Section II: Vulnerability Assessment and Mitigation

1. Hazard Vulnerability Analysis

_____ (*facility name*) should conduct a thorough Hazard Vulnerability Analysis to help determine what events or incidents may negatively impact its operations. While it is impossible to forecast every potential threat, it is important to identify as many potential threats as possible to adequately anticipate and prepare to manage a crisis or disaster situation.

_____ (*facility name*) should utilize a quantitative tool, the Hazard Vulnerability Assessment (HVA), which was developed by the American Society of Healthcare Engineering (ASHE) of the American Hospital Association (©2001). The HVA utilizes a rating system for the probability, risk, and preparedness for various hazards and situations.

Assumptions: For the purpose of this *All Hazards Emergency Plan*, it is assumed that the following threats may potentially impact all facilities:

- Fire/Explosion
- Flood
- Bomb Threat
- Tornado/Hurricane/Severe Weather
- Power Failure/Utility Disruption
- Workplace Violence/Security Threat
- Law Enforcement Activity
- Missing Resident
- Internal Hazardous Materials Spill/Leak
- Pandemic Episode
- Unknown Acts of Terrorism

Unique Threats: Based on the facility's geographic location, past history, proximity to other structures and operations, proximity to transportation corridors, as well as other unique factors, it is essential to identify all threats that can potentially impact the facility.

_____ (*facility name*) should utilize a risk assessment tool to determine hazards and vulnerabilities for its County and surrounding areas.

The _____ (*county name*) County Emergency Management Coordinator will be contacted for guidance and assistance in determining the hazards and vulnerabilities for the facility.

The following is a tool that will aid in completing the Hazard Vulnerability Assessment, as it takes into consideration the proximity that _____ (*facility name*) is within specific probable hazardous areas. (The bolded terms in the Geographic Hazardous Areas column pertain to events that could potentially pose as dangers, if the hazardous areas are close to the facility.)

Geographic Hazardous Areas	Proximity to Facility:	Potential Hazard (Y/N)
Busy Roadways—**Elopement, Haz Mat**		
Wooded Areas—**Elopement, Fire**		
Bodies of Water—**Elopement**		
Designated Truck Routes—**Haz Mat**		
Railroad—**Elopement, Haz Mat**		
Airport—**Terrorism Target, Mass Casualty**		
Dam—**Terrorism Target Mass Casualty**		
Military Bases/Installations—**Explosion, Haz-Mat, Terrorism Target**		
Pipelines—**Explosion, Haz Mat**		
Gas Stations—**Explosion, Haz Mat**		
Industrial Areas/Distribution Centers/Trucking Terminals—**Explosion, Haz Mat**		
Chemical Plants—**Explosion, Haz Mat, Terrorism Target, Mass Casualty**		
Nuclear Plants—**Explosion, Haz Mat, Terrorism Target, Mass Casualty**		
Bulk Fuel Storage/Tank Farms (Oil, Gasoline, Propane, Natural Gas, etc,)—**Explosion, Haz Mat, Terrorism Target, Mass Casualty**		
Refineries—**Explosion, Haz Mat, Terrorism Target, Mass Casualty**		
Sewage Treatment Plants—**Haz Mat, Terrorism Target, Mass Casualty**		
Agricultural Processing Plants/Storage Facilities (Grain Silos)—**Haz Mat, Explosion**		
Public Swimming Pools—**Elopement, Haz Mat**		
Schools—**Law Enforcement Activity**		
Jails/Prisons—**Civil Unrest, Law Enforcement Activity**		
Any Immediately Adjacent Operation posing a threat:		
Any Operation in the general area posing a threat:		

The Hazard Vulnerability Tool should be completed to identify hazards and the direct/indirect effect these hazards could have for _____ (*facility name*):

Instructions to Complete the Hazard Vulnerability Analysis Tool

1. Evaluate every potential event in each of the categories for probability, risk, and preparedness. Add events as necessary.

   Probability: Evaluate each event as the likelihood of it occurring. Issues to consider in determining probability are:

   - Known risk
   - Historical data
   - Manufacturer/vendor statistics

   Risk: Evaluate the potential impact that any given hazard may have on the facility. Issues to consider are:

   - Threat to life and/or health
   - Disruption of services
   - Damage/failure possibilities
   - Loss of community trust
   - Financial impact
   - Legal issues

   Preparedness: Evaluate the current level of preparedness to manage each disaster. Issues to consider are:

   - Status of current plans
   - Training status
   - Insurance
   - Availability of backup systems
   - Community resources

2. Multiply the ratings for each event in the area of probability, risk, and preparedness to give a total score for each hazard. A hazard that does not have a probability of occurring is scored zero and will result in a zero for the total score.

3. List the hazards in descending order of the total scores will prioritize the hazards most in need of attention and resources for emergency planning.

_____ (*Facility)* will evaluate the final prioritization and determine a cutoff value, where no action will be taken for particular hazards. There will be some risk for those hazards.

The Hazard Vulnerability Assessment should be reviewed at least annually.

Hazard Vulnerability Assessment

EVENT	PROBABILITY				RISK					PREPAREDNESS			TOTAL
	HIGH	MEDIUM	LOW	NONE	LIFE THREAT	HEALTH/ SAFETY	HIGH DISRUPTION	MODERATE DISRUPTION	LOW DISRUPTION	POOR	FAIR	GOOD	
SCORE	**3**	**2**	**1**	**0**	**5**	**4**	**3**	**2**	**1**	**3**	**2**	**1**	
NATURAL EVENTS													
Hurricane Winds													
Tornado													
Severe thunderstorm													
Snow fall													
Blizzard													
Ice storm													
Earthquake													
Temperature extremes													
Drought													
Flood, external													
Wild fire													
Landslide													
Epidemic/pandemic													
Dam failure													
Explosion/munitions													
Nuclear power plant incident													
HUMAN EVENTS													
Elopement													
Work place violence													
Security threat													
Hazmat exposure, external													
Terrorism, chemical													
Terrorism, biological													

EVENT	PROBABILITY				RISK					PREPAREDNESS			TOTAL
	HIGH	MEDIUM	LOW	NONE	LIFE THREAT	HEALTH/ SAFETY	HIGH DISRUPTION	MODERATE DISRUPTION	LOW DISRUPTION	POOR	FAIR	GOOD	
SCORE	**3**	**2**	**1**	**0**	**5**	**4**	**3**	**2**	**1**	**3**	**2**	**1**	
Hostage situation													
Civil disturbance/ community violence													
Labor action													
Bomb threat													
TECHNOLOGICAL EVENTS													
Electrical failure													
Generator failure													
Transportation failure													
Fuel shortage													
Natural gas failure													
Water failure													
Sewer failure													
Steam failure													
Fire alarm failure													
Communications failure													
Medical gas failure													
Medical vacuum failure													
HVAC failure													
Information systems failure													
Fire, internal													
Flood, internal													
Hazmat exposure, internal													
Unavailability of supplies													
Structural damage													
Other													

EVENT	PROBABILITY				RISK					PREPAREDNESS			TOTAL
	HIGH	MEDIUM	LOW	NONE	LIFE THREAT	HEALTH/ SAFETY	HIGH DISRUPTION	MODERATE DISRUPTION	LOW DISRUPTION	POOR	FAIR	GOOD	
SCORE	3	2	1	0	5	4	3	2	1	3	2	1	