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**G CONTINGENCY PLAN [40 CFR 270.14(b)(7), 264.50 through 264.56;
OAR 340-105-0014, 340-104-0001]**

The information contained herein is submitted in accordance with the requirements for a Contingency Plan, contained in 40 Code of Federal Regulations (CFR) 270.14(b)(7) and 264 Subpart D. The purpose of the Contingency Plan is to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents associated with storage activities at Umatilla Chemical Depot (UMCD) Storage Facilities. The Storage Facilities are managed within UMCD, so emergency response procedures for UMCD Storage Facilities are identical to procedures for the rest of the facility. The provisions of this Contingency Plan will be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents that could threaten human health or the environment. This plan also covers chemical accidents/incidents (CA/Is) described in the UMCD Chemical Accident/Incident Response and Assistance (CAIRA) Plan. A chemical accident is a chemical event from non-deliberate acts where safety is a primary concern, and a chemical incident is a chemical event resulting from deliberate acts (terrorism or criminal) where security is a primary concern. Routine operations related to identification and isolation of munitions with minor vapor leaks that are contained within storage igloos do not constitute CA/Is.

At UMCD the Commander is the Emergency Coordinator (EC) and has overall control and responsibility for all contingency events occurring on the Depot, including within the UMCDF. The UMCDF hazardous waste treatment permit defines the roles and responsibilities between the UMCD and UMCDF. The commander has delegated the role of the EC to the UMCDF Plant Manager, but maintains overall responsibility. The UMCDF EC will have primacy for UMCDF contingency events, whereas UMCD EC will have Primacy for UMCD contingency events. Both facilities will maintain individual contingency plans and emergency response procedures as part of their permit requirements. In the event that emergency response is necessary at either facility, the Emergency Coordinators will communicate with each other to coordinate response actions. For a CA/I occurring in the Storage Facilities, the Emergency Coordinator for UMCD will have primacy and direct the activities of UMCDF personnel. This may include stand-down, seek

cover, evacuate, or provide assistance in responding to the CA/I. The UMCDF Emergency Coordinator will have primacy for CA/Is occurring at UMCDF. Emergency response interaction between the UMCD and UMCDF is detailed in Figure G-1-1.

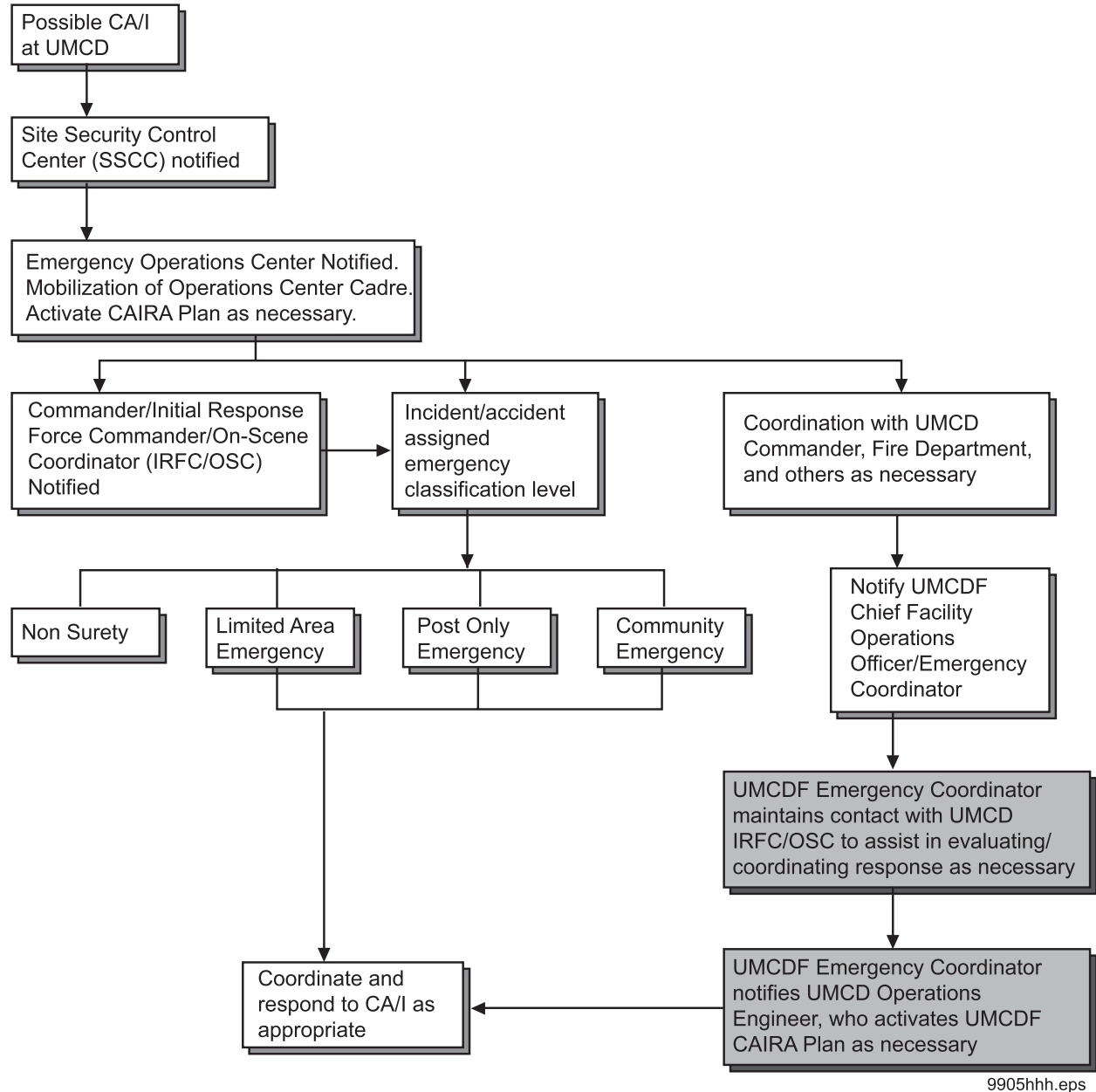


Figure G-1-1: UMCD/UMCDF Response Coordination Plan for a Chemical Accident/Incident at UMCD

The specific responsibilities of key UMCD personnel for addressing emergency situations involving release of chemical agents are described in the UMCD CAIRA Plan. The CAIRA Plan is reviewed annually and updated as necessary. Emergency response to situations will comply with the most current version of the CAIRA Plan. For uncontrolled releases of non-agent-related hazardous wastes or constituents, the responsibilities of key UMCD personnel are described in the Spill Prevention, Control and Countermeasures (SPCC) Plan and Installation Spill Contingency (ISC) Plan.

The Operations Center is responsible for distributing the CAIRA to response personnel (both on-site and off-site), regulatory personnel, and Major Command elements.

G-1 General Information [40 CFR 264.52, OAR 340-104-0001]

This Contingency Plan is for the UMCD Storage Facilities. The UMCD is located near Hermiston, Oregon, and is owned by the U.S. Army. Figures B-1-1 and B-1-2 provide a location map for the UMCD and a site plan for the Storage Facilities. Storage Facilities include K-Block, J-Block, and the Building 203 Hazardous Waste Storage (HWS) Facility, Satellite Accumulation Sites, and 90-day Storage Areas.

G-1a Process Description

Hazardous waste activities performed at the UMCD Storage Facilities are described in Section D-1 of this permit application.

G-1b Incineration (Not Applicable)

G-1c Personnel Protection Summary

Personnel protection procedures are summarized in Section D-1f of this permit application. Protective equipment is described in Section F-4.

G-1d Maintenance of Contaminated Parts and Equipment

Maintenance procedures for contaminated parts and equipment are summarized in Section D-1g.

G-1e Liquid Waste Process Systems (Not Applicable)

G-1f Plant and Instrument Air Systems (Not Applicable)

G-1g Chemical Agent Monitoring

Procedures for chemical agent air monitoring in storage structures are discussed in the SUOMP.

G-1h Personnel and Maintenance Building (Not Applicable)

G-1i Process Steam Supply and Distribution System (Not Applicable)

G-1j Water Supply and Distribution Systems

Currently, three reservoirs are available for fire suppression:

1. 150,000-gallon water tower located next to Building 7 in the Administration Area;
2. 100,000-gallon water tower located between the 100 and 200 Areas (supplies Building 203 and I-Block); and
3. ******The information in this paragraph is For Official Use Only (FOUO) and has been removed from the redacted document*****.*

The reservoir that furnishes the automatic sprinklers in Building 203 provides adequate volume and pressure to those sprinklers.

G-1k Utilities

A discussion of electrical utility contingency procedures is provided in Section F-4d – Equipment and Power Failure, and this information is also summarized here. *****
******The information in this paragraph is FOUO and has been removed from the redacted document.* *****
*****. No power is needed for the J-Block igloos. Only the lighting at the hazardous waste storage facility in Building 203 requires power. If the power were to fail, flashlights would be used to see within the building.

If power to the Operations Center (OC) fails, an emergency diesel generator provides backup power. Backup power for the OC's over-pressurization system is provided by a separate, dedicated generator. All computers in the OC have built in uninterruptible power supplies, which maintain power to the computers and bridge the gap between loss of primary power and the startup of the backup generator. In case of power loss, the OC has the capability of operating the sirens from a computer.

G-1l Fire Protection

Fire protection procedures for all Army major commands and field operating agencies are described in detail in AR 420-90. Under this regulation, each Army post will have a fire protection program consisting of the following:

- Fire protection training;
- Fire suppression;
- Fire prevention; and
- Fire protection engineering.

The regulation also stipulates that a Fire Protection Operational Readiness Inspection (FPORI) will be conducted at least every 24 months, and that copies of FPORI Reports will be kept at the installation and at the Major Command. Additionally, the facility must have a detailed

Emergency Firefighting and Rescue Plan (or Crash Plan Guide) posted at each location where emergency calls are received. This plan will be tested annually by all agencies identified as participants.

Training records will include Individual Evaluation Records (DA Form 5376-R) documenting fire-related training for each individual, and Fire Protection Training records (DA Form 5377-R) documenting each training session. Individual Evaluation Records will be maintained at the Fire Department for as long as the individual is a member of the Fire Department. Fire Protection Training Records will be maintained for one year after the cutoff date.

AR 420-90, Section 4-9a(1) stipulates appropriate protective clothing for firefighters responding to CA/Is. These will include National Institute of Occupational Safety and Health (NIOSH) approved self-contained breathing apparatus (SCBAs) for oxygen deficient environments, and M40 masks (or similar respirators) where there is no danger of oxygen deficiency. The regulation also stipulates that contaminated personal protective equipment (PPE) will not be reused.

The UMCD has coordination agreements with nearby municipal fire departments, including Hermiston, Irrigon, Umatilla, and Boardman, as discussed in Section G-6. However, AR 420-90, Section 2-9(d) states that “Mutual aid firefighting forces will not be used for biological, chemical, radioactive, or explosive responses but may be used for support functions.”

G-1m Ventilation

In the event that confirmed readings at or above the Reportable Limit (RL) (0.25 Short Term Exposure Limit [STEL]) is detected in an igloo during routine air monitoring (described in the SUOMP), a powered 1000-cfm contingency carbon filter is attached to the igloos. Procedures for attaching and operating contingency filter units are described in local Standard Operating Procedures (SOPs). Agent-contaminated air is evacuated at the air vent through the filter system, and the leaking munition is overpacked or repaired and moved as required.

The 1000-cfm contingency filter units (Figure D-1-4) consist of one prefilter, one high efficiency particulate air (HEPA) filter, and two high efficiency gas adsorber activated charcoal filters meeting minimum specifications (Program Manager for Chemical Demilitarization [PMCD], 1996). Filter housing, motor, electrical, and power requirements are described in Procurement Specification No. 4980-001 (PMCD, 1996). All components inside the filter housing are compatible with a decontamination solution of 5% sodium hypochlorite.

All 1000-cfm contingency filter units are equipped with piping manifolds and air sampling connections permanently installed between the two banks of filters and before the exhaust vent. The filter system is monitored for agent breakthrough during operation. If agent is detected between the filters, the first filter will be removed and containerized for storage in J-Block. The back filter will be moved forward to become the first filter. A new filter will be placed in the backfilter position. When the filter system unit is saturated with agent, it will be bagged, air-monitored, verified to have airborne concentrations at or below the RL, tagged, and placed in permitted J-Block igloos until disposal. Contaminated filters are managed according to local SOPs which comply with applicable state and federal regulatory requirements.

All contingency filter units are tested annually or when filters are replaced during a maintenance cycle for the purpose of establishing breakthrough concentrations. Testing the agent filter is known as a filter challenge. This procedure is performed by subjecting the filter media to a known concentration of chemical over a specific period of time. The filter challenge introduces a known concentration of Freon-11 (or equivalent) gas up-stream of the filter and then monitors the exhaust stream for fugitive gas. If no fugitive gas is detected, the filter system is operating as designed and the filter challenge testing is complete.

Additional ventilation procedures are described in local SOPs and the SUOMP.

G-1n Laboratory

Laboratory waste generation is discussed in Section C-1a.

G-2 Emergency Coordinators [40 CFR 264.52(d), 264.55; OAR 340-104-0001]

The following sections describe the emergency response organization and designated personnel (including the Emergency Coordinator) at the UMCD Storage Facilities.

G-2a Emergency Response Organization and Responsibilities

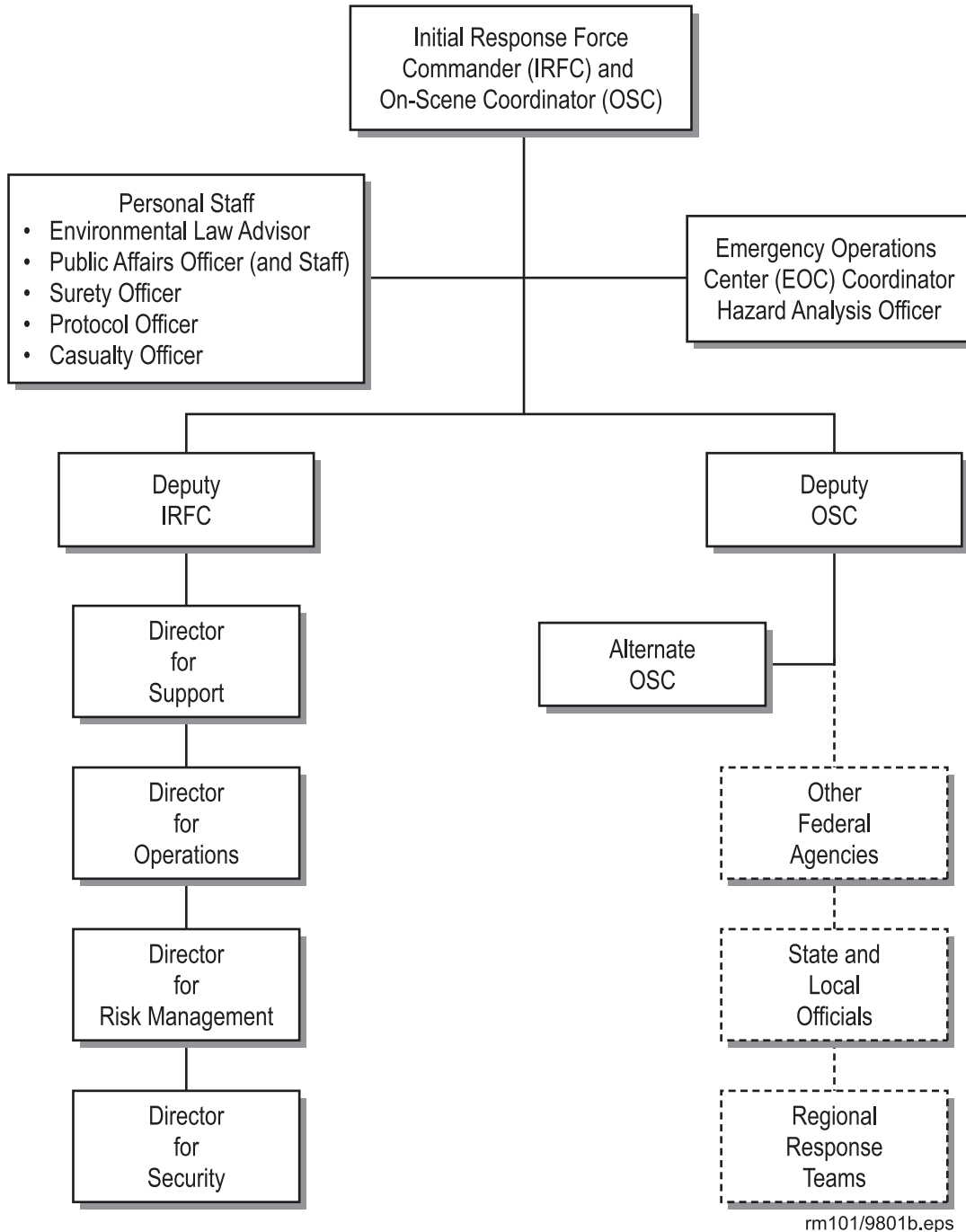
The UMCD OC described in this section is staffed by UMCD personnel, and directed by different facility staff members depending on whether the accident or incident occurs in K-Block, I-Block, or J-Block (i.e., agent-related); or in non-agent-related hazardous waste storage or Satellite Accumulation Sites. Emergency response organization and responsibilities for agent-related accidents and incidents are described in the CAIRA Plan, and for non-agent-related accidents or incidents they are described in the Spill Prevention Control and Countermeasures Plan/Installation Spill Contingency Plan (SPCC/ISC Plan). Emergency response organizations are summarized in Table G-2-1, Response Personnel for Agent-Related Spills. The purpose of these organizations is to provide qualified personnel to conduct an accurate assessment of the threat posed by an incident, alert the appropriate authorities, and implement response actions to minimize the effects of the incident.

The overall direction of the UMCD OC and response procedures is provided by the Initial Response Force Commander (IRFC)/On-Scene Coordinator (OSC). The Chemical Surety Officer (under IRFC Personal Staff) is responsible for maintenance of the organizational chart and Initial Response Force (IRF) Duty Roster, and a copy is also posted at the OC. Figure G-2-1 shows the IRF organization for CA/Is at UMCD.

In accordance with 40 CFR 264.52(d), the names, addresses, and telephone numbers (office and home) of the personnel who may serve as Emergency Coordinator for UMCD Storage Facilities are included in this Contingency Plan and supplied to the Regional Administrator (Director of the Environmental Protection Agency (EPA) Region X). Designees for UMCD Storage Facility Emergency Coordinators are discussed in Section G-2b(1). The names and telephone numbers of these individuals are listed in Table G-2-2, UMCD Emergency Coordinators.

Table G-2-1: Response Personnel for Agent-Related Spills (per CAIRA Plan)

Title	Responsibilities
IRFC/OSC This is the EC or as directed by the EC	Commands all operations at the accident/incident site. As OSC the IRFC is responsible for all military; federal, state, and local government; and private assets assigned to the IRF.
Operations Center Coordinator/Hazard Analysis Officer	Establishes and coordinates Operations Center, and supervises Center's Cadre (described in Section G-2b(6)). Analyzes hazards associated with a CA/I.
Personal Staff 1. Public Affairs Officer 2. Medical Officer 3. Surety Officer 4. Protocol Officer 5. Casualty Officer	Staff reporting directly to the IRFC/OSC Advisor to IRFC/OSC on public affairs matters. Operates the Joint Information Center. Acts as liaison between news media and CAIRA experts. Prepares public statements and news releases. Provides medical advice to IRFC/OSC, participates in press conferences, and coordinates medical treatment at CA/I location. Advises IRFC/OSC and staff on Chemical Surety matters. Responsible for maintaining organization of the IRF and Operations Center Cadre. Advises IRFC/OSC on protocol and is responsible for official visitors Advisor informs the IRFC/OSC of actual and expected injuries/casualties from a CA/I.
Deputy Initial Response Force Commander (DIRFC)	Second in command, and directly responsible for operations and support under IRFC/OSC direction. Primary interface with headquarters and off-site agencies/organizations.
Director for Support	Supervises and coordinates all logistical and administrative support for the response effort through the Support Group. Coordinates information flow between Support Group Staff, IRF staff elements, and the DIRFC.
Director for Operations	Responsible for all questions in the field and Operations Center. Reports directly to IRFC/OSC.
Director for Risk Management	Advises DIRFC on risk-management issues. Supervises Risk Management Directorate.
Director for Security	Advises IRFC/OSC on security issues. Supervises the Security Directorate (Provost Marshall, Security Augmentation Force, Security Officers).
Deputy On-Scene Coordinator (DOSC)	Coordinates and directs federal response operations in coordination with State and local authorities, other Federal agencies, and private organizations in accordance with IRFC/OSC.



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----- Activated when required

Figure G-2-1: Initial Response Force Organization

Table G-2-2: UMCD Emergency Coordinators

Title	Address	Telephone
Commander, UMCD	Commander Umatilla Chemical Depot Hermiston, OR 97838-9544	(541) 564-5200/5230 (Operations Center) (541) 564-5279 (660)
Deputy to the Commander	Commander Umatilla Chemical Depot Hermiston, OR 97838-9544	(541) 564-5200/5230
Operations Center	Commander Umatilla Chemical Depot Hermiston, OR 97838-9544	(541) 564-5230

G-2b Emergency Response Personnel

G-2b(1) Emergency Coordinator [40 CFR 264.55, OAR 340-104-0001]

The Emergency Coordinator position will be filled by the IRFC/OSC, who has overall responsibility for response activities, as designated by the responsible major Army Commander. For K-Block, I-Block, and J-Block (agent-related Storage Facilities), the primary designate for this position will be the Post Commander, followed by the Deputy to the Commander (or as outlined in current policy, if different). For the HWS Facility, 90-day Storage Areas, and Satellite Accumulation (non-agent-related) Sites, the IRFC/OSC will be the Chief, UMCD Fire Department; and the Senior Environmental Officer will be the alternate. The IRF under the direction of the IRFC/OSC will be the same for agent and non-agent-related accidents or incidents (i.e., only the IRFC/OSC will be different).

Per 40 CFR 265.55, the IRFC/OSC will be thoroughly familiar with all aspects of this Contingency Plan, all operations in UMCD Storage Facilities, location and characteristics of all wastes handled, location of all records, and the facility layout. The IRFC/OSC will also have the authority to commit all UMCD resources necessary to adequately implement the response actions. In the event of injury, major fire, or threat of an off-site excursion of a hazardous waste or toxic material, the IRFC/OSC will activate the UMCD CAIRA Plan and coordinate with the UMCD Commander, Fire Department, Security Department, health services, and/or other emergency personnel as required.

The general responsibilities of the IRFC/OSC in the event of an imminent or actual emergency situation are summarized below:

- Evaluate the situation and determine the proper course of action;
- Determine the areas of possible contamination and evacuate all dangerous areas;
- Ensure that UMCD alarms and communication systems are activated to notify facility personnel;
- Identify the character, exact source, amount, and extent of any released materials from spills, fires, or explosions;
- Assess possible hazards, both direct and indirect, to human health or the environment;
- Report his/her findings (as specified in the UMCD CAIRA Plan) to the appropriate authorities in the event that the UMCD Storage Facilities have had a release, fire, or explosion which could threaten human health, or the environment;
- Take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread; and
- Provide for treatment, storage, or disposal of recovered waste and contaminated material after an emergency.

In the event that the IRFC/OSC determines that the scope of the CA/I exceeds the capabilities of the IRF, he will request deployment of the Service Response Force (SRF) through the Army Operations Center; specifying the level of response requested. Deployment of the SRF and transition will be in accordance with the Army Materiel Command (AMC) Chemical Service Response Force Commander's Emergency Response Plan (CSRFCERP) (basic Plan and Annex D); and in accordance with the IRF to SRF Transition Guide published by the U.S. Army Surety Field Activity. A brief description of the IRF to SRF transition is also presented in the CAIRA Plan.

G-2b(2) Hazardous Waste Spill Personnel

Response personnel for non-agent-related hazardous waste spills are discussed in the SPCC/ISC Plan. The response personnel for agent-related spills are discussed in the UMCD CAIRA Plan.

Non-Agent-Related Hazardous Waste Spills

For non-agent-related hazardous wastes (i.e., Building 203, Satellite Accumulation Sites, and 90-day Storage Areas) the Chief of the Fire Department will be the IRFC/OSC for Level I spills and the Chief of Support Services will be the IRFC/OSC for Level II spills. Level I spills are generally within the capabilities of the facility to correct, while Level II spills are generally beyond the capability of the facility to correct. Table G-2-3, Spill Response Personnel for Non-Agent-Related Spills, shows the response personnel and responsibilities for non-agent-related spills.

Table G-2-3: Spill Response Personnel for Non-Agent-Related Spills

Title	Responsibilities
Installation Commander	Responsible for all actions that take place on-site including the program and budget for personnel, materials, training, health monitoring, and equipment required to comply with all Federal, State, and local regulations related to the SPCC/ISC Plan.
Chief, Fire Department	Supervises the Installation Response Team (IRT). Shares containment responsibilities with Chief, Support Services. Acts as IRFC/OSC for Level I spills. Responsibilities include assessment of the spill, requests for additional manpower and resources, and coordination of mitigation and cleanup.
Chief, Support Services	Acts as IRFC/OSC for all Level II cleanup actions. Shares responsibility for cleanup and containment with Chief, Fire Department. Responsibilities include assessment of the spill, requests for additional manpower and resources, and coordination of mitigation and cleanup.
Installation Response Team (IRT)	The first response team is made up of personnel from the UMCD Fire Department. If the spill can't be contained by the first-response team alone, personnel from the Support Services Branch act as the second response team. The primary responsibility of the IRT is to contain and clean up any hazardous wastes or substances spilled.
Director, Public Works	Responsible for Industrial Division of UMCD after the Commander.
Director, Risk Management	Provides technical guidance on cleanups. Responsible for reporting spills and response team actions to appropriate agencies.
Public Affairs Officer	Responsible for providing the public with information concerning a spill of hazardous substance or oil in a timely, positive manner that ensures accuracy and reflects consideration for public welfare.

Agent-Related Spills

For agent-related spills, activities will be performed in accordance with the CAIRA Plan, which is essentially a spill-contingency plan for chemical agents. The response organization and responsibilities for agent-related spills are the same as for any CA/I, and are discussed in Section G-2(a).

G-2b(3) Staff Duty Officer

The Staff Duty Officer functions in UMCD Storage Facilities have been delegated to the OC.

G-2b(4) Supply Branch Chief

For UMCD Storage Facilities, the Supply Branch Chief position is filled by the Logistics Officer under the Public Works Directorate. The Logistics Officer is responsible for coordinating logistical support with other Army facilities, and for procuring supplies and equipment necessary to meet requirements of the Contingency Plan. He/she contracts for materials, equipment and services; issues supplemental agreements, modifications, and terminations to contracts or purchase orders; and arranges for inspection and acceptance of required materials and services. The Logistics Officer is responsible for procuring and maintaining all equipment and supplies required to respond to CA/Is at the UMCD Storage Facilities.

G-2b(5) Administrative Office Chief

There is no Administrative Office Chief for UMCD Storage Facilities. However, there is an Administrative Support Pool composed of the Reports Officer, Computer Operators, and Status Board Coordinators in the OC Cadre. The Administrative Support Pool reports directly to the OC Coordinator/Hazard Analysis Officer.

G-2b(6) Emergency Response Team

For UMCD Storage Facilities, the Emergency Response Team is the OC Cadre, under the direction of the OC Coordinator. The personnel and organization of the OC Coordinator is discussed in Section G-2a, and a more detailed discussion is provided in Table G-2-1.

G-2b(7) Safety Office Chief

For UMCD Storage Facilities, the Safety Office Chief, or Safety Officer, reports directly to the Director, Risk Management under the Risk Management Directorate (see the organization chart and IRFC/OSC roster). The Safety Officer provides general and chemical safety guidance for all personnel and operating equipment, prescribes required PPE, and furnishes safety reports to the Installation Commander and headquarters.

G-2b(8) Environmental Compliance/Safety Director

The Director, Risk Management, will be responsible for issuing and updating this Contingency Plan. Changes will be issued in writing. The individuals to whom copies of the Plan are issued are responsible for updating their copies. The Director, Risk Management, will conduct periodic audits to ensure that all copies of the Contingency Plan located in UMCD Storage Facilities are kept current. The Director, Risk Management, will review and, if necessary, immediately amend the Contingency Plan, per 40 CFR 264.54, whenever:

- Applicable regulations are revised;
- The Plan fails in an emergency;
- The UMCD Storage Facilities change in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
- The list of emergency coordinators changes; or
- The list of emergency equipment changes.

Each employee, without exception, will be properly instructed about the Contingency Plan and will have access to it. The operators will understand the hazards and effects of the chemical agents, safety, fire, and emergency procedures, and understand when and how to use all protective and safety equipment appropriate to the operations they are responsible for.

G-2b(9) Chemical Operations Director

For UMCD Storage Facilities, the Chemical Operations Director is responsible for:

- Maintaining adequate safety equipment;
- Keeping a complete copy of the Standing Operating Procedures (SOPs) and Contingency Plan immediately available;
- Ensuring that the proper sections of the SOPs is available or posted conspicuously at each operation;
- Ensuring that the operations and all operators and support personnel conform with the SOPs;
- Ensuring that the authorized personnel exposure limits are conspicuously posted and are not violated;
- Ensuring that the appropriate fire hazard symbols are properly posted;
- Ensuring that each operator is thoroughly instructed in his/her job assignment;
- Maintaining all equipment in safe and operational condition;
- Halting any operation when an unusual or abnormal condition is encountered;
- Ensuring that personnel are assigned a serviceable protective mask approved for use in their particular operation;
- Ensuring that no individual is left alone or unobserved in an area where he/she might be subject to chemical agent exposure (The "Two-Person Rule" is also known as the "buddy system," and requires [in Army Regulation (AR) 190-59] that any individual working in an area containing chemical surety items or materiel, or where hazardous materials are stored, transported, disposed of, or handled, be accompanied by at least another individual ["buddy"])

for purposes of rendering first aid, practicing rescue and retrieval, or safeguarding surety items from harm);

- Ensuring that all accident and chemical agent exposure victims are immediately transported to the UMCD Medical Clinic;
- Promptly reporting all injuries/chemical agent exposures to the OC who, in turn will notify the Medical Officer and the UMCD Commander;
- Ensuring that checks are made for chemical agent effects any time personnel are required to wear Level A protective clothing, immediately upon their leaving a contaminated area and for 30 minutes thereafter, and that all personnel are observed for chemical agent exposure symptoms for 30 minutes at the end of each shift; and
- Making all applicable decisions not covered above.

G-2c Job Qualifications and Medical Surveillance

G-2c(1) Job Qualifications

In order to work with hazardous wastes or chemical agents, all personnel must:

- Complete all applicable training specified in Section H of this plan, "Personnel Training," including the 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training (Occupational Safety and Health Administration [OSHA] 29 CFR 1910.1200) or equivalent;
- Have a medical clearance from the UMCD physician or other designated, approved physician;
- Receive initial and annual refresher training in chemical agent safety;
- Read and understand relevant SOPs and Contingency Plan, including general safety requirements; and
- Be part of the Chemical Personnel Reliability Program (CPRP).

Any question regarding qualifications should be discussed with the appropriate supervisor before work begins. The above job qualifications will meet or exceed the Hazardous Waste Operations Training Requirements of 29 CFR 1910.20 for hazardous waste operations and emergency response.

G-2c(2) Medical Surveillance

The medical surveillance program is designed to establish a baseline health profile of individual employees and, depending on the employee's duty assignment, periodically reevaluate the health of the individual. The medical surveillance program is based on a series of physical examinations and laboratory analyses to assess potential chemical exposures, as well as worker ability to wear protective clothing and equipment. The content of the pre-placement, periodic, and termination medical surveillance examinations for chemical agents is summarized in the following discussion, and is described in detail in Department of Army Pamphlets (DA PAM) 40-8 and 40-173. Medical surveillance is also briefly discussed in Section D-1f of this permit application.

Personnel Categories

UMCD personnel are categorized according to their potential exposure to chemical agent as follows:

- Category A—Includes personnel with a high risk of potential exposure to high-level chemical agent concentrations (for example, certain maintenance workers and workers requiring full protective equipment and devices);
- Category B—Includes personnel with a low risk or infrequent potential for exposure to chemical agents in routine industrial, laboratory, or security operations; but possible exposure at much higher levels during accidents (e.g., guards, firefighters, medical personnel, chemical agent operation supervisors, and inspectors);
- Category C—Includes personnel with a low probability of exposure to chemical agents, even under accident conditions, but whose activities may place them in proximity to chemical

agent areas (e.g., administrative personnel employed in an area adjacent to a chemical agent area);

- Category D—Includes transient visitors to chemical agent areas where there is a potential for exposure, and who are not included in the medical surveillance program for chemical agents at the visited installation.

Physical Examination

All individuals whose duties involve potential exposure to chemical agent are given a physical examination prior to their employment, annually and upon termination of employment.

Additionally, physical examinations are performed on any other occasion deemed necessary by the responsible physician (including accidents or exposures). Termination examinations are not required for individuals who are included in medical surveillance programs for three months or less.

- Preplacement Examination
 - (1) Responsibility—All preplacement physical examinations for UMCD personnel are conducted by a designated, approved physician or physician's assistant.
 - (2) Categories A, B, and C—Comprehensive medical exams and work histories are required for Category A, B, and C employees. Exams will emphasize potential prior exposure to cholinesterase-inhibiting substances (including organophosphate pesticides), as well as other substances that may cause cardiovascular or pulmonary disease, asthma, and neurological disorders. A general physical examination will be performed with special emphasis on cardiovascular and pulmonary functions; visual acuity and hearing; and abnormalities in the skin, kidney function, and central nervous system.
 - (3) Category D—No preplacement examination will be required.

- Periodic Examination(s)

(1) Responsibility—Periodic medical examinations are conducted at the UMCD Medical Clinic.

(2) Categories A, B, and C—All workers in these categories receive an annual examination to determine their continued fitness, and review their occupational exposure histories during the preceding year. Special attention is given to the possibility of non-occupational exposures to cholinesterase-inhibiting pesticides, with exposure symptoms similar to nerve agents. A complete history will be obtained concerning any signs or symptoms that are connected to chemical agent exposure.

(3) Category D—No periodic medical examination will be required.

- Termination Examination

(1) Responsibility—Termination medical exams are conducted by a designated, approved physician or physician's assistant.

(2) Categories A, B, and C—All workers in these categories receive a termination examination to determine their occupational exposure histories since their last periodic examination. Individuals included in a medical surveillance program for three months or less do not require termination examinations unless there has been documented evidence of exposure to chemical agents. Special attention is given to the possibility of non-occupational exposures to cholinesterase-inhibiting pesticides, with exposure symptoms similar to nerve agents. A complete history will be obtained concerning any signs or symptoms that are connected to chemical agent exposure

(3) Category D—No medical examination will be required.

- Post-Exposure Examination

(1) Responsibility—Post-exposure medical examinations are conducted by a designated, approved physician or physician's assistant.

(2) Categories A, B, C, and D—Any worker or transient visitor exhibiting chemical agent exposure symptoms receives a medical examination to determine their condition. Any workers receiving a potential exposure during an accident/incident involving release of a chemical agent are examined to determine their condition. Any atmospheric monitoring measurements are recorded in the occupational health record.

Evaluation of Findings

- Preplacement Examination—If any of the findings obtained during the examination are outside the normal range, the individual is referred to his/her own physician. The individual's physician is provided a copy of the findings.
- Periodic, Post-Exposure, or Termination Examinations—If any of the findings obtained during the examination are outside the normal range, consultation with the Major Command Surgeon or designee is obtained for possible problems related to chemical agents.

Cholinesterase Program

Cholinesterase monitoring applies only to nerve agents (GB, VX).

- Frequency of Cholinesterase Monitoring
 - (1) Category A personnel—Red blood cell cholinesterase (RBC CHE) determinations are performed monthly, unless workplace environmental monitoring information or accident/injury experience indicates the need for an increased frequency.
 - (2) Category B personnel—RBC CHE determinations are performed annually, or more frequently at the discretion of the contract physician.
 - (3) Category C personnel—RBC CHE determinations are performed annually.
 - (4) Category D personnel—No periodic RBC CHE monitoring is required.
- Recording Cholinesterase Monitoring Results—Monitoring results will be plotted on a graph (SF 512, Clinical Record Plotting Chart) showing the RBC CHE values expressed in percent

of baseline versus time with the absolute cholinesterase values noted above the respective data points. The SF 512 will be incorporated into the outpatient occupational health record.

- Action Levels

- (1) In the event the RBC CHE activity is below 75 percent of the baseline value, the affected individual(s) will be removed from further potential chemical agent exposure. Following removal from work, the individual(s) work practices will be reviewed by the Safety Officer. The affected individual's coworkers will also be monitored for RBC CHE activity. RBC CHE determinations will be performed weekly until the affected individual(s) return to work. The period of removal from work will be noted on the worker's health record.
- (2) RBC CHE activity will be determined when signs and symptoms of systematic uptake of chemical agent are apparent. In addition, local (minor) signs such as miosis or localized sweating necessitate immediate RBC CHE determination and removal of the individual from further potential exposure until the results of the determination are known. Further action will be in accordance with (1) above, if necessary.
- (3) No return to work with potential exposure to cholinesterase-inhibiting substances will be permitted unless the RBC CHE has reached a value of at least 80 percent of the individual's baseline value and the individual has been asymptomatic for at least one week.

G-3 Implementation [40 CFR 264.52(a), OAR 340-104-0001]

The following sections describe the actions taken in implementing emergency response procedures following a CA/I, general functional organization of the UMCD Storage Facilities, methods for communicating and detecting chemical agents, self-help and first aid procedures common for all emergencies, and maintenance safety procedures.

Emergency procedures are described in Section G-4e. The EC, as described in Section G-2b, has overall responsibility for UMCD response activities. In the event of an injury, fire, or threat of a

hazardous waste excursion, the Emergency Coordinator has the authority to commit all resources necessary to implement the response actions. UMCD response to a CA/I is divided into three phases: (1) Readiness, (2) Response; and (3) Recovery.

Readiness Phase

During the Readiness Phase, the IRF will prepare and coordinate response plans, establish organizations to execute plans, train personnel to the required level of proficiency, evaluate UMCD capability to execute plans, and educate the public to potential threats. As part of the Readiness Phase, CAIRA training exercises will be implemented quarterly.

Response Phase

In the Response Phase, the IRF will take actions necessary to gain control of the CA/I including:

- Saving lives;
- Preserving health and safety;
- Containing and rendering hazardous materials safe;
- Protecting the environment;
- Securing chemical surety materiel and Government property;
- Providing accurate, timely, and effective communication with proper authorities; and
- Demonstrating Army's ability to conduct emergency response operations.

Upon receiving report of a CA/I, the OC Staff will initiate UMCD notification procedures described in Section G-4(a). Following notification the OC will be set up under the direction of the OC Coordinator (for all CA/I deemed Limited Area Emergency or higher). The Field Command Post (FCP) Officer will establish the FCP as soon as possible, based upon the location of the CA/I and meteorological condition. Monitoring teams will then report to the change-house, don protective clothing and equipment, and notify the Survey and Detection (S&D) Dispatcher who will notify the S&D Controller via phone. The Officer in Charge (OIC) of the U.S. Army Occupational Health Clinic (USAOHC) will dispatch emergency vehicles to the hot-

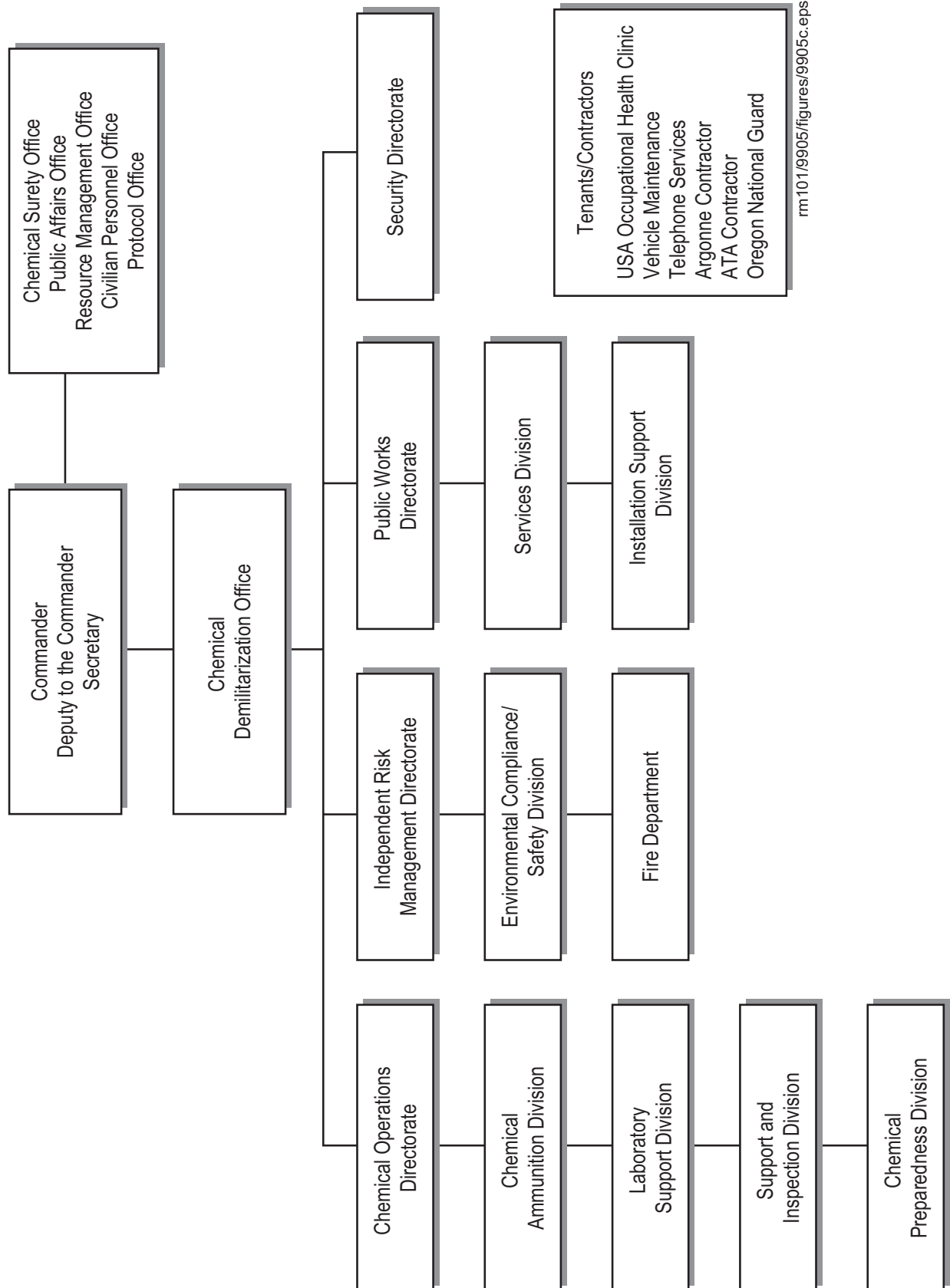
line immediately after authorization by the FCP Officer. Immediately following classification of the CA/I, the Chemical Stockpile Emergency Preparedness Program (CSEPP) Coordinator will notify state and local authorities and relay the IRFC/OSC's protective action recommendations. Non-essential personnel will exit the area as directed. Lab personnel will evacuate, bringing as much detection equipment and standards as possible. Evacuation from UMCD will be recommended by the Hazard Analysis Office (HAO). Civilian authorities will determine and implement all off-site actions, while the IRFC/OSC will only provide recommendations. UMCD will maintain communication with off-site authorities, providing periodic updates on CA/I status, changes in emergency notification levels, and changes in protective action recommendations. If necessary, where a CA/I is beyond the capability of the IRF to control, the IRFC/OSC will implement transition to the SRF as discussed in Section G-2b(1).

Recovery Phase

During the Recovery Phase, the UMCD emergency response force (IRF or SRF) will initiate actions to restore conditions at the CA/I site to a technically feasible, acceptable state. This phase is essentially the initiation of remedial operations. During the Recovery Phase, hazards will be assessed and recommended precautionary and safety measures will be implemented to further protect the public from CA/I-related contamination. Long-term hazards will be clearly identified. Deactivation of the CAIRA Plan will be directed by the IRF/SRF Commander. Partial deactivation of the CAIRA Plan may be directed prior to decontamination of all land, buildings, or vehicles, provided that the immediate area around CA/I has been decontaminated of all detectable agent.

G-3a General Functional Organization and Responsibilities [40 CFR 264.52; OAR 340-104-0001]

Organizational elements responding to emergencies, accidents, and casualties within the UMCD Storage Facilities include the Chemical Operations, Industrial Risk Management, Public Works, and Security Directorates (Figure G-3-1). The Chemical Operations Directorate includes



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Figure G-3-1: General Organization of UMCD

Chemical Ammunitions, Laboratory, Support and Inspection, and Chemical Preparedness functions. Environmental Compliance and Safety functions (including the Fire Department) fall under the Industrial Risk Management Directorate. The Public Works Directorate includes Services and Installation Support functions, and the Security Directorate is responsible for maintaining security throughout UMCD. Elements responsible for responding to emergencies, accidents, and casualties that occur outside the UMCD Storage Facilities or that are beyond the capacity of the UMCD staff to correct are described in Annex C of the UMCD CAIRA Plan.

G-3b Communications [40 CFR 270.14(b), 264.32(a),(b), and (c), and 264.34(a) and (b); OAR 340-105-0014, 340-104-0001]

Communications at the UMCD Storage Facilities occur through telephones, public address system, radio, and closed-circuit television systems. Telephones provide communications with the UMCD Major Commands and the emergency support services in the surrounding community. Telephones to the outside area are located in the Laboratory, Guardhouse, and Medical Clinic. Internal telephones are located throughout the UMCD. Emergency personnel will also communicate using special radio frequencies. Additional communications equipment consists of vehicle-mounted FM radio sets or the use of messengers. A warning siren will be used to warn Storage Facilities staff of a CA/I, and the UMCD public address system provides verbal instructions for evacuation and sheltering-in-place (described in detail in Section G-7 – Evacuation Plan).

G-3c Detection

Detection equipment will be used to monitor storage structures for leaks that may constitute CA/Is, and to identify contaminants and protect workers during emergency response activities. Detailed descriptions of chemical-agent monitoring equipment are presented in Section D-3a(3) of this permit application and in the SUOMP. Brief summaries of detection instrument characteristics and performance are also provided below.

G-3c(1) Description of Instruments

For purposes of this Contingency Plan, agent-detection instruments are subdivided into Storage Facility Monitoring, and S&D Monitoring.

Storage Facility Monitoring

Monitoring of UMCD Storage Facilities containing munitions, chemical agent bulk items, and possibly 1X wastes is conducted using Real-Time Analytical Platform (RTAP) vehicles (see SUOMP). Typically, two monitoring instruments are mounted in each RTAP. These may be configured in the following combinations to meet specific operational requirements; a Miniature Continuous Air Monitoring (MINICAM) system/Hewlett Packard-Dynatherm (HPD), a MINICAM/Agilent-Dynatherm Agent Monitor (ADAM), or an HPD/ADAM. RTAP analytical equipment can detect HD, GB, and VX concentrations down to 0.25 of the STEL level. Other instruments capable of detecting agent concentrations to the STEL, and that meet or exceed other performance specifications of current RTAP equipment, may also be used. Small vapor leaks detected in storage igloos that have not breached the igloo containment are not considered to be CA/Is. Identification, isolation, and overpacking of these munitions are routine activities at the K-Block Facility Storage Facilities. Repair of ton containers in I-Block and K-Block are also routine procedures. These routine repair activities are not covered by this Contingency Plan. Refer to the SUOMP, for air monitoring schedule for igloos that contain overpacked munitions. The Army, or Commander UMCD, may require more frequently monitoring intervals based upon an overall assessment of hazards and risks and the tendency of munitions or overpacks to develop leaks. In the event that agent monitoring identifies a leak that has breached or is likely to breach engineering controls (Limited Area Emergency), the event will be considered a CA/I and the IRFC/OSC will activate the CAIRA Plan.

The MITECS monitoring system will be used to collect and analyze an ambient air sample from within the igloo for the presence of HD. The monitoring system shall consist of MINICAMS, sample pumps, heat-traced sample line, exhaust line and monitoring house. The basic design principle allows the MITECS monitoring system to integrate with existing igloo sample line

configuration, transport a representative air sample from the igloo interior back to the monitoring house, and analyze the sample for the presence of chemical agent using a near-real-time (NRT) MINICAMS. The MITECS monitoring system shall provide compatibility with the UMCD RTAP sample line. In the event of two consecutive MINICAMS agent alarms, initial confirmation effort shall be performed by UMCD RTAP personnel. Integration with RTAP sample lines shall be performed via the sample Tee at the igloo.

S&D Monitoring

The S&D team responding to a CA/I will be equipped with detection equipment in order to evaluate the extent and type of spill or release, and take necessary actions to protect health and safety. To the extent practicable, RTAP vehicles will be used to monitor agent concentrations in the vicinity of the CA/I. In addition, S&D team personnel may carry M18A2 Detector Kits, M8A1 alarms, or other equipment capable of detecting gross-level agent concentrations rapidly in a field setting. Gross-level detectors are used as an added safety precaution in addition to RTAP monitoring.

G-3c(2) Description of System

When monitoring equipment (such as MINICAMS or HPD) detects chemical agent exceeding a given threshold concentration, a notification alarm will be activated, signifying that something is abnormal and needs to be corrected. It will also provide notification that personnel shall take action to avoid the area of low-level threat because chemical agent symptoms or medical problems could result if low-level exposure persists.

Visual observation of a chemical agent spill or leaking vapor in a work area or any detection of mustard also constitutes a limited area emergency. In addition, chemical agent symptoms in personnel constitute a chemical agent emergency. Any such observation must be reported in accordance with local procedures.

G-3d Self-Help and First Aid [40 CFR 264.52; OAR 340-104-0001]

The following paragraphs describe self-help and first aid for chemical agent exposure.

G-3d(1) Mustard Agents

General

Mustard agents act on the eyes, skin, and respiratory tract by either vapor or liquid contact (HD is the only blister agent at UMCD). Mustard is a yellow-to-brown oily liquid, ranging from odorless to a garlic smell. Mustard agents are delayed-action chemical agents that cause no immediate symptoms. The first symptoms appear as early as one hour after exposure to a high concentration, but generally symptoms do not appear for at least four to six hours after exposure. Effects of exposure include irritation of the throat and respiratory tract, swelling and reddening of the eyes, reddening of the skin, and development of skin blisters.

Self-Aid for Mustard Exposure

If alerted to possible exposure to mustard vapor or liquid by an alarm or by an odor, personnel should immediately mask, sound the alarm (verbal warning “GAS!”), and proceed as indicated below.

1. Evacuate the contaminated area (move upwind if outside).
2. Blot any liquid on the skin and wash area thoroughly with soap and water or sodium hypochlorite solution (household bleach), if available.
3. Remove all clothing carefully to avoid self-contamination.
4. Shower with soap and cool water (a cool shower is best because of the slower action of the chemical agent at lower temperatures).
5. Remain cool and quiet.
6. Get help and go to the Medical Clinic as soon as possible.

NOTE: Liquid mustard agent in the eyes must be washed out with water immediately to prevent severe eye damage. Continue eyewash for 15 minutes. If the skin or clothing are more heavily contaminated by droplets or splashes of mustard, personnel should flush the affected area with a sodium hypochlorite solution.

First Aid for Mustard Exposure

If someone is exposed to mustard agent and is incapable of self-help, a "buddy" should perform all items above for that individual without contaminating him/herself.

In the unlikely event that exposure to HD is suspected after the employee has left work, the employee will immediately contact the Medical Officer for guidance in treatment of the exposure. Personnel must report all exposures to their immediate supervisor and the Safety Officer.

G-3d(2) Nerve Agents (GB and VX)

Self-Aid for GB and VX Exposure

Self-aid and first aid for exposure to GB and VX are identical. If exposed to low concentrations of nerve agent GB or VX, the following symptoms may be experienced: runny nose, tightness of chest, and or pinpointing of pupils (miosis) and dimness of vision.

The exposed worker should immediately mask, sound the alarm (GAS!), and proceed as indicated below.

1. Evacuate the contaminated area (move upwind if outside).
2. If victim displays two or more symptoms, administer Mark I Kit(s) (nerve agent antidote kit carried within the mask case and available in first aid kits), and, if possible, note the time of injection.

3. Remove clothing and step under safety deluge shower or flush contaminated skin and clothing with a 5-percent sodium hypochlorite solution, then shower.
4. Immediately report to the Medical Clinic.

If exposed to high concentrations of GB or VX, the person may experience involuntary twitching and jerking, nausea, vomiting, involuntary urination and defecation, headache, confusion, convulsions, and coma. These symptoms are followed by cessation of breathing and death. Given the rapid rate of action by the nerve agent, the worker will probably be unable to perform any self-aid measures beyond masking and evacuating the area. Other workers in the area should provide first aid by administering two or three Mark I kits depending on the severity of signs and symptoms. Record the time of injection, if possible.

First Aid for GB and VX Exposure

If a worker is exposed to GB or VX, he/she may experience the symptoms listed above. Given the rapid action of the nerve agents, the worker may be incapable of self-help. Workers in the area should proceed as indicated below.

1. Mask and sound the verbal alarm (GAS!).
2. Pull the victim out of any areas of liquid contamination.
3. Mask the victim.
4. Evacuate the contaminated area (move upwind if outside).
5. Administer one, two, or three Mark I kits (depending on severity of symptoms) into a large muscle (preferably thigh).
6. Decontaminate victim using sodium hypochlorite solution.
7. Remove clothing and decontaminate exposed skin surfaces.
8. Monitor and wrap victim in a blanket.
9. If victim has stopped breathing and/or has no pulse, administer cardiopulmonary resuscitation (CPR) (if workers are in an area free of vapor contamination).
10. Remain with the victim until he/she is taken to the Medical Clinic.

Suspect GB or VX Exposure

In the unlikely event that exposure to GB or VX is suspected after the employee has left work, the employee will immediately contact the Medical Officer for guidance in treatment of the exposure. Personnel must report all exposures to their immediate supervisor and the Safety Officer.

G-3e Maintenance Safety Procedures

This section of the Contingency Plan describes actions taken to provide safe maintenance working conditions at UMCD. It specifies general procedures and specific decontamination and protective clothing requirements in various equipment areas.

G-3e(1) General Instructions

Maintenance Information

For specific maintenance information on each piece of equipment, the appropriate vendor maintenance manual or preventive maintenance manual or SOP should be consulted. Equipment used in agent-related Storage Facilities must be monitored and appropriately labeled if contaminated. Maintenance of contaminated equipment is performed in specified areas with appropriate engineering controls. Additional information on maintenance of contaminated equipment is presented in Section D-1g.

Maintenance Personnel

In addition to training on equipment maintenance procedures, maintenance personnel must have the training required for work with chemical agents (described in Section H and Section G-2c(1) of this Contingency Plan). Personnel engaged in contaminated work operations are observed for signs or symptoms of exposure for 30 minutes following the completion of such work or at the end of each shift.

G-3e(2) Instructions for Non-Hazardous Areas

In areas of the UMCD Storage Facilities where no hazardous levels of chemical agent or other hazardous chemicals are present, maintenance will be performed in accordance with local SOPs (see Section G-3e(2)). In such operations, parts will be replaced and the defective part(s) will be transported to the maintenance shop for study, repair, or disposal. There will be no restrictions on the movement of these items within UMCD.

G-3e(3) Instructions for Chemical Agent Areas

General

When any accident or incident occurs in chemical agent Storage Facilities (K-Block or I-Block) or during transport of munitions between UMCD and UMCDF, workers must proceed as if the accident/incident involves chemical agent(s) release.

Two-Person Rule

The two-person rule (“buddy system”) will be strictly enforced in the exclusion areas of K-Block and I-Block.

Decontamination

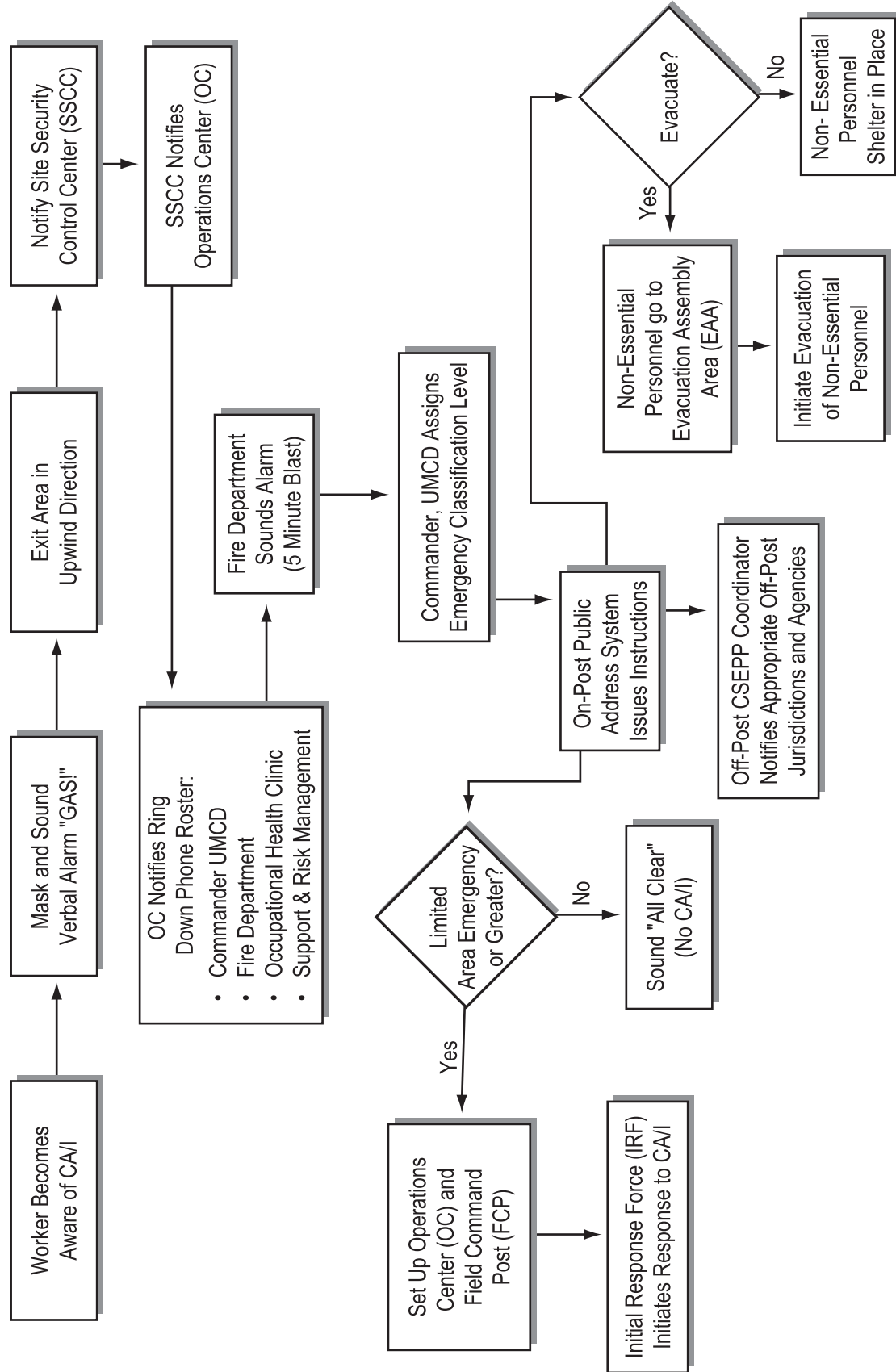
If a maintenance task is judged to be too extensive for the level of protection required in the particular UMCD Storage Facilities, there are two choices for maintenance:

- Remove the equipment to a more suitable area to perform maintenance (including possible transfer to UMCDF); or
- Decontaminate the room in which maintenance is to take place (assuming it can be adequately isolated from other ongoing work). This may be accomplished by completely washing all floors and equipment items in the room with aqueous decontamination solution.

G-4 Emergency Response Procedures

G-4a Procedures [40 CFR 264.56(a); OAR 340-104-0001]

Figure G-4-1 shows the general procedures to be followed from the time a worker identifies or suspects a CA/I, through IRF response to the CA/I and evacuation or sheltering-in-place of non-essential personnel. For CA/Is in UMCD Storage Facilities, the IRFC/OSC will direct activities



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Figure G-4-1. Typical Emergency Response for CA/Is at UMCD Storage Facilities

of UMCDF staff. This may include stand-downs, shelter-in-place, evacuation, or assistance with the response. For CA/Is at UMCDF, the Storage Facility IRF will follow directions of UMCDF IRF. These procedures include the following:

- Identification of an actual or potential CA/I by a site worker;
- Clearing of personnel from the vicinity of the CA/I;
- Notification sequence, including notification of UMCDF;
- Classification of the CA/I by the IRFC/OSC;
- Sounding of the siren;
- Evacuation or sheltering-in-place of non-essential personnel;
- Activation of the OC and FCP (for Limited Area Emergencies and greater);
- Identification of hazardous materials and assessment of the hazard;
- Mitigation of the immediate threat to health and safety and the environment;
- Initiation of the Recovery Phase; and
- Deactivation of the CAIRA Plan by the IRFC/OSC.

When a worker identifies a CA/I, he/she is to implement local procedures. The IRFC/OSC will then assign one of the following four emergency classification levels to the CA/I:

- Non-Surety Emergency: Declared for events that may be perceived as a chemical surety emergency or that may be of general public interest, but which pose no chemical surety hazard;
- Limited Area Emergency: Declared when events are likely to occur or have occurred that involve agent release outside engineering controls or approved chemical storage facilities with the predicted no-effects dosage not extending beyond the Chemical Limited Area (CLA), or K- or I-Block, where the CA/I occurred;
- Post Only Emergency: Declared when events are likely to occur or have occurred that involve agent release with the predicted no-effects dosage (safe distance) extending beyond the CLA, but not beyond the post boundary;

- Community Emergency: Declared when events are likely to occur or have occurred that involve agent release with the predicted no-effects dosage extending beyond the post boundary.

Following classification of the CA/I, the IRFC/OSC will determine whether non-essential personnel should evacuate or shelter-in-place. Appropriate instructions will then be broadcast over the Depot public address system. For Limited Area Emergencies and higher, the FCP Officer will establish the FCP at a suitable location, depending upon the location of the CA/I and meteorological conditions (such as wind speed and direction). Notification will be provided to state and local authorities in a timely manner. The OC CSEPP Coordinator will communicate protective action recommendations to off-post authorities.

Response personnel will identify the hazardous materials spilled or released, and evaluate the hazards related to the CA/I. The first concern will be protecting the health and safety of response workers, followed by mitigation and control of the spill or release. Once the CA/I is controlled during the Response Phase (see Section G-4), the IRFC/OSC will direct the IRF to transition to the Recovery Phase. At the discretion of the IRFC/OSC, the CAIRA Plan may be deactivated when the immediate threat from the CA/I has been controlled and cleaned up. Partial deactivation of the CAIRA Plan may also occur at any point during the Response Phase, at the discretion of the IRFC/OSC.

Non-Agent-Related Procedures

Procedures for non-agent-related related emergencies will be in accordance with the SPCC/ISC Plan and will involve activation of the Spill Response Personnel discussed in G-2b(2) and notification of the OC. Any worker identifying a non-agent-related spill or release will notify the OC, which will initiate the required response and supervise the IRT. For reportable quantities, the Director of Risk Management will submit a written Spill Incident Report including the following:

- a. Unit/Activity name, location, and function;
- b. Commander's name and phone number;
- c. Name and phone number of the person making the report;
- d. Location, date and time of the spill, and date of spill discovery, if different;
- e. Time the spill was stopped;
- f. Type and estimated quantity of material;
- g. Any bodies of water or sanitary/storm sewer lines contaminated;
- h. Cause of the incident;
- i. Any injuries or property damage;
- j. Remedial actions taken; and
- k. Support personnel/agencies notified.

G-4b Identification of Hazardous Materials [40 CFR 264.56(b); OAR 340-104-0001, 340-101-0030]

There are three basic types of chemical agents stored at the UMCD: the nerve agents VX and GB (Sarin), which belong to a family of organophosphorous chemicals; and the blistering mustard agent HD. In addition, UMCD Storage Facilities in J-Block contain agent-related 3X wastes. Building 203, its associated Satellite Accumulation Sites, and the Building 31 90-day Storage Area serving the UMCD administrative support activities, contain only non-agent-related hazardous wastes (as discussed in Section D).

Chemical agents are stored in a variety of munitions and bulk items: rockets, land mines, projectiles, bombs, spray tanks, and ton containers in K-Block and ton containers in I-Block. All munitions are considered waste with the adoption of OAR 340-104-1201. More detailed descriptions of hazardous materials in UMCD Storage Facilities can be found in Section C.

The EC will be able to determine the nature of a release through knowledge of storage practices and the type and quantity of material stored in each storage area.

G-4c Hazard Assessment [40 CFR 264.56(c), 264.56(d); OAR 340-104-0001]

The IRFC/OSC is responsible for implementing a hazard assessment if potentially hazardous conditions are encountered. To assess the hazard of CA/Is, the IRFC/OSC will implement the procedures in the CAIRA Plan.

The IRFC/OSC will notify agencies outside the UMCD. A listing of outside agencies to be notified is contained in the UMCD CAIRA Plan. The memoranda of agreement/understanding that UMCD has with outside agencies are discussed in Section G-6.

To assist the IRFC/OSC in assessing the hazards involved in an emergency, the following information will be considered:

- Whether the nature of the hazard is known, unknown, or can be reasonably assumed;
- The degree of toxicity of the material;
- The presence of toxic, irritating, or asphyxiating gases, which may be present as a result of controlling a fire;
- Containment of a spill or lack of containment;
- Uncertainty as to the extent of migration of wastes or water used in fire control to either ground or surface waters; and
- Ability of response teams to contain the emergency.

To assess potential hazards, the Army Chemical Materials Agency (CMA) and its predecessor entities have developed and used a number of progressively more capable computer models. The computer model currently in use is D2PUFF. D2PUFF includes a computer program that models atmospheric diffusion, plume rise, liquid evaporation, and effect distances. Typical operating time is approximately two to five minutes for this program to develop the 1% lethality, no-deaths, and no-effects distances. The OC is manned at all times, and its staff uses the computer model most recently approved by the U.S. Army to determine downwind hazard distances. The staff also establishes appropriate notification and evacuation procedures for on-

post and notifies the off-post community. The Commander recommends protective actions to the off-post community.

G-4d UMCDF Control Procedures

The UMCDF Contingency Plan, included in the UMCDF RCRA Part B Permit, describes the flow of munitions and lethal chemical agents through the demilitarization process. These processes and control procedures are not applicable to the UMCD Storage Facilities or the UMCD Contingency Plan.

G-4d(1) Process Control Procedures

Refer to the UMCDF Contingency Plan for a description of the process control procedures. These procedures do not apply to activities in the UMCD Storage Facilities

G-4e Prevention of Recurrence or Spread of Fires, Explosions, or Releases

Fire and spill response actions are the primary means of preventing releases of hazardous waste resulting from the recurrence or spread of fires and explosions.

G-4e(1) Procedures for Process Equipment Emergencies

Fire and spill response actions and procedures to be used in the event of process equipment emergencies are described in the UMCDF Contingency Plan. These response actions are specific to process equipment emergencies at the UMCDF and are not directly applicable to the UMCD Storage Facilities. However, in the event of a process equipment emergency at the UMCDF, UMCD personnel may be requested to assist or participate in a response action. The procedure for UMCD/UMCDF emergency response interaction is detailed in Figure G-1-1.

**G-4e(2) Procedures for Chemical Agent Emergencies [40 CFR 264.52(a);
OAR 340-104-0001]**

Procedures for Chemical Agent Emergencies are discussed in detail in Section G-4a; procedures for Fire Protection are discussed in Section G-11; and Explosive and Fire Emergency Procedures are discussed in Section G-4e(3). These discussions include procedures to prevent recurrence or spread of fires, explosions, or releases. Additional information on chemical agent emergency procedures can be found in the CAIRA Plan.

G-4e(2)(a) Chemical Agent or Other Hazardous Chemical in the Unpack Area

Procedures to be used in the event that the agent alarm system indicates release of agent in the Chemical Unpack Area are detailed in the UMCDF Contingency Plan (Section G-4e(2) of that document). These response actions are specific to the UMCDF and are not directly applicable to the UMCD Storage Facilities. However, as discussed in Section G-4e(1) above, UMCD personnel may be requested to assist or participate in response activities.

G-4e(2)(b) Chemical Agent in the Observation Corridor (Not Applicable)

G-4e(2)(c) Chemical Agent in Demilitarization Protective Ensemble Support Area (Not Applicable)

G-4e(2)(d) Chemical Agent in the Toxic Maintenance Area (Not Applicable)

G-4e(2)(e) Chemical Agent in the Residue Handling Area (Not Applicable)

G-4e(2)(f) Major Chemical Agent Spill in Processing Areas of the Munitions Demilitarization Building (Not Applicable)

G-4e(2)(g) Chemical Agent Spill/Accident During Transportation

Procedures for transportation are discussed in Section D. Munitions and containers are in the custody of UMCD during transportation to UMCDF for disposal. Custody is transferred to UMCDF immediately prior to unloading of the Enhanced On-site Container (EONC) at UMCDF. For rejected munitions, UMCDF retains custody during transport until they are unloaded to UMCD Storage Facilities (K-Block or I-Block). Any release of chemical-agent that breaches containment will be considered a CA/I. Response to CA/Is during transportation will be the same as for any other CA/I, and are discussed in detail in Section G-4a of this Contingency Plan. Detailed loading, unloading, and transportation procedures are described in Section D-2.

G-4e(2)(h) Chemical Agent Leaks or Spills in the Container Handling Building (Not Applicable)

G-4e(2)(i) Sampling and Analysis

Any sampling and analysis following accidents or chemical agent spills will be conducted under the direction of the IRF or SRF Team.

G-4e(3) Explosive and Fire Emergency Procedures [40 CFR 264.56(e); OAR 340-104-0001]

G-4e(3)(a) General

In general, two types of explosive hazards are of concern in the UMCD:

- Explosives in the presence of chemical agent; or
- Explosives alone.

Some munitions in the UMCD Storage Facilities contain explosives (bursting, supplemental charges, and fuzes). A detonation of an explosively configured munition presents not only a hazard to personnel and property from the blast effects, but also a hazard from the spread of chemical agent.

Requirements for safely handling, transporting, and storing ammunition and explosives are described in the following regulations and standards:

- Federal Register, 53 FR, 8504-8507;
- AMCR 385-100, Safety Manual;
- MIL-STD-882-C, Military Standard System Safety Program Requirements;
- TM 9-1300-214, Military Explosives;
- DDESB, Explosive Safety Standard 6055;
- AR 385-64 and DA PAM 385-64 for explosives; and
- AR 385-61 and DA PAM 385-61 for chemical agents.

An explosion presents a fire hazard. Fires or explosions occurring in the UMCD Storage Facilities will be responded to by the IRF and the Fire/Rescue Team unless they are beyond the capabilities of these two units. For non-agent-related fires only, the Hermiston, Umatilla, and Irrigon Fire Departments may be called in to supplement on-site capabilities. Where chemical agents are involved, supplemental fire fighting units will be provided as part of the SRF. In accordance with AMCR 385-100, if a fire involves explosive materials or is supplying heat to explosives, or if the fire is so large that it cannot be extinguished with the equipment at hand, the personnel involved shall evacuate and seek safety. All fire response personnel will be provided with the appropriate protective clothing and safety equipment. Care will be taken to contain and recover any runoff of waste and water, foams, or chemicals applied to the fire. If possible, the area will be diked and/or any runoff drains blocked prior to using liquids to put out the fire. Once extinguished, the materials involved in the fire and surrounding area will be decontaminated (if necessary), recovered, and placed in containers for proper disposal.

In the event of a fire, the major effort is placed on preventing the fire from spreading to nearby areas. The following actions will be taken in indoor areas affected by a fire or explosion.

- Personnel will close fire doors in buildings.
- Work in all areas will be terminated immediately.
- The EC will be contacted.
- All personnel not actively involved in fighting the fire will clear the area. Non-emergency personnel will report to the designated assembly point for a head count.
- All injured persons will be removed, and qualified personnel will administer medical treatment.

If the EC decides that the chances of an explosion are high, the entire area within a 2000-foot radius of the source will be evacuated. All personnel will be trained in evacuation procedures and means of exit from their respective work areas (see Section G-7).

Until evacuation is signaled, personnel who are not in an affected area will stay in their respective work areas. Visitors will be cleared from the area and instructed to report to a designated assembly point. The EC will be responsible for all fire fighting efforts until help from outside sources arrives. Supervisors of unaffected areas will stay with their personnel and will be ready to evacuate and account for the persons under their supervision.

An "all clear" signal will be given when the fire has been extinguished, personnel are no longer endangered, and the EC, Director of Operations, and the UMCD Fire/Rescue Team have determined the emergency is past. All emergency equipment used in the emergency response will be cleaned and decontaminated.

Before operations are resumed, the IRFC/OSC will conduct an inspection of all safety equipment to ensure that the equipment is fit for future use. When the inspection is completed, the IRFC/OSC will notify the ODEQ, local authorities, EPA Regional Administrator, and Major Command that the response operations are satisfactorily completed. The IRFC/OSC will also

inform them of the status of the emergency equipment and that normal operations can resume (see Section G-8, "Required Reports").

G-4e(3)(b) Fire Reporting and Evacuation

Fire reporting procedures are discussed in Section G-4e(3). Evacuation procedures are discussed in Section G-7.

G-4e(3)(c) Collection, Storage, and Treatment of Released Material [40 CFR 264.56(g); OAR 340-104-0001]

In the event that wastes are spilled into or otherwise exposed to water (such as firefighting water), sorbent materials and/or containment berms will be used. In this case, sorbent materials will be placed directly on the waste to prevent further spread and to aid in recovery. Berms of earthen or sorbent materials may be used to contain larger water-borne spills and will be constructed downstream of the leading edge. Any contaminated sorbents or earthen materials will be cleaned up and placed in drums for proper storage or disposal. No contaminated materials above detectable levels will be left at the spill site.

Immediately after release, the IRFC/OSC (agent release), or the Fire Department Chief/ Support Services Chief (non-agent-related spills) arranges for treatment, storage, or disposal of recovered waste, contaminated soil, surface water, or any other contaminated material. In general, the recovered wastes and contaminated materials will be characterized, placed in drums, and stored in appropriate storage areas (K-Block, I-Block, J-Block, or HWS Facility).

G-4e(4) Spills of Explosives in the Munitions Demilitarization Building (Not Applicable)

G-4e(4)(a) Detonation Outside the Munitions Demilitarization Building (Not Applicable)

G-4e(4)(b) Detonation in the Container Handling Building, Munitions Demilitarization Building Unpack Area, and Explosive Containment Room Vestibule (Not Applicable)

G-4e(4)(c) Detonation in the Explosive Containment Rooms (Not Applicable)

G-4e(4)(d) Detonation in the Deactivation Furnace System (Not Applicable)

G-4e(5) Industrial Accident Procedure

Industrial accident procedures are discussed in Section G-4a and spill plans.

G-4e(5)(a) Notification

Notification procedures for CA/Is at UMCD are discussed in Appendix 3 of the CAIRA Plan, and are briefly discussed in Section G-4a of this Contingency Plan. For all releases of hazardous materials at the UMCD, a specific notification sequence for Emergency Response personnel has been established. Emergency contact telephone numbers are shown in Table G-4-1.

Table G-4-1: Emergency Contact Phone Numbers

Office	Phone
Operations Center	(541) 564-5230
Commander, UMCD	(541) 564-5200
Fire Department	(541) 564-5210
Risk Management	(541) 564-5252
Occupational Health Clinic	(541) 564-5228

G-4e(5)(b) Response

Response to all CA/Is at the UMCD Storage Facilities will follow procedures discussed in Section G-4a.

G-4e(5)(c) Transportation

Industrial accidents during transportation are not applicable to storage activities. Response to CA/Is associated with transportation is discussed in Subsection G-4e(2)(g).

G-4e(5)(d) UMCDF Medical Emergency Equipment List (Not Applicable)

**G-4f Storage and Treatment of Released Materials [40 CFR 264.56(g);
OAR 340-104-0001]**

Spilled or contaminated materials resulting from a hazardous waste accident or incident will be collected immediately, characterized, and placed in K-Block (1X) or J-Block (3X) storage igloos, or in Building 203 (non-agent-related contaminated residues), until final disposal. For spills inside storage igloos or buildings, the spill area will be mitigated with absorbent material or vacuumed and decontaminated and air monitored. If positive results are obtained, the decontamination procedure will be performed until a negative result is obtained. The spilled chemical and absorbent material will be contained and collected for disposal.

For outdoor spills or releases, personnel wearing the appropriate personal protective clothing and equipment will attempt to contain the spill and prevent further leakage at the source of the spill. Decontamination solution will be added to the contained chemical. Air in the spill area will be monitored and the substrate will be analyzed to determine whether all of the contamination has been removed. This procedure will be performed until negative results are obtained.

Berms of earthen or sorbent materials may be used to contain large water-borne spills and will be constructed downstream of the leading edge of the spill. Any contaminated sorbents or earthen materials will be cleaned up and placed in drums for proper storage or disposal. No contaminated materials will be left at the spill site.

G-4g Incompatible Waste [40 CFR 264.56(h)(1); OAR 340-104-0001]

At no time during a response to an accident or incident shall incompatible materials be stored or transported together. Incompatible materials will remain segregated; storage/disposal will occur only after the cleanup operations have been completed.

G-4h Post-Emergency Equipment Maintenance [40 CFR 264.56(h)(2), 264.56(i); OAR 340-104-0001]

Maintenance Safety Procedures described in Section G-3e will be followed. After an emergency event, all emergency equipment that was used will either be cleaned so that it is fit for reuse, or it will be replaced. The equipment and protective clothing will be washed with the proper decontamination solution or discarded and replaced with new equipment or clothing. Before operations resume, an inspection of all safety equipment will be conducted by the Chemical Operations Director or his designee, to ensure that all equipment is fit for future use. When the inspection is completed, the IRFC/OSC will notify the EPA Regional Administrator, state and local authorities, and Major Command that the response operations have been satisfactorily completed and that all waste materials have been stored or disposed in an appropriate manner. He/she will also inform them of the status of the emergency equipment and that normal operations will be resuming.

G-4i Container Spills and Leakage [40 CFR 264.171; OAR 340-104-0001]

All chemical agent leaks are reported to the OC. Upon notification, the Commander or OC staff will determine if the leak is a CA/I. Procedures for CA/Is are discussed in Section G-4 and the CAIRA Plan. Routine leakers discovered during inspection/igloo monitoring are not considered CA/Is.

Response to non-chemical agent container spills or leaks are discussed in the SPCC and ISC Plan. In the event of a non-agent-related spill or release, the OC will be notified by radio and/or telephone. If the spill involves a reportable quantity, a written spill incident report will be prepared and provided to the appropriate agencies.

The first concern in the event of a non-agent-related chemical spill or release is the health and safety of personnel. Health and safety protection is ensured through PPE and/or evacuation of personnel from the spill area. The secondary concern in the event of a spill is containment. For spills that are within the capability of UMCD staff to correct (Level I Spills), the Chief, Fire

Department will direct the response. For spills beyond the capability of UMCD staff to correct, the Chief, Support Services will coordinate the response and enlist the required off-post response personnel. Specific clean-up procedures for non-agent-related chemicals likely to be spilled at UMCD Storage Facilities are shown in the tables in Attachment G-1.

The third phase of a spill response is restoration of the spill site, under the direction of the Directorate of Industrial Risk Management. Remedial actions will be coordinated with appropriate regulatory agencies.

A post-spill review or briefing will be scheduled to evaluate the spill response and determine any corrective actions required for procedures to respond to future spills. Finally, spill response equipment and procedures will be revised and updated, as necessary, based upon information from a completed spill response.

G-4j Tank Spills and Leakage [40 CFR 264.194(c)(2); OAR 340-104-0001] (Not Applicable)

G-4k Surface Impoundments Spills and Leakage (Not Applicable)

G-5 Equipment

This section describes the emergency response equipment available on-site. Specifically, this section lists emergency equipment available at the UMCD Storage Facilities, gives a physical description of the equipment, gives a description of the capability of the equipment, and states where a current list of equipment may be found on-site. Subsection G-5a is titled Protective Equipment, Facilities, and Supplies. This section covers all emergency equipment other than protective clothing which is covered in Subsection G-5b.

The RCRA permit application requirements for describing emergency equipment are found in 40 CFR 264.52 (e), which requires a current list of all requisite emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems

[internal and external], and decontamination equipment), physical description and location of each item on the list, and a brief outline of the capabilities of each.

G-5a Protective Equipment, Facilities, and Supplies

Table G-5-1 lists all emergency response equipment available on-site in tabular form. It provides a physical description of each type of equipment, a description of equipment capabilities, and the location of the equipment or an equipment list/inventory.

G-5b Protective Clothing Ensembles

This section presents a discussion of the protective clothing worn when responding to emergencies in the UMCD Storage Facilities. Protective clothing requirements and dressing/undressing procedures are also addressed.

G-5b(1) Definition

For accident/incidents involving chemical agent, the same PPE that is worn during normal operations may be worn during emergency response. A description and capability summary of this PPE is described in local SOPs in accordance with Department of the Army Pamphlet (DA PAM) 385-61.

Other types of PPE are maintained solely for response to non-agent-related hazardous material releases. This PPE includes OSHA Level A suits and oversuits (splash suits), Level B suits, Level C suits, self-contained breathing apparatuses, full-face respirators, chemical resistant gloves (such as neoprene or latex), overshoes, and helmets. (Note that the Levels A, B, and C mentioned here are the OSHA/NIOSH-defined levels, which are different than the Levels A, B, and C used by the Army.) This PPE is worn in ensembles consistent with the OSHA/NIOSH levels of protection. For example, when Level A protection is needed, the various PPE components required by that level are worn.

Table G-5-1: Protective Equipment, Facilities, and Supplies

PROCESS			
Equipment	Physical Description	Capability	Location/List
G5a(1) Personnel Protection			
Masks and Protective Clothing	See DA PAM 385-61 for chemical agent PPE and 29 CFR 1910.120(g) for non-agent-related PPE.	Respiratory and dermal protection against chemical agent vapors and/or liquid, and other hazardous chemicals/conditions in UMCD Storage Facilities.	List/inventory of chemical agent PPE maintained by Chemical Operations Directorate; list/inventory of non-agent-related PPE maintained by Fire Chief.
G-5a(2) Chemical Flush – Eyes and/or Skin			
Portable Eyewash Station	Portable eyewash station with dilute <i>Eyesaline</i> solution. Flow started by removing a strap – operates by gravity flow.	Flush chemicals from eyes following exposure/spill with a pH 7.4 saline solution.	List/inventory maintained by Chemical Operations Directorate.
Building 203 Eyewash/Showers Station	Shower/eyewash in combination connected to 1.25-in. potable water supply pipe.	Flush chemicals from eyes and/or skin with water following accidental exposure.	Adjacent to Building 203 Equipment Room (northwest corner of HWS Facility)
G-5a(3) Agent Detection			
MINICAM	Air sampler, pre-concentrator tube (PCT), dust filter, gas chromatograph (GC) (with capillary column), and flame photometric detector.	Detects GB, VX, and HD to STEL. Can only analyze one agent at a time. Monitoring results in 5 min. for HD and GB, and 12 min. for VX.	Record kept in the Laboratory Support Division Chief's property book; location tracked on a white board in laboratory.
Detector Kit (composed of detector tubes, enzyme detector tickets, and M8 paper)	<u>Detector tube</u> : Tube filled with a reagent that changes color in the presence of chemical agent. Aspirator bulb is used to draw air through tube.	Gross-level detection of agent concentrations (1 mg/m ³). Results in approximately 2 min.	Stored on M12A1 decontamination trucks, in Building 419, and in Building S30.
	<u>Enzyme detector ticket</u> : A ticket that, once treated with a reagent, turns blue in the absence of chemical agent. In the presence of agent, the ticket turns light red-orange or shows no color change. Aspirator bulb is used to draw air across ticket.	Gross level detection of GB and VX (0.1 mg/m ³). Results in approximately 3 min.	

PROCESS			
Equipment	Physical Description	Capability	Location/List
	<u>M8 paper</u> : An off-white paper that has been treated with a combination of dyes which produce a distinctive color change when in contact with liquid agent.	Used on liquids. Provides an immediate positive or negative confirmation of the presence of agent. Cannot determine concentration.	
Real-Time Analytical Platform (RTAP)	Vehicle-mounted unit used for sampling and analysis of potentially agent-contaminated air. Involves sampling via Depot Area Air Monitoring System (DAAMS), sorption, and analysis via GC.	Detects GB, VX, and HD to AEL. Monitoring results in approximately 15 min.	Record kept in the Laboratory Support Division Chief's property book; location tracked on a white board in laboratory.
M8A1 Alarms	Portable alarm that uses a M43A1 detector unit and an M42 alarm unit. M43A1 unit uses an alpha radiation source and electrochemical cell to detect chemical agent. M42 alarm unit has a horn and indicator lamp which activate when agent is detected.	Detects IDLH levels of GB, and 20 x IDLH levels for VX. Monitoring results in 1-2 min.	Record kept in the Laboratory Support Division Chief's property book.
Leak-tec CG Tracker	A hand-held unit that detects over 100 gases, including all combustible gases and many toxic gases.	Able to detect all applicable gases well below their lower explosive limit, and most gases below their OSHA ceilings.	List/inventory maintained by Fire Chief.
Model G Sniffer	A two-person unit—one to hold and direct the sniffing wand, the other to hold the main unit and draw air into it using a bulb.	Detects combustible gas concentrations to the lower explosive limit.	List/inventory maintained by Fire Chief.
G-5a(4) Decontamination Personnel and Equipment			
Decontamination solutions for GB contamination/spills	Sodium hydroxide (NaOH) for equipment; 5% sodium hypochlorite (NaOCl) for fabric, clothing, and skin.	Degrades/destroys agent on contact (immediate for NaOH, 5 minutes for NaOCl).	List/inventory maintained by Chemical Operations Directorate
Decontamination solutions for VX contamination/spills	Calcium hypochlorite (Ca(OCl) ₂ or HTH) for equipment; 5% sodium hypochlorite (NaOCl) for fabric, clothing, and skin.	Degrades/destroys agent on contact (5 minutes).	List/inventory maintained by Chemical Operations Directorate

PROCESS			
Equipment	Physical Description	Capability	Location/List
Decontamination solutions for HD contamination/spills	Calcium hypochlorite (Ca(OCl) ₂ or HTH) for equipment; 5% sodium hypochlorite (NaOCl) for fabric, clothing, and skin.	Degrades/destroys agent on contact (5 minutes).	List/inventory maintained by Chemical Operations Directorate
Personnel Decontamination Station	Fully self-contained trailer with separate rooms used for specific decontamination purposes.	Extensive decontamination capabilities. In the case of chemical accident/incidents, used for processing personnel from the hot line to the clean area.	List maintained by the Equipment Manager.
M12A1 Decontamination Trucks	Nine-ton trucks with M12A1 decontamination systems mounted in the back. Systems are composed of a tank for mixing decontamination solutions, a portable water heater, and a pump. 20' X 12' collapsible pools contain the spent decontamination solution.	Provides decontamination capabilities in virtually any location. Tank has a working capacity of 447 gallons. Discharge rate is 25 gpm (one spray gun) or 50 gpm (two spray guns).	List maintained by the Equipment Manager.
Personnel Decontamination Shower	Portable decontamination shower that can be connected to either a fire hydrant or water tanker. Constructed of PVC pipe with 4 shower heads and 2 shower wands.	Flush chemicals from PPE or skin with water.	Located on the hazardous materials response truck and trailer at the UMCD Fire Station.
G-5a(5) Emergency Vehicles			
Ambulance	Standard ambulance.	Fully outfitted for life support and patient transport activities.	Located at the Health Clinic.
Patient Transport Vehicle	Vans which have been converted to carry patients.	Basic life support and patient transport activities (vehicles have cots).	Located at the Health Clinic.
G-5a(6) Communications			
Alarm System	Sirens and public address speakers are located on poles throughout the UMCD. Backup siren and system located on poles throughout the UMCD.	The sirens can be sounded individually, in any combination, and all at the same time. The public address system can broadcast recorded or live messages. Sirens can be sounded individually or all at the same time.	List maintained by the Chief of the Chemical Preparedness Division. List maintained by the Fire Chief.

PROCESS			
Equipment	Physical Description	Capability	Location/List
Telephone	A phone jack exists on each K-Block igloo. Crews carry portable phones that are compatible with the jacks.	Allows communication with the Operations Center, supervisor, or other entity in an emergency.	Located outside each K-Block igloo.
	Cell phones.	Cell phones are carried by Storage Facility work crews for communication backup only. Standard telephones and radios are the preferred methods of communication.	Record of cell phone custody maintained in each supervisor's property book.
	Ring-down phone (telephone line for emergency purposes only).	Using a single phone in the Operations Center and dedicated phones in the key UMCD personnel offices, emergency information can be transmitted to a group of people simultaneously.	List maintained by the Chief of the Chemical Preparedness Division.
	"All-call" line which uses microwave transmissions.	Allows communication with many off-post emergency response agencies at one time.	List maintained by the Chief of the Chemical Preparedness Division
	Telephone line with conference bridge.	Allows communication with many off-post emergency response agencies at one time using a conference call format.	List maintained by the Chief of the Chemical Preparedness Division.
Radio	Two-way hand-held and desk-top radios.	All crews carry radios. Radio traffic is monitored by strategic UMCD personnel. Because all radios usually use the same channel, a message can be distributed quickly.	Record of radio custody maintained in each supervisor's property book.
Computer	Wide-area network.	Provides communication capabilities with off-site emergency assistance organizations. Communication made via microwave transmissions.	List maintained by the Chief of the Chemical Preparedness Division.
G-5a(7) Emergency Equipment Storage and Inspection Stations			
Storage and Inspection Stations	The UMCD Storage Facilities do not contain specific emergency equipment storage and inspection stations (these stations are at the UMCDF, and are discussed in the UMCDF RCRA Part B Permit). Storage locations for emergency equipment in UMCD Storage Facilities are as described in this table.		

PROCESS			
Equipment	Physical Description	Capability	Location/List
G-5a(8) Fire Extinguishing			
Fire Trucks	Pumper	1000 gpm	All located at the UMCD Fire Station
	Pumper	750 gpm	
	1-ton pumper	250 gpm	
	Brush truck	200-gallon capacity; 60-gpm pump	
Fire hydrants	Fire hydrants located as shown in Figure B-1-2	Varying rates	List of hydrants maintained by the Fire Chief.
Building 203 Fire Sprinklers	Automatic fire sprinklers	Sprinklers cover entire building, providing fire control in the Hazardous Waste Storage (HWS) Facility and surrounding area	Located in strategic locations throughout Building 203.
Portable Fire Extinguishers	Water fire extinguishers	For type A fires (wood, paper, and other standard combustibles)	Lists for all three types of extinguishers are maintained by the Fire Chief.
	Dry chemical fire extinguishers	Depending on the type of chemical used, may be used for type A, B (liquids and grease), and C (electrical equipment) fires	
	Carbon dioxide fire extinguishers	For type B and C fires	
G-5a(9) Non-Agent-Related Spill Response			
Hazardous Materials Emergency Response Truck and Trailer	Contains all equipment used to respond to a non-agent-related hazardous material spill, including: PPE, response kits, absorbent materials, assorted tools, and reference guides.	Primary supply used when initially responding to non-agent-related hazardous material spills. Provides capability to aggressively stop the release by plugging, patching, etc., and provides ability to contain and clean up spills.	List/inventory maintained by the Fire Chief.
Building 203 Emergency Response Equipment	Aggressive spill kit, non-aggressive spill kit, PPE, respiratory protection, empty drums, and fire extinguisher.	Provides capability to stop minor spills, and to contain and clean up larger spills.	Located in the Equipment Room next to the HWS Facility.
Equipment in the Decontamination Reduction Trailer	Absorbent material, step pans, empty drums, rags, and plastic bags.	Basic emergency equipment which provides the ability to respond defensively to a hazardous material release.	Located in the Decontamination Reduction Trailer in K-Block.

PROCESS			
Equipment	Physical Description	Capability	Location/List
G-5a(10) Emergency Support			
Heavy Equipment	Bulldozer, Caterpillar-type	For spill cleanup, brushfire control, general grading.	List maintained by Equipment Manager
	Front end loader, scoop	1 1/2 yd ³ capacity; for spill cleanup. Outfitted with a 3,000-psi Cascade air system, which will provide breathing air for 4 to 8 hours depending on the respiration rate of the operator. Allows operation of the vehicle in a contaminated area or during a chemical agent incident.	List maintained by Equipment Manager
	Backhoe; wheeled-type tractor mounted; also has front-end scoop.	For ditch digging and excavation. Outfitted with a 3,000-psi Cascade air system, which will provide breathing air for 4 to 8 hours depending on the respiration rate of the operator. Allows operation of the vehicle in a contaminated area or during a chemical agent incident.	List maintained by Equipment Manager
	Distributor, water tank (mounted on a trailer)	3,000-gallon capacity	List maintained by Equipment Manager
	Distributor, water tank (mounted on a trailer)	500-gallon capacity	List maintained by Equipment Manager
	Auger; tractor-mounted	Capable of boring 10-inch holes	List maintained by Equipment Manager
	Road grader with 12-foot blade	For road grading, ditch cleaning, etc.	List maintained by Equipment Manager
	Crane, hydraulic	40-ton capacity; used for major item handling. May be used on rough terrain.	List maintained by Equipment Manager
	Crane, warehouse	8-ton capacity; used for small lifting jobs on paved surfaces only.	List maintained by Equipment Manager
	Dump truck	12- to 14-yd ³ capacity	List maintained by Equipment Manager
	Dump truck	5-yd ³ capacity	List maintained by Equipment Manager
	Pickup trucks	General purpose	List maintained by Equipment Manager
	Earth scraper	18-yd ³ capacity	List maintained by Equipment Manager
	Tractor	For general pushing and pulling tasks	List maintained by Equipment Manager

PROCESS			
Equipment	Physical Description	Capability	Location/List
	School buses	For evacuating personnel	List maintained by Equipment Manager
	Vans	For evacuating personnel	List maintained by Equipment Manager
Miscellaneous Equipment	Generator, portable	5 kW; used in K-Block to provide power to the filter units	List maintained by Equipment Manager
	Concrete cutters, self-propelled and push-type	14-inch capability	List maintained by Equipment Manager
	Light sets	For night operations	List maintained by Equipment Manager
	Filter unit, 1000 and 2000 cfm; attaches directly to igloo air vents.	For removing potentially agent-contaminated air from igloos. The air is pulled through a series of filters which remove chemical agent gases as well as particulates. Filters have a minimum efficiency of 99.9%.	List maintained by Equipment Manager
	Filter unit, M6A1; attaches directly to igloo air vents.	For removing potentially agent-contaminated air from igloos. Two M6A1 filter units, operating in series, remove chemical gases and particulates to provide 300 cfm of purified air. Each unit contains two 150-cfm particulate and gas filters fitted in parallel.	List maintained by Equipment Manager.
	Standard airlock; 10'1 x 10'h x 9'w, vinyl w/steel frame, attaches directly over door to igloo face, single chamber.	To allow personnel entry during periods when high agent concentrations are detected inside the igloo, to prevent agent migration outside the igloo when the door is opened. Used w/powerful filters. Space for personnel decon.	List/inventory maintained by Chemical Operations Directorate
	Inflatable Airlock; 16'1 x 10'h x 10'w, vinyl w/aluminum frame, attached floor, two chambers	To allow personnel and forklift entry during periods when high agent concentrations are detected inside the igloo, to prevent agent migration outside the igloo when the door is opened. Multi-chambered, allowing for decontamination of personnel, equipment and munitions. Used w/powerful filters	List/inventory maintained by Chemical Operations Directorate

G-5b(2) Protective Clothing Requirements by Area and Function

For chemical agent accidents/incidents, the types of protective clothing ensembles worn are based upon the concentration of agent in the air (determined by air monitoring) or the activity to be performed. Section D-1f (see Table D-1-3, Airborne Concentration Criteria for PPE Levels), describes the conditions under which particular levels of protective clothing are required.

For non-agent-related hazardous material emergencies, the appropriate level of PPE depends upon the hazards presented by the material. If the material is unknown, PPE consistent with Level A protection (the most protective) is automatically worn. The North America Emergency Response Guidebook provides initial guidance on the level of PPE needed to respond to specific hazardous material releases. Further guidance is obtained using the resources in the Guidebook, such as Chemtrec (a national hazardous material response hot-line), or the contact and hot-line numbers provided by the State of Oregon.

G-5b(3) Protective Clothing Location and Dressing Procedures

Protective Clothing Location

The stockpile of protective clothing for chemical agent environments is kept at the Chemical Protective Equipment (CPE) area. ******Information in this paragraph is FOUO and has been removed from the redacted document.****** Building 655 provides change house facilities supporting all activities within K-Block.

Protective clothing for non-agent-related hazardous material emergencies is kept on the hazardous material response truck and trailer at the UMCD fire station. Basic response equipment, consisting of goggles, face shields, coveralls, rubber gloves, rubber boots, full-face respirators, and dust protective masks, is kept in the Equipment Room next to the HWS Facility in Building 203. PPE is donned at the emergency site before entering any contaminated areas.

Dressing Procedures

Procedures for donning PPE used during chemical emergencies are presented in TM 10-277, while general guidelines are given in local SOPs. Procedures for use of masks are provided in DA PAM 385-61 and TM 3-4240-204-12&P. Personnel inspect PPE for holes, tears, weakening of seams, or excessive wear prior to dressing. Assistance with donning the impermeable PPE is provided by a co-worker or supervisor. The assistant ensures that PPE has been correctly donned and that effective closure has been made.

The PPE worn while responding to a non-agent-related hazardous material release is donned according to the manufacturer's specifications and the procedures outlined in the EPA's Hazardous Materials Incident Response Training Program manual. All responders receive instruction on the proper donning procedures during HAZWOPER training. When donning the PPE, assistance is provided by another trained individual, who ensures that the equipment has been assembled properly.

G-5b(4) Undress Procedure

Following a CA/I, the removal of contaminated PPE is performed in the Personnel Decontamination Station (PDS) at the hot line. Procedures for the doffing of contaminated PPE and the use of the PDS are provided in local SOPs. Assistance during the initial decontamination stage within the PDS is provided by another individual. Extreme caution is taken while doffing the PPE to prevent exposure of personnel to chemical agent. Air monitoring is performed upon completion of the process to confirm the absence of agent.

Undressing procedures for PPE used during non-agent-related hazardous material releases are established by manufacturer instruction manuals and the EPA's Hazardous Materials Incident Response Training Program manual. These undressing procedures are similar to those used during a chemical emergency. Decontamination and removal of the PPE occurs at the hot line. Depending on the substance and the amount of contamination, decontamination can be performed using the decontamination shower on the hazardous material response truck and

trailer, the M12A1 decontamination apparatus, or the PDS. Care is taken during the PPE removal to ensure that personnel are not exposed to any hazardous material remaining on the PPE. Training on the proper doffing techniques is provided to all responder personnel. Assistance is provided during decontamination and PPE removal.

G-6 Memoranda of Agreement/Understanding [40 CFR 264.52(c), 264.37, 264.53(b); OAR 340-104-0001]

As required under 40 CFR 264.52(c), the U.S. Army has described arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency procedures. These coordination agreements include the following entities listed below:

- Madigan Army Medical Center - Tacoma, Washington;
- Kadlec Medical Center - Richland, Washington;
- U.S. Army Health Clinic - Hermiston, Oregon;
- Consolidated Good Shepherd Hospital - Hermiston, Oregon;
- St. Anthony Hospital - Pendleton, Oregon;
- Umatilla County Sheriff Department;
- City of Irrigon;
- City of Hermiston;
- City of Umatilla;
- Oregon State Police;
- Morrow County Sheriff;
- Umatilla Rural Fire District;
- Boardman Rural Fire District;
- Hermiston Rural Fire District;
- Irrigon Rural Fire District; and
- Hermiston City Fire District.

Chemical Agent Antidotes have been provided to the off-post medical community and are accounted for under the applicable State Health Rules.

G-7 UMCD Evacuation Plan [40 CFR 264.52(f); OAR 340-104-0001]

Procedures for evacuation of UMCD in the event of a CA/I are described in the CAIRA Plan. Procedures for evacuation in the event of a CA/I at the UMCD are discussed in the UMCD RCRA Part B Permit Application. In the event that evacuation from the UMCD Storage Facilities or the UMCD is necessary, the EC for each facility will communicate (see Figure G-1-1, UMCD/UMCD Response Coordination Plan) to coordinate the individual evacuation plans. Generally, in the event of a CA/I, only non-essential personnel will be evacuated or sheltered in place. Facility staff that are part of the IRF will typically remain on-site to execute the CAIRA Plan and take necessary emergency response and corrective actions under the direction of the IRFC/OSC. Figure G-7-1, Attachment G-2, shows evacuation routes for UMCD Storage Facilities.

Phase I—Readiness. The Chief of Chemical Preparedness Division and/or Chemical Surety Officer will ensure that non-essential personnel understand and are prepared to respond to evacuation or shelter-in-place orders, and will supervise quarterly preparedness drills. Each directorate is responsible for notifying their non-essential and resident contractor personnel and they report to the Evacuation Assembly Area (EAA) located in Building 32. The Contracting Officers Representative (COR) may direct the contractor to implement evacuation procedures.

Phase II—Response. The Evacuation Coordinator will establish an EAA in Building 11 (or alternate location at the discretion of the management for contractors), receive non-essential personnel with no off-site transportation, establish personnel accountability, and report EAA status to the OC via telephone. The HAO will assess the CA/I and advise the IRFC/OSC on whether to evacuate or shelter-in-place. Instructions for evacuation or sheltering in place will be provided verbally over the Depot public address system and door-to-door (UMCD residents). As soon as the IRFC/OSC makes the decision to evacuate or shelter-in-place, the Hazard Analysis Officer will execute the required plan. Until such time, all non-essential personnel (potential

evacuees) are not to exit the post. Upon orders to evacuate, designated evacuation drivers will proceed to the motorpool, draw their vehicles, and report to the Evacuation Coordinator at the EAA (Buildings 11 or 32). Facility evacuation routes are presented in Figure G-7-1, Attachment G-2.

G-7a Evacuation of the Munition Demilitarization Building (Not Applicable)

G-7b Evacuation of the UMCDF (Not Applicable)

G-8 Required Reports [40 CFR 264.56(j); OAR 340-104-0001]

After an accident/incident has occurred and the cleanup has been completed, the IRFC/OSC will comply with the reporting requirements of OAR Chapter 340, Division 108. The IRFC/OSC will notify the Oregon Department of Environmental Quality (ODEQ) and the EPA Regional Administrator that the following conditions have been met before operations resume.

- No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed.
- Emergency equipment listed in the Contingency Plan is cleaned, decontaminated or replaced, and fit for its intended use before operations are resumed.

In addition to notifying the ODEQ within 24 hours of an incident, the IRFC/OSC will submit a written report on the incident to the Director of the ODEQ and the EPA Regional Administrator within 15 days of the incident. The report will include the information designated on Table G-8-1, Incident Report.

These notification procedures are required for any release of hazardous material or waste as a result of chemical agent, equipment, or explosive emergencies; storage structure failure; spills; accidents; or incidents.

Table G-8-1: Incident Report

1.	Location of incident and specific areas affected.
2.	Name of unit and person in charge of the UMCD.
3.	Type of material involved in incident.
4.	Amount of material involved in incident.
5.	Date and time of incident or time of discovery.
6.	Description of building or area at which incident occurred. a. Storage or handling capacity of building or area. b. Normal daily/weekly throughput.
7.	Cause of incident, including a failure analysis of system in which the failure occurred. Description of any unique problems encountered.
8.	Post-incident corrective actions, including resources committed, attempts to reclaim released substance, and/or countermeasures taken.
9.	Additional preventive measures taken or contemplated to minimize the possibility of a recurrence of an incident.
10.	The extent of injuries, if any.
11.	An assessment of actual or potential hazard to human health and environment, where this is applicable.
12.	Description of any emergency actions taken to minimize threat to human health and the environment.
13.	Estimated quantity and disposition of recovered material that resulted from the incident.
14.	Any other information necessary to fully evaluate the situation and to develop an appropriate course of action.
15.	Name and address of individual reporting.
16.	If the incident is not corrected, the anticipated time that it is expected to continue and the steps taken or planned to reduce, or eliminate, the incident.

ATTACHMENT G-1
SPILL RESPONSE TABLES

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TABLE 1

SPILL RESPONSE PROCEDURES FOR BASES

Containment	<ul style="list-style-type: none"> Enclose the spilled material with a dike of a solid absorbent such as sand, sawdust, clay, or vermiculite.
Collection	<p><u>Collection of Liquids:</u></p> <ul style="list-style-type: none"> Neutralize with 6N hydrochloric acid (one part water to one part HCl), until the pH is in the 6 to 8 range. Use pH paper to test for pH. Transfer material into a properly labeled drum by pumping or by collecting with an absorbent and shoveling into drums. <p><u>Collection of Solids:</u></p> <ul style="list-style-type: none"> Containerize as much as possible into a properly labeled drum, by scooping or shoveling. Add water to the remaining material and neutralize with 6N HCl until the pH is between 6 and 8. The resulting liquid is then collected by pumping or absorption by solids and shoveled into a drum.
Personal Protective Equipment	<ul style="list-style-type: none"> See posted instructions for specific waste streams.
Decontamination	<ul style="list-style-type: none"> Decontaminate the spill area, tools, and personal protective equipment, etc., with 6N HCl solution (or equivalent) until the resulting pH is between 6 and 8.

Note: These tables are from the UMCD Spill Prevention Control and Countermeasures/ Installation Spill Contingency Plan.

TABLE 2
SPILL RESPONSE PROCEDURES FOR ACIDS

Containment	<ul style="list-style-type: none">• Contain the spill with a dike or clay absorbent or other noncombustible absorbent.
Collection	<ul style="list-style-type: none">• Neutralize acid spill by adding sodium bicarbonate to the liquid acid spill until it is completely covered. Test with Ph paper until pH is between 6 and 8. If the acid is in solid or pellet form, containerize by direct pickup into a properly labeled drum. Take up liquid by adding sand or other noncombustible absorbent and deposit into properly labeled drum.
Personal Protective Equipment	<ul style="list-style-type: none">• See posted instructions for specific waste streams.
Decontamination	<ul style="list-style-type: none">• Decontaminate the spill area, tools, and personal protective equipment, etc., with sodium bicarbonate (or equivalent) until the resulting pH is between 6 and 8.

Note: These tables are from the UMCD Spill Prevention Control and Countermeasures/
Installation Spill Contingency Plan.

TABLE 3

SPILL RESPONSE PROCEDURES FOR OXIDIZERS AND ORGANIC PEROXIDES

Containment	<ul style="list-style-type: none">• Contain or enclose the spill by diking with clay, sand, talc, or other noncombustible material.
Collection	<ul style="list-style-type: none">• Chemical treatment (neutralization): Cover the spill with sodium bisulfite, which is a weak reducing agent. A reaction promoter such as sulfuric acid (28.4 ml concentrated HCl diluted to one liter) may be needed to hasten the reaction.• Add more noncombustible absorbent until the oxidizer is completely absorbed. Scoop up the absorbent with a non-sparking shovel. Place the waste oxidizer into drum of the proper type and labeling.
Personal Protective Equipment	<ul style="list-style-type: none">• See posted instructions for specific waste streams.
Decontamination	<ul style="list-style-type: none">• Wash with soap and water.

Note: These tables are from the UMCD Spill Prevention Control and Countermeasures/ Installation Spill Contingency Plan.

TABLE 4
SPILL RESPONSE PROCEDURES FOR NONFLAMMABLE SOLVENTS

Containment	<ul style="list-style-type: none">• Contain the spilled material with a dike made from noncombustible absorbent material (sand, earth, vermiculite, etc.).
Collection	<ul style="list-style-type: none">• Collect spilled material by taking up with sand or other noncombustible absorbent and place into properly labeled drum. Where liquid is pooled deeply, air operated diaphragm pumps may be used for collection.
Personal Protective Equipment	<ul style="list-style-type: none">• See posted instructions for specific waste streams.
Decontamination	<ul style="list-style-type: none">• Ground Surfaces: Remove earth two inches below depth of penetration.• Impervious Surfaces: Let trace amounts evaporate.• Tools and Equipment: Clean tools with solvent; wash clothing with soap and water.

Note: These tables are from the UMCD Spill Prevention Control and Countermeasures/ Installation Spill Contingency Plan.

TABLE 5
SPILL RESPONSE PROCEDURES FOR PESTICIDES

Containment	<ul style="list-style-type: none">• Contain spilled material with a dike of absorbent (sawdust, clay, vermiculite, etc.).
Collection	<ul style="list-style-type: none">• Neutralize spilled material by following the procedures found on the container label.• Add more absorbent if necessary to collect liquids. Scoop up absorbent or dry solid material and place into a drum or metal can with a plastic liner.
Personal Protective Equipment	<ul style="list-style-type: none">• See posted instructions for specific waste streams.
Decontamination	<ul style="list-style-type: none">• Follow procedure found on product label.

Note: These tables are from the UMCD Spill Prevention Control and Countermeasures/ Installation Spill Contingency Plan.

TABLE 6
SPILL RESPONSE PROCEDURES FOR PAINT

Containment	<ul style="list-style-type: none">• Contain or enclose the spilled material with an absorbent such as sand, earth, clay, vermiculite, etc.
Collection	<ul style="list-style-type: none">• If paint is in liquid form, add sufficient extra absorbent to absorb all of the liquid. Shovel or scoop the material into the proper type labeled container. If the material is dry or solidified, gather or shovel the material into the proper type labeled container.
Personal Protective Equipment	<ul style="list-style-type: none">• See posted instructions for specific waste streams.
Decontamination	<ul style="list-style-type: none">• Decontaminate the spill area by removing two inches of earth below the extent of the spill into the ground. Spill sites inside buildings and on impervious surfaces will be cleaned as completely as practicable using sorbents.

Note: These tables are from the UMCD Spill Prevention Control and Countermeasures/ Installation Spill Contingency Plan.

TABLE 7
SPILL RESPONSE PROCEDURES FOR FLAMMABLE
AND COMBUSTIBLE ORGANIC LIQUIDS

Containment	<ul style="list-style-type: none">• Enclose spilled organic liquid with a dike of sawdust or sweeping compound (solid sorbent).
Collection	<ul style="list-style-type: none">• Use enough sorbent to soak up all of the spilled liquid. Avoid all sources of ignition and sparking. Scoop up all of the solid sorbent with a non-sparking shovel or scoop and place into a proper type and properly labeled container.
Personal Protective Equipment	<ul style="list-style-type: none">• See posted instructions for specific waste streams.
Decontamination	<ul style="list-style-type: none">• Let trace amounts which are not collected evaporate. For clothing and personal protective equipment, the procedure is evaporation followed by washing with soap and water.

Note: These tables are from the UMCD Spill Prevention Control and Countermeasures/ Installation Spill Contingency Plan.

TABLE 8
SPILL RESPONSE PROCEDURES FOR EXPLOSIVE REACTIVE WASTES

Containment	<ul style="list-style-type: none">• If necessary, enclose or contain the material with a noncombustible absorbent such as earth, sand, clay, etc.
Collection	<ul style="list-style-type: none">• Powdery Materials: Apply oil to the material before attempting to collect to avoid reaction.• Pellet-sized Materials: Sweep up with non-sparking dust pan and broom.• Material is destroyed in open-burning trays or in open-detonation site.
Personal Protective Equipment	<ul style="list-style-type: none">• See posted instructions for specific waste streams.

Note: These tables are from the UMCD Spill Prevention Control and Countermeasures/ Installation Spill Contingency Plan.

TABLE 9
SPILL RESPONSE PROCEDURES FOR LISTED HAZARDOUS WASTES

Containment	<ul style="list-style-type: none"> • Contain the spill by using a solid absorbent such as earth, sand, vermiculite, etc.
Collection	<ul style="list-style-type: none"> • Liquids: Add extra absorbent to completely soak up all free liquids. Place absorbent and spill into a properly labeled container using a scoop or shovel. Remove a layer of earth two inches below the level of penetration for spills on the ground. • Solids: Scoop or shovel material into a properly labeled drum. For ground spills, remove a two-inch layer of earth below the spill. For spills onto an impervious surface, carefully sweep up all of the material after shoveling and deposit in a drum.
Personal Protective Equipment	<ul style="list-style-type: none"> • See posted instructions for specific waste streams.
Decontamination	<ul style="list-style-type: none"> • Decontaminate tools and clothing by washing with soap and water.

Note: These tables are from the UMCD Spill Prevention Control and Countermeasures/ Installation Spill Contingency Plan.

TABLE 10
SPILL RESPONSE PROCEDURE FOR TCLP HAZARDOUS WASTES

Containment	<ul style="list-style-type: none"> • Contain the spill with a solid absorbent (sand, vermiculite, earth, clay, etc.).
Collection	<ul style="list-style-type: none"> • Liquids: <ul style="list-style-type: none"> - Pump material, if feasible, into properly labeled drums using a solid absorbent to collect liquid remaining after pumping. - Where pumping is not feasible, add sufficient absorbent to pick up all of the liquid, and shovel or scoop the absorbent into a properly labeled drum. • Solids: Shovel or scoop material into a properly labeled container.
Personal Protective Equipment	<ul style="list-style-type: none"> • See posted instructions for specific waste streams.
Decontamination	<ul style="list-style-type: none"> • For materials spilled onto impervious surfaces, collect all that is feasible with absorbents and dustpan and broom. Wash surface with soap and water. • For material spilled onto the ground, remove the earth two inches below the level of penetration.

Note: These tables are from the UMCD Spill Prevention Control and Countermeasures/ Installation Spill Contingency Plan.

ATTACHMENT G-2

CAD DRAWINGS

Figure G-7-1: Evacuation Routes
(***This Figure is FOUO and has been removed from the redacted document*****)**