the test subject while the respirator seal is being continually challenged by the smoke, directed around the perimeter of the respirator at a distance of six inches.
- If the person being fit tested reports detecting the irritant smoke at any time, the test is failed. The person being retested must repeat the entire sensitivity check and fit test procedure.
- Each test subject passing the irritant smoke test without evidence of a response (involuntary cough, irritation) shall be given a second sensitivity screening check, with the smoke from the same smoke tube used during the

fit test, once the respirator has been removed, to determine whether he/she still reacts to the smoke. Failure to evoke a response shall void the fit test.

- If a response is produced during this second sensitivity check, then the fit test is passed. The glass tube shall be disposed of properly.

Quantitative Fit Test (QNFT) Protocols

Using controlled negative pressure and appropriate instrumentation to measure the volumetric leak rate of a face piece to quantify the respirator have been demonstrated to be acceptable to OSHA.

The Rice-Tinsley Corporation shall ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and ensure that test equipment is in proper working order.

The Rice-Tinsley Corporation shall ensure that QNFT equipment is kept clean and is maintained and calibrated according to the manufacturer's instructions so as to operate at the parameters for which it was designed.

Portacount Fit Test Requirements

- Check the respirator to make sure the respirator is fitted with a high-efficiency filter and that the sampling probe and line are properly attached to the face piece.
- Instruct the person to be tested to don the respirator for five minutes before the fit test starts. This purges the ambient particles trapped inside the respirator and permits the wearer to make certain the respirator is comfortable. This individual shall already have been trained on how to wear the respirator properly.
- Check the following conditions for the adequacy of the respirator fit: Chin properly placed; Adequate strap tension, not overly tightened; Fit across nose bridge; Respirator of proper size to span distance from nose to chin; Tendency of the respirator to slip; Self-observation in a mirror to evaluate fit and respirator position.
- Have the person wearing the respirator do a user seal check. If leakage is detected, determine the cause. If leakage is from a poorly fitting face piece, try another size of the same model respirator, or another model of respirator.
- Follow the manufacturer's instructions for operating the Portacount and proceed with the test.
- The test subject shall be instructed to perform the exercises in Test Exercises section of this procedure.
- After the test exercises, the test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried.

Portacount Test Instrument

The Portacount will automatically stop and calculate the overall fit factor for the entire set of exercises. The overall fit factor is what counts. The Pass or Fail message will indicate whether or not the test was successful. If the test was a Pass, the fit test is over. Since the pass or fail criterion of the Portacount is user programmable, the test operator shall ensure that the pass or fail criterion meet the requirements for minimum respirator performance.

A record of the test needs to be sent to the Safety Manager and kept on file, assuming the fit test was successful. The record must contain the test subject's name; overall fit factor; make, model, style, and size of respirator used; and date tested.

Use, Maintenance and Care of Respirators

This section requires The Rice-Tinsley Corporation to provide for the use, cleaning and disinfecting, storage, inspection, and repair of respirators used by employees. Appendix B - Respirator Cleaning Procedures (Mandatory) shall be followed.

Use

- Items that can affect the face to mask seal are prohibited. This includes facial hair, glasses, clothing, etc.
- Each time a respirator is put on a positive and negative pressure check shall be performed.

Cleaning and Disinfecting Requirements

The Rice-Tinsley Corporation shall provide each respirator user with a respirator that is clean, sanitary, and in good working order. The Rice-Tinsley Corporation shall ensure that respirators are cleaned and disinfected using the procedures in this Respiratory Protection Program, or procedures recommended by the respirator manufacturer, provided that such procedures are of equivalent effectiveness. The respirators shall be cleaned and disinfected at the following intervals:

- Respirators issued for the exclusive use of an employee shall be cleaned and disinfected by the employee as often as necessary to be maintained in a sanitary condition,
- Respirators used in fit testing and training shall be cleaned and disinfected after each use by the Safety Manager or designated person.
- Each individual who is assigned a cartridge respirator is responsible for seeing that the respirator is cleaned, inspected and properly stored.

Cleaning Procedures

- Remove filters, cartridges, or canisters. Disassemble face pieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
- Wash components in warm water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
- Rinse components thoroughly in clean, warm, preferably running water. Drain.
- When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in commercially available cleansers of equivalent disinfectant quality. Another alternative is to use wipes containing alcohol that are intended for use with respirators.
- Rinse components thoroughly in clean, warm, preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on face pieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
- Components should be hand-dried with a clean lint-free cloth or air dried. Reassemble face piece, replacing filters, cartridges, and canisters where necessary. Test the respirator to ensure that all components work properly.

Storage and Inspection

- Respiratory equipment shall be stored in a manner to protect it from damage, contamination, temperature extreme, etc.
- Respiratory equipment intended for emergency use shall be stored in an area that is readily accessible and be clearly marked.

The Rice-Tinsley Corporation shall ensure that respirators are inspected as follows:

- All respirators used in routine situations shall be inspected by the employee before each use and during cleaning;
- A check by the employee of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the face piece, head straps, valves, connecting tube, and cartridges, canisters or filters; and
- A check of elastomeric parts for pliability and signs of deterioration.
- Emergency respiratory equipment will be inspected at least monthly, and before and after each use.
- Escape only respiratory equipment will be inspected before being carried into workplace.

Breathing Air Quality and Use

The Rice-Tinsley Corporation shall ensure that compressed air accords with the following specifications:

- Compressed breathing air shall meet at least the requirements for Type 1-Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:
 - Oxygen content (v/v) of 19.5-23.5%;
 - Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;
 - Carbon monoxide (CO) content of 10 ppm or less;
 - Carbon dioxide content of 1,000 ppm or less; and
 - Lack of noticeable odor.
- The Rice-Tinsley Corporation shall ensure that oxygen is not used in compressed air units.
- The Rice-Tinsley Corporation shall ensure that oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution.
- The Rice-Tinsley Corporation shall ensure that cylinders used to supply breathing air to respirators meet DOT requirements and that:
 - Cylinders are tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 173 and part 178);
 - Cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Type 1--Grade D breathing air; and
 - The moisture content in the cylinder does not exceed a dew point of -50 deg. F (-45.6 deg. C) at 1 atmosphere pressure.
- The Rice-Tinsley Corporation shall ensure that compressors used to supply breathing air to respirators are constructed and situated so as to:
 - Prevent entry of contaminated air into the air-supply system;
 - Minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F (5.56 deg. C) below the ambient temperature;
 - Have suitable in-line air-purifying sorbent beds and filters to further ensure breathing air quality. Sorbent beds and filters shall be maintained and replaced or refurbished periodically following the manufacturer's instructions.
- Have a tag containing the most recent change date and the signature of the person authorized by The Rice-Tinsley Corporation to perform the change. The tag shall be maintained at the compressor.

- For compressors that are not oil-lubricated, The Rice-Tinsley Corporation shall ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.
- For oil-lubricated compressors, The Rice-Tinsley Corporation shall use a high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high-temperature alarms are used, the air supply shall be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.
- The Rice-Tinsley Corporation shall ensure that breathing air couplings are incompatible with outlets for nonrespirable worksite air or other gas systems. No asphyxiating substance shall be introduced into breathing air lines.

Repairs

The Rice-Tinsley Corporation shall ensure that respirators that fail an inspection or are otherwise found to be defective are immediately removed from service, and are discarded or repaired or adjusted in accordance with the following procedures:

- Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and shall use only the respirator manufacturer's NIOSH-approved parts designed for the respirator;
- Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and

Voluntary Use

If an employee chooses to voluntarily wear a respirator when not required by this Program (contaminants do not meet protection standards, odors, etc.) they will be advised of the following in their training:

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for employees.

However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the employee. Sometimes, employees may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

- Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
- Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
- Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
- Keep track of your respirator so that you do not mistakenly use someone else's respirator.

WORKPLACE MONITORING

A program of monitoring potential employee exposures has been implemented through the corporate health and safety department. Project personnel may also be assigned with the task of conducting air monitoring. Direct-reading instruments will also be used in the characterization of potential exposures. All the data collected is used to determine the appropriateness of the respiratory equipment.

RECORDKEEPING

The Rice-Tinsley Corporation will establish and retain written information regarding medical evaluations, fit testing and the respirator program. Records of medical evaluations required by this section must be retained and made available in accordance with 29 CFR 1910.1020. The Rice-Tinsley Corporation shall provide the employee with an opportunity to discuss the questionnaire and examination results with the PLHCP.

Records will be treated confidentially and maintained on file in the The Rice-Tinsley Corporation corporate office by the Safety Manager.

PROGRAM EVALUATION

The Rice-Tinsley Corporation shall conduct evaluations of the workplace as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

The Rice-Tinsley Corporation shall regularly consult employees required to use respirators to assess the employees' views on this program's effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed and verified include, but are not limited to:

- Respirator fit (including the ability to use the respirator without interfering with effective workplace performance); Appropriate respirator selection for the hazards to which the employee is exposed;
- Proper respirator use under the workplace conditions the employee encounters; and
- Proper respirator maintenance.

TRAINING

All employees will receive respirator training during their initial health and safety training class and on at least an annual basis, if required for their job classification. Training shall address employee knowledge of respirators, fit, use, limitations, emergency situations, wearing, fit checks, maintenance & storage, medical signs and symptoms of effective use and general requirements of the OSHA standard. The training must be provided before requiring the employee to use the respirator.

Retraining

Retraining shall be administered annually, and when the following situations occur:

- Changes in the workplace or the type of respirator render previous training obsolete;
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

THE RICE-TINSLEY CORPORATION QUALITATIVE RESPIRATORY FIT TEST RECORD SHEET

Note: Employee Must Have Completed Respiratory Protection Training and Passed Airway Exam Prior To Fit Testing

Test Date: _____

Employee Name: _____ SS# _____

Test Agent: Irritant Smoke (Stannic Chloride)

Respirator Identification:

Model: North 7700 Series Half Mask Size (circle one): Small Medium Large
Manufacturer: North Safety Products Approval No: 42 CFR 84
Additional Information: Respirator must be equipped with North HEPA filters

Fit Test Protocol (Test Subject Initials indicate steps were performed):

___ TOLD TO KEEP EYES CLOSED DURING SMOKE EXPOSURE

___ Test subject smelled irritant smoke before fit test	___ Wore respirator 5 minutes before fit test
___ Protocol reviewed before fit test	___ Test subject did not have hair in fitting area
___ Shown how to wear respirator	___ Performed positive pressure & negative fit
___ Mirror available for use by subject	check successfully after seating respirator
___ Must wear PPE (hard hat, etc.) if needed	

Fit Test Steps (1 minute each except Grimace = 15 seconds)

___ Breath normally	___ Breathe deeply	___ Turned head side to side
___ Nod up and down	___ Talking (Read Rainbow Passage)	___ Grimace
___ Jog in place	___ Breath normally	

"When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow".

Fit Test Results: ___ Pass ___ Fail

Test Subject Signature: _____ Date: _____

Examiner's Name: _____ Examiner's Signature: _____ Date: _____

Distribution: Employee Local File - The Rice-Tinsley Corporation Safety & Training Dept

RIGGING MATERIAL HANDLING

PURPOSE

The purpose of this training program is to ensure a safe and incident free lifting operation.

SCOPE

When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

KEY RESPONSIBILITIES

Management shall determine if this program is required for regulatory compliance within his/her region. Management shall select a training facility or use an in-house qualified trainer to supply and document the training.

Supervisors shall assist the managers in the tasks described above. The supervisor shall verify that each of their employees have the proper training before being involved in rigging operations.

Only qualified and trained personnel can attach or detach lifting equipment to loads or lifting loads.

PROCEDURE

General

Only "qualified riggers" are allowed to attach any loads to a lifting hook and only "qualified operators" are allowed to operate a crane while engaged in lifting operations.

Qualified Rigger: A rigger is anyone who attaches or detaches lifting equipment to loads or lifting devices. In order to be considered a qualified rigger, the person shall be qualified by his employer to perform specific rigging tasks and possesses a recognized degree, certificate, or professional standing, or has extensive knowledge, training, and experience, and can successfully demonstrate the ability to solve problems related to rigging loads.

Material Handling

- Rigging equipment shall be inspected to ensure it is safe. Rigging equipment for material handling shall be inspected prior to use and on each shift and as necessary during its use to ensure that equipment is safe.
- Defective rigging shall be removed from service. Defective equipment shall not be used and removed from service immediately.
- Rigging equipment shall not be loaded in excess of its recommended safe working load. Rigging equipment shall not be loaded beyond its recommended safe working load and load identification shall be attached to the rigging.
- Rigging equipment, when not in use, shall be removed from the immediate work area. Rigging equipment not in use shall be removed from the immediate work area so as not to present a hazard to employees.
- Tag lines shall be used unless their use creates an unsafe condition.

- Latches will be in place on all hooks, eliminating the hook throat opening. Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be a type that can be closed and locked, eliminating the hook throat opening. Alternatively, an alloy anchor type shackle with a bolt, nut and retaining pin may be used.
- All employees shall be kept clear of loads about to be lifted and of suspended loads. No employee shall be allowed under a suspended load.
- Slings shall not be shortened. - Chain or wire rope slings shall not be shortened with knots or bolts or other makeshift devices. Slings shall not be kinked or knotted, etc.

Training and Education

The Rice-Tinsley Corporation employees shall display their competency in the following topics:

- The selection of proper hardware (eye bolts, shackles, hooks, wire rope products, synthetic slings, chain slings, etc.) for the correct application (weight, hitches, angles, temperatures, center of gravity, etc.).
- The inspection of the selected hardware before, during and after the lift.
- The proper methods of securing the load, attaching the load to the hook, lifting the load, handling of the load during the movement of the load and lowering and placement of load.
- The proper storage of the rigging equipment.
- All The Rice-Tinsley Corporation employees shall re-certify their training on a four (4) year basis.

SCAFFOLDS

PURPOSE

The purpose of this program is to prevent injuries due to falls from elevated work areas and ensure employees and contractors are able to inspect scaffolding materials and erected scaffolds.

SCOPE

This program is applicable at every work area where scaffolding is erected. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

DEFINITIONS

Bearer - A horizontal member of a scaffold upon which the platform rests and which may be supported by ledgers.

Brace - A tie that holds one scaffold member in a fixed position with respect to another member.

Coupler - A device for locking together the components of a tubular metal scaffold which shall be designed and used to safely support the maximum intended loads.

Double pole or independent pole scaffold - A scaffold supported from the base by a double row of uprights, independent of support from the walls and constructed of uprights, ledgers, horizontal platform bearers, and diagonal bracing.

Guardrail - A rail secured to uprights and erected along the exposed sides and ends of platforms.

Heavy Duty Scaffold - A scaffold designed and constructed to carry a working load not to exceed 75 pounds per square foot.

Ledger (stringer) - A horizontal scaffold member which extends from post to post and which supports the putlogs or bearer forming a tie between the posts.

Light Duty Scaffold - A scaffold designed and constructed to carry a working load not to exceed 25 pounds per square foot.

Manually Propelled Mobile Scaffold - Manually propelled mobile scaffold.

Maximum intended load - The total of all loads including the working load, the weight of the scaffold, and such other loads as may be reasonably anticipated.

Medium duty scaffold - A scaffold designed and constructed to carry a working load not to exceed 50 pounds per square foot.

Mid-Rail - A rail approximately midway between the guardrail and platform, used when required, and secured to the uprights erected along the exposed sides and ends of platforms.

Putlog - A scaffold member upon which the platform rests.

Runner - The lengthwise horizontal bracing or bearing members or both.

Scaffold - Any temporary elevated platform and its supporting structure used for supporting workmen or materials or both.

Toe board - A barrier secured along the sides and ends of a platform, to guard against the falling of material.

Tube and coupler scaffold - An assembly consisting of tubing, which serves as posts, bearers, braces, ties, and runners, a base supporting the posts, and special couplers which serve to connect the uprights and to join the various members.

Tubular welded frame scaffold - A sectional, panel, or frame metal scaffold substantially built up of prefabricated welded sections that consist of posts and horizontal bearer with intermediate members. Panels or frames shall be braced with diagonal or cross braces.

Working Load - Load imposed by men, materials, and equipment.

KEY RESPONSIBILITIES

Managers and Supervisors

- Responsible for ensuring that scaffolds are erected by a qualified person, that set up inspections are performed, and all daily inspections are performed before work starts for the day.
- Responsible for ensuring that all employees, and/or contractors have been trained in the use and inspection methods for scaffolds. Only qualified and competent personnel are allowed to use or modify scaffolding systems.
- Responsible for ensuring that all employees and contractors are aware that if an inspection discovers a defect, the scaffold cannot be used until repairs are made.

Employees

- Responsible for following this program by inspecting the scaffolds daily and report any damages or repairs that may be needed to their supervisor.

PROCEDURE

General Requirements

Scaffolds shall be furnished and erected in accordance with applicable standards for persons engaged in work that cannot be done safely from the ground or from solid construction. Except that ladders used for such work shall conform to ladder safety standards.

Scaffolds shall only be erected by a qualified third party, who is competent to certify the scaffolding safe to use.

The footing or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose boards shall not be used to support scaffolds or planks.

Scaffolds and their components shall be capable of supporting without failure at least four times the maximum intended loads. Scaffold components must meet OSHA requirements 29 CFR 1910.28 and 29 CFR 1926.451.

Wood scaffold planks must be cross-supported every 8 feet. Scaffold deck boards shall be cleated, wired or nailed into place.

All working levels of scaffolds will be floored completely except where internal ladders require space for ladder openings.

Scaffolds and other devices mentioned or described in this program shall be maintained in safe condition. Scaffolds shall not be altered or moved horizontally while they are occupied.

Any scaffold damaged or weakened from any cause shall be immediately repaired and shall not be used until repairs have been completed.

Scaffolds shall not be loaded in excess of the working loads for which they are intended.

Bolts used in the construction of scaffolds shall be of adequate size and in sufficient numbers at each connection to develop the designed strength of the scaffold.

All platforms shall be overlapped (minimum 12 inches) and secured from any movement.

An access ladder or equivalent safe access shall be provided.

Scaffold planks shall extend over their end supports not less than 6 inches or more than 18 inches.

The poles, legs, or uprights of scaffolds shall be plumb, and securely and rigidly braced to prevent swaying and displacement.

Materials being hoisted onto a scaffold shall have a tag line.

Overhead protection shall be provided for workers on a scaffold exposed to overhead hazards.

Toe boards and guardrails shall be installed if a scaffold or platform is erected to a height of 6 feet or more. Scaffolds shall be provided with a screen between the toe board and the guardrail, extending along the entire opening, consisting of No. 18 gauge wire one-half inch mesh or the equivalent, where workers are required to work or pass under the scaffolds.

Work shall not be performed on a scaffold during storms or high winds.

Work shall not be performed on scaffolds that are covered with snow or ice, unless all snow and ice has been removed and all planking has been sanded to prevent slipping.

Tools, material, and debris shall not be allowed to accumulate in quantities to cause a hazard.

Inspections

Scaffolding shall be inspected, by a qualified person, in conjunction with the manufactures required recommendations. The competent person must also ensure scaffolds are safe prior to and during scaffold use.

- At a minimum, the following shall be inspected by the competent person after erection, before the start of the day or beginning of a shift change to ensure scaffolds are safe prior to and during use:
 - Ground or surface footing shall be inspected to ensure that there is no settling.
 - All main supports and cross braces shall be inspected for any signs of damage, missing pins, bolts and any locks and/or safety keepers.
 - All walking surfaces and/or planks shall be inspected for damage and proper placements and any possible movement.
 - All walkways and planks must be secure to prevent any movement.
- Inspection shall be made to ensure that the scaffold is stable and any movement is prevented.
- If during the inspection, a defect or damage to the scaffold is discovered, the scaffold shall be tagged out by the competent person, complied with and use prohibited until needed repairs are made.

Mandatory Signs and Tags for Defects Found

Signs and tags shall be visible at all times when work is being performed and shall be removed or covered promptly when the hazards no longer exist. Employees shall be instructed in complying with signs and tags.

Defective or unsafe equipment or conditions shall be tagged out by the competent person using a weather resistant tag secured to the scaffolding structure on all four sides and must be complied with. An example would be improper footing conditions were observed.

Danger signs shall be used only where an immediate hazard exists. Danger signs must be posted around the immediate area of the scaffold, to alert other workers of possible danger from falling objects from the scaffold.

Caution Signs and/or barricade tape shall be used to mark off a larger area around scaffolding warning other workers to use caution.

Modifications

Modification and repairs shall be performed by a qualified person, who is competent to certify the scaffolding safe to use to ensure non-qualified personnel do not create additional hazards.

Employees shall not perform any modifications or repairs, unless they have been trained and certified, and failure to comply may result in disciplinary action and or termination.

TRAINING REQUIREMENTS

The Rice-Tinsley Corporation is required to train all employees that work on scaffolds regarding hazards by "qualified" persons. The supervisor shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training shall occur before use and include the following areas:

- Basic safety information and duties of a competent person assembling/disassembling scaffolding (see below). Basic safety information must be provided prior to use and when conditions change.
- Hazards including fall protection, electrical safety, falling object protection (see below).
- Tags – types and the requirement to comply with.
- The proper use of the scaffold, and the proper handling of materials on the scaffold.
- The correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used.
- The maximum intended load capacity of the scaffolds used.

The supervisor shall have each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold trained by a competent person to recognize any hazards associated with the work in question.

- The training shall include the following topics, as applicable:
- The nature of scaffold hazards.
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in use.
- The design criteria, maximum intended load-carrying capacity and intended use of the scaffold.

When the employer has reason to believe that an employee lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, the employer shall retrain each employee so that the requisite proficiency is regained. Retraining is also required in at least the following situations:

- Where changes in scaffolding at the worksite present a hazard about which an employee has not been previously trained.
- Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained.
- Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

Hazards Associated with the Use of Scaffolds

- Nearby electrical lines or source of electrical hazards
- Poor foundation – scaffold shall be erected on a firm and stable base.
- Damaged scaffold components.
- Overload of scaffold components (load capacity).
- Unstable, incomplete or incorrect use of scaffold.
- Base frames not adequately braced, tied or supported.
- Scaffold exceeds height to base dimensions ratio.
- Inappropriate access or egress points.

- Slips and falls.
- Falling objects.
- Manual handling.
- Movement of plant and machinery – all cranes and mobile machinery shall keep within designated areas and away from scaffolding.

Duties of a Competent Person Assembling/Disassembling Scaffolding

General

- To select and direct employees who erect, dismantle, move, or alter scaffolds.
- To determine if it is safe for employees to work on or from a scaffold during storms or high winds and to ensure that a personal fall arrest system or wind screens protect these employees. (Note: Windscreens should not be used unless the scaffold is secured against the anticipated wind forces imposed.)

For Training

- To train employees involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting scaffolds to recognize associated work hazards.

For Inspections

- To inspect scaffolds and scaffold components for visible defects before each work shift and after any occurrence which could affect the corrective actions.
- To inspect ropes on suspended scaffolds prior to each work shift and after every occurrence which could affect the structural integrity and to authorize prompt corrective actions.
- To inspect manila or plastic (or other synthetic) rope being used for top rails or midrails.

For Suspension Scaffolds

- To evaluate direct connections to support the load.
- To evaluate the need to secure two-point and multi-point scaffolds to prevent swaying.

For Erectors and Dismantlers

- To determine the feasibility and safety of providing fall protection and access.
- To train erectors and dismantlers to recognize associated work hazards.

For Scaffold Components

- To determine if a scaffold will be structurally sound when intermixing components from different manufacturers.
- To determine if galvanic action has affected the capacity when using components of dissimilar metals.

Tube And Coupler Scaffolds - Light Duty

Uniformly distributed load		Not to exceed 25 p.s.f.
Post Spacing (longitudinal)		10 ft. 0 in.
Post Spacing (transverse)		6 ft. 0 in.
Working Levels	Additional Planked Levels	Maximum Height
1	8	125 ft.
2	4	125 ft.
3	0	91 ft. 0 in.

Tube And Coupler Scaffolds - Medium Duty

Uniformly distributed load		Not to exceed 50 p.s.f
Post spacing (longitudinal)		8 ft. 0 in.
Post spacing (transverse)		6 ft. 0 in.
Working Levels	Additional Planked Levels	Maximum Height
1	6	125 ft.
2	0	78 ft. 0 in.

SPILL PREVENTION / RESPONSE

PURPOSE

The purpose of this plan is to document spill prevention and response requirements. Each The Rice-Tinsley Corporation work site will develop a spill prevention and response plan based on the requirements and template provided.

SCOPE

This procedure applies to all The Rice-Tinsley Corporation operations. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

REQUIREMENTS

Each work site spill prevention and response plan shall contain the following requirements.

- Chemical substances should be stored in proper containers to minimize the potential for a spill. Whenever possible, chemicals should be kept in closed containers and stored so they are not exposed to storm water.
- The program must identify chemicals used that may be potentially spilled or released. This will include both liquid chemicals used at our facilities or brought on to owner client sites.
- Spill kits must be adequate for any anticipated spills. A proper spill kit must contain the appropriate supplies for materials that may be spilled. Supplies must be easily accessible when required, and considerations must be made for both the type and quantity of materials. The contents of spill response kits shall be periodically assessed to ensure the availability of adequate spill response supplies and adjust inventory as necessary.
- The Rice-Tinsley Corporation shall ensure the availability of adequate spill response supplies by periodic inspection to assess their availability and adjust the inventory as necessary.
- Employees must be instructed on spill prevention and the proper response procedures for spilled materials. The training should include materials available for use, proper waste disposal and communication procedures.
- Areas where chemicals may be used or stored must be maintained using good housekeeping best management practices. This includes, but is not limited to clean and organized storage, labeling and secondary containment where necessary.
- Proper communication measures for employees to initiate in the event of a spill will be created on a site-by-site basis. Communication procedures will be based on type and quantity of materials spilled.
- Environmental spills shall be reported to environmental authorities when required. Reporting procedures will be based on type and quantity of materials spilled.

The following template shall be used for each work site.

Copies of this plan are located at the facility and are available to all employees.

Location(s) of plan(s): _____

Facility Information

Facility Name: _____

Mailing Address: _____

Physical address if different: _____

Owner Name: _____

Owner Address: _____

Primary Contact Name: _____

Work Phone Number: _____

Home Phone Number: _____

Mobile Phone Number: _____

Secondary Contact Name: _____

Work Phone Number: _____

Home Phone Number: _____

Mobile Phone Number: _____

Date of Initial Operation: _____

Site Assessment

Location - Describe where facility is located.

STOP WORK AUTHORITY

PURPOSE

The Stop Work Authority process involves a stop, notify, correct and resume approach for the resolution of a perceived unsafe condition, act, error, omission or lack of understanding that could result in an undesirable event. All The Rice-Tinsley Corporation employees have the authority and obligation to stop any task or operation where concerns or questions regarding the control of health, safety or environmental risks exist.

SCOPE

This program applies to all The Rice-Tinsley Corporation projects and operations.

KEY RESPONSIBILITIES

- Employees are responsible to initiate a Stop Work Intervention when warranted and management is responsible to create a culture where SWA is exercised freely.
- Supervisors are responsible to ensure a culture is created where SWA is exercised and honored freely to resolve issues before operations resume and recognize proactive participation.
- Management must establish and support clear expectations to exercise SWA, create a culture where SWA is exercised freely and hold those accountable that chose not to comply with established SWA policies.

STOP WORK AUTHORITY PROCEDURE

- When an unsafe condition is identified the Stop Work Intervention will be initiated, coordinated through the supervisor, initiated in a positive manner, notify all affected personnel and supervision of the stop work issue, correct the issue and resume work when safe to do so.
- No work will resume until all stop work issues and concerns have been adequately addressed.
- Any form of retribution or intimidation directed at any individual or company for exercising their right to issue a stop work authority will not be tolerated by the host nor by The Rice-Tinsley Corporation.

FOLLOW-UP

- All Stop Work Interventions shall be documented for lessons learned and corrective measures to be put into place.
- Stop Work reports shall be reviewed by supervision order to measure participation, determine quality of interventions and follow-up, trend common issues, identify opportunities for improvement, and facilitate sharing of learning.
- It is the desired outcome of any Stop Work Intervention that the identified safety concern(s) have been addressed to the satisfaction of all involved persons prior to the resumption of work. Most issues can be adequately resolved in a timely manner at the job site, occasionally additional investigation and corrective actions may be required to identify and address root causes.

TRAINING

Employees shall receive Stop Work Authority training before their initial assignment. The training will be documented including the employee name, the dates of training and subject matter.

STOP WORK FORM

Section 1: Stop Work Issuance			
Location of operation		Date & Time	
Supervisor		Phone	
Person initiating stop work			
Person performing work			
Work operation or condition (include names of individuals performing work)			
Hazard (as stated by person initiating stop work)			

Section 2: Date / Time Informed			
Supervisor		Safety Manager	
Area Manager		Client Safety (If required)	

Section 3: Follow-up Action (Be specific – what by, who by, when by to correct hazard)

Section 4: Restart Concurrence			
Supervisor		Date	
Area Manager		Date	
Safety Manager		Date	

WELDING, CUTTING AND HOT WORK

PURPOSE

The purpose of this program is to assure a safe work environment during welding, cutting, and hot work operations.

SCOPE

This program is applicable to all employees directly involved or assisting in the welding, cutting and hot work operations. When work is performed on a no owned or operated site, the operator's program shall take precedence, however, this document covers The Rice-Tinsley Corporation employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent. Operators of equipment should report any equipment defect or safety hazards and discontinue use of equipment until its safety has been assured. Repairs shall be made only by qualified personnel. If fire hazards cannot be taken to a safe place or guards cannot be used to confine heat, sparks, slag and protect the immovable fire hazards, the welding and cutting shall not be performed.

DEFINITIONS

Welding/Hot Work Procedures - any activity which results in sparks, fire, molten slag, or hot material which has the potential to cause fires or explosions.

Examples of Hot Work - Cutting, Brazing, Soldering, Thawing Pipes, Grinding, using an electric tool in a hazardous area and Welding.

Special Hazard Occupancies - any area containing Flammable Liquids, Dust Accumulation, Gases, Plastics, Rubber and Paper Products.

Hazards - includes, but not limited to the following; fires and explosions, skin burns, welding "blindness", and respiratory hazards from fumes and smoke.

KEY RESPONSIBILITIES

Managers and Supervisors

- Determine if its property is safe for welding and cutting operations.
- Establish safe areas for welding and cutting operations.
- Provide training for all employees whose task includes heat, spark or flame producing operations such as welding, brazing, or grinding.
- Develop and monitor effective hot work procedures.
- Provide safe equipment for hot work.
- Provide proper and effective PPE for all hot work.
- Monitor all hot work operations.
- Ensure all hot work equipment and PPE are in safe working order.
- Allow only trained and authorized employees to conduct hot work and conduct inspections of the hot work area before operations begin.

- Ensure permits are used for all hot work outside authorized areas.

Employees

- Follow all hot work procedures.
- Properly use appropriate hot work PPE.
- Inspect all hot work equipment before use.
- Report any equipment problems or unsafe conditions.

PROCEDURE

General

A hot work permit must be completed before performing hot work. Precautions that are to be taken shall be in the form of a written permit. Before cutting or welding is permitted the area shall be inspected and a written permit shall be used to authorize welding and cutting operations.

Where practicable all combustibles shall be relocated at least 35 feet from the work site. Where relocation is impractical, combustibles shall be protected with flameproof covers, shielded with metal, guards, curtains, or wet down the material to help prevent ignition of material.

Ducts, conveyor systems, and augers that might carry sparks to distant combustibles shall be protected or shut down.

Where cutting or welding is done near walls, partitions, ceilings, or openings in the floor (grating, manholes, etc.), fire-resistant shields or guards shall be provided to prevent ignition.

Wherever there are floor openings or cracks in the flooring that cannot be closed, precautions shall be taken so that no readily combustible materials on the floor below will be exposed to sparks which might drop through the floor. The same precautions shall be observed with regard to cracks or holes in walls, open doorways and open or broken windows.

If welding is to be done on a metal wall, partition, ceiling, or solid decking/flooring, precautions shall be taken to prevent ignition of combustibles on the other side, due to conduction or radiation of heat. Where combustibles cannot be relocated on the opposite side of the work, a fire watch person shall be provided on the opposite side of the work when management determines it to be necessary.

Welding shall not be attempted on a metal partition, wall, and ceiling or decking/flooring constructed of combustible sandwich panels.

Before cutting or welding is permitted the area shall be inspected by position responsible for authorizing welding and cutting operations. He/she shall designate precautions to be followed in granting authorization to proceed preferably in the form of a written permit.

Cutting or welding on pipes or other metal in contact with combustible walls, partitions, floors, ceilings, or roofs shall not be undertaken if the work is close enough to cause ignition by combustion.

Cutting or welding shall not be permitted in the following situations:

- In areas not authorized by management.
- In sprinkled buildings while such protection is impaired.
- In the presence of potentially explosive atmospheres, e.g. flammables.
- In areas near the storage of large quantities of exposed, readily ignitable materials.
- In areas where there is dust accumulation of greater than 1/16 inch within 35 feet of the area where welding/hot work will be conducted.
- All dust accumulation shall be cleaned up before welding or hot work is permitted.

Whenever welding or cutting is performed in locations where other than a minor fire might develop or any of the conditions mentioned above cannot be met, a fire watch shall be provided when management determines it to be necessary.

- The fire watch shall be provided during and for a minimum of 1/2 hour past the completion of the welding project.
- The fire watch shall be trained in the use of fire extinguishers and the facility's alarm system.
- During this time the fire watch will have appropriate fire extinguishers readily available.
- Suitable extinguishers shall be provided and maintained ready for instant use.
- A hot-work permit will be issued on all welding or cutting outside of the designated welding area.

Fire Prevention Measures

A designated welding area shall be established to meet the following requirements:

- Floors swept and cleaned of combustibles within 35 feet of work area.
- Flammable and combustible liquids and material will be kept 35 feet from work area.
- Adequate ventilation providing 20 air changes per hour.
- At least one 10 pound dry chemical fire extinguisher shall be within access of 35 feet of the work area.
- Protective dividers such as welding curtains or noncombustible walls will be provided to contain sparks and slag to the combustible free area.

Requirements for welding conducted outside the designated welding area:

- Portable welding curtains or shields must be used to protect other workers in the welding area.
- A hot-work permit must be completed and complied with prior to initiating welding operations.
- Respiratory protection is mandatory unless an adequate monitored airflow away from the welder and others present can be established and maintained.
- Plastic materials must be covered with welding tarps during welding procedures.
- Fire Watch must be provided for all hot-work operations.

After welding operations are completed, the welder shall mark the hot metal or provide some other means of warning other workers.

Confined Space

- A space that is large enough and so configured that an employee can bodily enter and perform assigned work;
- Has limited or restricted means for entry or exit (for example, tanks, vessels, coolers, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and
- Is not designed for continuous occupancy.

Refer to The Rice-Tinsley Corporation's Confined Space Program before commencing any welding, cutting, and/or brazing operations in an area meeting the requirements of a confined space. Ventilation is a prerequisite to work in confined spaces.

When welding or cutting is being performed in any confined spaces, the gas cylinders and welding machines shall be left on the outside. Before operations are started, heavy portable equipment mounted on wheels shall be securely blocked to prevent accidental movement.

When a welder must enter a confined space through a manhole or other small opening, means shall be provided for quickly removing him in case of an emergency.

- When safety belts and lifelines are used for this purpose, they shall be so attached to the welder's body that it cannot be jammed in a small exit opening.
- An attendant with a preplanned rescue procedure shall be stationed outside to observe the welder at all times and be capable of putting rescue operations into effect.

When arc welding is to be suspended for any substantial period of time, such as during lunch or overnight, all electrodes shall be removed from the holders and the holders carefully located so that accidental contact cannot occur and the machine shall be disconnected from the power source.

In order to eliminate the possibility of gas escaping through leaks of improperly closed valves, when gas welding or cuffing, the torch valves shall be closed and the fuel-gas and oxygen supply to the torch positively shut off at some point outside the confined area whenever the torch is not to be used for a substantial period of time, such as during lunch hour or overnight. If practical, the torch and hose shall also be removed from the confined space.

When welding must be performed in a space entirely screened on all sides, the screens shall be so arranged that no serious restriction of ventilation exists. It is desirable to have the screens so mounted that they are about 2 feet (0.61 m) above the floor unless the work is performed at so low a level that the screen must be extended nearer to the floor to protect nearby workers from the glare of welding.

A fixed enclosure shall have a top and not less than two sides which surround the welding or cutting operations, and a rate of airflow sufficient to maintain a velocity away from the welder of not less than 100 linear feet (30 m) per minute.

All welding and cutting operations carried on in confined spaces shall be adequately ventilated to prevent the accumulation of toxic materials or possible oxygen deficiency. This applies not only to the welder, but also to helpers and other personnel in the immediate vicinity. All air withdrawn will be replaced with air that is clean.

In circumstances for which it is impossible to provide such ventilation, airline respirators or hose masks approved for this purpose by the National Institute for Occupational Safety and Health (NIOSH) will be provided. In areas immediately hazardous to life, a full-face piece, positive pressure, self-contained breathing apparatus or a combination full-face piece, positive pressure supplied-air respirator with an auxiliary, self-contained air supply approved by NIOSH must be used.

Where welding operations are carried on in confined spaces and where welders and helpers are provided with hose masks, hose masks with blowers or self-contained breathing equipment, a worker shall be stationed on the outside of such confined spaces to ensure the safety of those working within.

Fumes, Gases and Dust

Fumes produced by some welding processes can be toxic and may require source extraction. An assessment of the work to be performed must be completed before each job is undertaken. Fumes generally contain particles from the material being welded. Welding fumes can have an acute effect on the respiratory system.

Any welding, cutting or burning of lead base metals, zinc, cadmium, mercury, fluorides, beryllium or exotic metals or paints not listed here that could produce dangerous fumes shall have proper ventilation or respiratory protection. This includes inert-gas metal-arc welding or oxygen cutting of stainless steel.

Welders and helpers will refer to The Rice-Tinsley Corporation's Respiratory Protection Program to determine the appropriate respiratory protection to be used during welding operations.

All welding and cutting operations shall be adequately ventilated to prevent the accumulation of toxic materials. This applies not only to the welder, but also to helpers and other personnel in the immediate vicinity.

Personal Protection

Goggles or other suitable eye protection shall be used during all gas welding or oxygen cutting operations.

Spectacles without side shields, with suitable filter lenses are permitted for use during gas welding operations on light work, for torch brazing or for inspection.

Helmets and hand shields shall be made of a material, which is an insulator for heat and electricity. Helmets, shields, and goggles shall not be readily flammable and shall be capable of withstanding sterilization.

Helmets and hand shields shall be arranged to protect the face, neck and ears from direct radiant energy from the arc.

Helmets shall be provided with filter plates and cover plates designed for easy removal.

Helmets or hand shields shall be used during all arc welding or arc cutting operations.

All parts shall be constructed of a material, which will not readily corrode or discolor the skin.

Goggles shall be ventilated to prevent fogging of the lenses as much as practicable.

All glass for lenses shall be tempered, substantially free from scratches, air bubbles, waves and other flaws. Except when a lens is ground to provide proper optical vision correction, the front and rear surfaces of lenses and windows shall be smooth and parallel.

Lenses shall bear some permanent distinctive marking which may readily identify the source and shade.

The following is a guide for the selection of the proper shade numbers. These recommendations may be varied to suit the individual's needs.

Welding Operation		Shade Number
Shielded metal — arc welding 1/16, 3/32, 1/8-5/32 inch electrodes		10
Gas-shielded arc welding (nonferrous) 1/16, 3/32, 5/32 inch electrodes		11
Gas-shielded arc welding (ferrous) 1/16, 3/32, 1/8, 5/32 electrodes		12
Shielded metal arc welding: 3/16	7/32,1/4 inch electrodes	12
	5/16. 3/8-inch electrodes	14

Atomic hydrogen welding	10 – 14
Carbon arc welding	14
Soldering	2
Torch brazing	3 or 4
Light cutting, hp to 1 inch	3 or 4
Medium cutting, 1 inch to 6 inches	4 or 5
Heavy cutting, 6 inches or over	5 or 6
Gas welding (light) up to 1/8 inch	4 or 5
Gas welding (medium) 1/8 - 1/2 inch	5 or 6
Gas welding (heavy) 1/2 inch or over	6 or 8

NOTE:

In gas welding or oxygen cutting where the torch produces a high yellow light, it is desirable to use a filter or lens that absorbs the yellow or sodium line in the visible light of the operation. All filter lenses and plates shall meet the test for transmission of radiant energy prescribed in ANSI Z87.1 — 1968 — American National Standard Practice for Occupational and Educational Eye and Face Protection. Where the work permits the welder to be enclosed in an individual booth painted with a finish of low reflectivity such as zinc oxide (an important factor for absorbing ultraviolet radiation) and lamp black or shall be enclosed with noncombustible screens similarly painted. Booths and screens shall permit circulation of air at floor level. Workers or other persons adjacent to the welding areas shall be protected from the rays by noncombustible or flameproof screens or shields or shall be required to wear appropriate goggles.

Adequate hand protection and clothing must be used to protect the body from welding hazards.

Cleaning Compounds

In the use of cleaning materials, because of their possible toxicity or flammability, appropriate precautions such as manufacturer instructions shall be followed.

- Degreasing and other cleaning operations involving chlorinated hydrocarbons shall be so located that no vapors from these operations will reach or be drawn into the atmosphere surrounding any welding operation.
- In addition, trichloroethylene and perchloroethylene shall be kept out of atmospheres penetrated by the ultraviolet radiation of gas-shielded welding operations.

Oxygen cutting, using a chemical flux, iron powder or gas shielded arc cutting for stainless steel shall be performed using mechanical ventilation adequate to remove the fumes generated.

Cylinders

Compressed gas cylinders shall be DOT-approved and legibly marked near the shoulder of the cylinder for the purpose of identifying the gas content with either the chemical or trade name of the gas.

- All compressed gas cylinder connections must comply with ANSI B57. 1-1965 Standards.
- Compressed gas cylinders shall be secured in an upright position at all times except, if necessary, for short periods of time while cylinders are actually being hoisted or carried.

All cylinders shall be kept away from sources of heat and from radiators and piping systems that may be used for grounding purposes. Cylinders and cylinder valves including couplings and regulators shall be kept free from oily or greasy substances and must not be handled with gloves or rags in the same condition.

Stored oxygen cylinders shall be kept at least 20 feet from the fuel gas cylinders or combustible materials, especially oil or grease, or separated by a non-combustible barrier at least 5 feet high with a fire rating of at least one-half hour. All empty cylinders shall have closed valves. Valve protection caps shall always be in place and hand-tight except when cylinders are in use or connected for use.

Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards.

Fuel gas cylinders stored inside buildings shall be limited to a total capacity of 2000 cubic feet (300 pounds) of liquefied petroleum gas, except for those in actual use or attached ready for use.

All acetylene cylinders shall be stored valve-end up.

Assigned storage spaces shall be located where cylinders cannot be knocked over or damaged by falling objects or subject to tampering by unauthorized persons.

- Back flow protection shall be provided by an approved device that will prevent oxygen from flowing into the fuel-gas system or fuel from flowing into the oxygen system.
- An approved device that will prevent flame from passing into the fuel-gas system shall provide flashback protection.
- An approved pressure-relief device set at the appropriate pressure shall provide backpressure protection.

Special care must be taken when transporting gas cylinders:

- Cylinders must be secured with valve cap installed.
- Cylinders shall not be lifted by the valve protection caps, the regulators must be removed and cylinders shall not be dropped or permitted to strike each other.
- Removed regulators must be carried in the cab of the vehicle.
- Cylinders shall not be tampered with nor should any attempt be made to repair them.
- They shall be handled carefully - rough handling, knocks, or falls are liable to damage the cylinder, valve or safety device and cause leakage.

Safety devices shall not be tampered with.

Arc Welding and Cutting

All personnel operating, installing, and maintaining welding equipment shall be qualified or trained to operate and maintain such equipment.

- All workmen assigned to operate or maintain equipment shall be familiar with and electrical welding equipment shall be chosen for safe operation and comply with applicable Requirements for Electric Arc Welding Standards to include: 29 CFR 1910.254, 29 CFR 1910.252 (a)(b) (c) and if gas shielded arc welding is done the must be familiar with the American Welding Society Standard A6-1-1966.

- Arc welding equipment must be designed to meet conditions such as exposure to corrosive fumes, excessive humidity, excessive oil vapor, flammable gasses, abnormal vibration or shock, excessive dust and seacoast or shipboard conditions.
 - It shall be operated at recommended voltage in accordance to the manufacturer recommendations.
 - All leads shall be periodically inspected and replaced if insulation is broken or splices are unprotected.
 - Leads shall not be repaired with electrical tape.
- All ground connections shall be checked to determine that they are mechanically strong and electrically adequate for the required current.

A disconnecting switch or controller shall be provided at or near each welding machine along with over current protection.

All direct current machines shall be connected with the same polarity and all alternating current machines connected to the same phase of the supply circuit and with the same polarity.

- To prevent electrical contact with personnel, all electrode holders shall be placed where they do not make contact with persons, conducting objects or the fuel of compressed gas tanks.
- All cables with splices within 10 feet of the holder shall not be used.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

If an object to be welded or cut cannot be moved and if all the fire hazards cannot be removed, then guards shall be used to confine the heat sparks and slag and to protect the immovable fire hazards.

Resistance Welding

All personnel operating, installing, and maintaining welding equipment shall be qualified or trained to operate and maintain such equipment.

- Voltage, interlocks, guarding, grounding and shields shall be in accordance with manufacturer recommendations.
- Precautions such as flash guarding, ventilation and shields shall be provided to control flashes, toxic elements and metal fumes.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

The frame or case of the welding machine, except engine-driven machines, shall be grounded.

Before starting operations all connections to the machine shall be checked to make certain they are properly made.

Transmission Pipeline

When arc welding is performed in wet conditions, or under conditions of high humidity, special protection against electric shock shall be supplied.

Pressure testing:

- In pressure testing of pipelines, the workers and the public shall be protected against injury by the blowing out of closures or other pressure restraining devices.
- Protection shall be provided against expulsion of loose dirt that may have become trapped in the pipe.

The welded construction of transmission pipelines shall be conducted in accordance with the Standard for Welding Pipelines and Related Facilities, API Std. 1104-1998.

Oxygen Fuel Gas Welding and Cutting:

Only approved apparatuses such as torches, regulators or pressure-reducing valves, setting generators and manifolds shall be used:

- Mixtures of fuel gases and air or oxygen may be explosive and must be guarded against.
- All hoses and hose connections shall comply with the Compressed Gas Association and Rubber Manufacturers' Associations' applicable standards.
- Workers in charge of the oxygen or fuel-gas supply equipment, including generators, shall be instructed and judged competent by the The Rice-Tinsley Corporation before being left in charge.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

Fire Watch Requirements

A fire watch shall be under these conditions when management determines it to be necessary:

- When working within 35' of any exposed and live gas lines and/or highly flammable materials a Hot Work Permit and fire watch is required up to 30 minutes after work has stopped.
- Fire watchers shall have fire extinguishers readily available.

First Aid Equipment

First aid equipment shall be available at all times. All injuries shall be reported as soon as possible for medical attention. First aid shall be rendered until medical attention can be provided.

TRAINING

Training shall include:

- Position Responsibilities
- Cutters, welders and their supervisors must be suitably trained in the safe operations of their equipment and the safe use of the process.
- Fire Watch Responsibilities - specifically, the fire watch must know:
 - That their ONLY duty is Fire Watch.
 - When they can terminate the watch.
 - How to use the provided fire extinguisher(s).
 - Be familiar with facilities and how to activate fire alarm, if fire is beyond the incipient stage.
 - Operator Responsibilities
 - Contractor Responsibilities
 - Documentation requirements
 - Respirator Usage requirements
 - Fire Extinguisher training.

QMS PROGRAMS

QMS COMPETENCE, AWARENESS AND COMMUNICATION - GLOBAL

PURPOSE

The purpose of this competence, awareness and communication plan, is to establish, implement & maintain a procedure to ensure that all the personnel is trained appropriately to the requirements of Environmental, Occupational Health & Safety Management System, including those whose work may create a significant impact or risk on the environment and safety.

SCOPE

This procedure applies to all permanent, contract employees & personnel working under the control of The Rice-Tinsley Corporation, whose job may affect the functioning of Environmental, Occupational Health & Safety Management System. It is the responsibility of the HR Manager to make sure awareness is attained by providing the employees of The Rice-Tinsley Corporation the understanding of their responsibilities and how their actions contribute to the achievement of the The Rice-Tinsley Corporation's objectives.

At The Rice-Tinsley Corporation, we ensure that staff are fully aware of their responsibilities. This awareness could occur through various means such as:

- Documented policies and procedures
- Training sessions
- Meetings
- Assessments

The Rice-Tinsley Corporation insures employees are clearly aware of their responsibilities and conscious of how those responsibilities and their actions can contribute to The Rice-Tinsley Corporation and achieving our objectives.

Persons doing work under the organization's control are aware of their contributions to the QMS.

DEFINITIONS

Training – Includes all forms of training such as on job experience and background education, programmed training or EHS training.

Awareness – This refers to awareness on Environment & Safety Management System.

Competence – All employees or personnel working for or on behalf & under the control of The Rice-Tinsley Corporation whose jobs can affect the Environmental, Health & Safety should be competent. This means that the education, experience and training requirements for that job must be defined and the employee must meet the requirement.

QMS - A quality management system (QMS) is defined as a formalized system that documents processes, procedures, and responsibilities for achieving quality policies and objectives. A QMS helps coordinate and direct an

organization's activities to meet customer and regulatory requirements and improve its effectiveness and efficiency on a continuous basis.

PROCEDURE

At The Rice-Tinsley Corporation, training is conducted across the organization for various topics as covered in the training plan. This is to ensure that the employees are made aware of:

- The importance of conformance with the Environment & Safety policy and organizational objectives derived to meet the policy.
- The control methods derived to reduce the significance of the significant environmental aspects & OH&S Hazards identified in the area.
- The preparedness for potential emergency situations.
- Environmental Impacts / OH&S consequences actuals or potentials of their work in case of deviations and appropriate corrective actions for the same.

Internal and external communication of the QMS:

Effective communication within The Rice-Tinsley Corporation allows the Management System to function efficiently, by providing relevant, meaningful information to the people who need it. It is necessary for The Rice-Tinsley Corporation to decipher the internal and external communications pertinent to the management system and put some structure around it. In doing this it is necessary to know who to communicate with, how communication will occur and who is responsible for doing the communication.

When working with communication, there are two main divisions to consider; internal and external. Internal communication is all levels of the organization; employees who deliver and implement information, operational employees and management. Internal communication can be delivered in three main formats; visually, written and face to face. The format of internal communication is determined by any barriers within The Rice-Tinsley Corporation. Barriers within The Rice-Tinsley Corporation could include language barriers, illiteracy, some staff working outside the office, technology within the company, etc. Internal communication is all about ensuring internal employees have the information they need to be able to effectively execute their job.

The second division of communication within a quality management system is external communication. This method of communication involves anyone pertinent outside The Rice-Tinsley Corporation. Devising effective external communication ensures all relevant interested parties are appropriately informed.

The Rice-Tinsley Corporation will create a communication matrix. The matrix functions as a summary so all communication can be viewed from a macro level to identify gaps and redundancies in communication.

Competency, Training & Awareness:

Employees working or working on behalf & under the control of The Rice-Tinsley Corporation in the areas where significant Aspects/Hazards has been identified are trained to build competency for handling the significant Aspects / Hazards. MR / HR retains the records of competency. Core Team members of the department within the scope of

EHS shall be responsible for assuring that the appropriate training, awareness, and competence requirements have been defined and met. The associated records of competency are retained by the HR / MR as relevant for fulfilling the requirement of competency.

Competence in the context of quality management is developing the ability to apply appropriate qualifications, skills, and knowledge to the right activities or operations with the goals of achieving intended results. Employees are considered to be a resource for the realization of products or services and have objectives that are derived from the context of the organization, its strategy, and the processes that operate the QMS. The needs for competences should be defined in a systematic way that can fulfill these goals and objectives. Training and qualifying should be planned in order to enhance the achievement of these goals and objectives.

One critical step in building competence is establishing an effective training and certification process. But before you set the certification process, you must identify and locate the relevant training needs. The trainings and the certifications of employees in a workplace are a process with the purpose of assisting the members of the organization in fulfilling their activities and tasks better and more effectively by introducing them to skills, knowledge, and professional and organizational approaches. Training and certifications may be needed in the following cases:

- Hiring and introducing new personnel
- Improving knowledge and skills
- Reassigning employees
- Introducing innovations in the organization
- Supporting organizational processes

Identification of Training Needs and Training Calendar:

The training needs pertaining to the Environmental, Health & Safety Management system are identified:

1. At the start of the implementation of the EHS Management System – a training plan is derived for all dept's where the common topics of training are identified. The Rice-Tinsley Corporation must make sure that adequate resources are available to allow the employee to receive all appropriate training. If adequate resources are not available, The Rice-Tinsley Corporation must develop a plan for completion within a reasonable time frame.
2. Activities with Significant Impacts / Hazards
3. Operation control procedures
4. Incidents that have discrepancies
5. Emergency Situations
6. After Audit from its observations
7. Change in the management system, Introduction of new product/process/ services, which has significant aspects / Hazards.
8. Induction of new employee based on skill/competency requirements of the person.

9. Change in responsibility is based on the skill evaluation, which is kept as the base to analyze his functional competency against the requirement for the relevant function or position.
10. Based on the competence defined for specific significant process/activity.

An annual Training Calendar will be prepared based on the above-mentioned points. After the conduct of training, attendance records are maintained. Training programs are conducted based on the responsibility and ability of the personnel, language & literacy. Competent personnel/ Agency / qualified trainer will conduct the training on the EHS Management system. Effectiveness of training will be evaluated by The Rice-Tinsley Corporation. If found not effective, re-training will be planned & associate records will be maintained by The Rice-Tinsley Corporation.

Certification Plan

Each employee that is recruited to The Rice-Tinsley Corporation and will participate in the realization of goods or services is obliged to go through a planned and documented introduction of The Rice-Tinsley Corporation and its relevant processes. The plan will cover specific areas and topics in The Rice-Tinsley Corporation, such as:

- Introduction to The Rice-Tinsley Corporation.
- Administrative and human resources issues, for example, holidays, vacations, working hours, social conditions.
- Introduction to the different zones and areas in The Rice-Tinsley Corporation and their use: cafeteria, parking places, toilets, and offices.
- Introduction to The Rice-Tinsley Corporation's structure of the company and to different persons and functions, for example, work colleagues. This is very important for the employees in order to orient themselves in the organization.
- Their part in the realization of product and quality processes.

The plan will be documented and controlled. Records indicating the performance of the plan shall be maintained as documented information.

TRAINING

All employees at The Rice-Tinsley Corporation are competent on the basis of appropriate education, training and/or experience. Employees will be deemed competent prior to performing work that can affect the performance of the QMS.

After defining requirements for qualifications and skills, training, and certification, The Rice-Tinsley Corporation is required to plan the training or other activities in order to meet these requirements. The objective of the training plan is to fill in the gaps between the training needs and objectives and the current situation of employees and persons that realize the products or services (regarding qualifications and skills). The matter can be completed in four stages:

- The determination of target groups in The Rice-Tinsley Corporation: departments, workers, divisions, roles, or functions
- The review and evaluation of the status with a defined method
- The identification and mapping of the gaps in The Rice-Tinsley Corporation

- The development of a training plan according to results obtained

In order to create effective training that will assist employees and provide them with tools and knowledge for their everyday work, The Rice-Tinsley Corporation provides persons with the appropriate knowledge, background, and experience to navigate the training for each field or area of activity for all employees of The Rice-Tinsley Corporation.

At The Rice-Tinsley Corporation, we define the operational procedures. We then discuss those procedures in staff training sessions. We have management meetings to run through those procedures again to ensure employees still have a clear understanding of their responsibilities. Then finally, The Rice-Tinsley Corporation gets with the employees and assess their awareness levels of their responsibilities.

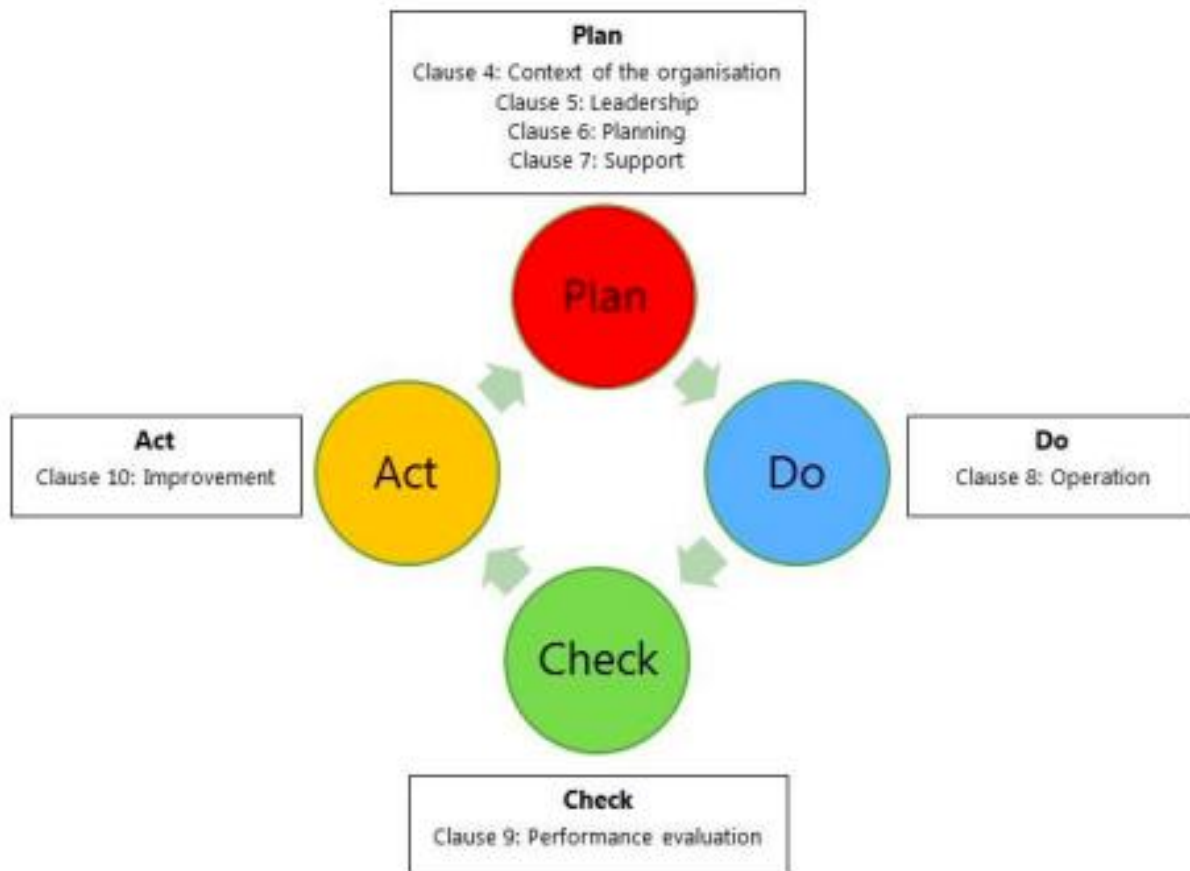
All training and qualifications records are documented.

QMS Context of the Organization - Global

INTRODUCTION

What is a Quality Management System? A QMS is a tool to help The Rice-Tinsley Corporation to manage quality. The quality manual is a means of recording how quality is managed within The Rice-Tinsley Corporation, so everyone does their job in a consistent way, delivering a consistent and quality product or service. A quality manual reflects the business and the quality management system.

The clauses and requirements of the standard are all based on the Plan – Do – Check – Act (PDCA) cycle. PDCA is integral and operates at the process level and at an overall system level.

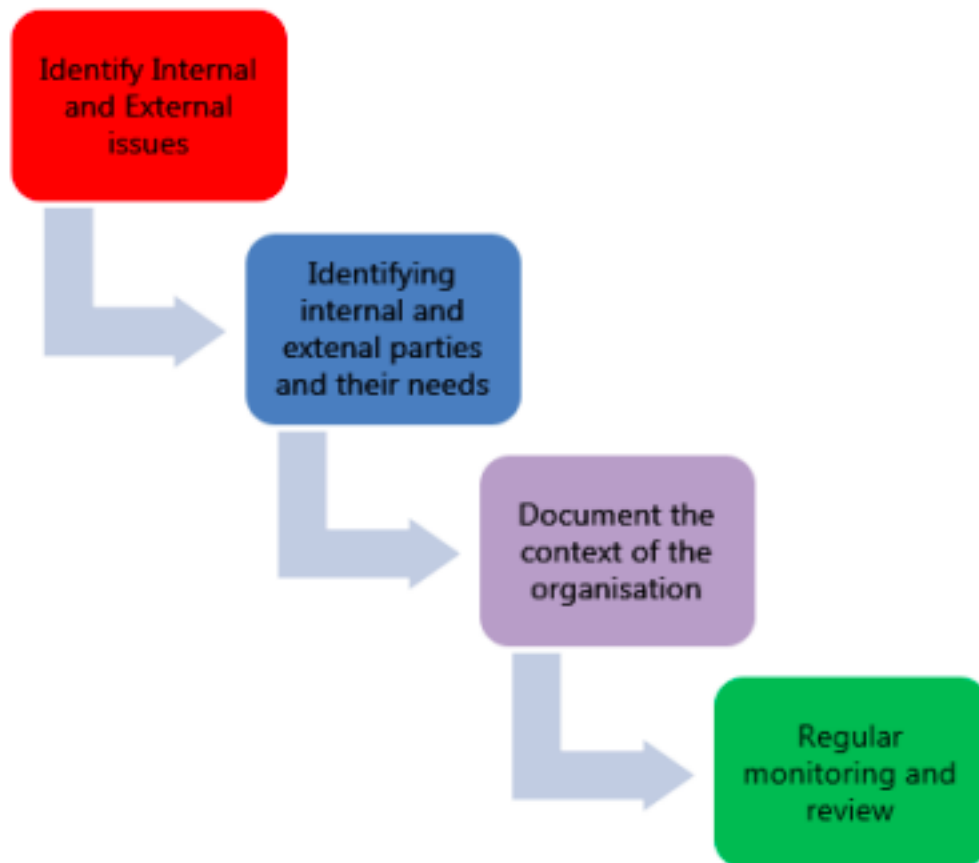


CONTEXT OF THE RICE-TINSLEY CORPORATION

Understanding The Rice-Tinsley Corporation and Its Context

The Rice-Tinsley Corporation will define the scope of the QMS in the Quality Manual and the sequence of processes and their interaction. These will be either in the form of text or a flowchart.

Once the scope of the QMS is defined by The Rice-Tinsley Corporation with any permissible exclusions, the processes and their inter-relationships are then identified. At this point, the following steps need to be taken:



What are internal and external issues?

The Rice-Tinsley Corporation will focus only on issues that can affect:

- customer satisfaction;
- the delivery of quality product and services that meet all applicable statutory and regulatory requirements.

The Rice-Tinsley Corporation's internal context is the environment in which it aims to achieve its objectives.

Internal context can include its approach to:

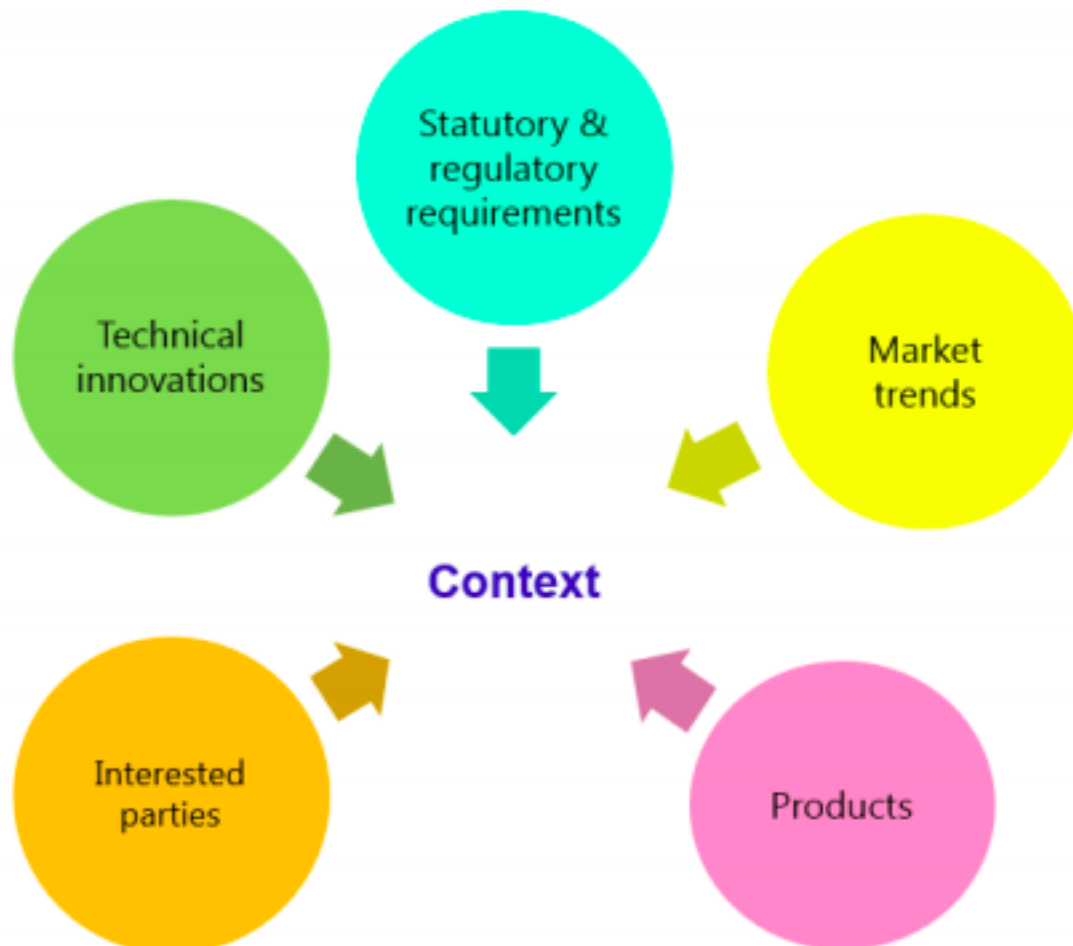
- governance;

- its contractual relationships with customers and its interested parties.

The aspects that need to be considered are related to the culture, beliefs, values, or principles inside The Rice-Tinsley Corporation, as well as complexity of processes and The Rice-Tinsley Corporation's structure.

To determine external context, The Rice-Tinsley Corporation considers issues arising from its social, technological, environmental, ethical, political, legal, and economic environment. Examples of external context may include:

- government regulations and changes in the law;
- the requirements of regulatory bodies such as the NSI, BAFE, SIA etc.;
- economic shifts in The Rice-Tinsley Corporation's market;
- The Rice-Tinsley Corporation's competition;
- the events that may affect corporate image;
- changes in technology



Understanding The Needs And Expectations Of Interested Parties

The requirements for identifying relevant interested parties means that The Rice-Tinsley Corporation will decide whose opinion The Rice-Tinsley Corporation should consider. These interested parties include:

- direct customers;
- employees;
- suppliers;
- corporate partners;
- regulatory bodies (e.g. NSI, NPCC, SIA, BAFE etc.);
- owners/shareholders;
- insurance;
- society;
- service providers;
- competitors;
- government;
- the Local Authority;
- the police;
- the fire brigade;
- anyone who has an impact on The Rice-Tinsley Corporation.

These parties add direct value to The Rice-Tinsley Corporation and/or are affected by the activities within The Rice-Tinsley Corporation. Identifying the needs and expectations lays the foundations of implementing an efficient and effective QMS.

The feedback will help determine how and what can be improved in The Rice-Tinsley Corporation.

The requirements:

- What are their terms and conditions?
- When will I be paid?
- Have we got effective communications?
- What information do I need and when can they give it to me?
- Are they above board?
- Are they compliant with the applicable requirements?

Determining The Scope Of The QMS

The Rice-Tinsley Corporation will clearly define what we sell, including products and services.

QMS And Its Processes

The standard requires The Rice-Tinsley Corporation to establish a process-based management system. This is required to be maintained and continually improved.

The clause sets out high level requirements for the design of such a process-based management system.

Process

The process is a set of interrelated activities that transform activity inputs into outputs. For example:

Installation: The process of converting a box of components into a working security system.

Process Approach

Process approach is a management strategy that requires The Rice-Tinsley Corporation to manage its processes and the interactions between them. The Rice-Tinsley Corporation will consider each major process and the supporting processes.

All processes have:

- inputs;
- outputs;
- operational control;
- appropriate measurement & monitoring.

Each process will have support processes that underpin and enable the process to become realized.

Leadership

Top management must:

- have accountability for the effectiveness of The Rice-Tinsley Corporation's quality management system;
- ensure that The Rice-Tinsley Corporation's quality policy and quality objectives are consistent with the The Rice-Tinsley Corporation's overall strategic direction and the context in which The Rice-Tinsley Corporation is operating;
- work alongside their employees in The Rice-Tinsley Corporation in order to ensure that the quality objectives are achieved;
- ensure that the quality policy is communicated, understood and applied across The Rice-Tinsley Corporation;
- make sure that the quality management system is achieving the results that are intended;
- lead people to contribute to the effective operation of the system;
- drive continual improvement and innovation and develop leadership in managers.

The top management is required to ensure that:

- the requirements set out in ISO 9001:2015 are met;
- QMS processes are delivering their intended outcomes;
- reporting on the operation of the QMS and identifying any opportunities for improvement is taking place;
- a customer focus is promoted throughout The Rice-Tinsley Corporation;
- whenever changes to the QMS are planned and implemented, the integrity of the system is maintained.

Customer Focus

- Knowing the law and knowing the customer's expectations and delivering it;
- What can go wrong with what you are selling and providing and what opportunities you also have when you deliver this; opens doors, for example, to other work streams;
- Making sure the customer is happy.

Policy

The Rice-Tinsley Corporation will write the policy to include:

- making sure it reflects business size, ethos and what The Rice-Tinsley Corporation is trying to achieve;
- how The Rice-Tinsley Corporation will decide what we are going to achieve and how we will check this;
- committing to doing it the right way (e.g. in line with standards and best practice);
- committing to try to continually improve.

The Rice-Tinsley Corporation Roles, Responsibilities And Authorities

- Allocating responsibilities across The Rice-Tinsley Corporation to maintain the management system.
- Making sure what is supposed to happen is happening.
- Outcome of the business processes and how it can be improved.
- Remembering customers at all times.
- Remembering to update the system as and when you change how employees work or the intended process is amended.

PLANNING

Actions To Address Risks And Opportunities

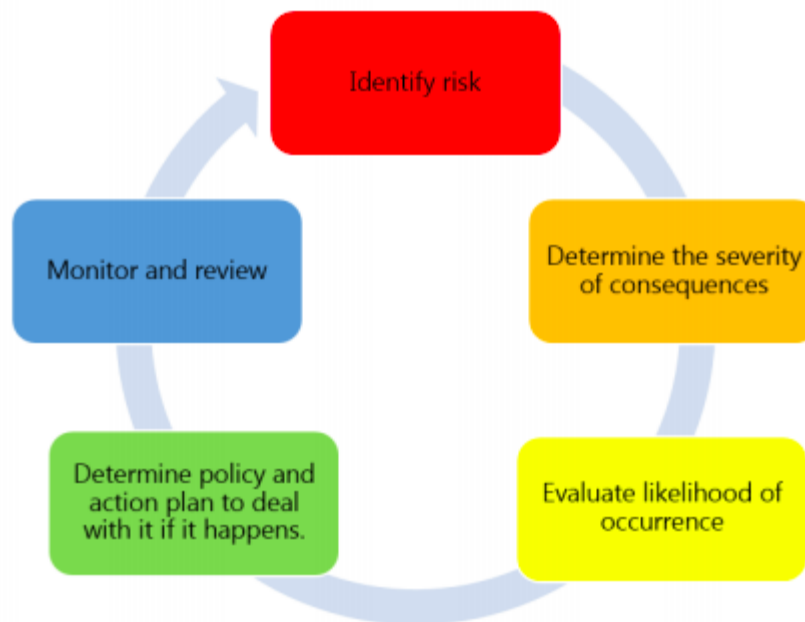
- When thinking about the business and service delivery, it's about ensuring that the system The Rice-Tinsley Corporation uses is right for this. This could include anything from the way in which The Rice-Tinsley Corporation sells, to the technology The Rice-Tinsley Corporation uses in the office.
- Doing extra to make sure the outcome is better than The Rice-Tinsley Corporation had hoped for.
- Putting safety measures in place to ensure things don't go wrong, training for staff, supervision, margins that are realistic which means we can rival our competitor but still remain profitable.
- Actually get better at what we are doing, selling providing, servicing, etc.

Planning for the QMS

- Actions to address the risks – simply understanding what the risks are best capturing this in a business plan.
- Plan how all the elements come together, the business plan and how it will be run, and a means of checking these things work and the business plan is on track.

Note: The Rice-Tinsley Corporation will use risk methodologies here to ensure we apply things appropriately. The greater the risk and the impact on the business, the greater the control measures, planning, management, etc.

If necessary, The Rice-Tinsley Corporation will have a Plan B. The Rice-Tinsley Corporation will consider how an understood risk can be used in a positive way to look at other ways of doing things or other products.



Quality Objectives And Planning To Achieve Them

The Rice-Tinsley Corporation will ensure that whatever objectives The Rice-Tinsley Corporation implements, they are SMART.

- Specific
- Measurable
- Achievable
- Realistic
- Time Bound

Requirements For Products And Services

This is essentially about what how The Rice-Tinsley Corporation relates to the customer, to include:

- a) what The Rice-Tinsley Corporation is selling;
- b) how they can expect to be dealt with (e.g. formal quote / email / letter / terms The Rice-Tinsley Corporation will work under/within);
- c) getting feedback from the customer;
- d) looking after their property;
- e) what plans The Rice-Tinsley Corporation put in place for if something goes wrong.

Determining The Requirements For Products And Services

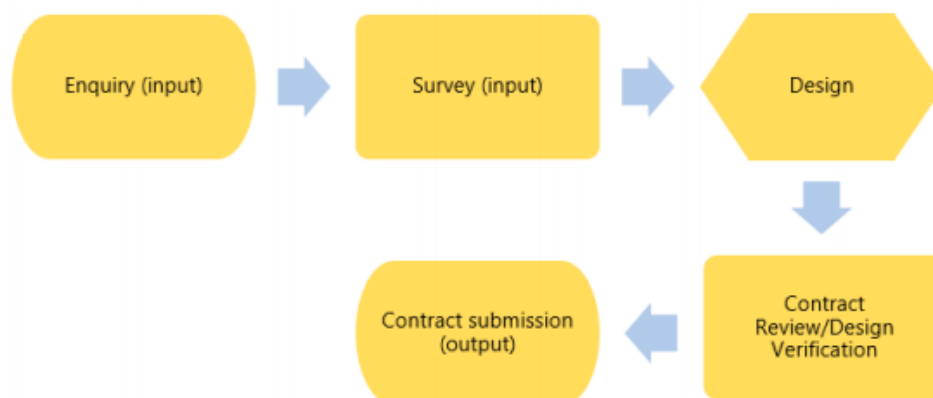
The Rice-Tinsley Corporation will be clear about what is required in order to sell The Rice-Tinsley Corporation products and services:

- for legal and industry norm;
- elements The Rice-Tinsley Corporation determines as necessary for our own needs.

The Rice-Tinsley Corporation will be able to deliver what we are selling.

Design And Development Of Products And Services

The Rice-Tinsley Corporation will introduce design and development processes. This means that previously, when design was not relevant as The Rice-Tinsley Corporation provided a service, that this needs to be considered even if The Rice-Tinsley Corporation do not make the products. The fact that The Rice-Tinsley Corporation are designing a system means we need to consider all the elements of design.



Design And Development Planning

This is a list of items The Rice-Tinsley Corporation will include when designing:

- How long will it take to survey / design / what surveying skills are needed?
- Who should review the design? Who can confirm it is right?
- What needs to be done to check it is right?
- Who would be responsible?
- Resources needed from the company and any subcontractors.
- Ensuring all involved communicate (e.g. surveyor and designer and administrator).
- Checking that what you are designing is what the customer wants.
- What other things are needed – products and services?
- Control needed to ensure it goes to plan, from customers and interested parties (e.g. subcontractors / manufacturers / monitoring stations)
- Documenting that the above has been considered

Information For External Providers

This is about ensuring that third party suppliers and subcontractors have a clear understanding of what they are expected to supply.

Control Of Production And Service Provision

Documented information – must be available to record activities undertaken and results. Monitoring and measurement is now no longer just about test results / meter readings but checks that personnel may undertake such as human checks.

- Should have info that describes the product – specification / manufacturers guidance / quotation.
- Define what the customer wants (e.g. intruder system).
- Ensuring that you have what you need to measure and test systems installed. Meter readings / paperwork for commissioning.
- Define what tests should be done and when (e.g. test electric output before, during and after install).
- Make sure that you have the right support from the office and site to complete the job this could be as simple as someone ordering the right part for you to be delivered to site.
- Competent and trained staff.
- A clear process to test and check the install is as should be during delivery so that you know that when it's done it was done correctly.
- Safety measures to prevent mistakes taking place.
- Process required when an install is complete.

Property Belonging To Customers Or External Providers

There is an expectation that any property belonging to a client, third party, supplier, etc. The Rice-Tinsley Corporation is involved with we have a clear process for protecting it. The Rice-Tinsley Corporation will regard the following as property and as such protect it:

- Intellectual info such as data / addresses / prices.
- Materials.
- Tools equipment.
- Customer keys.

For example, The Rice-Tinsley Corporation may have a team of contractors working on a site who bring their own equipment. There should be a clear and understood process on how this is managed even if it is stipulated that they are responsible for their own tools. It may be hire equipment is necessary and the subcontractors are using this. Measures need to be in place to safeguard against its misuse as The Rice-Tinsley Corporation is effectively still responsible for this.

Companies must have a clear thought out rationale for this and ensure that if property is damaged and/or lost they are notified in a clear and consistent manner.

QMS Control of Non-Conforming Outputs - Global

PURPOSE

The purpose of this procedure is to ensure that outputs that do not conform to their requirements are identified and controlled to prevent their unintended use or delivery.

SCOPE

This procedure covers the detection of non-conforming products within The Rice-Tinsley Corporation operations and taking the necessary corrective or preventive action to avoid unintended use or delivery.

DEFINITIONS

- D – Director
- MR – Management Representative
- NCP – Non-conforming product
- SOP – Standard Operating Procedure
- Non-Conformity – Non-fulfilment of requirement

RESPONSIBILITY AND AUTHORITY

Director

- Appoint the disposal committee members
- Authorize disposal of non-conforming products
- Overall responsibility for determination of appropriate disposition method for non-conforming product

Deputy Directors/ Centers Directors/ Departmental Heads /Stores Officer /Other Staff

- Responsible for control of the non-conforming products in their unit

PROCEDURE

Detection of Non Conformity

1. Non-conforming products are detected through any of the following activities:
 - Protocol and manuscript review
 - Inspection and testing
 - Customer feedback and complaints handling
 - Quality audits
 - Procurement process
 - Service delivery

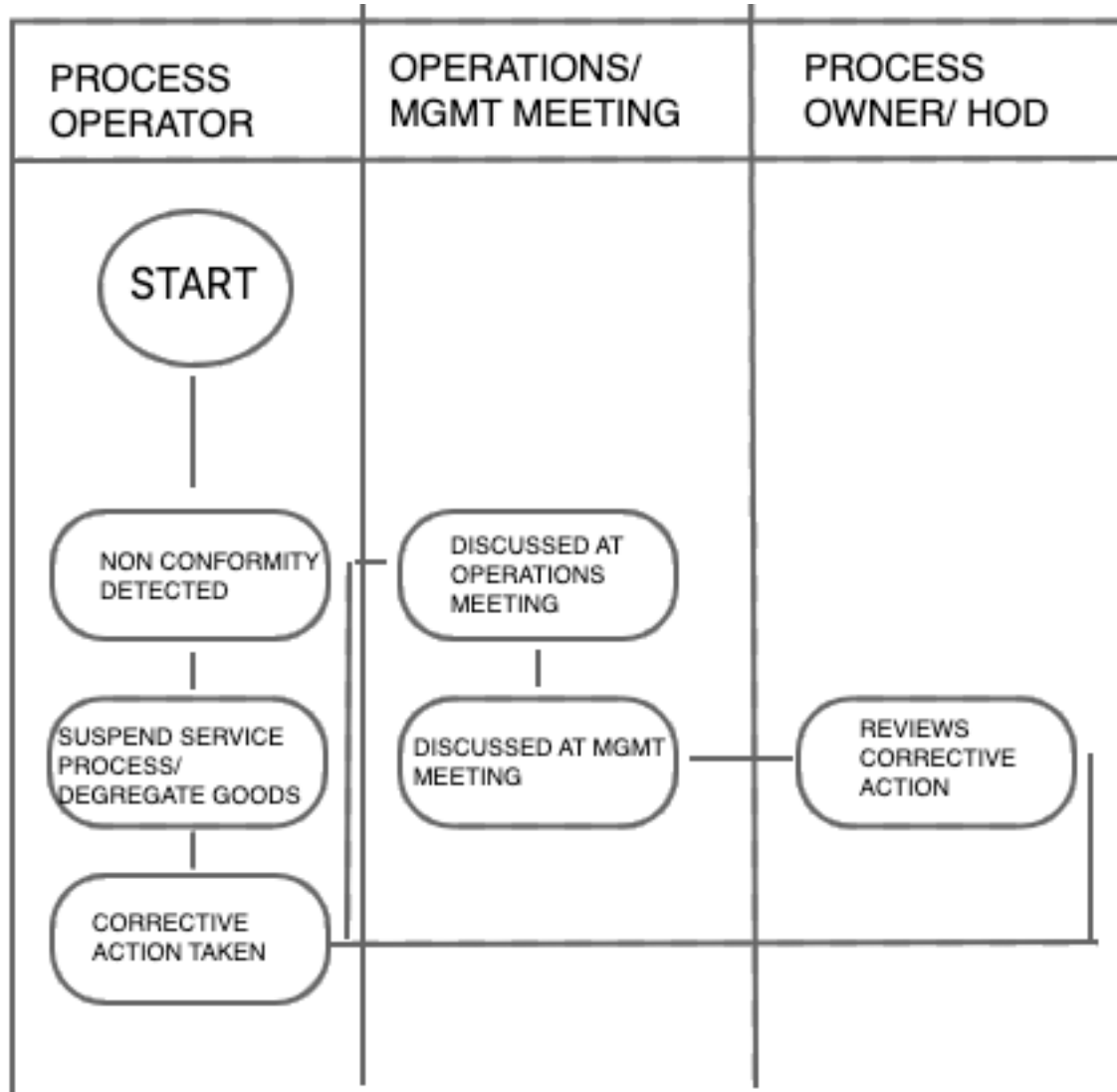
2. Identify/label and quarantine the non-conforming products.
3. The Rice-Tinsley Corporation shall deal with non-conforming outputs in one or more of the following ways:
 - Correction
 - Segregation, containment, return or suspension of provision of products and services
 - Informing the customer
 - Obtaining authorization for acceptance under concession
4. Where non-conformity is detected during processing, it is suspended until action is taken to eliminate the detected non-conformity.
5. Where non-conformity is detected in protocols and manuscripts, it is referred back for effecting of suggested corrections or rejected outright.
6. Where non-conformity is detected during handling/delivery further processing/delivery will be suspended until action is taken to eliminate the cause of the non-conformity.
7. Non-conforming products detected during quality audits or inspections are recorded on corrective action request forms as non-conformity.
8. Where a concession is allowed on supply or receipt of a product that does not certain specifications/characteristics a concession form is filled.
9. The relevant process owner shall review and investigate the non-conformance.

NOTE 1: All non-conformances shall be closed out without undue delay.

RETAINED DOCUMENTED INFORMATION

- Corrective Action Request Form QMS F001
- Concession request form – QMS F012

PROCESS FLOW CHART



QMS Design and Development - Global

PURPOSE

This process provides a new, changed or acquired off the shelf design, process, procedure, methodology or technology that addresses a new or changed stakeholder expectation/need. It produces an operations-ready (i.e. validated) system from a new or changed design, process, procedure, methodology or technology.

SCOPE

This process defines, the steps design and pilot teams must take in order to design a solution to satisfy a change or new need. This process outlines the need for a new design and the steps for development and validation of the solution.

DEFINITIONS

The Rice-Tinsley Corporation Administrator - The individual named by a party to a hydrometric agreement to represent the needs and interests of that party and to approve the activities undertaken under that agreement.

Client - A person, body or agency.

Coordinating Committee - A body created by the Administrators of a hydrometric agreement to plan and manage the activities under that agreement so as to meet the needs of the stakeholders.

Hydrometric - Of or related to measurements and calculations of the velocity, discharge, volume and other physical parameters of surface waters and surface water bodies.

Operational Staff - Individuals within an operating party that conduct activities.

Network - A collection of hydrometric monitoring sites that provide spatial and temporal information in accordance with specified parameters.

OMC-H - Body made of all regional WSC managers and National representatives to plan and manage the operational activities as to meet the needs of the stakeholders.

Project Lead - Could be any of the following; an individual, sub-committee, working group or task group.

Stakeholder - Stakeholders are individuals or organizations (including clients) who are the direct recipients of product or service, or may have an interest in the work and policies, (for example, hydrometric agreement administrators, clients, data users, recreational users, etc.)

INFORMATION

Inputs:

- Output from Stakeholder Requirements Process, including Change Plan
- National Standards

- Quality Assurance Program Audit Report
- Information about existing designs, processes, procedures, methodologies, and technologies

Outputs:

- Documentation of a new design, process, procedure, methodology, and technology
- Approved field and office technologies

Process Metrics:

- Design fulfills needs as per requirements
- Design is deemed acceptable for operational use by Regional Manager or person deemed acceptable by The Rice-Tinsley Corporation

Human Resources:

- Staff inventory: composition of the staff includes engineers, hydrologists, physical scientists, technologists and support staff
- Regional Manager, person deemed acceptable by The Rice-Tinsley Corporation

Materials & Equipment:

- Field and office equipment
- Station facilities and infrastructures
- Testing tools

Associated Records:

- Scientific/engineering Reports & Products
- National Standard Operating Procedures
- Specifications and Drawings
- Validation and verification reports
- Decision documents from Regional Management meetings
- Decision documents from Design and Pilot Team meetings

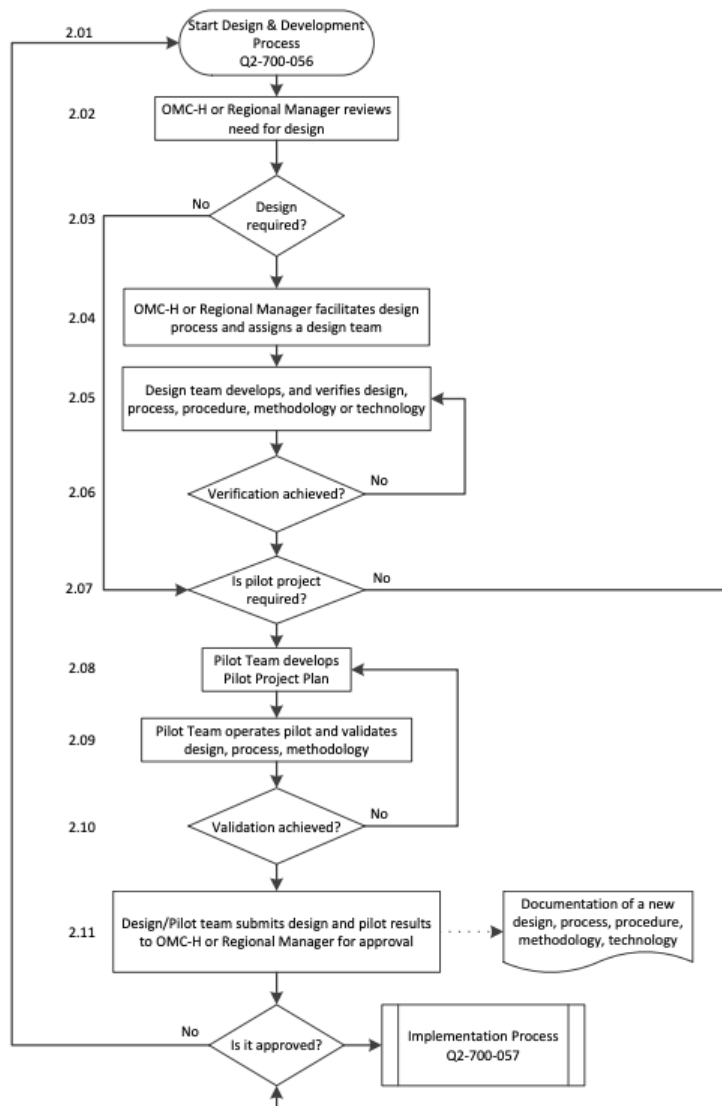
Process Notes

- Start of the Design and Development Process.
- A review of the design, process, procedure, methodology or technology needs is carried out by the OMC-H or the Regional Manager of The Rice-Tinsley Corporation. The review may include work assignments to subcommittees, task groups or outside consultants. If the design, process, procedure, methodology or technology needs can be satisfied within existing designs, processes, procedures methodologies or technologies then proceed to the pilot project. Alternately, the needs may identify the requirements for a new or change to the design, process or technology, procedure, methodology or technology invoking a design process. The reviewer also defines indicators for verification of the design.
- The OMC-H or the regional Manager facilitates the design process by assigning a Design Team that may include sub-committees, WSC regional offices task groups or outside consultants. In some instances, the design process may include the use of, or integration with, IT infrastructures, in which case CSB/SSC process will be called upon to participate and/or deliver related components. The Design Team develops the design.

- The Design Team verifies any design changes or new design, process or technology, procedure, methodology or technology. The verification ensures that the design outputs have met the input requirements.
- The Design Team assesses if a pilot project is required and if required assembles a Pilot Team. The Pilot Team may be the same as the Design Team, a sub-set of the Design Team or composed of new members. If a pilot project is not necessary, proceed to the Implementation Process.
- The Pilot Team prepares a pilot plan which details the design installation and validation criteria in an operational setting.
- The Pilot Team, with the help of regional representatives, operates the pilot in an operational environment and identifies implementation requirements (training, user's guide, installation guides, etc.) and gaps. This activity is critical in preparing for successful implementation.
- The Pilot Team reviews results and validates the solution. Validation is required to ensure that the resulting design, process, procedure, methodology or technology is capable of meeting the requirements for the specified application or intended use.(ex; demonstration of performance).
- Once the validation criteria are met, the Design/Pilot Team submits the design and validation results to the OMC-H or the regional Manager for their approval.
- OMC-H or the regional Manager may approve the new/changed design, process, procedure, methodology or technology so the implementation process may begin, may reject the results, or may terminate the process altogether.

Statutory and regulatory requirements are taken into consideration in the design and development of the product and/or service. Legal requirements will be determined and met in the design and development process.

PROCESS FLOW CHART



DOCUMENT HISTORY

Example:

Initials	Name	Role	Approval Date
KH	Firstname Surname	OP lead	March 9, 2016
Rev#	Date	State	Description of Changes
1Dv01	Oct 15, 2004	NHP QMS	QMS documents developed under NHP QMS. Documents were used to develop WES ISO
1Dv02	March, 2007	First Draft	Reformatted and edited to fit WES ISO project requirements
1Dv03	Jun 04, 2008	Pending - Review by WSC Core Team	Reformatted and edited to fit WES ISO project requirements
1Dv04	Jun 12, 2008	Issued for review & approval	Reviewed by OMC-H, approved by OP Lead
1A	Jun 18, 2008	Approved	Draft 1Dv04 approved to 1A
2Dv01	Jul 10, 2008	Pending review by WSC Core Team	Refining document using input from internal audit, staff training and others
2Dv02	Aug 07, 2008	Pending review by WSC Core Team	Refining document
2Dv03	Aug 19, 2008	Issued for review & approval	Reviewed by OMC-H, approved by OP Lead
2A	Aug 28, 2008	Approved	Draft 2Dv03 approved to 2A
3A	Jun 6, 2010	Approved	OP and OPSC references altered.
4A	Jun 5, 2012	Approved	Reviewed with minor revisions
5A	Dec 18, 2013	Approved	Reviewed and approved
6D	February 12, 2015	Approved	Reviewed with minor revisions
6A	March 9 2015	Approved	
7A	March 9, 2016	Approved	No change from previous version

The Rice-Tinsley Corporation will take any necessary actions to address problems identified during the review, verification, and validation activities and continue to improve it whenever necessary.

QMS Improvement - Global

PURPOSE

At The Rice-Tinsley Corporation, our vision is to be the premier partner of choice for our customers, suppliers, employees and shareholders by accelerating their success through our global technology marketing and distribution resources, services and culture.

POLICY STATEMENT

Each The Rice-Tinsley Corporation employee strives to provide products, services and solutions that fully meet or exceed the established requirements of our internal and external customers and is committed to continual improvement.

We achieve this through the process of defining and understanding our customer and key stakeholder requirements. Measurable objectives are established and reviewed at various points within the organization. The Rice-Tinsley Corporation is committed to practicing environmentally responsible business processes in the spirit of continual improvement.

CORE VALUES

- Integrity
- Objectivity
- Know-how
- Ingenuity
- Empathy
- Collaboration

Customer Focus

As a leading solutions provider, The Rice-Tinsley Corporation provides customer-centric business strategies and processes designed to satisfy our customer through the application of our policies, direct customer engagement, core values and elements of our management system.

Leadership Statement

It is the responsibility of the The Rice-Tinsley Corporation leadership to embrace and continually strive for operational excellence throughout the entire organization as outlined in this document.

As stakeholders in our company's future success, we must all be consistent in our approach and deployment of our system strategy and structure to ensure it not only meets the needs and expectations of present customers and business demands but will also be the primary foundation to support company growth to attract new customers.

The culture we create and nurture to ensure success in our quality and business objectives depends heavily on our ability to effectively communicate our mission, goals and objectives to all employees. Each process owner must have an understanding of the company's vision, its objectives and how their process contributes to the overall well-being of the organization.

8 ELEMENTS OF QMS

- Quality Management System - The quality management system pursues quality, efficiency and effectiveness in all activities and processes.
- Management Responsibility – Includes:
 - a. Management Commitment
 - b. Customer Focus
 - c. Quality Policy
 - d. Strategic Planning
 - e. Quality Objectives
 - f. Responsibility, Authority and Communication
 - g. Management Representative
 - h. Internal Communication
 - i. Management Reviews
 - j. Customer Satisfaction
- Resource Management - The purpose of the Resource Management process is to ensure that there are adequate resources to implement and continually improve the quality management system and to ensure customer and regulatory requirements can be met.
 - a. Training, Awareness and Competency
 - b. Infrastructure
 - c. Work environment
- Solutions Realization – Process Interaction (see Appendix 1)
 - a. Solutions realization processes and process interactions of the system are represented in Appendix 1 attached to this document. The elements of solutions realization listed below are either addressed directly or are embedded within the applicable processes described in lower level documentation that capture the specific solutions provided.

Solutions Realization Elements:

 - a. Planning of Solutions Realization
 - b. Customer-Related Processes
 - c. Design and Development
 - d. Purchasing
 - e. Production and Service Provision - including applicable traceability requirements
 - f. Control of Monitoring and Measuring Equipment
- Measurement Analysis and Improvement - The purpose of the measurement, analysis and improvement system is to ensure there is a defined planning process to measure the efficiency, effectiveness and conformity of the quality management system concerning product and process quality.
- Risk Management –
 - a. The Rice-Tinsley Corporation Risk Management
 - b. Supplier Risk Management
 - c. Counterfeit Mitigation
- Environmental, Health, and Safety Management - The purpose of the Environmental, Health, and Safety Management process is to ensure that there are adequate resources to implement and continually improve the Environmental, Health, and Safety Management system and to ensure The Rice-Tinsley Corporation and regulatory requirements can be met.
 - a. Hazard identification
 - b. Aspect impact study

- c. Legal and other requirements / evaluation of compliance
- d. Environmental, Health, and Safety Programs
- e. Operations Control
- f. Emergency preparedness and response
- g. Monitoring and measurement
- Communication - Effective arrangements for communicating necessary information and data to customers, suppliers, and external interested parties in a way they find satisfactory are determined and implemented. The Rice-Tinsley Corporation provides internal communication aspects regarding health and safety hazards and objectives among the various levels and functions of the organization.

LEVEL 1, 2, AND 3 DESCRIPTIONS

Operational Documentation Planning and Structure

The documentation strategy is based on a standard three-tier structure and is deployed into elements representing policy, operating procedures, and process instructions. These elements are identified as Level 1, Level 2, and Level 3 and are described below.

Level 1 Policy

The level 1 policy manual identifies that The Rice-Tinsley Corporation has a system that meets the intent of the standard and expectations set by The Rice-Tinsley Corporation leadership. The objective of this high level document is to identify that there is an approved quality management system which establishes a standardized approach to control, monitor, and improve the identified processes. To enable the quality management system to improve and evolve without mandating a change to the level 1 policy manual, the policy manual is designed to be static and not to be encompassing in its description of the key process elements. Lower level documentation identifies process overviews and specific process elements.

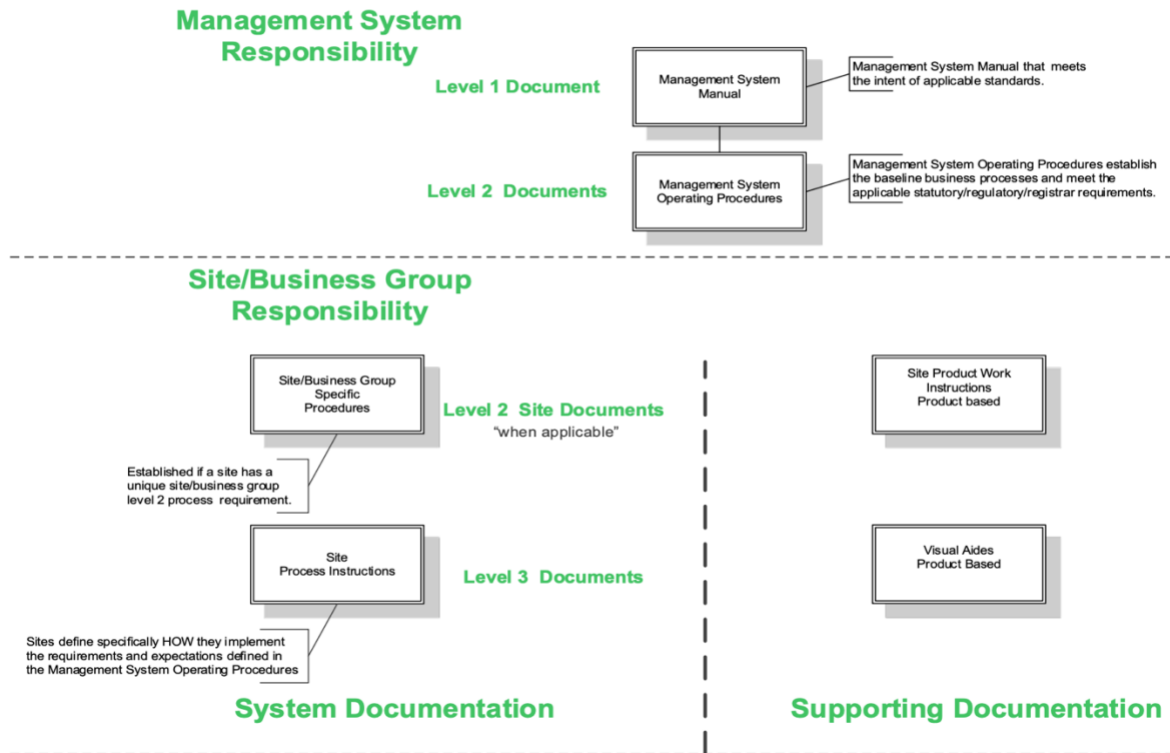
Level 2 Operating Procedures

The level 2 operating procedures are intended to describe the global view of the organization and/or major process, identify all elements of the organization/process as a baseline, meet the intent of applicable requirements, and support repeatability, standardization and effectiveness concerning overall business excellence.

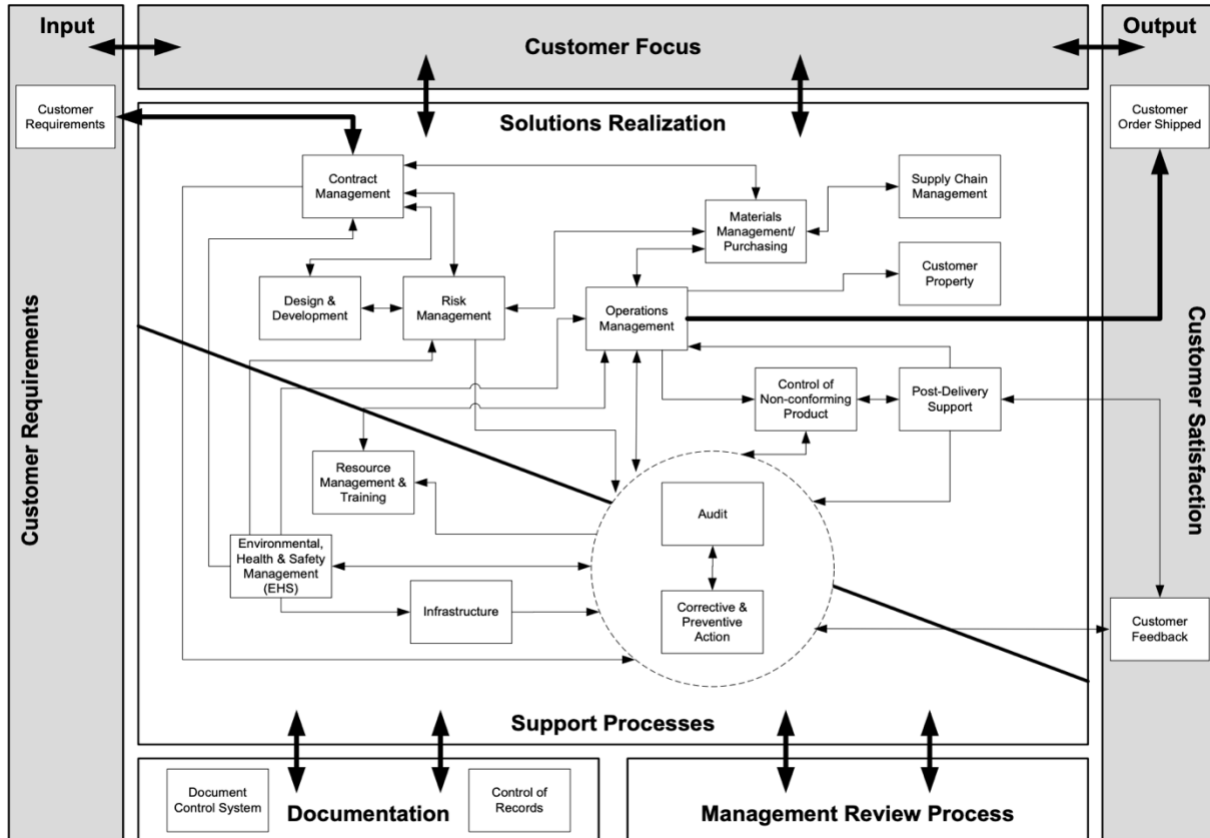
The level 2 operating procedures are designed to be high-level overview documents that identify the process elements. They are also designed to be static to an extent; however, as the organization streamlines and improves, they may evolve to identify the organizational changes.

Level 3 Process Instructions

The level 3 process instructions are designed to identify specific process direction to accomplish tasks that are unique to the process area. Level 3 process instructions not only establish criteria to drive standardization and repeatability, but also act as primary training criteria for new and existing employees, process certification, verification and validation activities. The level 3 process instructions are designed to be living and dynamic documents that reflect process changes as a result of continual improvement, preventive action, or corrective action.



Solutions Realization – Process Interaction Diagram – Appendix 1



Appendix 2

Documentation Matrix *Key: shading signifies relationship to a QMS element*

Level 2 Process	8 Global QMS Elements							
	Quality Management System	Management Responsibility	Resource Management	Solutions Realization	Measurement Analysis and Improvement	Risk Management	EHS	Communication
Customer Focus								
Management Review								
Environmental, Health & Safety Management								
Risk Management								
Audit								
Corrective & Preventive Action								
Materials Management / Purchasing								
Supply Chain Management								
Operations Management								
Resource Management & Training								
Infrastructure								
Document Control System								
Control of Records								
Contract Management								
Customer Property								
Control of Nonconforming Product								
Design and Development								
Post-Delivery Support System								
Context of the Organization								

QMS Internal Audit - Global

PURPOSE

The purpose of this document is to help The Rice-Tinsley Corporation consistently meet customer requirements, enhance customer satisfaction, address risks and opportunities and meet business objectives.

The ISO 9001 standard is based on the following quality management principles:

1. Customer focus
2. Leadership
3. Engagement of people
4. Process approach
5. Improvement
6. Evidence-based decision making
7. Relationship management

SCOPE

The Quality Manager is responsible for scheduling and coordinating audits to determine adherence to quality principles, processes, and procedures. Internal audits of activities affecting the quality of items and services are scheduled, planned, and conducted in accordance with procedures.

The Quality Coordinator is responsible for implementing and conducting ongoing internal audits to determine adherence of the company, customer and regulatory processes, procedures and requirements.

Customer Focus

In order to know if our customers are satisfied, The Rice-Tinsley Corporation uses surveys to obtain customer satisfaction data. After the data is collected, The Rice-Tinsley Corporation monitors and reviews it during weekly management meetings. See The Rice-Tinsley Corporation Product Testing Survey below as Attachment A.

Actions to address risks and opportunities are also always under review and steps are taken to always improve and update them as needed.

Methods (Part 1)

The Rice-Tinsley Corporation will review risk-management plans and business processes for weaknesses and failures.

The Rice-Tinsley Corporation starts by assessing current processes and procedures. Then the The Rice-Tinsley Corporation auditor will analyze and compare results against internal control objectives to determine whether audit results comply with internal policies and procedures as well as federal and state rules and regulations. For the final step, The Rice-Tinsley Corporation auditors will compile an audit report to present to The Rice-Tinsley Corporation.

The Rice-Tinsley Corporation auditors will ask questions of The Rice-Tinsley Corporation's managers, accountants and any other key staff to help determine some relevant information. The auditor asks about business processes and the appropriate recording of financial transactions to make sure The Rice-Tinsley Corporation is doing everything possible to avoid risks. The auditor takes the responses into account but does not accept the answers alone as confirmation. The auditor will establish additional testing criteria with different methods as well.

The auditor will also observe the tasks, procedures, and conditions. The Rice-Tinsley Corporation will declare that certain noted records have been appropriately secured. In order to verify that the stated records have been securely stored, the auditor will watch a The Rice-Tinsley Corporation employee or manager unlock the secured area and reveal the records.

The auditor will examine evidence which includes the review of written documentation and records that might include visitor logs, employee manuals and system databases, etc.

Methods (Part 2)

The "Stop And Go" Audit Approach

To maximize Audit coverage with limited Internal Audit Resources, The Rice-Tinsley Corporation's auditor utilizes a "stop and go" audit approach, which focuses on continuous risk assessment throughout all audit phases, which are outlined below.

By continuously evaluating risk, the auditor may determine at any phase of the audit, that no further work is needed to conclude on the control environment. Upon validating this conclusion with The Rice-Tinsley Corporation, the audit may be ended and an audit report issued.

The use of this "Stop and Go" approach enables everyone to focus on performing value added cost effective audits.

STEP #1 - PRELIMINARY RISK ASSESSMENT PHASE

Internal Audit facilitates discussions with operating management to identify business processes and risks. Key high-level information, including financial data and customer contact names, is obtained. Additionally, the auditor solicits management's concerns and work with them to define expectations.

Internal Audit will analyze the business and supporting technical risks to define the audit scope and to identify key business control objectives. The business control objectives are validated with The Rice-Tinsley Corporation to ensure that Audit's approach is in line with the business.

STEP #2 - PLANNING STAGE

Internal Audit gathers information on how management is controlling risks. Through discussions and/or walk-throughs with key contacts, the Internal Audit identifies business control processes.

An assessment is then performed to ensure that the control environment is adequate. Issues or control weaknesses are communicated and validated with The Rice-Tinsley Corporation immediately to ensure ongoing communication throughout the audit.

Internal Audit's define the testing strategy based on the assessment of the control environment and management's concerns. If testing is necessary to determine that controls are functioning effectively, detail test programs are developed.

STEP #3 - TESTING PHASE

Internal Audit executes the test programs defined above. Throughout this phase, test results are analyzed to determine if additional test work is required, or if no further testing is necessary to conclude on the sufficiency of the control environment. The auditor will ensure timely communication of issues arising as test work is executed. Issues are communicated, validated, and drafted with The Rice-Tinsley Corporation as they are identified.

STEP #4 - COMMUNICATING RESULTS

Communicating Results is not considered a separate phase. It is embedded in all of the above processes. Throughout the audit, all issues identified are validated with The Rice-Tinsley Corporation and action plans are immediately developed by management. Audit recommendations and management responses are included in the Audit Report including an action plan of what will be done, by whom, by when, and to fix what problems. Reports are issued within 5 days from the end of fieldwork.

CUSTOMER SURVEY

Customers are asked to contribute to The Rice-Tinsley Corporation's continuous improvement process by providing feedback on our The Rice-Tinsley Corporation Product Testing Survey. Customers are asked to provide written comments about the work performed, as well as asked to rate The Rice-Tinsley Corporation's work, products, etc. (See Attachment A)

Current and previous audit results of The Rice-Tinsley Corporation will be compared to identify those areas that may require additional improvement or monitoring.

LEADERSHIP'S RESPONSIBILITIES AND COMMITMENT

The Rice-Tinsley Corporation will always take corrective action in a timely manner and always be open to improvement.

Leadership

The following list outlines the key responsibilities that management will carry out during the design and implementation of the system, and during the maintenance and improvement of the system.

During Design and Implementation The Rice-Tinsley Corporation Top Management will:

- Establish the quality policy.
- Ensure that quality objectives are established at all relevant levels of The Rice-Tinsley Corporation.
- Ensure availability of resources.
- Ensure that the planning of the quality system is carried out to meet the requirements of the standard and the quality objectives.
- Ensure that responsibilities, authorities and their interrelation are defined and communicated.
- Ensure that appropriate communication is established within The Rice-Tinsley Corporation and effectiveness of the quality management system is communicated.

After Registration The Rice-Tinsley Corporation Top Management will:

- Maintenance and Continual Improvement
- Communicate the importance of meeting customer, statutory and regulatory requirements.

- Conduct management reviews.
- Ensure availability of resources.
- Ensure that customer requirements are determined and fulfilled.
- Ensure that the integrity of the quality management system is maintained when changes are made.

Evidence will be provided to registration auditors to demonstrate The Rice-Tinsley Corporation's role in fulfilling each of these responsibilities.

Risks

Documented information resulting from risk management activities such as risk management processes, plans and reports, etc. will be maintained or referenced in The Rice-Tinsley Corporation's risk management file.

Internal communication is necessary for all appropriate personnel to be aware of the remaining risks even after implementing risk control measures.

In order to maintain control over our products, The Rice-Tinsley Corporation will incorporate appropriate risk management activities for these products by planning and by ensuring risk control measures are appropriately applied. Before the approval and implementation of a change to any outsourced process or product, The Rice-Tinsley Corporation will:

1. Review the change;
2. Assess if new risks have been discovered; and,
3. Determine if current and/or new individual residual risks and/or the overall risk is acceptable according to the predetermined existing acceptability criteria.

Risk management activities will begin as early as possible in the design and development phase, when it is easier to prevent problems rather than correcting them later.

For each identified hazard, the risk in both normal and fault conditions is estimated. In risk evaluation, The Rice-Tinsley Corporation decides whether risk reduction is needed. The results from this risk evaluation such as the need for risk control measures then become part of the design input.

Risk registers allows The Rice-Tinsley Corporation to assess the risk in context with the overall context of The Rice-Tinsley Corporation and will help to record the controls and treatments of those risks.

The risk registers or risk logs become essential as it records the identified risks, their severity, and the actions steps to be taken.

The Rice-Tinsley Corporation records the date that risks are identified or modified and records:

- Description of the risk
- Risk Type
- Likelihood of occurrence
- Severity of effect
- Countermeasures and actions taken to prevent, reduce, or transfer the risk.

- Risk owner who is responsible for ensuring that risks are appropriately engaged with countermeasures undertaken
- Current status of whether this is a current risk or if risk can no longer arise and impact
- Other columns such as quantitative value are also sometimes added

Clauses that Promote Risk-based Thinking

Risk-based thinking is part of The Rice-Tinsley Corporation's process approach because it forms a key part of our preventive action routines. Internal audits are conducted objectively and impartially.

1. The Rice-Tinsley Corporation determines the risks which can affect our ability to meet the system objectives. The Rice-Tinsley Corporation uses risk-based thinking, which means we consider the risk quantitatively and qualitatively.
2. The Rice-Tinsley Corporation top management demonstrates leadership and commits to ensuring that risks and opportunities that can affect the conformity of our service are determined and addressed.
3. The Rice-Tinsley Corporation will take action to identify risks and opportunities and plan how to address the identified risks and opportunities.
4. The Rice-Tinsley Corporation will monitor, measure, analyze, and evaluate the risks and opportunities.
5. The Rice-Tinsley Corporation is always improving by responding to changes in risk.

At The Rice-Tinsley Corporation, we ensure that the audit testing procedures meet the type of requirements and operating effectiveness.

Attachment A

The Rice-Tinsley Corporation Product Testing Survey

1. What is your first reaction to the product?
 - ☐ Very Positive
 - ☐ Somewhat Positive
 - ☐ Neutral
 - ☐ Somewhat Negative
 - ☐ Very Negative

2. How would you rate the quality of the product?
 - ☐ Very high quality
 - ☐ High quality
 - ☐ Neither high nor low quality
 - ☐ Low quality
 - ☐ Very low quality

3. How innovative is the product?
 - ☐ Extremely innovative
 - ☐ Very innovative
 - ☐ Somewhat innovative
 - ☐ Not so innovative
 - ☐ Not at all innovative

4. When you think about the product, do you think of it as something you need or don't need?
 - ☐ Definitely need
 - ☐ Probably need
 - ☐ Neutral
 - ☐ Probably don't need
 - ☐ Definitely don't need

5. How would you rate the value for money of the product?
 - ☐ Excellent
 - ☐ Above Average
 - ☐ Average
 - ☐ Below Average
 - ☐ Poor

6. How likely are you to replace your current product with The Rice-Tinsley Corporation's product?
 - ☐ Extremely likely

- ☐ Very likely
- ☐ Somewhat likely
- ☐ Not so likely
- ☐ Not at all likely

7. How likely is it that you would recommend our new product to a friend or colleague?

- ☐ Extremely likely
- ☐ Very likely
- ☐ Somewhat likely
- ☐ Not so likely
- ☐ Not at all likely

8. In your own words, what are the things that you like most about The Rice-Tinsley Corporation's product?

9. In your own words, what are the things that you would most like to improve in this product?

QMS Leadership and Commitment - Global

PURPOSE

The Rice-Tinsley Corporation management ensures the quality policy and objectives are applicable to the organization.

Leadership is about establishing unity of purpose and direction in an organization. It also involves creating and maintaining an environment where people can be fully involved in achieving the organization's objectives. Therefore, someone has to get this started, to set the direction, to strategize, to plan and implement the business idea, to find the means and to provide the resources.

In managing performance, leadership is crucial because leaders are purposeful and result-oriented. They are oriented towards achieving desired targets in the specific field. It is also important to know that such orientation is learnt. In other words, leadership can be developed. To manage an organizational performance, leaders are needed at different levels and functions in the organization.

A good leadership is important to influence and motivate others to follow him/her into areas of uncertainty. What it means here is that the crucial leadership role is concerned with change. In times of uncertainty, change is the only constant to the organization's survival and hence longevity. As changes bring anxiety to employees, a good leader must help the people to know the organization through its values, guiding principles and underlying philosophy in such times.

MANAGEMENT RESPONSIBILITY

Under the ISO 9001 requirements, the leadership role is defined as management responsibility in Clause 5, "Management Responsibility". The standard requires that top management to provide evidence of its commitment to the development and implementation of the quality management system and continually improving its effectiveness. Therefore, the top management holds five key responsibilities:

- Communicating to all employees on the importance of meeting customer and other requirements,
- Setting direction through a quality policy
- Defining expectations and monitoring results through the established quality objectives,
- Reviewing the organization's overall performance by conducting management reviews,
- Providing resources to achieve desired outcomes.

A good leader must be passionate about the objective of the organization and to achieve the desired target. This requirement is stated in ISO 2001 Clause 5.3 "Quality Policy", that the top management is responsible to establish, document and communicate to all employees and other interests parties.

The Rice-Tinsley Corporation's Quality Policy is tool for expressing top management's intention on quality management performance. The requirements of Quality Policy are:

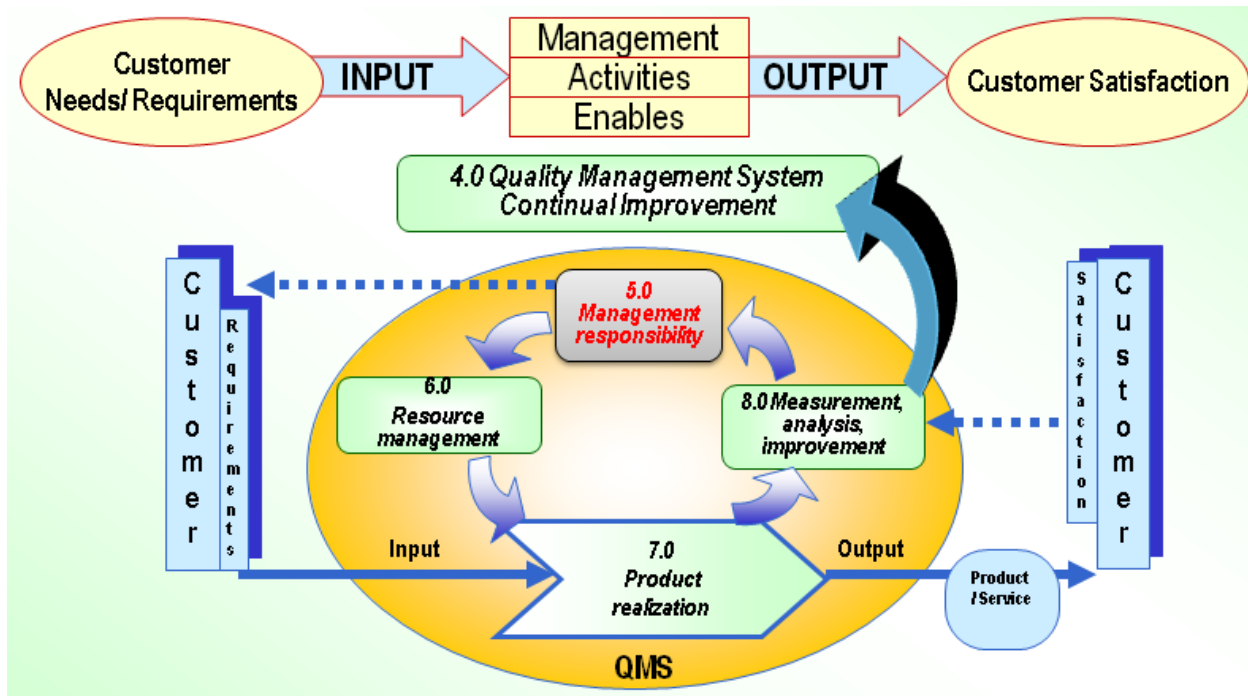
- The purpose of the organization
- Commitment on conformance to ISO 9001 requirements
- Continual improvement on the management system
- The guiding framework for establishing and reviewing organization's performance, defined as Quality Objectives.
- To communicate and understood by all employees
- To periodic reviews to ensure the defined policy is continues suitable to an organization.

Another evident to prove top management's involvement is conducting the management reviews at planned intervals to review the performance and changes of the Quality Management System. The ISO 9001 clause 5.6 "Management Review" stated clearly on what are the requirements of a management review, which includes the review of the existing policy and objectives.

Evidence of management reviews can be found in the meeting minutes, the 7 key items review inputs which stated in ISO 9001 clause 5.6.2 "Review Input" are necessary discussion items in management review. The leader's responsibilities in management review is stated in ISO 9001 clause 5.6.3 "Review Output" which cover the decisions and actions to be taken related to improving the effectiveness of the quality management system and its processes, the improvement of the product or services related to customer requirements, and evaluation and provision resources covers human resources, finances, MIS and etc.

How a leader creates and maintains the environment for employees can become fully involved in achieving the organization's goal is more complicated to assess. Generally, these soft requirements are expressed as espoused statements of the organization's philosophy and core values. The practices of these espoused values are difficult to document or record down except through constant communication. Nevertheless, these are very important in building a culture that supports organization's performance.

Communication is another key function of a leader. Leader has to communicate to all employees on the importance of meeting customer requirements and other requirements such as legal, regulatory that affect the use of the product or service. Evidence records come from the various communication channels in quality management system such as frequent periodic meetings carried out at different hierarchical and functional levels, for example, monthly top management meeting, division meeting and etc.



MANAGEMENT COMMITMENT

Management Commitment

In order to provide evidence to show to commitment, The Rice-Tinsley Corporation's Top Management must:

- Communicate to all level of people in the organization, the importance of meeting customer requirements and other statutory and regulatory requirements related to conformity of product.
- To ensure "Quality Policy" is established
- To ensure "Quality Objectives" are established
- To ensure "Management Review" is conducting, minimum once a year in common practices.
- To ensure "Availability of Resource" need for implement QMS.

Quality Policy

Top management is responsible to establish a Quality Policy for an organization. This Quality Policy must:

- Align with the organization's goal and quality direction
- Commitment to comply ISO 9001 QMS requirements and continually improve the effectiveness
- Provide direction or framework for setup Quality Objectives
- Communicate and understanding to everyone within an organization
- To review periodically the suitability for the organization.
- Must review in "Management Review".

Two key words are important in a Quality Policy, there are:

1. Fulfill or meeting customer satisfaction

2. Continual improvement

At The Rice-Tinsley Corporation, we are committed to fulfill customer satisfaction by continual improvement of our processes.

Quality Objectives

Top management must establish Quality Objectives. Quality Objectives must:

- Be measurable and align with Quality Policy for commitment of continual improvement
- Include meeting customer's requirements and other requirements determined by the organization.
- Must periodical review and monitor the result and provide necessary corrective actions when needed
- Must be the reviewed result in Management Review.

At The Rice-Tinsley Corporation, we must communicate to all level of staff the commitment of achieving customer satisfaction and understanding all requirements.

Management review

Management review is an important requirement. All the important decisions are decided in management review. There are three sub clauses under this requirement. They are:

- General Rules
- Review Input
- Review Output

General Rules: Top Management must review the ISO 9001 system, at planned intervals, at a minimum of once a year, this is to ensure:

- The ISO 9001 QMS continuing suitability to the organization,
- The effectiveness of the ISO 9001 system,
- The changes needed for QMS
- Room of improvement for QMS
- The suitability of Quality Policy and Quality Objectives

Review Input: The ISO 9001 QMS requires the minimum 7 review input in "Management Review":

- Results of Audits, this includes any kind of audits, including first body audit or internal audit done by organization, second body audit done by customer, third body audit done by ISO Certification Body.
- Customer Feedback, the comments from customer includes performance rating judged by customer, customer complaints and etc.
- Process performance and product conformity
- Status of preventive and corrective actions, including production CAR report, audit CAR report and any preventive action report.
- Follow up action from previous management reviews

- Any changes that could affect the ISO 9001 QMS
- Recommendation of improvement

Review Output: Through the reviewing of the overall performance of QMS, management can decide if any process or system needs to improve or additional resources needs for future plans.

The management review is normally reviewed annually or a series of monthly management meeting throughout the year. The frequency and schedule for these meetings must be defined and this is part of the audit criteria. Management Review's meeting minutes must be kept as quality record and control follow the Control of Records Procedure.

The top management must make a decision after all the "Review Input" had been discussed, the decisions and actions related to:

- Improvement of the effectiveness of the ISO 9001 QMS and its processes - Management review needs to seek for opportunities to improve the QMS and its processes
 - a. Can QMS system be more simplified and effectiveness?
 - b. Do any processes have a room for improvement?
- Improvement of product related customer requirement - Management review needs to seek for opportunities to improve the product quality or service quality.
 - a. Can any improvements be made to reduce nonconforming product?
 - b. Any new requirements from customer related to product?
- Resource needed - Management review also need to decide any addition resources needed to improve the effectiveness of ISO QMS.
 - a. Is our manpower enough for next one year? Any addition head count?
 - b. Any training needed for our manpower?
 - c. Any addition machine or infrastructure require to meeting customer requirements?

AVAILABILITY OF RESOURCE

Provision of Resource

The Rice-Tinsley Corporation will determine and ensure the available of determined resources needed:

- To ensure the implantation, maintain and continually improve the effectiveness of ISO 9001 system
- To ensure customer satisfaction

Resources needed mentioned here can refer to manpower, machine, infrastructure, regulation, etc.

Human Resources

Human resource is another critical resource for organization. ISO 9001 emphasis on human resource's competency and training. 2 sub-clauses are under this requirement.

People performing work directly or indirectly affecting the conformity of product requirements must be competent based on education, training, knowledge, skills and experience.

Human resources is one of the key resources for the ISO 9001 QMS. ISO QMS can be effective and efficiency if the organization has the right people doing the right jobs with the right types of competencies.

To handle this requirement, the competency (education, skills, experience) must be defined clearly and communicate to the people who perform the task affected to the product quality.

The common practice, we will define these competency requirements in the job description, some organization define in procedure level.

Competence, Training and Awareness

The Rice-Tinsley Corporation will identify the training needed for each job or task, and review the gap between the people who perform the job to the requirements.

- Provide the require training to the people if there is a gap.
- To review and evaluate the people after training provided to ensure the effectiveness of training.
- People must be aware and understand the importance of how their activities can contribute to the achievement of quality objectives.
- Training records, evaluation records will be maintained by The Rice-Tinsley Corporation according to ISO 9001 requirements.

Infrastructure

The Rice-Tinsley Corporation will identify, provide and maintain the facilities needed to ensure to achieve conformity of product, including:

- Building, workspace and associated facilities
- Equipment needed related to process or product requirement, either hardware or software
- Supporting activities such as communication method, transport and etc.

All pertinent infrastructures must be identified, available and maintained. This requires a maintenance plan or preventive maintenance plan and records to ensure the maintenance job was done effectively.

Work Environment

The Rice-Tinsley Corporation will determine and manage the work environment needed to achieve the conformity of product requirements.

Our work environment is suitable to ensure organization to meet the product requirements and management will ensure the availability of resources.

Risks and Opportunities That Can Affect Products and/or Services

Risk-based thinking is an important new concept that has been brought into the forefront of quality planning. Along with this notion that it is important to think about risk.

The Rice-Tinsley Corporation has a business planning processes that looks at the risks to the business and the opportunities that could be present. It's called a SWOT analysis (strengths, weaknesses, opportunities, and threats).

The use of a SWOT analysis will include making plans to address the risks and opportunities identified, which is also required by the ISO 9001:2015 standard requirements. For instance, if we identify a risk that a key component in our product or service will become obsolete, we can make the plans necessary to find a replacement before our customers are impacted by our product becoming unavailable.

QUALITY LEADERSHIP

Executives must provide the structure and resources to set the foundation during implementation and through ongoing internal audits, corrective action, and continual improvement. ISO9001:2015 Section 5.1 (Leadership and commitment), Part 5.1.1 states that general top management shall demonstrate leadership and commitment with respect to the quality management system by:

- Ensuring that the quality policy and quality objectives are established for the quality management system and are compatible with the context and strategic direction of the organization. (Structural)

Establishing a mission and vision drives the strategic direction of a company recognizing major forces working for and against it (Lee G. Bolman and Terrence E. Deal, "Reframing Organizations: Artistry, Choice and Leadership," 2nd ed.; San Francisco: Jossey-Bass Publishers, 1997; 180). A vision without a strategy is just an illusion. It is important that the strategy drive the quality policy, and that the quality policy set the framework for establishing company goals, objectives, targets, and continual improvement toward realizing the strategy. Without this guidance, employees can be left without a path laid out in front of them, causing them to be less efficient both in their day-to-day and longer-term tasking, as well as stray from the company's strategic goals. Without structure, employees will invent ways to complete tasks rather than follow established processes.

- Promoting the use of the process approach and risk-based thinking. (Symbolic)

One way to integrate the requirements is by organizing the quality management system with a process focus, rather than a standards focus. In a process-based quality management system, the executive team identifies management as process owners. Process owners are those who are responsible for ensuring procedures, work instructions, standard operating procedures, and forms are written to describe actual practice while meeting the needs of the international standard. Effectively incorporating risk-based thinking means taking those questions that are always left in the back of the mind, bringing them to the forefront, and documenting them in a process flow.

- Ensuring that the resources needed for the quality management system are available. (Human Resource)

ISO9001:2015 seeks to change some of the drawbacks of going lean by putting a stronger emphasis on analyzing the resources needed to provide a quality product and/or service. These resources include infrastructure, operations, and the ability to adequately monitor and measure results. The ISO standard also requires consideration for the operational environment, including social, psychological, and physical factors.

- Communicating the importance of effective quality management and of conforming to the quality management system requirements. (Symbolic)

When it comes to communications, The Rice-Tinsley Corporation has an active leadership team, providing needed resources and a solid support system for employees. The lines of communication between top and middle management are excellent, and the importance of conformance is passed on to all employees. Communicating employee responsibilities for quality management throughout all levels of the company starts when the process owner is identified, when an employee is hired, or when his or her position changes. Creating a master list of process owners' respective procedures, providing an overview of the quality management system, drilling down to the responsibilities of the new hire to ensure adequate training occurs, and discussing changes in responsibilities due to a new position are all important for communicating requirements and ensuring conformance over time.

- Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility. (Political)

Members of the executive team demonstrate leadership by creating opportunities to talk to employees at all levels of the company. Improvement of the quality management system for their process area should be at the forefront of their dialogue. Executive management make it a goal to talk to employees at least once a month about the importance of the company's goals, their role in achieving them, continual improvement, and any elements of risk they see from a new or changed process.

Responsibility for implementation, training, internal auditing, corrective action, and continual improvement of each process generally lies with middle management as the process owner, but leadership and direction from executives is paramount to the success of a solid quality management system. If there is a strong leadership at the highest level, in all four frameworks, employees will buy into the system. Employees at every level are instrumental to the success of the quality management system, even if commitment to certification starts at the top.

Without rock-solid management commitment, you will not have a successful quality management system. Communicating the importance of Leadership commitment and active involvement to quality is essential.

The Rice-Tinsley Corporation management communicates the importance of the QMS requirements to all employees and ensures that the QMS achieves its intended results.

QMS Management Review - Global

PURPOSE

The Rice-Tinsley Corporation management ensures the quality policy and objectives are applicable to the organization.

The act of reviewing the available data on Management Review can be one of the biggest drivers of improvement in the Quality Management System.

Top management shall review the organization's quality management system, at planned intervals, to ensure its continuing suitability, adequacy, effectiveness, and alignment with the strategic direction of the organization.

QUALITY SYSTEM

For effective management review, you need to bring together key points of the quality system:

- Identification of Key Processes (those processes to be included in the QMS)
- Identification of Quality Objectives for the processes
- Monitoring and measuring QMS processes

When focusing on these three key points of the quality system, management can identify measurements to be made and quality objectives. At management review, improvement goals can be evaluated, and new goals identified, leading to continual improvement.

The Relationship Between Processes, Procedures and Work Instructions

When The Rice-Tinsley Corporation documents its QMS, it is an effective practice to clearly and concisely identify our processes, procedures and work instructions in order to explain and control how it meets the requirements. This begins with a basic understanding of the hierarchy of these terms and how to efficiently categorize the workings of a management system within them.

- A **process** states *what* needs to be done and why
- A **procedure** states *how* the *process* needs to be done
- A **work instruction** explains *how* to carry out the *procedure*

Consider a process as a high level, strategic method of control, in effect a summary of objectives, specifications, and broad resources needed. The procedure adds more specifics such as responsibilities, specific tools, methods, and measurement. And a work instruction is a step-by-step guideline to implement the process and procedure, often segmented in some way to focus those who are doing the actual work.



To control the outcome of a quality management system, more increasingly detailed action levels are often created in the form of processes, procedures and work instructions. These are typically to help satisfy a requirement by the quality management standard such as ISO 9001-2015.

Quality objectives are measurable goals relevant to enhancing customer satisfaction and are consistent with the quality policy. These objectives are initially established when planning our QMS and redefined in management reviews as needed. Examples can include goals to improve on time delivery, defects, or scrap. These objectives will be documented and updated as appropriate.

Examples of quality objectives:

- Obtain 100% customer on-time-delivery
- Reduce production defects by 10%
- Average operation efficiency to be >90%

Quality objectives are properly communicated throughout The Rice-Tinsley Corporation's organization.

One of the methods used to control production of products or services is identification and traceability. This can be in the form of part labels, job travelers/work orders/route sheet, process validation worksheet, lot control, "inspected" labels, or any means to identify outputs and their status.

ISO 9001:2015 Subclause 8.5.2 Identification and Traceability states the following three requirements around identification and traceability:

- Use suitable means to identify outputs when it is necessary to ensure the conformity of products and services.
- Identify the status of outputs with respect to monitoring and measuring requirements throughout production and service provision.
- Control the unique identification of the outputs when traceability is a requirement and retain documented information to enable traceability.

The method and level of control is determined by The Rice-Tinsley Corporation's customer's requirements and what is needed to support The Rice-Tinsley Corporation's processes.

WHAT ARE THE REQUIRED MANAGEMENT REVIEW INPUTS

Although other inputs could be added as desired by The Rice-Tinsley Corporation, ISO9001 has a minimum list of seven required inputs that top management needs to review. This can help to not only assess the health of the QMS, but also to find areas where improvement is needed or desired in order to improve the processes and customer satisfaction. The seven headings below are the required inputs, and there are some ideas on what questions to ask when reviewing data for each mandatory input in order to help dig further and drive improvement.

- **Results of Audits.** Are any non-conformances found with the processes due to problems with the design of the process? Are any of them repetitive non-conformances that have been ignored in the past, are the incidences of problems increasing, or is the same problem seen across different processes indicating larger problems? Is a problem seen in one process possibly lurking in another process waiting to occur?
- **Customer Feedback.** Firstly, is negative customer feedback coming less often, and positive feedback more of the time? Are customer complaints addressed quickly enough to ensure customer satisfaction is not impacted? If the feedback is not a complaint, such as a comment that a response to a question was expected the day before it was given, do you need to make changes to that process before an actual complaint happens?
- **Process Performance and product conformity.** Are process problems or product non-conformities increasing, decreasing or remaining constant? Are adequate resources present to address non-conformances? Have non-conformances affected customer satisfaction? Are there areas that can be improved, and what resources would be needed?
- **Status of Preventive & Corrective Actions.** If you have identified corrective or preventive actions in your processes, are they being addressed quickly enough to meet your business needs? Are the appropriate resources allocated to the most critical problems to support the requirements of your company?
- **Follow-up Actions from previous Management Reviews.** If previous reviews of data required someone to go away and take further actions, were these actions followed through upon? Were the appropriate resources applied in a timely fashion to satisfy the business requirements? Did the actions avoid potential problems, and if not, are further actions needed?
- **Changes that could affect the Quality Management System.** Is there an expected customer or legal change that you know is coming, and if so, can you start planning to address it before it arrives? Can the cost of implementing the changes be reduced, or at least spread over several budget years, by starting early? It is often easier to implement a change on your own timeline rather than in a rush to meet an imposed deadline.

- **Recommendations for Improvement.** If employees or third parties have recommended improvements, have they been reviewed rather than discounted? Is there improvement to be gained from making the improvements, or is the cost too great? Has feedback been given to the person recommending the improvement whether it has been adopted or not?

WHAT ARE THE REQUIRED MANAGEMENT REVIEW OUTPUTS

The three headings below are the mandatory outputs of Management Review, and records of the above queries need to be maintained to show that management review successfully addressed them and identified the outputs for the QMS. The records maintained will vary depending on how the management review is structured and carried out, but they are important not only to demonstrate to an auditor, but to document for The Rice-Tinsley Corporation what decisions were made and why.

- **Improvement of the effectiveness of the system.** Improvement is the big driver of the ISO9001 Quality Management System, and it can be the largest benefit for a company that implements a good QMS. How do you demonstrate that you are improving the effectiveness of the system? You do it by improving the processes within the system. Process improvement is measured by savings in time, money and resources, and this can be fed back into greater profits or driving the system to improve even further.
- **Improvement of product related to customer requirements.** Again, by improving the product or service to make it better meet the requirements of the customer, you can have greater customer satisfaction, which means more customers who will return for your product or service again or tell their friends about it. Better meeting your customer needs is one of the best advertisements there is, and it is an expected product of a well-implemented QMS.
- **Resource Needs.** Assigning resources, such as deciding to hire new employees or spend money on machinery or tools that will make the processes work better, is one of the key duties of management. Using Management Review to try to focus on improvements can help drive savings in costs and resources by making sure they are applied in the right place the first time. Using data to drive decisions helps to ensure they are accurate.

Management Review Can Be A Key Driver Of Improvement

Since Top Management Leadership, Customer Focus, Evidence Based Decisions and Improvement are four of the Quality Management Principles that form the basis of the ISO9001 standard, it makes sense that the Management Review process highlights all four areas to make sure the Top Management are monitoring and controlling the necessary resources to make the company function. Instead of being a burden, Management Review should become one of the main elements of QMS improvement. Management Review is all about reviewing the available data to confirm that adequate resources are present to ensure customer satisfaction and improve the QMS and the product.

GENERAL

The management review must address the possible need for changes to policy, objectives, targets, and other elements of the quality management system. The management review process must ensure that the necessary information is collected ahead of time to allow management to effectively carry out this evaluation. Information that should be reviewed includes:

1. Minutes from previous management reviews
2. The status of policies, objectives and targets
3. Results of quality management system audits
4. The extent to which the objectives and targets have been met
5. Suitability and effectiveness of the QMS based possible changes
6. New or proposed legislation or regulations
7. Changing expectations and requirements of relevant interested parties
8. New or modified activities, products, or services
9. Advances in technology and science
10. Changing market preferences of buyers

All management reviews must be documented. Observations, conclusions, and recommendations for further necessary action from the review must be recorded. If any corrective action must be taken, top management will follow up to ensure that the action was effectively implemented.

The purpose and final outcome of the management review should be continual improvement of the quality management system. As The Rice-Tinsley Corporation's QMS increases in its effectiveness and efficiency, The Rice-Tinsley Corporation performance will likewise increase.

Performance metrics should be monitored with varying frequencies, some hourly, some daily, some weekly and some monthly; management cannot wait for six months to respond, if they do, it will be too late.

Top management might conduct weekly meetings in which they review metrics and objectives to determine if any corrective action is required. The process owner is then responsible for reporting close out progress in the meeting a week later. Undertake management reviews in order to:

1. Determine and evaluate QMS performance
2. Determine the need for change and improvement
3. Determine the suitability of the policies and the objectives

QMS Monitor and Measurement - Global

PURPOSE

Measurement, Analysis, and Improvement

The cornerstone of a successful QMS is the measurement, analysis, and improvement of processes, policies, and work instructions. The value of the QMS is derived from process improvement. Senior Management will periodically review Company processes and procedures to ensure that customer satisfaction, organizational processes, and non-conformance of product and services are properly managed and improved with the intent of non-reoccurrence. The Rice-Tinsley Corporation is always evaluating the effectiveness of actions taken to address risks and opportunities.

The Rice-Tinsley Corporation will make sure to apply and practice the following principles:

- The Rice-Tinsley Corporation shall determine which quality elements shall be monitored and measured.
- Methods for monitoring, measurement, analysis, and evaluation shall be determined.
- The methods shall define which activities are needed to ensure valid results of monitoring and measurements.
- The methods shall define the stages and the intervals in the process when activities of monitoring and measurements must be performed.
- The methods shall define when results of monitoring and measuring shall be analyzed and evaluated.
- The results shall enable the evaluation of the performance and the effectiveness of the QMS.
- Documented information on the results of the monitoring, measurements, analysis, and evaluation shall be retained.

TERMS AND DEFINITIONS

- Monitoring—a continuous inspection or observation of process performance or process output for a special purpose through a defined scope (e.g., with a sample size or over a period of time) and maintaining records of those observations
- Measurement—the activity of delivering data to a method in order to define objectively a quantitative or qualitative measure and capturing a situation without any references to the significance
- Analysis—a set of techniques for examining trends and tendencies of measurements of an output (process or product)
- Evaluation—the action of comparing a process or process output measurements against given criteria to determine the performance of the process or conformity of a process output

SCOPE

Customer Satisfaction

Customer satisfaction is accomplished through periodic review of customer quality control reports, periodic customer QMS review, commendations, gained/lost business analysis, etc. The results of customer feedback will be used by Senior Management to modify internal organizational and business processes. Customer satisfaction results will be documented in such a form to enable analysis of the data.

Monitoring and Measurement

Monitoring and measurement of organizational processes, services, and products are accomplished through the use of internal audits, inspections, benchmarks, strategic and project plans, non-compliance reports, customer complaints, and established metrics. The Quality Manager has authority to stop work or ensure adequate controls are in place until effective corrective action has been taken, any applicable changes have been incorporated in procedures, and these have been communicated to appropriate personnel. Management will periodically review outcomes and organization objectives to identify those processes that need improvement. Findings, decisions, and directions should be incorporated into a strategic or tactical plan and communicated to staff as appropriate.

GOAL OF MONITORING, MEASUREMENT, ANALYSIS, AND EVALUATION

The goal of monitoring, measurement, analysis, and evaluation is to provide the decision makers an understanding through a situation report concerning the performance of processes. The data that the monitoring, measurement, analysis, and evaluation provide shall relate directly to the controls suggested by the standard such as supplier evaluations or control of nonconform products. Those activities shall indicate the effectiveness of the QMS and the extent to which the QMS achieves its quality objectives. This type of reporting shall regularly provide the different organizational units data and information regarding quality issues.

The Rice-Tinsley Corporation shall make sure that these needs are known and available through the outputs of the process approach—which processes must be measured in order to control their performance and verify their conformity. The Rice-Tinsley Corporation will:

- Determine the processes needed for the QMS
- Evaluate these processes and implement any changes needed to ensure that these processes achieve their intended results
- Improve the processes and the QMS

The Rice-Tinsley Corporation shall define how these quality objectives shall be monitored and measured by breaking down the quality objectives into operational measurements:

- Which processes and activities must be monitored?
- Which process outputs must be monitored and measured?
- Which methods shall be used for monitoring the activities and measuring the data?

The advantages of implementing monitoring, measurement, analysis, and evaluation:

- Implementing a systematic control of the realization processes
- Identifying deviations in time and submitting them to a controlled process for treatment
- Allowing users of the QMS to make decisions regarding results of processes
- Allowing the users of the QMS to prevent nonconformities by identifying gaps in a process and preventing the transition of nonconform outputs to the next process
- Determining the effectiveness and efficiency of processes
- Using the monitoring, measurement, analysis, and evaluation as means for continual improvement
- Promoting the achievement of quality objectives through key process indicators related to the objectives of the organization

DEFINING THE METHODS FOR MONITORING, MEASUREMENT, ANALYSIS, AND EVALUATION

Each monitoring and measuring activity must be conducted according to a defined method. The goal is to identify, for each process, the parameters of outputs that affect its quality and determine the activities necessary to ensure valid results, activities that will ensure that the monitoring and measurement deliver results that can be analyzed and evaluated. The methods shall enable a comparison of the results with the objectives.

When The Rice-Tinsley Corporation is monitoring and measuring a process, the following issues shall be referred:

- Identification of the processes or process outputs that must be monitored and measured
- Identification of those parameters or outputs that may indicate how the process behaves
- Identification of the function or the role responsible for conducting the activities of measurement
- Definition of parameters for monitoring such as process conditions, interval, sampling rates, batch loads, and quantities
- Description of the stages during the process where measurement activities shall be undertaken
- Tools, equipment, or software required to perform or assist in the measurement
- The activities and the use of techniques of measuring the process
- Where and how the results must be documented
- The criteria necessary for the evaluation of the results (the objectives)
- Action required in case nonconformities are detected

QMS Planning - Global

PURPOSE

Purpose - To define the Quality Objectives and Planning that is applied at The Rice-Tinsley Corporation.

This procedure is applicable to all personnel.

RESPONSIBILITIES

Top Management at The Rice-Tinsley Corporation shall be responsible for preparing, communicating to the organization and maintaining the effectiveness of the Quality Objectives and Planning.

Quality Assurance shall be responsible for enforcing and maintaining this procedure.

All Functional Departments at The Rice-Tinsley Corporation are responsible for understanding and complying with the Quality Objectives and Planning as stated in this document.

PROCEDURE

Quality Objective

Top Management at The Rice-Tinsley Corporation ensures that quality objectives, including those needed to meet requirements for products, are established at relevant functions and levels within The Rice-Tinsley Corporation. The quality objectives are measurable and consistent with the quality policy.

Quality Objective measures and results data is examined by The Rice-Tinsley Corporation Top Management and the Quality Council personnel as defined in Management Review.

The intent of the Quality Objectives is to establish measures that allow continuous improvement to occur.

Quality Management System Planning

The Rice-Tinsley Corporation ensures that:

- A. The planning of the quality management system is carried out in order to establish, document, implement and maintain a quality management system and continually improve its effectiveness as well as the quality objectives, and
- B. The integrity of the quality management system is maintained when changes to the quality management system are planned and implemented.

When it is necessary to update the quality management system, Quality Assurance prepares the necessary change documentation and obtains the appropriate approvals. Quality Assurance ensures changes/updates to the quality management system are in compliance with applicable ISO 9001 quality management system, statutory and regulatory requirements.

Customer Job Order Quality Management System Planning

Upon receipt of a Customer orders, various department participate through the life cycle of product ensure adherence to order requirements and proper planning.

The Rice-Tinsley Corporation Sales Department ensures that Customer order requirements are clear and properly communicated.

Continuous Improvement

The Quality Measures defined in this document were selected by the Quality Council based on being critical to report and improve Customer Satisfaction. The measured data is reviewed during the scheduled Management Review meetings to determine performance trends that may warrant the need for continuous improvement. A record of the review is documented as part of the Management Review report.

Figure 1 - Quality Objectives by Function

Item No.:	Quality Objective Type:	Measurement Type:	Functional Responsibility:	Reporting Frequency:
1	Customer Satisfaction Survey Index %	Greater than 75%	Contracts/Gen. Admin./Technical Manager/Producti on Operations/QA	Minimum five surveys are sent two times per year. When less than five Customers, then survey 75% of Customers
2	On-Time Delivery %: - Warehouse & Distribution Services - Calibration Services - Value-Added Assy, Test & Insp. Services - Micro Lab Test Services	Greater than 95%	Production Operations	Minimum Two times per year
3	Receiving Inspection %	Great than 95%	Production Operations	Minimum Two times per year
-	-	-	-	-

Each department manager of The Rice-Tinsley Corporation will develop and maintain a process map, flow chart, quality plan, operating procedure, etc., that show the workflow of the department as well as referencing evidence of compliance with the requirements of the management system.

Resources always have to be available when making changes to the QMS.

Top management shall demonstrate leadership and commitment with respect to the quality management system:

- insuring the quality policy and quality objectives are established
- ensuring the integration of the quality management system into The Rice-Tinsley Corporation's business processes
- promoting the use of the process approach and risk-based thinking
- promoting improvement

The new standard standardizes knowledge gained from experience, recognizes not only risk but opportunities, delves deeper into the measurement of The Rice-Tinsley Corporation's success, and places more emphasis on management involvement.

KEY REQUIREMENTS

- Adding risk-based thinking and management to planning
- Establishing quality objectives and how they will be achieved
- Planning actions when changes to the QMS are made
- Updating the QMS based on measuring ongoing effectiveness and any newly discovered risks or opportunities

A risk is a positive or negative deviation from the expected. Addressing a risk could mean pursuing a new opportunity. The better The Rice-Tinsley Corporation manages risks, the better prepared The Rice-Tinsley Corporation is to face uncertainties. During planning of the QMS, The Rice-Tinsley Corporation will address both risks and opportunities. Opportunities can include the adoption of new customers, products, technology or practices.

When addressing risks and opportunities, The Rice-Tinsley Corporation uses these key steps:

1. Define the risk and opportunity type: i.e. whether it derives from context, process and products/ services
2. Define the activity/source from where the risk or opportunity comes from.
3. Determine what category the risk falls under.
4. Thoroughly describe the risk.
5. Define the impact and the probability of occurrence.
6. Establish how The Rice-Tinsley Corporation will treat the risk and create a predefined list of treatments.
7. Define the acceptable action to treat the risk.
8. The Rice-Tinsley Corporation will identify opportunities and describe in ways on which The Rice-Tinsley Corporation will capitalize on them via documentation an action plan.
9. Regularly review risks and opportunities.
10. Procedures and forms related risk and opportunity can be described in a documented information module.

QMS Policy and Objectives - Global

QUALITY POLICY

The Rice-Tinsley Corporation will consistently provide products and services that meet or exceed the requirements and expectations of our customers. We will actively pursue quality improvements through programs that enable each employee to do their job right the first time and every time.

The Rice-Tinsley Corporation has developed its expertise since its establishment and its aim is to achieve a high standard of service to its customers.

It is the policy of The Rice-Tinsley Corporation to provide the customer with goods and services to the agreed requirement in accordance with the details and price.

Our Quality Policy is defined and strongly driven by the following management principles and behaviors:

- Build a mutually profitable relationship with our customers, ensuring their long-term success, through the understanding of their needs and the needs of their customers as well
 - Achieve our commitments for quality, cost, and schedule
 - Enhance the systematic research and use of best preventive practices at all levels and ensure reliable risk management
 - Drive continual improvement and innovation based upon efficient business processes, well-defined measurements, best practices, and customer surveys
 - Develop staff competencies, creativity, empowerment and accountability
- through appropriate development programs and show strong management involvement and commitment

The Rice-Tinsley Corporation strives to be the best provider in the industry. Through the use of these guiding principles, everyone in The Rice-Tinsley Corporation is accountable for fully satisfying our customers by meeting or exceeding their needs and expectations with best-in-class solutions and services. Our goal is 100% customer satisfaction 100% of the time.

The quality policy provides a framework for setting quality program objectives.

OBJECTIVES

Quality Objectives are goals for the value of products, services and processes. Quality objectives are communicated throughout The Rice-Tinsley Corporation. Here are The Rice-Tinsley Corporation's objectives:

- Send out fewer than 0.1 percent of products with a defect.
- Improve operational efficiency by 100 percent.
- Have zero safety incidents in the workplace.
- Maintain a customer satisfaction rate of 100 percent.
- Provide all resources employees need to remain as productive as possible.

The Rice-Tinsley Corporation QUALITY POLICY

The Rice-Tinsley Corporation will consistently provide products and services that meet or exceed the requirements and expectations of our customers. We will actively pursue quality improvements through programs that enable each employee to do their job right the first time and every time.

The Rice-Tinsley Corporation has developed its expertise since its establishment and its aim is to achieve a high standard of service to its customers.

It is the policy of The Rice-Tinsley Corporation to provide the customer with goods and services to the agreed requirement in accordance with the details and price.

Our Quality Policy is defined and strongly driven by the following management principles and behaviors:

- Build a mutually profitable relationship with our customers, ensuring their long-term success, through the understanding of their needs and the needs of their customers as well
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President: _____

Date: January 1, 2020

The President of The Rice-Tinsley Corporation has formulated the quality policy. The policy is explained and discussed at the general orientation training given to all new employees and has been reviewed with all current employees. All employees are expected to know what the quality policy means to them as it affects their job or position within the company. The policy is posted in prominent locations throughout the facility.

QMS Processes- Global

PURPOSE AND SCOPE

This document provides a means to:

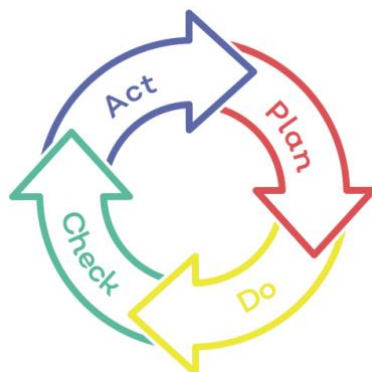
- demonstrate ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, and
- aims to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.

TERMS AND DEFINITIONS

- Product or Service only apply to products and services intended for, or required by, a customer.
- Statutory and regulatory requirements can be expressed as legal requirements.
- The term Customer refers to all companies, individuals, and organizations purchasing products from The Rice-Tinsley Corporation.
- An Internal Customer is an individual or department receiving information or material for a particular procedure.
- An Internal Supplier is an individual or department providing information or material for a particular procedure.
- A Procedure is a series of processes with responsibilities, and authorities to achieve a goal or specified output.
- A Process is a set of interrelated or interacting activities, which transform inputs into outputs.
- A Process Owner is the individual responsible for a given procedure and it's supporting work instructions, forms, and records. This responsibility includes ensuring that all relevant personnel are trained and that the documentation is accurate. Process Owners are identified by title.
- A Performance Objective is something sought or aimed for based upon the goals of the company. This includes objectives related to quality, customer satisfaction and/or other goals as described in the Quality and Environmental Policies, by the Management Review Committee and/or by the Process Owner
- Performance Metrics may be established for various functions and levels in the organization.
- Improvement Projects include Preventative Actions, Corrective Actions, and Continuous Improvement Actions.

PROCESSES

The process approach is a management strategy which incorporates the plan-do-check-act cycle and risk-based thinking. It means that processes are managed and controlled.



Production and Service

Foremen and craft teams are required to have a working understanding of the customer requirements as set out by contractual and regulatory requirements as appropriate for the job. Project Managers will ensure that information describing the characteristics of the product is available along with work instructions as appropriate. Crew leaders have a responsibility to ensure that suitable equipment, including safety equipment, is available on the job site. Individual craft team members will be qualified in the tasks that they will perform. If required, a copy of the operator's qualifications document will be kept on the project site in a readily available and legible format.

Inspections and test results shall be documented and their conformance with acceptance criteria evaluated.

Process Control

Product realization includes installation and construction activities that are planned and performed under controlled conditions. These conditions include the monitoring of customer contract specifications, and contractual, safety, and regulatory requirements. Processes affecting the delivery of the product or service are controlled using checklists, drawings, instructions, procedures, punch-lists, and other applicable documentation.

Project Management is responsible for ensuring that employees are trained, qualified, and authorized to perform the work assigned. Additionally, Project Management will ensure that the proper tools, equipment, processes, and information are available and communicated to the construction crews.

Equipment Calibration

The Rice-Tinsley Corporation's Quality Management is focused on zero defects for the delivery of our products and services. To meet that goal, it is important to ensure that all equipment items requiring calibration be calibrated on an as required basis. Equipment items include any item, whether used in the field or otherwise, that can affect the outcome of a delivered product. These items may include holiday detectors, micrometers, pressure testing charts, safety equipment, gas monitors, measurement equipment, torque wrenches, etc.

For all measuring equipment items that require period calibration, the items will be calibrated by the vendor or other suitable source and the calibration shall be logged. A copy of the calibration record shall be maintained with the correlating piece of equipment.

All necessary information relative to processes is documented and available when needed.

MEASUREMENT, ANALYSIS, AND IMPROVEMENT

The cornerstone of a successful QMS is the measurement, analysis, and improvement of processes, policies, and work instructions. The value of the QMS is derived from process improvement. Senior Management will periodically review The Rice-Tinsley Corporation processes and procedures to ensure that customer satisfaction, organizational processes, and non-conformance of product and services are properly managed and improved with the intent of non-reoccurrence.

Customer Satisfaction

Customer satisfaction is accomplished through periodic review of customer quality control reports, periodic customer QMS review, commendations, gained/lost business analysis, etc. The results of customer feedback will be used by Senior Management to modify internal organizational and business processes. Customer satisfaction results will be documented in such a form to enable analysis of the data.

Monitoring and Measurement of Processes

The Rice-Tinsley Corporation uses the contract to determine testing requirements.

Corrective Action

Corrective action is necessary to ensure that appropriate means are taken to ensure that a non-conforming product or service does not enter into production and to ensure non-reoccurrence. Corrective action is identified through inspections, observation, measurements, customer complaints, and non-conformance reports. The Quality Manager has the authority to stop work until such time as processes, procedures, and/or measurements are in place to ensure non-reoccurrence and that those changes are communicated to appropriate personnel.

The Rice-Tinsley Corporation shall take immediate action to eliminate non-conformities and to prevent reoccurrence to ensure conformity of the product or process.

We monitor metrics that measure our performance and indicate trends as they relate to the interested parties above through the following methods.

- End of Year Report – Annually
- Management Review – Quarterly
- Business Unit Managers Scorecard – Weekly
- Daily Flash Report – Daily
- Daily Standup Meetings (companywide) – Daily

External Context

The Rice-Tinsley Corporation monitors, measures and considers the impact of legal, technological, competitive, market, cultural, social, and economic environments. Strategic and operational decisions are based on our understanding of the external context of the business environment we compete in.

Internal Context

The Rice-Tinsley Corporation strives to understand and consider issues related to values, culture, knowledge, growth, and performance. Our workforce is very culturally, age, and educationally diverse.

Top management ensures that the responsibilities and authorities for relevant roles are assigned, communicated and understood.

The Rice-Tinsley Corporation's Top Management or Quality Manager will verify our products and/or service requirements and assure they have been met.

We consider all Interested Parties as they impact our QMS. We focus on our customers which directs the rest of the business.

We analyze performance, conduct market research, listen to our employees, and comply with laws and regulations.

The Rice-Tinsley Corporation products and/or services to the customer will not be released until all requirements are met and are satisfactory.

The Rice-Tinsley Corporation delivers high levels of customer satisfaction by producing superior quality products and continually improving our Quality Management System.

CONTROL OF DOCUMENTED INFORMATION

The Rice-Tinsley Corporation shall ensure availability and suitability of documentation required by the QMS and by the ISO 9001 Standard.

The Rice-Tinsley Corporation shall control the sufficient and appropriate protection of documented information and will identify risks for its safety and integrity.

Distribution, access, and retrieval activities necessary for the control of documented information shall be determined and maintained.

Activities for storage and preservation, including activities to ensure that documented information remains legible necessary for the control of documented information, shall be determined and maintained.

Activities for the control of changes of documented information shall be determined and maintained.

The different levels of access permissions and the authority to modify the documented information will be defined and controlled.

Activities for retention and disposition necessary for the control of documented information shall be determined and maintained.

Documented information of external origin needed for the planning and operation of the QMS will be identified, controlled, and appropriately distributed.

Documented information retained as evidence of conformity shall be protected from unintended alterations.

Each document shall be approved for suitability before release for use.

Control of Records

The Rice-Tinsley Corporation establishes and controls records as evidence of conformity to requirements and to demonstrate the effective operation of the quality management system.

The Rice-Tinsley Corporation will maintain documented information to support our operation of processes and retain documented information to the extent necessary to have confidence that the processes are being carried out as planned.

Control of External Information

The Quality Manager will document and file relevant documents of external origin as needed. The Quality Manager is responsible for:

- getting new versions or new documents
- update register
- distribute new version or new document
- check if it is applicable
- plan changes
- implement changes
- confirm that changes were implemented

QMS Product and Service Requirements - Global

PRODUCT AND SERVICE

Work Environment

Management is responsible for the development, maintenance, and identification of the work environment to ensure the highest level of productivity, quality, and safety is achieved and thereby reduce costly workers' compensation claims, safety, non-conformance, and poor quality issues.

Infrastructure

Management is responsible for ensuring that employees have the necessary equipment, tools, processes, and personnel in place to perform job duties.

Product Realization

Product realization is the goal of both The Rice-Tinsley Corporation and the customer. The Quality Management System is articulated, maintained, and improved with the focus of ensuring that customer contract requirements and expectations are met. As such, the following sections contain the necessary processes to ensure objectives, as set forth by Senior and Project Managers, are obtained.

Contract Review

All customer requests for proposals, bids, and contracts are to be reviewed by all Division Managers to ensure customer expectations are met. The review is performed to ensure that all customer-stated requirements are adequately defined and documented; that regulatory requirements are fulfilled; and that the necessary resources are available to execute and fulfill the contract.

Customer-Related Processes

The Rice-Tinsley Corporation shall adhere to processes, specifications, standards and policies communicated by the customer and contract. Customer-related processes may include scheduled meetings, reports, inspections, key document turnover, requirements and status reports. The Rice-Tinsley Corporation personnel will ensure that those processes are documented and tracked to ensure compliance. Where applicable, Project Specific Quality Assurance Plans outline these adherences, along with internal processes and procedures. Internal project/phase/job notifications ensure all The Rice-Tinsley Corporation organizational components can be made aware of any stated customer and contract related processes.

Procurement

Senior Management and Managers are responsible for ensuring that the proper equipment and services are available for crews to fulfill product/service realization and subsequently meet the customer's expectations. Procurement activities are controlled through processes and procedures to ensure that selection of suppliers, subcontractors, supplier communication, evaluation, and resolution of non-conformance are accomplished.

Management is responsible for the selection and discontinuance of contracts with vendors that conduct business with The Rice-Tinsley Corporation. Senior Management will determine authorized spending levels within each employee's responsibility.

The Rice-Tinsley Corporation will safeguard customers' or external providers' property or information. The Rice-Tinsley Corporation utilizes protection of property such as intellectual property, raw materials, software, or data from external parties.

Traceability Of Outputs

The Rice-Tinsley Corporation tracks outputs/deliverables, through job numbers, serial numbers, bar codes or part numbers.

Vendor Set Up

When a process or product is outsourced that may affect product quality, The Rice-Tinsley Corporation assures control by:

- Assuring the supplier of the outsourced process or product is qualified.
- Defining the requirements for the outsourced supplier through a vendor preparation and qualification.
- Verifying parts and/or approval of the product or process upon receipt.

Foremen and craft teams are required to have a working understanding of the customer requirements as set out by contractual and regulatory requirements as appropriate for the job. Project Managers will ensure that information describing the characteristics of the product is available along with work instructions as appropriate. Crew leaders have a responsibility to ensure that suitable equipment, including safety equipment, is available on the job site. Individual craft team members will be qualified in the tasks that they will perform. If required, a copy of the operator's qualifications document will be kept on the project site in a readily available and legible format.

Inspections and test results shall be documented and their conformance with acceptance criteria evaluated.

Process Control

Product realization includes installation and construction activities that are planned and performed under controlled conditions. These conditions include the monitoring of customer contract specifications, and contractual, safety, and regulatory requirements. Processes affecting the delivery of the product or service are controlled using checklists, drawings, instructions, procedures, punch-lists, and other applicable documentation.

Project Management is responsible for ensuring that employees are trained, qualified, and authorized to perform the work assigned. Additionally, Project Management will ensure that the proper tools, equipment, processes, and information are available and communicated to the construction crews.

Equipment Calibration

The Rice-Tinsley Corporation's Quality Management is focused on zero defects for the delivery of our products and services. To meet that goal, it is important to ensure that all equipment items requiring calibration be calibrated on an as required basis. Equipment items include any item, whether used in the field or otherwise, that can affect the outcome of a delivered product. These items may include holiday detectors, micrometers, pressure testing charts, safety equipment, gas monitors, measurement equipment, torque wrenches, etc.

For all measuring equipment items that require period calibration, the items will be calibrated by the vendor or other suitable source and the calibration shall be logged. A copy of the calibration record shall be maintained with the correlating piece of equipment.

Training Process

The Rice-Tinsley Corporation shall ensure that personnel performing job-specific duties are trained and qualified to conduct such functions. The Rice-Tinsley Corporation shall:

- a. Determine the skills necessary to perform the job function;
- b. Where necessary, provide training for those individuals requiring a skill set necessary to complete a task;
- c. Evaluate the effectiveness of the training to ensure that individuals are competent to conduct the job task; and
- d. Maintain employee records that contain the training, skills, education, and experience of the employee.

QMS Resources (External and Internal) - Global

RESOURCES

Management Responsibility

It is the responsibility of Senior Management to ensure that appropriate policies and procedures are in place to measure, manage, and improve the processes used to realize customer products and services. The President shall appoint a Quality Manager. The Quality Manager is responsible for the Quality Management System and its components.

Management Commitment

Senior Management shall provide evidence of its commitment to the development and implementation of the Quality Management System and continually improving its effectiveness by:

- Communicating to the organization the importance of customer satisfaction and by complying with statutory and regulatory requirements,
- Ensuring quality objectives are established and monitored,
- Conducting management reviews, and
- Ensuring the availability of resources.

Customer Satisfaction

Senior Management will ensure that customer requirements are determined and fulfilled with a focus on exceeding customer satisfaction. Customer satisfaction can be realized through project analysis, inspections, customer reviews and commendations.

Quality Policy

'Quality In Everything We Do', is one of The Rice-Tinsley Corporation's 4 core values. We work with our customers and employees to build solid, lasting relationships for quality that goes beyond the surface. To achieve this The Rice-Tinsley Corporation will:

- Give quality and customer service the emphasis equal to the safety and financial aspects of the company.
- Empower our employees so that everyone is responsible and accountable for achieving the goal of superior quality products and services.
- Provide each employee with training, tools, skills, and motivation to produce the high quality products and services that meet or exceed our customer's requirements.
- Support the The Rice-Tinsley Corporation QMS through review and a continuous improvement philosophy.

Internal Communication

Senior Management shall ensure that employees have timely and complete information necessary to fulfill customer requirements. Communication processes shall occur via verbal and written form to include internal intranet, email, secure online platforms, checklists, employee meetings, project meetings, construction imaging, etc.

Resource Management

Resource management includes both equipment and human resource capital. It is the responsibility of the superintendent to ensure that appropriate equipment is used on the job site and that employees are properly trained for the task. Project personnel must be trained, competent, and qualified to accomplish work activities. Individuals should be aware of their role in ensuring that customer satisfaction is met in accordance with superintendent instructions.

Provision of Resources

The superintendent will coordinate the necessary resources needed for a project and will coordinate equipment resources with the equipment manager to ensure that needed equipment is available for the project.

Superintendents are responsible for the following:

1. Communicating the necessary skill set needed to accomplish work activities.
2. Ensuring that personnel have the necessary skill set to accomplish assigned work activities.
3. Measuring project personnel to ensure that each individual is trained, competent, and qualified to accomplish work activities.

Human Resources

Personnel who are assigned responsibilities that affect the quality of product are deemed competent on the basis of applicable education, training, skills, qualifications and experience. The Rice-Tinsley Corporation uses personnel who have experience or appropriate education and training for positions and their task requirements.

Training Process

The Rice-Tinsley Corporation shall ensure that personnel performing job-specific duties are trained and qualified to conduct such functions. The Rice-Tinsley Corporation shall:

- a. Determine the skills necessary to perform the job function;
- b. Where necessary, provide training for those individuals requiring a skill set necessary to complete a task;
- c. Evaluate the effectiveness of the training to ensure that individuals are competent to conduct the job task; and
- d. Maintain employee records that contain the training, skills, education, and experience of the employee.

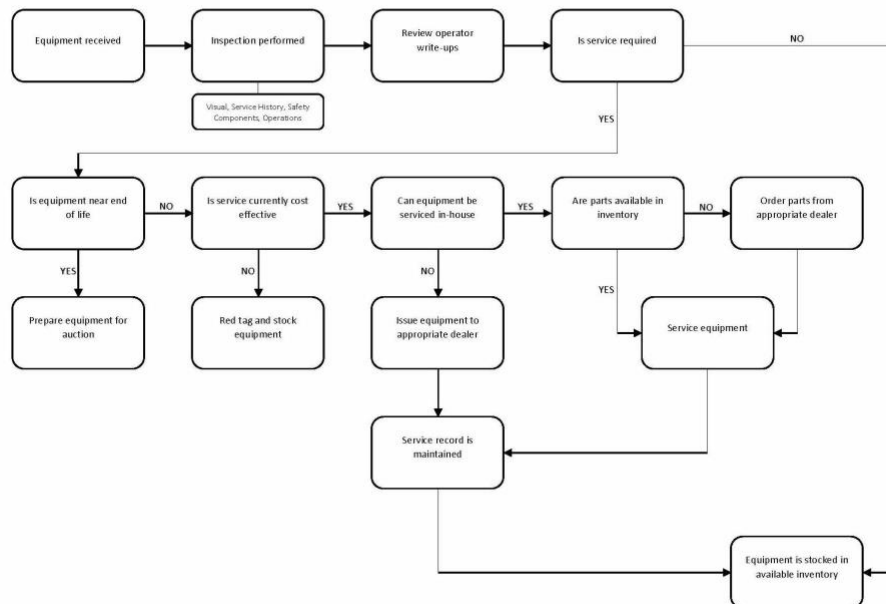
Work Environment

Management is responsible for the development, maintenance, and identification of the work environment to ensure the highest level of productivity, quality, and safety is achieved and thereby reduce costly workers' compensation claims, safety, non-conformance, and poor quality issues.

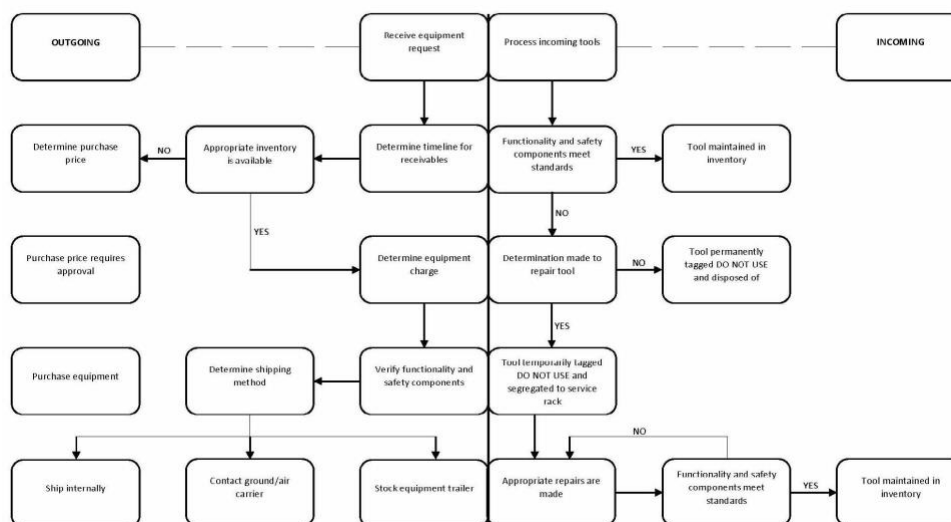
Infrastructure

Management is responsible for ensuring that employees have the necessary equipment, tools, processes, and personnel in place to perform job duties.

PROCEDURE – Heavy Equipment, Maintenance



PROCEDURE – Light Equipment



Product Realization

Product realization is the goal of both The Rice-Tinsley Corporation and the customer. The Quality Management System is articulated, maintained, and improved with the focus of ensuring that customer contract requirements and expectations are met. As such, the following sections contain the necessary processes to ensure objectives, as set forth by Senior and Project Managers, are obtained.

Measurement, Analysis, and Improvement

The cornerstone of a successful QMS is the measurement, analysis, and improvement of processes, policies, and work instructions. The value of the QMS is derived from process improvement. Senior Management will periodically review Company processes and procedures to ensure that customer satisfaction, organizational processes, and non-conformance of product and services are properly managed and improved with the intent of non-reoccurrence.

Customer Satisfaction Customer satisfaction is accomplished through periodic review of customer quality control reports, periodic customer QMS review, commendations, gained/lost business analysis, etc. The results of customer feedback will be used by Senior Management to modify internal organizational and business processes. Customer satisfaction results will be documented in such a form to enable analysis of the data.

The Rice-Tinsley Corporation will acquire additional knowledge as customer requirements and/or trends change. This includes but is not limited to: new knowledge, such as incorporation of lessons learned, ongoing training programs, or identification of non-conformance trends.

Monitoring and Measurement

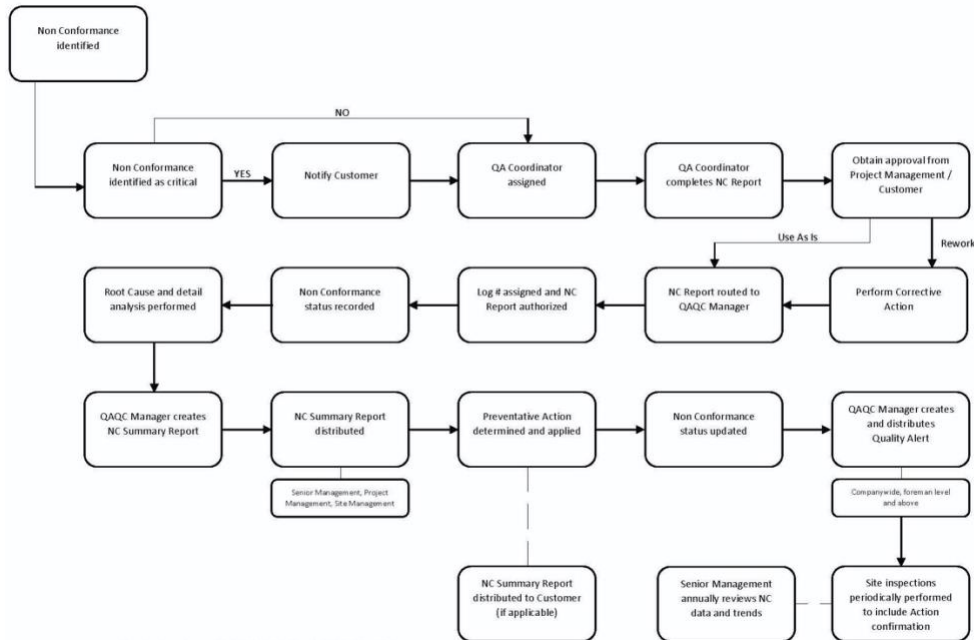
Monitoring and measurement of organizational processes, services, and products are accomplished through the use of internal audits, inspections, benchmarks, strategic and project plans, non-compliance reports, customer complaints, and established metrics. The Quality Manager has authority to stop work or ensure adequate controls are in place until effective corrective action has been taken, any applicable changes have been incorporated in procedures, and these have been communicated to appropriate personnel. Management will periodically review outcomes and organization objectives to identify those processes that need improvement. Findings, decisions, and directions should be incorporated into a strategic or tactical plan and communicated to staff as appropriate.

The Rice-Tinsley Corporation reviews the validity of previous measurement results when measuring equipment that is found to be unfit for its intended purpose. Product/service measurements will be checked to ensure they were not affected by test equipment that has failed calibration.

Control of Nonconforming Product

Nonconforming product is any part, process, procedure, service or item that does not meet the stated requirement for its intended purpose. All personnel are responsible for reporting non-conformances.

PROCEDURE – Non Conformance



Corrective Action

Corrective action is necessary to ensure that appropriate means are taken to ensure that a non-conforming product or service does not enter into production and to ensure non-reoccurrence. Corrective action is identified through inspections, observation, measurements, customer complaints, and non-conformance reports. The Quality Manager has the authority to stop work until such time as processes, procedures, and/or measurements are in place to ensure non-reoccurrence and that those changes are communicated to appropriate personnel. The Rice-Tinsley Corporation shall take immediate action to eliminate non-conformities and to prevent reoccurrence to ensure conformity of the product or process.

Vendor Set Up

When a process or product is outsourced that may affect product quality, The Rice-Tinsley Corporation assures control by:

- Assuring the supplier of the outsourced process or product is qualified.
- Defining the requirements for the outsourced supplier through a vendor preparation and qualification.
- Verifying parts and/or approval of the product or process upon receipt.

Management Review

Management is responsible for ensuring implementation, compliance, and process improvement of the Quality Management System with the intent of exceeding customer satisfaction and regulatory requirements. Management will periodically review established benchmarks, processes, audit reviews, and customer and employee data to determine if process improvement is needed.

Management will review inputs such as bids, previous management minutes, nonconformance records, audit results, organizational or resource changes and status of corrective and preventative actions to determine if process modifications are necessary to meet strategic, tactical, and operational goals.

Management will review outputs such as project budget versus actual data, product/service realization, and measurements, analysis, and improvement data for established processes.

Senior Management will conduct an annual meeting to discuss Company strategies, outcomes, customer satisfaction, and other information identified in the Quality Management System. It is the responsibility of Senior Management to establish, accomplish and control goals, objectives and outcomes of financial, human and equipment capital of the organization.

Records of the management review will be maintained. Review minutes may include date, time, location, individuals present and individuals absent, actions, discussions and time.

Management Representative

The Quality Manager has direct access to the President of The Rice-Tinsley Corporation for all quality issues. The Quality Manager is responsible for the maintenance, implementation, and performance of, and the adherence to the Quality Management System. These responsibilities include audits, supplier and subcontractor quality, customer requirements, and quality standards.

Senior Management and Managers are responsible for ensuring that the proper equipment and services are available for crews to fulfill product/service realization and subsequently meet the customer's expectations. Procurement activities are controlled through processes and procedures to ensure that selection of suppliers, subcontractors, supplier communication, evaluation, and resolution of non-conformance are accomplished.

Management is responsible for the selection and discontinuance of contracts with vendors that conduct business with The Rice-Tinsley Corporation. Senior Management will determine authorized spending levels within each employee's responsibility.

The Rice-Tinsley Corporation records will be maintained to provide evidence that products/services conform to requirements, such as inspection records, ITP's, quality control forms, etc.

QMS Roles and Responsibilities - Global

PURPOSE AND SCOPE

The QMS serves everyone at The Rice-Tinsley Corporation in applying its quality policy and in pursuing consistent achievement of its quality goals. The Rice-Tinsley Corporation shall establish, document, implement and maintain the QMS and continually improve its effectiveness. The QMS comprises three elements: people, processes and systems. The effectiveness of the QMS depends on having all three elements in place and aligned.

RESPONSIBILITIES

Top management sets the direction for the business, determines the structure or framework in which the business processes operate, and ensures those processes have the resources needed to generate their outputs and meet customer requirements on an ongoing basis.

Top management have the following responsibilities:

- establish the quality policy
- ensure quality objectives fit the strategic direction
- ensure QMS requirements are integrated into The Rice-Tinsley Corporation's business processes
- ensure resources needed for the QMS are available
- communicating the importance of the QMS requirements
- engaging, directing and supporting people to participate in the QMS
- ensure customer and legal requirements are met
- ensure that risks and opportunities are identified and addressed
- assign responsibility for the QMS, its processes, reporting, and for managing change
- review the QMS at planned intervals

The integrity of the quality management system is maintained when changes to the quality management system are planned and implemented.

It is the responsibility of Top Management to provide direction, authorization and, resources and review for QMS planning.

President

The Rice-Tinsley Corporation president is committed to the QMS in so far as it establishes and fulfils the quality policy and the quality goals. The The Rice-Tinsley Corporation president ensures that the QMS is established and maintained to achieve our objectives.

Top Management

The Top Management of The Rice-Tinsley Corporation has overall responsibility for the QMS. It establishes its scope, roles and responsibilities. Top Management defines the The Rice-Tinsley Corporation's priorities for the achievement of quality goals and supervises the functioning of the QMS to ensure that performance is aligned to the goals. Top Management runs an annual review of the QMS to ensure that it is operating effectively.

Directors

Each Director fulfils the role of process owner for one or more processes. As a process owner, the Director is responsible for managing the process so that it delivers business value. This includes responsibility for implementing the process, for defining, implementing and using performance measures, and for maintaining the process. The Directors communicate to

their staff the importance of meeting users' requirements while complying with the legal framework and making efficient use of resources. Directors are responsible for ensuring that the quantity and quality of resources under their management are at the right level for efficient and effective performance of the processes for which they are responsible.

Middle Managers

Middle managers support the Directors in performing the duties mentioned above. They manage resources in order to achieve the quality goals and established objectives. Middle managers have to play a key role in the communication chain between the management and employees. They provide guidance to employees to ensure they understand the quality policy of the The Rice-Tinsley Corporation.

Quality Managers

Quality Managers implement, maintain and improve the QMS. They provide leadership and guidance on quality issues in their respective departments. They help Directors to align processes to the objectives of the The Rice-Tinsley Corporation, to put in place process measures that are aligned to the service standards. They gather suggestions for improvement from staff working in the relevant processes and evaluate their feasibility and impact with the help of the Quality Management Department. To perform their duties, quality Managers have an appropriate knowledge of departmental processes, quality management skills and follow specific training programs. They are the departmental contact point for quality issues related to processes and cooperate with the Quality Management Department in resolving these issues.

Quality Group

The Quality Group consists of quality officers and representatives of the Quality Management Department. The Group meets regularly to evaluate process performance against objectives, identify opportunities for improvement and raise QMS effectiveness.

Examiners and Specialized Staff

Examiners and specialized staff (e.g. staff working with searches or translations) are the key part of the QMS. They deliver the services to the users. The QMS must ensure that examiners can perform their functions and deliver the services with maximum efficiency and effectiveness. Examiners and specialized staff are an active part of the QMS. They provide feedback to other quality players, especially to middle managers and quality officers, on the functioning of processes. Managers and quality officers motivate examiners to provide suggestions for improvement. Quality circles are one element of the QMS through which examiners can provide suggestions and gain recognition for their participation and contribution.

Department of Intellectual Property Policy (DIPP)

DIPP is responsible for supporting the core business departments on industrial property decision making. In particular, DIPP issues guidelines and instructions to provide examiners with a comprehensive, up-to-date reference work. Moreover, DIPP is consulted on all issues related to compliance with rules and regulations applicable to the core business functions of The Rice-Tinsley Corporation. DIPP is advised of the quality checks of examiners' decisions performed by legal advisers and quality experts, evaluates the results and suggests measures together with the core business for quality improvement. These measures include for example training, practice notes, revised guidelines.

Quality Management Department (QMD)

QMD coordinates the functioning of the QMS. It reports to the Management Committee on the performance of the System and any need for improvement. QMD is responsible – in co-operation with Directors, middle managers and quality managers – for identifying problems that may require preventive or corrective actions in order not to jeopardize the achievement of quality goals.

QMD is also responsible for supporting departments in continuously improving the services and functioning of their processes and identifying areas for technical improvements. QMD, in cooperation with quality officers, evaluates and puts in place all suggestions for improvement which increase the added value, economy or efficiency of the processes of the

The Rice-Tinsley Corporation. QMD manages or triggers, upon request of the process owner, the design, production and deployment of process tools and mechanisms to simplify processes and improve services.

Top management appoints a member of QMD as Quality Manager, who has, irrespective of other responsibilities, defined authority for:

- ensuring that processes needed for the QMS are established, implemented and maintained;
- reporting to top management on the performance of the QMS, including needs for improvement;
- ensuring the promotion of awareness of customer requirements throughout The Rice-Tinsley Corporation

All QMS performance reports, opportunities, and information is reported to Top Management for improvement of the QMS.

Directors, middle managers and quality managers are committed to searching continuously for ways to improve the processes they are responsible for in order to meet users' requirements in a more efficient and consistent manner. Improvements must include being faster, more reliable, more cost-effective. This involves simplifying procedures, eliminating bureaucracy, striving for transparency and enhancing expertise.

All employees and top management must be made aware of the functioning and aim of the QMS. Training material shall be maintained for the induction of new employees of The Rice-Tinsley Corporation. The staff of The Rice-Tinsley Corporation must have access to quality related plans and reports, quality indicators and other communications related to quality. Directors, middle managers, legal advisers, examiners and specialized staff, and quality managers all share information and best practice to improve the overall performance of The Rice-Tinsley Corporation.

CUSTOMOR FOCUS

The Rice-Tinsley Corporation will consistently provide products and services that meet or exceed the requirements and expectations of our customers. We will actively pursue quality improvements through programs that enable each employee to do their job right the first time and every time.

The Rice-Tinsley Corporation has developed its expertise since its establishment and its aim is to achieve a high standard of service to its customers.

It is the policy of The Rice-Tinsley Corporation to provide the customer with goods and services to the agreed requirement in accordance with the details and price.

The Rice-Tinsley Corporation strives to be the best provider in the industry. Through the use of these guiding principles, everyone in The Rice-Tinsley Corporation is accountable for fully satisfying our customers by meeting or exceeding their needs and expectations with best-in-class solutions and services. Our goal is 100% customer satisfaction 100% of the time.

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