

BEATTY, NEVADA LOW-LEVEL RADIOACTIVE WASTE DISPOSAL FACILITY
RADIOLOGICAL CONTINGENCY PLAN

US Ecology's Beatty, Nevada Facility is a low-level radioactive waste disposal facility located on Highway 95 approximately 12 miles south of the town of Beatty.

The facility is licensed by the State of Nevada Division of Health to dispose of low-level radioactive waste in accordance with the terms of the license issued by that agency and applicable federal and state rules and regulations.

In the event that an emergency condition occurs which has the potential to threaten the public health and safety or the environment, this contingency plan will be initiated and maintained in effect by the facility manager or his designee until the condition has been stabilized.

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1.0

EMERGENCY COORDINATOR

- 1.1 The facility manager will be the primary emergency coordinator. In the absence of the facility manager, the first alternate will be the assistant facility manager; the second alternate will be the facility radiological control and safety officer (FRC&SO). At all times during operations, at least one of the above will be on-site and readily available.
- 1.2 In the event that the contingency plan is initiated by the facility manager or his designee, the emergency coordinator will have full authority to commit all necessary resources to implement the plan and carry it out until complete recovery from the contingency is achieved.

Technical support shall be available to the emergency coordinator from the US Ecology Corporate Offices. Technical support may be obtained from the chief radiological control and safety officer (CRC&SO) and the radiological operations officer (ROO) and such other qualified personnel they may designate.

- 1.3 The Contingency Plan Notification List (Attachment 1) or equivalent will contain all emergency notification telephone numbers associated with the plan. The list will be updated whenever there are changes in key personnel and will be posted in the vicinity of facility telephones for quick reference.

2.0

INITIATION OF THE RADIOLOGICAL CONTINGENCY PLAN

Any person will immediately initiate the radiological contingency plan by notifying the emergency coordinator or alternate upon identifying:

- 2.1 Fire;
- 2.2 Release of radioactive materials to the air, soil, surface water or groundwater;
- 2.3 Contaminated, injured or ill personnel requiring immediate medical assistance;
- 2.4 Accident during transportation of radioactive material or hazardous materials;
- 2.5 Any event not listed which presents an imminent hazard to personnel, facilities, or the environment.

3.0

EMERGENCY COORDINATOR NOTIFICATION

The following information will be conveyed to the emergency coordinator or alternate:

- 3.1 Caller's name;
- 3.2 Nature of incident;
- 3.3 Location of incident;
- 3.4 Material involved, if known.

Subsequent to notification, all personnel will function under the direction of the emergency coordinator.

4.0 PLAN DISTRIBUTION/COORDINATION AGREEMENTS

The facility manager will ensure that the following response agencies are in possession of copies of the Radiological Contingency Plan. These agencies will be asked to review and comment on the plan and establish specific actions they will take in response to an emergency.

4.1 Beatty Facility Offices

4.2 US Ecology Corporate Offices

4.3 State of Nevada Division of Health

4.4 Beatty Volunteer Fire/Rescue/Ambulance Service

4.5 Beatty Substation Nye County Sheriff

4.6 University Medical Center - Las Vegas

4.7 Beatty Medical Clinic

At least annually, the facility manager will review the Contingency Plan with the above agencies to maintain coordination agreements and response actions.

5.0

PLAN MODIFICATION

The Radiological Contingency Plan may be modified with approval of the Division of Health. Prior to a proposed revision being submitted to the Division, the revision shall be reviewed by the CRC&SO, the facility manager, and the radiological operations officer. In the event that actual emergency situations warrant, the emergency coordinator may modify the plan in order to more adequately protect the public health or the environment.

Periodic emergency drills shall be conducted to evaluate major portions of this plan. Such drills shall be unannounced and shall be conducted and documented as specified in Facility Operations Manual (BOP-27). At least three drills shall be conducted during each calendar year and shall include fire, release of radioactive material and contaminated injured or ill personnel.

The Radiological Contingency Plan will be reviewed and modifications proposed whenever:

- 5.1 The facility radioactive material license(s) or facility operating procedures are revised;
- 5.2 The plan fails in an emergency;
- 5.3 If improvements are recognized during contingency or emergency response drills which would enhance effective response;
- 5.4 The list of emergency coordinators changes;
- 5.5 The list of emergency response equipment changes; or
- 5.6 The list of response agencies change.

REPORTS AND RECORDS

- 6.1 As soon as possible after initiation of the Radiological Contingency Plan, the emergency coordinator will ensure the notification of the CRC&SO and the RDO to appraise them of the situation. The following information shall be conveyed:
- 6.1.1 Time and type of incident;
 - 6.1.2 Type and quantity of radioactive material or other hazards involved;
 - 6.1.3 Status of the emergency;
 - 6.1.4 Extent of injuries;
 - 6.1.5 Response efforts in progress;
 - 6.1.6 Estimates of radiation exposures received or likely to be received;
 - 6.1.7 Estimates of radioactive material released or likely to be released;
 - 6.1.8 Whether outside assistance has been requested; or
 - 6.1.9 Whether notifications have been made to federal and state regulatory agencies.
- 6.2 Notifications to the Division of Health shall be made in accordance to the provisions of NAC 459.370 and the Beatty Operational Procedures (BOP 63). These notifications shall be performed by either the facility manager, the assistant facility manager, the FRC&SO, the RDO or the CRC&SO. Notification shall be at the earliest time consistent with the emergency response effort, but in no case shall exceed the notification time frame specified in the applicable regulations.

The Division of Health shall be notified of any situation which results in the initiation of this plan, but which does not meet the notification requirement specified in the regulations, at the earliest time consistent with the emergency response effort but in no case shall the notification exceed two working days.

- 6.3 Any incident which results in the initiation of this plan shall be investigated and the results of that investigation documented in an incident report. The report shall be forwarded within thirty days of the incident to the Division of Health. Copies of the report shall be maintained at the Beatty Facility Office by the FRC&SO and at the US Ecology Corporate Offices by the CRC&SO. The report shall contain, at a minimum, the time and date of the incident, the probable cause, determinations or calculations of internal and external radiation exposure received by individuals, estimates of the release of radioactive material, personnel involved in emergency response operations, decontamination operations, and corrective actions initiated as a result of the incident investigation.
- 6.4 American Nuclear Insurers shall be notified of any incident which requires the immediate notification of Federal or State authorities or which results in a request for assistance by off-site emergency response groups to care for injured personnel or to protect the public health and safety. Notification to American Nuclear Insurers shall be made in accordance with US Ecology internal policies.

EMERGENCY FACILITIES AND SAFETY EQUIPMENT

- 7.1 The facility manager or designee shall ensure that sufficient safety equipment to provide for immediate response to emergency conditions is maintained at the facility. At a minimum, this equipment will include the following:

7.1.1 Safety Shed

A safety shed will be located within the radioactive material disposal area. This shed will contain a portable fire extinguisher, respiratory protection face masks and a commercial first aid kit. Also available shall be an emergency van equipped with Self-Contained Breathing Apparatus (S.C.B.A.'s) and first aid equipment.

Radiation detection instrumentation shall be available in the health physics office and in the radiological disposal area during disposal operations.

7.1.2 Mobile Water Supply

A portable water tank capable of storing 6,000 gallons and pump will be available on site which may be used to supply fire-fighting water. The pump will be capable of supplying water at a rate of at least 20 gallons per minute.

7.1.3 Internal Communications

Internal communications shall consist of three systems.

The first system will be a Claxon emergency warning system consisting of two high intensity horns, one located at the radiological disposal portion of the facility and the other in the office compound area.

The horns shall be interfaced so that they can be activated at either location.

The second system is comprised of FM radio communications units. Base stations will be located in the facility manager's office and in the facility laboratory. Hand-held units will be worn by the radiological control personnel supervising disposal operations. A hand-held unit will be worn by the foreman and the FRC&SO.

The third system of internal communications will be comprised of telephone intercom systems located in the office buildings.

7.1.4 External Communications

External communications for the summoning of outside emergency assistance will be accomplished by telephone.

7.1.5 Respiratory Protection

Air purifying full-face respirators with appropriate cartridges and/or canisters will be available in the facility offices and safety shed. Self-contained breathing apparatus will be available in the facility office compound or in the facility safety van which will normally be parked in the office compound area.

7.1.6 Radiation Survey Instrumentation

Radiation survey equipment including hand-held portable instrumentation shall be maintained by radiological control personnel in the health physics office. Radiological control personnel performing vehicle surveys or supervising disposal operations shall be equipped with portable instrumentation.

Related equipment, including portable air samplers and counting equipment for sample analysis will be maintained in the health physics office. A continuous air sampler will be operating during disposal operations.

7.1.7 Fire Extinguishers

Portable fire extinguishers, rated for class "ABC" fires, will be available on site. Each facility building will contain at least one fire extinguisher. Additional fire extinguishers are mounted on forklifts and heavy equipment used during facility operations.

7.1.8 Heavy Equipment and Vehicles

Heavy equipment and vehicles shall be used as deemed necessary by the emergency coordinator to support the immediate response.

7.1.9 Designated Emergency Areas

Attachment 2 indicates designated emergency areas including the emergency muster area and the evacuation muster area.

The emergency coordinator may designate either the administrative office or health physics office as a response coordination center. The administrative office building or the facility lunchroom may be designated as a shelter for injured individuals in the event of inclement weather.

These decisions shall be based upon the tactical logistics of the emergency and upon removing individuals from the affected areas.

BEATTY, NEVADA LOW LEVEL RADIOACTIVE WASTE DISPOSAL
CONTINGENCY PLAN

SUMMARY OF IMMEDIATE ACTIONS TO BE TAKEN IN THE EVENT OF FIRE

| <u>REF.</u> | <u>ACTION</u> | <u>RESPONSIBILITY</u> |
|-------------|---|---|
| 8.1 | Notification to Emergency Coordinator Give: --Name --Nature of Incident --Location of Incident --Material Involved | Individual Reporting Fire |
| 8.2 | Notification to Facility Personnel As soon as possible, ensure notification made to CRC&SO and RCO in accordance with Section 6.0 of Contingency Plan. | Emergency Coordinator |
| 8.3 | Establish voice communications | Personnel with FM Radios |
| 8.4 | Halt all routine operations | Emergency Coordinator Facility Personnel |
| 8.5 | Follow Radiological Control personnel instructions | Facility Personnel Visitors |
| 8.6 | Proceed via upwind route to emergency muster area | Facility Personnel Visitors |

| | | |
|------|--|--|
| 8.7 | Injured personnel removed to safe location | Radiological Control Personnel/Emergency Medical Technicians |
| 8.8 | Halt incoming traffic except for emergency assistance | Emergency Coordinator |
| 8.9 | Assess incident and need for outside assistance | Emergency Coordinator |
| | In the event the Emergency Coordinator deems general evacuation required, procedures in Section 12 are followed | Emergency Coordinator |
| 8.10 | Outside assistance agencies notified as required | Emergency Coordinator |
| 8.11 | Direction of Response Efforts: --Removal of personnel not required --Respiratory protective equipment issued --Protective clothing issued if required --Dosimeters issued --Radiation levels monitored --Removal or isolation of materials | Emergency Coordinator Rad Control Personnel |
| 8.12 | Restricted area established | Emergency Coordinator |
| 8.13 | Equipment release surveys | Rad Control Personnel |
| 8.14 | Personnel external exposure levels documented | Rad Control Personnel |
| 8.15 | Personnel internal exposure levels documented | Rad Control Personnel |

8.0 FIRE INVOLVING RADIOACTIVE MATERIALS

In the event that a fire involving radioactive materials or a fire of significant magnitude which threatens the involvement of radioactive materials occurs anywhere on the facility, the following actions shall be taken:

- 8.1 The emergency coordinator will be immediately notified. Notification will be by one of the systems referred to in Section 7.3. The information listed in Section 3.0 will be conveyed.
- 8.2 The emergency coordinator or designee will notify all facility personnel of emergency by use of the Claxon warning horns, the FM radio or telephone intercom communications system.
- 8.3 All key personnel in possession of FM radios will immediately establish voice communications.
- 8.4 All routine facility operations will immediately cease.
- 8.5 Personnel shall follow the instructions of radiological control personnel at the scene.
- 8.6 All personnel will be transported or will proceed directly to the designated emergency muster area under the direction of the emergency coordinator. Movement to the emergency muster area will be via an upwind route.

If movement via an upwind route is not possible, a safe upwind location will be selected by the affected personnel. The affected personnel will remain in the safe location until they can be secured.
- 8.7 Injured personnel will be removed to a safe location and medical treatment will be administered by qualified personnel.

8.8 All incoming vehicular traffic will be halted with the exception of emergency assistance traffic.

8.9 When all personnel are accounted for, the emergency coordinator will begin assessment of the incident.

Assessment will be made through observations for the following criteria:

8.9.1 The nature and extent of the incident.

8.9.2 The location of the incident.

8.9.3 What radioactive materials are involved (review of manifests, disposal records, computer records, trench coordinates).

8.9.4 The potential for escalation through the spread of fire to other radioactive materials.

8.9.5 The intensity of the fire.

8.9.6 The extent of released material to the air and immediate surrounding area.

8.9.7 Wind direction and relative speed.

8.9.8 Potential exposure to external radiation or radioactivity in the air.

8.9.9 The need for additional outside assistance and/or evacuation.

8.9.10 The proper extinguishing medium for the fire will be established by the emergency coordinator (i.e., backfill, foam, dry chemical, water, etc.).

NOTE: No fire fighting will be attempted in the event the emergency coordinator determines that there is significant risk of injury to facility personnel. Normally only outbreak stage fires which can be rapidly contained and controlled will be handled.

- 8.10 If the emergency coordinator determines that the fire threatens human health or the environment outside of the facility boundaries, or that additional outside assistance is necessary to bring the incident under control or to evacuate local areas, the emergency coordinator will immediately establish communications with the following agencies:

Beatty, Nevada Sheriff's Substation

Beatty, Nevada Volunteer Fire Department

Beatty, Nevada Clinic

The following information will be transferred:

- 8.10.1 Caller's name;
- 8.10.2 Company name/location;
- 8.10.3 Type of fire;
- 8.10.4 Instructions for assistance;
- 8.10.5 Wind direction and recommended direction of approach;
- 8.10.6 Meeting location; and
- 8.10.7 Further means of communication.

Emergency telephone numbers can be found in Attachment 1.

- 8.11 If the emergency coordinator determines that the potential for fire is high, the entire area downwind and the area within a 100 foot upwind radius from the source of the incident will be evacuated.
- 8.12 The emergency coordinator will direct the response efforts by US Ecology personnel or personnel from any outside agency. The emergency coordinator shall ensure that:
- 8.12.1 All personnel not required for response efforts are evacuated to a safe area.
 - 8.12.2 Lines of communication are established.
 - 8.12.3 All necessary respiratory and personal protective equipment is provided. Only personnel, including outside emergency response teams, who are issued radiation monitoring devices (i.e. pocket dosimeters) and who are wearing respiratory protection equipment shall be allowed in the vicinity of the fire-fighting operations. Anticontamination clothing and gloves shall be worn at the direction of the emergency coordinator.
 - 8.12.4 Affected areas are monitored for radiation levels and release of radioactive material. This shall include radiation surveys to determine external radiation levels and portable air samples to determine airborne concentrations.
 - 8.12.5 The use of motor vehicles is limited in the affected areas to avoid ignition or reignition of flammable vapors and/or gases.
 - 8.12.6 Remove or isolate, if practical, any waste containers or shipments which could become involved if the

situation escalates or which would be detrimental to the present situation.

8.12.7 Fire-fighters shall be advised at the location of known sources of hazardous material. They shall be advised to use foam, CO₂, and dry chemicals, rather than water, if possible.

8.13 The emergency coordinator shall establish a restricted area boundary for the purpose of controlling the spread of radioactive contamination. Collection drums and areas shall be established where possible for items found to be contaminated.

Personnel and equipment shall be monitored for radioactive contamination prior to leaving that restricted area. Individuals shall read, or have read for them, pocket dosimeters as frequently as practical during the emergency response and when exiting the controlled area. Any film badges or TLD's worn by the individual shall be analyzed if pocket dosimeters are found to be off-scale.

8.14 At the conclusion of the emergency, and prior to leaving the facility, a final release survey shall be conducted on all equipment used in the emergency response. This survey shall be documented.

8.15 At the conclusion of the emergency, and prior to leaving the facility, pocket dosimeter readings shall be documented for each person involved in the emergency response.

8.16 Thyroid scans, whole body scans, and/or bioassays shall be performed as necessary, based upon the material involved in the emergency and the results of air samples taken during the emergency response.

8.17 When the emergency has been brought under complete control and the threat to human life or the environment has been stabilized the emergency coordinator will immediately initiate the following remedial actions in order to restore the facility to operational readiness.

8.17.1 The entire area involved in the emergency will be cordoned off and only operations directly related to the remedial clean-up will be allowed. No waste disposal, storage or other activities will be conducted in the cordoned off area.

8.17.2 The emergency coordinator will continue the monitoring of the area during remedial operations. Monitoring shall include measurements of external radiation through area surveys and direct frisk of the affected area. Monitoring shall include vegetation samples, if possible, and soil samples within the affected area and downwind of the incident area. A plan for the collection of these samples shall be proposed to the division for approval. This plan shall include the areas to be sampled and the number of samples to be collected. With approval of the division, routine environmental air samples and TLD's shall be expeditiously analyzed in lieu of routine change-out time. If needed for evaluation, nonroutine sampling techniques shall be considered (e.g. heavy equipment air filters may be analyzed for additional data on air concentrations).

8.17.3 The emergency coordinator will ensure that all operational personnel taking part in the cleanup are equipped with personnel dosimetry and respiratory protection equipment, and anticontamination clothing as required.

- 8.17.4 All recovered waste, contaminated soil or other contaminated material resulting from the incident will be collected, containerized and stored for disposal when the remedial clean-up is complete.
- 8.17.5 All contaminated surface water or other contaminated liquids will be treated with approved sorbent material, containerized and stored for disposal at the end of the remedial clean-up.
- 8.17.6 When all remedial clean-up measures have been completed, the emergency coordinator will ensure that all equipment utilized in the emergency and subsequent clean-up is decontaminated, cleaned and fit for its intended use before resuming normal operations.
- 8.17.7 All disposable personal protective equipment (i.e., gloves, protective clothing, etc.) will be collected and containerized.
- 8.17.8 All respiratory protection equipment will be cleaned after use.
- 8.17.9 Fire extinguishers will be inspected and serviced as necessary before being placed back in service.
- 8.17.10 The emergency coordinator will comply with the regulatory requirements for notifications contained in Section 6.0 of this procedure and shall document in the report of the incident the information specified in Section 6.3.

BEATTY, NEVADA LOW LEVEL RADIOACTIVE WASTE DISPOSAL
CONTINGENCY PLAN

SUMMARY OF IMMEDIATE ACTIONS TO BE TAKEN IN THE EVENT OF RELEASE OF
RADIOACTIVE MATERIALS

| <u>REF.</u> | <u>ACTION</u> | <u>RESPONSIBILITY</u> |
|-------------|--|---|
| 9.1 | Notification to Emergency Coordinator Give: --Name --Nature of Incident --Location of Incident --Material Involved | Individual Reporting incident |
| 9.2 | Notification to Facility Personnel As soon as possible, ensure notification made to CRC&SO and R00 in accordance with Section 6.0 of Contingency Plan. | Emergency Coordinator |
| 9.3 | Establish voice communications | Personnel with FM Radios |
| 9.4 | Halt all routine operations | Emergency Coordinator Facility Personnel |
| 9.5 | Follow Radiological Control personnel instructions | Facility Personnel Visitors |
| 9.6 | Proceed via upwind route to emergency muster area | Facility Personnel Visitors |

| | | |
|------|--|--|
| 9.7 | Injured personnel removed to safe location | Radiological Control Personnel/Emergency Medical Technicians |
| 9.8 | Halt incoming traffic except for emergency assistance | Emergency Coordination |
| 9.9 | Assess incident and need for outside assistance | Emergency Coordinator |
| | In the event the Emergency Coordinator deems general evacuation required, procedures in Section 12 are followed | Emergency Coordinator |
| 9.10 | Outside assistance agencies notified as required | Emergency Coordinator |
| 9.11 | Direction of Response Efforts: --Removal of personnel not required --Respiratory protective equipment issued --Protective clothing issued if required --Dosimeters issued --Radiation levels monitored --Removal or isolation of materials | Emergency Coordinator Rad Control Personnel |
| 9.12 | Restricted area established | Emergency Coordinator |
| 9.13 | Equipment release surveys | Rad Control Personnel |
| 9.14 | Personnel external exposure levels documented | Rad Control Personnel |
| 9.15 | Personnel internal exposure levels documented | Rad Control Personnel |

9.0

RELEASE OF RADIOACTIVE MATERIALS TO THE AIR, SOIL, SURFACE WATER OR GROUNDWATER

In the event that a major release or spill of radioactive materials occurs at the facility, the following action will be taken.

- 9.1 The emergency coordinator will be immediately notified. Notification will be by one of the systems referred to in Section 7.3. The information listed in Section 3.0 will be conveyed.
- 9.2 The emergency coordinator or designee will notify all facility personnel by use of the Claxon warning horns, the FM radio or telephone intercom communications systems.
- 9.3 All key personnel in possession of FM radios will immediately establish voice communications.
- 9.4 All routine facility operations will immediately cease.
- 9.5 Personnel shall follow the instructions of radiological control personnel at the scene.
- 9.6 All personnel will proceed directly to the designated emergency muster area under the direction of the emergency coordinator. Movement to the emergency muster area will be via an upwind route.

If movement via an upwind route is not possible, a safe upwind location will be selected by the affected personnel. The affected personnel will remain in the safe location until they can be secured.
- 9.7 Injured personnel will be removed to a safe location and medical treatment will be administered by qualified personnel.

9.8 All incoming vehicular traffic will be halted with the exception of emergency assistance traffic.

9.9 When all personnel are accounted for, the emergency coordinator will begin assessment of the incident.

Assessment will be made through observations for the following criteria.

9.9.1 The nature and extent of the incident.

9.9.2 The location of the incident.

9.9.3 What materials are involved (review of manifests, disposal records, computer records).

9.9.4 The potential for escalation of the release.

9.9.5 The quantity of materials involved.

9.9.6 Wind direction and relative speed.

9.9.7 Potential exposure to external radiation or radioactivity in the air.

9.9.8 The need for additional outside assistance and/or evacuation.

9.10 If the emergency coordinator determines that the release threatens human health or the environment outside of the facility boundaries, or that additional outside assistance is necessary to bring the incident under control or to evacuate local areas, the emergency coordinator will immediately establish communications with the appropriate agencies.

The following information will be transferred:

- 9.10.1 Caller's name;
- 9.10.2 Company name/location;
- 9.10.3 Type of release and magnitude;
- 9.10.4 Instructions for assistance;
- 9.10.5 Wind direction and recommended direction of approach;
- 9.10.6 Meeting location; and
- 9.10.7 Further means of communication.

Emergency telephone numbers can be found in Attachment 1.

9.11 If the emergency coordinator determines that the incident is within the facility's response capabilities, he will immediately initiate clean-up procedures.

9.12 The emergency coordinator will direct the response efforts by US Ecology personnel or personnel from any outside agency. The emergency coordinator shall ensure that:

- 9.12.1 All personnel not required for response efforts are evacuated to a safe area.
- 9.12.2 Lines of communication are established.
- 9.12.3 All necessary respiratory and personal protective equipment is provided. Only personnel, including outside emergency response teams, who are issued radiation monitoring devices (i.e. pocket dosimeters)

and who are wearing respiratory protection equipment shall be allowed in the vicinity of the operations. Anticontamination clothing and gloves shall be worn at the direction of the emergency coordinator.

9.12.4 Affected areas are monitored for radiation levels and release of radioactive material. This shall include radiation surveys to determine external radiation levels and portable air samples to determine airborne concentrations.

9.12.5 Standing liquids shall be bermed to prevent run-off and treated with approved sorbents as soon as possible.

9.12.6 All absorbed liquids will be containerized and removed to a safe storage location for further treatment if necessary prior to disposal.

9.13 The emergency coordinator shall establish a restricted area boundary for the purpose of controlling the spread of radioactive contamination. Collection drums and areas shall be established where possible for items found to be contaminated.

Personnel and equipment shall be monitored for radioactive contamination prior to leaving that restricted area. Individuals shall read, or have read for them, pocket dosimeters as frequently or practical during the emergency response and when exiting the controlled area. Any film badges or TLD's worn by the individual shall be analyzed if pocket dosimeters are found to be off-scale.

9.14 At the conclusion of the emergency, and prior to leaving the facility, a final release survey shall be conducted on all equipment used in the emergency response. This survey shall be documented.

- 9.15 At the conclusion of the emergency, and prior to leaving the facility, pocket dosimeter readings shall be documented for each person involved in the emergency response.
- 9.16 Thyroid scans, whole body scans, and/or bioassays shall be performed as necessary, based upon the material involved in the emergency and the results of air samples taken during the emergency response.
- 9.17 When the emergency has been brought under complete control and the threat to human life or the environment has been stabilized, the emergency coordinator will immediately initiate the following remedial actions in order to restore the facility to operational readiness.
- 9.17.1 The entire area involved in the emergency will be cordoned off and only operations directly related to the remedial clean-up will be allowed. No waste disposal, storage or other activities will be conducted in the cordoned off area.
- 9.17.2 The emergency coordinator will continue the monitoring of the area during remedial operations. Monitoring shall include measurements of external radiation through area surveys and direct frisk of the affected area. Monitoring shall include vegetation samples, if possible, and soil samples within the affected area and downwind of the incident area. A plan for the collection of these samples shall be proposed to the division for approval. This plan shall include the areas to be sampled and the number of samples to be collected. With approval of the division, routine environmental air samples and TLD's shall be expeditiously analyzed in lieu of routine change-out

time. If needed for evaluation, non-routine sampling techniques shall be considered (e.g. heavy equipment air filters may be analyzed for additional data on air concentrations).

- 9.17.3 The emergency coordinator will ensure that all remedial operational personnel taking part in the clean-up are equipped with personnel dosimetry and respiratory protection equipment and anticontamination clothing.
- 9.17.4 All recovered waste, contaminated soil or other contaminated material resulting from the incident will be collected, containerized and stored for disposal when the remedial clean-up is complete.
- 9.17.5 All surface water or other contaminated liquids will be solidified using approved sorbent material, containerized and stored for disposal at the end of the remedial clean-up.
- 9.17.6 When all remedial clean-up measures have been completed, the emergency coordinator will ensure that all equipment (including heavy equipment) utilized in the emergency and subsequent clean-up is decontaminated, cleared and fit for its intended use before resuming normal operations.
- 9.17.7 All disposable personal protective equipment (i.e., gloves, protective clothing, etc.) will be collected and containerized.
- 9.17.8 All respiratory protection equipment will be cleaned after each use.

9.17.9 Fire extinguishers will be inspected before being placed back in service.

9.17.10 The emergency coordinator will comply with the regulatory requirements for notifications contained in Section 6.0 of this procedure and shall document in the report of the incident the information specified in Section 6.3.

10.0 CONTAMINATED INJURED OR ILL PERSONNEL REQUIRING IMMEDIATE MEDICAL ASSISTANCE

In the event that an individual is contaminated, injured or ill and requires immediate medical assistance, the following action will be taken.

- 10.1 The emergency coordinator will be notified immediately. Notification will be by one of the systems referred to in Section 7.3. The information listed in Section 3.0 will be conveyed.
- 10.2 First aid shall be administered if required. The injured person shall not be moved until professional medical assistance is available unless an imminent hazard exists to the individual if he remains in the area.
- 10.3 An evaluation shall be made by the emergency coordinator or designee to determine if outside assistance is necessary.
- 10.4 The injured person should be checked for contamination if there is sufficient time. Decontamination should be accomplished before moving the injured person from the area, but not at the risk of aggravating the injury.
- 10.5 Specific Injury Response
 - 10.5.1 Unconscious Person
 - A. Do not move the person unless he is located in an area which presents an imminent hazard.
 - B. Observe the person and check for breathing, pulse, bleeding, shock, eyes for unequal pupil dilation and broken bones (by observation only).
 - C. Evaluate possible causes of unconsciousness.

- D. Qualified person should administer what first aid is possible and necessary.
- E. If heat prostration is evident, efforts should be made to immediately reduce body temperature.
- F. Transport to a hospital immediately.

10.5.2 Respiratory Injury

- A. Commence artificial respiration immediately (preferably mouth-to-mouth), prevent movement as much as possible.
- B. Treat for shock.
- C. Keep person quiet.
- D. Observe for other complications (e.g., something, broken bones) and control in accordance with other sections of this article or proper emergency medical practices.
- E. Transport to a hospital immediately.

10.5.3 Weak or Slow Pulse

- A. Treat for shock.
- B. Keep person quiet.
- C. Transport to a hospital immediately.

10.5.4 Cuts and Massive Bleeding

- A. Control bleeding.
- B. Treat for shock.
- C. Keep person quiet.
- D. Transport to a hospital immediately.

10.5.4 Shock

- A. Cover person with heavy blanket to prevent body heat loss.
- B. Elevate lower extremities to just above head level.
- C. Make person comfortable.
- D. Keep person quiet.
- E. Transport to a hospital immediately.

NOTE: Never give alcoholic beverages to a person in shock.

10.5.5 Fracture

- A. Control bleeding, if present.
- B. Cover wound to prevent infection.
- C. Splint fracture - do not attempt to set fracture.
- D. Transport to a hospital.

10.5.6 Radiologically Contaminated and Injured Individual

In the event that an injury occurs in a radiological contaminated area, or while working with radioactive or radioactive contaminated material, the action to be taken will be governed by the type and extent of the injury.

- A. Contact the radiological control personnel at the scene. Radiological control personnel shall notify the FRC&SO or facility manager.
- B. The individual also would act as emergency coordinator shall determine the severity of the injury. If the injury is sufficient to require medical assistance it shall be deemed necessary to activate the reporting requirements of this contingency plan. Otherwise the situation shall be handled as specified below and treated in accordance with the procedures contained in the Facility Operations and Facility Standards Manuals.

- C. For superficial puncture wounds or cuts, move the individual to a safe, uncontaminated area and flush the wound, if practicable.
- D. Check the wound, clothing and person for contamination.
- E. Remove all contaminated clothing and flush all contaminated areas with lukewarm (approximately 100°F) water, if practicable.
- F. If contamination is evident, allow the wound to bleed freely for a short period (not constituting excessive blood loss), then flush with copious amount of clean, fresh water.
- G. Isolate or obtain a smear of the object which caused the puncture or cut to be counted for activity.
- H. Before the individual is placed on a stretcher, cover the stretcher with plastic, if practicable.
- I. Transport the person to a medical doctor or hospital for check-up and/or treatment.

10.5.7 If the person is transported to the hospital, the emergency coordinator or designee will travel in the ambulance with injured person offering assistance as requested.

The emergency coordinator or designee will notify the hospital of the transportation of an injured person to their facility, identifying the following:

1. Individual's name;
2. Employer;
3. Nature of injury;
4. Estimated time of arrival;
5. Extent of radioactive contamination; or
6. Any other information requested by the hospital.

11.0

ACCIDENT DURING TRANSPORTATION OF RADIOACTIVE MATERIAL

In the event that an accident occurs during the transportation of hazardous materials, the following procedures will be utilized. A copy of this section will be carried by US Ecology drivers at all times when transporting radioactive materials and will be adhered to strictly.

11.1 US Ecology Drivers' Emergency Procedure

11.1.1 Make an immediate radiation survey with a G-M type meter.

11.1.2 Rope or block off the area around the vehicle if:

- A. There is any spill or leakage.
- B. The meter reads more than 200 mr/hr at the trailer side.

11.1.3 Determine the extent of the hazard.

- A. Wipe test any breached containers.
- B. Determine the radiation levels.

11.1.4 Have someone responsible or yourself, notify someone on the call list. Give the following information as accurately as possible.

- A. Location of the vehicle.
- B. Extent of hazard or emergency.
- C. Injuries.
- D. Property damage.

E. If there was a fire, what burned?

F. Vehicle condition.

G. Phone number where you can be reached.

11.1.5 Notify the local authorities if any liability or property damage is involved.

11.1.6 Keep all unauthorized personnel away from the truck.

11.1.7 In the event of a fire, keep everyone upwind and out of the smoke. Notify the firemen that the material is radioactive.

11.1.8 Do not give any information to anyone other than authorized law enforcement or public health officials.

11.1.9 Keep yourself and the public calm. Think before you do anything.

11.2 Supervisor's Emergency Plan

In the event the truck driver notifies a supervisor of an emergency, the procedure outlined below will be followed.

11.2.1 Determine the extent of damage by obtaining the following information:

A. Location of truck;

B. Injuries;

C. Radiation and contamination levels;

D. Property damage; and

E. Phone number where truck driver can be reached.

11.2.2 After determination of the extent of damage, make the proper notifications. Specified in Section 6.0 of this plan.

12.0 EVACUATION PLAN

All emergencies require prompt and deliberate action. The emergency coordinator will be responsible for determining if facility evacuation is required. In the event that this determination is made, the following actions will be taken.

- 12.1 FM radio communications will be established and the order for evacuation will be given.
- 12.2 All facility personnel in the restricted area will immediately don proper respiratory and personal protective equipment if available and proceed to the primary evacuation route (Attachment 2).
- 12.3 All evacuations will be coordinated by the emergency coordinator in such a manner as to minimize potential exposure (i.e., upwind egress).
- 12.4 All facility visitors and contractors will exit the facility immediately under the direction of the emergency coordinator.
- 12.5 In the event that evacuation by the primary designated route is not possible, the emergency coordinator will authorize penetration of facility fencing by use of heavy equipment or motor vehicles. All personnel evacuating the facility in this manner will immediately proceed to the evacuation muster area when clear of danger.
- 12.6 No personnel will re-enter the facility unless specifically authorized by the emergency coordinator.
- 12.7 When the evacuation is complete, the emergency coordinator will immediately account for all facility personnel, visitors and contractors.

- 12.8 No attempt to find persons not accounted for will be made if it involves the endangering of lives of others by re-entry into the facility.
- 12.9 The emergency coordinator will appoint one US Ecology employee to contact the CRC&SO and ROO in accordance with Section 6.1.
- 12.10 The Division of Health shall be notified immediately.
- 12.11 Individuals shall be monitored for radioactivity and pocket dosimeters read.
- 12.12 Re-entry into the facility will only be made after clearance is given by the emergency coordinator in concurrence with the CRC&SO, ROO, and the Division. Follow-up actions shall be in accordance with previous sections of this plan or as specified by the CRC&SO with approval by the Division of Health.

ATTACHMENT 1

RADIOLOGICAL EMERGENCY NOTIFICATION LIST

In the event of an emergency involving a radioactive shipment, contact the following personnel in the order in which they are listed.

| | | | | |
|---------------|---------|---------|---------|------------|
| Bob Marchand | | Beatty | | 553-2949 |
| Terry King | | Pahrump | | 1-727-6598 |
| Doug Greffin | | Beatty | | 553-2110 |
| David Lima | | Beatty | | 553-2611 |
| Marv McGregor | | Beatty | | 553-2296 |
| Dall Shemp | | Beatty | | 553-2265 |
| Gary Senior | | Beatty | | 553-2348 |
| Bill Marchand | | Beatty | | 553-2396 |

| | | |
|---------------------------------|-----------|------------|
| Low-Level Waste Project Manager | | 1-885-4475 |
| Fire Department | | 553-2222 |
| Sheriff's Department | | 553-2345 |
| Nevada Highway Patrol | | 1-885-5300 |