

5.0 PROCEDURES TO PREVENT HAZARDS

[R315-8-3 of the UAC and 40 CFR 264, Subpart C]

The Bacchus Facility is a collection of hazardous waste management units that are all operated by ATK. The Bacchus Facility consists of the Plant 1 and NIROP facilities. Plant 1 includes the following regulated units: HS-1, ES-1, Segment Storage and RH-1. NIROP includes the following regulated units: ES-2, NIROP Burning Grounds and Ash Storage Pad. All of these units are designed, constructed, maintained, and operated to minimize the possibility of fire, explosion, or the release of hazardous waste or hazardous waste constituents into the air, soil, or surface water that could threaten human health or the environment. This plan covers the safe handling procedures employed at the NIROP Facility for the ES-2, NIROP Burning Grounds, and Ash Storage Pad hazardous waste management units.

5.1 SECURITY

5.1.1 Security Procedures and Equipment

ATK provides 24-hour security of the Bacchus Facility through the use of fences, by limiting access at entrance gates, having armed security force that patrols the Bacchus Facility, and by staffing a private fire department. The NIROP Facility is located within the Bacchus Facility boundary fence.

5.1.2 Surveillance System

Entrance into the Bacchus Facility is controlled by security guards that are stationed at the main entrance gates and under the direct supervision of the facility's Security Department or through the use of ATK issued identification card that allows access through card-operated gates equipped with digital surveillance cameras.

Access to the Bacchus Facility is limited to authorized personnel who have a valid Bacchus Facility identification badge on their person that is clearly displayed. Features of the security and surveillance system include:

- All Bacchus Facility employees are issued an identification badge;
- All visitors to the Bacchus Facility are required to obtain visitor passes, a temporary identification badge from the facility's Security Department;
- Escorted visitors will be accompanied by a Bacchus facility employee while they are on-site;
- Unescorted visitors, e.g., contractors, must successfully complete the Bacchus Facility's Security and Safety training before they can enter the Bacchus Facility alone;
- All employees and visitors on the Bacchus Facility are required to always clearly display their Bacchus Facility identification badge while on the site;
- All visitors entering the Bacchus Facility will do through one of the access gates;
- Contractor and commercial vehicles may enter contractor gates after proper clearance has been secured; and
- All gates to the site are closed and locked during non-operating hours.

5.1.3 Barriers and Means to Control Entry

An eight foot tall perimeter security fence surrounds the entire Bacchus Facility with access available only through controlled gates. The perimeter fence is monitored daily by armed security personnel. Repairs to the fence are made when they are identified. The location of the boundary fence and gates are shown on Figure 5-1.1.

Hazardous Waste Management Facility Barriers

All of the hazardous waste management facilities are located inside the secured perimeter for the Bacchus Facility. The ES-2 building is locked when unoccupied. Ash Storage Pad is an open air storage pad that is immediately adjacent to the NIROP Burning Grounds and has no secondary fencing. The NIROP Burning Grounds is a fenced compound that is located inside the perimeter fence for the Bacchus Facility. The fence surrounding the NIROP Burning Grounds is kept locked when the unit is unoccupied.

5.1.4 Warning Signs

Warning signs are posted at approximate 500-ft intervals, at fence corners, and at each gate along the fence. In addition each hazardous waste storage and treatment unit is posted with a sign that reads "Danger, Unauthorized Personnel Keep Out" or similar wording. The signs are written in English and are legible at a distance of at least 25 feet. The signs are posted at each entrance and at normal approach routes to the active portion of each hazardous waste management unit.

5.2 SITE FACILITY INSPECTIONS

5.2.1 General Inspection Requirements

Routine inspections are conducted at hazardous waste management units: ES-2; NIROP Burning Grounds; and Ash Storage Pad. The inspections are designed to detect equipment deterioration and malfunctions, operator errors, and accidental leaks or spills that could lead to the release of hazardous waste or hazardous waste constituents to the environment and/or threaten human health.

The inspection forms for the hazardous waste management units are presented in Figures 4-6.10, 4-6.15, 5-2.2, 5-2.3 and 5-2.4. The common non-emergency problems that may be encountered during an inspection are listed on the inspection forms. All inspectors will be trained in what constitutes acceptable and unacceptable conditions for both emergency and non-emergency situations. A log of this training is maintained in the Bacchus Facility's employee training record. The inspector is required to check each item on the form and indicate whether its condition is acceptable or unacceptable. If the status of a particular item is unacceptable, the inspector will detail the problem and describe what type of corrective action will be taken to correct the problem. This information is recorded on the applicable inspection form.

All non-emergency items will be corrected within 90 days of the date of discovery. A non-emergency item is anything that does not have the potential to escalate into an imminent endangerment to human health or the environment, create hazards to Bacchus Facility personnel or visitors, or would not involve into a situation that would immediately affect Bacchus Facility production or waste handling activities. All corrective action activities will be identified on the inspection record. The date the problem is corrected will also be documented. Problems requiring an extended period

to correct may be addressed using a temporary work around solution until a permanent solution can be implemented as long as the temporary solution does not present a risk to human health or the environment.

All temporary solutions will be documented on the inspection form in the operating record. Whenever a temporary solution is implemented, ATK will provide justification upon request to any authorized representative of the Executive Secretary detailing the need for the temporary solution and explaining why the non-emergency item could not be corrected within 90 days. If ATK cannot correct the problem that required a temporary solution within 180 days of the date of discovery of the problem, then ATK will submit a request to modify the permit so that the problem can be corrected.

An emergency situation is defined as any situation that could escalate into imminent endangerment to human health or the environment, create hazards to Bacchus Facility personnel or visitors, or involve situations that could affect the Bacchus Facility's production or waste management activities. Emergency situations include, but are not limited to the following: (1) spill or leak of a reportable quantity any hazardous waste, material or substance; (2) incompatible storage of wastes, materials or substances; (3) storage of wastes, materials or substances in unlabeled or unknown containers; and (4) storage containers in poor condition (e.g. the container cannot be closed properly or has damage that may compromise the integrity of the container) The inspectors will clearly document and detail all emergency situations discovered during an inspection. All emergency situations will be corrected, contained or stabilized within 72 hours from the time of discovery. All operations at a facility with an emergency situation will be halted until the emergency situation is resolved.

In the event that an emergency involves the release of hazardous waste or hazardous waste or hazardous waste constituents to the environment, efforts will be directed towards containing, removing, and cleaning up or decontaminating the affected area. Chapter 6 of this permit application, the Hazardous Waste Contingency Plan, details the processes for reporting and managing corrective action of a release to the environment.

All inspection records will be maintained for a minimum period of 3 years from the date of the inspection. Each inspection record will identify the name of the inspector, and the date and time the inspection was performed.

5.2.2 Inspection Criteria

The inspector checks the status and condition of each item and records the finding. If the condition of a particular item is unacceptable, the inspection will record appropriate and complete information on the issue, including the date of discovery, the nature of the repair needed, and date when corrective action took place. When deterioration or malfunctions of facility equipment, errors, or accidental leaks and spills are noted, the inspector takes prompt action to correct the problem. If the inspector is unable to correct the problem immediately, the facility supervisor will be informed. If the problem cannot be corrected within 24 hours, the facility supervisor will notify Bacchus Facility Environmental Services. All corrective actions or repairs are recorded on the appropriate inspection record form.

The following tables identify inspection items and criteria for each hazardous waste management unit identified in this permit application.

Table 5.1 Burning Grounds Pre-burn Inspection	
Inspection Items	Inspection Criteria
Radio	Verify the radio works properly
Telephone	Verify the telephone works properly.
Fire Extinguisher	Verify that at least one (1) fire extinguisher is present, and access is not blocked. If the extinguisher has a pressure gage, verify it is in the normal range; if not, verify the plastic seal is in place.
Fire Blankets	Verify the fire blankets are in the designated locations.
Diesel Storage	Verify the condition of the container – no signs of leaks.
Siren & Flashing Light	Verify the siren and flashing light is operational.
Warning Sign	Verify that warning sign is intact and in good repair.
Unburned Slums	Check previous Post Burn Inspection for location of unburned slums and residue
Ejected Material	Visually inspect the area around the pans burned on previous date for unburned material. Collect any unburned material.
Pan Water Leakage	Visually inspect the pan for leaking pan water.
Pan Water Level	Visually inspect the pan for water on the pan surface. Pump the pan if water is observed.
Residue Cleaning	Visually inspect the pans burned previously for residue. Collect and dispose of any residue if present.
Resistance Check	Acceptable value is an open circuit (no short circuit)

5.2 Burning Grounds Post Burn Inspection	
Inspection Item	Inspection Criteria
Radio	Verify the radio works properly.
Telephone	Verify the telephone works properly.
Fire Extinguisher	Verify that at least one (1) fire extinguisher is present, and access is not blocked. If the extinguisher has a pressure gage, verify it is in the normal range; if not, verify the plastic seal is in place.
Fire Blankets	Verify the fire blankets are in the designated locations.
Diesel Storage	Verify the condition of the container – no signs of leaks.
Open Flame or Hot Spots	Verify that no open flame or hot spots are present from previous burn.
Pan and Cage Cleaning	Clean pan and cage surface according to procedure.
Unburned Residue Collected	Unburned residue collected on pans, cage or separate container if present.
Ejected Material	Visually inspect the area around the pans burned on previous date for unburned material. Collect any unburned material and place it on the pan or cage.

Table 5.2 continued

Inspection Item	Inspection Criteria
Asphalt surface around pans and cage	Asphalt surface around pans and cage swept to collect ash, weather permitting
Ash Storage	Containerize ash and burned residue according to procedure.
Ash Storage Housekeeping	Verify the ash storage pad is clean of ash. Sweep and or collect any material; weather permitting.
Unburned Waste	Cover unburned waste if not burned by 6 PM on the calendar day following the burn, temperature permitting

Table 5.3 Monthly Burning Grounds Perimeter Inspection Record	
Inspection Items	Inspection Criteria
Description and location of explosive material found around NIROP Burning Grounds perimeter	Identify by type and location any explosive or explosive contaminated materials visible on the South, West, and North areas outside the perimeter fence.
Disposition of explosive material found around NIROP Burning Grounds perimeter	Identify handling, storage, and disposal methods for any material identified during the inspection
Catch basins for NIROP Burning Grounds storm water collection	Assure catch basins are clear of debris including catch basin by Cage 19 and catch basin by Pan 8.

Table 5.4 ES-2 Daily Inspection Criteria	
Inspection Items	Inspection Criteria
Containers	Inspect containers for leaks and spills.

Table 5.5 ES-2 Weekly Inspection Criteria	
Inspection Items	Inspection Criteria
Telephone	Verify the telephone works properly.
Danger sign	Verify the danger sign posted on the main entrance is visible.
Building security	Verify the doors are locked.
Fire extinguisher	Verify that at least one (1) fire extinguisher is present, and access is not blocked. If the extinguisher has a pressure gauge, verify it is in the normal range; if not verify the plastic seal is in place.

Table 5.5 continued

Inspection Items	Inspection Criteria
Inspection Items	Inspection Criteria
Aisle space	Verify a 30-inch minimum aisle space is maintained.
Container labeling	Verify all containers are marked with a tracking number and or labels are clearly visible
Storage Compatibility	Verify 1.1 and 1.3 materials are separated by a 30-inch minimum aisle space.
Containers	Visually inspect all containers in storage to ensure all containers are closed, in good condition and that no containers are leaking.

Table 5.6 Ash Storage Pad Daily Inspection Criteria	
Inspection Items	Inspection Criteria
Containers	Inspect containers for leaks and spills.

Table 5.7 Ash Storage Pad Weekly Inspection Criteria	
Inspection Items	Inspection Criteria
Danger sign	Verify the danger sign posted on the main entrance is visible.
Aisle space	Verify a 30-inch minimum aisle space is provided.
Container labeling	Verify the container is marked with a tracking number and or the label is clearly visible
Containers	Visually inspect container(s) to ensure all containers are closed, in good condition and that no containers are leaking. . If a gondola is in use, assure the gondola is not leaking, is not excessively dented and that the lid is securely in place.
Pad	Visually inspect the pad for cracks in need of repair.
Note: The Ash Storage Pad shares a fire extinguisher and danger sign with the NIROP Burning Grounds.	

5.2.3 Frequency of Inspection

Inspections of the Bacchus Facility’s equipment are conducted at a frequency sufficient to identify problems before they harm human health or the environment.

ES-2 and the Ash Storage Pad are inspected every day, using the Hazardous Waste Daily Inspection Record (Figure 5-2.4), when the units are in active use (e.g. when wastes are being loaded or unloaded at the unit). These hazardous waste management units will, at a minimum, be inspected weekly using the Explosive Storage Building/Pad/Treatment Inspection Record (Figure 5-2.3), regardless of activity.

Every burn at the NIROP Burning Grounds will have a pre and post burn inspection. The pre-burn inspection will be conducted at least monthly if there is an extended period between burns and no pre-burn inspection has been conducted during the calendar month. The perimeter of the NIROP Burning Grounds will be inspected each calendar month. The NIROP Burning Grounds will also be inspected weekly using the Explosive Building/Pad/Treatment Inspection Record (Figure 5-2.3) to document the condition of ordnance (between first and second burns), untreated residue and unburned waste.

5.3 EMERGENCY PREPAREDNESS

5.3.1 Equipment Requirements

All hazardous waste management units and operations are equipped to prevent and minimize the potential impact of a release of hazardous waste or hazardous waste constituents which may be harmful to human health or the environment. The equipment used includes internal and external communication devices, personal protective clothing and equipment, fire fighting equipment, hand tools, spill control equipment, decontamination equipment, and other emergency equipment and materials. Emergency equipment requirements for the hazardous waste management units and the Bacchus Facility are identified and discussed in the Contingency Plan, Section 6 of this application.

5.3.2 Internal Communication

The hazardous waste management units are linked with the internal telephone system for the Bacchus Facility. All emergencies, including hazardous waste releases or spills, are reported by dialing the plant emergency phone number (extension 22222). If employees are using an external phone line then they would dial 801-251-2222 to report an emergency.

The emergency notification will include the following information:

- Callers name
- Callers location (building number and telephone number)
- Type of emergency (explosion, fire, hazardous waste release, etc)
- Extent of emergency

Phones are installed at the following locations:

- ES-2 - inside the building.
- NIROP Burning Grounds – phones on the telephone pole by main gate and in the control bunker.
- Ash Storage Pad – shares the phones available to the NIROP Burning Grounds

5.3.4 External Communication

The Bacchus Facility internal telephone system described above can also be used to summon emergency assistance from local law enforcement, fire departments, and state and local emergency response teams. Telephones are available for use at or near ES-2, the NIROP Burning Grounds and the Ash Storage Pad. In addition employees responding to spills and/or release of hazardous waste or hazardous waste constituents carry two-way radios or cell phones which may be used to summon emergency assistance.

ATK has agreements for fire fighting assistance at the Bacchus Facility with West Valley City and the Unified Fire Authority in the event that the Bacchus Fire Department cannot control a fire. However, due to the nature of manufacturing operations conducted at the Bacchus Facility, it is understood by the outside fire departments that the Bacchus Fire Department will escort, direct, and take charge of the overall fire fighting operation. In addition, the National Fire Protection Association (NFPA) protocol dictates that the first agency on the scene coordinates all fire fighting activities.

A good mutual working arrangement is maintained between the Bacchus Facility Security personnel both the West Valley City Police Department and the Salt Lake County Sheriff's Department. In the event additional law enforcement personnel are required, other outside police departments located within the county may be contacted. Site personnel will escort outside law enforcement personnel at all times while on the site to avoid possible dangers.

ATK staffs a clinic at the Bacchus Facility with a nurse who is capable of treating minor injuries. No specific arrangements have been made with any of the area hospitals, because it has not been deemed a necessary requirement due to the nature of the hazardous waste materials managed at the Bacchus Facility. Should it be needed, Pioneer Valley Hospital, located in West Valley City (approximately 9 minutes traveling time from the Bacchus Facility) can provide professional medical support for employees. The Bacchus Facility also has sufficient open space for a helicopter to evacuate injured personnel.

5.3.5 Emergency Equipment

All fire extinguishers on the Bacchus Facility are visually inspected for pressure, functionality and existence by the Bacchus Fire Department quarterly, and by individual building supervisors monthly. Fire extinguishers at the hazardous waste storage units are inspected at least weekly and documented on the weekly inspection form. Fire extinguishers and fire fighting equipment at the NIROP Burning Grounds is inspected prior to every burn and at least monthly if the NIROP Burning Grounds are inactive for an extended period on time. The monthly inspections conducted by building supervisors are documented on a tag attached to the fire extinguisher. Records of quarterly inspections conducted by the Bacchus Fire Department are maintained by the Bacchus Fire Department. The inspections of the hazardous management units are maintained by Bacchus Facility Environment Services.

The emergency communication system for the Bacchus Facility is tested weekly by the Bacchus Fire Department who also documents the test. The communication devices used at the hazardous waste storage units are inspected and tested weekly. The communication devices used at the NIROP Burning Grounds are inspected prior to every burn and at least monthly if the NIROP Burning Grounds are inactive for an extended period on time. The inspections of the hazardous management units are maintained by Bacchus Facility Environment Services.

5.3.6 Water for Fire Control

The location of fire hydrants at the hazardous waste facilities is described below. All fire hydrants are subject to an annual flow check by the Bacchus Fire Department.

Bacchus Facility safety procedures limit fighting fires when explosive materials are involved. The fire fighting activities at any of the hazardous waste storage or treatment facilities will involve containment only, to keep the fire from spreading to other facilities.

Water for fire control/containment is available as follows:

- ES-2 - is equipped with a deluge fire suppression system. The fire hydrant/hose combination can deliver 2430 gpm @ 20 psi
- NIROP Burning Grounds - the NFPA 13 calculation requires 178 gpm. The fire hydrant/hose combination can deliver 2430 gpm @ 20 psi.
- Ash Storage Pad - shares the fire control and containment resources described for the NIROP Burning Grounds.

5.3.7 Protection of Water Supplies

Water supplies are protected by procedures and facilities utilized at the Bacchus Facility. Spills and leaks are promptly cleaned up, potential releases are minimized by our container management practices, the design of the hazardous waste management units, run-on/run-off controls that prevent stormwater from being contaminated, and frequent inspection of all waste and hazardous material storage and handling areas.

5.3.8 Power Failure

Most hazardous waste management operations at the Bacchus Facility are not dependent upon power for continuing operations. In the event of a power failure, operations will stop until power is restored. The loss of heating in explosives waste storage areas could create a hazard where nitroglycerine-containing materials are stored or handled. In the event that heating is lost, the materials will be burned immediately or moved to another heated location.

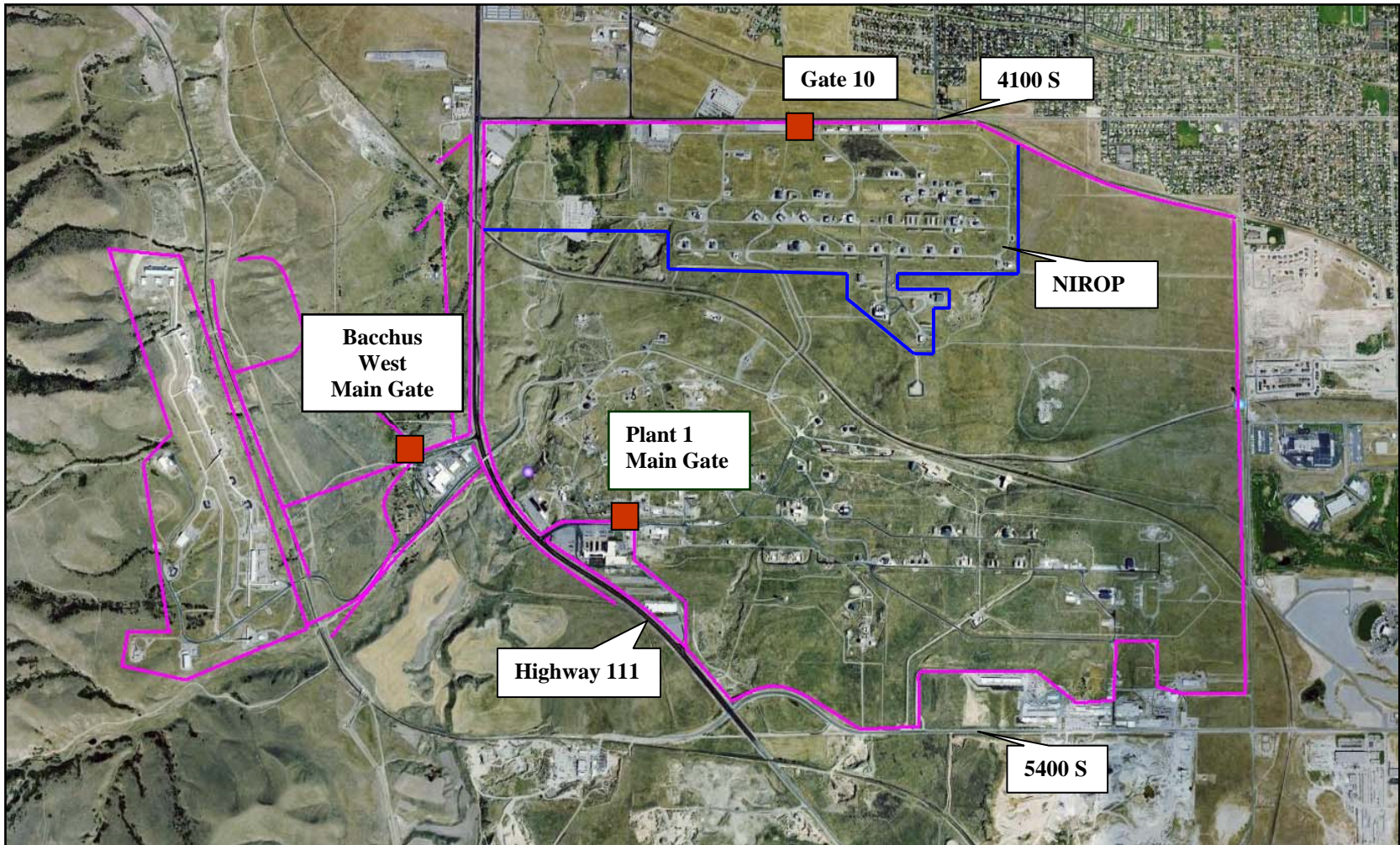


Figure 5-1.1
ATK - Bacchus Security Fence

Figure 5-2.2

MONTHLY BURNING GROUNDS PERIMETER INSPECTION RECORD

Inspector: _____

Date: _____

Time: _____

Description and Location of PEP Material Found Around Burning Grounds Perimeter:

Disposition of PEP Material Found Around Burning Grounds Perimeter:

Note condition of Storm water catch basins by Pan 8 and Cage 19:
Contact Burning Grounds Supervision if catch basins require cleaning.

Note: Inspection is to be done once each calendar month

Figure 5-2.3

EXPLOSIVE STORAGE BUILDING/PAD/TREATMENT INSPECTION RECORD (LONG TERM STORAGE AND NIROP BURNING GROUNDS)							
INSPECTOR DATE		ES-1 (2105)	ES-2 (8A)	RESTHOUSE #1	Segment Storage	B.G. Ash Gondola	Burning Grounds
Building Operation	Time of Inspection						
	Telephone dial tone				N/A	Share with BG	
	Security signs at entrance					Share with BG	
	Building secure				N/A	N/A	
Fire Extinguisher	In position				N/A	Share with BG	
	Pressure gauge checked				N/A	Share with BG	
	Seal in place				N/A	Share with BG	
	Access available				N/A	Share with BG	
Storage Conditions	Aisle space allows for unobstructed movement						
	Waste properly labeled						
	Incompatible wastes are separated						
Resthouse 1 grounding	Rocket motor(s) grounded	N/A	N/A		N/A	N/A	N/A
	Grounds in good condition	N/A	N/A		N/A	N/A	N/A
B.G. Ash Gondola Items	Gondola leaks and dents	N/A	N/A	N/A	N/A		N/A
	Lid to gondola secure	N/A	N/A	N/A	N/A		N/A
	Accumulation date present	N/A	N/A	N/A	N/A		N/A
	Label clearly visible	N/A	N/A	N/A	N/A		N/A
	Pad Inspected for Cracks	N/A	N/A	N/A	N/A		N/A
Segment Storage Items	Rocket motor/trailer(s) grounded	N/A	N/A	N/A		N/A	N/A
	Grounds in good condition	N/A	N/A	N/A		N/A	N/A
	Shipping trailer properly placarded	N/A	N/A	N/A		N/A	N/A
Burning Ground Items	Ordnance collected and containerized	N/A	N/A	N/A	N/A	N/A	
	Unburned waste covered	N/A	N/A	N/A	N/A	N/A	
	Untreated residue collected on pan, cage or separate container	N/A	N/A	N/A	N/A	N/A	
	Untreated residue properly labeled	N/A	N/A	N/A	N/A	N/A	
✓ if okay; X if action is needed							
Comments/ Corrective Action:							

Figure 5-2.4
HAZARDOUS STORAGE DAILY INSPECTION RECORD
(Inspection Required – Daily, When in Use)

Location (Circle)		HS-1 RESTHOUSE #1	ES-1 (2105)	ES-2 (8A) BG ASH STORAGE PAD	SEGMENT STORAGE
Date	Time	Inspector		Inspection	
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
				Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	<input type="checkbox"/>
✓ if OK; <input type="checkbox"/> if action is needed					
Comments:					
Corrective Action:					