6.0 HAZARDOUS WASTE CONTINGENCY PLAN

The Hazardous Waste Contingency Plan (HWCP) adopts the ATK Launch Systems Management Policy SC-E, "Emergency Action Planning (EAP)," which directs emergency response actions at the Bacchus Facility. The HWCP adopts those portions of the EAP that deal with general responses to fires, explosions, or releases of hazardous waste, constituents or substances as defined by R315-261 of the Utah Administrative Code (Utah Admin. Code) or 40 CFR 303.3 in all areas of the Bacchus Facility. These general responses will be referred to as "environmental emergencies." The HWCP also contains emergency equipment lists and evacuation plans for hazardous waste management units.

6.1 GENERAL INFORMATION

The HWCP is designed to minimize the hazards to human health and the environment in the event of an uncontrolled, unplanned, sudden, or non-sudden fire, explosion, release of hazardous materials or hazardous waste to the air, soil, or surface water.

6.1.1 Site Location

The Bacchus Facility occupies approximately 10,000 acres in West Valley City and unincorporated Salt Lake County. The main gate entrance is located at approximately 5000 South on Highway 111 (8400 West). The Bacchus Facility site includes the contiguous locations commonly referred to as: Plant 1, Bacchus West, and NIROP. This plan also applies to off-site groundwater monitoring wells classified as large quantity generators.

6.1.2 Ownership

The Bacchus Plant 1 facility is owned and operated by ATK Launch Systems LLC, which is owned by Northrop Grumman Innovation Systems, Inc. located in Virginia. NIROP is owned by the United States Navy and operated by ATK. A large portion of Bacchus West is leased from Kennecott Utah Copper Corporation and operated by ATK. The telephone contact for the Northrop Grumman Innovation Systems, Inc. Corporate Environmental Offices is: (763) 744-5182. The telephone contact for the local office of ATK Launch Systems is (801) 251-2166.

6.1.3 Operations

Operations at Bacchus Facility include, but are not limited to the following:

- Production of nitroglycerin;
- Manufacture of rocket motor propellant;
- Assembly of rocket motors;
- Static testing of propellants;
- Production of composite products;
- Support, administration, and maintenance of facilities; and
- Storage of chemical and explosive hazardous wastes incidental to the manufacture of rocket motors.

Explosive and chemical hazardous wastes are generated during the manufacturing process and are treated or stored at one of the Bacchus Facility's generator storage areas or hazardous waste management units. The hazardous waste management unit located on the Plant 1 facility is HS-1. The hazardous waste management units located on the NIROP Facility includes the NIROP Burning Grounds, ES-2, ES-3 and the Ash Storage Pad.

In order to provide a complete description of emergency procedures for the Bacchus Facility, the treatment and storage facilities located on both the NIROP and Plant 1 facilities will be included in this application.

Hazardous waste chemicals and explosives generated and/or stored at the Bacchus Facility are managed on site at one of the hazardous waste storage areas. All hazardous waste not treated at the NIROP Burning Grounds will be shipped off-site to an approved TSDF for treatment and/or disposal, or treated on-site in accordance with R315 of the Utah Admin. Code.

6.1.4 Site Plan

The topographic map (Figure 2-5.14) shows the plant site layout, and the location of the regulated hazardous waste management units.

6.2 EMERGENCY COORDINATOR

The Emergency Coordinator is the ATK Fire Department's Emergency Manager. The alternate Emergency Coordinators are the ATK Fire Department Shift Supervisors. A primary or alternate Emergency Coordinator is on plant or on call at all times. In this plan, the Emergency Coordinator will be referred to as the Incident Commander (IC). The primary and alternate Emergency Coordinators or ICs are identified in the Operating Record, and can be contacted 24/7 at (801)251-2222. The information in the Operating Record will list the names of all primary and alternate ICs, addresses, and their office, home and cell phone numbers.

6.2.1 Duties and Responsibilities

The IC and the alternate IC are professional fire fighters certified by the State of Utah to no less than a Fire Fighter II level, and are trained to OSHA 29 CFR 1910.120 requirements. They have also received extensive training in responding to emergencies that could occur at the Bacchus Facility. The ATK Fire Department is a full-time professional fire service organization on the Bacchus Facility 24-hours a day 365-days per year.

The ATK Fire Department has the responsibility for initial response, site assessment, site direction and control, communications, emergency medical treatment, rescue and evacuation, and site stabilization for all emergencies at the Bacchus Facility. In an emergency, the IC is responsible for managing the emergency in accordance with established Fire Service procedures, and notifying the appropriate management personnel.

The IC and alternate ICs are trained in all aspects of the HWCP, are familiar with the operations and activities at the Bacchus Facility, the location and characteristics of all waste handling activities, the layout of the facility and have access to all applicable emergency response records at the Bacchus Facility.

6.2.2 Authorization

The IC and all of the alternate ICs are authorized to commit the equipment and all other resources necessary to implement the provisions of the HWCP.

6.3 IMPLEMENTATION

The HWCP will be implemented whenever any of the following events occur:

- A reportable release of a hazardous waste, a material which when spilled becomes a hazardous waste, constituents or substances per R315-263-30 of the Utah Admin. Code or 40 CFR Table 302.4 List of Hazardous Substances, or is listed in the NIROP Facility Permit, Module 1, Condition 1.T.2 and 1.T.3;
- An unplanned fire or explosion in any manufacturing, maintenance, storage, or hazardous waste management facility;
- Accidental or unplanned ignition at the NIROP Burning Grounds;
- Accidental or unplanned grass fire associated with production, manufacturing or disposal operations or a grass fire that threatens explosive or chemical storage facilities; or
- Waste propelled or ejected out of the NIROP Burning Grounds during open burning operations.

Whenever the HWCP is implemented, ATK will submit an implementation report in accordance with Section 6.8 of this plan. Controlled fires, such as routine open burning of waste propellant at the NIROP Burning Grounds and propellant burn-rate tests conducted incidental to the manufacturing operations are not subject to the reporting requirements of Section 6.8. Operations associated with testing of propellant and process equipment decontamination will also be excluded from reporting requirements.

6.4 EMERGENCY ACTIONS

6.4.1 Emergency Reporting Procedure

Any employee who witnesses a fire, explosion, or other significant release of hazardous materials or hazardous waste to the environment will report the event by dialing extension 2222 or dialing 801-251-2222 on an external phone line, and supply the following information:

- Caller's name;
- Caller's location; and
- Type of emergency

If possible, the caller will stay by the telephone to supply additional information as needed; if safety considerations require a move to another location, the caller will move and repeat the above steps.

An emergency reported using the above procedures will result in the notification of the employees listed below:

- IC (Fire Station);
- Plant medical staff;
- Radio Dispatcher;
- Industrial Safety Manager;
- Security Manager; and
- Plant Manager

During normal working hours the employees identified above are automatically notified of an

environmental emergency or contacted by the Radio Dispatcher. During off-shifts, these individuals are contacted by the IC or his/her designee.

Notification of Federal, State, and Local Authorities

If the IC determines that assistance is required from the West Valley City or Salt Lake County Unified Fire Authority, Emergency Services (911) will be contacted immediately. The Emergency Services number automatically notifies the Local Emergency Planning Committee for both West Valley City and Salt Lake County

When an environmental emergency results in the release of a reportable quantity of hazardous waste, constituents or substances, as specified in Section 6.3, the appropriate Federal and State authorities will be notified immediately. The IC may delegate the responsibility of notifying Federal and State authorities to ATK Environmental Services. The IC cannot notify ATK Environmental Services in a timely manner, the IC is responsible for making the necessary notification.

ATK Environmental Services or the IC will notify the proper authority according to the following conditions:

- For releases per R315-263-30 of the Utah Admin. Code, contact the Utah State Department of Environmental Quality's 24-hour answering service number at 801-536-4123 and during normal business hours the Utah Division of Waste Management and Radiation Control at 801-536-0200;
- For releases per 40 CFR Table 302.4 List of Hazardous Substances and Reportable Quantities or 49 CFR 172.101 Table 1- Hazardous Substances Other Than Radionuclides, contact the National Response Center at 1-800-424-8802 and the State agencies listed above; and
- For releases identified in Module 1, Condition 1.T.2 and 1.T.3 of this permit, contact the Utah Division of Waste Management and Radiation Control environmental incident reporting number 801-536-4123.

The following information will be provided when reporting releases:

- Name, phone number, and address of responsible party or company;
- Name, title, and phone number of person reporting;
- Time and date of spill/release;
- Location of spill/release, as specific as possible;
- Kind and amount of material;
- Cause of spill/release;
- The extent of injuries, if any;
- An assessment of the actual or potential hazard to human health or the environment, when applicable;
- Waterways involved or proximity to waterways;
- Emergency action taken for containment and clean-up; and
- Other agencies contacted.

6.4.2 Identification of Hazardous Waste, Constituents or Substances

The IC will identify the hazardous wastes, constituents or substances involved, and provide an approximation of the amount of material that was released. This will be done using observation, discussing the issue with knowledgeable individuals, reviewing of records for the operation or facility, and if necessary, by chemical analysis. The IC may call upon the on-site Industrial Safety and Hygiene or Environmental Services employees to assist with identification.

If a material cannot be immediately identified by a container label, operator knowledge or another convenient method, field characteristic tests may be conducted, as needed, to identify the immediate hazards, and may include:

- pH test;
- Water reactivity;
- Ignitability;
- Oxidizer test; and
- Organic vapors.

The field characteristic testing is designed to permit safe handling of the waste, residues or spill site while samples are collected and analyzed. Samples will be collected and analyzed as required in the Waste Analysis Plan to assure proper management and disposal of the waste, residues or spill site.

6.4.3 Assessment Criteria

The IC will assess all possible threats to human health or the environment as soon as possible after an environmental emergency is reported. The purpose of the assessment is to evaluate actual and potential hazards to the employees responding to the environmental emergency, and the actual and potential hazards to off-site populations. To conduct the assessment, the IC may call upon the on-site Industrial Safety and Hygiene or Environmental Services employees to assist.

In the event of an environmental emergency, the human health and environmental assessment criteria will include the following:

- Fire or explosion hazards;
- Corrosive material hazards;
- Toxic substance hazards;
- Potential for off-site releases;
- Containment of spill;
- Water contamination;
- Air contamination; and
- Hazard isolation requirements.

6.4.4 Control Procedure Guidelines

Upon arriving at the scene the IC will identify the nature of the emergency. Standard Fire Service protocol will be followed for each type of emergency. Assistance from West Valley City or the Salt Lake County Unified Fire Authority may be requested by the IC depending on the scope of the emergency. Injured personnel will be immediately evacuated for medical care and non-injured personnel will be removed from immediate hazard exposure at the scene of the incident. Managers of the affected area along with the General Management Team (GMT), and support personnel (e.g. health, safety, environmental, public relations, etc.) will be notified. The management of the affected area and the GMT will gather in the Emergency Operations Center to provide support and direction during the emergency. The ATK Fire Department will then secure a perimeter at a sufficient distance from the source to prevent further injury to Bacchus Facility personnel.

The ATK Fire Department will initiate containment, control or suppression activities as directed by internal procedures or standard Fire Service protocol. Because of varied and highly sensitive materials and processes within the Bacchus Facility boundaries, the IC or other designated employees will escort outside emergency response units or individuals during all on-site operations.

6.4.4.1 Fires/Explosions

In the event of a fire or explosion the ATK Fire Department will apply appropriate fire fighting procedures to prevent the spread of fire to adjoining buildings and property.

6.4.4.2 Release of Hazardous Wastes, Constituents or Substances

If an emergency involves a release of a hazardous wastes, constituents or substances, the ATK Fire Department will provide the initial response, and conduct containment activities. Environmental Services is responsible for managing the cleanup of releases of hazardous wastes, constituents or substances after they have been contained by the ATK Fire Department.

Spills involving explosive and non-explosive hazardous wastes, constituents or substances will generally be cleaned up by production employees who work in the area where the spill occurs as long as they have adequate training and protective equipment to meet the OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements.

Spills of non-explosive hazardous wastes, constituents or substances that cannot be cleaned up by production employees will be referred to a contractor with adequate training and equipment to safely complete the job.

Spills of explosive hazardous wastes, constituents or substances will be cleaned up by Bacchus Facility employees unless a contractor has documented experience working with explosives.

6.4.4.3 Natural Disaster

The ATK Fire Department will respond to natural disasters such as earthquakes and severe weather conditions in the same manner as fires, explosions, and releases of hazardous waste, constituents or substances. Injured personnel will be treated, damaged facilities will be evaluated, releases, if applicable, will be evaluated and actions taken to minimize the scope of the emergency.

6.4.5 Prevention of Recurrence or Spread of Fires, Explosions or Releases

During an environmental emergency, the IC will take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, reoccur, or spread to other facilities.

6.4.6 Storage and Treatment of Released Material

Following an environmental emergency, the recovered waste, contaminated soil, surface water, decontamination water and all other contaminated medium may be stored on site at one of the permitted facilities. All recovered material or waste will be handled and managed as a hazardous waste unless it is determined to be non-hazardous.

6.4.7 Incompatible Waste

Incompatible wastes generated during any implementation of the HWCP will be transported to and stored at the HS-1 hazardous waste storage facility in accordance with the requirements described in the Plant 1 Hazardous Waste Storage Permit.

6.4.8 Post-Emergency Equipment Maintenance

Equipment used in an emergency response will be disposed as required by regulation, or decontaminated, visually inspected and returned to its storage location. Due to the nature of the materials used during decontamination, decontamination wastes will be managed as hazardous waste until they are characterized in accordance with Attachment 3. All supplies, listed in Tables 6.1 and 6.2, used during an emergency response event will be replaced within 5 working days of the completing the emergency response event. The equipment listed in Table 6.3 will be replaced before operations at the NIROP Burning Grounds resume. Prior to resuming operations in the affected area, the facility owner or operator will notify the Director or his designee at 801-536-0200 and other appropriate State and local authorities that the facility is in compliance with R315-264-56(h) of the Utah Admin. Code.

6.4.9 Container Spills and Leakage

Container spills and leaks will be responded to as described in Section 6.4.4.2,"Release of Hazardous Wastes, Constituents, or Substances." The protocol for responding to container spills and leaks may include:

(1) Identify the contents of the container;
(2) Move the container so the leak is above the liquid level;
(3) Apply a temporary seal to the leak using putty or a wooden plug; and
(4) Overpack the drum or pump the contents to a new container.

Spilled materials will be absorbed, neutralized or pumped as required and the area impacted by the spill will be decontaminated. Absorbent and cleanup materials, including disposable equipment, will be collected for disposal in accordance with the applicable waste management rules.

6.4.10 Open Burning/Open Detonation Emergency

An emergency involving an open burn or detonation at an explosive manufacturing, product or waste handling facility, or at an explosive waste treatment facility requires an immediate response from the operator of the unit or facility. Safety of personnel is always the primary concern. Potential emergency circumstances include, but are not limited to the following: (a) the unplanned initiation of wastes on a burn pan; (b) explosions; (c) fire in or near one of these facilities; or (d) a natural disaster.

The operator of the unit or facility will immediately report unplanned initiation or other fire through the plant emergency phone number. Immediate actions will be taken to remove injured personnel from the area, but only when it is safe to enter the area. Fire blankets, chemical fire extinguishers, or water supplied by hydrants or hoses are available for extinguishing burning clothing. First-aid should be administered to any injured persons prior to the arrival of the ATK Fire Department. In no instance will attempts be made to extinguish burning materials on a burn pan or at any of the other explosive facilities.

The NIROP Burning Grounds are located outside the 100-year flood plain of Coon Creek. ATK has installed diversion ditches and berms around the perimeter of the NIROP Burning Grounds to manage and divert floodwater away from the NIROP Burning Grounds. If the Bacchus Facility should become immersed in floodwater, operations will cease until floodwaters have receded, the area is cleared and cleaned, and the IC has released the site for use.

6.4.11 Review and Revision of Plan

ATK will review the HWCP for the Bacchus Facility annually and, if necessary, amend the HWCP. The HWCP will also be amended whenever any of the following conditions exist:

- The HWCP fails in an emergency;
- The permit is revised;
- There is a significant changes in the facility's design, operations, construction, and maintenance;
- Changes in emergency equipment are made; and
- Hazardous Waste Management regulations are amended with regard to contingency planning.

6.5 EMERGENCY EQUIPMENT

Each of the hazardous waste management units has emergency response equipment, which is described in Tables 6.1 through 6.3. Where appropriate, the equipment capabilities are detailed. The emergency response equipment is stored at the location indicated on the Tables. All of this emergency equipment can be transported and used at any location as required. Emergency response equipment located at the Fire Department (Building 8228) will be identified in the Operating Record. A physical description and outline of capabilities will be provided upon request.

Emergency equipment inspection frequency and requirements are described in Attachment 5, "Procedures to Prevent Hazards." The Maintenance Department conducts preventative maintenance inspections, quarterly on sprinkler and deluge systems in hazardous waste management areas. Fire hydrants are located strategically throughout the plant. The ATK Fire

Department personnel tests fire hydrants annually to ensure they are in proper working order.

TABLE 6.1

EMERGENCY RESPONSE EQUIPMENT LOCATED AT HS-1

Physical Description	Outline of Capabilities
Absorbent material	Material for absorbing liquids
Barricade tape	Barricade marker for designating exclusion zone
Boots (disposable)	Chemical resistant over boots
Drum repair kit	Assorted devices including plugs, screws, dowels and tape for temporary repairs to leaking drums
Coveralls (disposable)	All purpose coveralls that repel most liquids and particulates from incidental contact; for level C and level D response
Face shield	Provides face protection against incidental contact from chemical splashes (2)
Fire extinguisher	3 Hand-held, ABC-class extinguishing agent
Goggles	Eye protection complying with ANSI Z87.1-19898 requirements
Gloves (chemical protective)	Gloves manufactured from various types of chemical resistant material which may include neoprene, viton, nitrile, leather, kevlar mesh, PVC or equivalent
Mercury spill kit	Contains various devices to absorb or aspirate mercury
Neutralizing media (for acids)	Commercial neutralizing and absorbing media
Neutralizing media (for bases)	Commercial neutralizing absorbing media
pH paper	Provides a quick and accurate determination of acid/base; measure pH from 0-14
Shovel (non-sparking)	Non-sparking shovel for cleaning up flammable materials
Telephone	Explosion-proof telephone with a push button dial.

TABLE 6.2

EMERGENCY RESPONSE EQUIPMENT LOCATED AT ES-2, AND ES-3

Physical Description	Outline of Capabilities
Telephone	Explosion-proof telephone with a push button dial.
Fire extinguisher	1 Hand-held, ABC-class extinguisher

Decontamination and cleanup equipment from Table 6.1 will be transported to ES-2, or ES-3 as required.

TABLE 6.3 EMERGENCY RESPONSE EQUIPMENT LOCATED AT THE NIROP BURNING GROUNDS	
Physical Description	**Outline of Capabilities**
Fire blankets	MSA, 62 in. x 82 in. flame retardant wool blanket stored in a metal case or equivalent (3)
Fire extinguisher	1 Hand-held, ABC-class extinguisher
Telephone	Explosion-proof telephone with a push button dial
Stretcher	MSA, basket type litter with wire netting reinforced with iron braces or equivalent (1)

Decontamination and cleanup equipment from Table 6.1 will be transported to the NIROP Burning Grounds, as required.

6.6 COORDINATION AGREEMENTS

Agreements for fire fighting assistance are maintained with West Valley City, the Salt Lake County Unified Fire Authority and the ATK Fire Department. The Battalion Chiefs from the assisting fire departments will act as liaisons between the IC and the assisting fire departments. The assisting fire departments will report to the appropriate security gate and will wait for an escort to the emergency scene.

ATK maintains a good working arrangement between its Security Management personnel, West Valley City Police, and the Salt Lake County Sheriff's Departments. If additional law enforcement personnel are required, their assistance will be requested. Bacchus Facility personnel will escort outside law enforcement personnel at all times to avoid possible dangers due to the nature of our operations.

A copy of the HWCP will be submitted to the Salt Lake County Local Emergency Planning Commission (LEPC), West Valley City LEPC, West Valley City Fire Department, Salt Lake County Unified Fire Authority and Pioneer Valley Hospital. The Salt Lake County Sheriff's Department and West Valley City Police Department have both requested that emergency information be communicated and coordinated through their respective LEPC.

Salt Lake County LEPC has jurisdiction for an off-site release from the Bacchus West portion of Bacchus Facility, and West Valley City LEPC has jurisdiction for an off-site release from the remainder of the Bacchus Facility. The Bacchus Facility will notify the 911 operator if the off-site release requires LEPC response. If LEPC response is requested, the appropriate fire department will then become the IC for off-site operations, and will direct city or county personnel.

6.7 EVACUATION PLAN

The emergency evacuation plan is implemented for each hazardous waste management unit in the event of an emergency. ATK has an evacuation plan for each hazardous waste management unit.

Employees evacuate a building if the fire alarm sounds or if they are verbally instructed to do so. Once outside, employees assemble at a predetermined meeting area away from the affected building and account for all employees assigned to the affected building. The evacuation routes and assembly areas for HS-1, NIROP Burning Grounds and the Ash Storage Pad, ES-2 and ES-3 are shown on Figures 6.7-1 through 6.7-4, respectively.

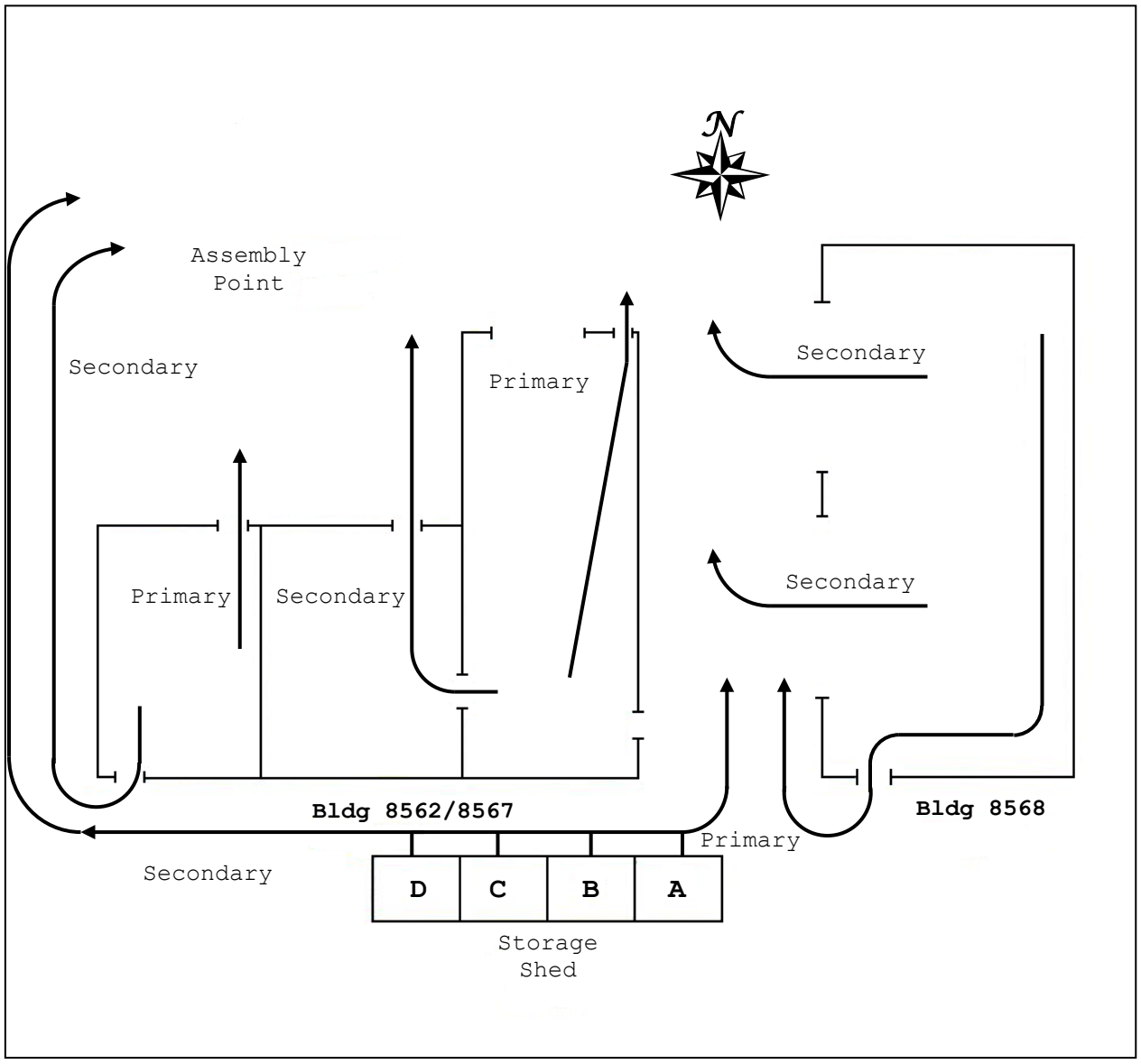

Figure 6.7-1 HS-1 Evacuation Plan

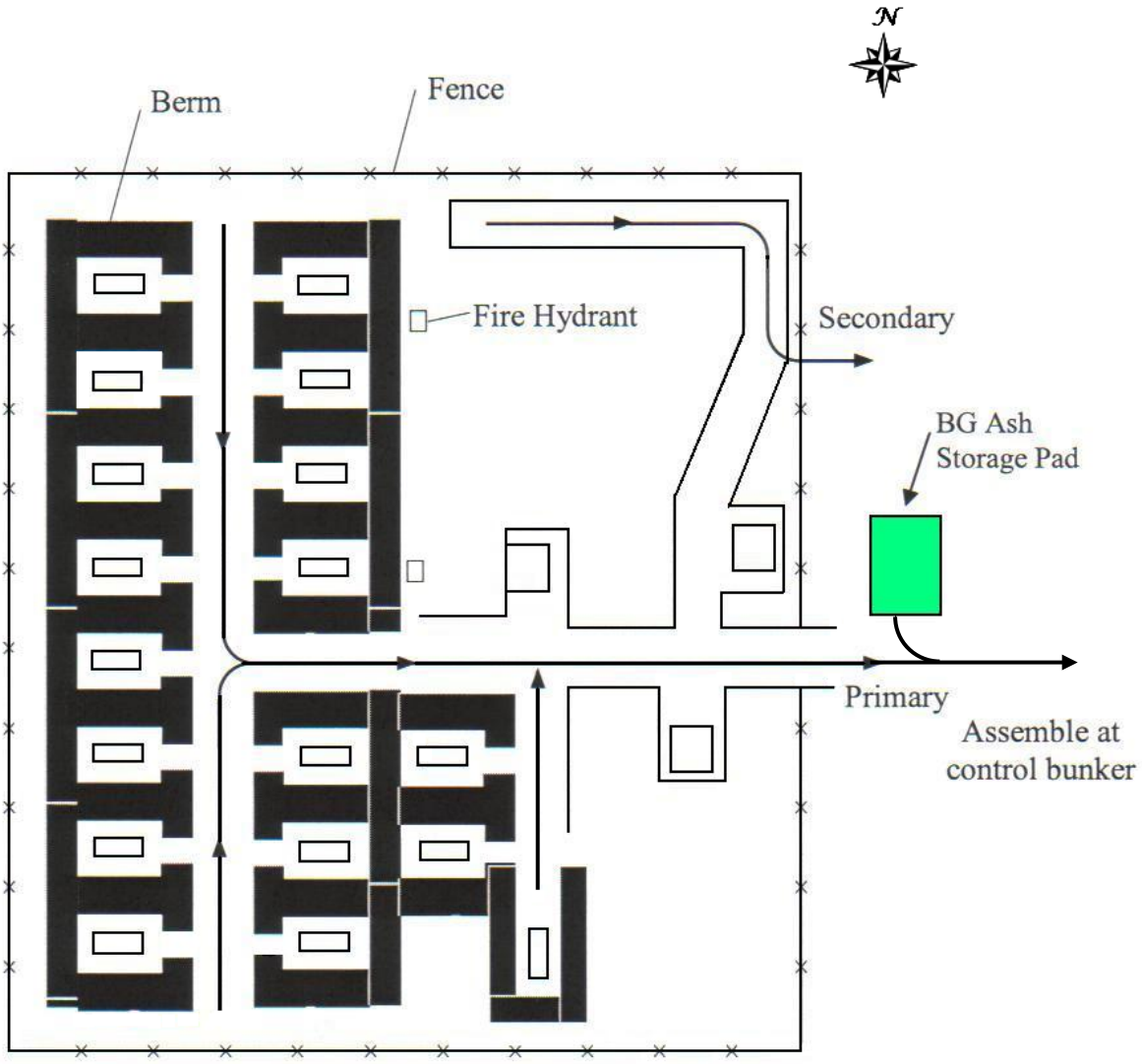

Figure 6.7-2. NIROP Burning Grounds and Ash Storage Pad Evacuation Plan

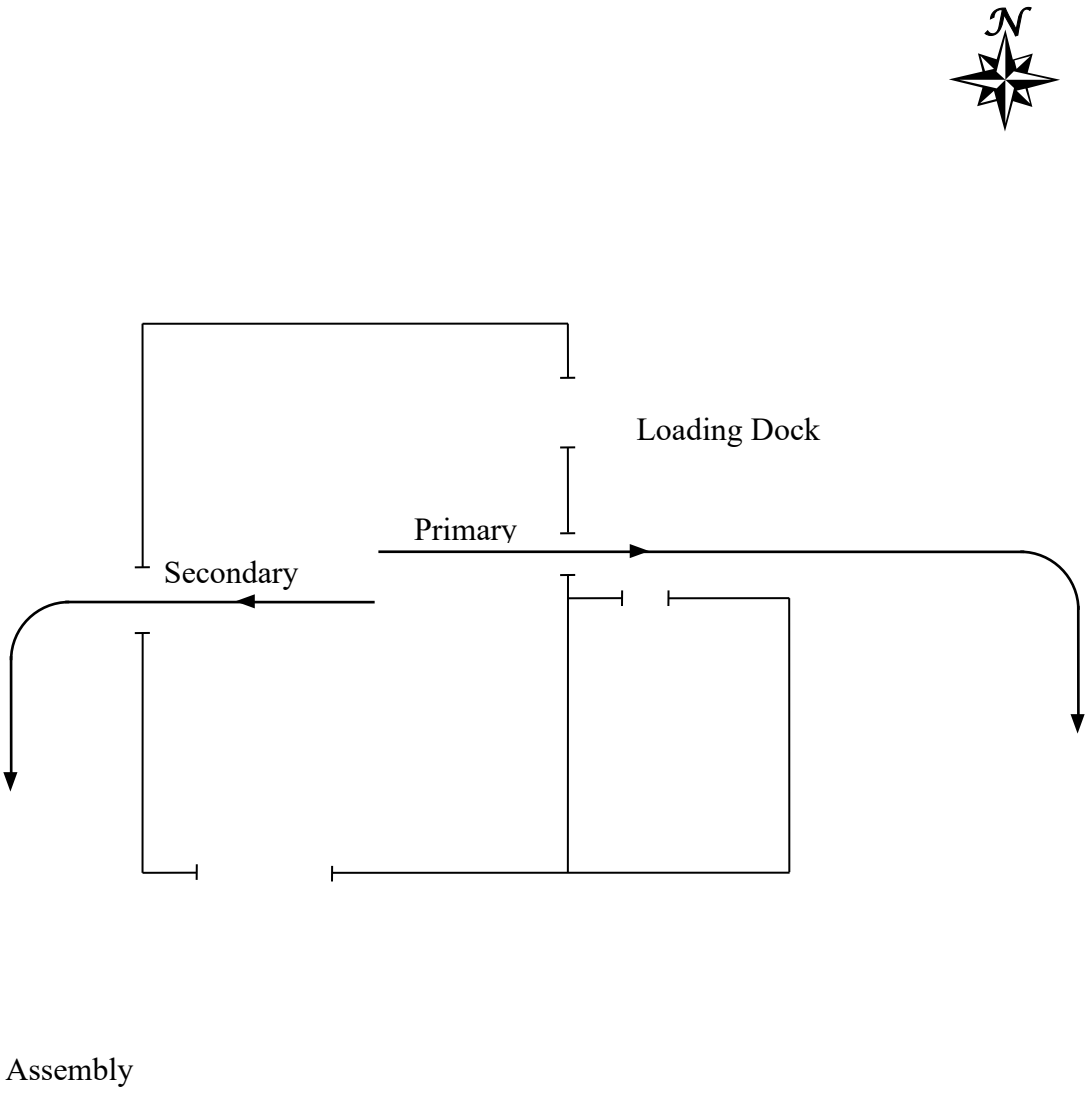

Figure 6.7-3. ES-2 Evacuation Plan

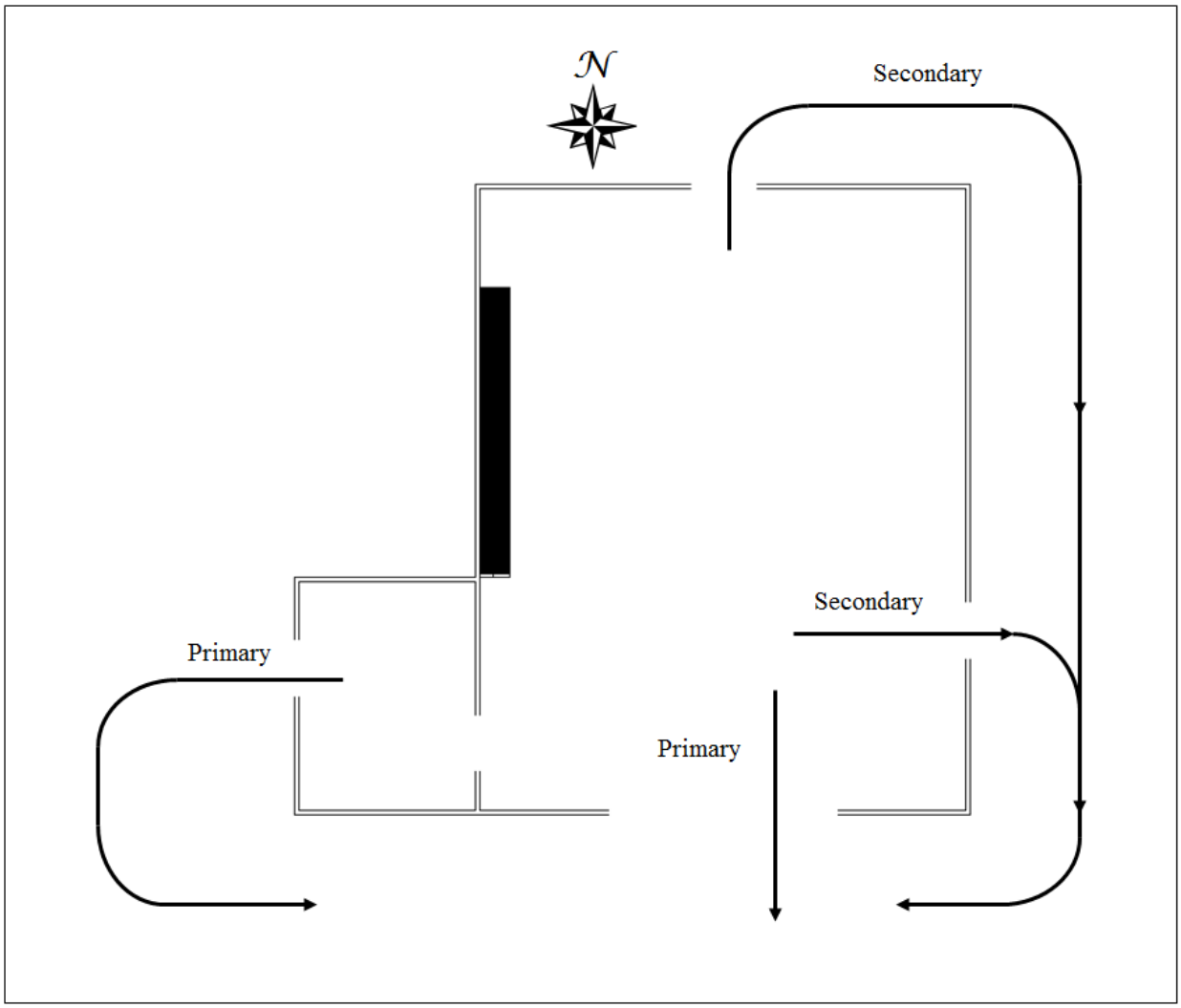

Figure 6.7-4. ES-3 Evacuation Plan

6.8 REQUIRED REPORTS

All implementation of the HWCP will be recorded in the operating record, for the Bacchus Facility and a written report will be submitted as required in Section 6.3 within 15 days of an occurrence of an environmental emergency that requires reporting. The report will contain the following information:

- Name, address, and telephone number of the owner, operator, and facility;
- Date of incident;
- Time of incident;
- Type of incident;
- Name of all materials involved;
- Quantity of materials involved;
- Extent of injuries (if any);
- Assessment of actual or potential hazards to human health or the environment;
- Estimated quantity of recovered material; and
- Arrangements for disposition of recovered material.

A copy of the report will always be sent to the Director of the Utah Division of Waste Management and Radiation Control, in addition to other agencies requiring the report.