

## Appendix H

### SD BIG GAME GUZZLER SITE-SPECIFIC HEALTH AND SAFETY PLAN

**Project Manager:** The project manager is responsible for implementing the Health and Safety Plan (HASP), including adhering to mitigation and protective measures contained therein. The HASP identifies actual and potential site hazards. Project personnel are NOT required to work in surroundings or under conditions that are dangerous to their health and safety. The project manager shall ensure personnel receive project-specific (and job-specific) health and safety training before starting any activities. The project manager may delegate individual daily responsibilities, but ultimately is still responsible for the entire project.

#### **Hazard Assessment:**

The following hazards have been identified due to natural site conditions:

- Biologicals, including snakes and spiders (bites), and soil containing spores
- Physical, including uneven terrain, sunshine, and heat (heat exhaustion, stroke, stress, sun exposure, dehydration)
- Rugged outdoor conditions (scrapes, sprains)
- Manual materials lifting (sprains, strains)
- Potential impact from run-away boulders or other up-wash hazards.
- Unexploded ordnance

The following hazards have been identified due to trench, excavation, and concrete operations:

- Equipment turnover due to rough terrain or equipment failure
- Heavy equipment navigation/movement
- Trench cave-in
- Noise exposure
- Crushing/ pinching injuries
- Chemical burn (caustic nature of concrete)
- Materials in eyes (caustics, dust)

**Mitigation Measures:** The following measures are taken to reduce the potential adverse conditions listed above. If the measures are not being followed, work should stop until the condition is corrected.

1. Before assigning daily tasks, **tailgate safety meetings** should be held. Discussion should include:
  - Tasks to be performed.
  - Time constraints (e.g., rest breaks).
  - Hazards that may be encountered, including the effects, how to recognize or monitor symptoms, and danger signals.
  - Emergency procedures.
  - Radio communication.
  - Injury reporting procedures.
2. **Field Attire.** Hard hats are required within 25 ft. of heavy equipment and where there is an overhead hazard; otherwise, a broad-brimmed hat is recommended. Closed-toe shoes with ankle protection are required on-site. Shirts with at least a 2 inch sleeve are required due to the likelihood of extreme sun exposure. No clothing or jewelry should be dangling so as to get caught on any moving equipment. It is recommended workers apply sun screen throughout the day.

3. **Training.** Project personnel should be informed of the hazards, mitigation measures and procedures identified in the HASP.
  - a. All site personnel will receive site-specific safety training consisting of a review of the Health and Safety Plan, information on chemical, radiological, and other potential hazards at the site and emergency procedures prior to entering any active work areas.
  - b. Personnel should be certified in Heavy Equipment operation and must possess a Commercial Driver's License to transport Heavy Equipment on public highways.
  - c. Personnel working with concrete preparation and application should have prior experience or shall be under the immediate direction of someone who is experienced.
  - d. The project manager is responsible for ensuring appropriate training/certification documentation for each employee is present at the job site.
  - e. Copies of all material safety data sheets (MSDS) for hazardous chemical materials that are used during site operations or that are present on-site should be available from the Project Manager on site. Employees should be trained to meet the Hazard Communication Standard (29CFR1910.1200).
  - f. All containers brought on site will be labeled as to content and hazardous nature of the product (as per DOT and OSHA).
  
4. **Personal Protective Equipment** selection should be modified if project conditions change. For personnel working on heavy equipment or with concrete (either preparation or application) long pants, long sleeves, and safety boots complying with ANSI Z41 (meeting I/75 Impact and C/75 for compression standard for the protective toe box) are required. Hearing protection is required when within 25 ft of operational heavy equipment or when using power or hand tools creating noise levels above 85 dBA.

As a rule, levels of PPE should need to be reassessed if any of the following occur:

- Appearance of previously unidentified or anticipated conditions or task hazards.
  - Ambient weather conditions change which impact the use of assigned PPE.
  - A new task is introduced or a previously assigned and evaluated task is expanded in scope.
5. **Daily Safety Inspections:** The project manager should conduct a site inspection prior to holding the daily tailgate meeting to identify topics for discussion and to ensure the operation is being conducted as per the HASP. Problems identified during the site inspection should be discussed at the tailgate safety meeting. Inspections should include the following areas:
    - **General Site Safety**
      - Housekeeping. Trash is removed from the site at the end of each work day.
      - Communication Equipment is tested daily before work resumes.
      - Personal Protective Equipment is provided and on-site before work begins.
      - Project Hazards. Attention to hazards from higher elevation when working in and around the wash/bouldered area.
      - Incident Experience. Discuss prevention measures for incidents which occur. Discuss reporting procedures.
      - Sanitation. Ensure containment and supplies are adequate to provide for washing of hands and potable water sufficient for drinking and washing.
    - **Emergency Equipment**
      - Fire extinguisher and First-aid Kit
      - Safety shower/eyewash operability
      - Spill containment and control supplies
    - **Hazardous Materials**
      - Proper storage and segregation
      - Leakage/spillage protection

- Equipment and Tools
  - Vehicle Operation
  - Heavy equipment
  - Power & Hand tools

Any problems in implementation of the Health and Safety Plan should be reported immediately to the Project Manager, and work should not proceed until all deficiencies have been corrected. As appropriate, this may include additional training, closer supervision, or disciplinary action.

**6. Emergency Procedures and Medical Response:**

- The Project Manager should be the on-site emergency coordinator in case of an accident or incident requiring emergency response. The Project Manager is responsible for maintaining a first aid treatment log of all first aid administered, regardless of severity.
- No one will work alone at the site.
- Emergency contact telephone numbers should be posted and kept readily available. All personnel should be briefed on the site emergency procedures and will know the location of the cellular telephones and other on-site communications devices.
- At least one person certified in First Aid/CPR should be on site at all times to provide immediate response to an accident situation until medical assistance arrives on the site. Indoctrination to the bloodborne pathogens standard [29 Code of Federal Regulations (CFR) 1910.1030] should be provided to project personnel either during their first aid training, and/or during the initial site health and safety meeting.

7. **Visitors.** The Project Manager should provide visitors initial awareness of the hazards of the site. The visitor shall always remain with a site-knowledgeable person during the visit.

8. **Emergency Equipment.** First aid kits for the treatment of minor injuries and burns should be maintained. At least one full kit meeting American National Standards Institute (ANSI) Z308.1, *Minimum Requirements for Industrial Unit-Type First Aid Kits*, will be provided at the site. This basic kit shall include:

- a. Absorbent compress (32 square inches, with no side smaller than 4 inches)
- b. Adhesive bandages
- c. Adhesive tape
- d. Antiseptic applications (0.5 gram per application, total 0.14 fluid ounces)
- e. Burn treatment applications (0.5 gram per application, total 0.14 fluid ounces)
- f. Two pairs of medical exam gloves, and two additional pairs of latex gloves
- g. Sterile pads (3 by 3 inches)
- h. Triangular bandage (40 by 40 by 56 inches)
- i. Mouth protective valve for CPR
- j. Disinfectant
- k. Biohazard disposal receptacle

The following general emergency equipment should be available at the site at all times:

- |                   |  |
|-------------------|--|
| Fire Extinguisher | At least one 2-A:40-B in addition to one small FE in each transport vehicle and piece of heavy equipment |
| Emergency Eyewash | UL approved for corrosive incident response  |

9. **Site Map:** A site map should be available to inform the workers of the location of hazardous areas on the site, the assembly areas to be used in the event of a site evacuation, and any other information relevant to the project's activities.

10. **Communications:** On-Site and Off-site communication by cellular phones/ dispatch communications will be confirmed by an actual test from the project site before beginning any hazardous activities,

such as earth-moving or concrete mixing. On-site communications will include hand signals, or on-site cellular phone / FM two way radio.

The following Hand and Audible Signals will be used when necessary:

|   |                                   |
|---|-----------------------------------|
| Thumbs up:                                    | "OK, I'm all right, I understand" |
| Thumbs down:                                  | "No, negative"                    |
| Pointing to ear(s):                           | "Can't hear, don't understand"    |
| Waving hand(s) over head:                     | "Need assistance now"             |
| Pointing to eyes then to a person/object:     | "Watch person/object closely"     |
| Point to emergency exit route with both hands | "Evacuate site now"               |

**11. Emergency Services**

Telephone Number

Emergency Dispatch 911  
 HAZMAT Emergency Communications Center 800-424-9300

California  
 Federal Interagency Communication Center 888-233-6518  
 909-383-5651  
 California Highway Patrol (Morongo Basin) 760-366-3707  
 63683 29 Palms Hwy.; Joshua Tree 92252-9707

Naval Hospital 1145 Sturgis Rd, Twentynine Palms, CA 92278, US 760-830-2188

- Start out going WEST on AMBOY RD toward FERRELL RD. 26.7 miles
- Turn RIGHT onto UTAH TRL. 2.5 miles
- Turn LEFT onto SUNNY SANDS DR. 0.5 miles
- Turn RIGHT onto CONDOR RD. 0.5 miles
- CONDOR RD becomes DEL VALLE DR. 0.9 miles
- Turn RIGHT. 0.3 miles
- Turn LEFT onto STURGIS RD. 0.7 miles

**End at Naval Hospital**



**Hi-Desert Medical Center**

760-366-3711

6722 White Feather Rd  
 Joshua Tree, Ca 92252

Directions: Take 62 West. Turn left on White Feather Rd.

12. **Biological Hazards:** There are numerous biological hazards such as plants, snakes, insects, and spiders which may be encountered. Workers shall look for these hazards as they work, shall use gloves when reaching into tight areas, and shall wear long pants where snakes may be hidden. Avoid contact with any plants or animal excreta. Wash hands well if these are encountered.
- a. Snakes will be most likely in and around the rocks where the project is occurring. The Mojave rattlesnake and Desert sidewinder are likely. If you encounter a snake, stay calm and still. If you are bitten DO NOT make an incision, apply suction, apply a tourniquet, or run for help! Stay calm. Transport quickly to a medical facility. Hold the bite lower than the heart. Ice the area if swelling or color change occur. If possible, bag the snake and bring it for positive identification.
  - b. Insects to be aware of are ticks, bees, scorpions, fire ants, and spiders. Lyme disease and Rocky Mountain Spotted Fever are caused by bites from infected ticks. Inspect for ticks daily. Symptoms begin as flu like chills, fever, headache, stiff neck, etc. Typically, a tick must remain for more than 24 hrs to transmit the disease. If you think you have been bitten, seek medical treatment. Prevention included application of DEET, wearing light colored clothes, wearing long pants and socks when in heavy weeds, and checking yourself after having been in a tick-area.
  - c. Bees, wasps, scorpions, fireants, and etc. may be encountered, but not anticipated. Personnel with known reactions to these should inform the project manager upon assignment to the project. Where needed, additional training in emergency treatment for these personnel may be provided.
  - d. Rats, mice, and bats carry rabies and other diseases. Hanta virus is common in rodents and their droppings. Soil excavation of contaminated soil may distribute the virus in air. Where rodent droppings are found, it is recommended the area be sprayed with diluted bleach and water or dust respirators be worn.
  - e. Valley fever is an upper respiratory infection common in the Southwestern US. Fungal spores may be airborne when soil is disturbed by winds, construction, etc. Symptoms usually manifest within 3 weeks of exposure and may be like the flu, fatigue, cough, chest pain, fever, rash, headache, and joint aches. Valley fever is not contagious and can be diagnosed with laboratory tests.
13. **Physical Hazards:** Slip, trip, and fall hazards are ubiquitous in the project area. There are also hazards of large boulders becoming dislodged and traveling downward to workers below.
- a. Electrical storms and resulting lightning occur in the project area. Activities should be suspended when lightning is seen and thunder occurs within 5 seconds of that lightning. This would indicate the storm is about 1-mile away.
  - b. Flash flooding is possible in the project area. Project personnel should be aware of weather reports on a daily basis. An area for evacuation should be determined at the onset of the project.
14. **Ordnance (OE) and ordnance-related** items may be encountered at the project site. Personnel should be alert for OE and OE-related scrap. Assume ordnance items contain a live charge until it can be ascertained otherwise by a UXO-qualified person. The general location where the ordnance was found should be clearly marked so it can be easily located. Upon locating any suspected OE/UXO item notify the Federal Interagency Communication Center at (909) 383-5651 and then the Bureau of Land Management, Needles Field Office, Hazardous Materials Coordinator, 760-326-7000.
- The following general precautions with regards to ordnance should be observed:
- If suspected UXO is identified, evacuate to an upwind location.
  - DO NOT touch or move any ordnance.
  - DO NOT remain in a suspected ordnance/UXO area if an electrical storm is occurring or approaching. If a storm approaches, leave the site and seek shelter.
  - DO NOT use radios or cellular phones in the vicinity of suspect ordnance items.

15. **Heat Stress:** Heat stress is one of the most common and potentially serious illnesses affecting personnel working in a desert environment. Heat stress can result in health effects ranging from transient heat fatigue to death. Sweating is the body's way of releasing body heat; but sweating does not cool the body unless the moisture can be removed from the body. If moisture can not be removed as rapidly as the body temperature is increased, body temperature will increase. If water is not replaced as fast as it is released through cooling, the body can not cool efficiently and a medical emergency will follow. Heat stress disorders include heat rash, fainting, heat cramps, heat exhaustion, and heat stroke. The following mitigation methods will be used to minimize the risk for heat-related disorders during this project:
- a. Sufficient potable water, or an electrolyte replacement solution, will be brought to the site in a "community" water container each day that each person will be able to drink at least 24 ounces per hour during heavy work intervals. Workers will be encouraged to drink at least every 20 minutes during heavy exertion intervals.
  - b. Workers are considered acclimatized when they have worked under similar conditions for 5 of the last 7 days, and for at least two weeks prior to this project. Non-acclimatized workers will require additional time to rest and recover.
  - c. Portable shade units will be erected when possible.
  - d. Work will be accomplished during early morning hours. Work will be avoided from 11am – 3 pm during the summer.
  - e. When the ambient temperature exceeds 98<sup>o</sup>C, less than 30% humidity, and the worker has direct sun exposure, work-rest regimen will be implemented beginning at 15 min. rest and 45 min. work. As the temperature and humidity increase, the rest time will be extended.
  - f. Cooled water vests and other means to cool workers will be used as possible.
  - g. Workers will stop work when dizziness, fatigue, headache, or other symptoms are noted indicated a heat stress disorder is occurring.
16. **Equipment Hazards:** The following mechanical hazards are associated with this project: Moving trucks, forklifts, all-terrain vehicles; Operation of heavy equipment; Use of hand tools (picks, shovels, etc.) Hard hats and steel-toed shoes are required for personnel working near heavy equipment. PPE such as heavy duty work gloves and hearing protection may be required for specific tasks. The Project Manager has the authority to upgrade PPE requirements at any time based on changing site conditions and work activities.

The following safety precautions should be followed in order to minimize the possibility of injury by mechanical hazards:

- a. Heavy equipment will be operated under OSHA regulation. The operators will be certified on each piece of equipment they will operate.
- b. An observer will be used when heavy equipment is being repositioned to ensure visibility and safety of personnel. Bystanders should not stand within the swing radius of backhoe buckets or near earth moving equipment.
- c. Daily equipment check of safety devices will be done. Heavy equipment shall have an audible backup alarm. Non-essential equipment shall be removed from the cab or secured. A seat belt must be worn.
- d. Establish eye contact with heavy equipment operators before crossing their path.
- e. Proper lifting technique and "buddy" lifts will be used to prevent back strain/injury.
- f. Hand tools will be inspected daily before use. If damage is present, the tool will be repaired before use.
- g. When equipment is used to move a heavy load, a "tag" line and visual signals will be used.
- h. During moving of equipment, there will be a spotter to assist and all personnel will be forewarned about the relocation. Barrier tape will be used once the equipment is placed to keep personnel out of the way of the equipment.
- i. No one is allowed to "ride" equipment other than the operator.
- j. The donning of hearing protection is required when operating or guiding heavy equipment, or when within 25 ft. of the equipment when operating.

**17. Trench and Excavation Safety:** Trenches and excavations are very hazardous work activities. The Project Manager will ensure CCR Title 8, Section 1540 shall be followed for the Trench and Excavation Work. US government publication: <http://www.osha.gov/Publications/osha2226.pdf> will be used as a reference for day to day work.

- Prior to initiating the “trench or excavation work” at the project site, a competent person should be designated, in writing. The competent person should evaluate the stability of the walls prior to any persons entering the trench/excavation and daily when work is in progress. An excavation in which employees could be exposed to cave-ins should be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area. While a worker is in a trench, a standby-person shall be observing while in the “rescue mode”.
- The competent person should have the authority to promptly correct or eliminate any hazard that is observed.
- There are no underground utilities in the project area. There are underground pipelines in areas nearby. Any deviation from the project plan will re-evaluate this potential hazard.
- No one shall stand closer than two feet from the edge of a trench or excavation.
- No one should enter a trench or excavation while heavy equipment is working on the trench or excavation.
- Excavated soils, materials, and equipment should be kept at least two feet from the edge of a trench or excavation. Prevent soil and rock from falling on workers.
- The area will be barricaded to prohibit entry to the excavation when the project is not manned.
- Employees are not permitted to work on faces of sloped or benched excavations at levels above other employees.
- Employees are not permitted to stand or work under loads being handled by heavy equipment.
- Workers are required to stand away from vehicles being loaded or unloaded to protect them from being struck by any spillage or falling materials. Operators to remain inside cabs of heavy equipment.
- If the trench or excavation exceeds four feet in depth, a safe means of egress shall be provided, so as to allow for no more than 25 feet of lateral travel by a worker.
- Workers should not enter a trench or excavation when water or chemicals are flowing, seeping, standing, or have saturated inside the trench or excavation. Trench and excavation hazards must be reevaluated after a rainstorm.

**18. SPILL CONTAINMENT:** Spills will most likely be petroleum based solid materials and domestic garbage. Spills of petroleum-based material will be immediately shoveled into drums. A spill report will be completed by the Project Manager for all spills exceeding one pint.