CONSOLIDATED EMERGENCY RESPONSE PLAN

PROCEDURE APPROVALS:		
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* INDICATES RSO HAS DETERMINED THAT ANY MODIFICATION RESULTING FROM USE OF THIS SOP WILL PROVIDE LEVELS OF RADIATION SAFETY AND ADMINISTRATION CONTROLS THAT ARE AT LEAST EQUIVALENT TO THOSE APPROVED BY THE RESPECTIVE REGULATORY AUTHORITIES		
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1.0 INTRODUCTION

The institutional foundation of emergency preparedness at Waste Control Specialists LLC (WCS) is *ERP-100, Consolidated Emergency Response Plan (ERP)*, which is the site plan for the management, planning, preparedness, response to, mitigation of and recovery from emergencies affecting the site. The ERP provides the framework for response to radiological and hazardous material events that may involve workers, public health and safety and the environment. The ERP is consistent with regulatory and industry standards. It also addresses all standard Emergency Management System functions associated with the treatment, storage and disposal of waste containing radiological and hazardous constituents. The ERP uses the guidance contained in United States Nuclear Regulatory Commission (NRC) Regulatory Guide 3.67 - Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities, as well as multiple sources contained within 30 Texas Administrative Code (TAC). The latest revision of the ERP includes National Incident Management System (NIMS) considerations.

The ERP provides controls for emergency planning, preparedness and response to emergencies at its waste management facility in Andrews County, Texas. It establishes organizational direction for ensuring safe facility operation, protection of the workers, the public and the environment. The ERP describes a program for responding to and mitigating radiological and non-radiological incidents, typically associated with operations at waste management facilities that includes, but is not limited to, fires, hazardous material releases (radioactive, non-radioactive and radioactive mixed waste) and natural events as they may impact the hazardous waste products managed on-site.

The information contained in the ERP encompasses all applicable regulatory requirements. The ERP is developed to include radiological and non-radiological emergency incidents that are deemed credible when hazard analyses are applied to routine operations of the facility. In summary, the ERP delineates necessary and sufficient emergency response capabilities for managing all reasonably anticipated emergency conditions associated with the operation of the facility.

1.1 Purposes and Implementation of the ERP

The ERP represents the program and describes the capabilities for responding to both radiological and non-radiological emergencies at the WCS facility in Andrews County, Texas. The ERP integrates the initial response as an element of the overall ERP. The ERP serves as the overall emergency response-governing document, which is supported by implementing procedures. As such, the ERP covers required development, coordination, planning, preparedness, drills, exercises, response and recovery planning activities.

1.2 Concept of Operations

The WCS ERP is the governing document for ensuring the health and safety of site personnel and the public; and for protecting the environment in the event of an operational emergency. The ERP and its supporting documents will enable WCS to respond to an emergency in a timely, efficient and effective manner resulting in the mitigation of incident consequences.

Site-wide emergency planning is consistent with comprehensive emergency management concepts. These concepts are inclusive of the following:

1.2.1 Planning

Planning involves the development and preparation of hazard assessments, emergency plans and procedures and the identification of necessary personnel and resources to provide an effective response.

1.2.2 Preparedness

Preparedness includes the training of personnel, acquisition and maintenance of resources, and involvement in exercising of plans, procedures, personnel and resources essential for emergency response.

1.2.3 Response

Response represents the implementation of planning and preparedness during an emergency and involves the effective decisions, actions and application of resources to both mitigate consequences and to recover from an emergency.

1.2.4 Drills and Exercises

The conduct of drills and exercises involves developing and maintaining a program for ensuring individual and organizational proficiency for emergency response. While drills are instructional in nature, exercises are evaluated demonstrations of proficiency.

The extent of emergency planning and preparedness required is based upon, and is commensurate with, the hazards and consequences associated with the facility (LLRW, TSDF, and CISF). All actions involved in mitigating the accident/incident must meet the requirements set forth in Federal legislation including: Emergency Planning and Community Right-to-Know Act (EPCRA), Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation Liability Act (CERCLA), Superfund Amendments and Reauthorization Act (SARA) Title III, Occupational Health & Safety Act (OSHA) and applicable NRC Regulations, the Texas Administrative Code and the Toxic Substances Control Act (TSCA).

1.3 Description of Licensed and Permitted Activities

WCS possesses radioactive waste disposal license R04100 that authorizes the disposal of low-level radioactive waste (LLRW), except greater than Class C (GTCC) low-level radioactive waste. The disposal of spent fuel, high-level radioactive waste, byproduct material as defined in 30 TAC 336.2(16)(b), Naturally-Occurring Radioactive Material (NORM), hazardous waste, industrial solid waste, municipal waste, liquid waste explosive or pyrophoric materials are specifically prohibited under this license.

In addition, the license allows for possession of multiple curies of various radionuclides for the term of the license. Storage capability includes Naturally-Occurring Radioactive Materials, pre-packaged and treated low-level waste and mixed waste, including greater than Class C waste (on a case-by-case basis), Transuranic (TRU), byproduct material, and sealed sources. Authorized process capabilities for mixed waste include consolidation, sorting, repackaging, in-container and bulk stabilization of mixed, decontamination of Low Level Radioactive Waste and a variety of other waste management services.

WCS possesses radioactive waste disposal license R05807 that authorizes the disposal of byproduct material, as described in 30 TAC 336.1105, and is currently limited to materials formerly stored in Silos 1 and 2 of the Fernald Waste Management Plant. The disposal of low-level radioactive waste, mixed low-level radioactive waste, naturally-occurring radioactive material, hazardous waste, industrial solid waste, municipal waste, liquid waste explosive or pyrophoric materials are specifically prohibited under this license.

WCS possesses radioactive material license L06153 that authorizes the possession and use of calibration reference sources, calibrations sources and sources used within nuclear soil density gauges. Radioactive materials shall only be used by, or under the supervision of, individuals designated by the Radiation Safety Officer (RSO).

WCS has two RCRA permits from the TCEQ and a TSCA authorization from the United States Environmental Protection Agency (EPA), which authorizes treatment, storage and land disposal of hazardous and toxic waste. The current treatment capabilities include consolidation, repackaging and stabilization for a wide variety of RCRA and TSCA wastes.

WCS has also requested a license to construct a CISF for the storage of Spent Fuel with the NRC.

1.4 Description of Facility and Site

Located in Andrews County, Texas, the WCS facility is an approximately 1,338-acre site that is authorized for the treatment, storage and landfill disposal of hazardous, toxic, exempt wastes, byproduct material and low level radioactive wastes, and treatment and storage of LLRW, mixed wastes and byproduct material. Approximately 14,000-acres surround the permitted site as a buffer zone. The facility is planned, designed and built in compliance with all applicable local, state and federal regulations.

The CISF will comprise 320 acres of land north of the LLRW facilities and includes; a container handling building, an administration and security building and will be used to store up to 500 metric tons of heavy metal (spent fuel) that will be placed in storage systems licensed by the NRC.

WCS manages most hazardous wastes listed in 40 CFR 261 and wastes containing Polychlorinated Biphenyls (PCBs). Approval, using the appropriate Waste Acceptance Criteria, occurs before any waste stream arrives on-site. Hazardous wastes are stored, treated and disposed at the facility.

Areas storing ignitable materials are totally enclosed and equipped with automatic foam fire protections, fire extinguishers and/or pressurized hoses. There are also several standpipes “wharf hydrants” at each storage building compatible with hose connections used by local volunteer fire departments.

1.5 Description of the Area near the Site

The WCS site is located in a sparsely populated area straddling the Texas – New Mexico state line in Andrews County, Texas and Lea County, New Mexico. The site is located approximately one mile north of Texas State Highway 176. The permitted portion of the site is located entirely in Texas. The area within 1 mile of the permitted facility boundaries is largely undeveloped and used for cattle ranching, sanitary waste disposal (Lea County Landfill) and oil gas production. There are no adjacent landowners located next to the facility permitted boundary. A six-foot chain-link fence topped with three strands of barbed wire surrounds the operating boundaries within the permitted area of the facility. The buffer area provided by the 23 square miles of owner-controlled land surrounding the facility provides further separation from any other adjacent landowner and the public. There are no residential areas within a 3-mile radius of the facility. The terrain at the site and surrounding area consists of gently sloping grassland with scattered small mesquite trees.

Industrial facilities near WCS include a gravel and caliche mining/crushing facility located approximately one mile to the west of the facility boundary, the Lea County landfill located about one mile to the south-southwest and URENCO USA, a facility for enriching uranium located one mile west of the permitted boundary.

Access to the site is via State Highway 176. Trucks carrying hazardous, mixed waste and low level radioactive waste materials turn north off of State Highway 176 onto the facility's access road. The facility's access road is located immediately east of the state border with New Mexico. Trains access the site from west to east on a rail spur off the Texas-New Mexico Railroad line in Eunice, New Mexico to a rail loop, which surrounds the WCS site.

The city of Eunice, New Mexico, located in Lea County, is the closest populated area to the site, located about 6 miles west of the site. The population of Eunice is approximately 2,922 according to the 2010 census. Lea County had a 2010 population of 64,727. The city of Andrews, Texas is located approximately 30 miles to the east. Andrews is the largest city in the county and has a 2010 population of 11,088.The 2010 population of the 1,500 square mile Andrews County was 14,786. The nearest public gathering place (church, school, park, etc.) is approximately 7 miles from the facility and outside the Emergency Planning Zone (EPZ). All nearby public gathering places are shown on the 10-mile radius Emergency Planning Map in Figure 3.

The WCS site is located in a sparsely populated area of West Texas. The isolation of the operating facilities within the site, undeveloped land use around the facilities and large owner controlled buffer area surrounding the facilities are favorable characteristics that limit any potential radiological impact from the operation of the facilities to the public and the environment.

1.6 Meteorology

The WCS site is located in a physiographic region that is arid to semi-arid and characterized by hot summers and dry winters. The evaporation rate of the area is greater than the precipitation rate throughout the year. The average monthly rainfall ranges from 0.4 to 2.5 inches. The average yearly total for precipitation is approximately 16 inches. The average monthly evaporation rate is 6 inches and the average yearly evaporation rate is 72 inches per year. The 24-hour 25-year storm event produces approximately 4.5 inches of rainfall.

Tornadoes may pose a threat to the operating facilities during tornado season although the facility is south of “Tornado Alley” which stretches from Texas through Oklahoma and into Kansas. The Office of the State Climatologist, using the National Oceanic and Atmospheric Administration Storm Data, has indicated that Andrews County should have between 10 and 19 tornadoes per 1000 square miles per 30 years (1954 - 1983).

During the winter months, snow and icy conditions are possible since the temperature may fall below 32 degrees from November to April. However, as with most areas in Texas, the snow and ice does not remain for extended periods.

Adverse weather conditions are not expected to hamper emergency response. The probability of flash flooding is minimal due to the small amount of precipitation in the area. The topography of the site is relatively flat to slightly undulating with minor drainage relief. There is no major stream or stream drainages capable of producing flash floods within miles of the facilities boundaries.

WCS has four on-site meteorological towers for purposes of environmental monitoring. Therefore, real time meteorological data is available for use in emergency response. Data collected over the last six years from the on-site meteorological tower that is located near the Guard House, indicate that the prevailing wind direction is from the south-southeast. The winds throughout the months of December to February shift occasionally to the southwest. The wind velocity increases from March to May with the winds increasing from the south and south-southwest. During the months of June to November, the wind direction is predominantly from the south and south-southeast. The average wind velocity throughout the year is approximately 11 miles per hour. In the event of an airborne release of radioactive material, wind velocity is a key factor in determining the radionuclide concentration at the location of an off-site receptor. As wind velocity increases, the dilution of the radionuclide concentration at the location of an off-site receptor increases. The wind blows in the direction of the closest off-site receptors (to the west of the facility) only about 5 to 6% of the time on average and most frequently in the 8 to 12 miles per hour range.

Atmospheric stability is a measure of the dispersive capability of the atmosphere and depends on the horizontal temperature gradient of the air. In the event of an airborne release of radioactive material, good atmospheric dispersion dilutes the release and minimizes the radionuclide concentration at the location of an off-site receptor. Unstable atmospheric conditions (stability class A-C) provide greater dispersion than stable conditions (stability class D-F). The atmospheric stability data from on-site data collected from the years 2000 – 2005 indicate that the atmosphere at the site is unstable 25% of the time, neutral (stability class D) 69% of the time and stable 5% of the time. Thus, on average, atmospheric conditions (unstable and neutral) more favorable to dispersion occurs 94% of the time.

2.0 TYPES OF ACCIDENTS

Information that was used to develop potential operational failures leading to potential accidents is found in the site's documents that serve as its basis of operations. These documents include the licenses, permits, authorizations and hazard analysis performed on systems and or operations. Hazards analysis will be conducted for new systems /operations and any new or unique hazardous or radioactive material inventories. These data will be used to formulate accident scenarios that, through human or equipment failures, may lead to previously unevaluated accident types. The Incident Commander (IC) then prepares various protective action scenarios that serve as the baseline emergency management response actions incorporating the appropriate response equipment, on-site emergency response, off-site support and notifications.

2.1 Description of Postulated Accidents

Accidents and unusual operational conditions could occur during the operation of the low-level radioactive waste and mixed waste storage and processing component of the site. The operations and physical characteristics of the operating facilities were evaluated to define accidents that could potentially result in on-site or off-site exposures to the general public. Potential accidents could involve rupture of a waste container or process confinement and subsequent release of a portion of the radioactive waste material. A fire could consume a waste package and release a portion of the contained radioactive waste. Natural events such as floods or tornadoes could disperse radioactive material to off-site locations where public exposure is possible.

The postulated accident scenarios for the WCS facilities that could result in the implementation of the ERP includes a transportation accident within the facility (with fire), a failure of a ventilation system utilized for radioactive or hazardous particulate filtration, a fire within one of the storage, staging or processing areas and a tornado. Each of the scenarios has been assessed to determine the environmental impact.

Fire scenarios produce greater consequences than other containment failure events because fire offers an increased off-site transport potential. Fire generates heat and combustion gases that may destroy or stress the material and/or the substrate upon which the radioactive materials may be deposited, compromise barriers and/or pressurize containers/enclosures that may lead to the airborne release of contained materials. Mass flux and vapors from the fire suspend material in air. This material mixes with general convection currents that provide transport for particulate materials.

The primary exposure pathways to workers and the public are through inhalation and direct external exposure. The dose from external exposure is much less than dose from inhalation exposures outside of the facility structures, therefore, protective actions are typically based on inhalation exposures.

Secondary emergencies that may result from the onset of the primary condition include medical emergencies, personal injury accidents and property damage accidents. A power failure will not constitute an emergency requiring implementation of the ERP, unless it causes an increased threat of fire or release to the environment. There are no postulated accidents that could lead to a release of radioactive material in quantities that would trigger an event classification.

Potential emergencies that could occur at the facility are similar to those that can occur at any industrial facility operation. These include the following:

2.1.1 Fire

- Could cause release of toxic fumes and/or radioactive particulates

- Could spread and possibly ignite materials at other buildings on-site or cause heat induced explosions
- Could produce contaminated runoff from fighting fires with extinguishing chemicals or water
- Cause injury to personnel
- Could cause damage to the physical structures of the facility

2.1.2 Explosion

- Could cause a safety hazard from flying fragments or shock waves
- Could ignite other hazardous waste at the facility
- Could damage other containers or tanks at the facility that would result in release of toxic and/or radioactive material
- Could cause injury to personnel

2.1.3 Material Release

- Could result in the release of flammable liquids or vapors capable of causing a fire or gas explosion
- Could cause the release of toxic and/or radioactive contaminated liquids or fumes
- Could result in contamination of surface or ground water and/or soil
- Could cause injury to personnel

2.1.4 Accident (vehicle or equipment)

- Could cause fire, explosion or spill
- Could cause mixing of incompatible chemicals
- Could cause release of toxic and/or radioactive materials
- Could cause injury to personnel

2.1.5 Natural Events (tornados, lightning, earthquakes, etc.)

- Could cause a safety hazard from flying debris
- Could cause damage to the physical structures at the facility
- Could indirectly cause fires, releases and other consequences
- Could directly cause injury to personnel

The hazards are documented by the pre-acceptance procedures as developed from the customer data and sample analysis or initial waste screening for any particular waste handled by the facilities. Potential adverse human health effects from any substances released in an emergency are summarized below:

Radioactive materials – The primary dangers are external exposures or internal exposures from ingestion or inhalation of radioactive particles or gases. All types of radioactive emitters are accepted and are stored in containers that limit the potential for involvement and release for most types of accidents.

Ignitable substances - The primary dangers are those associated either with burns or with injuries due to the concussive forces of possible detonation upon ignition. The

RCRA Part B permitted facilities accept all types of hazardous materials including highly ignitable wastes. WCS does not store ignitable liquid wastes in bulk. All ignitable liquids and solids are either stored in drums and placed in the Container Storage Building (CSB) or contained in roll-off bins, tank trucks or vans. There is a diked 4000-gallon gasoline tank and bulk liquefied petroleum gas tanks for vehicular use on the facility.

Toxic substances - Adverse health effects (whether acute or chronic) may include injury to the skin, the eyes, the mucous membranes, the respiratory system, the digestive system, the circulatory system, the nervous system, the endocrine system, the reproductive system, or other bodily organs and functions. The current RCRA Part B permitted facilities accept all types of hazardous materials. Bulk tank storage is not provided for toxic liquids. All highly toxic substances are contained in drums and stored in the CSB or contained roll-off bins, tank trucks or vans. Large storage tanks to store highly toxic liquids are not used at this facility.

Corrosive substances - The adverse health effects could involve injuries to skin, hair, eyes, mucous membranes and the respiratory system. The RCRA Part B permitted facilities accept all types of hazardous materials. Bulk tank storage is not provided for corrosive wastes. All corrosive wastes are contained within drums and stored within the CSB or contained in roll-off bins, tank trucks or vans.

Reactive substances - Adverse health effects could involve injuries to skin, hair, eyes, mucous membranes and the respiratory system. The RCRA Part B permitted facilities accept all types of hazardous materials. WCS does not maintain bulk tank storage for reactive substances. All reactive materials are contained within drums and stored within the CSB or contained in roll-off bins, tank trucks or vans. Large storage tanks to store reactive liquids are not used at this facility.

PCBs - Are probable human carcinogens and may cause non-cancer health effects, such as reduced ability to fight infections, low birth weights, and learning problems. The risks and hazards associated with the PCB contaminated wastes found at WCS are a function of the toxicity of PCBs and an individual's exposure. The TSCA authorization allows WCS to store any PCBs. However, liquid PCBs cannot be disposed in the RCRA landfill. PCB warning labels are placed on all containers containing PCB materials.

2.2 Detection of Accidents

Detection of accidents is dependent on personnel observation, by fire and smoke alarms and radiation monitoring instrumentation. Employees who detect a potential emergency shall notify his/her supervisor/manager and the IC (or designee) immediately. Notification of WCS Security in an attempt to notify the IC is acceptable. The notification is made in one or more of the following ways:

- Radio
- Voice
- Telephone
- Alarm Systems

The employee reporting a potential emergency is responsible (if it can be done safely) for obtaining initial information for the IC (or designee) in order to assess the degree of hazard to life, property and/or the environment. This information is used to make preliminary determinations of the necessity for declaration of an emergency and notification to regulatory agencies or to decide whether a request for assistance should be made to other off-site agencies under mutual aid agreements.

3.0 OPERATIONAL EMERGENCY EVENT CLASSES

3.1 Classifications of Accidents

Emergencies will be classified according to the severity of events and the potential for impact on facility personnel, the general public and the environment. Emergencies are classified as an Alert or Site Area Emergency. The criteria for each level and the expected response are included in Table A. Emergencies are classified as soon as possible to ensure adequate emergency response resources are available to protect personnel, the public and environment.

Table A - Emergency Classification

Classification	Criteria	Response
Alert	An alert is defined as an incident that led or could lead to a release to the environment of radioactive or hazardous material, but the release is not expected to require a response by an off-site response organization to protect persons off-site. An alert requires mobilization of the WCS Emergency Response Organization, either in a standby mode that will activate some portions of the organization or full mobilization, but does not indicate an expectation of off-site consequences. However, an alert may require off-site response organizations to respond to on-site conditions such as a fire.	Activate WCS Emergency Response Organization. Activate off-site response personnel, if required, or place on stand-by. Conduct appropriate assessments. Mitigate the severity of the occurrence or its consequences.
Site Area Emergency	A site area emergency is defined as an incident that led or could lead to a significant release to the environment of radioactive or other hazardous material and that could require a response by an off-site organization to protect persons off-site. A site area emergency reflects full mobilization of the WCS Emergency Response Organization and may result in requests for off-site organizations to respond to the site.	Activate WCS Emergency Response Organization. Activate off-site response personnel, if required, or place on stand-by. Notify state and local agencies. Notify the Executive Director (ED) of the Texas Commission on Environmental Quality (TCEQ) Conduct appropriate assessments. Mitigate the severity of the occurrence or its consequences. Initiate any predetermined protective actions for on-site personnel. Notify the NRC Operations Center immediately after off-site notifications are made and no later than 1 hour after declaring a Site Area Emergency.

TABLE B - CISF MALFUNCTION INITIATING CONDITION MATRIX [1]

Notice of Unusual Event	ALERT
UNCONTROLLED increase in radiation levels at the CISF.	UNCONTROLLED increase in radiation levels that impedes operations at the CISF.
Confirmed security event with the potential loss of level of safety of the CISF	Confirmed security event involving potential release of radioactivity from spent fuel storage systems at the CISF
Other severe incident that may compromise safety systems potentially resulting in a release of radioactivity at the CISF.	Other severe incident that compromises safety systems resulting in a release of radioactivity at the CISF.
Other conditions judged warranting declaration of an UNUSUAL EVENT.	Other conditions judged warranting declaration of an ALERT.
Natural OR destructive phenomena inside the Protected Area affecting the ability to maintain spent fuel integrity.	

1 Methodology for Development of Emergency Action Levels, Nuclear Energy Institute, NEI-99-01 (NUMARC/NESP-007, January 2003.

Interim Staff Guidance, Emergency Planning, ISG-16

3.2 Notification and Coordination

WCS will notify higher authority levels including state and local jurisdictions if an emergency occurs at the facility. Once categorized, notification of off-site agencies is as soon as specified by this plan, by agreement or by regulation.

3.2.1 Off-site Notifications

Operational Emergencies involving actual or potential release of hazardous materials both radiological and non-radiological are the primary concern at WCS. Depending on the type of emergency encountered, the need for outside resources may be necessary. The IC, or designee, at their discretion will contact outside agencies for help in resolving the emergency. This help can range from fire and ambulance service to activation of county and city Emergency Operations Center (EOC) facilities. The IC will be responsible for ensuring required off-site notifications.

3.2.2 On-site Notifications

It is the policy of WCS to ensure prompt emergency response by the WCS Emergency Response Organization (ERO). The IC performs a complete recall of the ERO or appropriate elements within the ERO. The Emergency Operations Center shall serve as the single point of recall for the ERO. The IC may use the following systems to communicate the recall message:

- Facility Telephone
- WCS Public Address (PA) System
- Electric Horn
- Intercom System
- Cell Phones

- On-Site Emergency Notification System
- Reverse 911 System (R911)

3.2.3 Emergency Communications Systems

The IC uses multiple methods (including the R911 system) to initiate emergency evacuation and response. The communication system is designed to immediately inform all operations and administration areas of the site protective measures.

- An initial R911 message is activated, alerting all site personnel to standby for a follow-up communication.
- Follow-up instructions are provided in multi-modal delivery paths (Site PA / Intercom, radio, telephone, e-mail).

Only the IC or designee may evacuate the entire site, call for third party response teams or notify off-site agencies, as necessary.

The communication system, consisting of telephones, cell phones, radios or intercom systems are used to summon first aid and to summon security. A communication system is located in every storage or treatment area. A radio is used within the landfills or other areas not within the boundaries of other communication systems. Cell phones are also used to contact the local emergency response agencies in case all power and telephone service is lost.

4.0 RESPONSIBILITIES

4.1 Normal Facility Organization

Normal facility operations are under the control of the General Manager. The Vice President of Operations is the primary IC. Alternate Incident Commanders are designated in the event the primary IC is unavailable. The Radiation Safety Officer is an alternate IC, and will provide guidance during emergencies, but also is empowered to assume control and have the authority to institute corrective actions, including shutdown of operations when necessary in emergency situations or unsafe conditions in accordance with 30 TAC 336.210. The additional alternate ICs are selected based on their levels of qualification and training.

4.2 WCS Emergency Response Organization (ERO)

The WCS Consolidated ERP expresses the philosophy that the WCS Site shall be as self-sufficient as possible in handling emergencies within the facility. Further, the ERP establishes and identifies the groups of individuals to assemble for various types of emergencies at the site. These groups together constitute the ERO.

In an emergency, the IC or his designee activates the ERP. Accordingly, the IC or his designee is responsible for immediately directing and taking appropriate emergency response actions within the site boundary and for immediate notification to state and local emergency jurisdictions. Protective action recommendations to the state and local jurisdictions are an integral part of the notification. The IC may delegate specific duties to other qualified personnel. Elements of the ERO are:

- First Responders
- Incident Commander (IC)
- Radiation Safety Officer (RSO)
- Operations Manager

- Emergency Operations Center (EOC) Coordinator
- Public Information Officer (PIO)
- Security Manager
- Procurement Manager
- Health and Safety Manager
- Technical Support Manager
- Logistics Member/Scribe
- Finance Manager
- Radiation Safety Technicians (RST)
- Maintenance

The elements of the ERO have been organized into a standardized structure with terminology consistent with the National Incident Management System (NIMS) Incident Command Structure (ICS), to allow immediate recognition of the components of the WCS ERO by external emergency response organizations.

4.3 Emergency Program Direction and Coordination

The facility personnel receive emergency specific training and are organized to respond to emergencies effectively. This response occurs at several levels as described below:

4.3.1 First Responders

First responders are personnel most likely to discover an emergency. These personnel initiate the emergency response actions of the facility by notifying their supervisor/manager and the IC (or designee). Personnel included in this group could be Operations personnel, Radiation Safety Technicians (RST), Lab personnel etc. These personnel are trained so they can:

- Understand the risks presented by the hazardous and radioactive substances at the facility
- Understand the potential outcomes associated with an emergency involving the hazardous and radioactive substances at the facility
- Recognize the presence of hazardous and radioactive substances at the emergency scene
- Identify the hazardous and radioactive substances involved in the emergency
- Contain the release from a safe distance and prevent exposures to personnel
- Utilize basic risk assessment techniques
- Select and use appropriate personnel personal protective equipment
- Understand the basic operational practices of the facility

4.3.2 ERO Members

Several persons within the organization acquire additional training so they can function in lead and supporting roles during the response to an emergency. This team corresponds to the function of Hazardous Materials Technicians and Hazardous Materials Specialists that are prescribed under the OSHA HAZWOPER Standard (i.e., 29 CFR 1920.120(q)).

Employees are selected for the emergency response organization based on knowledge, skills and abilities (KSA). These employees are given additional training facilitating the required skills that will allow them to perform safely as members of the Emergency Response Organization. Employees who are potential members of the ERO may be cross-trained in areas to allow flexibility in staffing of the teams. However, the staffing of the ERO will be determined by the IC. Multiple ERO members are on-site during operational hours at all times. The IC, RSO and other key ERO personnel are available by cell phone 24 hours a day.

4.3.3 Examples of ERO Members

- Operations
- Safety
- Logistics
- Procurement
- Technical Support
- Finance
- Emergency Response Coordinator
- Public Information Officer (PIO)
- Radiation Safety Officer (RSO)
- Radiation Safety Technician (RST)
- Maintenance

4.4 Incident Commander (IC)

The IC or designee is the individual who is responsible for managing the activities outlined under this ERP. IC duties, authorities and responsibilities are presented in this section. The persons qualified to act as IC are listed on Attachment F, *Emergency Information List* of procedure EP-1.1, *Consolidated Emergency Response*. The names of the primary and alternate ICs are submitted to The Texas Commission of Environmental Quality (TCEQ). The IC or alternate is on the facility premises or on call 24 hours a day (i.e., available to respond to an emergency by reaching the facility within less than one hour if after working hours). In the absence or unavailability of the primary IC, an alternate IC is designated as the primary IC under a delegation of authority memorandum. The ICs are thoroughly familiar with all aspects of this ERP, all the hazardous and radiological waste operations and activities at the facility, the location of all hazardous waste records within the facility and the facility layout.

When called to an emergency, the responsibilities of the IC are:

- Declaring an emergency
- Classifying emergencies
- Decisions regarding off-site assistance
- Activating the ERO
- Directing response activities
- Declaring a site evacuation
- Declaring an end to emergencies
- Returning authority for command and control of site activities back to Facility Management
- Emergency Reporting
- Post event assessment
- Recordkeeping

During the recovery phase, the IC or designee will assure that all recovered waste, soil, water or any other contaminated material is properly treated, stored or disposed. The IC or designee must ensure the response phase and recovery procedures are complete before any waste in the affected area is managed or treated.

4.4.1 Delegation and Assignment

The ERP identifies ICs who train to coordinate the response of the ERO to an emergency event. These personnel may not always be present at the facility when an event occurs. One of the ICs listed in Attachment F, *Emergency Information List* of EP-1.1, *Consolidated Emergency Response* is always on-call. If the on-call IC is not at the facility, then he / she is available to those individuals present at the facility through communication device or other means. Depending upon the nature of the event, the on-call IC may designate certain duties to those present at the facility by phone or electronic communication.

The IC position meets the requirements of OSHA 1910.120(q) for an on-scene Incident Commander. Beyond acquiring the minimum skills for the first responder, and emergency response training of the emergency response organization, the IC or designee must have competency in the following areas:

- Implementation of the ERP

- Understand the risks presented by the hazardous substances present at the facility
- Interaction of emergency response at the facility with local and regional emergency response organizations
- Know and understand the importance of emergency decontamination procedures

4.4.2 Authority

The IC has been granted the authority necessary to implement this ERP in the event of an emergency. These authorities include:

- Deploy equipment
- Direct company personnel
- Contact emergency response agencies
- Contact regulatory agencies
- Contract for commercial vendors
- Summon assistance from hospitals
- Shutdown operations and evacuate the facility

Attachment F, *Emergency Information List* of procedure EP-1.1, *Consolidated Emergency Response* lists the names, addresses, and phone numbers of the currently authorized ICs. Attachment F, *Emergency Information List* of procedure EP-1.1, *Consolidated Emergency Response* is continuously updated as the names and contact information of ICs change.

4.5 Health and Safety Manager

The Health and Safety Manager is responsible for:

- Identifying and evaluating hazards
- Providing directions with respect to safety of operations
- Providing directions for personal protective equipment in conjunction with the RSO

4.6 RSO

The RSO or designee is responsible for:

- Directing the Radiation Safety Technicians (RST)
- Ensuring a contamination control point and radiation area boundary is established on the perimeter of the contaminated area
- Ensuring records are maintained for documenting personnel doses received during emergency operations
- Ensuring off-site response organizations have or are provided (if required) adequate dosimetry and briefings
- Ensuring a monitoring and decontamination station is set up to determine if personnel leaving the site were contaminated, exposed, or injured during cleanup of the radioactive materials release, and to ensure that contamination is not spread by such personnel

- Preparing reports as required
- Calculating potential off-site radiological doses

4.7 Security Officers

The Security Officers are responsible for:

- Controlling access to emergency scenes by off-site personnel
- Contacting the Sheriff's Department to provide armed deputies, if requested by the IC

4.8 Managers and Supervisors

The Managers and Supervisors are responsible for:

- Area supervisors are responsible for overseeing evacuation from their work area
- Reviewing evacuation routes and expectations with employees
- Managers work with supervisors to select their designated locations, assembly points and evacuation route as directed by the IC
- Instructing employees on the evacuation protocol
- Assisting employees to designated areas of refuge and then to the exterior assembly area

4.9 Local Off-site Assistance

This section discusses the role off-site organizations may play if an emergency occurs at the facility. Presented below are the organizations that may assist the facility. Attachment F, *Emergency Information List* contains the telephone numbers of these organizations. Posted by key telephones throughout the facility, Attachment F*, Emergency Information List* is revised as contact information changes.

Presented in Appendix D is documentation of the agreements reached with these organizations.

4.9.1 Fire and Explosion

Both the Andrews County Volunteer Fire Department, located 30 miles from the site, and Eunice, New Mexico Volunteer Fire Department, located 6 miles from the site have signed agreements to assist the WCS Emergency Response Organization in the control of major emergencies. Both departments are equipped to respond to structural fires, oil well fires and chemical tank explosions.

4.9.2 Medical Care

Carlsbad Medical Center, located in Carlsbad, New Mexico is the first choice for incidents involving radiologically contaminated individuals; unless life threatening injuries are present which would take precedence and treatment would be sought at Lea Regional Medical Center or Permian Regional Medical Center.

Lea Regional Medical Center is located 25 miles to the northwest in Hobbs, New Mexico. The hospital is fully equipped to handle most types of emergencies and has a life flight helicopter available. The hospital has received training from the Waste Isolation Pilot Plants (WIPP) personnel on the handling of injury victims in the event of contamination with radioactive materials.

Permian Regional Medical Center is located approximately 30 miles to the east in Andrews, Texas. The hospital is fully equipped to handle most types of emergencies. Transport by helicopter of severely injured personnel to Covenant Medical Center in Lubbock, Texas or the Parkland Memorial Hospital in Dallas, Texas for treatment is available. Helicopters are staged at Covenant Medical Center. A flight time of 35-45 minutes is normal from Lubbock to Andrews. Copies of the ERP and a list of waste materials likely to undergo treatment, storage or disposal at the WCS facility have been forwarded to Permian Regional Medical Center and Lea Regional Hospital. Hospital personnel have been asked to review the plan. A listing of medical facilities indicating they are ready and willing to provide any emergency care necessary is in Appendix D. These medical treatment facilities have entered into Memoranda of Understanding (MOU) letters with WCS. The letters will be updated periodically.

4.9.3 Ambulance

The City of Andrews Police Department also serves as the ambulance service for the entire county. All City of Andrews police officers are trained and certified EMTs. The Andrews Police Department has agreed to provide emergency medical assistance and evacuation for the facility. Response time for medical assistance to the site is about 30 minutes from Andrews (see Appendix D).

Additional ambulance service is available through the Eunice Fire and Rescue Service, which has agreed to provide emergency medical care to the facility. The Eunice Fire and Rescue Service is approximately 6 miles from the facility. They can respond within ten minutes.

4.9.4 Traffic Control and Residential Evacuation

The Andrews County Sheriff's Department has agreed to provide traffic control and residential evacuation. The Sheriff's Department also provides 24-hour emergency dispatch service for all emergency response organizations.

The IC or designee is responsible for alerting local authorities to emergencies that may affect the environment or public safety outside of the facility. When the IC determines that an emergency exists, he/she will immediately:

- Determine if the emergency involves a loss of control or potential loss of control over hazardous or radioactive materials, thus requiring further classification as an Alert, or Site Area Emergency.
- Immediately notify appropriate local and state jurisdictions when emergency circumstances indicate potential off-site effects.

4.10 Activation of the ERP

Activation of the ERP requires notification of the following:

- Activation for any reason is reported to the TCEQ Region 7 office in Midland (see *Attachment* F*, Emergency Information List* of EP-1.1, *Consolidated Emergency Response*). Cleanup and verification of significant spills are conducted as directed by the TCEQ Region 7 office in Midland
- Spills meeting the EPA definition are reported to TCEQ via the 24 hour Emergency Spill Reporting Line (see *Attachment F, Emergency Information List*)
- If an emergency is declared, notify the DSHS emergency number (see Attachment F, *Emergency Information List*) within one hour of contacting off-site response agencies, in accordance with 30 TAC 327.3.

Whenever notification is made to TCEQ or DSHS, the following information will be provided if requested:

- IC name and telephone number
- The facility
- The time and type of incident (e.g., release, fire)
- The type and quantity of material(s) involved, to the extent known
- The extent of injuries, if any
- The possible hazards to human health and the environment outside the facility
- When required, based on the amount released exceeding the applicable Reportable Quantity, the National Response Center (see Attachment F, *Emergency Information List*) must also be notified
- Notify NRC as required by 10 CFR part 72

4.11 Coordination with Participating Government Agencies

Texas State law and executive orders of the Governor make the chief elected official in each local jurisdiction responsible for emergency planning and response within that jurisdiction. Those chief elected officials are the mayors of incorporated cities and the county judges in unincorporated areas. When an emergency occurs or threatens, local governments are expected to first use their own resources and invoke existing mutual aid agreements to cope.

Cities and counties can request State assistance from the local Disaster District in the event local resources are inadequate for dealing with an emergency. Each of the State's 21 Disaster Districts has a Disaster District Committee (DDC) composed of representatives of all state agencies having resources within the district. The DDC Chairman (who is also the Highway Patrol commander in that district) has the authority to employ all state resources within the district to respond to an emergency. Disaster District 4A (DD-4A), located at the Department of Public Safety District Headquarters in Amarillo, covers the WCS area (Requests from the facility for State assistance should also be addressed to the Disaster District in Amarillo). DD-4A is prepared to provide a State Liaison Officer to the WCS EOC during operational emergencies.

Should the DDC's resources be inadequate or inappropriate, the DDC refers requests for support to the State EOC in Austin. The Division of Emergency Management (DEM) operates the State EOC and coordinates emergency resource support for local governments with various state agencies on a daily basis. In the event of a significant emergency, the State Emergency Management Council (which includes all major State agencies and the State liaison of the American Red Cross) will be called into session at the State EOC to manage the State response. The State Emergency Management Council has the authority to employ virtually all State resources, including (with approval of the Governor) the National Guard and Texas State Guard. Pursuant to provisions of the State Emergency Management Plan, DEM increases its readiness during Alerts and Site Area Emergencies and the State Emergency Management Council may be called in as necessary.

The State of Texas will request Federal assistance from FEMA Region VI in Denton, Texas, in the event that State resources are inadequate to respond to a major emergency. Requests for Federal assistance are coordinated by DEM and signed by the Governor of the State of Texas.

The DSHS, TCEQ and NRC have responsibilities for detecting, measuring, and supervising cleanup of radioactive materials that are released into the environment. The DSHS and TCEQ have statutory responsibilities for controlling the distribution of contaminated food and restricting use of contaminated public water.

A spill of material containing PCBs usually does not constitute a situation that is of immediate danger to public safety or the environment. However, spills of PCB containing materials must be reported. Spills must be reported to the National Response Center (see Attachment F*, Emergency Information List* of EP-1.1, *Consolidated Emergency Response*), if they contain one pound or more of pure (greater than 500 ppm) PCB. Spills **must be reported**, to EPA's Toxic Substances Branch if they directly contaminate surface water, sewers, drinking water supplies, grazing lands, or vegetable gardens. Spills must be reported **within 24 hours** of discovery. Spills of low level PCBs (less than 500 ppm) require remediation. PCB Spill Cleanup Policy for the EPA, Region VI, and the TCEQ, require soils to be remediated to background levels (e.g., detection limits), where practicably attainable, of any PCB spill from a source greater than 50 ppm PCBs.

5.0 EMERGENCY RESPONSE MEASURES

Consequence assessments include both initial and ongoing evaluations of the potential consequences of an accident/incident occurring at the WCS site that could adversely affect on-site and off-site personnel. The emergency management program is commensurate with the hazards present and is consistent with a graded approach evaluation of those hazards. Initial assessments provide the technical basis on which emergency plans and procedures are based. On-going assessments use the same modeling tools and techniques, when performed during emergency response. On-going assessments are continually refined using real time monitoring data from field monitoring teams.

5.1 Activation of ERO

All WCS personnel are responsible for reporting potential emergency conditions, events, and occurrences to the IC or designated alternate. Such emergency conditions, events, and occurrences are categorized and classified to ensure proper emergency response actions are taken and occurrence-reporting procedures are followed. The IC is responsible for categorizing operational emergencies. An occurrence determined to be an operational emergency is further classified as an alert or site area emergency in those cases in which the release of a radiological or hazardous material is a potential or actual consequence of the emergency event. When emergency circumstances warrant, local and state jurisdictions will be notified.

Declaration of an emergency is the responsibility of the IC. An IC is on call 24 hours a day. Once it has been determined that an emergency exists, the IC activates the ERO. Under most circumstances, outside help is not summoned unless the emergency cannot be controlled by the WCS ERO. The RSO is listed as an Alternate IC with the authority to assume control to institute corrective actions, including shutdown of operations when necessary in emergencies or unsafe conditions.

Whenever there is an emergency, the IC (or on-site designee when the IC is off-site) immediately activates the internal facility notification systems, when applicable, to warn all facility personnel. Whenever there is an emergency, the IC or designee is responsible for ensuring the character, exact source, amount and extent of any released material is immediately identified. This is accomplished by observation and by review of facility manifests and other facility records as required.

Whenever there is an emergency, the IC or designee immediately assesses hazards to human health or the environment that may result. This assessment considers both direct and indirect effects of the emergency (e.g., the effects of any generated toxic, irritating, or asphyxiating gases, or the effects of any hazardous surface water run-off from the water or chemical agents used to control fire- and heat-induced explosions).

5.1.1 General Response Steps

The steps taken to implement the ERP are presented below:

5.1.1.1 Discovery of the Event by Individual – Notification

- Note location of event and problem
- Inform the IC, Acting IC or designee - identification and assessment
- Investigate circumstances and condition of the event
- Immediately identify character, source, amount and the extent of any releases
- Ensure all personnel are protected against exposures or injury
- Assess the need for personnel evacuation

If hazards extend beyond facility boundaries or if otherwise warranted notify appropriate emergency service groups and

5.1.1.2 ERO – Control and Mitigation:

- Establish a control area
- Obtain medical attention for any injured persons
- For spills or material releases, contain and control
- Prepare for re-entry as directed and authorized by the IC

5.1.1.3 IC – Post-Emergency Recovery:

- Restrict access to affected areas
- Ensure an adequate recovery plan is in place and implemented before normal activities are resumed
- Notify public authorities that recovery operations are complete and normal operations will resume

5.1.2 Safety during Emergency Response

The IC or designee specifies the appropriate safety procedures to mitigate potential adverse effects for each category of hazards present at the scene. Personal protective equipment may include but is not limited to safety glasses, gloves, boots, Tyvek suits, full-face respirators and self-contained breathing apparatus. Toxic, flammable, reactive and radioactive wastes are accessed on a waste-by-waste basis depending on the potential routes by which the waste can adversely affect the safety of ERO personnel.

5.1.3 Initial Response and Notification

The IC or a listed alternative is always on-call. Any personnel detecting a perceived emergency must immediately warn other employees working nearby and notify the IC. The IC then notifies other processing areas to the extent of the emergency, as deemed necessary. The IC evaluates the situation and determines whether to initiate special measures or to handle the situation through the normal line organization. If the IC determines special emergency measures are required, emergency alarm notification of personnel and evacuation procedures may be commenced.

Under normal circumstances, only Security Officers are on-site during weekends and holidays. WCS Security Officers are trained to assume the duties of initial response and notification during these times. Upon detecting a perceived emergency, Security personnel on duty will immediately inform the IC. The home and/or mobile phone numbers of the IC and all alternates are posted on the *Attachment* F, *Emergency Information List* in the security offices. After notifying the IC and receiving direction, Security Officers may call off-site emergency response organizations, as required. The phone numbers of these services are also posted on the Attachment F*, Emergency Information List* of EP-1.1, *Consolidated Emergency Response.*

5.1.4 Public Information Program

Depending on the severity of the event, the potential public impact, and the level of public interest, either the WCS General Manager (who serves at the PIO) or the WCS Corporate Office are the only WCS employees who have authority to disseminate emergency related public information. The IC will establish a liaison that will communicate real time emergency event information directly to the WCS General Manager.

5.2 Accident Assessment

Various atmospheric transport and dispersal models that utilize on-site meteorological data are available for use to develop consequence analyses to determine the potential effects of an accident/incident at the WCS facility. In conducting consequence analyses during an accident/incident, all information available in the EOC will be utilized. Information such as modeling outputs, real-time meteorological data and forecasts, monitoring data from field response teams, and hazardous material inventories and data will be used to make recommendations concerning consequences that could be expected.

The primary dispersion/dose assessment model used for consequence analysis will be Hotspot 2.06, or equivalent. This model can accept real time meteorological data from the on-site meteorological tower.

As a backup, manual meteorological data from Hobbs, New Mexico or Andrews, Texas can be input into Hotspot 2.06 Meteorological data can be obtained remotely via the internet web portal using the site Citrix® server to access individual desktop computer drives at the site.

The WCS inventory program can provide a real time radiological source term. This inventory-tracking program can provide immediate real time information on the radionuclides that are stored in the specific areas impacted by the incident/accident. Monitoring data received can be used to provide real-time assessment of the model output. This information can then be used by the IC in the decision-making processes regarding protection of emergency responders, site workers, and the general public. Specific training, drills, and exercises are provided on the use of the model and inputs.

If the emergency escalates, consequence assessments provide for continuing timely assessments of the effects of any release during the course of the emergency. Backup equipment and personnel may be necessary to permit continuing consequence assessments. Common communications shall exist between all personnel involved in the consequence assessment.

The RSO shall communicate off-site dose projections or potential impact assessment information to DSHS and TCEQ as soon as practicable following the assessment of the accident. DSHS and TCEQ regulatory notification contact numbers are included in Attachment F, *Emergency Information List* of EP-1.1, *Consolidated Emergency Response.*

The post-emergency assessment provides the basis for decisions regarding re-entry, recovery, and the return to normal operations. The post-assessment is helpful for the

analysis of actual accident conditions for the purposes of critique and lessons learned. Collection and retention of data compiled during the emergency, provides valuable assessment of the decisions and actions taken and may be required for investigation purposes.

5.3 Mitigating Actions

5.3.1 Mitigation of Fires

In the event of a catastrophic fire, the Andrews and Lea County Sheriff's Departments, Texas Department of Public Safety and/or the New Mexico State Police are responsible for directing traffic along Highway 176 and evacuating any of the general public surrounding the facility that may be affected by windblown or gaseous wastes. Conduct of all fire-fighting activities is always upwind of the fire at the facility. The Andrews Volunteer Fire Department has a suppressant foam producing truck, if one is required to mitigate a fire. Andrews County also has agreements with surrounding fire departments from neighboring counties for assistance during large-scale fire events.

The Andrews County Volunteer Fire Department is trained and equipped to handle large fires. They are known for their wellhead firefighting ability, have experience fighting fires that may produce toxic fumes, and can respond in approximately 30 minutes. The Eunice Fire Department may also respond and is also known for fighting large fires and has worked with the Andrews firefighting team often in the field. Radiological response training has been, and will continue to be, offered to the Andrews Fire Department and Eunice Fire Department.

WCS emergency response personnel have the ability to handle small scale fires located within a confinement area. The Andrews Volunteer Fire Department and/or the Eunice Fire Department may be summoned if a fire is extensive, breeches a confinement barrier or is too intense for WCS employees to handle.

The fire protection systems are designed in accordance with NFPA 30 requirements. Each operational area also has standpipes (wharf hydrants) with standard hose connections and/or sprinklers. LLRW operational areas do not have standpipes. CWF and FWF staging buildings have sprinklers. Each operational area is equipped with hand-held portable extinguishers.

WCS has equipment available on-site to erect temporary berms across drainage ditches and around emergency areas as may be required for water control. After a fire has been extinguished, firewater is collected and sampled. The area that contained the fire is decontaminated if necessary and the rinse water is analyzed. If the water is contaminated, it may be treated on site per applicable permits, or the water may be taken off-site to an authorized facility.

5.3.2 Mitigation of Spills/Releases

The hazardous/radioactive materials delivered to the WCS facility are composed of bulk solid, or containerized solid and liquid wastes. The most credible worst-case spill/release scenarios for the facility consist of spilling a large load of hazardous and/or radioactive material from a tote, bin truck, or truck carrying containerized hazardous or radioactive wastes within the facility or on an access road leading into the facility; or an explosion and fire involving ignitable and reactive liquids. Any hazardous or radioactive spill will be remediated according to all regulatory requirements. Most spills are mitigated and cleaned up following standard procedures and do not constitute an emergency. Significant spills and/or releases that pose a potential threat to on-site personnel or to the general public off-site are considered emergencies that are mitigated and controlled under this Plan.

In the event of spills of PCBs,[in low concentrations (less than 500 ppm PCBs) in oils and less than 454 g (1 lb.) of PCBs by weight] all soil within the spill area (visible boundary plus a 1-ft-lateral buffer zone) must be excavated and backfilled with clean soil. Solid surfaces must be double- washed/rinsed with diesel fuel. See cleanup requirements listed in 40 CFR 761.125.

5.3.3 Mitigation of On-Site Transportation Accidents

A vehicle accident may cause a fire or explosion due to rupture of the vehicle fuel tank, the spillage of liquid wastes, or mixing of incompatible wastes and/or release of hazardous and/or radioactive materials to the environment. Personnel selected for emergency response train to handle these types of emergencies. Portable fire extinguishers and extended pressurized water hoses are available throughout the site for such emergencies.

If an on-site accident involving contamination of property and facilities occurs, WCS will deploy equipment to clean up the release and decontaminate the site. If an incident occurs off-site, WCS will, if requested, supply technical support along with monitoring equipment. Andrews County has a mutual agreement with the City of Odessa, Texas to supply a HazMat team to respond to any incident. The City of Hobbs, New Mexico also has a HazMat team that will respond to any incidents in Lea County and if requested, they will respond in Andrews County.

5.3.4 Mitigation of Natural Events

Evacuation and emergency response drills prepare the facility employees to react to emergencies such as tornados. The facility may be evacuated in advance of a tornado. In the event of a tornado where an evacuation cannot take place, waste is secured if possible and employees are directed to shelter in a substantial structure or building. Flash flooding in the facility area is unlikely due to the relatively flat topography and absorbent native soils. During violent thunderstorms, personnel involved with landfill disposal or working outside of an enclosed building are directed to shelter in a substantial structure or building until the storm passes. Waste is secured when possible. Transfer of containers between buildings is stopped and all employees are directed to remain indoors. Activities conducted within an enclosed building may continue (i.e. stabilization, inspection, labeling and moving containers from drum staging to storage, etc.).

5.3.5 Mitigation of Injuries

Potential of injuries during facility emergencies include burns, cuts, broken bones and other serious physical conditions. ERO members train in first aid techniques. First aid kits are located in each operational area to help with the incidence of minor injuries. Minor injuries are evaluated and may be treated by trained personnel on site. Major injuries such as broken bones, major sprains, burns or other serious conditions are treated at the nearest medical facility as appropriate to the injury. Personnel who are chemically exposed or show signs of chemical exposure are removed from the contaminated area and transported to Lea Regional Medical Center (first choice) or the Permian Regional Medical Center (second choice) if necessary.

EMT-qualified personnel are typically on-site during normal hours of operation. Radiological safety personnel are trained to control and mitigate radiological accidents. Injured personnel contaminated with hazardous or radioactive material and must be evacuated prior to decontamination will undergo decon in accordance with the approved, facility specific, chemical/hazardous waste or radiation safety decontamination procedures, as appropriate**.**

If a medical emergency involving radiologically contaminated individuals occurs and if the individuals cannot be decontaminated on-site or must be transported immediately due to life threatening injuries, trained WCS employees will accompany the individuals to the treatment facility and will assist in performing decontamination and contamination control activities. The primary treatment facility for radiological contaminated individuals will be the Carlsbad Medical Center in Carlsbad, New Mexico due to its proximity to the Carlsbad Environmental Monitoring Research Center. The hospital emergency staff is trained by Waste Isolation Pilot Plant (WIPP) personnel to handle radioactive material incidents and have their own decontamination procedures. If life threatening injuries are present, the injuries always take precedence over choice of facility.

Personnel who are severely injured and are radiologically contaminated may be covered with protective material and transported to the nearest medical facility. Hospital personnel shall be alerted to the radiological contamination and shall employ contamination control practices during treatment of the injured. Radiological decontamination may involve removing contaminated clothing from the injured individual, placing the individual in an emergency shower or sponging the individual with a wet sponge and detergent. Contaminated clothing is collected in an appropriate container, surveyed, and evaluated prior to disposal. Emergency shower water is drained to a collection point to be analyzed. Alternatively, water may be taken off-site to an authorized facility. Personnel who assist a radiologically contaminated person must wear appropriate personal protective equipment.

In the event of chemical or hazardous material contamination, medical personnel will be provided a copy of the safety data sheet (SDS) or other chemical information. Decontamination procedures may be similar to those for radiological contamination stated above. Emergency room staff at the hospitals train to address chemical or hazardous contamination emergencies and will follow their own decontamination protocols.

5.4 Protective Actions

Protective actions are activities performed to prevent further damage to personnel and the environment after an emergency develops. Depending on severity and type, emergencies warrant different types of protective actions. The two most prevalent protective actions for WCS personnel are sheltering and evacuation.

5.4.1 Personnel Evacuation

The IC or designee has the authority to order an evacuation of the site or individual buildings. The evacuation routes and EOC are shown in Figure 1. The roles and responsibilities of all employees during an evacuation are detailed in Appendix E "Evacuation Roles and Responsibilities." At the WCS site, the following types of locations are designated as emergency assembly and activity points:

5.4.1.1 Assembly Area

The Staging Area for employees evacuating the site is important for personnel safety and for locating all personnel. If the site is evacuated, the Staging Area is beyond the Guard House located at the entrance to the TSDF or beyond the employee gate entrance located at the LLRW employee parking area unless otherwise specified by the IC. After WCS Security, with concurrence from the IC, has accounted for all employees and radiation safety personnel have monitored employees for potential contamination (in the event of a radioactive material release), employees may then proceed down the private access road to Highway 176. If the parking lot is downwind from the incident, the IC will direct personnel to an alternate location on-site. An assembly area will be designated for the CISF upon completion of construction.

Protective actions that may be used in the event of an emergency include, but are not limited to:

- Personnel are notified of impending danger via PA announcement, telephone, email and radio broadcast
- Personnel are directed to shelter
- Site personnel evacuate from the affected area only
- Affected personnel evacuate to the assigned assembly point
- Personnel in vehicles are directed to remain in the vehicle, and personnel working outdoors are directed to take refuge indoors
- If a radiological release occurs, Radiation Safety personnel shall monitor all potentially contaminated persons

5.4.2 Use of Personal Protective Equipment and Supplies

All ERO personnel train in the use of appropriate personal protective equipment and supplies. Personal protective equipment and supplies used in emergencies are identical to those used in the course of WCS day-to-day operations for limiting personnel exposure and contamination. The IC and RSO direct and specify the type of equipment used depending on the type and severity of the emergency.

5.4.3 Contamination Control

Contamination control procedures for emergencies are identical to those used in the course of WCS day-to-day operations for limiting personnel exposure and contamination. The IC and RSO direct and specify the methods to use depending on the type and severity of the emergency.

Emergency showers are located in areas where chemical or radiological hazards could exist. For radiological contamination control, the personnel decontamination areas are located just outside of the radiation control area. At the contamination control area, all contaminated workers must undergo decontamination prior to exiting

to a clean area. Frisker stations are located at the exit of the decontamination station.

5.4.4 Shutdown of Operations

Limitations or discontinuances of certain operations may be required as a result of emergency conditions. Specifically, such action(s) may be necessary to:

- Prevent or control actual damage on-site or off-site
- Prevent or control potential damage on-site or off-site
- Protect site personnel
- Preserve public safety

There are two variations of limiting actions/discontinuances:

5.4.4.1 Temporary shutdown,

Examples of temporary shutdown conditions are:

- Severe Weather: Tornado/tornado warnings, severe thunderstorms, heavy lightning, large hail, continuous rain, winter storms, severe winds
- Large fire/industrial accident with equipment or personnel disabling effects such that continued operations would subject the remainder of the Site or personnel to unnecessary danger

5.4.4.2 Complete Shutdown,

A complete shutdown of operations may occur in the event of a large-scale radiological or hazardous material spill/contamination. Shutdown operations are the responsibility of the affected building personnel. All operations personnel train to safely shutdown facilities and equipment they are qualified to operate.

The IC or designee may direct temporary shutdowns and complete shutdowns.

5.4.5 Off-site Protective Actions

After declaration of a Site Emergency, the IC has the authority to recommend off-site protective actions. The IC or designee will make off-site notifications to local authorities. If the release poses off-site consequences, personnel who reside in the affected area will be advised by authorized public officials on how to respond.

The information included on the *Emergency Response Checklist* and *Incident Report* (forms *EP-1.1- 1*in procedure *EP-1.1* respectively) will be provided to off-site response agencies and appropriate regulatory agencies. This form includes type of incident, injuries, materials released, recommended protective actions, requested assistance, incident scene control and emergency classification. Off-site entities that may need to be notified of protective action are listed in Attachment F, *Emergency Information List* of EP-1.1, *Consolidated Emergency Response*.

5.5 Exposure Control

For events that cause an actual or projected radiological release, appropriate protective actions for on-site and off-site populations have been pre-determined based on thresholds

called Protective Action Guides (PAGs). A PAG is an exposure level or range beyond which protective action (an action to take to avoid or reduce the projected exposure) should be considered. The PAGs do not imply an acceptable level of risk for normal (non-emergency) conditions nor do they represent the boundary between safe and unsafe conditions. The PAG values are established to reflect a balance of the risks and costs posed to on-site personnel, public health and safety, and the environment by potential protective actions weighted against the benefits provided by these protective actions. Thus, in an actual emergency, protective actions may be taken in response to exposure levels below the applicable PAG if the situation is such that the potential benefits outweigh the associated risks and cost. Conversely, under certain circumstances (for example, evacuations in extremely inclement weather), protective actions may not be taken, even though the PAGs may be exceeded, because the benefits are not commensurate with the risks and costs associated with the protective action. Nevertheless, the PAGs provide a useful basis for planning. The PAG threshold of concern for WCS is based on the EPA limits of one Rem Committed Effective Dose Equivalent (CEDE), five Rem thyroid, or 50 Rem skin dose. Protective actions are recommended to off-site authorities when the projected or actual dose at the site boundary exceeds these PAGs. Table B presents the PAGs used as guidelines by WCS.

Table C Protective Action Guides

Projected Dose (REM) to the Population	Recommended Actions
< 1[a]	No planned protective actions. Previously recommended protective actions may be reconsidered or terminated.
1 to < 5[a]	Seek shelter as a minimum. Evacuation should normally be initiated at 1 Rem unless constraints make it impractical. Monitor environmental contamination levels. Control access.
> 5[a]	Mandatory evacuation. Monitor environmental levels and adjust area for evacuation based on these levels. Control access. Seek shelter if evacuation is not immediately possible.
> 25[b]	Administration of stable iodine (requires the approval of state medical officials).

Reference – “Manual of Protective Action Guides and Protective Actions for Nuclear Incidents,” Office of Radiation Programs, USEPA, 1992

[a] The sum of the effective dose equivalent resulting from exposure to external sources and the committed effective dose equivalent incurred from all significant inhalation pathways during the early phase. Committed dose equivalents to the thyroid and to the skin may be 5 and 50 times larger, respectively.

[b] The committed dose equivalent to the thyroid from radioiodine.

For hazardous material emergencies, protective actions are designed to keep on-site and off-site exposures As Low As Reasonably Achievable (ALARA). This is accomplished by minimizing time spent nearby the hazard, maintaining a distance as far from the hazard as possible and taking advantage of available shielding or sheltering. The non-radiological protective actions for airborne releases outside buildings or releases migrating outside

buildings are based on the American Industrial Hygiene Association's (AIHA). The Emergency Response Planning Guide (ERPG) Guidebooks are available in the EOC.

5.5.1 ERPG-1

ERPG-1 is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing other than mild, transient, adverse health effects or perceiving a clearly defined objectionable odor.

5.5.2 ERPG-2

ERPG-2 is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action.

5.5.3 ERPG-3

ERPG-3 is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing life threatening health effects.

Table C lists the recommended actions for each ERPG.

Table D - Emergency Response Guides for Hazardous Chemicals

Projected Concentration	Recommended Action
< Emergency Response Planning Guideline-1	No planned protective actions.
> Emergency Response Planning Guideline-1 and < Emergency Response Planning Guideline-2	Notification of the public. No mandated protective actions unless the projected exposure is prolonged (>1hr). Previously recommended protective actions may be reconsidered or terminated.
> Emergency Response Planning Guideline-2 And < Emergency Response Planning Guideline-3	Seek shelter as a minimum. Consider evacuation unless constraints make it impractical. Monitor environmental contamination levels. Control access.
> Emergency Response Planning Guideline-3	Mandatory evacuation. Monitor environmental levels and adjust area for evacuation based on these levels. Control access. Seek shelter if evacuation is not immediately possible and duration of exposure is short (minutes).

The current American Conference of Governmental Industrial Hygienists' handbook, "Threshold Limit Values for Chemical Substances and Physical Agents," is the guide for accidental releases of materials inside a room or building. The Short Term Exposure Limit is the criteria at which protective actions are taken. The Short Term Exposure Limit is defined as; "the concentration to which workers can be exposed continuously for a short period of time without suffering from 1) irritation, 2) chronic or irreversible tissue damage, or 3) narcosis of sufficient degree to increase the likelihood of accidental injury, impair self-rescue, or materially reduce work

efficiency, and if the daily Threshold Limit Value Time-Weighted Average is not exceeded". A Short Term Exposure Limit is further defined as a 15-minute Time-Weighted Average that should not be exceeded any time during a workday." Accidental releases exceeding the Short Term Exposure Limit or other exposure limit will be cause for evacuation of the area until the exposure limit returns to a safe level as determined by Environmental, Safety and Health personnel.

5.6 Radiation Protection Program

The on-site Radiation Protection program implemented during emergencies is described in RSP-100, *Radiation Safety Program*.

This program includes:

- Methods to comply with exposure guidelines
- Identification of individuals, by position or title, who can authorize workers to receive emergency doses
- Procedures for permitting on-site volunteers to receive radiation doses in the course of carrying out lifesaving and other emergency activities
- Guidance for determining the doses and dose commitments from external radiation exposure and any internally deposited radioisotopes received by emergency personnel involved in any accidents, including volunteers and emergency workers from off-site support organizations who may receive radiation exposure while performing their duties at the licensee's facility
- Distribution of dosimeters, both self-reading and permanent record devices and means for assessing inhalation exposures
- Maintenance of dose and dose commitment records are for licensee and off-site support organization's emergency workers involved in any nuclear accident

5.7 Decontamination of Personnel

WCS has decontamination equipment and emergency showers throughout the facility for use in the event that chemical or radiological decontamination practices are required in response to an emergency. Routine doffing of personal protective clothing is not emergency decontamination. A drenching shower is not the first response to radiological skin contamination. Refer to approved personnel decontamination procedures for detailed radiological contamination response and documentation. Decontamination of radiological contamination will commence with dry methods in a Radiation Restricted Area unless directed otherwise by the RSO.

First aid is the first priority for injured personnel – above decontamination. The emergency shower is intended for chemical decontamination following contamination with organic or corrosive liquids. 29 CFR 1910.151(c) that states "Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for the quick drenching or flushing of the eyes and body shall be provided within the work area for immediate use." Immediate use is not clearly defined in current OSHA regulations. In many cases of chemical contamination, flushing with large volumes of low-pressure water is an early step of providing first aid. Portable eyewash bottles may also be available. Responders should refer to the SDS for additional information during emergency response to specific compounds. Some dry chemicals become more harmful to skin when wetted. These chemicals are best removed by brushing. Site emergency showers are all placed in areas designed to contain liquids allowing for the collection and proper disposal.

The RST may respond to both radiological and chemical contaminations. Injured personnel that are contaminated and must be evacuated due to the severity of their injury are normally decontaminated before being evacuated from the site. Area and personnel decontamination will be performed in accordance with approved facility-specific radiation safety decontamination procedures. Decontamination may involve removing all contaminated clothing from the injured individual and placing the individual in an emergency shower (chemical, corrosive exposure) or dry removal/gentle sponging to remove the contamination with a wet sponge and mild detergent (radiological). All contaminated clothing is collected in a container and properly disposed. All emergency shower and washing water are collected for disposal. Dry wastes are also collected for proper disposal.

If decontamination is not practical based on the condition of the injured, the individual is placed on plastic, life-sustaining care provided and the individual is evacuated to the nearest/appropriate medical facility where they are treated and hospital personnel employ contamination control practices. Medical personnel should be provided a copy of the SDS with chemical contamination. Hospital personnel are offered training in decontamination techniques and requirements, and WCS radiation safety personnel will accompany the individual(s) and assist hospital personnel in decontamination activities.

Conduct all personnel radiological decontamination in accordance with approved WCS standard Radiation Safety procedures.

As an additional service to assist the local hospitals, the RST collects and properly disposes of all contaminated (chemical or radiological) materials that may have been generated by treating the injured personnel. This may include clothing, bandages, cotton swabs, paper, plastics, etc. The same is true for any waste that may be generated by the ambulance service. The RST also assures that the emergency rooms or any other areas that may have been contaminated by the injured personnel are decontaminated.

5.8 Medical Treatment and Transportation

OSHA approved first aid stations are located in the following areas:

- MWTF – Lunchroom
- Old Administration Building – Lunchroom
- New Administration Building – Hallway
- Personnel Building – Lunchroom
- Guard House – Driver's room
- Gate House – Driver's room
- Emergency Trailer
- Maintenance Building
- Landfill Building – Office
- Numerous LLRW Locations
- LLRW Field Admin Offices

The primary emergency treatment area is located in the lunchroom in the Administration Building where all emergency treatment equipment and supplies, including one of the defibrillation machines are centrally located. The Administration Buildings (LLRW, TSDF and CSIF) will be used for all emergency treatment situations unless the nature of the emergency prevents it, in which case one of the first aid station locations will be used as an alternate.

WCS will attempt to maintain approximately five employees that are trained in first aid, CPR and use of the defibrillation machine. WCS also maintains at least one licensed EMT on staff that has access to an emergency trauma bag. Emergency first-aid treatment and decontamination will be administered in the area where an incident occurs if it is considered safe to do so. If the area is contaminated or considered unsafe, the injured employee will be moved to the primary emergency treatment area. If necessary, off-site emergency medical personnel (ambulance) will be called. The estimated arrival time for an ambulance is approximately 10 minutes. Upon arrival at the Guard House, they will be escorted to the location of the injured person. Emergency medical contacts are listed on form Attachment F, *Emergency Information List* of EP-1.1, *Consolidated Emergency Response* and are updated as contact information changes.

If a medical emergency involving radiologically contaminated individuals that cannot be decontaminated on-site occurs, trained WCS employees will accompany the individual to the treatment facility and will assist in performing decontamination and contamination control activities. The primary treatment facilities for radiological contaminated individuals will be Carlsbad Medical Center in Carlsbad, New Mexico, and/or Lea Regional Medical Center in Hobbs, New Mexico. The emergency staff at the hospital has been trained by WIPP personnel to handle radioactive material incidents and have their own decontamination procedures.

WCS will offer orientation training as requested for medical support staff (EMS and hospital nursing staff) and physicians at the secondary (Permian Regional) facility in Andrews, Texas, and Eunice, NM EMS. WCS' orientation training for emergency situations involving radiologically contaminated individuals will include types of radiation, radiation detection and risks, signs and symptoms of radiation exposure, contamination control and methods of decontamination. The length of training will range from one to four hours depending on personnel knowledge, experience and previous training.

5.9 Emergency Planning Zone (EPZ)

Based on the potential consequences of postulated emergencies, the EPZ for the WCS facility has been defined as a 6 km (3.7 mile) radius circle centered on the Site.

This size EPZ is sufficiently large that:

- Detailed planning within the EPZ provides both an adequate basis for responding to all reasonably credible accidents and a substantial base for the expansion of response efforts in the event that this proves necessary by WCS, State of Texas, and local agencies and organizations responsible for off-site emergency response.
- Projected maximum doses resulting from credible accidents, under unfavorable meteorological conditions, within the site will not require protective actions to be taken outside the EPZ.

Chief elected officials responsible for various portions of the WCS EPZ will provide the public information on operational emergencies at the WCS facility and, based on inputs from the site and regulatory agencies, may recommend public protective actions, such as sheltering or evacuation. Texas State law does not provide for mandatory evacuations.

5.10 Downgrade and Termination

Emergencies, once categorized, shall be reviewed periodically to ensure classification is commensurate with response activities. If the protective action recommendation is modified or lifted, notification will then be transmitted to all activated government agencies.

6.0 EMERGENCY RESPONSE EQUIPMENT AND FACILITIES

6.1 EOC

WCS has a central facility from which management and support personnel carry out coordinated emergency response activities. The EOC is the location having appropriate communications and informational materials to carry out the assigned emergency response mission. The primary EOC is the Executive Conference Room located in the southern section of the main administrative building within the boundaries of the existing facility. The secondary EOC is the LLRW Administration Building. The locations of the primary and secondary site EOCs are shown on the site map in Figure 5. The location of an incident determines which EOC is utilized or evacuated as determined by many factors such as; environmental conditions, plumes, etc.

When activated, the EOC has the following communications and accident assessment capabilities and equipment capabilities:

- Radio equipment to monitor and communicate on all radio nets used at the site
- Overhead video capabilities for displaying information to occupants of the EOC
- A public address system for announcements, status reports and briefings to be heard by all EOC personnel
- An established phone line for communicating with off-site agencies
- Computer terminal with Hotspot software and access to met tower and waste tracking recordkeeping data

The IC or RSO will be responsible for determining the severity of the incident and conditions that may require the evacuation of the EOC.

The primary and secondary EOC will have accident assessment and communication capabilities.

6.2 Communications Equipment

The WCS telephone system will serve as the primary means for communication. Backup communications will include radios, runners or other suitable means. The telephone system will be utilized to notify the IC that an incident has occurred. The following may be used as a primary or backup means of communications:

- Facility Telephone
- WCS PA System
- Electric Horns
- Intercom System
- Cell Phones
- On-Site Radio Broadcast
- Dedicated EOC E-mail

The communication system, consisting of telephones, mobile phones, radios or intercom systems are used to summon first aid and security. A communication system is located in every storage or treatment area. A radio is used within the landfills. Mobile phones are also used to contact the local emergency response agencies in case all power and telephone service is lost. All communications equipment will be tested at least quarterly.

6.3 Emergency Equipment

The WCS ERP is based on the philosophy that the facility should be as self-sufficient as possible in handling on-site emergency situations. The facilities that serve in various capacities during an emergency situation are discussed in the following sections. Emergency equipment, including communications and information handling and display equipment, used or issued during emergency operations varies depending on each situation. The equipment contained in the facility will also vary depending on the operations performed and potential emergencies that can occur.

The facility is equipped with all necessary communication and emergency response equipment required to respond to foreseeable emergencies including the following:

- Internal and external communication and alarm systems capable of providing immediate and highly audible emergency instruction and warning
- A telephone or other communication device available in all areas of operation that is capable of calling emergency assistance from in-house emergency response organization
- Adequate volumes of water to supply water hoses, automatic sprinklers and water spray systems
- Portable fire extinguishing systems including those using foam, inert gases or dry chemicals
- Portable spill control equipment and decontamination equipment

All emergency response equipment and communication systems are tested as required by the equipment specifications to assure proper function at all times. Wherever radioactive or hazardous waste is being poured, mixed, spread, stored, or otherwise handled, all personnel have access to an internal alarm or emergency communication device. This access may be through direct contact or through visual or audible contact with another employee.

The emergency firewater system for both facilities is supplied by a 500,000-gallon water tank and a diesel-operated fire pump that does not require electricity to operate in case of a full facility power outage.

A sufficient quantity of emergency response equipment will be maintained on-site in order to adequately respond to emergencies resulting from facility operations. There are three decontamination kits on-site. These kits are inventoried on a monthly basis to meet the minimum equipment requirements listed on the Radiation Safety Department's Monthly Decontamination Kit Inventory List. There is also a mobile emergency response vehicle. Inventory is verified quarterly using the emergency response vehicle weekly inventory list. All applicable OSHA regulations, National Fire Protection Association (NFPA), National Electric Code (NEC), and National Fire Code will be followed in regards to location, testing, and maintenance of emergency equipment.

There are three decontamination kits, one located at the Guard House, one at the Mixed Waste Treatment Facility Control Point and one at the Emergency Vehicle, one of which will be taken by Radiation Safety Technicians to the location of contaminated personnel. WCS also has other items such as Tyvek® suits, rubber suits, nitrile gloves and other types of disposal gloves available throughout the facility. Contaminated clothing will be collected and stored in approved radiation bags. Contaminated water will be collected in a variety of different types and sizes of containers.

Due to the potential for radiological consequences during emergency situations, the Radiological Team Leader on the Emergency Response Organization has the responsibility to obtain calibrated and response checked count rate and dose rate instrumentation when responding to emergencies.

7.0 MAINTAINING EMERGENCY PREPAREDNESS CAPABILITY

7.1 Written Emergency Procedures

All information (emergency contact lists, equipment lists, action levels, etc.) necessary to implement this Plan are included in Procedure EP-1.1*, Consolidated Emergency Response*. Attachments to EP-1.1 provide current detail for contact information and the availability of equipment. The attachments to EP-1.1 will be continually updated as information and conditions change. Copies of all attachments to EP-1.1 are located in the EOC, the Administration Building and the Guard House for use by the IC and the ERO.

All Emergency Response documents are approved and controlled in accordance with standard WCS policy and procedures. Changes and updates to these documents can occur for the following reasons:

- Changes to emergency organizational structures
- Changes made in site operations that could impact the site emergency response model
- The facility permits and/or licenses are revised
- The facility operations change in a way that alters the Plan
- The ERP fails in an emergency

Changes to ERP-100, *Emergency Response Plan* and EP-1.1*, Consolidated Emergency Response* are composed in accordance with *QA-5.1, Standard Operating Procedures and Work Instructions*. Updates to form *Attachment F, Emergency Information List of* EP-1.1*, Consolidated Emergency Response*, may be made without formally revising the procedure in accordance with *QA-5.1*.

Written Emergency Procedures will be maintained and updated per 10 CFR 72.32 (a)(7).

7.2 Training

It is the policy of WCS to provide training to its personnel and to maintain emergency management response elements at readiness levels.

7.2.1 On-site Employee Training

General employee training is provided to all facility employees who may have to take protective actions (e.g., assembly, evacuation) in the event of an operational emergency. Specialized training is provided to personnel directly involved in emergency response actions (e.g., ICs, ERO personnel, RSTs, etc.).

Training objectives are to:

- Instruct personnel regarding their responsibilities during an emergency
- Inform personnel of any weaknesses detected during drills and exercises, changes to plans and procedures, lessons learned from emergencies at the facility and training needed to remedy these situations
- Provide training based on employee and emergency responder tasks to be performed during an emergency

7.2.2 Emergency Response Personnel

ERO training is completed in accordance with requirements listed in *TRN-1.1, WCS Training Plan*. Emergency response employees training includes but is not limited to Radiation Worker II, 24 hour HAZWOPER, basic RCRA training, how to use

personal protection equipment (respirators, eye and ear protection, breathing apparatus, protective clothing) and how to perform basic first aid. Emergency response personnel are not certified fire fighters but do understand the correct methods and techniques for eliminating and responding to fire emergencies. Drills and exercises are part of the training curriculum.

At least one employee from each operational area is trained for emergency response. This ensures that at least one member of the emergency response organization can describe the waste types and hazards associated with the operational area. After the employee is qualified for emergency response activities, the employee must attend required refresher courses.

7.2.3 Off-Site Response Teams

Members of the Andrews County and Eunice Volunteer Fire Departments are offered training using the same guidelines set for WCS employees regarding hazardous materials, which is a 24-hour HAZWOPER course, training in basic radiation safety, including potential hazards, personal protective clothing, dosimetry, and decontamination procedures. WCS organizes and provides financial support to educate off-site personnel regarding potential WCS operational hazards.

Currently, the staff at Lea Regional Medical Center in Hobbs, New Mexico and Carlsbad Medical Center in Carlsbad, New Mexico train with WIPP. Depending on the type of injury and contaminate of concern, the RSO and/or IC will determine where the injured personnel will be sent. The Permian Regional Medical Center staff is trained on how to handle various chemicals and hazardous materials generated by the hospital. This basic training enables the staff to read and understand SDS and the hazards involved with hazardous materials. The Permian Regional Medical Center Risk Management Supervisor educates hospital staff concerning hazardous materials and standard decontamination practices. However, the Permian Regional Medical Center does not have a formal hazardous materials treatment unit to care for those individuals who may be overexposed or contaminated by hazardous materials. Permian Regional Medical Center staff employs the standard decontamination practices used throughout the health care system including rinsing the affected areas with water for fifteen minutes unless the contaminant is water reactive. Water reactive chemicals are physically scraped or rubbed off.

As part of the assistance agreement between the WCS facility and Lea Regional Medical Center, Permian Regional Medical Center and Carlsbad Medical Center if any person has been exposed to hazardous materials at the WCS facility, all information regarding the specific material will be forwarded to the hospital. The Health and Safety Manager, Radiation Safety Officer, or designee may also ride with injured personnel to a medical facility to explain the type of waste the individual has come in contact with to medical professionals.

7.3 Drills and Exercises

Emergency drills and exercises are conducted systematically utilizing a “building block” concept to maintain a high state of emergency readiness, improve response capabilities and enhance worker safety through protective actions. The methodology includes classroom training; team and site-level drills and full-scale exercises that may include external agencies.

The goal of drills and exercises is to develop, maintain and demonstrate skills, expertise, and emergency response capabilities of the WCS ERO and site populace. Additionally, drills and exercises build teamwork, trust and confidence. In support of that goal, drills and exercises may:

- Reveal planning weaknesses
- Reveal resource gaps
- Improve coordination
- Clarify roles and responsibilities
- Improve individual performance and experience
- Improve operations
- Improve emergency decision making and planning skills
- Improve effectiveness and skills of the ERO
- Validate adequacy of facilities, equipment, plans, and procedures

Drills and exercises will be used as a unifying force between various emergency response units. Federal, state, and county emergency response units will be encouraged to participate in certain facility exercises. Exercises and drills afford an opportunity to involve off-site agencies. These agencies and related personnel will be involved as much as possible to build the interactive skills of emergency response personnel.

At WCS two categories of drills are performed. These are standard and site level drills. Standard drills are oriented toward specific hazards or events that could be encountered by individuals in the workplace. Site-level drills involve multiple response organizations and are designed to train responders on various categories of large-scale events (e.g., fire, explosion, natural disasters, large chemical or radiological spills, or physical assault on the site) requiring practical teamwork. The goal of the emergency exercise is to validate emergency response capabilities of the Site’s emergency response personnel and the general site populace. Exercises are conducted to ensure that proficiency is achieved and maintained by all personnel. Of note is the process of identifying, resolving and verifying effective resolution of emergency response findings.

At least one planned and one unannounced site-wide evacuation drill will be conducted annually. Operational supervisors will not be notified in advance of the unannounced drills. The WCS ERP will be fully exercised twice a year. Off-site response organizations will be invited to participate in the drills and exercises. Participation of off-site response organizations in drills and exercises, although recommended, is not required. WCS will critique each drill and exercise using individuals not having direct implementation responsibility for the plan. Drill and exercises are evaluated in accordance with EP-1.2*, Emergency Response Training and Drills*. Critiques of exercises will evaluate the appropriateness of the ERP, emergency procedures, facilities, equipment, training of personnel and overall effectiveness of an incident response. Deficiencies found by the drill and exercise evaluations will be corrected utilizing the WCS corrective action process.

Consistent with the requirements in 10 CFR 72.32 (a) and (b),documented quarterly communications checks with off-site response organizations will include the check and update of all necessary telephone numbers.

7.4 Independent Audit

The Emergency Response Program will be audited annually by qualified staff. Included in this review will be the emergency plan and its procedures; training activities; emergency facilities, equipment, and supplies; and records associated with off-site support agency interface to ensure the overall emergency preparedness program is being adequately maintained. The Individual performing the review will not have direct responsibility for implementing the emergency response program.

7.5 Maintenance and Inventory of Emergency Equipment, Instrumentation, and Supplies

Frequent inspections under the WCS Health and Safety program ensure that the equipment and instrumentation are in good working condition and that an adequate stock of supplies is maintained. A quarterly inventory will be conducted to ensure all emergency equipment and supplies are intact and in good operating condition, including instrumentation for operation and calibration, demand respirators, self-contained breathing apparatus, fire-fighting equipment and gear, and supplemental lighting. Timely corrective actions are to be taken when deficiencies are found during these checks.

7.6 Letters of Agreement

Letters of agreement (Appendix D) for the WCS facility from law enforcement and medical assistance providers describe their capabilities to evaluate and treat injuries from radiation, radioactive materials and other hazardous materials used in conjunction with a radioactive materials event.

Upon request, WCS will provide training for physicians that will include types of radiation, radiation detection and risks, signs and symptoms of radiation exposure, contamination control and methods of decontamination. The length of training will range from one to four hours depending on personnel knowledge and experience and previous training. Letters of agreement will reviewed annually and renewed at least every 4 years.

8.0 RECORDS AND REPORTS

Copies of ERP-100 and associated implementing procedures are to be controlled through the site's document control system. A copy of this ERP will be maintained at the facility and will be provided to all local police departments, fire departments, hospitals and local emergency response teams that may be called upon to provide emergency services. The ERP will also be provided to all site personnel responsible for its implementation. When the ERP is amended for any reason, each amended section will also be submitted to appropriate agencies or emergency response authorities and to the WCS site personnel responsible for its implementation.

Requirements for reporting and recording incidents of abnormal operation, equipment failure and accidents that led to a facility emergency are included in EP-1.1. These reports will be completed and maintained by the IC and will be retained as QA records.

All of the following additional records will be maintained and controlled through the site's document and records administration system:

- Training and retraining (including lesson plans)
- Drills, exercises and related critiques
- Inventory and locations of emergency equipment and supplies

- Maintenance, surveillance, calibration and testing of emergency equipment and supplies
- Agreements with off-site support organizations
- Reviews and updates of the emergency plan
- Notification of all personnel and off-site agencies affected by an update of the plan or its implementing procedures
- Records of quarterly communication checks with the off-site responding organizations

9.0 RECOVERY AND FACILITY RESTORATION

Based on the nature of potential emergency events at WCS, the response phase to an emergency will normally be very short when compared to the recovery phase. Recovery is defined as the actions taken, after the facility has been brought to a stable or shutdown condition, to return the site to normal operation. Recovery is event dependent. As a result, recovery planning is initiated in the early stages of emergency response and the Recovery Plan is produced only after the consequences of a specific event are reasonably well understood.

9.1 Re-entry

Re-entry is a planned activity to accomplish a specific objective set by the IC, conducted prior to termination of emergency response, which involves re-entering a facility or affected area that has been evacuated or closed to personnel access during the course of the emergency. Re-entry activities are to be carried out properly and safely. All re-entry actions conducted prior to the termination of the emergency must be authorized by the IC. Reentry shall be made with the utmost care given to health and safety of all emergency responders. Re-entry operations shall use radio communications and/or the "buddy system" for safety. After a facility has been brought to a stable or shutdown condition, recovery actions are those taken to return the facility to normal operation.

Before the initial re-entry, the following considerations shall be included in the planning:

- Assessment of hazardous material surveillance data to determine buildings potentially affected
- Review of exposure histories of personnel required to participate in re-entry operations
- Determination of equipment adequacy for monitoring and survey instrumentation
- Review of survey team plans to include:
    - Anticipated contamination levels
    - Survey equipment required
    - Shielding requirements and availability
    - Personal protective clothing and equipment required
    - Access control procedures including exposure control limits and personnel dosimetry requirements
    - Decontamination requirements
    - Communications requirements

Re-entry teams will be tasked with as many of the following tasks as required:

- Determine the initial required recovery operations including personnel rescue
- Perform hazard, casualty, or damage assessment
- Conduct comprehensive surveillance of facilities

- Isolate and post areas
- Assess conditions of building equipment and structures
- Re-establish building security
- Restore or operate equipment (as qualified) to provide vital services for the building
- Perform materials control and accountability functions (as qualified)

Re-entry will include the use of appropriate protective clothing and respiratory protection and shall include specific criteria for aborting re-entry.

9.2 Recovery

Recovery is the final phase of the emergency management cycle. Recovery continues until all systems return to normal or near normal. The recovery process will be addressed at the time of the incident. It will be situation dependent in establishing the restoration to a safe pre-emergency environment. The applicable Director of Operations, or his / her designee, will serves as the Recovery Manager. Recovery team(s) will be established by the Recovery Manager to restore all vital systems back to normal operation. Examples of these systems include water, electrical power and communications. Some of these systems will be restored shortly after the accident/incident and may not be included in the recovery process.

Recovery includes those actions necessary to return an incident and the surrounding environment to pre-emergency conditions. Exposure levels are established for estimating dosage and for protecting workers and the general public from hazardous exposure during recovery activities. The IC is responsible for determining when an emergency situation is sufficiently stable to enter the recovery phase. The IC, through the PIO, disseminates information regarding the relaxation of public protective actions. The recovery organization develops and coordinates plans and schedules for recovery operations.

The WCS General Manager shall ensure the following items are addressed prior to initiating the Recovery Plan:

- Recovery strategy
- Recovery tasks and assignments
- Regulatory notifications and follow-ups
- Insurance and risk management notification
- Logistical support needs
- Off-site logistical support needs
- Appointment of a Recovery Manager

9.3 Reporting and Investigating Incidents

The facility utilizes procedures for both the reporting and investigating of incidents. WCS procedure HS-2.4.1, *Incident Reporting and Investigation* establishes uniform guidelines to ensure incidents are evaluated and controls and/or procedure are implemented to reduce or prevent future occurences; EP-1.1, *Consolidated Emergency Response* prescribes actions WCS emergency response personnel take when responsding to emergencies at the WCS site

10.0 COMPLIANCE WITH COMMUNITY RIGHT-TO-KNOW ACT

WCS certifies it has met its responsibilities under the Emergency Planning and Community Right to Know Act of 1986, Title III, Pub.L.99-499 with respect to hazardous materials of at the facility. WCS complies with the Community Right-to-Know Act by submitting the following reports:

- Texas Tier-II Reports
- TRI Reports – Toxic Release Inventory Report

11.0 REFERENCES

11.1 American Conference of Governmental Industrial Hygienists' handbook, "Threshold Limit Values for Chemical Substances and Physical Agents"

11.2 USNRC Regulatory Guide 3.67 - Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities

11.3 WCS program RSP-100, *Radiation Safety Program*

11.4 WCS procedure, EP-1.2, *Emergency Response Training and Drills*

11.5 WCS procedure EP-1.1, *Consolidated Emergency Response Procedure*

11.6 WCS plan TRN-1.1, *Training Plan*

11.7 WCS procedure, QA-5.1, *Standard Operating Procedures and Work Instructions*

11.8 Texas Administrative Code Title 30 Chapter 327 Spill Prevention and Control Rule 327.3 Notification Requirements – 30 TAC 327.3

11.9 Manual of Protective Action Guides and Protective Actions for Nuclear Accidents; USEPA, 1992

11.10 Texas Administrative Code Title 30 Chapter 336.210 Emergency Plan for Responding to a Release

11.11 Texas Commission on Environmental Quality Radioactive Materials License R04100

11.12 Texas Commission on Environmental Quality Radioactive Materials License R05807

11.13 Texas Department of State Health Services License L06153

Figure 1 - WCS Site Evacuation Plan

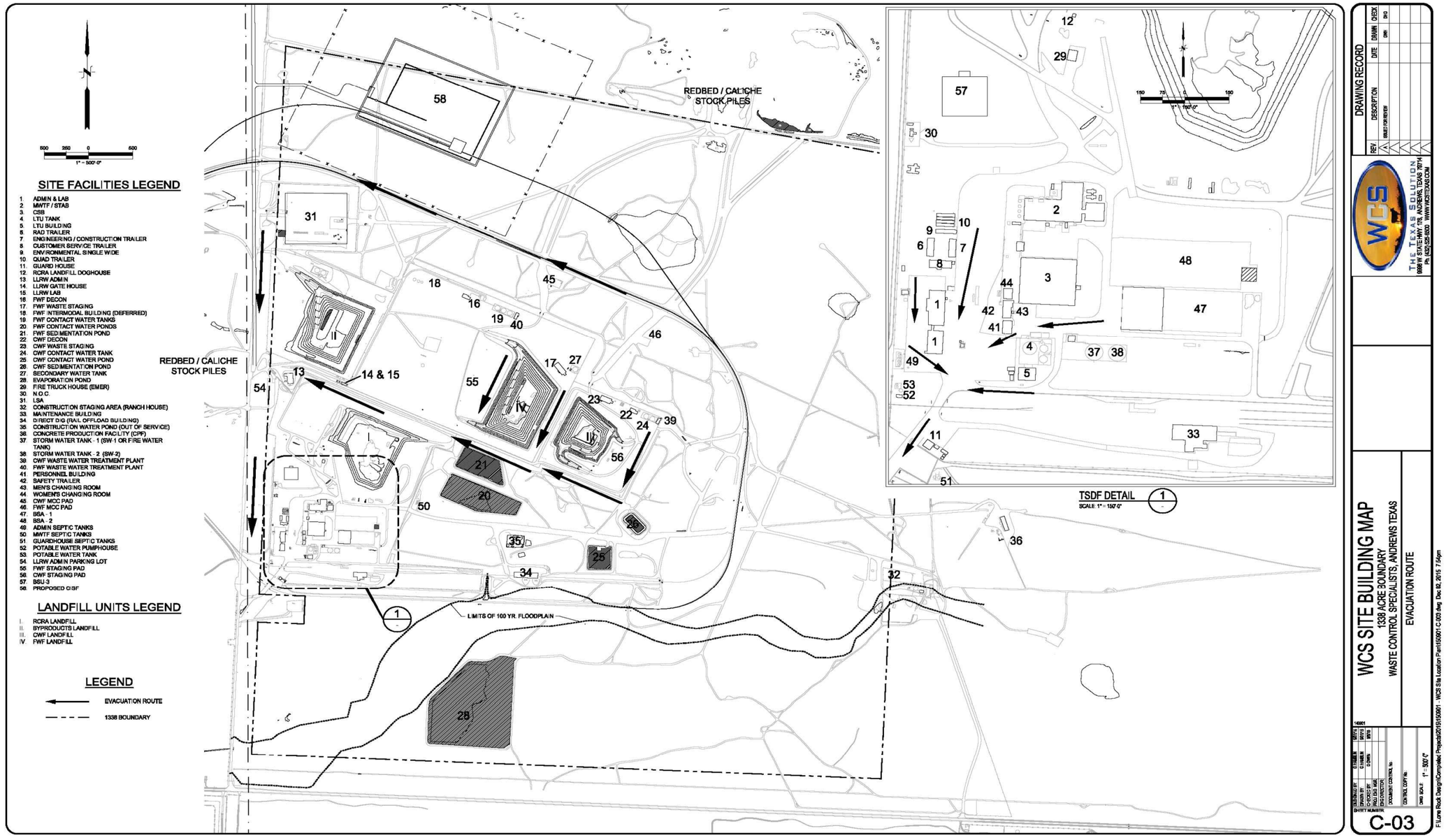


Figure 2 – Emergency Planning Map-50 Mile Radius

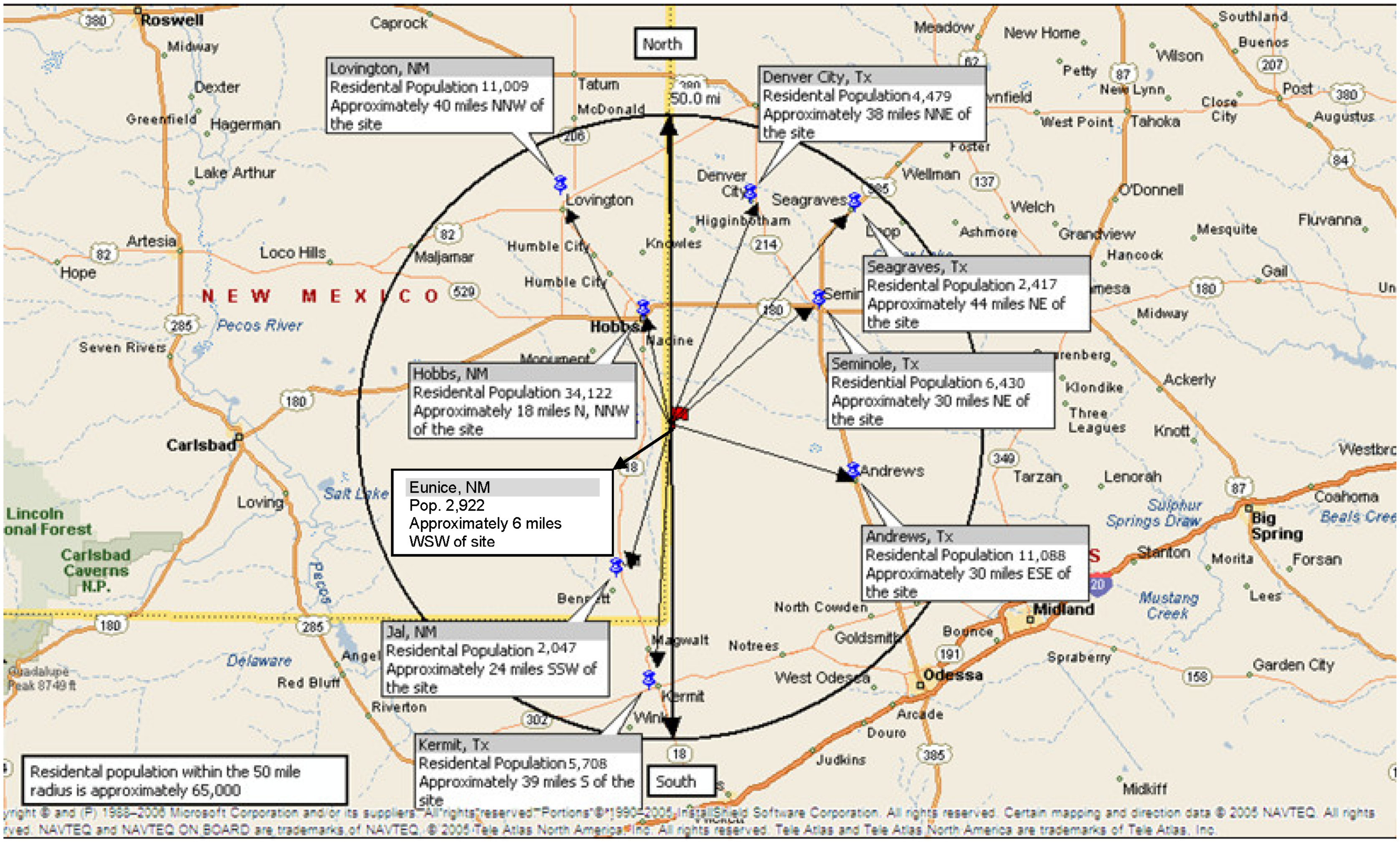


Figure 3 - Emergency Planning Map-10 Mile Radius

Figure 4 - Detail Map Eunice, New Mexico

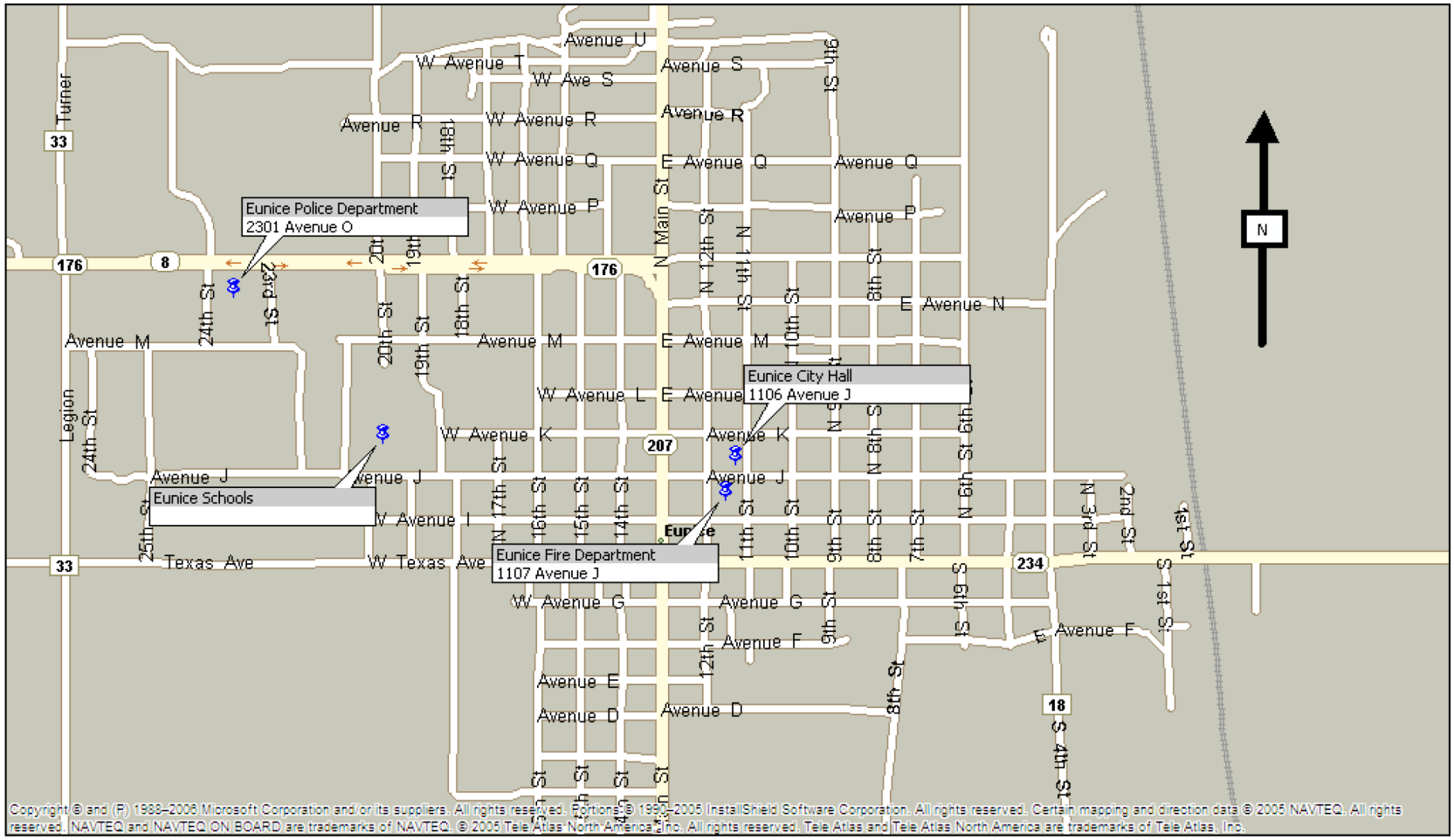


Figure 5 - Location of the WCS Emergency Operations Center and Emergency Response Vehicle

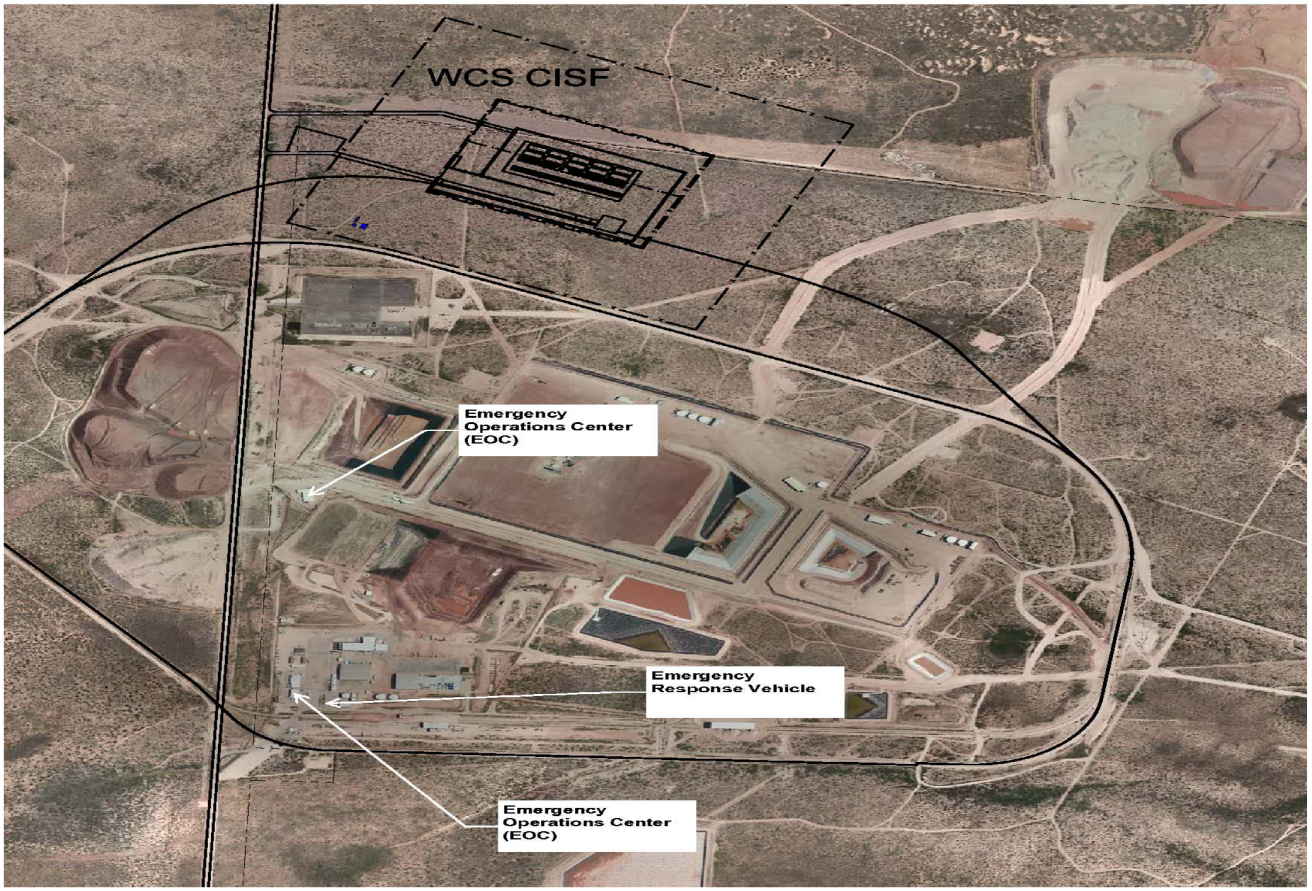
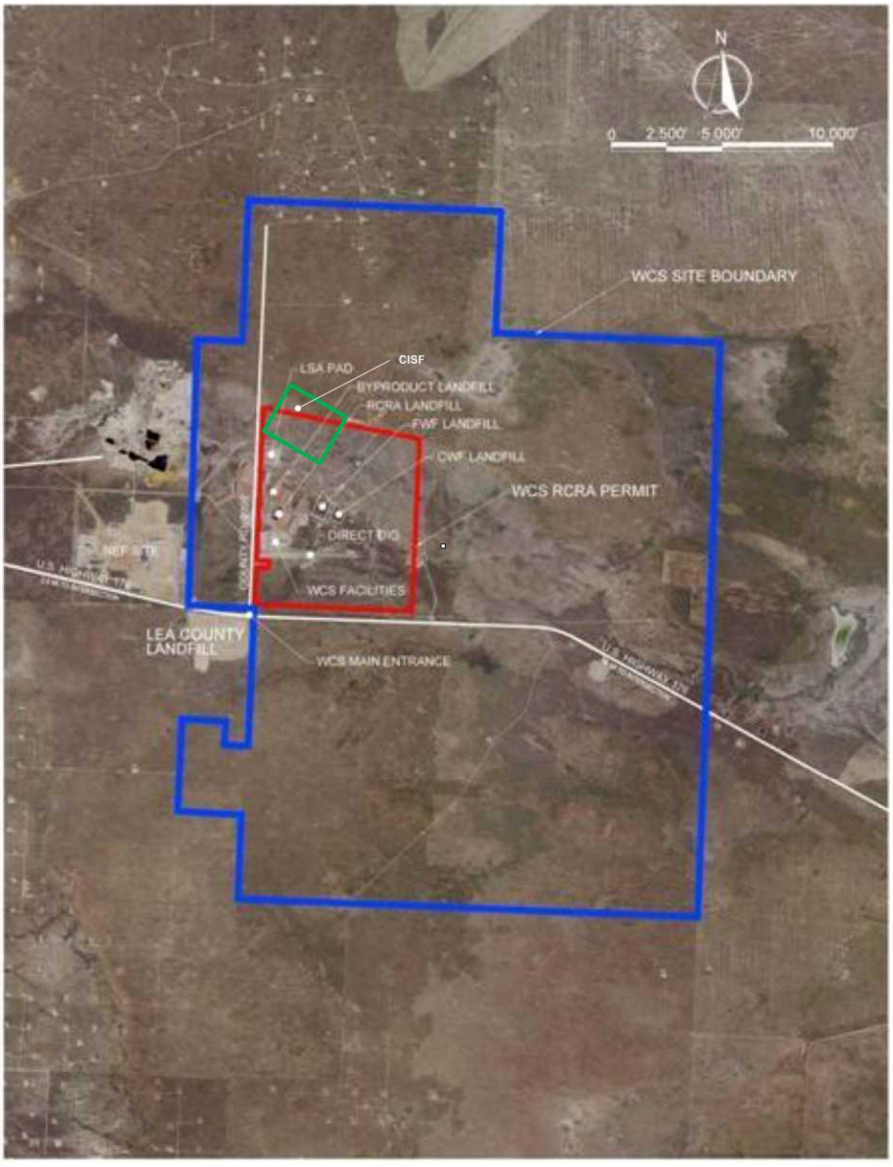


Figure 6 - Site and RCRA Boundaries



*Appendix A - **Acronyms***

ALARA	As Low As Reasonably Achievable
CEDE	Committed Effective Dose Equivalent
CERCLA	Comprehensive Environmental Response Compensation Liability Act
CFR	Code of Federal Regulation
CISF	Consolidated Interim Storage Facility
CPR	Cardio-Pulmonary Resuscitation
CSB	Container Storage Building
DDC	Disaster District Committee
DEM	Division of Emergency Response
DSHS	Department of State Health Services
EAL	Emergency Action Level
ED	Executive Director
EMT	Emergency Medical Technician
EOC	Emergency Operations Center
EPA or USEPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPZ	Emergency Planning Zone
ERO	Emergency Response Organization
ERP	Emergency Response Plan
ERPG	Emergency Response Planning Guide
FEMA	Federal Emergency Management Agency
HAZWOPER	Hazardous Waste Operations
IC	Incident Commander
ICS	Incident Command Structure
KSA	Knowledge, Skills and Abilities
LLRW	Low Level Radioactive Waste
MOU	Memorandum of Understanding
MWTF	Mixed Waste Treatment Facility
NEC	National Electric Code
NFPA	National Fire Protection Agency
NIMS	National Incident Management System
NORM	Naturally Occurring Radioactive Materials
NRC or USNRC	Nuclear Regulatory Commission

OSHA	Occupational Safety & Health Administration
PA	Public Address
PAG	Protective Action Guide
PCBs	Polychlorinated Biphenyls, also known as Araclor
PIO	Public Information Officer
R911	Reverse 911 System
RCRA	Resource Conservation and Recovery Act
RSO	Radiation Safety Officer
RST	Radiation Safety Technician
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TRU	Transuranic
TSCA	Toxic Substance Control Act
TSDF	Treatment Storage and Disposal Facility
WCS	Waste Control Specialists LLC
WIPP	Waste Isolation Pilot Plant

Appendix B - Definitions

Agency -Any organization that acts in the place of a government and by its authority (e.g., the Federal Emergency Management Agency is an agency of the Federal Government).

Alert - An Alert is an emergency class within the Operational emergency. An Alert represents events in progress or having occurred which involve an actual or potential reduction for the level of facility safety and protection. Any environmental release of hazardous materials is expected to be limited to small fractions of the appropriate PAG or ERPG at the facility.

Consequence Assessment - A consequence assessment is the evaluation and interpretation of radiological or other hazardous materials measurements and other information to provide a basis for decision-making.

Corrective Actions - Corrective Actions are measures taken to terminate or mitigate the consequence of an emergency at or near the source of the emergency.

Dosimetry – The theory and application of the principles and techniques involved in measuring and recording radiation doses.

Drill - A supervised, hands-on instruction period intended to test, develop, and/or maintain a specific emergency response capability. A drill is often a component of an exercise.

Emergency - An emergency is the most serious event and consists of any unwanted operational, civil, natural-phenomenon, or security occurrence that could endanger or adversely affect people, property, or the environment.

Emergency Equipment – Any equipment that may be required to measure, control, or mitigate the consequences of an emergency situation.

Emergency Action Level - Specific, predetermined, observable criteria used to detect, recognize, and determine the emergency class of Operational Emergencies. An EAL can be an instrument reading, an equipment status indicator, a measurable parameter for facility or off-sitemap discrete, observable event, results of analysis, or another observed phenomenon that indicates entry into a particular emergency class.

Emergency Class - The class further differentiates an emergency by the degree of severity, depending on the actual or potential consequence of the emergency situation. For the Operational Emergency subcategories, the classes are: Alert, Site Area Emergency, and General Emergency.

Emergency Management - Elements of Emergency Management include the development, coordination, and direction of planning, preparedness, and readiness assurance activities.

Emergency Operations Center - A central facility from which management and support personnel carry out coordinated emergency response activities. The EOC may be a dedicated facility or office, conference room, or other pre-designated location having appropriate communications and informational materials to carry out the assigned emergency response mission. EOC is located, when possible, in a secure and protected location.

Emergency Management Plan - A brief, clear and concise description of the overall emergency Response Organization, designation of responsibilities, and procedures, including notifications, involved in coping with any or all aspects of a potential credible emergency.

Emergency Planning Zones – Off-site zone established as a contingency for planning in the event of a release of hazardous materials.

Emergency Response - Emergency Response Actions encompass implementation of planning and preparedness during an emergency involving the effective decisions, actions, and application of resources that should be accomplished to mitigate consequences and recover from an emergency.

Emergency Response Organization -The Emergency Response Organization consists of a designated group(s) of personnel responsible for coping with and minimizing or mitigating the effects of any emergency.

Emergency Response Planning Guidelines - A hazardous material personnel exposure level or range which, when exceeded by a short term or acute exposure, may cause irreversible or other serious health effects in humans. The ERPGs are approved by a committee of the American Industrial Hygiene Association.

Essential Personnel – Personnel who have assigned duties that prevent their immediate departure from the site during an evacuation.

Evacuation - An evacuation of personnel from all areas of the site within the secured, fenced boundary.

Exercise - A scheduled and planned large-scale activity that tests the integrated capability and most aspects of the emergency management program associated with a particular facility

Federally Permitted Release – Any release that satisfies the definition of “federally permitted release” as stated in 40 CFR 302.3.

General Emergency – A general emergency is an emergency class within the Operational emergency. It is an incident in which a significant release to the environment of radioactive or other hazardous material has occurred, is in progress and response by an off-site organization is required.

Hazard Assessment – Used as the foundation for emergency planning purposes; includes the identification of any hazards and targets unique to a facility, analyses of potential accidents or events, and evaluation of potential accident or event consequences.

Hazardous Materials - Any solid, liquid, or gaseous material that is toxic, flammable, radioactive, corrosive, chemically reactive, or unstable upon prolonged storage in quantities that could pose a threat to life, property, or the environment. This definition is an omnibus term used to include both "hazardous materials" as defined by the Hazardous Materials Transportation Act and "hazardous substances" as defined by Comprehensive Environmental Response, Compensation, and Liability Act.

Hazardous Substances - Any pollutant identified by the Federal water pollution or hazardous air pollution rules, or the Toxic Control Act; any other substances the EPA designates as posing a substantial danger when released into the environment.

Hazardous Waste - Those solid wastes designated by Occupational Safety and Health Administration 40 Code of Federal Regulations 261 due to the properties of ignitability, corrosivity, reactivity, or toxicity.

Health Physicist - A health field professional whose area of expertise deals with radiation protection.

Incident - An occurrence that requires action by the Emergency Response Organization

Incident Commander - The IC directs emergency response at the EOC and is responsible for overall control, mitigation, and recovery from emergency events.

Ingestion Exposure Pathway - The pathway in which exposure occurs after ingestion of contaminated water or foods such as milk, fresh vegetables, or aquatic foodstuffs.

Non-Essential Personnel – Non-essential personnel are site personnel whose assistance has been deemed unnecessary to mitigate the emergency by the EC.

Pasquill Stability Class - A categorization scheme used to estimate the intensity of turbulence near the ground using the wind speed at 10m, incoming solar radiation, cloud cover and time of day. These categories of turbulent intensity, from “A” (most unstable) to “F” (most stable) are used in Gaussian plume models to estimate the lateral and vertical spread of a pollutant as a function of downwind distance from the source.

Safety Data Sheets - Written information provided by manufacturers and compounders (blenders) of chemicals, with minimum information about: chemical composition, physical and chemical properties, health and safety hazards, emergency response, and waste disposal of the material.

Protective Action - Physical measures, such as evacuation or sheltering, taken to prevent potential health hazards resulting from a release of hazardous materials to the environment from adversely affecting employees or the off-site population.

Protective Action Guide – The Protective Action Guide is a radiation personnel exposure level index or range beyond which protective action may be considered. PAG values should reflect a balance of risks and costs to Facility personnel, public health and safety, and the environment weighed against the benefits obtained from protective actions.

Radiation Safety Technician – A Radiation Safety Technician is an employee who performs qualitative and quantitative radiological evaluations.

Release – A release is any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or otherwise disposing of substances into the environment. This includes abandoning/discarding any type or receptacle containing substances or the stockpiling of a reportable quantity of a hazardous substance in an unenclosed containment structure. A radiological release (accidental or unplanned) is defined as a release of a quantity of radioactive material that can result in a dose rate to the public in excess of 2mrem in any one hour.

Reportable Quantity - For any CERCLA hazardous substance, the quantity established in Table 302.4 and Appendix B of 40 CFR Part 302, the release of which requires prompt notification unless federally permitted. Reportable Quantity is also identified in 40 CFR 355 Appendix A, and by the State of Texas in 30 TAC 101.1.

Recovery - Actions taken after a facility has been brought to a stable or shutdown condition to return the facility to normal operation.

Respirator – A respirator is a device to filter contaminants from breathing air.

Response – Response refers to all actions taken to cope with and minimize the effects of any emergency.

Safety Device/System - This term is intended to mean all permanently installed safety-related equipment that related to processes, other major equipment, major personnel hazards, etc. It is not intended to include boundary ropes, chains, goggles, handrails, and any other of a host of minor items that could be included under literal compliance. Problems with minor items fall under this reporting system when they result in consequences of a level with reportable criteria.

Security Emergencies – Security Emergencies include any disruption of the routine operation of the facility or event that jeopardized the health and safety of personnel such as bomb threats, civil demonstrations, or hostage situations.

Self-Contained Breathing Apparatus - Self-Contained Breathing Apparatus is **self**-contained device that supplies breathing air in hazardous atmospheres.

Shutdown – A shutdown is a complete or partial shutdown of manufacturing or utilities operations.

Site Area Emergency - Within the context of an Operational Emergency, a Site Area Emergency represents events that are in progress or have occurred involving actual or likely failure(s) of facility safety or safeguards systems needed for the protection of facility personnel, the public health and safety, the environment, or national security. Any environmental releases of hazardous materials that are not expected to exceed the appropriate PAG or ERPG exposure levels off-site.

Source Term – Source term is defined as the amount of radioactive material available for release.

Spill - Includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, or dumping of oil or other hazardous materials.

Spill Control Material - Material use to stabilize, absorb, and/or neutralize releases of hazardous materials to minimize hazards and to facilitate cleanup.

Appendix C - Facility Emergency Action Levels

Incident	Alert	Site Area Emergency
High Winds/ Tornadoes	High winds strike causing major damage to one or more Facility structures. --------or-------- Sustained wind speeds > 90 mph in the area, which have been confirmed.	High winds cause major damage to a facility containing radioactive and/or hazardous materials. --------or------- Tornado visually seen striking a facility causing extensive damage.
Winter Storm	Accumulation of snow approaching roof design load limits. ---------or-------- Major egress routes from the Facility are impassable because of snow or ice.	N/A
Range Fire	Major fire not under control that threatens facilities.	Major fire not under control that has spread to facilities.
Spill/Release	Major spill or release not under control that may spread beyond the area of origin. ------or------ A major spill or release in a hazardous material or radiologically controlled area which may result in significant exposure to workers outside of the area.	A major spill or release in a hazardous material or radiologically controlled area which may result in a release to the off-site environment or exposure to the general public
Fire	Major fire not under control that may spread beyond the area of origin. ------or------ A fire in a hazardous material or radiologically controlled area.	Major fire not under control that has spread to other areas. ------or------ A fire in a hazardous material or radiologically controlled area that may result in a release to the off-site environment or exposure to the general public.
Explosion	Unplanned explosion with potential for more explosions. ------or------ An unplanned explosion in an operations area resulting in structural or process related damage.	Explosion causing major damage and/or injury.

Incident	Alert	Site Area Emergency
Airplane Crash	A plane crash on Facility property.	A plane crash impacting a hazardous material or radiologically controlled area.
Government or Commercial Vehicle	Accident involving a potential release of hazardous and/or radioactive material at the scene of an accident.	Accident which involves a release of hazardous material which has the potential of resulting in exposure to the general public at the exclusion
Site Intrusion	Alarm or visual observation indicating armed personnel entry at the Facility. ---------or-------- Unauthorized entry to a restricted access facility by non-WCS personnel.	Security incident that has a potential to lead to physical loss of control of a Facility.
Bomb Threat	Bomb threat with any detail aimed at a specific Facility, building, or personnel. ---------or-------- A suspicious object when initially evaluated/analyzed by security appears to possess the components of a bomb. ---------or-------- A hoax device is discovered on Facility property.	Bomb threat with sufficient detail aimed at a specific Facility, building, or personnel which, due to evaluation, appears to reveal actual intent. ---------or-------- Discovery of an actual device or reasonable verification that a bomb has been or will be placed on the property. ---------or-------- An explosion where initial investigation or information indicates a possible bomb as the initiating cause.
Non-radiological HAZMAT	Release > the ERPG (level 2) within an area that requires evacuation of a building.	Release > the ERPG (level 2) at a facility boundary or that requires evacuation of multiple buildings.
Radioactive Plume	>100 mrem CEDE but <500 mrem CEDE from an accidental release of radioactive material to the general public. --------or------- >1 rem CEDE in a facility from an accidental release of radioactive material to Facility workers.	>500 mrem CEDE but <1 rem CEDE from an accidental release of radioactive material to the general public. --------or------- >1 rem CEDE, calculated at a facility boundary, from an accidental release of radioactive material to Facility workers.

Appendix D – External Agreements

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE ANDREWS TEXAS POLICE DEPARTMENT AND WASTE CONTROL SPECIALISTS LLC

The purpose of this Memorandum of Understanding is to provide for the cooperation and coordination between the Andrews Police Department and Waste Control Specialists LLC (WCS).

WCS operates a fully permitted and licensed hazardous and low level radioactive waste treatment, storage and disposal facility along with a licensed Consolidated Interim Storage Facility for Spent Nuclear Fuel. In the event of an emergency, and the potential need for services, the Andrews Police Department will respond to the facility and provide law enforcement services should they be needed at the facility.

Therefore, during the construction, operations and decommissioning of the WCS waste treatment, storage and disposal facilities in Andrews County, the following is agreed to:

1. The Andrews Police Department will provide support through immediate law enforcement deployment as may be required to address WCS site protection and enforcement of applicable laws in emergencies at or near the WCS site. Additionally, the Andrews Police Department commits to the deployment of additional staff within fifteen (15) minutes after verification of need.
2. In the event of an emergency at the facility, the Andrews Police Department will coordinate with WCS to establish law enforcement, investigative, traffic control and evacuation services should they be needed at the facility. Once present on-scene, the Andrews County Sheriff's Office will coordinate the local police response as the Primary Emergency Authority for Local Law Enforcement.
3. The Andrews Police Department will ensure their responders dispatched for support will arrive with necessary equipment and identification for site access and emergency response. All Andrews Police Department equipment, property and personnel will remain under the operational control of their respective agency.
4. The Andrews Police Department will ensure that responding personnel dispatched by Andrews Police Department would serve as arresting authority when needed.
5. The Andrews Police Department agrees that if a security situation is critical to classified waste or information it will arrange for additional law enforcement assistance. The response time of additional support will vary.

In witness whereof, the parties have executed this Memorandum of Understanding on the date indicated.

Elicia Sanchez
Name (print)

Name (print)

Signature

Signature

Sr. VP/ General Manager

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE ANDREWS COUNTY SHERIFF'S OFFICE AND WASTE CONTROL SPECIALISTS LLC

The purpose of this Memorandum of Understanding is to provide for the cooperation and coordination between the Andrews County Sheriff's Office and Waste Control Specialists LLC (WCS).

WCS operates a fully permitted and licensed hazardous and low level radioactive waste treatment, storage and disposal facility along with a licensed Consolidated Interim Storage Facility for Spent Nuclear Fuel. In the event of an emergency, and the potential need for services, the Andrews County Sheriff's Office will respond to the facility and provide Primary Law Enforcement Services should they be needed at the facility.

Therefore, during the construction, operations and decommissioning of the WCS waste treatment, storage and disposal facilities in Andrews County, the following is agreed to:

1. The Andrews County Sheriff's Office will provide support through immediate law enforcement deployment as may be required to address WCS site protection and enforcement of applicable laws in emergencies at or near the WCS site. Additionally, the Andrews County Sheriff's Office commits to the deployment of additional staff within fifteen (15) minutes after verification of need.
2. In the event of an emergency at the facility, the Andrews County Sheriff's Office will coordinate with WCS to establish law enforcement, investigative, traffic control and evacuation services should they be needed at the facility. When present on-scene, the Andrews County Sheriff's Office will coordinate the local police response as the Primary Emergency Authority for Local Law Enforcement.
3. The Andrews County Sheriff's Office will ensure Sheriff's responders dispatched for support will arrive with necessary equipment and identification for site access and emergency response. All Andrews County Sheriff's Office equipment, property and personnel will remain under the operational control of their respective agency.
4. The Andrews County Sheriff's Office will ensure that responding personnel from the Sheriff's Office would serve as arresting authority when needed.
5. The Andrews County Sheriff's Office agrees that if a security situation is critical to classified waste or information it will arrange for additional law enforcement assistance. The response time of additional support will vary.

In witness whereof, the parties have executed this Memorandum of Understanding on the date indicated.

Elicia Sanchez
Name (print)

Signature

Sr. VP/General Manager

Waste Control Specialists LLC

Date:_____

_____
Name (print)

_____
Signature

_____
Title (print)
The Andrews County Sheriff's Office

Date: _____

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE CARLSBAD MEDICAL CENTER AND WASTE CONTROL SPECIALISTS LLC

The purpose of this Memorandum of Understanding is to provide for the cooperation and coordination between the Carlsbad Medical Center and Waste Control Specialists LLC (WCS).

WCS operates a fully permitted and licensed hazardous and low level radioactive waste treatment, storage and disposal facility along with a licensed Consolidated Interim Storage Facility for Spent Nuclear Fuel. In the event of an emergency, there is a potential need for hospital medical services for citizens who may be employed by, contracted by, or visiting the facility.

Therefore, during the construction, operations and decommissioning of the WCS waste treatment, storage and disposal facilities in Andrews County, the following is agreed to:

1. The Carlsbad Medical Center Medical Center agrees to work with WCS in coordinating emergency plans and procedures for assistance during the construction, operation and decommissioning phases of the WCS facilities in Andrews County.
2. In the event of an emergency at the facility, the Carlsbad Medical Center Medical Center will coordinate with WCS and local emergency response organizations to establish hospital medical services as needed.
3. If at any time the Carlsbad Medical Center, in their judgment, determines they do not have the resources to respond to the request for services from WCS due to other obligations or events, the Carlsbad Medical Center will be held harmless of any consequences.
4. The Carlsbad Medical Center will be invited to participate in joint training and emergency preparedness drills and exercises.
5. All Carlsbad Medical Center equipment property and personnel will remain under the operational control of their respective unit(s).
6. This agreement will be reviewed periodically. Either party may terminate this agreement with a ninety day written notice to the other party.

In witness whereof, the parties have executed this Memorandum of Understanding on the date indicated.

Elicia Sanchez
Name (print)

Signature

Sr. VP/ General Manager

Waste Control Specialists LLC

Date:_____

_____
Name (print)

_____
Signature

_____
Title (print)
Carlsbad Medical Center

Date: _____

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE CITY OF ANDREWS AND WASTE CONTROL SPECIALISTS LLC

The purpose of this Memorandum of Understanding is to provide for the cooperation and coordination between the City of Andrews and Waste Control Specialists LLC (WCS).

WCS operates a fully permitted and licensed hazardous and low level radioactive waste treatment, storage and disposal facility along with a licensed Consolidated Interim Storage Facility for Spent Nuclear Fuel. In the event of an emergency, and the potential need for services, the City of Andrews will respond to the facility and provide Primary Fire Fighting Services, Emergency Medical Services and Police services should they be needed at the facility.

Therefore, during the construction, operations and decommissioning of the WCS waste treatment, storage and disposal facilities in Andrews County, the following is agreed to:

1. The City of Andrews agrees to work with WCS in coordinating emergency plans and procedures for assistance during the construction, operation and decommissioning phases of the WCS facilities in Andrews County.
2. In the event of an emergency at the facility, the City of Andrews will coordinate with WCS to establish Police, Emergency Medical and Fire Fighting Services as needed at the facility. Once on-scene, the City of Andrews will have jurisdiction as the Primary Emergency Authority for Fire Fighting Services. When present on-scene, the Andrews County Sheriff's Office will coordinate any police response as the Primary Emergency Authority for Law Enforcement. A separate WCS - Police Department MOU exists.
3. If at any time City of Andrews, in their judgment, determines they do not have the resources to respond to the request for services from WCS due to other obligations or events, the City of Andrews will be held harmless of any consequences.
4. The City of Andrews will be invited to participate in joint training and emergency preparedness drills and exercises.
5. All City of Andrews equipment property and personnel will remain under the operational control of their respective agency.
6. This agreement will be reviewed periodically. Either party may terminate this agreement with a ninety day written notice to the other party.

In witness whereof, the parties have executed this Memorandum of Understanding on the date indicated.

Elicia Sanchez
Name (print)

Signature

Sr. VP/General Manager

Waste Control Specialists LLC

Name (print)

Signature

Title (print)
The City of Andrews

MEMORANDUM OF UNDERSTANDING
BETWEEN
EUNICE FIRE AND RESCUE AND WASTE CONTROL SPECIALISTS LLC

The purpose of this Memorandum of Understanding is to provide for the cooperation and coordination between the Eunice Fire and Rescue and Waste Control Specialists LLC (WCS).

WCS operates a fully permitted and licensed hazardous and low level radioactive waste treatment, storage and disposal facility along with a licensed Consolidated Interim Storage Facility for Spent Nuclear Fuel. In the event of an emergency, and the potential need for services, Eunice Fire and Rescue will respond to the facility and provide Emergency Medical and Fire Fighting Services should they be needed at the facility.

Therefore, during the construction, operations and decommissioning of the WCS waste treatment, storage and disposal facilities in Andrews County, the following is agreed to:

1. Eunice Fire and Rescue agrees to work with WCS in coordinating emergency plans and procedures for assistance during the construction, operation and decommissioning phases of the WCS facilities in Andrews County.
2. In the event of an emergency at the facility, Eunice Fire and Rescue will coordinate with WCS to provide Fire Fighting and Emergency Medical Services as needed at the facility. Once on-scene, the City of Andrews will have jurisdiction as the Primary Emergency Authority for Fire Fighting Services.
3. If at any time Eunice Fire and Rescue, in their judgment, determines they do not have the resources to respond to the request for services from WCS due to other obligations or events, Eunice Fire and Rescue will be held harmless of any consequences.
4. Eunice Fire and Rescue will be invited to participate in joint training and emergency preparedness drills and exercises.
5. All Eunice Fire and Rescue equipment property and personnel will remain under the operational control of their respective agency.
6. This agreement will be reviewed periodically. Either party may terminate this agreement with a ninety day written notice to the other party.

In witness whereof, the parties have executed this Memorandum of Understanding on the date indicated.

Elicia Sanchez
Name (print)

Signature

Sr. VP/General Manager

Waste Control Specialists LLC

Date:_____

_____
Name (print)

_____
Signature

_____
Title (print)
Eunice Fire and Rescue

Date: _____

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE EUNICE NM POLICE DEPARTMENT AND WASTE CONTROL SPECIALISTS LLC

The purpose of this Memorandum of Understanding is to provide for the cooperation and coordination between the Eunice Police Department and Waste Control Specialists LLC (WCS).

WCS operates a fully permitted and licensed hazardous and low level radioactive waste treatment, storage and disposal facility along with a licensed Consolidated Interim Storage Facility for Spent Nuclear Fuel. In the event of an emergency, and the potential need for services, the Eunice Police Department will respond to the facility and provide law enforcement services should they be needed at the facility.

Therefore, during the construction, operations and decommissioning of the WCS waste treatment, storage and disposal facilities in Andrews County, the following is agreed to:

1. The Eunice Police Department will provide support through immediate law enforcement deployment as may be required to address WCS site protection and enforcement of applicable laws in emergencies at or near the WCS site. Additionally, the Eunice Police Department commits to the deployment of additional staff within fifteen (15) minutes after verification of need.
2. In the event of an emergency at the facility, the Eunice Police Department will coordinate with WCS to establish law enforcement, investigative, traffic control and evacuation services should they be needed at the facility. Once present on-scene, the Andrews County Sheriff's Office will coordinate the local police response as the Primary Emergency Authority for Local Law Enforcement.
3. The Eunice Police Department will ensure their responders dispatched for support will arrive with necessary equipment and identification for site access and emergency response. All Eunice Police Department equipment, property and personnel will remain under the operational control of their respective agency.
4. The Eunice Police Department will ensure that responding personnel dispatched by Eunice Police Department would serve as an authority to detain adversaries until Texas law enforcement arrives.
5. The Eunice Police Department agrees that if a security situation is critical to classified waste or information it will arrange for additional law enforcement assistance. The response time of additional support will vary.

In witness whereof, the parties have executed this Memorandum of Understanding on the date indicated.

Elicia Sanchez
Name (print)

Signature

Sr. VP/General Manager

Waste Control Specialists LLC

Date:_____

_____
Name (print)

_____
Signature

_____
Title (print)
Eunice Police Department

Date: _____

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE LEA REGIONAL MEDICAL CENTER AND WASTE CONTROL SPECIALISTS LLC

The purpose of this Memorandum of Understanding is to provide for the cooperation and coordination between the Lea Regional Medical Center and Waste Control Specialists LLC (WCS).

WCS operates a fully permitted and licensed hazardous and low level radioactive waste treatment, storage and disposal facility along with a licensed Consolidated Interim Storage Facility for Spent Nuclear Fuel. In the event of an emergency, there is a potential need for hospital medical services for citizens who may be employed by, contracted by, or visiting the facility.

Therefore, during the construction, operations and decommissioning of the WCS waste treatment, storage and disposal facilities in Andrews County, the following is agreed to:

1. The Lea Regional Medical Center agrees to work with WCS in coordinating emergency plans and procedures for assistance during the construction, operation and decommissioning phases of the WCS facilities in Andrews County.
2. In the event of an emergency at the facility, the Lea Regional Medical Center will coordinate with WCS and local emergency response organizations to establish hospital medical services as needed.
3. If at any time the Lea Regional Medical Center, in their judgment, determines they do not have the resources to respond to the request for services from WCS due to other obligations or events, the Lea Regional Medical Center will be held harmless of any consequences.
4. The Lea Regional Medical Center will be invited to participate in joint training and emergency preparedness drills and exercises.
5. All Lea Regional Medical Center equipment property and personnel will remain under the operational control of their respective unit(s).
6. This agreement will be reviewed periodically. Either party may terminate this agreement with a ninety day written notice to the other party.

In witness whereof, the parties have executed this Memorandum of Understanding on the date indicated.

Elicia Sanchez
Name (print)

Signature

Sr. VP/General Manager

Waste Control Specialists LLC

Date:_____

_____
Name (print)

_____
Signature

_____
Title (print)
Lea Regional Medical Center

Date: _____

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE PERMIAN REGIONAL MEDICAL CENTER AND WASTE CONTROL SPECIALISTS LLC

The purpose of this Memorandum of Understanding is to provide for the cooperation and coordination between the Permian Regional Medical Center and Waste Control Specialists LLC (WCS).

WCS operates a fully permitted and licensed hazardous and low level radioactive waste treatment, storage and disposal facility along with a licensed Consolidated Interim Storage Facility for Spent Nuclear Fuel. In the event of an emergency, there is a potential need for hospital medical services for citizens who may be employed by, contracted by, or visiting the facility.

Therefore, during the construction, operations and decommissioning of the WCS waste treatment, storage and disposal facilities in Andrews County, the following is agreed to:

1. The Permian Regional Medical Center agrees to work with WCS in coordinating emergency plans and procedures for assistance during the construction, operation and decommissioning phases of the WCS facilities in Andrews County.
2. In the event of an emergency at the facility, the Permian Regional Medical Center will coordinate with WCS and local emergency response organizations to establish hospital medical services as needed.
3. If at any time the Permian Regional Medical Center, in their judgment, determines they do not have the resources to respond to the request for services from WCS due to other obligations or events, the Permian Regional Medical Center will be held harmless of any consequences.
4. The Permian Regional Medical Center will be invited to participate in joint training and emergency preparedness drills and exercises.
5. All Permian Regional Medical Center equipment property and personnel will remain under the operational control of their respective unit(s).
6. This agreement will be reviewed periodically. Either party may terminate this agreement with a ninety day written notice to the other party.

In witness whereof, the parties have executed this Memorandum of Understanding on the date indicated.

Elicia Sanchez
Name (print)

Signature

Sr. VP/General Manager

Waste Control Specialists LLC

Date:_____

_____
Name (print)

_____
Signature

_____
Title
Permian Regional Medical Center

Date: _____

Appendix E – Evacuation Roles and Responsibilities

All Employees:

Your supervisor is the Evacuation Assistant (EA) for your work area

At no time is anyone expected or authorized to take any uncommon personal risk or perform professional emergency services, unless included in your position description

Evacuate upon the direction of the Incident Commander or upon hearing the alarm

Place your work in a safe configuration

Secure sensitive work documents as predetermined by management and as time permits

Take personal belongings with you only as time permits. Do not re-enter area to get personal belongings when the alarm sounds

Immediately leave the building using designated evacuation route and assemble at designated location for your work area. **DO NOT** leave the designated area until instructed.

The designated location is:

Location to be determined by the ICS

Offer assistance to any employee on an as needed basis and as your abilities allow

If you require assistance with evacuation (even on a temporary basis) you have a responsibility to follow the steps in the following section on Employees Requiring Assistance in order to facilitate orderly and rapid evacuation of all occupants,

Never enter or re-enter the building when an alarm is sounding or when prohibited by authorized staff

Return immediately to the work area following the proper notification,

If there is an off-site visitor, vendor or contractors in your work area, have them follow you to the designated assembly point and inform your supervisor.

Managers:

Review evacuation procedure and expectations with employees,

When reviewing evacuation procedures with a group of employees, inform them that if they require assistance with evacuation to inform their supervisor,

It is up to employees to self-disclose their need for assistance. Individual employees shall not be asked if they require assistance,

As supervisors change assignments and leave work areas, ensure replacements are obtained,

Managers work with supervisors to select their designated locations, assembly points and evacuation route.

Employees Requiring Assistance:

If you will require assistance to evacuate the building during an emergency, contact your supervisor in advance

The H&S Manager and Incident Commander will designate where safe areas of refuge are located and how you will get to each of them in case of an emergency evacuation

Ask any supervisor for assistance when you are away from your regularly assigned work area during an evacuation.

Evacuation Assistants (Supervisors):

Instruct employees on the evacuation plans

Because of privacy laws, **DO NOT** inquire about the disability, only about instructions for evacuation. However, the employee may share information about their disability while discussing evacuation

Assist employees to designated areas of refuge and then to the exterior assembly area. To minimize risk, Evacuation Assistants shall not remain behind if the person insists on waiting for professional assistance

If a person requiring assistance cannot be found on his/her work area and is not waiting at the designated area of refuge, evacuate immediately. Report to the IC that you were not able to locate the employee.