DOE–EM/GJ1520

Environmental Management - Grand Junction Office

UMTRA Project

Moab UMTRA Project

Emergency Response Plan

Revision 3

March 2009

U.S. Department of Energy

Office of Environmental Management

Prepared by the Technical Assistance Contractor under DOE contract number DE-AC30-07CC60012
and by the Remedial Action Contractor under DOE contract number DE-AT30-07CC00014
for the U.S. Department of Energy Office of Environmental Management, Grand Junction, Colorado.

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Moab UMTRA Project
Emergency Response Plan

Revision 3

Review and Approval

3/9/09

Lawrence M. Brede
Project Manager (RAC)

Date

3/9/09

Joseph D. Ritchey
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Date

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3/9/09

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Date

Revision History

Revision No.	Date	Reason/Basis for Revision
0	September 2007	Initial issue.
1	May 2008	Revision 1 includes modifications that align the Plan with the 2008 Colorado River Flood Mitigation Plan (DOE-EM/GJ1640). Revision 1 of the Emergency Response Plan supersedes the initial issue in its entirety.
2	November 2008	Revision 2 includes modifications to address transportation emergencies and updates organizational and contact changes.
3	March 2009	Revision 3 includes modifications to address comments received by external stakeholders.

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Appendix A is not issued for public release

Attachments

Attachment 1. Emergency Contacts List **Attachment 1 is not issued for public release**
Attachment 2. Instructions **Attachment 2 is not issued for public release**
Emergency Action
Fire Action
Flood Action
Medical Emergency
Attachment 3. Checklists **Attachment 3 is not issued for public release**
Bomb Threat
Emergency Response
Attachment 4. Incident Report **Attachment 4 is not issued for public release**

Acronyms and Abbreviations

CA	Contaminated Area
DOE	U.S. Department of Energy
EMS	emergency medical service
ERP	Emergency Response Plan
RAC	Remedial Action Contract or Contractor
RRM	residual radioactive material
SR 279	State Route 279
TAC	Technical Assistance Contract or Contractor
UMTRA	Uranium Mill Tailings Remedial Action
Union Pacific	Union Pacific Railroad Company
US 191	U.S. Highway 191

1.0 Introduction

1.1 Purpose

This Emergency Response Plan (ERP) is intended to minimize adverse impacts on the safety and health of the public and U.S. Department of Energy (DOE) Technical Assistance Contractor (TAC), Remedial Action Contractor (RAC), and subcontractor personnel from an emergency or unusual occurrence during performance of work on the Moab Uranium Mill Tailings Remedial Action (UMTRA) Project. The ERP outlines the roles and responsibilities of key personnel and the actions to be taken in the event of an emergency. The TAC and RAC are jointly referred to as the contractors.

1.2 Project Background

The Moab site is a former uranium ore-processing facility located about 3 miles northwest of Moab in Grand County, Utah. The site encompasses 439 acres, of which approximately 130 acres is covered by a mill tailings pile. The selected cleanup remedy involves relocating the tailings and other contaminated materials, known as residual radioactive material (RRM), from the Moab site to a permanent repository located 30 miles north at Crescent Junction, Utah.

The Moab site is bordered on the north and southwest by steep sandstone cliffs. The Colorado River forms the southeastern boundary of the site. U.S. Highway 191 (US 191) parallels the northern site boundary and State Route 279 (SR 279) crosses the western portion of the site. Arches National Park is located north of the site across US 191. The Union Pacific Railroad traverses a small section of the site, just west of SR 279, prior to entering a tunnel that emerges several miles to the southeast. Moab Wash runs in a southeasterly direction through the center of the site and joins with the Colorado River. The wash is an ephemeral stream that flows only when there is a precipitation event.

The Crescent Junction site is located northeast of the junction of Interstate Highway 70 and US 191 between Crescent Junction and Thompson Springs, Utah. Five hundred acres at the Crescent Junction site were permanently transferred to DOE from the U.S. Department of Interior for the disposal cell. An additional 1,800 acres is in temporary withdrawal to support construction.

1.3 Project Description

The Moab UMTRA Project involves four general activities:

1. Constructing and maintaining facilities at the Moab site and excavating, preparing, and loading the RRM into containers.
2. Transporting the containers from the Moab site to the Crescent Junction site primarily by rail.
3. Constructing the disposal cell at Crescent Junction and placing RRM in it.
4. Actively remediating contaminated ground water at the Moab site.

Adjacent to the Moab site and potentially at several locations in the town of Moab are vicinity properties that contain RRM. Characterization of vicinity properties and, as necessary, remediation of those properties are included in project activities.

To support remediation activities, DOE, RAC, and TAC have administrative offices located in Grand Junction, Colorado.

1.4 Scope

This ERP is applicable to emergencies that may occur at or near the Moab or Crescent Junction sites or while transporting RRM between these sites or from vicinity properties to the disposal cell. This ERP is intended for use by all site workers. This plan complements the project *Moab UMTRA Project Health and Safety Plan* (DOE-EM/GJ1038), which provides information on hazards and spill response.

Appendix A to this document contains the ERP for activities occurring at the Grand Junction office.

2.0 Roles and Responsibilities

This section identifies the roles and responsibilities of project personnel and off site response organizations that are crucial to handling an emergency. Contact information for key personnel is listed in Attachment 1.

2.1 Key Project Personnel

Project personnel key to planning for, responding to, and reporting of an emergency include DOE, RAC, and TAC staff are identified along with a list of responsibilities in an emergency. If a key person is unavailable, his or her responsibilities will transfer to someone with equivalent training and authority.

2.1.1 DOE Federal Project Director and Public Affairs Specialist

Roles of the DOE Federal Project Director and Public Affairs Specialist include:

- Serves as the primary spokesperson for DOE for the Moab UMTRA Project.
- Provides interface between DOE and the media.
- Notifies DOE Headquarters and other agency contacts listed in Attachment 1 of emergency conditions, classifications, and status, as required.

2.1.2 DOE Deputy Federal Project Director

Roles of the DOE Deputy Federal Project Director include:

- Serves as the alternate spokesperson for DOE for the Moab UMTRA Project.
- Provides interface between DOE and the media in the absence the Federal Project Director.
- Assists the Federal Project Director in notifying DOE Headquarters and other agency contacts listed in Attachment 1 of emergency conditions, classifications, and status, as required.

2.1.3 DOE Health and Safety/Quality Assurance Manager

Roles of the DOE Health and Safety/Quality Assurance Manager include:

- Provides program management, technical oversight, and expertise in the fields health, safety, quality assurance.
- Reviews contractor plans, incident reports, and lessons learned.

2.1.4 DOE Facility Representatives

Roles of the DOE Facility Representatives include:

- Provides oversight for contractor emergency planning.

- Serves as the on-scene emergency representative for DOE.
- Assists Federal Project Director and Deputy Federal Project Director as requested in making notifications.
- Keeps Federal Project Director apprised of status of emergency.

2.1.5 RAC Project Manager

Roles of the RAC Project Manager include:

- Manages the RAC scope of work.
- Interfaces with Moab and Crescent Junction site organizations, contractor management, and DOE personnel.
- Coordinates with TAC Senior Program Manager.

2.1.6 RAC Deputy Project Manager

Roles of the RAC Deputy Project Manager include:

- Assists the RAC Project Manager in directing the RAC scope of work.
- Interfaces with Moab and Crescent Junction site organizations, contractor management, and DOE personnel.
- Obtains required RAC resources through coordination with Emergency Response Director.
- Coordinates with TAC Senior Program Manager.

2.1.7 RAC Emergency Response Director

Roles of the RAC Emergency Response Director include:

- The Moab Site Operations Manager and the Crescent Junction Construction Manager are the Emergency Response Directors during emergencies at their respective sites.
- Maintains executive control of emergency situations on site.
- Directs emergency response actions using personnel and resources to mitigate the consequences of the emergency.
- Authorizes site-wide evacuations of personnel.
- Declares a flood emergency.
- Verifies personnel accountability.
- Maintains RAC succession of authority.
- Notifies DOE Facility Representative of emergencies.
- Protects the health and safety and of the public and site personnel.
- Conducts a postemergency critique as soon as practicable following stabilization of the emergency condition.

2.1.8 RAC Emergency Response Coordinator

Roles of the RAC Emergency Response Coordinator include:

- Serves as on-scene coordinator during the emergency who advises the Emergency Response Director on the emergency condition or event.
- Assists the Emergency Response Director with emergency response actions.
- Provides a current inventory of chemicals and hazardous substances, materials, or wastes on site and identifies storage locations to off site response organizations.
- Ensures emergency response communications systems are available and operational and conducts annual tests of these systems.
- Assists in preparation of records of emergency response events, including incident investigation reports, for emergency response improvement and noteworthy practices.

2.1.9 RAC Health and Safety Manager

Roles of the RAC Health and Safety Manager include:

- Manages and coordinates all health and safety activities for work at the Moab and Crescent Junction sites.
- Advises Emergency Response Director on the health and safety aspects of an emergency condition or event.
- Assists the Emergency Response Director with emergency response actions.
- Categorizes emergencies according to criteria in *Moab UMTRA Project Occurrence Reporting* (DOE-EM/GJ1549).
- Ensures pertinent emergency information is adequately communicated to site personnel via training, briefings, and postings.
- Plans and coordinates training, drills, and other emergency preparedness activities.
- Assists the Emergency Response Coordinator in providing a current inventory of chemicals and hazardous substances, materials, or wastes on site and identifying storage locations to off site response organizations, as needed.
- Coordinates and assists in providing training to off site response organizations and gives consideration to off site response organizations' concerns.
- Coordinates emergency response planning with TAC Safety, Health, and Quality (SH&Q) Manager.

2.1.10 RAC Radiological Control Manager

Roles of the RAC Radiological Control Manager include:

- Manages and coordinates radiological control technicians supporting activities within the Contaminated Area (CA) or involving suspected radiological contamination during an emergency.
- Provides support for radiological assessment and decontamination of affected property or of injured personnel.

2.1.11 RAC Environmental Compliance/Permits Manager

Roles of the RAC Environmental Compliance/Permits Manager include:

- Coordinates notifications regarding environmental aspects of emergencies.

2.1.12 RAC Security Personnel

Roles of the RAC Security Personnel include:

- Serve as the primary access control at the Moab site entrance.
- Direct responders to the incident scene.
- Notify On-Call Manager of emergency conditions that occur during nonworking hours.

2.1.13 RAC On-Call Manager

Roles of the RAC On-Call Manager include:

- Serves as the Emergency Response Coordinator and/or Emergency Response Director during emergencies that occur during nonworking hours until assigned key personnel are available.

2.1.14 TAC Senior Program Manager

Roles of the TAC Senior Program Manager include:

- Manages the TAC scope of work.
- Obtains required TAC resources through coordination with RAC Emergency Response Director.

- Coordinates with RAC Project Manager and RAC Deputy Project Manager.

2.1.15 TAC Public Affairs Manager

Roles of the TAC Public Affairs Manager include:

- Serves as the primary spokesperson for the contractors for the Moab UMTRA Project during an emergency.
- Issues news releases and contacts local, state, and federal agencies with the approval of the DOE Public Affairs Specialist.

2.1.16 TAC SH&Q Manager

Roles of the TAC SH&Q Manager include:

- Assists with emergency response actions.
- Assists in providing training to off site response organizations and gives consideration to off site response organizations' concerns.
- Coordinates emergency response planning with RAC Health and Safety Manager.

2.2 Off Site Response Organizations

Outside agencies will be utilized for emergency responses because of the specialized training and resources of those organizations. This section identifies the emergency services that each of the off site response organizations will provide at the DOE project sites in Grand County or during an RRM transportation incident. Attachment 1 includes contact information for off site agencies.

Memoranda of Understanding have been executed with Grand County Emergency Medical Services and Allen Memorial Hospital to establish responsibilities for coordination of personnel and operations should an unplanned event occur. Memoranda of Understanding are being negotiated with the Moab Fire Department and the Grand County Sheriff's Office. DOE and its contractors will provide all reasonably available resources, including information and technical assistance, to these off site response organizations necessary to mitigate the effects of any emergency that may arise associated with the project. DOE will also allow access to its property for all personnel and equipment required for emergency response, such as fire department equipment, police vehicles, ambulances, and flight-for-life helicopters. Depending on the scope and severity of the emergency, any of these organizations, other than the hospitals, could provide an Incident Commander who is responsible for managing the emergency.

2.2.1 Moab Fire Department

Roles of the Moab Fire Department include:

- Provides fire protection, hazardous materials emergency response, and all other emergency services consistent with reasonable and prudent industrial emergency management practices.
- Coordinates emergency services required by DOE and its contractors.

2.2.2 Grand County EMS

Roles of the Grand County EMS include:

- Provides first response medical services for all injured or ill DOE, contractor, subcontractor, or vendor employees and site visitors.
- Transports injured or ill personnel by ambulance to medical facilities from DOE-owned or managed property.

2.2.3 Grand County Sheriff's Office

Roles of the Grand County Sheriff's Office include:

- Provides law enforcement protection, traffic control and coordination, and other law enforcement services consistent with reasonable and prudent practices.
- Coordinates emergency law enforcement services.
- Provides a suitable area or other accommodations for use as an emergency operations center.

2.2.4 Allen Memorial Hospital

Roles of Allen Memorial Hospital include:

- Provides medical treatment of nonlife-threatening injured or ill personnel associated with a project emergency.

2.2.5 St. Mary's Hospital

Roles of the St. Mary's Hospital include:

- St. Mary's Hospital CareFlight air ambulance from Grand Junction will be used for life-threatening situations.

3.0 Contingency Planning

The objective of contingency planning is to be prepared to respond to emergencies. Contingency planning includes coordinating with emergency response organizations, preparing guidance describing actions during emergencies, conducting training, and performing drills. The RAC Health and Safety Manager and TAC SH&Q Manager will plan for emergencies and coordinate with off site emergency response organizations.

Preparation to meet the challenge of an emergency requires project personnel to:

- Communicate with the Emergency Response Director that an emergency is in progress.
- Know the hazards in the area that may be affected by the emergency.
- Know what to do and what not do.
- Understand warning sounds and alarms and where to assemble.

3.1 Coordination with Off Site Emergency Response Organizations

Good coordination with off site organizations will result in effective response to any emergency situation. Training and drills as described in sections 3.3 and 3.4 will be periodically made available to off site emergency response organizations. Under the direction of the RAC Health and Safety Manager, a project representative will participate in local emergency planning committee meetings as practical. Coordination with response organizations will enable continuous improvement of performance in an emergency through feedback and lessons learned.

3.2 Guidance for Emergency Actions

Guidance for use during specific types of emergencies is provided as attachments to the ERP and is meant to be used by any staff member in the event of an emergency. The purpose of this guidance is to provide instructions or checklists that, when followed, will increase the likelihood of a proper response to the event. Because each incident is unique, the guidance is not mandatory and does not replace clear thinking.

3.3 Training

The project maintains an established training program to aid in ensuring that personnel are adequately trained for the work they perform and for emergency preparedness. Training at some level is required for everyone entering the site.

Personnel who regularly work on a project site receive the Moab Project Site Pre-Entry Briefing and will be trained on the ERP. The site briefing includes information on site hazards, basic emergency notification, and response activities. Specific training is provided to workers who have special duties during emergencies, such as security personnel who direct responders to the incident scene.

Site visitors and vendors will receive abbreviated training on emergency alarms and evacuation procedures commensurate with their time on site and the purpose for their visit.

Off site response organization personnel will be offered training on pertinent information regarding hazards present at the sites; the types of injuries and illnesses that could result from contamination by contact, ingestion, or inhalation of radioactive or hazardous substances; and contamination risks associated with fires, explosions, or other releases. This training, along with a site tour, shall be offered at least annually.

3.4 Drills

Drills will be conducted at least annually to practice response to possible emergencies with project personnel and to evaluate response to possible emergencies. Drills will be performed to simulate or practice a variety of emergencies and may involve a single field crew, the entire site, or off site emergency response organizations. Drills will also be performed that include off site emergency response organizations. Drills may be “desktop” or involve detailed coordination and physical role-playing.

4.0 Emergency Actions

4.1 Actions Common to All Emergencies

The highest priority in an emergency is protecting the life and health of project personnel and the public, followed by protecting the environment, and then property. In an emergency, site workers immediately should:

- **Warn** others in the area using whatever means are available (e.g., voice, telephone, radio, car horn).
- **Notify** the Emergency Response Director (in Moab dial 222).
- **Survey** the scene to obtain basic information regarding controlling the emergency and obtaining the proper resources needed by emergency personnel.
- **Stop** or secure the operation causing the emergency if it can be done safely.
- **Minimize** exposure to hazardous conditions that may exist as part of the emergency.
- **Identify** any other hazards that may be present (e.g., the potential for fire or explosion).
- **Isolate** the area and establish control boundaries, if possible.
- **Direct** the Emergency Response Coordinator to the scene, who will assume control of on scene emergency actions.

At no time should an emergency response action be performed if the Emergency Response Director determines that it would be dangerous to persons in the area.

Good communication is essential for effective response to an emergency. Although two-way radios and cellular telephones will be used, a simple warning system is shown in Table 1. This communication system shall be tested at least annually by the Emergency Response Coordinator.

Table 1. Warning Signals and Actions

Condition	Warning Signal	Actions to be Taken
Attention	With an air horn or vehicle horn, continuously blast for 20 seconds. Repeat at least three times with a 5-second pause in between.	Supervisor radios Emergency Response Director to receive further instructions.
Shelter in place	With an air horn or vehicle horn, three 1-second blasts with a 5-second pause in between. Repeat at least five times.	Remain in your work area and secure all equipment; wait for instructions.
Evacuate	With an air horn or vehicle horn, three 10-second blasts with a 5-second pause in between. Repeat at least three times.	Immediately evacuate to the designated assembly area for personnel accountability.

Upon notification of an emergency, the Emergency Response Director will notify the Deputy Project Manager, the DOE Facility Representative, and the DOE Federal Project Director. Notifications to agencies and organizations other than the contractors and DOE will be determined by the Federal Project Director.

Supplemental actions will be determined by Emergency Response Director and should be carried out as quickly as is reasonable after immediate actions are completed.

4.2 Additional Information for Specific Emergencies

Additional information for specific emergencies includes:

- Bomb threats.
- Evacuations.
- Fires.
- Floods.
- Hazardous material spills.
- Medical emergencies.
- Public disturbances.
- Transportation/vehicle incidents.

4.2.1 Bomb Threats

If a bomb threat is received, as best as possible keep calm. Keeping the telephone caller on the telephone line is important so that as much information as possible can be obtained. A checklist for bomb threats is provided in Attachment 3.

The receiver of the call should try to have someone else notify the Emergency Response Director of the bomb threat while he or she remains on the line. A bomb threat may be followed by a site evacuation depending on information obtained from the caller.

4.2.2 Evacuations

An evacuation may be called due to a fire, bomb threat, flood event, spill, public disturbance, or other situation. A call for an evacuation may be confined to a work area or may be for the entire site. An evacuation should be orderly and include a sweep of the area by exiting personnel to ensure that all workers received the order to evacuate.

A work area evacuation can be called by the area supervisor. For work area or CA evacuations, personnel would not leave the site, but would report to the designated assembly area or point of safe refuge for accountability.

A site-wide evacuation is authorized by the Emergency Response Director.

Evacuation instructions are provided in Attachment 2. The Emergency Response Checklist in Attachment 3 should be completed at the direction of the Emergency Response Director.

4.2.2.1 Evacuation Routes

The Emergency Response Coordinator shall establish evacuation routes to be used in the event that emergency evacuation of a site is ordered. The evacuation routes will be clearly communicated to project employees by postings or radio directives as mandated by changing conditions.

The following guidelines shall be considered when establishing emergency evacuation routes:

- Locate evacuation routes upwind of the CA or exclusion zone, whenever possible, and strategically locate windsocks to determine wind direction.
- Establish an evacuation route through the access control point.
- Ensure primary and alternate routes are adequately separated from each other.
- Ensure evacuation routes are kept free of obstruction.
- If primary evacuation routes are unusable, workers shall be directed via radio to an alternate route.

The RAC Health and Safety Manager will ensure the use of evacuation routes is rehearsed as a part of the site drills.

4.2.2.2 Assembly Areas

Assembly areas are designated safe refuge zones during a site emergency.

The following assembly areas have been established for the Moab site:

- Personnel inside the CA shall assemble at the Access Control Trailer and await further instructions.
- Personnel outside the CA shall assemble in the main parking lot.
- Personnel in the well field shall assemble at the access road south gate.
- If prevailing winds put the primary assembly areas downwind of the accident site, workers will be directed where to assemble via radio.

The following assembly areas have been established for the Crescent Junction site:

- Personnel inside the CA shall assemble at the access control point and await further instructions.
- Personnel outside the CA shall assemble in the main parking lot, an area adjacent to the rail spur, or as directed where to assemble via radio.

4.2.2.3 Personnel Accountability

The Emergency Response Director shall determine that all personnel are accounted for and are either safe or being appropriately attended to by using the accountability list, which is a combination of the daily sign-in sheet for the morning safety meeting and the visitor's log.

The supervisor or most senior person at each assembly area will notify the Emergency Response Director by radio of the personnel present at that area. In the event that there are unaccounted personnel, the Emergency Response Director will direct further actions.

4.2.3 Fire Actions

The objective is to take actions that might reduce the consequences of a fire. The actions taken in the event of a fire will depend upon the amount of warning received.

Limited fire-fighting equipment is available on site. Because there are no fire alarms at the Moab or Crescent Junction sites, the warning signals provided in Table 1 should be used to notify personnel.

Fire action instructions are provided in Attachment 2.

4.2.4 Flood Actions

Flood conditions will most likely occur from runoff associated with thunderstorms. Additionally at the Moab site, spring runoff in the Colorado River could overtop the bank for several days. Colorado River flooding is almost always predictable several days in advance of the event. The actions taken in the event of a flood will depend upon the amount of warning received before a flood actually occurs.

Flooding associated with thunderstorms can result in rapid increase in flow in washes. In the event of such conditions, notify the Emergency Response Director.

The objective of flood instructions provided in Attachment 2 is to take actions that might reduce the consequences of a flood. Actions are directed first to protect personnel safety and then to protect DOE property (including materials, buildings, and equipment).

4.2.5 Material Spills

Actions in the event of a spill of petroleum products, hazardous substances, and RRM at Moab UMTRA project sites are provided in the project *Health and Safety Plan*.

4.2.6 Medical Emergencies

While all employees are responsible for immediate actions identified in the medical emergency instructions (Attachment 2) and are expected to carry them out, no employee is required to provide first aid for which he or she has not been trained or is uneasy about providing.

Never move a victim in need of medical assistance unless:

- Directed by a competent medical authority.
- The injury will obviously not be aggravated or complicated by a move.
- The victim is in a location where greater physical harm would be likely if not moved.
- Wound severity is such that a life-threatening situation arises.

Never delay EMS personnel access to the scene while applying administrative controls or prescribing personal protective equipment.

Decontamination of victims, EMS personnel, and any associated equipment and materials will be in proportion to the nature and severity of the medical emergency. A Radiological Control Technician will determine the need for decontamination in the emergency room.

Figure 1 identifies travel routes to Allen Memorial Hospital from the Moab and Crescent Junction sites.

4.2.7 Public Disturbance Actions

A public disturbance is defined as a demonstration by activists or a threat to DOE operations that is related to DOE or contractor operations conducted as a part of the Moab UMTRA Project and which does the following:

- Disrupts DOE, contractor, or subcontractor operations.
- Adversely affects DOE or contractor property.
- Jeopardizes the safety and health of DOE, contractor, or subcontractor employees.
- Adversely affects the reputation or public image of the DOE or the contractors.
- Threatens or causes bodily injury or radiological exposure to the general public.

If there is no immediate threat to personal safety, the Emergency Response Director will work with the Federal Project Director to determine the appropriate response actions needed to safeguard personnel and property. Public disturbances often occur with little or no warning.

4.2.8 Transportation Incident

This section addresses emergency events involving rail or truck transport of the RRM and outlines coordination among responders. A separate *Moab UMTRA Project Transportation Plan* (DOE-EM/GJ1639) describes transportation and disposal of the Moab RRM, including on site staging, logistics, and packaging. Transportation incidents will be handled by off site response organizations if they involve a personnel injury requiring immediate medical attention.

Most transport of RRM will be by rail using Union Pacific Railroad Company (Union Pacific) as the carrier. A truck carrier has not been identified. Emergency coordination will include the carrier for transportation incidents.

Union Pacific staff is trained to prevent contamination of property by observing railcars for any leaking material and to respond to an emergency without endangering personal safety. Union Pacific is responsible for RRM cleanup activities from any rail transportation incident. If able, on-train personnel will immediately notify the off site emergency response organizations followed by the Emergency Response Director. The Emergency Response Director will coordinate contractor emergency response support as requested by Union Pacific.

Immediately following the incident, rail loading activities will cease until Union Pacific develops a recovery plan (with RAC input as requested), and project materials including RRM, containers, and railcars are recovered and placed in a safe area.

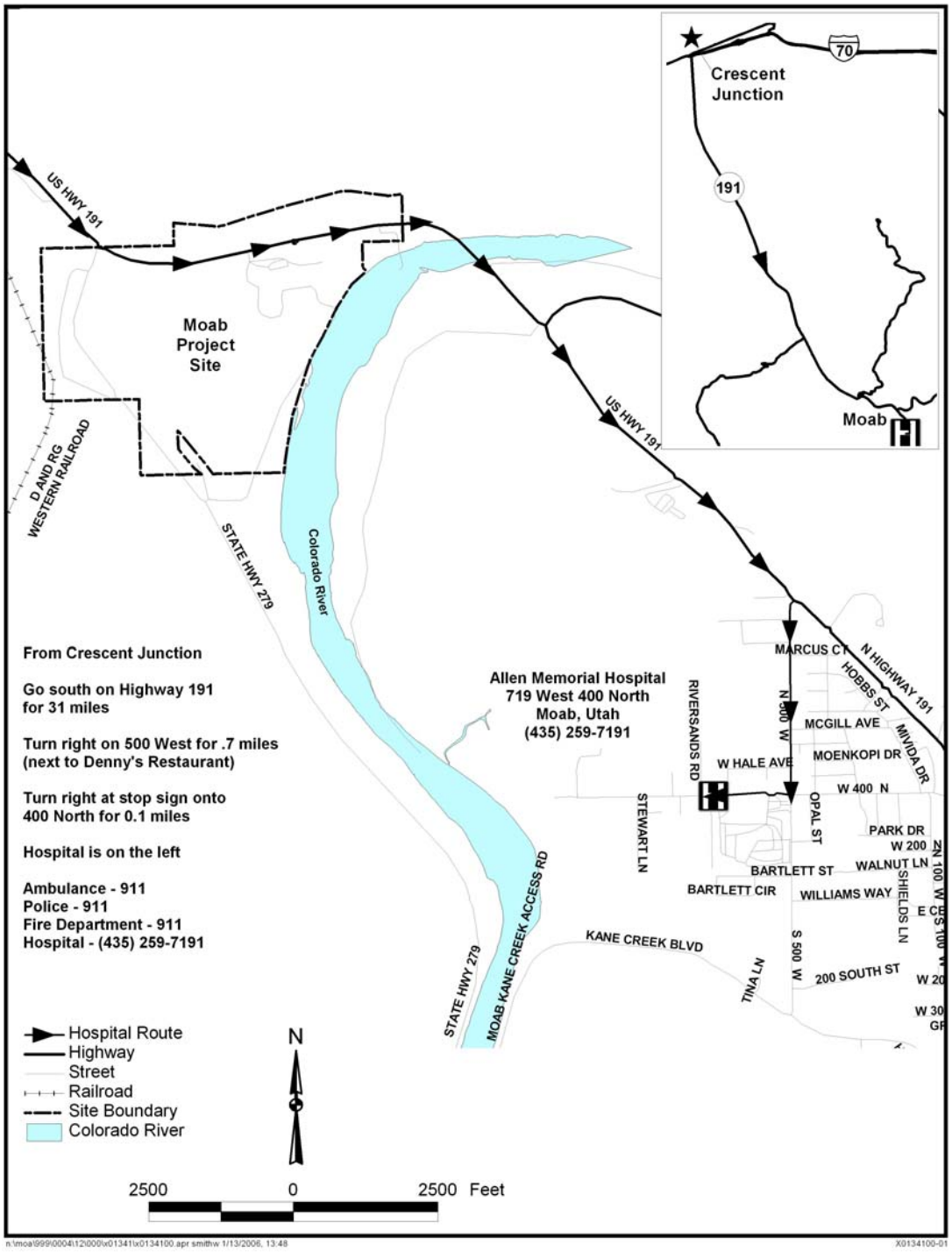

Figure 1. Travel Routes from the Moab and Crescent Junction Sites to Allen Memorial Hospital

Transportation may also occur by truck. In the event of a truck incident, the truck carrier is responsible for the RRM cleanup activities. If able, the driver will contact off site emergency response organizations followed by his or her supervisor or the RAC Emergency Response Director. If off site emergency responders are not present on scene, the Emergency Response Director will coordinate response actions including directing RAC personnel to the site to isolate the affected area, decontaminate it, and remove the vehicle and equipment from the scene. RRM handling activities will cease until the RAC develops a restart plan, including an incident investigation with root cause analysis and corrective actions.

5.0 Event Notifications and Reporting

5.1 Event Notifications

The Emergency Response Coordinator or the Emergency Response Director will categorize the emergency as described in section 4.1 and report it to contractor management and DOE in accordance with the criteria in *Moab UMTRA Project Occurrence Reporting*. The Federal Project Director will notify DOE Headquarters personnel listed in Attachment 1 of emergencies in accordance with DOE requirements. Incidents involving transport of RRM will be reported consistent with the reporting requirements of DOE Manual 460.2-1.

5.2 Reporting Requirements

All emergencies, regardless of their nature, will be reported using the Incident Report (Form 1743) presented in Attachment 4 and is available on the controlled documents network drive. Upon completion, the Incident Report is submitted to the Federal Project Director.

6.0 Postemergency Response Incident Investigation

6.1 Postemergency Critique

A postemergency critique will be conducted by the Emergency Response Director as soon as practicable following stabilization of the emergency condition.

If classification of the emergency or results of the critique indicate that more extensive investigation is required, the Project Manager, Deputy Project Manager, Senior Program Manager, or Federal Project Director will initiate the investigation.

6.2 Lessons Learned

Lessons learned from the emergency will be documented and distributed to appropriate project personnel, incorporated into project personnel training, and used to amend this plan and to institute corrective measures and procedures in an effort to prevent a similar emergency condition in the future. In addition, the lessons learned will be incorporated in the project Operating Experience/Lessons Learned program.

7.0 References

DOE (U.S. Department of Energy), 2008. *Moab UMTRA Project Occurrence Reporting* (DOE EM/GJ1549), Grand Junction, Colorado, February.

DOE (U.S. Department of Energy), 2008. *Moab UMTRA Project Flood Mitigation Plan* (DOE EM/GJ1640), Grand Junction, Colorado, May.

DOE (U.S. Department of Energy), 2009. *Moab UMTRA Project Transportation Plan* (DOE EM/GJ1639), Grand Junction, Colorado, January.

DOE (U.S. Department of Energy), 2009. *Moab UMTRA Project Health and Safety Plan* (DOE EM/GJ1038), Grand Junction, Colorado, March.