SECTION 9.0

CONTINGENCY PLAN

9.1 INTRODUCTION

This Contingency Plan describes the actions to be taken by GLOBALFOUNDRIES personnel in response to fires, explosions, or the release of hazardous waste. Copies of the Contingency Plan are kept electronically. Hardcopies are also available at the CDC and with the emergency services organization.

Additional information has been included in this plan to meet the requirements of 40 CFR 270.14(b)(7) and 264 Subpart D. The Contingency Plan will be amended whenever the facility's permit is revised, the plan fails in an emergency, changes in the facility's operations alter the plan, or changes occur in the list of emergency coordinators or emergency equipment. The hazardous waste engineer is responsible for these changes and for ensuring that all copies are up to date.

9.2 GENERAL INFORMATION

The Vermont facility is owned and operated by GLOBALFOUNDRIES U.S. 2 LLC whose headquarters are located in Santa Clara, CA. The Vermont facility is a manufacturer and developer of semiconductors for a variety of electronic applications. The facility is located in Chittenden County in the Town of Essex, the Village of Essex Junction, and the Town of Williston, Vermont. The Contingency Plan has been sent to local emergency organizations. Documentation regarding the distribution of the Contingency Plan can be found in the facility operating record. Agreements with local authorities are included in Attachment 9-1. The agreements include UVM Medical Center (formerly Fletcher Allen Health Care Center), Essex Rescue, Williston Police Department, Essex Police Department, Essex Junction Fire Department, and Williston Fire Department.

Chemical spill control for the GLOBALFOUNDRIES site is coordinated by the Emergency Services Department, located in Building 900. All releases of chemicals within the manufacturing areas, including satellite accumulation sites, are responded to and controlled by the procedures, personnel, and equipment detailed in the various sections of this Contingency Plan. This assures that control of all chemical clean-up and disposal is exercised by trained personnel who are properly equipped and informed of all hazardous waste handling and reporting procedures.

9.3 EMERGENCY COORDINATORS

Emergency coordination for the entire GLOBALFOUNDRIES site is provided by the Emergency Services Department on a 24-hour-per-day, seven-day-per week-basis. On-duty Emergency Responders may be reached at any time by telephoning the Security Dispatch Center at (802) 769-2222.

Emergency coordination is managed by Mr. James Mulligan Director of Environmental Health Safety and Security. Mr. James Mulligan or other managers who cover emergency operations in his absence, have the authority to commit GLOBALFOUNDRIES resources that are required to implement this Contingency Plan. A Duty Manager list is available to the Security Dispatch Center and Emergency Services Department for weekend and holiday coverage. Covering managers are available 24 hours per day, seven days per week. The Emergency Services Department has the primary role of emergency coordination.

Home address and home and business telephone numbers for Mr. Zachary Peatman are as follows:

NAME	ADDRESS	HOME/CELL PHONE	OFFICE PHONE
James Mulligan	17 Copperfield Drive Waterford, NY 12188	1-518-326-6992	1-518-305-6176 1-518-366-4521

Should a fire, explosion, or other incident with the potential to release hazardous waste and which may threaten human health or the environment occur at GLOBALFOUNDRIES, Chemical / Environmental Programs personnel will respond and provide assistance for control of hazardous waste releases and corrective actions. Emergency personnel are familiar with the Contingency Plan, site operations and activities, storage and characteristics of site hazardous waste, and the hazardous waste management facility layout.

9.4 IMPLEMENTATION OF THE CONTINGENCY PLAN

This Contingency Plan will be implemented whenever a fire, explosion, or other incident threatens to or actually ignites hazardous waste, releases toxic liquids, vapors, or gases, or causes soil, ground, or surface water contamination outside of the facility.

9.5 EMERGENCY RESPONSE PROCEDURES – INTERNAL NOTIFICATION

Emergencies are reported to Emergency Services personnel by dialing 3-3333, from a GLOBALFOUNDRIES internal telephone, or 769-3333 from an external telephone. Upon receiving an emergency call, the Security Dispatch Center notifies on-duty Emergency Services personnel, who in turn respond to the scene, perform an evaluation, and initiate actions to mitigate the incident. If additional resources are required, the Emergency Responder will request activation of the Emergency Response Team and Emergency Medical Team and will summon staff via radio dispatch system or the public address system. Additional resources may also be requested from the building operations team via telephone. Based on the nature of the incident, personnel from the following areas may be requested to provide technical support: Integrated Health Services, Site Operations Engineering, Chemical / Environmental Programs, and other departments as needed.

For a fire or an explosion involving hazardous wastes, the Emergency Responder will report the fire per the incident notification matrix to the dispatch center and request additional resources from the appropriate local fire department. Upon arrival of support units, a unified command will be established and all incident activities will be managed via this command system.

The Emergency Responders are trained to the level of Hazardous Material Technician/Incident Command under 29 CFR 1910.120. For incidents involving the release of hazardous wastes, the Emergency Responder notifies Facilities Maintenance and the Spill Control Engineer. Equipment, personnel, or outside contractors are brought in to remove the hazardous waste and to decontaminate the affected area. Upon completion of the emergency response, hazardous substances, health hazards, and materials contaminated with them (such as contaminated soil or other elements of the natural environment) at the site of the incident are assessed and removed as required. GLOBALFOUNDRIES shall conduct the cleanup using GLOBALFOUNDRIES employees or outside contractors trained in accordance with 29 CFR 1910.120.

9.6 IDENTIFICATION OF HAZARDOUS WASTES

In an emergency, hazardous waste will be identified by the storage area where the release occurs, and by the chemical name and/or hazard label on tanks, drums, and pipes.

9.7 ASSESSMENT

The Emergency Responder, with assistance from the Site Environmental and/or Integrated Health Services Departments and the Spill Control Engineer where required, will establish the identity, quantity, source, and extent of the release and will assess the possible hazards associated with the release of hazardous waste or a fire or an explosion involving hazardous waste. This assessment will include the extent of soil and groundwater contamination, the effects of any toxic, irritating, or asphyxiating gases generated, and the effects of any hazardous surface run-off from water or other agents used to control fire or explosion.

9.8 EXTERNAL NOTIFICATION

If the emergency creates an imminent hazard to human health outside of the site property limits, the Emergency Responder will notify the appropriate local fire department chief and inform the appropriate GLOBALFOUNDRIES management. The Emergency Services Department manager or, in her/his absence, the covering manager will inform local officials and provide help to those officials to decide if evacuation of local areas is required.

Depending upon the extent and quantity of hazardous waste released, the appropriate federal, state, and local officials listed in Table 9-1 are notified. Notification will be made within 24 hours, giving the following information:

1. Name and telephone number of the reporter.
2. Name and address of the facility.

3. Time and type of incident.
4. Name and quantity of materials involved, to the extent that this information is known.
5. The extent of any injuries.
6. The hazards to human health or the environment outside of the property limits.

Table 9-1
Emergency Notification

Organization	Telephone Number
National Response Center	800-424-8802
Vermont Emergency Management (24-hour emergency number)	800-641-5005
Essex Junction Fire Department	878-6944 (or 911)
Essex Police Department	878-8331 (or 911)
Williston Police Department	878-6611
Essex Rescue	878-4859 (or 911)
UVM Medical Center (MCHV Main Campus - Radio Room)	847-2434
Williston Fire Department	878-5622
GLOBALFOUNDRIES Security Department	769-2558
NOTE: The National Response Center notifies the EPA regional office of calls it receives.	

9.9 CONTROL PROCEDURES

Potential events that might threaten human health or the environment outside of the facility and involve hazardous waste are summarized as follows:

1. A fire or an explosion at the Chemical Distribution Center (CDC);
2. A fire or an explosion at a hazardous waste storage tank;
3. A release of hazardous waste from containers stored within the CDC; or
4. The release of hazardous waste from a hazardous waste storage tank.

Areas affected by a fire, explosion, or a release of hazardous waste will remain inoperative until decontamination and repairs have restored the area to its normal operating capacity.

Control procedures for each of those events are outlined below.

9.9.1 Fire or Explosion within the CDC

The CDC is protected by sprinkler systems, fire hoses, fire extinguishers, smoke detectors, sprinkler-system flow and manual fire alarms, fire walls and doors, and a 2,000-gallon foam system for the flammable storage room. The building can be approached easily by fire-fighting and other emergency equipment. If a fire occurs within the CDC, notification will be made to the Security and the Emergency Services Departments by one of the following methods:

1. Employee telephone call to the emergency extension.
2. Automatic alarms activated by either water flow in the sprinkler system or smoke or flame detectors.
3. Employee-activated fire alarms, pull stations.

If notification comes from an automatic alarm or fire alarm pull station, audible and visible alarms will automatically initiate an evacuation of the area. If notification comes by phone to the Security Dispatch Center, employees are instructed by the public address system to evacuate the building. During any emergency at the site, primary actions will be taken to preserve human health and life; efforts to protect the environment will be a secondary consideration. Emergency Services will respond to the scene and assess the extent of the fire. Emergency Services, with the assistance of local agencies as needed, will control and extinguish the fire. Emergency Services will assist the local fire chief in deciding if evacuation of local residences is required.

If an explosion occurs without a related fire, Emergency Services will contain the release of hazardous waste with commercial absorbents or other methods until the arrival of the Spill Control Engineer. Fire-fighting equipment will be used to prevent the ignition of ignitable hazardous waste. The Spill Control Engineer or other responsible personnel will assist with equipment, personnel, and/or contract resources to remove released waste and decontaminate the affected area.

9.9.2 Fire or Explosion at a Hazardous Waste Storage Tank

Hazardous waste storage tanks at the CDC tank farm are protected by a water deluge system that can be operated from the exterior of the CDC building, and the tanks are spill-contained for the volume of hazardous waste stored. A dry sprinkler system is installed to protect the Building 963 north above-ground waste tank, which is also spill-contained. A fire or an explosion at either type of hazardous waste storage tank will be controlled with the following procedure. The Emergency Responder will arrive at the scene of the fire or explosion and evacuate nearby areas. Concurrently, Emergency Services will assist the local fire chief in deciding if evacuation of local residences is required. When the fire is extinguished or when an explosion does not result in a fire, the Spill Control Engineer will assist the Emergency Responder in determining the character, quantity, source, and the extent of the hazardous waste release. The Spill Control Engineer or other responsible personnel will assist with equipment, personnel, and/or contract resources for the removal of hazardous waste and the decontamination of affected areas.

9.9.3 Hazardous Waste Release within the CDC

Hazardous waste storage areas within the CDC are spill-contained as follows (see Section 4.3 for more details):

- Organic liquids in the CDC waste storage room are contained by a 3,000-gallon storage tank connected to floor drains;
- Liquid acids, liquid caustics, poisons, and PCB wastes in the waste storage room are contained by use of spill-containment pallets;
- Wastes in the flammable waste storage room are contained by use of spill-containment pallets.

Whenever a container leak is discovered, CDC personnel will respond in a defensive fashion. The Emergency Responder is summoned to the scene to manage the released waste and to decontaminate the affected area. The Emergency Responder and/or the Integrated Health Services Department will determine if power venting or self-contained breathing apparatus are required to control and remove toxic hazardous wastes. If waste is found to be leaking from a damaged container, the waste will be secured in an overpack drum or containment vessel, or transferred to spare containers that are stored at the CDC. This transfer will be made with container-handling equipment that is normally used at the CDC.

The end point of emergency response (including decontamination) will be determined on a case-by-case basis by Emergency Services personnel. Spilled material will be removed within 24 hours or as soon as practicable.

9.9.4 Release of Hazardous Waste from Storage Tanks

All hazardous waste storage tanks at GLOBALFOUNDRIES are spill-contained within steel containment structures. The containment is provided for 150% of the volume of the tanks. These tanks have no bottom fittings or ports; all plumbing connections are made at the tops of the tanks. If a release occurs at a storage tank, the Emergency Responder will determine the site of the release. If the rupture or leak can be isolated to a fitting, valve, pump, or other ancillary equipment, flow to the tank will be stopped, and the failed unit will be replaced. Should the release occur from the tank walls, the contents will be transferred to a spare tank with a pump or vacuum trailer unit. In most cases this tank will be the Building 963 north tank, if it is not in use at the time. If the Building 963 north tank is in use, special provisions can be made to transfer the waste to an undamaged tank at the CDC. Specifications for the CDC tanks and for the Building 963 north tank are included in Section 5.0. The damaged tank will remain out of service until it is repaired, or the tank will be replaced. Emergency response may consist of temporary patching materials being added to the tank to stop or reduce the amount of material leaving the tank to the containment. Emergency Services has equipment on hand to accomplish this task, and trains regularly in its operation.

No contingency is provided for collisions with mobile equipment because mobile equipment cannot be operated near these tanks. Valves in the secondary containment system are closed and

locked unless the system is being drained. Leaks in the containment are repaired immediately. Transfers of hazardous waste from storage tanks at the CDC tank farm and the Building 963 north tank occur at load/unload stations, which are spill-contained. Should a release occur during loading/unloading of a hazardous waste, spill containment located at the CDC or Building 963 station will collect the liquid waste. Either the GLOBALFOUNDRIES vacuum trailer or a similar device provided by a local hazardous waste spill control firm would be used to remove the waste from the containment. Commercial absorbents would be used to remove any residue in the concrete containment areas. GLOBALFOUNDRIES Emergency Services Department personnel will stand by with appropriate fire-fighting equipment during the cleanup operation to prevent ignition of the released waste and assure proper handling of flammable wastes. Collected liquid waste will be transferred to containers or a spare tank located either at the CDC or at Building 963 north tank. Contaminated absorbents will be placed in approved drums for eventual disposal at an appropriate hazardous waste treatment or disposal facility. The end point of emergency response (including decontamination) will be determined on a case-by-case basis by Emergency Services personnel. Spilled material will be removed within 24 hours or as soon as practicable.

9.10 PREVENTION OF RECURRENCE OR SPREAD OF FIRES, EXPLOSIONS, OR RELEASES

During an emergency, the Emergency Responder, in consultation with the Emergency Coordinator, will take every reasonable action to prevent the occurrence, recurrence, or expansion of fire, explosion, or hazardous waste release. This action will include the transfer or isolation of containers, the ceasing of operations or processing, or the collection or containment of released hazardous waste. Lift stations pumping solvent waste from manufacturing tools into the bulk waste systems have high level alarms to prevent overflow of waste chemicals in the manufacturing areas as the result of a CDC shutdown. Pneumatically actuated valves in the solvent waste manifold upstream of the Building 963-Building 974 trestle are programmed to automatically divert bulk solvent waste flow to the Building 963 north tank when a leak detection alarm in the trestle is not cleared within a specified time.

9.11 STORAGE AND TREATMENT OF RELEASED MATERIAL

Recovered hazardous waste and hazardous waste generated during the cleanup and decontamination process will be packaged in drums and/or tankers for shipment to permitted off-site waste management facilities. If sufficient storage capacity is not available on the site, transport vehicles will be arranged on an emergency basis through existing agreements between GLOBALFOUNDRIES and transport/disposal vendors.

9.12 INCOMPATIBLE WASTES

In the event of an emergency, wastes that may be incompatible with released materials will remain segregated until cleanup procedures have been completed.

9.13 CONTAINER SPILLS AND LEAKS

Container spills and leaks have been addressed in earlier parts of this section.

9.14 TANK SPILLS AND LEAKAGE

Tank spills and leakage have been addressed in earlier parts of this section.

9.15 WASTE PILES

GLOBALFOUNDRIES does not operate a hazardous waste pile. Therefore, this section does not apply.

9.16 DISPOSAL OF CONTAMINATED MATERIAL

Contaminated materials will be analyzed, if necessary, and if characterized as hazardous, they will be properly manifested and sent to an approved disposal facility. Attachment 9-2 provides the procedure used by the Emergency Services Department for decontamination of equipment used during emergency response; this document is attached for reference only and may be changed or updated outside the permit modification process.

9.17 EMERGENCY EQUIPMENT

This section lists and describes emergency equipment available at GLOBALFOUNDRIES. The kinds of equipment described are (1) communications, (2) first aid, (3) emergency vehicles, (4) electrical, (5) generators, and (6) fire (GLOBALFOUNDRIES and local). Building locations may be found in Figure B-6.

9.17.1 Communication Equipment

9.17.1.1 Public Address System

The public address system is a general coverage type. The primary voice distribution amplifiers are located in Building 965 with additional paging amplifiers in all major buildings on-site. Public address systems for the CDC and the CDC tank farm are provided in Figures D-2-H and D-2-K.

9.17.1.2 Microphone Outlets

1. Primary console with zone control in Building 969.
2. Secondary console with zone control in Building 900.
3. Microphone only in Building 954 with zone control provided by one of the consoles.

9.17.1.3 Speaker Arrangement

The Vermont facility is divided into paging zones, typically buildings, controlled by the Security Control Center in Building 969-1. Touch screens on the consoles allow the officer on duty to page either an individual zone, group of zones, or all zones.

9.17.1.4 Telephone System

The telephone system is equipped with batteries able to support a peak load for four hours. Telephone systems for the CDC and the CDC tank farm are included in Figures D-2-H and D-2-K.

9.17.1.5 Security / Emergency Services Radio System

The Security and Emergency Services Departments have exclusive ownership and control of this radio system. All requests for its use must be approved by Security and Emergency Services management.

The system operates as follows:

Radio Frequencies	transmit: 935.13750 MHz 935.15000 MHz 935.16250 MHz 935.17500 MHz receive: 896.13750 MHz 896.15000 MHz 896.16250 MHz 896.17500 MHz
Call Sign	WPLR 921

Available radio equipment is listed in Table 9-2.

9.17.2 First Aid Equipment

GLOBALFOUNDRIES Emergency Services is a First Response Emergency Medical Service licensed at the Advanced level by the Vermont Department of Health and maintains emergency medical equipment and supplies to provide emergency medical care at this level. Emergency medical response equipment is housed on each of Emergency Services' response vehicles.

Table 9-2 Radio Equipment	
Type	**Location**
Mobile Radios	In each emergency vehicle In the maintenance vehicle
Portable Radios or pager	Security/Emergency Dispatch Center (Building 969) Maintenance Departments Security/Emergency Services Departments (Building 900) Emergency Response Crew Call Staff and Emergency Medical Response Call Staff

9.17.3 Emergency Response Equipment

9.17.3.1 Self-Contained Breathing Apparatus (SCBA)

A self-contained breathing apparatus may be used safely in any atmosphere except one that poisons through or irritates the skin. SCBA units can be used within chemical-resistant suits for absorption hazards. SCBA units are strategically located in emergency response vehicles. Trained emergency response personnel have access to these units at Building 900, the emergency response building.

9.17.3.2 Emergency Vehicles

GLOBALFOUNDRIES maintains special emergency vehicles to provide added protection to employees and buildings. GLOBALFOUNDRIES emergency vehicles include:

- One fire engine
- One utility vehicle
- One hazardous materials response vehicle

When an emergency warrants an ambulance service, Emergency Services may call upon the Essex Rescue Squad or other Ambulance District #3 ambulance according to the VT EMS District #3 response system. The nature of the emergency and location to which units shall respond will be provided to all requested resources upon dispatch. GLOBALFOUNDRIES Security Department personnel may meet the incoming ambulance service and escort them to the response location as needed.

9.17.4 Electrical Equipment

Electrical cords and portable lighting are available and maintained for emergency use. Emergency power is provided by emergency generators listed in Table 9-3.

Table 9-3 Emergency Generators		
Generator	**Voltage**	**Location**
460 KW Caterpillar	480/277	Industrial Waste, Building 054
100 KW Caterpillar	480/277	Industrial Waste, Building 053
300 KW Caterpillar	480/277	Generator Room, Building 965-1
200 KW Onaon	480/277	Generator Room, Building 967-1
530 KW Caterpillar	460/277	Generator Room, Building 971-1
1100 KW Caterpillar	480/277	Generator Room, Building 971-1
1100 KW Caterpillar	480/277	Generator Room, Building 971-1
1000 KW Detroit Diesel	460/277	Building 962, Column M-17
1000 KW Caterpillar	480/277	Building 962, Column M-17
275 KW Cummings	480/277	Generator Room, Building 975-1
105 KW Caterpillar	480/277	Generator Room, Building 972-3
1075 KW Waukesha	480/277	Generator Room, Building 973-1
1000 KW Cummings	480/277	Chiller Room, Building 973-1
315 KW Caterpillar	480/277	Boiler Room, Building 974-1
350 KW Caterpillar	480/277	Utility Plant, Building 801
300 KW Caterpillar	480/277	Generator Room, Building 966-1
500 KW Caterpillar	480/277	Building 986-1
1000 KW Caterpillar	480/277	Building 963
175 KW Caterpillar Portable		Building 900
30 KW Ford-Onaon Portable		Building 900

9.17.5 Fire Equipment

GLOBALFOUNDRIES is equipped with the following kinds of fire equipment:

- A fire-sprinkler alarm system
- Hand extinguishers
- Fire hose drop system
- Fire-fighting equipment (company and local)

9.17.5.1 Fire-Sprinkler Alarm System

A sprinkler alarm system is installed in all main site and Williston buildings. When a sprinkler is activated, an alarm is sounded at the Security Dispatch Center through the fire detection system. The fire detection system is shown in Figures D-2-I and D-2-K.

9.17.5.2 Fire Sprinkler System

All buildings are protected by automatic sprinkler systems. These systems meet National Fire Protection Association and Factory Mutual standards. A 1,500-gallon-per-minute (gpm) and a 2,000-gpm fire pump provide flow to the underground fire control system. These pumps obtain water from a 1,000,000-gallon private storage tank supplied from a Champlain Water District connection. A 12-inch connection to the Champlain Water District at Maple Street provides additional water supply. A water-deluge system with 40 nozzle heads protects the two load/unload areas at the CDC. The water-deluge system is capable of supplying 1,500 gpm for a two-hour minimum duration. For fire protection, the load/unload area at the north end of Building 963 is served by three fire water hydrants in the area as well as an automatic sprinkler system. The Williston facility fire protection system consists of one 1,500-gpm fire pump providing flow to the underground piping system. This pump is supplied from a 10-inch connection to the Champlain Water District feed for the site.

9.17.5.3 Hand Extinguishers

Four types of hand extinguishers are available for training emergency personnel and for extinguishing fires throughout the GLOBALFOUNDRIES site, including all satellite locations. The types of extinguishers located in each building are matched to the hazard classifications present. Locations of fire protection devices are shown in Figures D-2-G and D-2-K. The four types of extinguishers are as follows:

- Pressurized Water. A 2.5-gallon extinguisher that has a valve on the outside through which air pressure may be applied to the water. This unit has a pressure gauge located at the top for visual inspection. It has a hand-grip, squeeze-type valve that may be operated or shut off as necessary.
- Carbon Dioxide (CO_2). A 15-lb extinguisher operated by removing the locking pin and pressing the trigger or trigger lever. It has an effective range of 5 to 7 feet and can be discharged in 17 seconds. The CO_2 extinguisher is most effective on Class C (electrical) fires but is also very efficient for extinguishing Class B (flammable liquid) fires.
- Dry Chemical. The dry chemical extinguisher agent is a specially treated sodium bicarbonate in dry powder form with components added for producing free flow and water-repelling action. The extinguisher is charged with nitrogen, which expels the dry chemical. The discharge, controlled by a shutoff valve, has an effective range of 5 to 7 feet, depending on the size of the extinguisher.

- GLOBALFOUNDRIES uses the 5-lb and 20-lb sizes of Metal Fyr (trade name of the Fyr Fyter Company) Powder, a special-purpose extinguishing agent for use on magnesium metal fires. The powder is spread with a scoop over the burning metal until it is completely covered.

9.17.5.4 Fire Hose Drop System

Fire hose drops, strategically placed throughout the facility, are connected to the sprinkler system. Each response vehicle is equipped with a high-rise pack, consisting of 100 feet of 1½-inch double-jacketed hose, equipped with a fire-fighting nozzle (variable pattern) for use in fighting interior fires.

9.17.6 Spill Response Equipment

GLOBALFOUNDRIES is equipped with appropriate protective clothing and neutralizing materials to protect emergency response personnel and provide chemical control in the event of a hazardous material spill. Equipment and material are maintained on the Emergency Response vehicles stationed at the Emergency Services Building 900. These vehicles are stocked with the following materials:

- Sorbent pads or equivalent for acid spills
- Sorbent pads or equivalent for alkali spills
- Speedi-dri or equivalent mineral absorbent

The equipment listed in Table 9-4 is available for emergencies and is either carried on a mobile vehicle or stored at other site locations as indicated on Figures D-2-E and D-2-F. Emergency chemicals are listed in Table 9-5.

Table 9-4
Emergency Response Equipment

Maintained by Emergency Services	**Maintained by Industrial Wastewater Treatment Plant**
SCBA Air bottles (spare) Personal Protective Equipment (Levels A-D) Hydrant wrench Assorted hand tools Spill-containment equipment (absorbent materials, booms, etc.) Sample collection containers and equipment First aid kits Decontamination equipment Confined space rescue equipment Fire extinguishers Chemical identification equipment (pH paper, colorimetric tubes, etc.)	Vacuum trailer – 800-gallon capacity 150-gpm air-powered diaphragm pump Assorted hoses, fittings, and test balls

Atmosphere testing equipment Leak repair equipment Incident command equipment	

Table 9-5
Emergency Chemicals

Location	Inventory
Chemical Distribution Center	Sodium bicarbonate Speedi-dri
Industrial Wastewater Treatment Plant	Oil-absorbent pads and booms

9.18 COORDINATION AGREEMENTS

Local fire department personnel have attended a tour of the site and a briefing on the potentially hazardous facilities at the site. In addition, the site has emergency agreements for post-emergency response oil spill cleanup and decontamination contractors. Also, a contract is available for chemical analysis on an emergency basis. Attachment 9-1 contains the agreements with local authorities for responsibilities associated with emergency response.

9.19 EMERGENCY EVACUATION PLAN

Each department manager prepares an evacuation plan procedure for his or her department. Department plans are updated as required. The Evacuation Plan is implemented whenever there is a threat to employee health or safety.

9.19.1 Evacuation Procedure

1. An evacuation is announced over the public address system by a warbled tone which is used exclusively for that purpose. The tone is followed by a verbal announcement of instructions to evacuate.
2. Department personnel assemble the group and lead them out of the building to an assembly point at least 250 feet from the building. The evacuation area for the CDC is on the west side at the loading dock trailer turnaround area. Figure D-2-G shows the primary and secondary evacuation routes for the CDC. Figure D-2-K shows the evacuation routes for the Tank Farm. Department members are counted and missing members are reported to the manager.
3. Disabled persons are assisted to a safe place by assigned department personnel under a buddy system.
4. Designated personnel assure that power, gas, and chemicals are secure. After completing the shutdown, these personnel evacuate the building.

5. A two-man search team checks the immediate department area for missing personnel. Washrooms, lockers, cribs, and conference rooms are searched by Emergency Services personnel.
6. Evacuations are conducted in an orderly manner at a rapid walk.

9.19.2 Evacuation Drills

Evacuation drills are held twice annually. Prior to the drills, management personnel are given special instructions.

9.20 REQUIRED REPORTS

Each emergency at GLOBALFOUNDRIES is recorded in an emergency incident report, which documents the type of emergency, date, and details of the incident. Emergency Services files the incident report in a computerized incident management database. The incident report coordinator ensures that incident reports are distributed to responsible managers for follow-up and corrective action, and analyzes the incident data for trends. Actions taken are documented in the incident management database. Incidents involving hazardous waste which threaten human health or adversely affect the environment are reported in writing within 10 days to the Vermont State Hazardous Waste management section with the following information:

1. Name, address, and telephone number of the reporter.
2. Name, address, and telephone number of the facility.
3. Date, time and type of incident.
4. Name and quantity of material released.
5. The extent of injuries.
6. Assessment of the actual or potential hazard to human health and to the environment.
7. The estimated quantity and the disposition of recovered material that resulted from the incident.

ATTACHMENT 9-1
AGREEMENTS WITH LOCAL AUTHORITIES

GLOBALFOUNDRIES®

May 20, 2015

SUBJECT: Arrangements with Local Authorities per 40 CFR 264.37

To Whom It May Concern:

As you may be aware, IBM is transferring ownership of its Essex Junction manufacturing facility to GLOBALFOUNDRIES U.S. 2 LLC (GLOBALFOUNDRIES). The anticipated date of transfer of ownership is July 1, 2015.

Pursuant to 40 CFR 264.37, GLOBALFOUNDRIES is required to make arrangements with police departments, fire departments, emergency response teams, hospitals, and ambulance services to help ensure proper response in the event of an emergency. Emergency response personnel, both state and local (i.e. fire, police, ambulance, and hospital), must be made aware of:

- access to and the layout of the facility,
- properties of the hazardous waste handled at the facility,
- types of possible injuries, and
- evacuation routes.

Chemical spill control for the GLOBALFOUNDRIES site is coordinated by the on-site Emergency Services Department, located in Building 900. All releases of chemicals within the manufacturing areas, including satellite accumulation sites, are responded to and controlled by the procedures, personnel, and equipment detailed in the various sections of the attached RCRA Contingency Plan. This assures that control of all chemical clean-up and disposal is exercised by trained personnel who are properly equipped and informed of all hazardous waste handling and reporting procedures. Emergency coordination for the entire GLOBALFOUNDRIES site is provided by the Emergency Services Department on a 24-hour-per-day, seven-day-per week-basis.

The information in this letter and the attached RCRA Contingency Plan is provided should additional response support be needed by your department and to allow you to better plan for an emergency response at this facility. The plan contains the listing of our emergency coordinators. Those coordinators may be reached 24 hours a day in the event of an emergency. The plan includes a map showing work areas, storage areas, evacuation routes, employee emergency assembly areas, and entrance roads to the facility.

GENERAL FACILITY INFORMATION:

GLOBALFOUNDRIES develops, manufactures, and tests semiconductor products for a variety of computer and consumer applications. The manufacturing facility, including the permitted hazardous waste storage facility, is located on approximately 237 acres which lie west of the Winooski River in the town of Essex and the village of Essex Junction. The remaining 492 acres are located east of the river in the town of Williston and contain non-manufacturing buildings. The location consists of GLOBALFOUNDRIES employees along with a variety of tenants and contractors. We are a large quantity hazardous waste generator as well as a permitted treatment, storage, and disposal facility. The GLOBALFOUNDRIES facility is secured and operated to prevent unknowing entry and to minimize the possibility of unauthorized entry of persons or livestock. The Security Department is staffed with trained personnel to enforce security measures onsite and to monitor movement into and out of the facility on a 24 hour per day basis. The Chemical Distribution Center (CDC) is secured by a 10 foot-high chain link fence surrounds the CDC and tank farm to prevent unauthorized entry.

Please sign below and return the signed copy of this arrangement in the envelope provided by **June 15, 2015.**

If you have questions or comments regarding this letter or the RCRA Contingency Plan, please contact David Kost at (802) 288-6226 or *dlkost@us.ibm.com*.

Sincerely,

Steve Groseclose,
Director, Risk Management, Sustainability & Real Estate
GLOBALFOUNDRIES U.S. 2 LLC

SIGNATURE REQUIRED (Please Return to GLOBALFOUNDRIES by June 15, 2015)

I have received the RCRA Contingency Plan for the Essex Junction manufacturing facility from GLOBALFOUNDRIES. I have read and understand the emergency response process as outlined in the RCRA Contingency Plan.

Kenneth N. Murtus, Jr. — Signature

5/29/15 — Date

Fire Chief — Title

Williston Fire Department — Organization

Enclosures: GLOBALFOUNDRIES RCRA Contingency Plan, Essex Junction, VT Facility and Applicable Attachments

cc: UVM Medical Center (formerly Fletcher Allen Health Care Center)
Essex Rescue
Williston Police Department
Essex Police Department
Essex Junction Fire Department
Williston Fire Department

GENERAL FACILITY INFORMATION:

GLOBALFOUNDRIES develops, manufactures, and tests semiconductor products for a variety of computer and consumer applications. The manufacturing facility, including the permitted hazardous waste storage facility, is located on approximately 237 acres which lie west of the Winooski River in the town of Essex and the village of Essex Junction. The remaining 492 acres are located east of the river in the town of Williston and contain non-manufacturing buildings. The location consists of GLOBALFOUNDRIES employees along with a variety of tenants and contractors. We are a large quantity hazardous waste generator as well as a permitted treatment, storage, and disposal facility. The GLOBALFOUNDRIES facility is secured and operated to prevent unknowing entry and to minimize the possibility of unauthorized entry of persons or livestock. The Security Department is staffed with trained personnel to enforce security measures onsite and to monitor movement into and out of the facility on a 24 hour per day basis. The Chemical Distribution Center (CDC) is secured by a 10 foot-high chain link fence surrounds the CDC and tank farm to prevent unauthorized entry.

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Signature

7-19-15
Date

FIRE CHIEF
Title

ESSEX JUNCTION FIRE DEPARTMENT
Organization

GENERAL FACILITY INFORMATION:

GLOBALFOUNDRIES develops, manufactures, and tests semiconductor products for a variety of computer and consumer applications. The manufacturing facility, including the permitted hazardous waste storage facility, is located on approximately 237 acres which lie west of the Winooski River in the town of Essex and the village of Essex Junction. The remaining 492 acres are located east of the river in the town of Williston and contain non-manufacturing buildings. The location consists of GLOBALFOUNDRIES employees along with a variety of tenants and contractors. We are a large quantity hazardous waste generator as well as a permitted treatment, storage, and disposal facility. The GLOBALFOUNDRIES facility is secured and operated to prevent unknowing entry and to minimize the possibility of unauthorized entry of persons or livestock. The Security Department is staffed with trained personnel to enforce security measures onsite and to monitor movement into and out of the facility on a 24 hour per day basis. The Chemical Distribution Center (CDC) is secured by a 10 foot-high chain link fence surrounds the CDC and tank farm to prevent unauthorized entry.

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Signature

8/7/2015
Date

Chief of Police
Title

Essex Police Department
Organization

GENERAL FACILITY INFORMATION:

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Dalton Mantz — Signature

5-27-15 — Date

Executive Director — Title

Essex Rescue — Organization

GENERAL FACILITY INFORMATION:

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Todd Alexander — Signature

5/29/2015 — Date

Police Chief — Title

Williston Police Dept — Organization

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Signature _____ Date 6/8/15

Title OEH COORDINATOR

Organization UVM MEDICAL CTR

ATTACHMENT 9-2
DECONTAMINATION PLAN

Decontamination Plan
Global Foundries Fire Department
Policy 600-51

Contents

Decontamination Plan
Global Foundries Fire Department
Policy 600-51

Introduction

Personnel responding to hazardous substance incidents, including WMD incidents, may become contaminated in a number of ways including:

- Contacting vapors, gases, mists, or particulates in the air
- Being splashed by materials while sampling or opening containers
- Being splashed by materials while containing or cleaning up a spill
- Walking through puddles of liquids or on contaminated soil
- Using contaminated instruments or equipment
- Secondary contamination deliberately planned to injure or delay responders

Protective clothing and respirators help prevent the wearer from becoming exposed to contaminants; while utilization of good work practices help reduce contamination on protective clothing, instruments, and equipment.

Even with these safeguards, contamination may occur. Harmful materials can be transferred into clean areas, exposing unprotected personnel. In removing contaminated clothing, personnel may be exposed through contact or inhalation. To prevent such occurrences, methods to reduce contamination, and decontamination procedures should be developed and established before entry is made into contaminated area by an emergency responder and must continue (modified when necessary) throughout site operations.

Decontamination consists of physically removing contaminants or changing their chemical nature to innocuous substances. How extensive decontamination must be depends on a number of factors, the most important being the type of contaminants involved. The more harmful the contaminant, the more extensive and thorough decontamination must be. Less harmful contaminants may require less decontamination.

Combining decontamination, the correct method of doffing personnel protective equipment, and the use of site work zones minimizes cross contamination from protective clothing to wearer, equipment to personnel, and one area to another. Only general guidance can be given on methods and techniques for decontamination. The exact procedure to use must be determined after evaluating a number of factors specific to the incident.

Preliminary Considerations

Initial Planning

The initial decontamination plan assumes all personnel and equipment leaving the exclusion zone (area of potential contamination) are grossly contaminated.

A system is then set up for personnel decontamination to wash and rinse, at least once, all the protective equipment worn. This is done in combination with a sequential doffing of protective equipment, starting at the first station with the most heavily contaminated item and progressing to the last station with the least contaminated article.

The spread of contaminants during the washing/doffing process is further reduced by separating each decontamination station by a minimum of 3 feet. Ideally, contamination should decrease as a person moves from one station to another, further along in line.
While planning site operations, methods should be developed to prevent the contamination of people and equipment. For example, using a remote sampling techniques, not opening containers by hand, bagging monitoring instruments, using drum grapples, watering down dusty areas, and not walking through areas of obvious contamination would reduce the probability of becoming contaminated and require a less elaborate decontamination procedure.

The initial decontamination plan is based on a worst-case situation or assumes no information is available about the incident. Specific conditions at the site are then evacuated, including:

- Type of Contaminant
- The Amount of Contamination
- Levels of Protection Required
- Type of Protective Clothing Worn

The initial decontamination plan is modified, eliminating unnecessary stations or otherwise adapting it to site conditions. For instance, the initial plan might require a complete wash and rinse of chemical protective garments. If disposable garments are worn, the wash/rinse step could be omitted. Wearing disposable boot covers and gloves could eliminate washing and rinsing these items and reduce the number of stations needed.

Contamination Reduction Corridor

An area within the contamination reduction zone is designated as the contamination reduction corridor (CRC). The CRC controls access into and out of the exclusion zone and confines decontamination activities to a limited area. The site of the corridor depends on the number of stations in the decontamination procedure, overall dimensions of the work control zones, and amount of space available at the site. A corridor of 75 feet by 15 feet should be adequate for maximum decontamination. Whenever possible, it should be a straight path.

The CRC boundaries should be conspicuously marked with entry and exit restricted and anyone entering or exiting the exclusion zone must go through the CRC. The far end is the boundary with the exclusion zone. Personnel operating in the CRC should be wearing the level of protection designated for the decontamination crew. Another corridor may be required for heavy equipment needing decontamination. Within the CRC, distinct areas are set aside for decontamination of personnel, portable field equipment, removed clothing, etc... These areas should be marked and personnel restricted to those wearing the appropriate level of protection. All activities within this corridor are confined to decontamination.

Personnel protective clothing, respirators, monitoring equipment, and sampling supplies are all maintained outside of the CRC. Personnel don their protective equipment away from the CRC and enter the exclusion zone through a separate access control point.

Extent of Decontamination Required

Modifications of Initial Plan

The original decontamination plan must be adapted to specific conditions found at incidents. These conditions may require more or less personnel decontamination than planned, depending on a number of factors.

Type of Contaminant: The extent of personnel decontamination depends on the effects of the contaminants have on the body. Contaminants do not exhibit the same degree of toxicity (or other hazard). Whenever this is known or suspected that personnel can become contaminated with highly toxic or skin destructive substances, a full decontamination process should be followed. If less hazardous materials are involved, the procedure can be downgraded.

Amount of Contamination: The amount of contamination on protective clothing is usually determined visually. If it is badly contaminated, a thorough decontamination is generally required. Gross material remaining on the protective clothing for any extended period of time may degrade or permeate it. This likelihood increases with higher air concentrations and greater amounts of liquid contamination. Gross contamination also increases the probability of personnel contact. Swipe tests may help determine the type and quantity of surface contaminants.

Level of Protection: The level of Protection and specific pieces of clothing worn by entry personnel, determine on a preliminary basis the layout of the decontamination line. Each level of protection presents different problems. Clothing variations and different levels of protection may require adding or deleting stations in the original decontamination procedure.

Work Function: The work each entry person does determines the potential for contact with hazardous materials. This can influence the layout of the decontamination line. In large incidents different decontamination lines could be set up to accommodate different job functions.

Location of Contamination: Contamination on the upper areas of protective clothing poses a greater risk to the worker because compounds may generate a hazardous concentration in the breathing zone for both for the worker and the decontamination personnel. There is also an increased probability of contact with skin when doffing the upper part of clothing.

Reason for Leaving Site: The reason for leaving the exclusion zone also determines the need and extent of decontamination. A worker leaving the exclusion zone to pick up or drop off tools or instruments and immediately returning may not require decontamination. Individuals departing the CRC for a break, lunch, or at the end of the day must be thoroughly decontaminated.

Effectiveness of Decontamination

There is no method to immediately determine how effective decontamination is in removing contaminants. Discolorations, stains, corrosive effects, and substances adhering to objects may indicate contaminants have not

been removed. However, observable effects only indicate surface contamination and not permeation (absorption) into clothing. Also many contaminants are not easily observed.

A method of determining effectiveness of surface decontamination is swipe testing. Cloth or paper patches - swipes - are wiped over predetermined surfaces of the suspect object and analyzed in a laboratory. Both the inner and outer surfaces of protective clothing should be swipe tested. Positive indications of both sets of swipes would indicate surface contamination has not been removed and substances have penetrated or permeated through the garment. Swipe tests can also be done on skin or inside clothing. Permeation of protective garments requires laboratory analysis of a piece of the material.

Both swipe and permeation testing provide after-the -fact information. Along with the visual observations, results of these tests can help evaluate the effectiveness of decontamination procedures.

Equipment

Decontamination equipment, materials, and supplies are generally selected based on availability. Other considerations are ease of equipment decontamination or disposability. Most equipment and supplies can be easily procured. For example, soft-bristle scrub brushes or long handle brushes are used to remove contaminants. Water in buckets or garden sprayers are used for rinsing. Large galvanized wash tubs or stock tanks can hold wash and rinse solutions. Children's wading pools can also be used. Large plastic garbage cans or other similar containers lined with plastic bags store contaminated clothing and equipment. Contaminated liquids can be stored temporarily in metal or plastic cans or drums. Other gear includes paper or cloth towels for drying protective clothing and equipment.

Decontamination Solution

Personnel protective equipment, sampling tools, and other equipment are usually decontaminated by scrubbing with detergent and water using a soft bristle brush followed by rinsing with generous amounts of water. While this process may not be fully effective in removing some contaminants or in few cases, contaminants react with water); it is a relatively safe option compared with using a chemical decontamination solution. This requires the contaminant be identified. A decon chemical is then needed that will change the contaminant into a less harmful substance. Especially troublesome are unknown substances or mixtures from a variety of known or unknown substances. The appropriate decontamination solution must be selected in consultation with an experienced chemist.

Establishment of Procedures

Once decontamination procedures have been established, all personnel requiring decontamination must be given precise instructions (and practice, if necessary). Compliance must be frequently checked. The time it takes for decontamination must be ascertained. Personnel wearing SCBA's must leave their work area with sufficient air to walk to CRC and go through decontamination.

Decontamination During Medical Emergencies

Basic Considerations

Part of overall planning for incident response is managing medical emergencies. The plan should provide for:

- Response Team members fully trained in first aid and CPR
- Arrangements with the nearest medical facility for transportation and treatment of injured, and for treatment of personnel suffering from exposure to chemicals.
- Consultation services with a toxicologist
- Emergency eye washes, showers, and/or wash stations.
- First aid kits, blankets, stretcher, and resuscitator.

In addition, the plan should establish methods for decontaminating personnel with medial problems and injuries. There is the possibility that the decontamination may aggravate or cause more serious health effects. If prompt life-saving first aid and medical treatment is required, decontamination procedures should be modified. Whenever possible, response personnel should accompany contaminated victims to the medical facility to advice on matters involving decontamination.

Physical Injury

Physical injuries can range from a sprained ankle to a compound fracture, from a minor cut to massive bleeding. Depending on the seriousness of the injury, treatment may be given at the site by trained response personnel. For more serious injuries, additional assistance may be required at the site or the victim may have to be treated at a medical facility.

Life saving care should be instituted immediately without considering decontamination. The outer garments can be removed (depending on the weather) if they do not cause delays, interfere with treatment, or aggravate the problem. Respirators and backpack assemblies must always be removed. Fully encapsulating suits or chemical resistant clothing can be cut away. If the outer contaminated garments cannot be safely removed, the individual should be wrapped in plastic, rubber, or blankets to help prevent contaminating the inside of ambulances or medical personnel. Outside garments are then removed at the medical facility. No attempt should be made to wash or rinse the victim at the site. One exception would be if it is known that the individual has been contaminated with an extremely toxic or corrosive material which could also cause severe injury or loss of life. For minor medical problems or injuries, the normal decontamination procedure should be followed.

Heat Stress

Heat-related illnesses range from heat fatigue to heat stroke, the most serious. Heat stoke requires prompt treatment to prevent irreversible damage or death. Protective clothing may have to be cut off. Less serious forms of heat stress require prompt attention or they may lead to heat stroke. Unless the victim is obviously contaminated decontamination should be omitted or minimized and treatment begun immediately. Minor heat exhaustion should be promptly treated to prevent degrading conditions to heat stroke. This includes monitoring

patient condition, prompt cooling, and high flow oxygen. Monitoring temperature, blood pressure, pulse rate and oxygen saturation are required.

Chemical Exposure

Exposure to chemicals can be divided into two categories:

- Injuries from direct contact, such as acid burns or inhalation of toxic chemicals.
- Potential injury due to gross contamination on clothing or equipment.

For inhaled contaminants treatment can only be performed by qualified physicians. If the contaminant is on the skin or in the eyes, immediate measures must be taken to counteract the substances effect. First aid treatment usually is flooding the affected area with water; however, for a few chemicals, water may cause more severe problems.

When protective clothing is grossly contaminated, contaminants may be transferred to treatment personnel or the wearer and cause injuries. Unless severe medical problems have occurred simultaneously with splashes, the protective clothing should be washed off as rapidly as possible and carefully removed.

Protection for Decontamination Workers

The Level of Protection worn by decontamination workers is determined by:

- Expected or visible contamination on workers
- Type of contaminant and associated respiratory and skin hazards
- Total vapor/gas concentrations in the contamination reduction corridor
- Particulate and specific inorganic vapors in the CRC
- Results of swipe tests

Level B Use

In situations where site workers may be contaminated with unknowns, highly volatile liquids, or highly toxic materials, decontamination workers should wear a minimum of Level B protection. Level B protection includes SCBA, hard hat with face shield, chemical resistant gloves, and protective covering.

Decontamination of Equipment

In so far as possible, measures should be taken to prevent contamination of sampling and monitoring equipment. Sampling devices become contaminated, but monitoring instruments, unless they are splashed, usually do not. Once contaminated, instruments are difficult to clean without damaging them. Any delicate instrument which cannot be easily decontaminated should be protected while it is being used. It should be placed in a clear plastic bag, and the bag taped and secured around the instrument. Openings are made in the bag for sample intake.

Decontamination Procedures:

Sampling Devices**:** Sampling devices may require special cleaning. Where possible, covering the devices should reduce the exposure.

Tools**:** Wooden tools are difficult to decontaminate because they absorb chemicals. They should be kept on site and handled only by protected workers. At the end of the response, wooden tools should be discarded.

Respirators: Certain parts of contaminated respirators, such as the harness assembly and leather or cloth components, are difficult to decontaminate. If grossly contaminated, they may have to be discarded. Rubber components can be soaked in soap and water and scrubbed with a brush. Regulators must be maintained according to manufacturer's recommendations. Persons responsible for decontaminating respirators should be thoroughly trained in respirator maintenance.

Heavy Equipment**:** Bulldozers, trucks, back hoes, bulking chambers, and other heavy equipment are difficult to decontaminate. The method generally used is to wash them with water under high pressure, and/or to scrub accessible parts with detergent/water solution under pressure, if possible. In some cases, shovels, scoops and lifts have been sand blasted or steam cleaned. Particular care must be given to those components in direct contact with contaminants such as tires and scoops. Swipe tests should be utilized to measure effectiveness.

Sanitizing of Personnel Protective Equipment

Respirators, reusable protective clothing, and other personal articles not only must be decontaminated before being reused, but also sanitized. The inside of masks and clothing becomes soiled due to exhalation, body oils, and perspiration. The manufacturer's instructions should be used to sanitize the respirator mask. If practical, protective clothing should be machine washed after a through decontamination; otherwise it must be cleaned by hand.

Persistent Contamination

In some instances, clothing and equipment will become contaminated with substances that cannot be removed by normal decontamination procedures. A solvent may be used to remove such contamination from equipment if it does not destroy or degrade the protective material. If persistent contamination is expected, disposable garments should be used. Testing for persistent contamination of protective clothing and appropriate decontamination must be done by qualified laboratory personnel.

Disposal of Contaminated Materials

All materials and equipment used for decontamination must be disposed of properly. Clothing, tools, buckets, brushes, and all other equipment that is contaminated must be secured in drums or other containers and labeled. Clothing not completely decontaminated on-site should be secured in plastic bags before removed from the site.

Contaminated wash and rinse solutions should be contained by using step in containers (for example, containment barrels) to hold spent solutions. The spent solutions are transferred to drums, which are labeled and disposed of with other substances on site.

Level A, B, and Coverall Decontamination

Equipment Worn

The decontamination procedure outlined is for workers wearing Level A & B protection (with taped joints between gloves, boots, and suit) consisting of:

- Fully encapsulating suit with boots and gloves, or coverall suits
- Self Contained Breathing Apparatus
- Hard Hat (Optional)
- Chemical resistant, steel toe and shank boots
- Boot covers
- Inner and outer gloves

Decontamination Set-up

Proper decontamination follows a step-by-step process to ensure that all harmful/dangerous residues on personnel and equipment are contained within the hot zone and the decontamination area.

Decontamination Area

The decontamination area, prior to any entry of personnel into the hot zone, shall be set-up in the warm zone at the edge of the hot zone.

Every attempt shall be made to set up the Decon Area uphill and upwind from the hot zone. This allows runoff, if any, to flow from the Decon Area back into the hot zone.

There shall be an exit from the hot zone into the Decon Area, and an entrance from the Decon Area back into the hot zone. This allows personnel who have undergone partial decon to exchange air cylinders and re-enter the hot zone to complete tasks.

The Decon Area shall provide a pathway leading away from the contaminated area toward an exit into the Cold Zone. A decreasing level of contamination will be experienced as a person travels through the Decon Area.

Decontamination Area Set-up

The Decontamination Officer is responsible for the proper set-up of the Decon Area, and shall ensure that adequate resources are available to complete Decon. Decon solutions should be determined at this time by consultation with the Incident Commander and the Safety Officer.

The Decon Officer shall utilize the Decon Equipment & Set-up Check Sheet.

Decon equipment shall be removed from the apparatus and placed near the designated Decon Area.

Set-up large plastic sheets, and place all stations on the plastic. The Decon officer must ensure that all supplies and equipment are in their designated positions.

Isolate the area utilizing traffic cones and do not pass tape.

Adequate water supply for showers and hoses shall be in place.

Decontamination Plan
Global Foundries Fire Department
Policy 600-51

Definitions:

Cold Zone	The designated area where no contamination is present
Contamination Reduction Corridor:	Corridor designated within the decontaminated area to enter and exit the hot zone.
Contamination Reduction Zone:	Area within the “Warm Zone” where decontamination takes place
Exclusion Zone:	Area where Personal Protective Garments must be worn to prevent contamination
Hot Zone:	Area where contamination is anticipated
PPE:	Personal Protective Equipment
SCBA:	Self Contained Breathing Apparatus

Decontamination Plan
Global Foundries Fire Department
Policy 600-51

Revisions:

Version	Date	Comments
Revision 1.0	May 2015	Original as adopted from IBM Emergency Services Documentation

Appendix A: Decon Layouts:

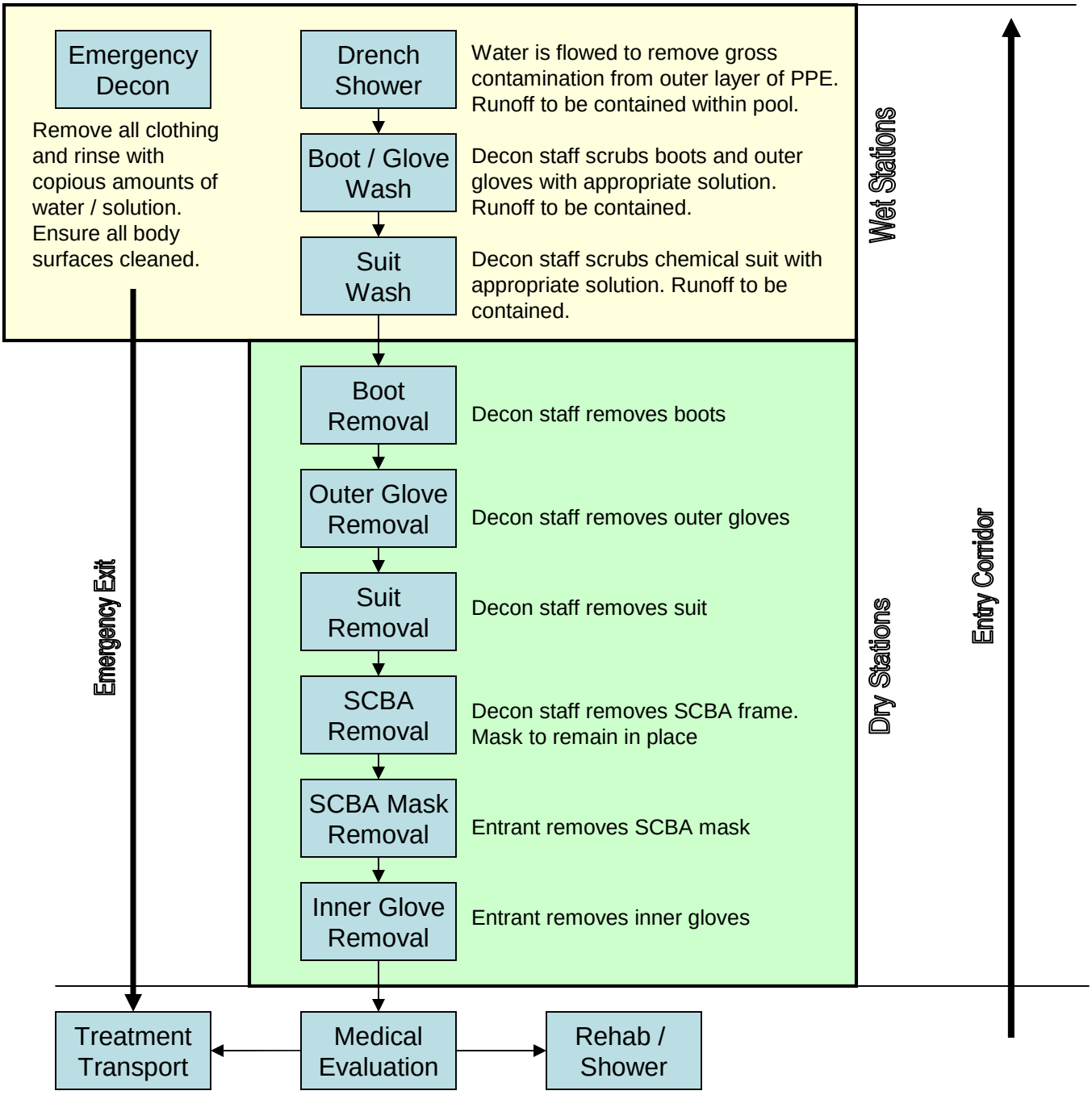
Maximum Decon Layout
Minimum Decon Layout
Field Shower Support Requirements
Patient Wash Configuration
Field Shower Configuration
Incorporation of Field Shower

Maximum Decon Layout

Hot Zone

Equipment Drop Area

Any equipment which entered the hot zone is placed in the equipment drop for reuse by subsequent teams or decontamination at conclusion of incident



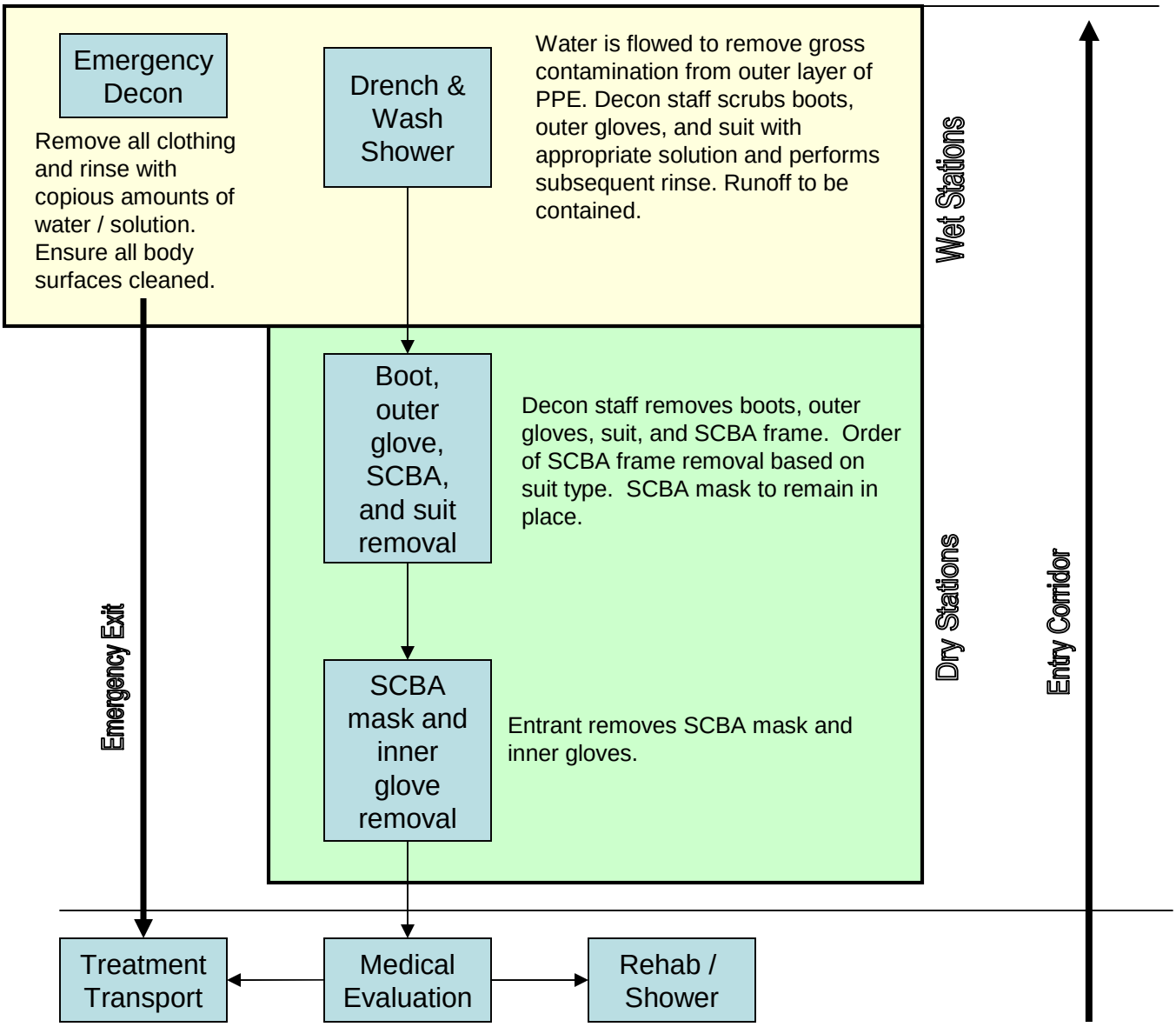
Cold Zone

Minimum Decon Layout

Hot Zone

Equipment Drop Area

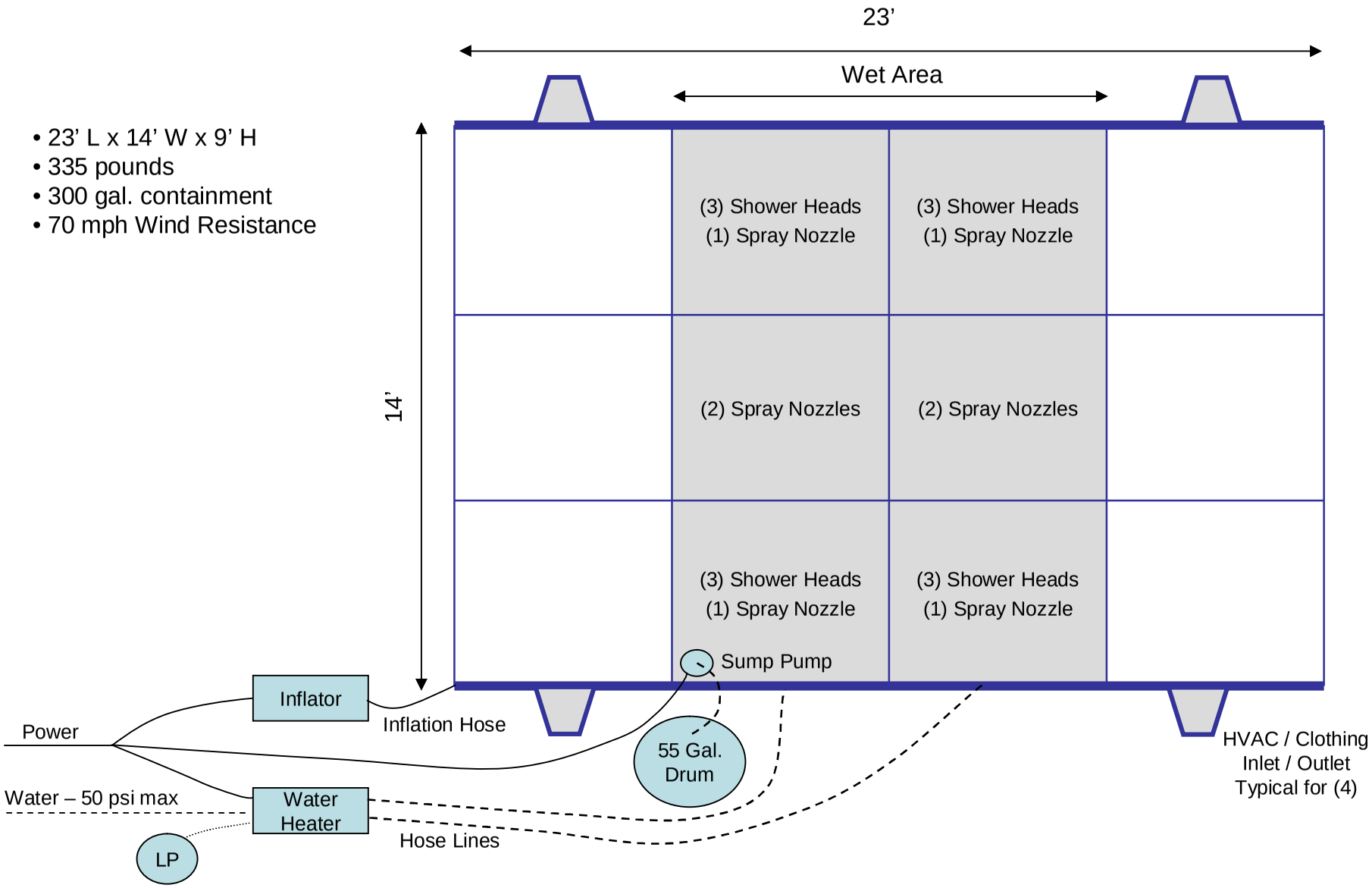
Any equipment which entered the hot zone is placed in the equipment drop for reuse by subsequent teams or decontamination at conclusion of incident



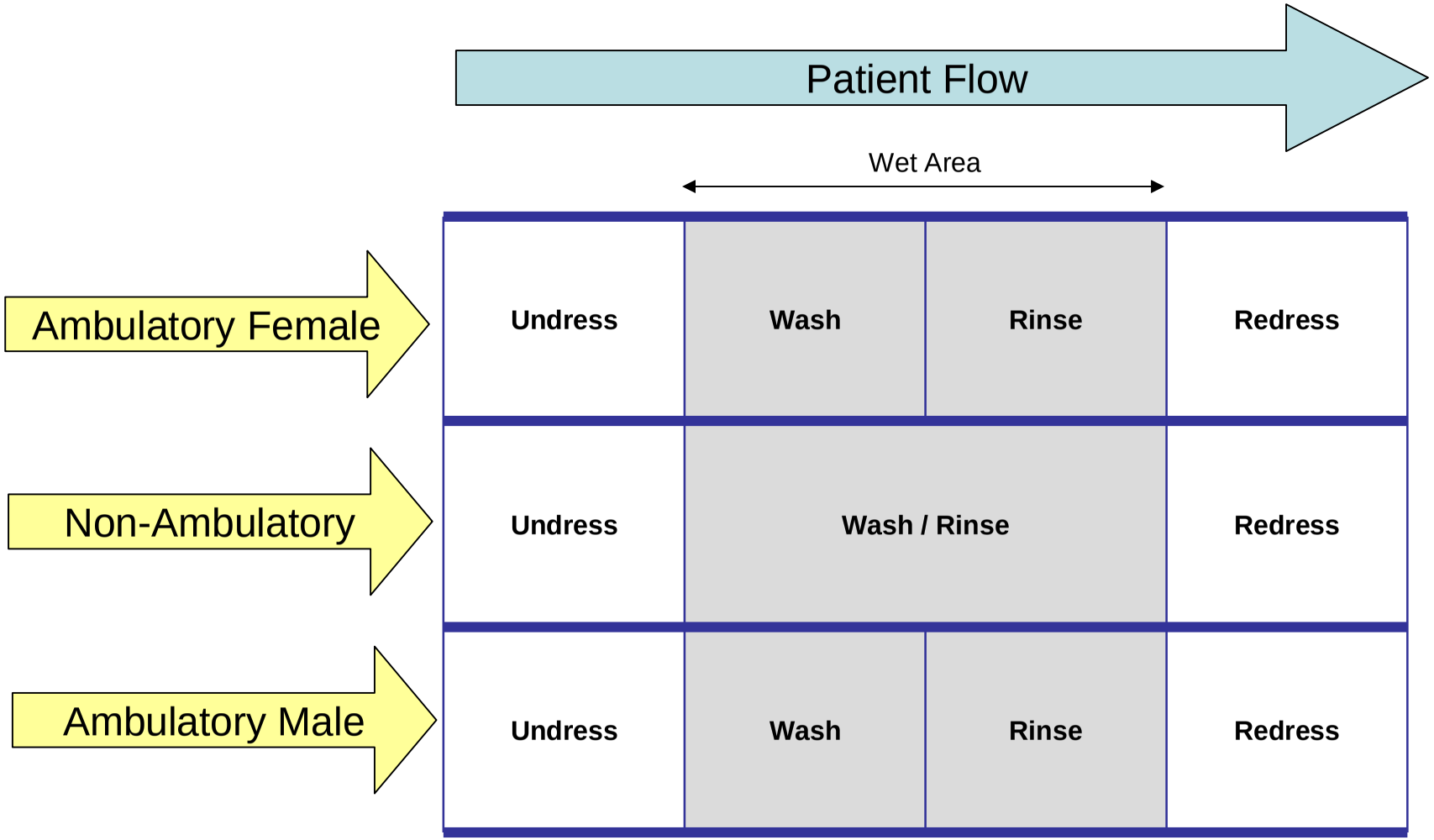
Cold Zone

Field Shower Support Requirements

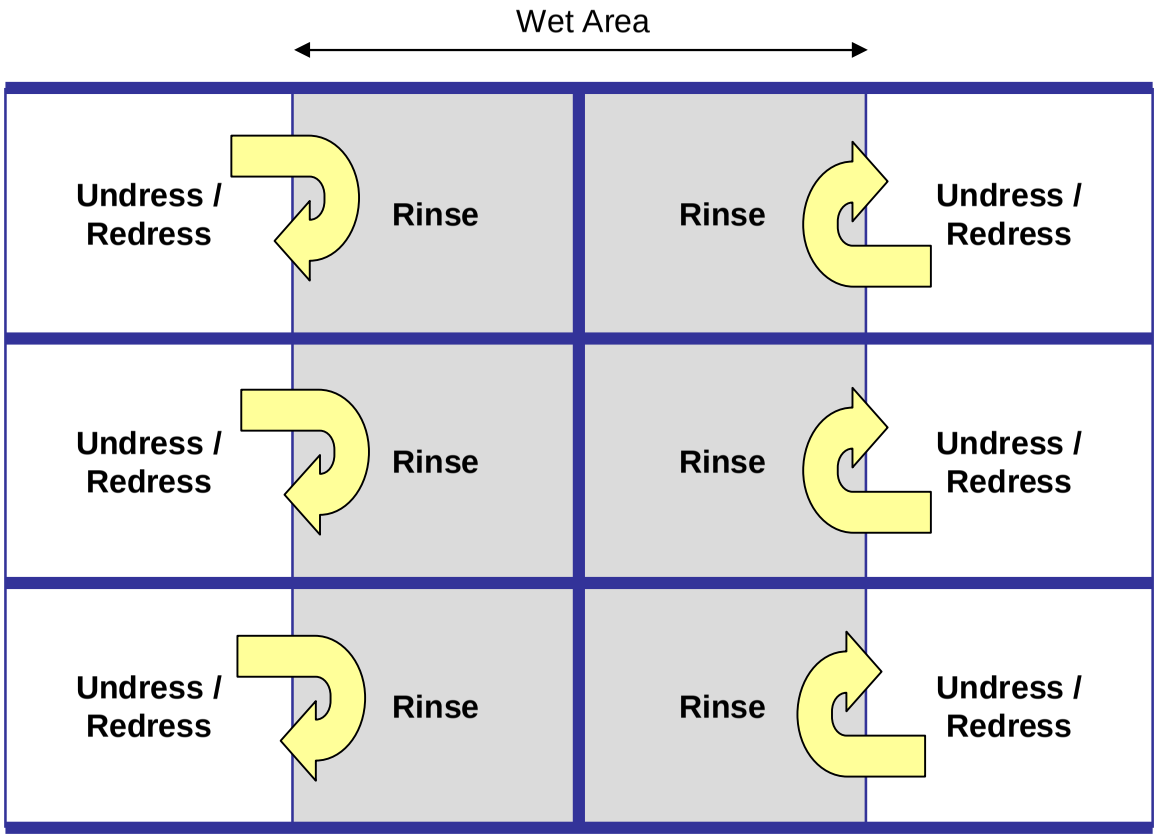
- 23’ L x 14’ W x 9’ H
- 335 pounds
- 300 gal. containment
- 70 mph Wind Resistance



Patient Wash Configuration

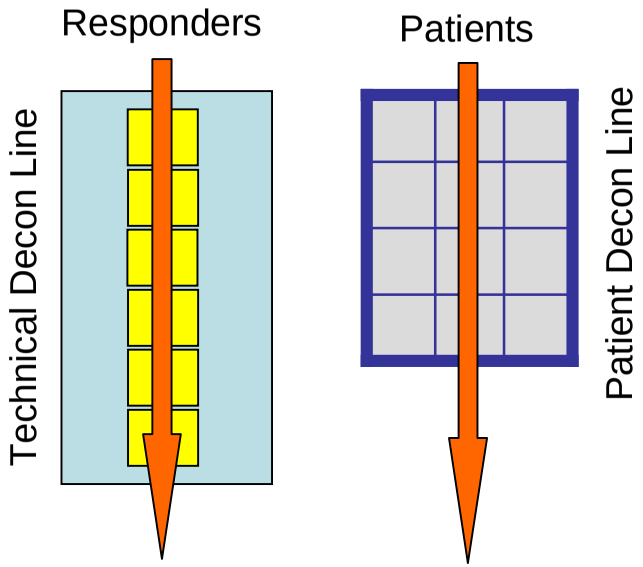


Field Shower Configuration



Incorporation of Field Shower

Technical Decon w/ Patient Decon



Technical Decon w/ Field Shower