

# HOT WORK PERMIT PROCEDURE

Hot work activities (torch cutting, welding, or the use of open flames) are required to be performed within safe designated areas, or, if this is not feasible, in other areas at the facility if the precautions outlined in this procedure are followed, and the hot work area is reviewed and authorized by the completion and posting of a hot work permit.

## 1.0 Purpose

This procedure outlines the Franklin Mill's requirements for safe hot work practices which include welding, torch cutting, burning, and the use of open flames. All such operations are required to be carried out with proper precautions and only in safe designated areas or where authorized by written permit.

## 2.0 Scope

2.1 This policy and procedure is applicable to all operations within International Paper, Franklin Mill, including the Fiber Recycling Plant and Franklin Sheet Converting.

2.2 This procedure applies to International Paper employees and contractors performing hot work at the Franklin Mill.

## 3.0 Responsibilities

3.1 International Paper Personnel:

3.1.1 Area owners shall request designation and annual update of safe designated areas for hot work through the Mill Emergency Response Coordinator. They shall periodically inspect hot work areas to ensure compliance with this procedure.

3.1.2 The IP individual trained and authorized (via the work order system or verbally from supervision) to perform the work shall complete a hot work permit prior to performing hot work unless the job is being done in a safe designated area. If the individual is not familiar with the area and associated hazards, he shall request assistance from someone familiar with the area prior to completing the permit and beginning the hot work.

3.1.3 The supervisor of the individual performing the work shall ensure that those persons are knowledgeable and trained on the hot work permit system, the proper use of equipment, and the proper use of personal protective equipment. The supervisor shall periodically inspect hot work activities to ensure compliance with this procedure. IP supervisors shall forward hot work permits to the Mill Emergency Response Coordinator upon completion of the work.

3.1.4 IP Contractor Managers shall obtain authorization from an area supervisor for hot work permits initiated for contractor activities.

3.1.5 IP Contractor Managers shall collect and return all hot work permits to the Mill Emergency Response Coordinator upon completion of the contractor's hot work activities.

3.1.6 After inspecting the hot work area, the IP employee authorizing the hot work permit shall review the hot work permit, the applicable hazards associated with the area, and all necessary safety precautions with those persons engaged in the hot work activity prior to signing the permit form.

3.1.7 The Mill Emergency Response Coordinator shall evaluate and approve safe designated areas and shall also maintain files of completed hot work permits and a list of all safe designated areas.

### 3.2 Contractors:

3.2.1 Contractors are responsible for ensuring their personnel are trained on, and comply with, the requirements outlined in this procedure.

3.2.2 Contractors shall not initiate any hot work activities until a permit is received from their IP Contractor Manager with authorization to proceed (as evidenced by signature of IP area supervisor on the permit form).

3.2.3 Contractors shall submit all hot work permit forms for completed work activity to their IP Contractor Manager.

### 3.3 Fire Watch:

3.3.1 Observe hot work area to detect flames, smoke, and smoldering.

3.3.2 Monitor hot work area to insure sparks and flames remain within the watch area.

3.3.3 Use appropriate firefighting equipment to suppress any detected fires.

3.3.4 Request the assistance of the Hazardous Emergency Action Team, if needed.

3.3.5 Remain in the hot work area during the entire length of hot work and for thirty minutes thereafter.

## 4.0 Definitions

4.1 **Area Supervisor** – An International Paper employee who is designated to authorize hot work activities. The Area Supervisor must be knowledgeable of the potential fire hazards in a given area and understand the necessary safeguards associated with the hot work. The Department Managers are responsible for designating hot work Area Supervisors for their respective areas.

4.2 **Auxiliary Heating Devices** - approved supplemental heating equipment such as fire barrels, kerosene and propane heaters that are used for freeze protection of process equipment.

4.3 **Fire Watch** - An individual who observes hot work activities for the purpose of preventing, detecting, and suppressing fires. The fire watch must be trained to use manual firefighting equipment and have the ability to summon emergency assistance if needed.

4.4 **Hot Work** - any work involving electric or gas welding, cutting, brazing, burning or similar flame or spark - producing operations, and open flames. This includes, but is not limited to, acetylene torches, arc welding equipment, portable grinders, propane torches, and explosion actuated tools.

4.5 **Hot Work Permit** - a form used to authorize hot work, listing as a minimum the fire precautions listed in this procedure, nature and location of work to be performed, date and time work will commence, and space for signatures.

4.6 **Safe Designated Area** - area where significant flammables or combustibles are not present and hot work can proceed without the need for an authorized hot work permit. Welding shops and other

permanent area maintenance shops fall into this category, provided they are isolated, or at a sufficiently safe distance, from appreciable flammables or combustibles. A notice must be posted in these areas, or otherwise communicated, stating that hot work may be carried out without a permit, but only within the confines of the specified area.

**NOTE:** Hot work permits are required in an area within the boundaries of a process (i.e., Chlorine Dioxide and Turpentine) covered by the OSHA Process Safety Management Standard when the work might contribute to a catastrophic chemical release from that process.

4.7 LFL - Lower Flammable Limit (may also be referred to as LEL - Lower Explosive Limit)

4.8 IP - International Paper

4.9 High Hazard Areas - An area that has a high amount of flammable or combustible material that is adjacent to the hot work activity. The amount or nature of the combustible material is such that it cannot be feasibly relocated. For example: PS&D Department, fuels, roll paper storage, chip silos, bins, and storage, roundwood storage, waste paper bale storage, finished goods warehouse, storeroom, paper machines (all levels), pallet storage, and lube or hydraulic oil reservoirs.

4.10 "Charged" Hose - An 1-1/2" fire water hose is considered charged when it has been deployed from its rack and is filled with water to the nozzle and the hose valve is fully open thus allowing full operation of the hoseline from the nozzle. When a 1-1/2" fire water hose is not available and wash-up hoses are being used, the wash-up line is considered charged when the wash-up hose has been extended to the hot work area and availability of water verified. As wash-up hoses do not have shutoff nozzles, they do not have to continually run with water.

## 5.0 References

5.1 OSHA Standard 29 CFR 1910.252, General Requirements for Welding, Cutting, and Brazing

5.2 OSHA Standard 29 CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals

5.3 Franklin Mill "Confined Space Entry" Procedure

5.4 Franklin Mill "Procedure for Opening Dangerous Systems"

5.5 International Paper's Corporate Risk Management "Hot Work Permit" Procedure

## 6.0 Procedures

6.1 General Requirements

6.1.1 Whenever possible, hot work should be carried out in safe designated areas. When reasonably practical, equipment on which hot work is to be performed should be moved to a safe designated area.

6.1.2 Hot work permit form to be used at the Franklin complex is Storeroom Item No. 1043624.

6.1.3 The individual performing the work shall complete a hot work permit form, which serves as a checklist of steps to be taken to help insure the work is performed safely. For IP employees, authorization to proceed with the hot work is obtained by having two employees sign the permit form (the person performing the hot work and the fire watch), one of which is knowledgeable of the

hazards in the area. This knowledgeable person is allowed to sign to “authorize” the permit. If neither of the two employees engaged in the hot work activity are familiar with the hazards of the area, an IP area supervisor, knowledgeable about the hazards, shall sign to authorize the permit form. For Contractor activities, the IP area supervisor shall sign the permit to authorize the start of hot work activities.

6.1.4 The hot work permit form shall be conspicuously posted at the job site.

6.1.5 If gas testing for flammable or combustible atmospheres is needed, the employee will notify his supervisor so testing can be arranged.

6.1.6 No hot work shall begin until all applicable checklist precautions have been taken.

6.1.7 Permits are valid only for the shift issued (12 hour maximum) and shall be reissued for subsequent shifts.

6.1.8 A fire watch shall be provided during and for at least 30 minutes after the hot work is completed, including during lunch or coffee breaks, by someone trained in the use of fire extinguishers, fire hoses, and proper emergency notification procedures.

6.1.8.1 For IP hot work activities, personnel from operating departments can act as the fire watch during lunch, breaks, and after the job is complete if their job allows them to keep check on the area after being notified by the employee who performs the hot work.

6.1.8.2 Contractors shall provide personnel to serve as fire watch for their hot work activities.

6.1.8.3 A single fire watch can serve more than one job as long as he/she can visually monitor each job. In addition, the fire watch must be able to reach all areas subject to a fire by the chosen fire suppression equipment.

6.1.8.4 Fire watches must be able to summon assistance from the Hazardous Emergency Action Team if needed. Appropriate communication devices include radios, telephones, and intercoms.

6.1.8.4.1 If a telephone or intercom is not within one minute’s travel from the fire watch area, the fire watch must use a radio.

6.1.8.4.2 A radio is required for hot work activities performed on roofs.

6.1.8.5 Fire Watches shall not perform duties that will interfere with their ability to detect and extinguish fires.

Acceptable collateral duties include passing tools into the hot work area, washing up the surrounding area, and short-term positioning of materials for a tack weld. Other collateral duties must be approved by the mill Emergency Response Coordinator, or designee, prior to being performed.

6.1.9 Where the hot work location is in a high hazard area, these areas shall be revisited hourly for four hours beyond the 30-minute required fire watch. This shall be performed by operating personnel for IP hot work activities, and by contractor personnel for contractor hot work activities.

6.1.10 If hot work is to be performed in high hazard areas, including warehouse areas and combustible construction areas, charged hoses shall be laid out and charged for immediate use. If inside hose stations are not available, charged hose lines from other areas or outdoor hydrants shall be provided.

6.1.11 Where reasonably practical, the hot work area must be barricaded or shielded to prevent potential injury to passers-by from arc flash, falling sparks, and hot slag. Warning signs may also be posted to alert passers-by that hot work is being conducted in this area.

6.1.12 Completed permits are to be turned into the supervisor of those engaged in the hot work activity to allow the permits to be forwarded to the Mill Emergency Response Coordinator.

## 6.2 Proper Precautions and Safeguards

6.2.1 Where hydrocarbon vapors or other flammable liquids or gases may be, or may have been, present near the hot work site, flammable vapor tests shall be carried out prior to issuing the permit to ensure it is safe to proceed. Where the initial flammable vapor concentration reading is above 10% of the LFL (lower flammable limit), IP employees shall contact their supervisor (for contractor activity, the IP Contractor Manager shall be informed by the contractor and he shall contact the IP area supervisor) to evaluate the need for cleaning, purging, and/or continuous ventilation to reduce the concentration to below 10% prior to beginning hot work. In no case shall hot work be allowed to continue if readings exceed 10% LFL.

6.2.2 The area within 35 feet of the work area should be clear of all flammables or combustibles, including but not limited to: paper, chips, sawdust, stock, and flammable liquids. Where this is not possible, means shall be used to prevent the spread of fire. This might include welding curtains, other non-combustible shields, or wetting the area.

6.2.3 Where combustible floors or walls are present they should be wetted or covered with a noncombustible material.

6.2.4 Where openings in walls or floors in the work area would permit penetration of hot slag or flame, these openings shall be adequately covered. If unable to adequately cover the opening, then additional fire watch (es) shall be posted.

6.2.5 Similarly, where hot work is to be performed near a building wall, any combustibles directly adjacent to the other side of the wall should be moved or adequately shielded from potential ignition.

6.2.6 Hot work shall not be performed on a metal partition, wall, ceiling nor roof having a combustible covering, or on walls or partitions of combustible "sandwich"-type panel construction.

6.2.7 Hot work shall not be performed on pipes or other metal in contact with combustible walls, partitions, ceilings, or roofs, if the hot work may cause ignition of these materials by conduction.

6.2.8 Ducts and conveyor systems which may carry sparks to distant combustibles shall be suitably protected or shut down.

6.2.9 Suitable fire extinguishing equipment, based upon the nature and quantity of exposed combustible material, such as charged portable fire extinguishers or charged hoses, shall be provided and maintained in a state of readiness for instant use at the work site. The IP Contractor Manager shall notify the Mill Emergency Response Coordinator of the need to utilize 1-1/2" fire hoses for contractor hot work activities. Prior to commencement of the hot work, the Mill Emergency Response Coordinator shall review the contractor's applicable training records and determine if use of the 1-1/2" fire hoses will be authorized.

6.2.10 Where automatic sprinklers or other fixed fire protection is provided, protection must be in ready service.

6.2.11 The cutting and welding equipment to be used must be in good repair and in a safe operating condition.

6.2.12 Compressed gas cylinders utilized during hot work shall be properly secured. Oxygen and fuel gas cylinders shall be secured using a substantial, non-combustible restraint (e.g. steel cable or chain).

### 6.3 Other Considerations

6.3.1 A hot work permit does not authorize smoking at the permitted site.

6.3.2 Permits are valid only for the shift issued.

6.3.3 Permits are valid only for the immediate area and the task specified on the permit.

6.3.4 A permit may be canceled at any time where conditions have changed, making continuation of the work hazardous.

6.3.5 All permits are automatically void when a fire or emergency condition has been signaled. In that event, the permit holder should cease operation and secure his equipment in a safe manner, without delay.

6.3.6 The hot work permit does not preclude the need to follow proper confined space entry and opening dangerous systems procedures.

6.3.7 Individuals shall be familiar with any anticipated special hazards they may encounter.

6.3.8 Proper personal protective equipment shall be worn at all times during the hot work activity.

6.3.9 Engine driven electrical arc welding equipment shall have a separate auxiliary ground wire which is connected from the equipment frame to structural steel or a water line. This only applies when the welder is being used for auxiliary 110v power.

6.3.10 During the winter months, it sometimes becomes necessary to utilize auxiliary heating devices. A hot work permit is required for use of these devices and personnel shall be designated to frequently check locations where the auxiliary heating devices are in use.

### 6.4 Training

Affected individuals shall be trained on this procedure on assignment and every two years thereafter.

## 7.0 Documentation

7.1 Attachment 7.1 - List of Safe Designated Areas for Hot Work

7.2 Hot work permits shall be retained by the Emergency Response Coordinator for the current and past two months.

## ATTACHMENT 7.1

### SAFE DESIGNATED AREAS FOR HOT WORK

- \* PAPER MILL MAINTENANCE SHOP & FABRICATION AREA AT THE REAR OF THE SHOP
- \* NO. 6 PAPER MACHINE ROLL BAY
- \* NO. 3 & 4 PAPER MACHINE ROLL BAY
- \* ROLL FINISHING MAINTENANCE SHOP & OUTSIDE AREA IMMEDIATELY ADJACENT TO NORTH SIDE OF SHOP
- \* SHEET FINISHING MAINTENANCE SHOP
- \* MAIN ELECTRICAL MAINTENANCE SHOP
- \* INSTRUMENT MAINTENANCE SHOP
- \* HVAC MAINTENANCE SHOP
- \* MAIN MAINTENANCE SHOP INCLUDING MACHINE SHOP AREA
- \* AUTOMOTIVE MAINTENANCE CRANE & TRUCK SHOP
- \* PUMP & GEAR SHOP
- \* FIBERS/POWER & RECOVERY MAINTENANCE SHOP
- \* LIME KILN MAINTENANCE AREA
- \* DIGESTER OPERATING FLOOR SOUTH SIDE
- \* WOODYARD MAINTENANCE SHOP
- \* SALVAGE YARD
- \* FIBER RECYCLING PLANT MAINTENANCE SHOP
- \* MAINTENANCE AREA - BASEMENT OF #8 POWER BOILER
- \* MAINTENANCE AREA - 10TH FLOOR OF #6 RECOVERY BOILER
- \* MAINTENANCE AREA UNDER D SET OF EVAPORATORS
- \* MAINTENANCE AREA ON 7TH FLOOR OF #4 RECOVERY BOILER
- \* CARPENTER SHOP - SOUTH END CENTER PORTION OF SHOP