

# PROJECT RIGHT-OF-WAY AGREEMENTS

Date: \_\_\_\_\_

Project No. T201801102 ... New Castle County  
Project Title: Chestnut Run Plaza Pedestrian Improvements  
Parcel No. 101 Owner: DUPONT SPECIALTY PRODUCTS USA, LLC  
Station: SR 141 Centre Road Existing R/W Baseline Station ≈ 112+50 through 147+25  
Lancaster Pike Existing R/W Baseline Station ≈ 29+25 through 43+75

## Conditions:

All Rights of Way have been acquired as per Right-of-Way Plans.

## Additional Conditions:

- Ingress and egress to and from the Temporary Construction Easement Area shall be by way or ways that shall be designated by DuPont.
- DelDOT's contractor shall provide DuPont with seven (7) days advance written notice of the first physical entry upon the Temporary Construction Easement Area.
- Upon completion of the work, DelDOT's contractor will restore the Temporary Construction Easement Area.
- DelDOT's contractor shall comply with all federal, state, County, and local laws, statues, and regulations.
- DelDOT's contractor shall comply with all DuPont Wilmington Area - FS&RE Site Conditions (attached) when DelDOT's contractor is outside the Temporary Construction Easement Area and on the DuPont Chestnut Run Site.

## Owner Contact Information:

<b>Lisa Paolizzi</b> Senior Consultant, Corporate Real Estate Facilities Services & Real Estate DowDuPont Specialty Products (DuPont) Division Chestnut Run Plaza 730/3155-4 974 Centre Road Wilmington, DE 19805 Office Number: +1-302-999-2028 Cell Phone Number: +1-856-981-6266	<b>Don Lynch (Site Point of Contact)</b> Facilities Engineer Facilities Services and Real Estate DowDuPont Specialty Products (DuPont) Division Office Number: 1-302-999-6018 Cell Phone Number: 1-302-218-9443 Office Address CRP 700/118-1 <a href="http://new.dupont.com">new.dupont.com</a>
---	--

## EXPRESSLY UNDERSTOOD AND AGREED TO:

### CONTRACTOR

\_\_\_\_\_

By: \_\_\_\_\_

Name:

Title:

Cc: DUPONT SPECIALTY PRODUCTS USA, LLC

# Wilmington Area - FS&RE

## Site Conditions

### Contents

1.0 SAFETY .....	3
1.1 Safety Requirements .....	3
1.2 Reporting Incidents/ Injuries .....	4
1.3 Contractor Qualification and Selection.....	4
1.4 Contractor Supervision and Subcontractor .....	5
1.5 Owner Representative.....	5
1.6 Safety Program .....	5
1.7 Safety Orientation/ Re-orientation.....	6
1.8 Safety Submittals.....	6
1.9 Job Safety Analysis (JSA)/Standard Operating Procedure (SOP) .....	6
1.10 Safety Meetings/ Safety Training .....	7
1.11 Safety Audits / Violations.....	8
1.12 Personal Protective Equipment.....	8
1.13 Respiratory Equipment .....	10
1.14 Ergonomics .....	10
1.15 Permits .....	11
1.16 Barricades .....	12
1.17 Construction Equipment .....	12
1.18 Rigging .....	15
1.19 Access.....	16
1.20 Spray Painting .....	16
1.21 Fall Prevention.....	16
1.22 Ladders/Scaffolding/Stilts .....	18
1.23 Ground Fault Protection/Power Cords/Electrical Equipment.....	20
1.24 Gas Cylinders .....	21
1.25 Liquid Storage / Chemical Storage.....	22
1.26 Welding, Grinding, and Cutting Nickel Containing Material.....	22
1.27 Tool Inspection.....	22
1.28 Lead Containing Materials .....	23
1.29 Asbestos Containing Materials.....	23
1.30 Non-Asbestos Respirable Fibers.....	23
1.31 Projecting Materials.....	24
1.32 Pipe, Ductwork, Cable Trays.....	24
1.33 Control of Hazardous Energy (Lock and Tag) .....	24
1.34 Confined Space and Vessel Entry.....	25
1.35 Electrical Qualification.....	25
1.36 Dismantling and Rearranging .....	26
1.37 Hazard Communication .....	26
1.38 Electrical Welding and Portable Generators.....	27
1.39 Excavations and Wall Penetrations .....	27
1.40 High Pressure Water Cleaning.....	28
1.41 Housekeeping .....	28
1.42 Roof Access.....	28

Rev. Date 10 1  
10/2018

1.43 Pipe Jack Stands .....	28
1.44 Pneumatic Testing .....	29
1.45 Powder Actuated Devices.....	29
1.46 Temporary Lighting.....	29
1.47 Throwing Material.....	30
1.48 Vehicle Safety .....	30
1.49 Waste Material Control .....	31
1.50 Electrically Classified Areas.....	31
2.0 FIRE PROTECTION.....	31
2.1 Procedures .....	32
2.2 Smoking.....	32
2.3 Flammable Materials .....	32
2.4 Fire Extinguishers.....	32
2.5 Oily Rag Storage .....	33
2.6 Protective Structures.....	33
2.7 Burning and Welding.....	33
3.0 CONSTRUCTION FACILITIES .....	33
3.1 Compressed Air .....	33
3.2 Nitrogen.....	33
3.3 Drinking Water and Sanitary Facilities .....	34
3.4 Electric Power .....	34
3.5 Site Facilities .....	34
3.6 Site Access .....	34
3.7 Telephones and other Communication Equipment.....	37
3.8 Temporary Construction (TC) Facilities and Trailers .....	37
3.9 Water .....	37
4.0 WORKING CONDITIONS .....	37
4.1 Badges .....	38
4.2 Cellular Telephones.....	38
4.3 Co-occupancy .....	38
4.4 Coordination with Others .....	38
4.5 Communication of Events Impacting Site Personnel .....	39
4.6 Diversity/ Matter of Respect.....	39
4.7 English Requirement .....	39
4.8 Fitness for Duty/Fatigue Management .....	39
4.9 Material Shipment and Storage .....	40
4.10 Prohibited Items.....	40
4.11 Property Removal .....	40
4.12 Criminal Background Checks – Contractor Requirements.....	41
4.13 Testing for Substance Abuse .....	41
4.14 Tool and Equipment Control.....	41
4.15 Insignias/ Logos/ Emblems/ Signs/ Symbols.....	41
4.16 Odor Control.....	42
4.17 Tobacco Free Site .....	42
5.0 ENVIRONMENTAL .....	42
5.1 Refrigerants .....	42
5.2 Spill Notification and Protection .....	42

# 1.0 SAFETY

DuPont believes that all injuries can be prevented and is dedicated to providing a safe work environment for both contractors and DuPont employees. It is your responsibility to make safety the first and highest priority and to complete any and all work without incident or injury. Failure to complete all assigned work safely and without incident is viewed as a failure of any project or work performed on site. As stated in the Pre-Qualification Form your company submitted, there are certain safety performance requirements that require proactive safety audits to be performed and submitted to DuPont.

The contractor is required to maintain a current Prequalification Form (PQF) Package on the Supplier Portal and be approved by the Site Contract Administrator. Any Subcontractors to be used by the prime will be prequalified and forms to be approved by Site Contract Administration, but are not required to be maintained in Supplier Portal. The Portal requirements include: A Pre-Qualification Form, insurance coverage certification, and compliance letters for adherence to the DuPont Substance Abuse Policy and Criminal Background policies. The contractor is also required to complete a Pre-Qualification package for each of their tier subcontractors. Failure to do so may result in a contractor being denied access to the site.

The safety requirements listed herein shall not relieve Contractor from complying with Local, State and Federal Occupational Safety and Health Act (OSHA) regulations or any other contractual agreement, and are only noted to highlight potential problem areas. If contractor's safety requirements are more stringent than those outlined in these Site Conditions, they shall take precedence. Please discuss with you contract Administrator prior to commencing work.

The Wilmington Area Safety Manual (WASM) and other standards are referenced throughout this document. The Contractor Safety handbook provided by DuPont may also be referenced for safety best practices and guidelines. Contact your Contract Administrator or Safety Resource for access or copies of these documents.

## 1.1 Safety Requirements

Contractor's work shall be performed in accordance with the instructions set forth in the following documents:

- DuPont FS&RE Wilmington Area SHE Manual (WASM)
- Global Contractor Safety, Health and Environmental Procedures (GCSHEP), including the DuPont's "Contractor Safety Handbook" (Green Book, G770) DuPont Corporate SHE Standards
- Federal and State OSHA standards (29 CFR Parts 1910 and 1926) The Contract Administrator/Sponsor will review site-specific safety requirements.

Contractor is requested to copy applicable procedures to be maintained by site supervisor. This program includes use of the above referenced book which will be furnished by DuPont. The term "Contractor" as used herein shall mean Contractor, its subcontractors, and their employees.

Contractor shall employ a full-time safety professional approved by DuPont when on-site workforce is equal to or greater than 25 persons, including subcontractors. Contractor shall provide DuPont with a resume for review and approval.

## **1.2 Reporting Incidents/ Injuries**

Contractor shall immediately notify DuPont Security and the Contract Administrator/Sponsor of any injury, incident, near-miss or potentially serious hazard to personnel on the site. This includes close calls and unusual events. Contractor's site supervisor and the Contract Administrator/Sponsor as required by the Wilmington Area SHE Manual Procedure 14-2 shall jointly investigate each injury or incident. Contractor shall submit a detailed report to DuPont within 24 hours of the injury or incident.

The Contractor shall be responsible for arranging treatment with a local medical provider well versed in Occupational Medicine. Contractors and site supervision shall be knowledgeable concerning the impact of injuries, their resulting effects and best practices of injury management including but not limited to:

- Being knowledgeable of applicable Worker Compensation Regulations
- Pre-arranging for an Occupational Medical Provider that:
  1. Administers uncompromised care for the patient while offering consideration to the employer.
  2. Understands how the physician's action can directly affect OSHA recordkeeping.
  3. Agrees to the need for the Contractor to offer a light or modified duty plan.
- Developing a detailed plan of action for site supervision (Emergency Preparedness)
  1. Who to contact and when,
  2. What to do and where to send an injured employee,
  3. Supervision, safety representative or equivalent to accompany an injured employee to his/her initial and subsequent follow-up visit.

DuPont will provide immediate medical care and attention in the event of a serious injury to contractor personnel. Care and attention will be limited to stabilizing the injured person until follow up care can be arranged. The contractor shall ensure that any employee who receives an electrical shock is provided a professional medical evaluation immediately following any such occurrence.

Contractor shall keep at least one person qualified in administering first aid treatment on site during all working hours. At a minimum, the person shall hold a Red Cross First Aid and CPR card (or equivalent) and be included in the contractor's Bloodborne Pathogens Exposure Control Program (WASM 13-1). In addition to qualified personnel, the contractor shall maintain first aid supplies and equipment adequate for the number of employees and approved, in writing, by the contractor's physician.

All contractor personnel shall be aware of the hazards associated with blood and body fluid contact.

## **1.3 Contractor Qualification and Selection**

DuPont is committed to working with safe contractors and has established minimum acceptable criteria for contractors and tier subcontractors. Exceptions to the following criteria are granted only by written approval from the site Contracts group.

Successful bidders shall be limited to second-tier subcontractors. All subcontractors shall meet the same requirements as prime contractors.

Contractors and their subcontractors shall meet the following minimum criteria:

- Have a Workers Compensation Insurance Experience Modification Rate (EMR) of .99 or less for the last year. However, contractor shall provide for review, copies of the EMR rates from the workers compensation carrier or underwriter for the last three (3) years.
- Have a Total Recordable Injury Frequency Rate (TRIFR) of 5.0 or less. Proof shall include the previous 3-year's OSHA 300 Logs and the company's formal documentation of employee exposure hours (total hours worked) for those years.

## **1.4 Contractor Supervision and Subcontractor**

The Contractor's site supervisor or trained/qualified designate (prime Contractor) shall be on-site at all times when Contractors or their subcontractor employees are performing work activities.

The Contractor's supervisor or trained/qualified designate (prime) shall be held accountable for the safety and health of all personnel working on the site (prime and sub-contractor employees).

Contractors are expected to conduct business in a manner conducive to a proactive safety program such as having frequent inspections by corporate safety and daily site safety inspections by the site supervisor. Inspection findings shall be turned into DuPont upon request.

## **1.5 Owner Representative**

DuPont shall designate Field Contract Administrator (FCAs), Contract Administrators (CAs) and Construction Managers (CMs) through whom all work questions or interpretations must be cleared.

## **1.6 Safety Program**

Before starting work, contractor shall submit, for DuPont review and acceptance, a written safety program that all contractors' employees must follow while on the job site. Minimum acceptable program shall meet OSHA requirements and include the Hazard Assessment per OSHA 1910. Sub-contractors must meet all of the same requirements as the prime contractor and the prime is responsible for compliance of the sub.

All contractors shall ensure that employees:

- Have the necessary job skill training and are qualified to safely perform the contracted work.
- Are instructed in the known potential fire, explosion, or toxic release hazards related to their jobs and the process.
- Receive and understand training regarding site safety rules, the Emergency Response Plan, and safety work practices of the facility.
- Follow all applicable work practices and safety rules of the facility.
- Are fit for duty and are not compromised by external influences.
- Advise DuPont of any unique hazards presented by the contractor's work, or any hazards found by the contractor's work.
- Audited to ensure that they are working safely and that they follow all applicable work procedures, practices and safety rules of the facility.

Contractors working in PSM (Process Safety Management) areas shall meet the requirements of 29 CFR 1910.119.

Contractor shall submit documentation of above at the request of DuPont.

## **1.7 Safety Orientation / Re-orientation**

Prior to beginning work on site, and at least annually, all contractor employees must attend the site and area safety orientation. Performance testing to confirm employee knowledge is part of this process. Safety orientation is given in American English. Contractor shall provide a translator if needed. The supervisor shall escort the new employee (s) to the work area.

Orientation Locations: See section 3.6 – Site Access

## **1.8 Safety Submittals**

At the request of DuPont, contractor may be required to supply the following.

This is a sample list and is not all-inclusive:

- Written Safety program and training documentation
- OSHA 300 logs
- Written fall protection plan/ scaffold procedure
- Written rigging plan
- Documentation on rigging/ lifting work equipment
- Documentation for equipment operators
- Documentation of respiratory protection certification
- Fatigue Management and Fitness for Duty Programs
- Listing of “Competent Persons” as per OSHA requirements

## **1.9 Job Safety Analysis (JSA) / Standard Operating Procedure (SOP)**

A written Job Safety Analysis (JSA) must be completed before assigning an employee to a task (new or repetitive). The JSA is a formal planning process for the work where the employees are instructed on the specific hazards of the job and how to mitigate those hazards. This document shall be reviewed and signed off on by the contractor. The contractor’s supervisor is responsible for this process and must perform the JSA at the work location. The JSA must be detailed enough to cover the specifics of the work that will take place. Particular attention should be paid to work deemed High Risk Activities (HRA) as defined by DuPont:

- Working with the potential for electrical shock/ arc
- Working at Elevation/ Heights (i.e. Roofs, Unprotected Edges, Ladders)
- Using High Pressure Water for cleaning (3,626 psig/ 250 bar)
- Performing Hot Work (i. e. welding, grinding, cutting)
- Operating Powered Industrial Trucks (i. e. Forklifts, Powered Pallet Truck)
- Working on or Near Suspended Loads (i.e. Hoists, Cranes)
- Working with the potential for body entrapment (i.e. Machines, Excavation)

Rev. Date 10  
10/2018

6

- Driving on public highways
- Entering Confined Spaces
- Performing line breaks to hazardous processes or systems
- Working in potentially oxygen deficient atmospheres (i.e. Nitrogen)
- Working with Highly Toxic Materials (i.e. Ammonia, Chlorine, Fluorine)

Once completed, the JSA must remain at the work location for auditing and review.

### **Standard Operating Procedure (SOP)**

When approved by DuPont a thorough Standard Operating Procedure (SOP) may be used in place of a JSA. SOPs shall be reviewed and approved by DuPont prior to use and all users shall be trained on the SOP prior to performing the task. SOPs shall be audited per DuPont's discretion. Training requirements are presented below in the Training section. Development of SOPs is the responsibility of the Contractor.

The SOP should contain the following key elements:

- Pre-operating inspection checklists to assure safety devices and guards (if any) are present and functional, and the equipment itself is functional and is not damaged.
- Step-by-step operating instructions specific to the task including safety hazards associated with each step and mitigation plan.
- Personal protection equipment required: items such as safety glasses, face shield, goggles, safety shoes, hard hat, hearing protection, and respiratory protection.
- How to clean and secure the equipment.
- Approved chemicals that can be used by the equipment with mixing and disposal instructions.

SOP Training:

A formal written/interactive training program is required for each SOP. The program must include all information found in the SOP, which may be used as the text. Equipment operators must be trained and qualified. Supervision is responsible for the program and for this training. Training personnel to perform the formal inspections and maintenance of equipment is also the responsibility of the supervision of those assigned to perform these functions. All new employees shall be trained on the SOPs and refresher training shall be provided annually at a minimum. All training shall be documented per regulatory requirements.

## **1.10 Safety Meetings / Safety Training**

Contractor shall conduct a job-specific safety orientation, covering the scope of work, these Site Conditions and other safety procedures covered at the pre-mobilization meeting, for each contractor employee before he/she begins work on the site. Meeting attendance shall be documented and furnished to DuPont. Prior to beginning each shift the Contractor shall hold a 5-10-minute safety meeting with their personnel to discuss safety requirements of the job(s) to be performed that day.

Contractor will train employees in safe work methods of their assignments and in some cases certification documents will be required before employees start work and will continue throughout all phases of the work. The contractor shall be responsible for maintaining records of all training in accordance with OSHA



and ANSI requirements. Personnel training records shall be submitted upon request. DuPont will reserve the right to audit the training program and procedures that the contractor has established. Employees sent to work on site without the required training will be denied access until the records reflect the required training.

There will be a Contractor Safety meeting each quarter that leadership from all contract companies are encouraged to attend. Please consult your DuPont contact for more information.

## **1.11 Safety Audits / Violations**

Contractor's job supervisor shall conduct daily safety audits of contractor's work area. In addition, contractor shall send a representative to participate in the formal audit program established by the site for contractors.

The following is a list of safety violations that are deemed serious enough in nature for the first consideration to be removal from site when the acts are committed:

- Fall Protection and Prevention
- Lock Out Tag Out
- Line Break
- Confined Spaces
- Seat Belts

In addition to the above, contractor employees who repeatedly violate requirements or commit acts that endanger themselves or others will be denied access to the site.

In the event of OSHA violations or unsafe practices involving imminent danger to DuPont or contractor personnel, immediate action will be taken to stop work and correct the hazardous situation. If violations continue or corrective actions are not taken after a reasonable period of time, DuPont reserves the right to correct the hazardous situations and back-charge the contractor for the cost. DuPont may also exercise the option of terminating the contract in accordance with the General Conditions.

## **1.12 Personal Protective Equipment**

Contractor's personnel and subcontractors performing work shall wear the proper PPE for each task performed.

Hardhats shall conform to ANSI Z89.1 and are not permitted to be worn backwards. The only exception to this is when welders are actively engaged in welding. Bump caps and metal hardhats are not permitted. Baseball caps shall not be worn under hardhats. The insignia shall be different from others in the site. Contractor employees shall have their names clearly displayed on the hardhat for identification purposes. Long hair must be contained or not longer than collar length.

Safety glasses, including all components (frames, lenses, and side shields) shall conform to ANSI Z87.1+. Rigid side shields will be required on safety glasses. They can be either a permanent part of the glasses, snap on, or slip-on type shields (flimsy, heavy film slip-on side shields are not permitted). The lenses must be etched and the frames marked with Z87.1+. Tinted lenses are not permitted indoors.

Impact and chemical resistant mono-goggles, or coverall visor spectacles conforming to ANSI Standard Z87.1+, worn over prescription glasses will be permitted only on an interim basis until personnel are furnished safety glasses as specified above. Coverall spectacles or mono-goggles shall not be used as an ongoing substitute for safety glasses.

Industrial-quality leather work shoes, safety shoes or toe protection that conform to ANSI Z41.1 shall be worn at all times by persons performing mechanical, electrical or construction work or who are in an area where such work is being performed. Safety shoes or toe protection shall be worn in all areas so posted.

When work requires the use of wrenches at face-level, use of a face shield is required. Face-shields are required when using grinders, abrasive cut-off wheels, chipping or in situation where extra protection for the face and neck are required. The proper face shield shall be used for each task. Face shields and welding hoods shall be the type that attaches directly to the hard-hat.

Leather gloves are required to be worn at all times while performing work unless gloves will not allow for the level of manual dexterity required to achieve the given task, gloves increase the hazard (i.e. rotating machinery or equipment), or another type of glove is more appropriate for the task. DuPont Contractor Safety Personnel must be involved in the review process.

Cut resistant gloves (i.e. Kevlar® or similar) are required during cutting operations involving a knife, box cutter (self-retracting or auto-retracting required), or like tool.

Hearing protection shall be required where noise levels exceed 85 dBA (83 dBA for 10 hour day) or where posted. If contractor's work causes noise levels, which exceed 85 dBA, they shall post warning signs at the leading edge of the high noise zone.

Contractors performing work in some areas will be required to wear full-body Nomex® Flame Retardant clothing or equivalent. When required, Nomex® Clothing shall meet the following requirements:

- All Nomex® clothing worn on site shall be at least 4.5-ounce weight.
- Contractor Nomex® clothing shall be labeled with Contractor company name.
- Nomex® is required in all areas so designated as Nomex® areas.
- Nomex® shall cover the full body (shirt and pants or coveralls).

Appropriate Electrical PPE (Nomex and recently inspected voltage rated gloves) based on the ARC flash calculations shall be worn when working on or near energized circuits. A discussion and review with the DuPont Electrical Resource must be conducted prior to any such work activity begins.

Per WASM 10-6 Contractors shall wear High-Visibility Apparel while performing any activity for which there is a need for daytime or nighttime visibility enhancement for workers where they are exposed to struck-by hazards from moving vehicles, equipment and machinery, or wherever a risk assessment indicates a need to be seen.

- Any construction personnel working in site roadways or outdoor barricaded construction work zones at risk of being struck by moving vehicles or heavy equipment. This also includes flagging as well as inspection, supervision, or oversight of work being performed in these work zones. At a minimum ANSI 107-2015 Type R, Class 2 or Class 3 hi-vis apparel is required to be worn for this work. This policy does not require hi-vis safety apparel to be worn when an individual is simply walking to or from their parked vehicle after exiting or entering a building or walking on sidewalks or in parking lots.
- Any personnel performing traffic control duties.

- Any personnel working within barricaded construction work zones in Wilmington-area buildings. High visibility safety vests with reflective striping (ANSI 107-2015 Type R, Class 2) are required when there is exposure to struck-by hazards from moving vehicles, equipment or machinery in the indoor construction work area. In the absence of this potential hazard, high visibility shirts, sweatshirts or vests (ANSI Type O, Class 1) are required to be worn at all times within the barricaded construction area. Project teams may be required a higher class of high-vis apparel in their indoor construction work area (e.g., ANSI 107-2015 Type R, Class 2 vests) and this must be communicated to affected personnel and posted at the worksite entrances in addition to other PPE requirements.

Other protective clothing will vary depending on the type of work being performed and the location within the site. However, all protective clothing and equipment will be worn as applicable to comply with the site area and regulatory requirements. All such clothing and equipment shall be provided by contractor.

All Personal Protective Equipment shall be provided by the Contractor at no cost to DuPont.

Non-compliance with the site requirements regarding the use of personal protective equipment can result in removal of personnel from the premises.

### **1.13 Respiratory Equipment**

In the event respiratory equipment is required, employee must be clean shaven as defined by OSHA. The Contractor must have a written program ready for submittal and review upon request.

Before any employee starts work requiring the use of respiratory equipment, Contractor shall furnish DuPont proof of compliance with OSHA Sections 1926.103 and 1910.134, and Wilmington area Safety Manual 5-9 (WASM) including the following documentation:

- Physician's approval for the employee to use respiratory protective equipment
- Training records indicating each type of respirator the employee is trained to use
- Fit test records for each type of respirator the employee is trained to use
- Proof of appropriate respirator use for type of work
- Proper certification and proof must be provided with each breathing air supply order to insure Grade D air is supplied.

### **1.14 Ergonomics**

The goal of ergonomics is to fit individual jobs to the capabilities of the person, rather than make the person fit the job. The contractor shall comply with general philosophy that ergonomically related injuries and illnesses are preventable by employing sound ergonomic control measures. Administrative personnel and any other personnel using a work station shall have an ergonomic audit performed by a qualified ergonomic professional.

At a minimum, the contractor shall use proper mechanical tools (such as hoists, forklifts and other pieces of equipment) for material handling tasks. Where manual material handling is performed, the contractor shall enforce a fifty-(50) pound maximum manual lift limit under optimal conditions (load is close to body) and thirty-(30) pound limit under less-than-optimal conditions (awkward lifting position). For a two-person lift, weight may not exceed eighty (80) pound, with weight distributed equally.

## 1.15 Permits

Contractor is responsible for obtaining all permits required by local, county and state laws that have not been obtained by DuPont for the performance of their work at this site.

The activities requiring a permit will be determined by the Contractors' DuPont contact or Construction Management firm.

All activities requiring a permit shall be reviewed with the Contractors' DuPont contact or Construction Management firm before these activities can begin.

Examples of permits that may be required include, but are not limited to:

- Hot Work - WASM 02-05
- Permit Required Confined Space – WASM 08-04
- Excavations - WASM 08-05
- Lockout - WASM 08-09
- Concrete/Masonry/Wall/Floor/Roof Penetrations – WASM 08-12
- Mobile Cranes – WASM 08-03
- Fire Protection / Life Safety Impairment – WASM 02-06
- Line Break – WASM 08-07

Work permits may be required daily and based on each job. Contractor is responsible for obtaining such permit from the Contract Administrator before the start of work.

Electrical permits will be required when working within the Prohibitive Approach Boundary of energized electrical equipment, i.e. panels, MCC's, sub stations, etc. DuPont will provide contractor with a copy of permit before contractor commences electrical work in area covered by permit.

Vessel or confined space entry permits will be required for any work inside a vessel or confined space (i.e. area which must be entered through a restricted opening, such as tanks, vessels, ductwork, vessel skirts, manholes, etc.)

DuPont will provide contractor with the necessary permits before work in the vessel or confined space will be permitted to start. Contractor shall furnish all protective and emergency equipment required by the site for this work and shall comply with all precautions stated in permit.

An excavation/penetration permit shall be required for each area to be excavated. DuPont will provide contractor with a copy of permit before contractor commences excavation work in area covered by the permit. The contractor shall comply with the requirements in WASM 08-05.

A radiographic permit will be required prior to beginning any work associated with a radiation source on site. DuPont will provide contractor with a copy of permit before contractor commences work. All radioactive materials, radiation devices and installations must be reviewed and approved by the radiation safety officer before they are brought on the site.

Any installations, additions and/or changes to Life Safety/Fire Protection Systems shall be reviewed with the Contractors' DuPont contact or Construction Management firm before these activities can begin. These modifications/repairs will be managed in accordance with Wilmington Area SHE Manual (WASM) 02-06 - Fire Protection / Life Safety Systems Impairment Procedure.

Rev. Date 10  
10/2018

11

## **1.16 Barricades**

Barricades are erected to protect areas where unusual activities or conditions in the area exist. Only authorized persons are permitted to enter these barricaded areas and only after learning of any additional precautions or protective equipment/ clothing that may be required.

There are many informational, caution and danger signs posted throughout the site. All personnel are to comply with the directions of posted signs.

Contractor shall furnish, erect, maintain and dismantle all barricades required for its work. Each individual contractor will be responsible for maintaining and ensuring integrity of their own barricaded work areas.

Barricades with OSHA approved signs are required, this is a sample list and not all inclusive:

- Around all work areas
- Around storage and fabrication areas
- Around crane swing areas.
- To define outer limits of high noise areas.
- To define areas of overhead work.
- Around excavations, post appropriate signs and follow OSHA guidelines.
- For road closures, barricades may be saw horse type. Provide flashing yellow lights if barricades are left overnight. Notify DuPont 48 hours in advance before closing off any road.
- Red barricades are to be used for asbestos, high pressure water cleaning, crane usage, suspended material, certain types of electrical work, etc. when entry is strictly prohibited.

Warning (tape and stand) barricades - Tape shall be supported only by stands or posts acceptable to DuPont. Do not tie to pipes, valves, material drums, vehicles, etc. Stands or posts shall be spaced no more than 25 feet apart. Stands or posts subjected to wind shall be weighted or otherwise secured so they remain erect.

Protective (rigid) barricades – shall consist of a guardrail and mid-rail meeting OSHA definition of “standard railing” [OSHA Section 1926.500(f)], capable of supporting a 200-pound force in any direction with minimal deflection. This type of barricade is required:

- Around excavations
- Around floor openings
- At floor and roof edges
- At elevated wall openings

Barricades around work areas shall be identified with signs such as danger or warning giving the reason for the barricade and the name and telephone number of a person to contact in emergencies.

Contractor responsible for barricade shall remove snow and ice from the barricaded areas. When required, snow shall be moved to an on-site area designated for dumping snow.

## **1.17 Construction Equipment**

Contractors and all tier subcontractors shall comply with the provisions of OSHA and in the operation, control and inspection of major equipment, and ASME B30.5 in the operation, maintenance of mobile cranes and inspection. All contractor owned or rental equipment shall be inspected prior to use and monthly if on site thereafter by site Powered Equipment Operations (PEO) shop. This inspection shall conform to industry standard. The contractor shall provide Contract Administrator two (2) days advance notice for equipment inspection. Lifting charts shall be kept with all lifting equipment.

No vehicles shall be left unattended unless the engine is turned off, keys removed from the ignition, transmission is in park or low gear, and the parking brake is set to prevent unintentional movement. No mobile equipment shall be left unattended unless the previous criteria are met and the wheels are chocked in opposite directions or at least two (2) outriggers are down.

Semi-trailers to be loaded or unloaded with the tractor disconnected shall have wheels chocked in opposite directions and a support jack installed under the fifth wheel. The support jack shall be locked and tagged by all exposed personnel to prevent unintentional hook-up or movement.

Semi-trailers to be loaded or unloaded with the trailer connected must have approval of the Contract Administrator.

All vehicle occupants shall wear seatbelts.

Truck-mounted, hydraulic, telescoping boom cranes shall not be moved until the boom is fully retracted and lowered to the boom cradle, if provided, and the hook is secured in a tie-down lug at some point on the truck bed. Anti-two-blocking devices are required when using any crane or boom truck.

Modifications shall not be made to lifting equipment without manufacturer's written permission. Each custom designed, job made lifting accessory (i.e. grabs, hooks, clamps, etc.) shall be marked to indicate safe working load and shall be tested, prior to use, to 125 percent of their rated load. [Reference OSHA Section 1926.251(a)(4)].

For fork trucks, the use of ANY attachment must be approved by the fork truck manufacturer and the truck's data plate must provide the capacity information for that specific attachment. If a fork truck utilizes a jib/boom/hook attachment, the operator must have a medical evaluation and drug screening. Documentation shall be provided to DuPont upon request.

For any telehandler, the operator must have a medical evaluation and drug test. Documentation provided to DuPont upon request. The use of a jib/boom/hook attachment on a telehandler must have a load chart for capacity of the unit at the various boom lengths, angles, and radius.

Rigging from buckets or booms of mobile equipment (including backhoes, front end loaders, dozers, etc.) to pick and/or carry, is prohibited unless a properly installed and tested lifting eye or lug has been attached to the bucket or boom by the manufacturer. Lifting capacities and configurations shall be specified in the manufacturer's operating manual. Operator shall be trained by the manufacturer or vendor the specific use of this equipment.

Rigging from the tines of fork trucks is prohibited.

Access to, and egress from, crane cabs, material wagons, truck beds, crawler backhoes, etc. shall be achieved by built-in ladder and or hand holds provided by the equipment manufacturer. If such means are not provided, Contractor shall provide a properly positioned and secured ladder or other appropriate method to gain access/egress.

All mobile equipment, including personnel transportation vehicles having the rear view obstructed, shall be equipped with audible backup alarms or in the absence of such, a flag person shall be used. A flag person

shall be used whenever the vehicle or piece of equipment is being operated or backing up in a congested area. A walking escort is required whenever a crane is being moved and there will be overhead obstructions, limited visibility, or congested areas.

Use of a crane or derrick to hoist personnel on a personnel platform is prohibited except when erection or use of other conventional means of reaching the work location would be more hazardous or is not possible because of the work site. Contractor shall submit details of its proposed work platform and rigging method for DuPont approval before conducting any work from a platform suspended from a crane. Included in the details must be clear justification for using a crane-suspended work platform rather than another method (i.e. scaffolds, aerial lifts, etc.). Contractor shall comply with all provisions of OSHA section 1926.550(g).

Contractor shall comply with the following requirements for aerial work platforms, man lifts, scissor lifts or bucket trucks:

- Operator shall be trained at Contractor's expense
- Occupancy by more than two people shall not be permitted
- Personnel in man lifts and bucket trucks shall use full body harness with shock absorbing lanyards or self-retractable lifeline secured to the platform or personnel bar.
- Personnel shall perform their work while standing on the platform floor. Standing on the top rail, mid rail, or toe board shall not be permitted.
- Rigging from the platform of boom shall not be permitted.
- Climbing out of the platform to an elevated work location shall not be permitted without CA and safety approval.
- Before equipment travel, the boom must be fully retracted and lowered to the horizontal position.
- Use to raise of lower materials will not be permitted, unless materials fit within the basket and weight requirements of equipment are adhered to.

Scissor lifts and other vertical tower devices used to elevate personnel above ground or floor level shall be operated and used in accordance with the manufacturer's operating manual which shall accompany all equipment on site.

No one shall be permitted to operate a lifting device (material or personnel) unless they have been properly trained. Documentation of qualification shall be furnished to DuPont. Also, upon request Contractor shall set up and demonstrate, to DuPont satisfaction, that each potential operator of a lifting device proposed for use on the site can properly operate the device. The manufacturer's operating instructions shall be available if so requested by DuPont.

Crane operator qualification (per ASME B-30.5) must be documented and furnished to DuPont prior to any crane work. For those contractors working in construction, crane operators shall be certified by an accredited crane operator testing organization per OSHA 1926 Subpart CC (i.e. NCCCO, NCCER). The certification document shall be provided to DuPont upon entry to the site. In those locations where a license is required by the state to operate a crane, it shall be provided to DuPont. In addition, the operator competency must be make/model specific is required and can be documented with PH84 Appendix C form, which must be provided to DuPont with the certification and/or license. This includes any crane work to be done by subcontractors. Documentation of the periodic crane inspection shall also be provided for the equipment brought on site. For the purpose of DuPont work, a crane is defined as any mobile equipment with a hook attachment intended to be used for lifting and as such shall be accompanied by lift charts supplied by the manufacturer (straight vertical mast fork trucks are an exception to this requirement).

Weight capacities shall be clearly posted on forklift jibs, concrete buckets, crane baskets, etc.

The contractor shall submit to owner for review and acceptance a critical lift plan at least seven (7) days prior to making the lift. A crane lift is considered critical when one or more of the following conditions exist:

- The load exceeds seventy-five percent (75%) of the crane's capacity.
- The load must be lifted by more than one crane (or other rigging).
- The lift requires a deviation from the manufacturer's recommendations.
- Lifting personnel (crane-suspended work platform)

The critical lift plan shall consist of:

- Manufacturer, model, and capacity of crane(s)
- Crane configuration (counterweight, outrigger position, jib position, boom length, boom angle)
- Crane capacity at configuration (Include capacity charts)
- Working radius
- Boom length
- How many parts of line
- Percent of lift in comparison to load chart

All critical lift plans shall include a rigging plan. Additional permits are required if the lift is in close proximity to electrical sources or critical or hazardous processes or pipelines.

*DuPont Corporate Engineering standard – Maintenance and Construction Procedure:PH84 shall be used for development of this plan.*

The rigging plan shall consist of:

- Weight of load including rigging
- How the weight was determined
- Size and capacity of rigging hardware (slings, shackles, spreader bars, etc.)
- Diagram of rigging and load connection

*DuPont Corporate Engineering Standard – Maintenance and Construction Procedure PV8 may be used for development of this plan.*

If requested by DuPont, Contractor shall submit a lift and/or rigging plan as outlined above for each non-critical lift.

Contractor shall not be permitted to lift a suspended load over personnel. Contractor shall not lift suspended loads over buildings, processes or electrical conductors without the written consent of DuPont.

## **1.18 Rigging**

The contractor shall comply with the requirements in the Orange Rigging Handbook (EN-3964) this book will be provided by DuPont. All overhead hoisting equipment shall comply with SHE Standard S33G – Overhead Hoisting Systems. All rigging equipment and hardware (hoists, slings, etc.) shall be thoroughly inspected prior to the initiation of rigging activities and at least quarterly by a qualified person.



The contractor shall ensure that competent riggers are used for rigging tasks. The contractor shall document, in writing that the persons are competent and shall provide to DuPont, a copy of the written training material, test results and other associated support material.

Existing lifting lugs, eyebolts, etc. on structures and other equipment are NOT permitted to be used by the contractor for rigging. Overhead supports and I-beams and anchoring points are to be verified by the contractor prior to use for rigging. The contractor shall provide written plans on rigging methods to DuPont prior to the initiation of rigging activities for review and acceptance.

Rigging methods shall not include field-modified tools or use of tools outside of tool manufacturer's written consent.

All structural steel, piping and equipment shall be rigged with at least two points of rigging - no single point picks will be permitted to be dropped from elevated locations. Use of a shackle is required to hold two or more eyes of a choker in a hook.

## **1.19 Access**

Access to exit doors, stairways, electric or elevator panels, and fire extinguishers or other emergency equipment must not be blocked at any time unless approved by DuPont.

## **1.20 Spray Painting**

During spray painting operations (where permitted) where a hazardous warning is posted on the paint can label and controls are inadequate to prevent harmful exposure to employees, Contractor shall provide, at no additional cost to DuPont, and require its employees to use, respirators approved for spray painting operations, and shall comply with OSHA Sections 1926.103 and 1910.134. Precautions stated on the Safety Data Sheet (SDS) shall be followed at all times.

## **1.21 Fall Prevention**

Protection is required to prevent personnel or material from falling through floor openings, wall openings, or from roof edges, stairways, elevator shafts, and other elevated locations at or above elevations six (6) feet from floor/ground level including, but not limited to ladders, scaffold erection and dismantlement. Employees must also be protected when working within six (6) feet of floor openings, open pits, etc. Employees shall also be tied off with 15 feet of an unprotected roof's edge unless the work meets the exceptions by OSHA to allow tie-off within 6 feet of the edge. When personnel are exposed to walking or working surfaces that are not capable of supporting occupancy weight, the surface shall be covered (i.e. skylights, translucent panels). This list is not all inclusive and work areas need to be evaluated for fall hazards. When moving at heights, Contractor shall employ a method to achieve 100% fall prevention, such as the use of double lanyards.

Engineering methods such as a system of handrails, mid rails, and toes boards or hole covers are the preferred method of fall protection. Fall protection is required when working from an incomplete scaffold platform. If engineering methods are not feasible\*, the protection shall comply with OSHA 1926.500, subpart M and the DuPont "Green Safety Handbook".

\*The feasibility analysis must be reviewed and accepted by DuPont.

Rev. Date 10  
10/2018

16

Work shall be evaluated by a Fall Protection Competent Person and upon request, Contractor shall submit a fall prevention plan to DuPont for approval prior to starting elevated work. As a minimum, the plan shall include the following:

- A list of all anticipated tasks to be performed at elevated locations
- The proposed method(s) of fall protection for each task, using in order of preference:
  - Elimination of fall hazards (through engineered means)
  - Prevention of falls (by changing work procedures or the work environment)
  - Control falls (through the use of fall arrest equipment)
- Means of access and egress
- The manufacturer and model number of each component of fall arrest equipment
- Name(s) and qualifications of Contractor's competent person(s) relative to fall protection
- Name(s) and qualifications of Contractor's qualified person relative to fall protection system design and installation.
- Names of personnel trained in proper use of fall arrest equipment each has been trained to use
- Description of the training program

A plan view of the work area shall include proposed attachment points for the fall protection system. All wire rope safety lines used for lanyard attachment shall be a minimum 1/2-inch (1.27 centimeter) diameter wire rope or equivalent, have a breaking strength of 5,000lbs (2,268 kg) per person and be designed, installed and used under the supervision of a qualified person as part of a complete personal fall arrest system. Anchorage points must be capable of withstanding 5,000 pounds of force for each employee attached.

All fall protection systems are to be designed by and installed under the direction of a qualified person and can include any or all of the following:

- Full body harness system
  - Anchorage connector
  - Lanyard
  - Energy shock absorber
- Full body harness
- Self-locking snap hook
- Retractable lifelines
  - Installation links
  - Energy shock absorber
  - Self-locking snap hook
- Ladder safety system
- Safety net system
- Beam straps

Lanyards may not be wrapped and hooked back into themselves unless it has been designed by the manufacturer to do so.

Failing to follow fall prevention rules can result in contractor employee removal from site.

## **1.22 Ladders/Scaffolding/Stilts**

### **Ladders:**

All straight or extension ladders (over 6ft) require tie off with a ½” or larger rope. Secure a ½” (1.3 centimeter) rope (Nylon, “Dacron”, or polypropylene, depending on environmental exposure) to the top back rung of step ladder or to the third rung from the top of straight and extension ladders to provide a tie-off rope when the ladder is set up.

All ladders used on site must be type 1A (300lb. Rating). For information on appropriate ladders for use in these situations, see ANSI Standard A14.2.

All ladders shall be inspected by a competent person who will attach an inspection sticker before the ladder is placed in service. It is the user’s responsibility to verify that the ladder has this sticker and that the ladder complies with the sticker checklist before each use. Ladder inspection checklist should include the following check points:

- The joint between steps and side rails shall be tight
- All hardware and fittings securely attached
- Moveable parts shall operate freely without binding or undue play
- Rungs and rails must be free of cracks and splits
- Ladders must be cleaned of oil, grease or slippery materials
- Hardware must not be missing.
- Safety feet in good condition
- Spreaders not bent and in good working order
- Positive stops and dogs in good working condition
- All ropes in good condition

Defective ladders shall be promptly removed from the site. Ladders without inspection tags will not be used.

Metal ladders are not to be used for electrical work, near electrical lines or circuits.

Step ladders may not be used to access an elevated work location. When work requires a person to climb off a ladder to access an elevated work location, a straight or extension ladder is the preferred method.

Trestle ladders and extension trestle ladders shall not be used as stepladders. Stepladders shall not be used as straight ladders.

Step ladders shall not exceed 12 feet in height. Straight ladders shall not exceed 30 feet in length. Extension ladders shall not exceed 60 feet in length.

### **Scaffolding**

If requested by DuPont, Contractor shall provide a written fall protection plan for scaffold erection. Scaffold builders are expected to have a fall prevention plan for erecting and dismantlement of the scaffolds.

Scaffolds exceeding 50 feet in height require a written job plan and DuPont approval before erection. Scaffolds in excess of 125 feet in height must be designed and approved by a Professional Engineer and approved by DuPont.

No less than two people may be used to erect or dismantle any scaffold.

Access shall be provided by ladder secured to the scaffold frame. Every 20 feet, the ladder must break with a platform at the break.

Contractor shall attach a scaffold tag to each erected scaffold. The tags will be filled out by Contractor to show Contractor's name, the name of the employee who erected the scaffold, the date the scaffold was erected, and whether the scaffold is complete or incomplete.

All scaffolding shall be erected, used, inspected and dismantled in accordance with OSHA 1926 Subpart L, WASM 08-11 and the manufacturer's recommendations.

Contractor shall provide written proof of qualified and competent persons for erection, inspection and proof of training for scaffold users.

All scaffolds shall be inspected for structural integrity and deficiencies by the competent person prior to each shift use. The inspection shall be documented in writing and posted on the scaffold.

Scaffolds will be provided with an access gate at the work platform, be erected as complete as possible and shall be identified with a properly filled out tag prior to use. Full-body harnesses shall not be used as a substitute for an incomplete scaffold which can be completed. Full-body harnesses shall be used on scaffolds with incomplete handrails or decking.

Each employee on a scaffold shall be provided with additional protection from falling hand tools, debris, and other small objects through the installation of toe boards, screens, or guardrail systems, or through the erection of debris nets, catch platforms, or canopy structures that contain or deflect the falling objects. When the falling objects are too large, heavy or massive to be contained or deflected by any of the above-listed measures, these objects shall be placed away from the edge of the surface from which they could fall and shall secure those materials as necessary to prevent the objects from falling. Where there is a danger of tools, materials, or equipment falling from a scaffold and striking employees/ pedestrians below, the area around the scaffold shall be barricaded as per WASM 8-1: Sign and Barricades and employees/pedestrians shall not be allowed to enter the hazardous area.

### **Stilts**

Plastering and drop ceiling contractors commonly use stilts. When stilts are worn the person's center of gravity is raised, the walking action is changed and the standing posture changes. Because of the inherent risk of using stilts the following guidelines shall be followed:

- Stilts shall be properly maintained. The manufacturer shall approve any alteration of the equipment.
- All manufacturer instructions shall be followed.
- Any users of the equipment shall be trained and have substantial experience using stilts.
- The work area shall be smooth, level, clean and free from any obstructions (i.e. extension cords, tools, boxes).
- Special precautions shall be taken to limit the user from bending and squatting.
- Movement shall only be in the forward direction, with a U-turn required to change directions.
- Users shall not walk through doorways while wearing stilts.
- Stilts shall not be used on any type of scaffolding or elevated working platform.

Remember, the usual working environment is designed for the normal size of the population with objects such as doorways, benches and guard railing around balconies set at standard heights to suit the stature of the majority of the population. Raising the person on stilts changes the way these things are used and removes the normal protection offered by standard designs. Consult your SBU Safety Resource for any additional guidance.

## **1.23 Ground Fault Protection/Power Cords/Electrical Equipment**

Ground fault protection shall be used where required. Contractor(s) shall provide ground fault circuit interrupter protection for all cord sets, receptacles, electrical tools, and equipment connected by cord and plug which are available for use by employees.

All GFCI receptacles shall be placed at the source end of electrical service and shall be tested prior to each use.

No D/C electrical current producing receptacle on equipment shall be allowed to be used on site. Equipment with existing D/C electrical current shall be disconnected or covered.

All damaged electrical cords are to be removed from service immediately. No repair of cords can be made except installing new male or female plugs, and must be repaired and inspected by a qualified electrician.

Extension cords shall be rated for the load they serve and at a minimum should be at least #14 gauge SO or SJO minimum in size. All cords, including welding leads, must be run overhead at the seven (7) foot level whenever possible.

Electrical power tools shall be disconnected from the source prior to making adjustment's or changing bits and blades and when left unattended.

All electrical tools must have a grounded plug unless tool states "double insulated" on handle or housing.

WASM 1-7 outlines the minimum inspection requirements for cord and plug connected electrical equipment.

Equipment and cord sets shall be listed and approved for areas of intended use. Equipment that is listed by one of the NRTL's does not require an inspection. All equipment that has been modified or repaired (regardless of listing) shall be inspected prior to returning to service. All cord and plug connected non-listed equipment and custom-made equipment shall be inspected prior to first use.

The electrical shock hazards caused by improper grounding, fusing, switching and polarity require that all custom made, modified and Non- listed cord and plug connected electrical equipment shall be inspected prior to first use and whenever repairs are made to such equipment prior to putting the equipment back into service.

**Rule:** All cord and plug connected Non- listed equipment, custom made equipment or equipment that has been modified or repaired shall be inspected prior to first use.

**Procedure:** It is the user's responsibility to ensure that this equipment is inspected prior to first use by a qualified electrician.

Equipment and cord sets shall be listed and approved for areas of intended use. Equipment that is listed by one of the NRTL's does not require an inspection. All equipment that has been modified or repaired (regardless of listing) shall be inspected prior to returning to service. All cord and plug connected non-listed equipment and custom-made equipment shall be inspected prior to first use.

A yellow cable tie (Ty-Rap) shall be attached near the plug end to indicate that equipment has been inspected.

**Note:** For equipment where the plug end of the cord is concealed or difficult to see, another yellow cable tie can be placed on the cord near the equipment to indicate that the equipment has been inspected.

**Note:** For equipment with a detachable power cord, a yellow cable tie shall be affixed to the power cord. An inspection sticker or label shall be attached to the equipment near the power cord connection point to indicate that the equipment has also been inspected.

Users of cord and plug-connected electrical equipment are responsible to inspect for visible damage; such as bent/broken plugs or frayed cords, before and after each use.

Users are responsible for notifying the appropriate work group to make repairs when damage to electrical equipment is found or suspected.

**Note:** Power strips are permissible where additional electrical outlets are required or for additional surge protection. They shall not be used to extend a circuit (used as an extension cord or plug one into another) in lieu of installing a permanent receptacle. They should be mounted off the floor to prevent accumulation of dust/dirt in the device and to avoid water/flooding situations. Do not overload electrical circuits and do not "daisy chain" power strips together.

## **1.24 Gas Cylinders**

Compressed gas cylinders shall be properly secured on two-wheel hand trucks designed for this use and brought into buildings (building is defined as curbed area) only as needed and removed as soon as work is completed or tanks are emptied.

Unless individual cylinder is equipped with regulating device, it shall have a safety cap secured in place. When transporting cylinders, they must be secured in an approved rack in the vertical position. When transporting cylinders by elevator contractor shall contact Contract Administrator for further instruction.

While secured and not in use, all gas cylinders must be at least fifty (50) feet from adjacent buildings if space permits. Cylinders shall be stored at least twenty (20) feet from any smoking, spark producing work and open flames. Secure cylinders with #9 tie wire or something of equivalent strength. Proper signage must be maintained in storage areas (No Smoking).

Combination check valve and flash arrestors are required on BOTH the torch and regulator of any oxygen/fuel rig system. Contractor employees engaged in welding or burning activities must be trained and documentation provided to DuPont. Each check valve-flashback arrestor shall be maintenance checked, as directed by the manufacturer, at least once every six months, and following significant backfires or incidents of burn back.

All burning rigs shall be broken down with regulators removed and protective caps screwed down hand tight at the end of each shift.

The use of acetylene is not permitted. DuPont management must approve, in writing, the use of acetylene for gas cutting, burning, and welding. Do not use acetylene at pressures over fifteen (15) psi (105 pa).

Rev. Date 10  
10/2018

21

## **1.25 Liquid Storage / Chemical Storage**

All flammable and combustible liquids shall be used, dispensed, handled, and stored in accordance with WASM 02-02, Flammables and other Hazardous Material. Open storage of flammables and combustibles will not be permitted without the written consent of DuPont.

Secondary containment shall provide capacity for 150% of stored liquid and be protected against accumulations of rainwater or other debris. Fire extinguisher placement, type and size shall be adequate for the application.

All corrosive and toxic chemicals shall be used, dispensed, handled and stored in accordance with Section 20 of WASM and applicable OSHA requirements.

## **1.26 Welding, Grinding, and Cutting Nickel Containing Material**

This applies to all workers who may work with, weld, cut, braze, sand or grind on nickel containing metals such as welding rods, stainless steel, Inconel, Alloy 600, Monel, etc.

Nickel and chromium IV classified as carcinogens and workers have a potential for exposure during welding, grinding, cutting, etc. Data collected indicate that respirators are required when welding, cutting or grinding nickel or chromium containing metals/alloys if local exhaust ventilation (welding hoods) is not used, available or ineffective. In addition, the immediate area should be roped off limiting worker access when these jobs are being performed without effective local exhaust ventilation. Some examples of nickel or chromium containing materials are Inconel, Hastelloy, Monel, & stainless steel. Exposure to other metals or chemical fluxes should also be controlled to prevent airborne concentrations above the PELs (Permissible Exposure Limits) specified in OSHA CFR 1910.1000. Welding equipment shall be maintained in good condition.

Contractors should consider these hazards in their job safety plan and use adequate protective equipment, ventilation and/or welding hood equipment to reduce the potential of overexposure to this toxin. If adequate ventilation is not available, protect workers by using the appropriate respiratory protection.

## **1.27 Tool Inspection**

All contractor-furnished portable tools and equipment (including personal protective equipment) shall be maintained in safe working order and are subject to DuPont inspection at any time while on the site. DuPont retains the right to prohibit or restrict the use of tools and equipment determined to be in unsafe working condition.

All damaged electrical cords are to be removed from the site. No other repair of cords can be made except installing new male or female plugs.

Damage to welding leads must be repaired to the original mechanical and insulating properties of the jacket. Using tape to repair welding leads is prohibited. Use of heat shrink or cold shrink sleeves or similar is recommended. No repair may be made within ten (10) feet of either end.

All power equipment will be disconnected, locked, tagged, tried, and tested before work is performed on them.

Employees using tools and equipment shall be properly trained in their safe operation and may require documentation/ certification.

DuPont tools and equipment will not be used without written approval from DuPont through the utilization of a DuPont Furnished Items Agreement.

Power tools shall be disconnected from the power source prior to making adjustments or changing bits and blades, and when left unattended.

Bits from drills and blades from jig and reciprocating saws must be removed when tool is in storage.

All electrical tools must have a ground plug unless tool states “double insulated” on handle or housing.

Contractor shall identify in writing to DuPont, the OSHA qualified person(s) that will be performing periodic inspections per applicable OSHA standards.

### ***1.28 Lead Containing Materials***

The protective coatings applied to the outside of existing pipes, structures, and associated hardware may contain lead. Unless the Contractor has written verification from the owner that specific coatings do **NOT** contain lead, the coatings shall be treated as lead containing. All abatement, removal and disposal of lead containing material will be performed by properly trained and qualified site personnel or a licensed and approved contractor.

The Contractor shall provide to DuPont, for review and acceptance, a copy of their written lead program, in accordance with OSHA 29 CFR 1926.62, before initiating any work activities that have the potential to expose personnel to lead and/or lead-containing materials. The Contractor shall provide training, medical surveillance, exposure control measures, and air sampling at no cost to DuPont if needed. Furthermore, the Contractor shall comply with all other applicable federal, state, and local regulations that apply to lead and lead-containing materials.

All lead-related activities must be coordinated with the site lead coordinator and/or the FS&RE Remediation Group.

### ***1.29 Asbestos Containing Materials***

Asbestos and asbestos containing materials are present on site. Unless the Contractor has written verification from DuPont that specific materials do **NOT** contain asbestos, the materials shall be treated as containing asbestos. Materials which do or may contain asbestos are insulating materials, floor tiles, fireproofing, mastics/adhesives, roofing materials, lab stone, transite/asbestos panels, and gasket materials.

The special safety requirements listed herein shall not relieve Contractor from complying with the Occupational Safety and Health Act (OSHA) or any other contractual agreement, and are only noted to highlight potential problem areas.

### ***1.30 Non-Asbestos Respirable Fibers***

Contractor shall comply with the requirements of the DuPont Corporate SHE Standard S15T, Management and control of Non-Asbestos Respirable Fibers (NARFs), when respirable fiber-containing materials are used or disturbed.



Non-asbestos respirable fiber containing materials shall be managed in a way that controls the release of respirable fibers to the atmosphere, protects from employee exposure, and ensures that waste is disposed of safely and in an environmentally sound manner.

A respirable fiber is a fiber whose diameter is less than 3 micrometers, length greater than 5 micrometers and lengths of at least 3 times its diameter. These include but are not limited to: fiberglass, mineral wool, refractory ceramic, para-aramid pulp and staple, as well as carbon filters. Materials which contain 1% or more of the NARFs, are covered.

Respirable fibers may be contained in insulation materials, surfacing materials (e.g. gaskets, backings, and brakes).

### **1.31 Projecting Materials**

Material projecting above horizontal surfaces shall be capped or otherwise protected to prevent the possibility of impaling personnel. Rebar caps must meet manufacturer's specifications for impalement protection. Mushroom caps without steel-plate reinforcement do not meet OSHA-required impalement protection devices.

### **1.32 Pipe, Ductwork, Cable Trays**

Walking on, crawling along, sitting on, or working from pipe, ductwork, or cable trays will not be permitted. Contractor shall provide mean of access and egress adjacent to the work area for personnel working in pipe bridges.

### **1.33 Control of Hazardous Energy (Lock, Tag, Clear and Try)**

Contractor shall follow the site's lock, tag, clear and try procedure before starting work on any process or electrical system, which can be actuated. Contractor shall comply with OSHA Section 1910.147 and the WASM 8-7 (line break) and 8-9 (lock out). Contractor employees shall not operate any valves or switches without specific approval by the owner. It is recommended that the details of the specific approval (names, date, numbers, purpose, reason, etc.) be documented in some manner, (e.g., in "description of work" section of the work permit).

The Contractor shall ensure that any and all electrical safety training (OSHA 29CFR 1910-331 through 335) is carried out before personnel start work at the site and continues throughout all phases of the work. In addition, the Contractor shall comply with the requirements of NFPA 70E, Standard for Electrical Safety requirements for Employee Work Places. Contractor's electrical safety program and procedures shall meet the requirements of DuPont Corporate Standard S31G, Electrical Safety Standards, including all applicable referenced documents. The Contractor shall also ensure only qualified or certified personnel perform particular tasks associated with particular equipment. The Contractor shall be responsible for furnishing documentation and training records to DuPont upon request. Personnel training records shall be submitted and approved prior to beginning work. DuPont reserves the right to accept or reject the Contractor's training records or training procedures established for the electrical training. Employees sent to work on site without 1.19.1.1, the required training will be denied access to the site.

## **1.34 Confined Space and Vessel Entry**

Contractor shall comply with the requirements of Federal OSHA 1910.146, Permit Required Confined Spaces, and WASM Confined Space Procedure 8-4. A confined space entry permit is required prior to beginning work. All contractors are responsible for providing their own non-entry rescue equipment. Contractor shall utilize personnel who have been trained to operate equipment.

A Written Rescue Plan must be developed and reviewed with personnel involved with the job. The written rescue plan shall identify the essential rescue equipment and the rescue team must have the appropriate equipment to perform rescues. Rescue equipment shall be periodically inspected and maintained in good working order. The plan must be reviewed with a member of the rescue team before entry starts. A copy of the rescue plan must be attached to the permit. A number of key elements shall be included in the rescue plan.

Provisions for non-entry rescues where possible:

- The precise location and identification of the space including access point
- The specified and detailed communication routes for raising the alarm, including what communication routes (e.g., air horn, cell phone) are to be used by the attendant(s) or which is the nearest fire-alarm activation point
- The equipment specified for a rescue and its location nearby, if it is not located at the point of entry or rescue
- The rescue method, including any elements to avoid, and any hazards the rescue team is likely to face

## **1.35 Electrical Qualification**

Contractor personnel shall be knowledgeable of and follow all OSHA, National Electric Code, WASM, the FS&RE Electrical Handbook, and Site-Specific Safety Procedures regarding electrical safety.

All electrical equipment will be disconnected, locked, tagged, cleared, tried, and tested before work is performed on them.

The contractor's electrical safety program shall comply with the requirements of OSHA. The Contractor shall ensure that all Electrical Safety Training (OSHA 1910.331 through .335) is carried out before personnel start work at the site and continues throughout all phases of the work.

The Contractor shall also ensure that only qualified and/or certified personnel perform tasks associated with particular equipment.

Personnel training records shall be available for review by DuPont prior to beginning work.

Re-training shall be provided as required to all personnel expected to perform electrical work.

DuPont reserves the right to accept or reject the Contractor's training records or training procedures established for electrical training.

Employees sent to work without required training will be denied access to the site.

As required by Delaware State Law, all persons performing "electrical services" or "electrical work" must have a Delaware professional electrical license.

Performing “electrical services” or “electrical work” is defined by the Electrical Examiners Board to mean any activity that is covered by the National Electrical Code (NEC) as adopted by the Delaware State Fire Commission.

Exemptions from this license requirement can be found on the State of Delaware Division of Professional Regulation Website under Title 24, Professional Regulation.

The Contractor shall have a minimum of one (1) Qualified Journeyman Electrician, who can supervise or manage the job that is given to them. Apprentice electricians can work under the direction of the Qualified Journeyman Electrician. Each Job or project will dictate the number of Qualified Journeyman Electricians that should be staffed on the project or job. Electrical Journeyman or Apprentices must be qualified for each task which they are assigned.

The first consideration before performing electrical work is to request a written shutdown of the equipment to be worked on.

There shall be NO work performed within the Restricted Approach Boundary of energized circuits/conductors operating above  $\geq 50$  volts. Exception: work can be performed within this area ONLY with the written approval using WASM 1.6 (Form FM021) Request for Shutdown and (form FM008) Electrically Hazardous Task Plan.

The appropriate voltage rated gloves with current inspection shall be used for the following tasks:

- When testing for voltage above  $\geq 50$  volts
- When working within the Restricted Approach Boundary as defined in WASM & NFPA 70E.

Contractor shall provide the appropriate electrical arc flash protection for personnel as necessary and as required by WASM procedures and & NFPA-70E.

All circuits shall be considered energized until proven de-energized by testing for absence of voltage.

ALL test equipment used for measuring/testing for voltage or current MUST be rated minimum 600-volt CAT III and meet IEC 61010-1 standards.

### ***1.36 Dismantling and Rearranging***

Before permitting employees to start any dismantling and rearranging activities, the contractor must assure that the competent person has conducted an engineering survey to the exact scope of work and the method to safely execute it.

The engineering survey must be documented in writing and must be provided to DuPont for review and acceptance at least five (5) working days prior to initiation of D&R activities. The survey must include details on methods of removal, integrity of the structure (including surrounding structures that may be affected) and provisions to safeguard contractor and site personnel from the hazards associated with D&R activities.

Green tag/blue tag WASM Procedure

Contractor shall **NOT** be permitted to remove, handle, or repair any process system and/or piping unless the owner has turned the system over to the Contractor.

### ***1.37 Hazard Communication***

Contractor and all tier subcontractors shall submit, for DuPont's review and acceptance, completed New Chemical Approval Request Form along with Safety Data Sheets (SDS) for all chemicals, which will be used on site prior to bringing them on site. The Contractor is responsible for complying with Federal Hazard Communication Standard (OSHA 29 CFR 1910.1200), WASM Procedure 13-4, and all applicable state and local hazard communication requirements, which include, but not limited to:

- Developing and implementing a written hazard communication program for the site and providing copies to DuPont upon request.
- Training its employees in handling all hazardous materials as per the OSHA Hazcom Standard.
- Maintaining a list of all hazardous materials present in the workplace and posting it in a place accessible to all employees. Safety Data Sheets (SDS) must be on file for each such material.

Contractor shall obtain DuPont's approval before introducing any hazardous materials onto the site. Such materials shall be properly labeled, stored and strictly controlled by Contractor as to its use and disposal. Storage and use of personal protection equipment (PPE) for handling such materials must comply with the instructions on the Safety Data Sheets.

DuPont will make available SDS's for all hazardous chemicals used and/or manufactured by the site that are applicable to the Contractors work. Copies are also maintained in an electronic database and are available upon request to the assigned Contract Administrator/Sponsor.

### ***1.38 Electrical Welding and Portable Generators***

All welding operations and training requirements shall be conducted in accordance with provisions set forth in OSHA 1910.251-255 and the WASM procedures.

Welding leads and rods must be inspected prior to use. Rods must be removed from the holder when left unattended.

All equipment must be properly grounded prior to use. This procedure does not apply to generators supplying voltages greater than 110/220.

Welding machines shall be inspected annually, with documentation of inspection made available to DuPont, upon request.

Damage to welding leads must be repaired by a qualified electrician to the original mechanical and insulating properties of the jacket. Using heat or cold shrink sleeves.

### ***1.39 Excavations and Wall Penetrations***

Excavation, including ground and/or concrete breaking/penetrating activities, shall comply with WASM Procedure 8-5. Excavations and the contractor shall provide a competent person for excavation tasks. The contractor will NOT be permitted to handle any known or suspected chemically impacted soil without written consent of DuPont. Permits in compliance with WASM 8-12 are required when penetrating walls, floors, ceilings, etc. to prevent contact with unidentified (electrical sources energized) permits will be provided by DuPont.

## **1.40 High Pressure Water Cleaning**

The contractor shall comply with the requirements of DuPont Standard S43G, High Pressure Water Cleaning, for water cleaning activities.

## **1.41 Housekeeping**

Job site shall be kept in an organized and clean condition by Contractor.

Contractor shall take all necessary precautions to prevent dirt, dust, etc., from entering operating areas. Occupied areas during construction must be protected from all work that will produce dust. During any work, construction, alteration, or repairs, all debris shall be kept cleared from work areas, passageways and stairs in and around buildings or other structures.

All dust producing activities shall be reviewed with the Contractors' DuPont contact or Construction Management firm before these activities can begin. The mitigation plans for these activities will be determined on a "case by case" basis as defined in the Waste Management Plan.

Contractor shall clean up all work areas. Debris and scrap material will not be allowed to accumulate in any work area. As work progresses the area is to be kept clean at all times during the day - vacuum all dust as necessary. Contractor shall remove all scrap materials and waste as defined in the Waste Management Plan.

Should Contractor fail to keep its work areas orderly, DuPont will perform this work on a time-and-material basis and back-charge Contractor.

Wash down of any vehicles, tools, equipment is not permitted on site unless expressly permitted by DuPont Environmental Services, the Contractors' DuPont contact or Construction Management firm.

Concrete trucks and chutes shall be washed out into 55 gallon drums. Drums shall be provided by Contractor. Disposal of drums in a suitable landfill shall be included in Contractor's price.

## **1.42 Roof Access**

Roof access permits are required to access roof areas at all buildings at the Experimental Station and some roof areas at other FS&RE sites. Consult your DuPont contact prior to accessing any roof area.

Contractor is required to provide necessary measures to protect roofing from damage due to Contractors activities on roof-tops. Provide protection to roofs to avoid damage from sharp objects, debris, foot traffic, and material lay down, etc.

Material shall be placed away from the roof edge and must be secure as necessary to prevent the objects from falling. Where there is a danger of tools, materials, or equipment falling and striking employees/ pedestrians below, the area below shall be barricaded.

## **1.43 Pipe Jack Stands**

Jack stands shall be positive locking (Pin Type) with large enough base to prevent tipping on a level surface. Friction type locking devices are not permitted.

Weight capacity for three-legged jack stands shall be 2,000 pounds or manufacturer's recommended weight capacity, whichever is less. Weight capacity shall be plainly marked on the stand.

Three-legged jack stands are not to be used to support material larger than 6" in diameter without site management approval. Diameter capacity shall be plainly marked on the stand.

Weight capacity for four-legged jack stands shall be 3,000 pounds or manufacturer's recommended weight capacity, whichever is less. Weight capacity shall be plainly marked on the stand.

Four-legged jack stands are not to be used to support material larger than 36" in diameter or manufacturer's maximum recommended diameter, whichever is less, without site management approval. Diameter capacity shall be plainly marked on the stand.

Jack stands with casters shall have a locking device. Locking device shall be in locked position when not being moved.

### ***1.44 Pneumatic Testing***

Any pneumatic testing should be coordinated through the Contract Administrator and be accompanied by the appropriate permits and authorizations as spelled out in procedures that have been made part of this contract. All gauges to be used in pneumatic testing and/or inflation type procedures should be calibrated before the first use and on a routine basis.

### ***1.45 Powder Actuated Devices***

Prior to the use of powder actuated device, such as a Hilti Nail gun, written permission must be granted by the Contract Administrator, WASM Permit FM020 WASM Procedure will be completed and authorized, and Engineering Standard B31.1 procedure will be followed.

### ***1.46 Temporary Lighting***

#### **Stringers**

All manufactured temporary lighting assemblies shall be 3-wire SO/SJ type molded cord sets installed on insulated supports or HID type temporary fixtures may be used and installed to meet NEC for temporary installations. As an example: McGill 400W HID fixture (TL40PMT0). Lighting stringers must be run at seven (7) foot elevations or higher whenever possible. The Contractor shall ensure that sufficient levels of illumination exist. If GFCI protection is being considered, a risk assessment shall be completed for the installation to determine if GFCI protection is necessary.

#### **Portable task lighting**

Portable temporary lighting shall be 3-wire molded case type with hard or extra hard usage cords and shall be protected by ground fault circuit interrupters (GFCIs). The contractor shall protect personnel and equipment from the hazards associated with use of portable electrical lighting in damp or wet and potentially hazardous (explosive) environments.

## **1.47 Throwing Material**

Material, equipment and tools shall not be thrown or dropped from roofs, buildings, platforms, etc. or from one individual to another or to another location.

## **1.48 Vehicle Safety**

Vehicle operator shall obey all traffic regulations and signs on site. Any vehicle operator must follow all government laws and regulations concerning driving, including having a valid driver's license.

Contractor's site access/egress shall be through the site Contractor gate. Site speed limits, as posted, shall be observed. Employees shall not ride in truck beds. Cell phone use while operating a vehicle is forbidden. The driver shall pull over and park the vehicle in a safe location before answering or placing any calls. This applies to hand held as well as hands free devices.

Seat belts shall be worn by the operator and all passengers while traveling on site. The use of seat belts at The Wilmington area FS&RE sites is a Life Saving Rule. No vehicles shall be left unattended unless the engine is turned off, keys removed from the ignition, transmission is in park or low gear, and the parking brake is set to prevent unintentional movement.

All motor vehicles and material handling equipment will be required to be equipped with seat belts and worn by occupants. An exception to this requirement is for certain equipment which the manufacturer has intentionally not installed seat belts (i.e. equipment without rollover protections.)

All vehicles, while on Company property, are subject to search by Security. Searches may include the person, personal property and assigned Company property. All lockable/storage compartments of all vehicles parking inside the fence must be able to be opened for inspection upon request of Security; otherwise, the vehicle must be parked outside the fence.

All delivery trucks parked in loading zones must have wheels chocked. For rear-loading uncoupled trailers, jacks shall be installed to the underline at both front corners to prevent tipping. The trailer's dolly legs alone are not able to prevent tipping with a load in the nose of the trailer. To prevent a trailer from tipping backward, jacks shall be installed at the rear corners if the rear wheel is more than one-wheel diameter in front of the end of the trailer.

### **Personal Motor Vehicle Repairs (On-Site) Policy**

Only Minor "NON-EMERGENCY" vehicle repairs such as fixing flat tires, fan belts, jump-start or window replacement which are needed to get the vehicle off site are allowed. Precautions must be taken to prevent injuries or environmental incident.

When an employee requests outside assistance for these minor repairs, it is his/her responsibility to relay Site Traffic policies to the vendor and report any incident arising from the task to Site Security.

Other types of vehicle repair are not allowed (i.e., changing oil, antifreeze replacement, engine or exhaust system repairs, headlamp replacement, etc.) where an environmental incident or personal injury has a greater potential to occur. Vehicles must be removed from the site for these types of repairs.

## **1.49 Waste Material Control**

All waste producing activities shall be reviewed with the Contractors' DuPont contact before these activities can begin. A waste management plan will be developed on a "case by case" basis. Disposal of all material must follow the Waste Management Plan developed with the Project Environmental Checklist. All waste produced on site must NOT be removed from the site unless approved by the DuPont contact. Disposal is to follow the Waste Management Plan.

The Contractors' DuPont contact and/or Construction Management firm and Contractor shall ensure that its operations comply with the spill prevention provisions of Wilmington Area SHE Manual (WASM) section, 20-14 – Spill/Release Prevention and Control.

Contractor may be required to provide metal containers for the collection and separation of waste, trash and other refuse. Contractor shall not use sites' dumpsters unless authorized by the Contractors' DuPont-contact or Construction Management firm. Contractor shall ensure that its operations comply with the oil spill prevention provisions of 40 CFR 112. Further, the spillage of oil or any other foreign substance onto the ground or into plant sumps, trenches or ditches is strictly prohibited. All spills are to be reported to site security and the DuPont Contract Administrator immediately after occurrence.

DuPont shall provide metal containers for the collection and separation of waste, trash and other refuse. Containers used for garbage, acids, caustics, harmful dust, etc. shall be equipped with covers. Contractor shall dispose of all trash and refuse in an on-site disposal area at frequent and regular intervals.

The contractor shall not accumulate salvaged materials on site for periods more than ten (10) days. Asbestos material, lead debris and any other regulated material shall be placed in properly labeled dumpsters or receptacles as soon as possible after removal or at least daily.

Contractor shall maintain roads and other sites' operating areas affected by its operations in a clean and uncluttered condition at all times. Any dirt, mud, concrete, debris, spoil, refuse, etc. shall be cleaned up and removed immediately.

## **1.50 Electrically Classified Areas**

Electrically Classified areas on the site are identified. The Contractor shall comply with the requirements of the site, when entering these areas, which includes flame retardant clothing that meets NFPA 2112 requirements.

All electrical equipment installed in classified areas shall be listed for the classification of the area and suitable for the environment.

Before performing any task in an electrically classified area, Contractor must receive authorization from their DuPont contact or Construction Management firm before those activities can begin.

## **2.0 FIRE PROTECTION**



## **2.1 Procedures**

Contractor shall be familiar with and observe DuPont's emergency procedures for reporting fires, environmental or hazardous materials releases, medical emergencies, evacuation procedures, and other emergencies on site. Contractor shall be familiar with and observe evacuation procedures and assembly area locations for the area they are working in.

Contractor's job supervisor will be given a copy of and be oriented by DuPont on the site Emergency Action Plan and shall ensure that all Contractor's employees are thoroughly familiar with those procedures.

Contractors shall be trained to a competent level of understanding of WASM 2-05 Hot Work, WASM 2-06 Fire Protection Life Safety Systems Impairment, WASM 8-04 Confined Space, WASM 14-02 Contractor/Vendor Safety, Health and Environment, as well as any other WASM procedures applicable to the work to be performed.

## **2.2 Smoking**

No use of tobacco products including, but not limited to cigarettes, cigars, pipes, or e-cigarettes will be permitted on DuPont property at any time. Employees, visitors, contractors and all persons coming onto DuPont property are required to comply with this policy.

Visitors and contractors who refuse to comply with the policy will be escorted off the property.

## **2.3 Flammable Materials**

The storage, use, dispensing, and disposal of flammable materials shall be approved by DuPont. WASM 2-02 Flammable Combustible - Liquid and Gas Storage, Handling, and Dispensing procedure and WASM 11-01 Compressed Gases procedure shall be followed.

OSHA-approved safety cabinets and cans shall be used for storing and dispensing flammable liquids and must have prior DuPont approval. Compressed gases shall not be stored in flammable liquids cabinets.

Gasoline powered tools or equipment are not permitted to be used inside buildings.

All equipment to be used inside buildings shall be air or electric-operated. Contractor will provide air source and electric source in excess of 120 Volt, 20 Amp.

All propane powered equipment shall be shut off, including the cylinder discharge valve, at the end of the work day or prior to an extended break in activity.

## **2.4 Fire Extinguishers**

Contractor shall furnish a minimum 10-pound fire extinguisher with a current, up-to-date annual inspection tag.

The extinguishers shall be rated not less than 2A:40-BC and be inspected and maintained for the duration of the work.

Rev. Date 10  
10/2018

32

All fires must be reported immediately using the site emergency phone number.

Discharged extinguishers shall be recharged or replaced as necessary.

## ***2.5 Oily Rag Storage***

Dirty and oily rags shall be kept in fire-proof metal containers with self-closing lids and removed as defined in the Waste Management Plan developed with the Project Environmental Checklist.

Oil catch pans placed under pipe and conduit threading machines must be noncombustible: i.e., metal and filled with nonflammable absorbent material. Disposal of all material must follow FS&RE Environmental Waste Guide and Waste Management Plan developed with the Project Environmental Checklist.

## ***2.6 Protective Structures***

Any plastic, tarpaulin, or other material used to construct a hut, tent, or similar protective structure, shall be flame retardant. Any other plastic fabrics or films shall be certified as conforming to the requirements of Test Method #2 in NFPA 701. View Ports are required.

## ***2.7 Burning and Welding***

Shield all arcs and post warning signs in operating area. Flashback arresters shall be an integral part of the oxy/fuel rig. FR11 or equivalent arresters shall be installed at the torch inlet valves and FR43 or equivalent arresters at the regulators. WASM 2-05 Hot Work procedure shall be followed.

# **3.0 CONSTRUCTION FACILITIES**

## ***3.1 Compressed Air***

Compressed air is not available within the work area. Contractor shall provide its own source of compressed air. All portable tools powered by compressed air where the supply hose ID is greater than 1/2" shall have an excess flow valve at the source of supply.

## ***3.2 Nitrogen***

Contractors are not authorized to make connections to any nitrogen station or service without specific written authorization from the DuPont Contract Administrator/Sponsor.

### **3.3 Drinking Water and Sanitary Facilities**

Contractor shall furnish and maintain water coolers in a safe and sanitary condition for their employees. Drinking water coolers shall be cleaned and sanitized on a regular basis and shall be sealed and identified (dated) to prevent contamination from various potential sources. Drink cup dispensers (disposable cups) and waste receptacles shall be provided at each water cooler.

Sanitary Facilities will be designated by your Contract Administrator.

### **3.4 Electric Power**

DuPont will furnish 120 volts, 60 Hertz, 20 amp electrical power at several locations within/approximately 30 feet from the work area for TC power and small tools.

Contractor shall make all connections (3-wire grounded) and run any extensions required.

Contractor needs to provide an electric source in excess of 110 volts, 60 hertz, 20 amp (i.e. welding machines, concrete saws, etc.).

All electrical installation and renovation work shall be checked and proven to be free of shorts and grounds. On power distribution systems operating at 480 volts or higher shall require both phase-to-phase and phase-to-ground megger testing to be performed.

A qualified DuPont Contract Administrator/Sponsor shall witness these megger tests.

There shall be written documentation indicating the results of these tests.

All installation or renovation work performed on power distribution system operating at 480 volts or higher will require a complete written and approved job plan. If any part of the job plan cannot be performed as written or if anything changes from the original job plan, work shall stop until a new job plan can be written and approved. All persons who participated in the original job plan shall be part of writing and approving the new job plan.

### **3.5 Site Facilities**

Contractor's personnel will not be permitted to use site facilities such as lunchrooms, change rooms, shops and toilets unless directed by the Contract Administrator.

Contractor's employees are expected to follow all posted signs in labs, semi-work area, construction areas and all barricaded areas.

In addition, Contractor's employees are expected to follow all traffic signage: speed, yield, stop, cell phone use, etc.

### **3.6 Site Access**

All Contractors must be badged before they are permitted to work on a FS&RE site. Criminal Background Checks and Substance Abuse Testing are required for all Contractors prior to requesting access for DuPont sites. 100% escort is required for all sites for contractors that do not have a site pass/badge. The Contract Administrator/Sponsor must submit an "employee badging" request via

Wilmington Security Portal. Once completed and approved, the Contractor and their employees will report to the Site Pass Office at his/her home site to review the required safety film and receive their badge. All Contractors must possess a valid U.S. state driver's license to be able to drive on DuPont sites.

### **What Are Suppliers Required to Do**

1. Verify and validate identity - this involves a social security/name trace search.
2. Check criminal history - this involves search of county, state, and/or federal criminal repositories for jurisdictions in which an individual has worked and resided; national criminal record search.
3. Verify and validate legal authorization to work - this involves filing of the U.S. Citizenship and Immigration Services (USCIS) Form I-9 or Employment Eligibility Verification or through DHS's E-Verify program.
4. Identify people with terrorist ties - this involves providing to DHS the names and SSN#'s of all covered employees and contractors.
5. Complete the recommended DHH 5 drug panel testing – marijuana metabolites, cocaine metabolites, opiate metabolites, phencyclidine (PCP), and amphetamines.

### **How to Meet Requirements**

1. Supplier must confirm for DuPont, in writing on company letterhead, a listing of each site worker by name, that the following checks have been conducted, "with the CBC being conducted within the last sixty (60) day period prior to the assignment start date" on each site worker, with no discrepancies noted:
  - a. Social Security Number verification and validation (the SSN is good and belongs to the person possessing the number)
  - b. Prothonotary's Office/County Courthouse search of criminal records for the past seven (7) year period (misdemeanor & felony)
  - c. National Criminal File Search/Multi-State Criminal File Search
  - d. Legal Authorization to work (I-9, E-Verify)
2. Any discrepancies must be brought to the Site Security Leader (SSL) - (no personal identifiers e.g., Name, Social Security Number, and Date of Birth).
3. If acceptable - email provided to Supplier by SSL of acceptance and attached to CBC; If not –verbal rejection.
4. Complete and receive a negative drug screening result within the last 90 days in compliance with the DHHS recommendations for marijuana metabolites, cocaine metabolites, opiate metabolites, phencyclidine (PCP), and amphetamines at the cutoff levels in accordance with DuPont Policy. Proof and/or confirmation may be by a "Letter of Certification", signed by an officer of the company, listing all employees who will be assigned to the DuPont site, identification number and date of the drug screen, and confirmation that the results were negative.

More information and a sample letter can be found in the below communication to suppliers:



FSRE Letter for CBC

This information must be emailed or faxed to the site where work will be performed:

Rev. Date 10  
10/2018

35

- **Chestnut Run**  
No fax available  
[CRP.Badging\\_contractor@dupont.com](mailto:CRP.Badging_contractor@dupont.com)
- **Experimental Station**  
Fax: 302-695-3674  
[ESL.Site-pass-office@dupont.com](mailto:ESL.Site-pass-office@dupont.com)

For more information, please use the below link to visit the DuPont Supplier Center:

<http://www.dupont.com/general/suppliers/supplier-center>

### **Contractor Gates**

Contractor employees must enter the site through the Contractor entrance and must badge in and out when entering or leaving the site. "Gate" records are audited against invoices and if there is a discrepancy DuPont will pay based on the "gate" log.

Badge readers are located in the following areas:

- Experimental Station: E313/Contractor Gate, ESL Main Gate (off hours only)
- Chestnut Run: Building 751 Contractor Gate, CRP710 Main Gate (off hours only)

### **Site Specific Guidelines**

#### **Experimental Station**

Contractors must enter and exit from the Contractor's Gate, located on the east side of the site off Alapocas Rd, unless entering during off hours. Entrance for off hours is via the ESL Main Gate.

The site pass/badge office is located at the Contractor gate 313:

- Site Pass Office Hours: Monday through Friday 8:00 AM – 4:00 PM (*Closed 12:00-12:30 PM*)
- Safety Film Viewing Hours: Monday through Friday 5:00 AM to 5:00 PM
- Contractor Gate Hours: Monday through Friday 4:30 AM to 6:00 PM

#### **Visitor Control**

Visitors to the Experimental Station must be escorted 100% of the time while on site. A visitor pass may be requested via the WiSP Portal ([https://dupont.sharepoint.com/teams/teams\\_wmseportal](https://dupont.sharepoint.com/teams/teams_wmseportal)) for visitors at the Experimental Station.

#### **Chestnut Run**

Contractors must enter and exit from the Contractor's Gate located off Faulkland Rd, unless entering during off hours. Entrance for off hours is via the Main Gate.

The site pass/badge office is located at the Contractor gate 751:

- Site Pass Office Hours: Monday through Friday 8:00 AM - 4:00 PM (*Closed 12:00-12:45 PM*)
- Safety Film Viewing Hours: Monday through Friday 5:30 AM - 4:00 PM
- Construction Gate Hours: Monday through Friday 5:30 AM – 5:30PM
- CRP710 Visitor Center Sign IN/OUT hours:
  - Monday through Friday 6:00 PM – 5:00 AM
  - Weekend/Holidays/Friday 6:00 PM – 5:00 AM

### **3.7 Telephones and other Communication Equipment**

The contractor shall furnish DuPont and the Contract Administrator with a means of contacting Job Supervisor. No portable cell phone usage will be permitted while driving on site.

All portable electronic devices such as radios, pagers and telephones shall be electrically rated for classified areas. The classification shall be clearly identified by the manufacturer on the cast of the device.

### **3.8 Temporary Construction (TC) Facilities and Trailers**

Contractor shall comply with DuPont Standards made part of this contract for use of trailers and other TC facilities provided by the contractor. OSHA Regulation 1926.1052 must be followed. Take note the following:

- Anchored platform landings are required at each doorway
- Trailer shall be blocked and tied down with tornado straps
- Trailer shall be equipped with a fire extinguisher
- Trailer shall have no open flame for heat or cooking
- Wiring shall meet electrical code and be installed by a certified electrician
- Trailer shall not be used for bulk storage
- Trailers shall be maintained, inside and outside, in a safe and neat manner

### **3.9 Water**

Water for construction is available.

DuPont will furnish water for construction and testing purposes at one 1-inch outlet within/approximately 200 feet from the work area. Contractor shall make all connections and run any hoses and pipe extensions required.

Fire hydrants shall not be used as a source of water without DuPont's prior written approval.

## **4.0 WORKING CONDITIONS**

## **4.1 Badges**

Site passes will be issued by site security and must be returned upon completion of work or termination of employee. Site passes shall be visible at all time while on site.

## **4.2 Cellular Telephones**

Non-intrinsically safe cellular phones and two-way radios are not allowed in electrically classified areas. These devices have the potential to create sparks and ignite flammable chemicals that might be present in classified areas. Cellular telephones are not to be used in process control rooms, electrical control rooms or within 25 feet of operating equipment or E & I control panels. Cellular phones are not to be used by the driver of any moving vehicles on site property. Cellular phones with image capturing or picture taking capabilities are permitted on site, but taking photos is prohibited without a DuPont approved camera pass.

## **4.3 Co-occupancy**

Contractor shall provide all measures required to protect existing facilities and work performed by others from damage due to Contractor's (including its tier subcontractors') operations or negligence. DuPont may suspend Contractor's operation until such protective measures are provided and the cost for stand-by of contractors, its tier subcontractors, or other contractor's personnel and equipment shall be for contractor's account.

## **4.4 Coordination with Others**

Where contractor's work must be performed in conjunction with work by others, contractor shall cooperate with DuPont in scheduling, coordinating and sequencing its work with that of others so all work may proceed with minimal interference or delay.

## **4.5 Communication of Events Impacting Site Personnel**

Site personnel must be notified of activities that could impact the site and their work day.

The contractor shall furnish DuPont with information of any work that would impact the normally scheduled work day of site personnel. Examples of events that require notifications are:

- Site Road Closures/Detours
- Sidewalk Closures
- Utility Shutdowns
- Crane Lifts Over Building
- Building Work (Exterior & Interior): Egress Changes/Odors/Noise/Vibration/Barricaded Areas/Work in Common Areas (corridors)
- Leveraged services changes or closures (Café hours/meal offerings, PPE (eye glasses/safety shoes, janitorial)

Prior to performing any work, the contractor shall furnish DuPont with timely information concerning work activities that could impact the normally scheduled work day of site personnel so the appropriate notifications can be made.

## ***4.6 Diversity/ Matter of Respect***

Creating the proper environment is a significant business issue with very high stakes for the contractor and for DuPont. Individuals uniquely contribute to make each company what it is. Recognizing we are a diverse people and will become more diverse, it is essential that we have an environment that value diversity. One of the DuPont key pursuits is to create this environment, where the value of diversity is shared and all people have an equal opportunity to make their maximum contribution.

DuPont does not condone nor will it tolerate any activities, whether they be physical, verbal or written, which an individual and/or group would perceive as offensive, demeaning or exploitative, based on religion, gender, nationality, race, etc.

The contractor is responsible for informing personnel in his/her employ of this policy. Any persons found in violation of the above policy may be subject to dismissal from the site.

## ***4.7 English Requirement***

Personnel entering this Site shall be capable of speaking, writing, reading and comprehending the English language. Variances to this policy are granted via an approved Translation Plan (Attached) or included in the supplier's contractual agreement.

Contractors intending to use non-English speaking/reading employees shall submit a translation plan, prior to mobilizing.



FS&RE Translation  
Plan

### **[Translated Documents](#)**

## ***4.8 Fitness for Duty/Fatigue Management***

All Contractors shall implement programs that are designed to ensure that personnel working in a high hazard environment are fit for duty and are not compromised by external influences.

External influences include such things as alcohol, under the influence of illegal or prescription medications, lack of sleep, fatigue, personal or family illness, death in family, divorce and harassment. It is important that "fitness for duty programs" be integrated with existing Human Resources policies.

All Contractors shall have a plan for dealing with diminished capacity to perform jobs safely. This plan should include:

- Identify jobs where diminished capacity might contribute to a release of a hazardous material.



- Establish practices to detect diminished capacity when hiring.
- Develop appropriate facility security measures for search and seizure of contraband in accordance with legal requirements.
- Develop a policy to deal with suspected cases of diminished capacity.
- Establish appropriate rehabilitation/assistance programs for employees.

### **Fatigue Management**

Contractors shall have a written Fatigue Management program that complies with API RP 755 and shall furnish the program for review by DuPont upon request. Contractors shall manage their work on site in such a way that work shifts do not exceed the recommended guidelines set forth in API RP 755.

## **4.9 Material Shipment and Storage**

Truck shipments to the site are acceptable. Contractor shall coordinate shipment with DuPont to avoid interfering with site operations. Contractors shall unload and handle its material. Motor control centers and fan rooms cannot be used as storage areas.

Material storage on site must be approved by the Site CA (form below) for reasonable ground space, but DuPont will make no structures, for storage of materials, office, etc., available to Contractor.

Material being furnished by DuPont will be made available to Contractor at a designated location on site.



Request Form for  
Common Property St

## **4.10 Prohibited Items**

In addition to those items noted in the Contractor Safety Handbook, flame producing hand warmers, lighters, matches, radios, tape recorders, and alcoholic beverage containers whether empty or not are strictly prohibited unless provided by DuPont on site property.

Cameras are permitted on site with a DuPont approved camera pass.

Use of two-way radios within 12 feet of electronic instrumentation is prohibited. Use of two-way requires specific approval of the Building Proprietor.

All two-way radios and portable electronic devices (cell phones etc.) used on site shall be for the area classification by a recognized agency UL, FM & CSA.

Food and beverages shall be consumed only in designated areas.

## **4.11 Property Removal**

Proper authorization must accompany all DuPont property removed from the Site. Appropriate Property Passes can be obtained through the Wilmington Security Portal (WiSP). Personal property, which could be mistaken as DuPont property, must be identified as such on an approved Property Pass when the property is brought on Site.

Security will challenge persons removing property from the Site to verify that the appropriate Property Pass has been authorized. Security reserves the right to deny the removal of any property that does not meet the removal permit process.

## **4.12 Criminal Background Checks – Contractor Requirements**

All suppliers working on FS&RE DuPont sites, must comply with the DuPont U.S. Supplier Criminal Background Investigation Requirements.

For more information, see section 3.6 – Site Access

## **4.13 Testing for Substance Abuse**

Contractor shall not assign any employee to this site unless proper documentation is presented stating that such employee has taken a 5-panel drug screen and the screen has proved negative.

For more information, see section 3.6 – Site Access

## **4.13 Tool and Equipment Control**

DuPont will not be responsible for the loss or theft, either on the site or in the parking lot, of contractor's tools or equipment, or contractor employee's personal belongings.

No tools or equipment shall be borrowed from DuPont except with DuPont Furnished Items Agreement from the Contract Administrator with the appropriate signatures.

## **4.14 Insignias/ Logos/ Emblems/ Signs/ Symbols**

Employees should be aware that when in the workplace, employees are expected to behave in a way that ensures all employees are treated with dignity and respect. Displaying disrespectful insignias, signs, pictures, T-shirts and the use of profane or offensive language is not appropriate in the workplace today.

*Note: Nothing in this policy is intended to infringe an individual's rights under the National Labor Relations Act.*

## **4.15 Odor Control**

Contractor must take appropriate measures to eliminate possible exposure to vapor/fumes created by a task.

## **4.16 Tobacco Free Site**

All FS&RE sites have implemented the Tobacco-Free Workplace Policy. No use of tobacco products including, but not limited to cigarettes, cigars, spit or chewed tobacco, pipes, dissolvable tobacco products, snus/snuff, or e-cigarettes will be permitted on DuPont property at any time. Employees, visitors, contractors and all persons coming onto DuPont property are required to comply with this policy.

# **5.0 ENVIRONMENTAL**

## **5.1 Refrigerants**

ANY equipment using fluorocarbon-based refrigerants, United States Environmental Protection Agency (EPA) Class I (CFC's) or Class II (HCFC's) **or** refrigerant "blends" containing Class I or II refrigerants or HFC refrigerants **SHALL NOT** have any additional refrigerant added to the equipment while on the location without first contacting the location's environmental resource for approval.

Refrigerant may not be added to any equipment or system on site without approval of the Site Environmental Air Programs Manager / designee.

## **5.2 Spill Notification and Protection**

Contractor shall manage all spills in accordance with Wilmington Area SHE Manual (WASM) section, 20-14. Material/spill management shall be addressed in the Contractors JSA and the Waste Management Plan developed with the Project Environmental Checklist.

Contractor shall maintain filter media around all storm drains prior to commencement of work in areas adjacent to drains.