

May 28, 2004

NEF#04-020

ATTN: Document Control Desk
Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Louisiana Energy Services, L. P.
National Enrichment Facility
NRC Docket No. 70-3103

Subject: Baseline Needs Assessment of Response to Fire and Related Emergencies at
National Enrichment Facility

- References:**
1. Letter NEF#03-003 dated December 12, 2003, from E. J. Ferland (Louisiana Energy Services, L. P.) to Directors, Office of Nuclear Material Safety and Safeguards and the Division of Facilities and Security (NRC) regarding "Applications for a Material License Under 10 CFR 70, Domestic licensing of special nuclear material, 10 CFR 40, Domestic licensing of source material, and 10 CFR 30, Rules of general applicability to domestic licensing of byproduct material, and for a Facility Clearance Under 10 CFR 95, Facility security clearance and safeguarding of national security information and restricted data"
 2. Letter NEF#04-002 dated February 27, 2004, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Revision 1 to Applications for a Material License Under 10 CFR 70, "Domestic licensing of special nuclear material," 10 CFR 40, "Domestic licensing of source material," and 10 CFR 30, "Rules of general applicability to domestic licensing of byproduct material"
 3. Letter dated April 19, 2004, from T. C. Johnson (NRC) to R. Krich (Louisiana Energy Services) regarding "Request for Additional Information on Louisiana Energy Services Project License Application"
 4. Letter NEF#04-018 dated May 19, 2003, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Response to NRC Request for Additional Information Regarding National Enrichment Facility Safety Analysis Report and Emergency Plan"

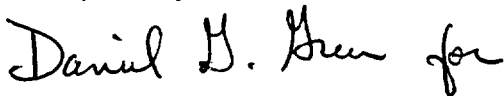
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By letter dated December 12, 2003 (Reference 1), E. J. Ferland of Louisiana Energy Services (LES), L. P., submitted to the NRC applications for the licenses necessary to authorize construction and operation of a gas centrifuge uranium enrichment facility. Revision 1 to these applications was submitted to the NRC by letter dated February 27, 2004 (Reference 2). By letter dated April 19, 2004 (Reference 3), the NRC provided the initial technical review of the license application and requested additional information and clarifications be provided.

The Reference 3 letter includes Request for Additional Information (RAI) FS-4. In RAI FS-4, the NRC requested that the schedule for completion of the baseline needs assessment for the facility Fire Brigade and the off-site fire departments be provided. The NRC also requested that an explanation of how this assessment may impact Safety Analysis Report Section 7.5.2, "Fire Emergency Response," be provided. The Reference 4 letter provided the LES response to RAI FS-4. In this response, a commitment was made to provide the baseline needs assessment to the NRC for review by May 28, 2004. The attachment to this letter includes a copy of the "Baseline Needs Assessment of Response to Fire and Related Emergencies at National Enrichment Facility," dated May 27, 2004.

If you have any questions or need additional information, please contact me at 630-657-2813.

Respectfully,

A handwritten signature in black ink that reads "Daniel B. Green for". The signature is written in a cursive, flowing style.

R. M. Krich
Vice President – Licensing, Safety, and Nuclear Engineering

Attachment:

Baseline Needs Assessment of Response to Fire and Related Emergencies at National Enrichment Facility

cc: T.C. Johnson, NRC Project Manager

ATTACHMENT

Baseline Needs Assessment of Response to Fire and Related Emergencies at National Enrichment Facility

**Baseline Needs Assessment of
Response to
Fire and Related Emergencies**

at the



Prepared by:



Framatome ANP, Inc.

Prepared for:

Louisiana Energy Services



All subsequent pages removed under 10 CFR 2.390 (pages 5-75).

EXECUTIVE SUMMARY

This report is a characterization of the needs for response to fire and related emergency situations at the National Enrichment Facility (NEF). Louisiana Energy Services (LES) has applied to the United States Nuclear Regulatory Commission (NRC) for a license to construct and operate a gas centrifuge uranium enrichment facility in Lea County, New Mexico.

In accordance with 10 CFR 70, LES has prepared a Safety Analysis Report (SAR) for NRC review. Chapter 7 of this SAR addresses facility Fire Safety and made a commitment to evaluate the needs for fire and related emergency response capabilities – either intrinsic to the facility and/or from external emergency response agencies. This assessment satisfies this commitment and was conducted following generally accepted practices for emergency response. It identified 1) the need, and 2) the response capability, in each of the following areas:

- Firefighting
- Emergency Medical Care
- Hazardous Materials
- Related Emergencies (e.g., confined space rescue, high angle rescue, etc.)

It is important to note that while this assessment incorporates and evaluates aspects of response for radiological and criticality emergencies as it might affect first response needs, it is not nor is it intended to be a comprehensive analysis of the NEF response to potential releases of licensed materials. Both the criteria and requirements for response to these releases, has been previously characterized in the NEF Emergency Plan, which is part of the NEF License Application.

The findings and recommendations of this assessment are presented in Section V. The recommendations have been summarized below:

Specific Recommendations

1. Provide mobile cart/vehicle(s) with hose/transportable hose packs (or otherwise locate hose) at NEF to cover all points of the facility. Minimum flow capability shall be two 1-1/2 inch diameter attack lines with a 2-1/2 inch diameter backup line.
2. Hobbs Fire Department should be an automatic aid dispatch for any fire that is or has a high likelihood of requiring extended structural firefighting.
3. Provide sufficient training and equipment for a minimum of two on-shift NEF personnel to don structural firefighting gear in order that the Criticality/Safety Officer can accompany firefighting teams during interior attack.
4. Provide on-site medical equipment and training for initial circulatory and respiratory support. In addition to basic first aid and CPR training, NEF Fire

Brigade/ERT members should be able to perform automatic external defibrillation and to administer oxygen by mask.

5. Support Eunice Fire and Rescue in equipping and staffing a HAZWOPER compliant entry team.
6. Reevaluate confined space rescue needs at detailed design.
7. Reevaluate need for trench rescue at detailed design/construction.
8. Provide cylinder stabilization and movement equipment for conceivable emergencies and coordinate with off-site response agencies for off-site transport accidents.

General Recommendations

1. Provide equipment and appropriate training for all necessary radiological monitoring equipment for both Eunice Fire & Rescue and Hobbs Fire Department. A standard radiological response "kit" should be developed and provided.
2. In concert with NEF pre-fire and pre-emergency plan development, develop training curricula and presentation material for off-site response agencies.
3. Develop annual training and drill protocols as prescribed in the NEF emergency plan and to include topical matter as described in this assessment.
4. Revise SAR Chapter 7 and Emergency Plan Chapter 11 as required to reflect final staffing and capability levels as recommended by this analysis.

ACRONYMS USED IN THIS REPORT

ALS	advanced life support
BLS	basic life support
CAB	Centrifuge Assembly Building
CFR	Code of Federal Regulations
CO ₂	carbon dioxide
CPR	cardio-pulmonary resuscitation
CRDB	Cylinder Receipt and Dispatch Building
CUB	Central Utilities Building
EFR	Eunice (NM) Fire & Rescue
EHS	environmental health and safety
EMS	emergency medical service
EMT	emergency medical technician
FB/ERT	fire brigade/emergency response team
FF	firefighter
FHA	fire hazards analysis
GPM	gallons per minute
HF	hydrogen fluoride
HFD	Hobbs (NM) Fire Department
HAZ MAT	hazardous materials
HAZWOPER	hazardous waste operations and emergency response
IC	Incident Commander
ICS	Incident Command System
IDLH	immediately dangerous to life and health
IROFS	item(s) relied on for safety
ISA	integrated safety analysis
LES	Louisiana Energy Services
NEF	National Enrichment Facility
NFPA	National Fire Protection Association
NM	New Mexico
NMBC	New Mexico Building Code
NRC	U.S. Nuclear Regulatory Commission
OSHA	Occupational Safety and Health Administration
PPE	personal protective equipment
PPM	parts per million
PRCS	permit-required confined space
RCRA	Resource Conservation and Recovery Act
SAR	Safety Analysis Report
SCBA	self-contained breathing apparatus
SNM	special nuclear material
TSB	Technical Service Building
UBC	uranium byproduct cylinder
UO ₂ F ₂	uranyl fluoride
UF ₆	uranium hexafluoride

I. INTRODUCTION AND OVERVIEW

The fuel for commercial nuclear power reactors requires a higher concentration of fissile uranium than exists in natural uranium ore. The primary isotope for this purpose, uranium-235 (U235) is enriched from a natural concentration of 0.7% (in the mined ore) up to about 5%. One of the available processes for performing this enrichment is through the use of gas centrifuges. The gas centrifuge uranium enrichment process uses a large number of rotating cylinders in series to enrich uranium in its U-235 isotope. A series of centrifuges are interconnected in series and parallel to form groups known as cascades in order to achieve the desired level of enrichment.

Louisiana Energy Services (LES) is proposing to build a gas centrifuge uranium enrichment facility that will enable the United States to enhance domestic enrichment capacity for subsequent conversion (by others) to enriched uranium fuel.

On December 12, 2003 LES submitted a license application to the US Nuclear Regulatory Commission (NRC) for a proposed gas centrifuge uranium enrichment plant to be built on a site in Lea County, New Mexico, outside the City of Eunice. The proposed facility will be known as the National Enrichment Facility (NEF).

Within this license application, a Safety Analysis Report (SAR) has been submitted which is an evaluation of various process and facility measures that will be undertaken to ensure the safety of the enrichment process, supporting processes, and the facility as a whole. Chapter 7 of this SAR addresses facility fire safety and makes the following commitment:

7.5.2.3 Baseline Needs Assessment

A baseline needs assessment will be performed for the facility Fire Brigade and the off-site fire departments utilizing the guidance of applicable NFPA Standards. This assessment will determine the ability of the fire fighting forces to accomplish the following responsibilities:

- *Fire Suppression*
- *Hazardous Materials (HAZMAT) Response (where assigned)*
- *Training*
- *Search and Rescue*
- *Inspection, Testing and Maintenance (where applicable)*
- *Emergency Medical Services (where assigned)*
- *Confined Space Entry*
- *Offsite Assistance.*

The assessment will include organizational responsibilities, collateral duties, facility hazards, response time requirements, personnel levels, required apparatus and equipment. In addition, the assessment will describe the various programs which support

fire fighting personnel. This will include training, physical fitness and medical programs relating to emergency responders.

This document was developed to satisfy this commitment. This is not a comprehensive assessment of all facility emergencies or emergency response. As part of the SAR, the NEF submitted a detailed Emergency Plan which provides the overview of potential emergencies and responses thereto. As described in the NEF Emergency Plan, numerous governmental agencies/resources can be brought to bear – from local agencies to both intra- and interstate (i.e., Texas) mutual aid agreements. Additionally federal agency assistance can be requested by the Governor of New Mexico via emergency declaration requests to the President of the United States (through the Office of Homeland Security, Federal Emergency Management Agency). The Nuclear Regulatory Commission, as a member of the National Response Team can also mobilize federal resources at its discretion in the event of significant emergency.

It is not the intent of this analysis to evaluate these capabilities.

The scope of this analysis is limited to the consideration of emergency response activities related to commitments made in Chapter 7 of the SAR as described above. Further, this analysis is limited to the two agencies that will be called as the primary and secondary first responders for fire/medical/hazardous material emergencies:

- Eunice Fire and Rescue Services (City of Eunice, NM)
- Hobbs Fire Department (City of Hobbs, NM)

As noted in the NEF Emergency Plan, other agencies may be involved in first response (e.g., the New Mexico State Police for hazardous materials emergencies) and will be involved in any protracted or multi-hazard type emergency.

II. METHODOLOGY

This section presents the methodology for conducting this assessment. A baseline needs assessment must define the “needs” of the facility with respect to if emergency response resources must be available to meet the “need”. For this assessment, a two-tiered process is used to characterize the need and associated resources. The first tier of screening is as follows:

1. Response capability is mandated by legal requirement and/or licensing basis commitments (e.g., Safety Analysis Report and other licensing correspondence).

This first screen identifies mandatory requirements which serve as basis for NRC licensing irrespective any analysis of the hazard.

The second tier of screening involves characterization of potential needs for emergency events as listed below:

1. Criterion I – events that can reasonably be expected to occur over the life of the facility (e.g., minor fires in non-radiological area, occupational injury/illness, medical events, minor chemical spills or releases, personal injury, vehicle accidents, local radiological contamination event, etc.).
2. Criterion II – events that are not expected to occur over the life of the facility (e.g., fire in a radiological area or large fire in non-radiological area, large chemical spill or airborne release, airborne radioactive material release, facility contamination event, criticality accident, etc.) but for which planning and resource capabilities are mandated as a condition of licensure and/or are prudent based on the loss history of similar types of facilities/industries.

The screening process above is used to define “baseline needs” for the NEF. The response capability – on-site and off-site – is then evaluated for efficacy in responding to the need and recommendations are made as needed. Criterion I types of emergencies are those that should be able to be responded to effectively with on-site response forces and limited offsite assistance. Criterion II events are those where implementation of the NEF Emergency Plan is likely and a multi-agency/multi-jurisdictional response including full utilization of first response agency resources would reasonably be expected.

It should be noted here that any number of events are theoretically possible. This analysis is limited to the types and frequencies of events as listed above and/or that are reasonably credible for the facility.

In order to characterize the response capabilities of the primary and secondary response agencies, interviews were conducted with representatives from each agency. These interviews were conducted following appropriate NFPA consensus standards – NFPA 1720 for the volunteer fire department, and NFPA 1710 for the career fire department.

This baseline needs assessment was prepared by Mr. Scott Tyler. Mr. Tyler was a representative on the NEF Integrated Safety Analysis team in the area of fire safety and chemical process safety. He also prepared portions of the NEF Safety Analysis Report.

Mr. Tyler is a registered fire protection engineer and has previously held positions in paid and volunteer fire departments and held certifications in Firefighting and as a Fire Service Instructor. He has prepared pre-fire and pre-emergency response plans for multiple industrial and nuclear facilities.

A peer review of this report was also conducted by Mr. John Crowther. Mr. Crowther is a fire protection engineer and was responsible for preparation of Chapter 7 – Fire Safety, of the NEF Safety Analysis Report. Mr. Crowther has prepared fire hazards analysis and fire protection programs for multiple nuclear facilities.

III. BASELINE NEEDS

This section focuses on identification of potential emergency response needs for the NEF. It is presented by individual types of response needs (e.g., fire, medical, haz mat, etc.) and presents each need as outlined in Section II, Methodology.

A. FIRE SUPPRESSION/FIRE BRIGADE

1. Regulatory Commitments

Appendix A of this document contains licensing statements regarding the fire brigade and other aspects of fire response. LES has committed to maintain a fire brigade continuously staffed with five members and meeting the qualifications of NFPA 600. By committing to have a fire brigade, this also invokes the requirements 29 CFR 1910.156 which has been summarized in Appendix B.

Both of these standards define the levels of qualification for private industry firefighting activities and provide for two classes of fire brigade – those that provide incipient firefighting and those that provide advanced exterior or interior structural firefighting.

There is no regulatory requirement in either of these standards that specifies which type of brigade is required; that decision is left up to the facility owner. LES has indicated that the NEF Fire Brigade will be an incipient level brigade.

Other commitment statements in Appendix A will need to be implemented in the form of procedures and protocols within the NEF Fire Safety Program and/or other Management Programs.

2. Facility Needs Analysis

There is a potential need for both incipient and structural firefighting at the facility.

With respect to the facility hazards themselves, the need for the structural firefighting capacity to be onsite should be based on the hazards of the facilities/structures and associated processes. Table III-1 provides a synopsis of the fire hazards as derived from the NEF Fire Hazards Analysis, Rev. 1, and the Integrated Safety Analysis Summary (Chapter 3 of the Safety Analysis Report).

Table III-1, NEF Significant Structures and Associated Fire Hazards

Bldg	Const. Type (per NFPA 220)	Stories Area	Comb Loading	Special Fire Hazards	UF6 Storage/ Use	Other Hzds Mtl Storage	Auto Suppr	Hose Station	Comments
CRDB	Type I – 443	1 11,300 m ²	Very Low	No	Yes	No	No	No	
UF6 Area	Type I – 443	1 8820 m ²	Very Low	Yes	Yes	No	No	No	<u>Special Fire Hazard</u> 70 liters (18.5 gal) silicon oil per cold trap heater/chiller unit, 8 total
Cascade Hall	Type I – 443	1 34,612 m ² (11,538 / module)	Very Low	No	Yes	No	No	No	
Proc Svc Corridor	Type I – 443	included in Cascade Area	Low to Moderate	No	Yes	Yes	No	No	3 level equipment corridor which supports Cascade Halls has low to moderate fire loading. Separated by rated construction from areas with Bulk SNM <u>Other Hazardous Materials</u> Sodium Fluoride (toxic) contained in metal traps
Blending & Liquid Sampling	Type I – 443	1 1538 m ²	Low	Yes	Yes	No	No	No	<u>Special Fire Hazard</u> 70 liters (18.5 gal) silicon oil in 1 cold trap heater/chiller unit
CAB	Type I – 443	1 11,364 m ²	Low	No	Yes	No	No	No	
TSB	Type I – 443	2 9192 m ²	Low to Moderate (varies by room)	Yes	Yes	Yes	No (paint booth protected)	No	<u>Special Fire Hazards</u> Flammable Liquids – see App. C <u>Other Hazardous Materials</u> see App. C for complete list

Bldg	Const. Type (per NFPA 220)	Stories Area	Comb Loading	Special Fire Hazards	UF ₆ Storage/ Use	Other Hzds Mtl Storage	Auto Suppr	Hose Station	Comments
UBC Storage Pad	NA exterior	NA	Very Low	No	Yes	No	NA	NA	
Fire Water Pump Bldg	Type II – 000	1 34 m ²	Moderate	Yes	No	No	Yes	No	<u>Special Fire Hazard</u> Diesel Fuel – Interior Tank
CUB	Type II – 000	1 1962 m ²	Moderate	Yes	No	No	Yes	Yes	<u>Special Fire Hazard</u> Diesel Fuel – Interior Day Tanks and Exterior Storage Tanks
Visitors Center	Type II – 000	1	Low	No	No	No	No	No	Outside Controlled Area fence
Site Security	Type II – 000	1 90 m ²	Low	No	No	No	No	No	
Admin	Type II – 000	1 1400 m ²	Low	No	No	No	Yes	Yes	

Notes to Table III-1:

1. All buildings containing UF₆ storage/use are of a nature that post-flashover fires are not deemed credible based on the limited amount of combustible materials and the large volume of the buildings. The only exception to this would be select rooms within the TSB. For these spaces, the quantity of material at risk is generally low. See the NEF Integrated Safety Analysis and Fire Hazards Analysis for further information.
2. All areas containing UF₆ storage/use require moderator control. Water may not be used for firefighting (e.g., hose stations, hose streams) in these areas except at the direction of qualified NEF personnel who can assess impact on criticality safety margins.

As can be seen from this table, the fire hazards expected from individual structures are generally low. Buildings housing special nuclear materials (SNM) or radioactive materials will be constructed of noncombustible construction and the uniform fire loading in these buildings will be low with respect to the area/volume of the structures, so much so that, with the exception of some individual rooms within the Technical Services Building (TSB), flashover conditions with post-flashover fire are not expected to occur. The rooms in the TSB which could be subject to flashover conditions are not expected to contain any significant quantity of SNM or radioactive materials that can be readily aerosolized and pose a significant airborne release threat.

Other structures, where sufficient combustibles are present for flashover fires to occur, will be provided with automatic suppression systems. The only process fire hazards of significance that are present in the facility are as follows:

- Diesel fuel for emergency generators – this will consist of two aboveground tanks of 5,000 gallon capacity each. These will be located exterior to the Central Utilities Building and will be housed in concrete vaults meeting the definition of “protected tank” as defined in NFPA 30, Flammable and Combustible Liquids Code. They will be provided with secondary containment, overfill protection, vehicle and ballistic impact resistance.
- Diesel fuel day tanks for the emergency generators and the diesel-driven fire pumps. These tanks will vary in capacity but will be less than 1000 gallons individually. The CUB and diesel fire pump house holding these tanks will be protected with automatic fire sprinklers.

There will be numerous interior electrical power supply breaker cubicles and motor control centers, dry type electrical transformers, battery charging stations, distribution electrical lighting and power cabinets, and similar hazards in the facility but these are of a nature where structural fire fighting capacity is not expected to be immediately required. Initial firefighting for onset failures in these types of components can be effectively combated with hand portable and/or wheeled fire extinguishers rated for electrical hazard. This is the preferred mode of firefighting until equipment has been deenergized and non-residue type extinguishers (e.g., CO2 or clean agent) are proving ineffectual.

As noted in the facility Integrated Safety Analysis Summary, for controlled case fires where Items Relied On for Safety (IROFS) function as intended, there are no scenarios for which fire brigade response is credited to mitigate the consequences of a facility fire below 10 CFR 70.61 release thresholds.

1. Process and facility fire hazards in SNM or radioactive materials areas are low.
2. Process and facility fire hazards in other areas are generally low and where moderate level fire hazards do exist, they do not expose bulk SNM or radioactive materials storage areas.

3. Non-SNM/radioactive materials buildings are protected with automatic suppression.
4. The entire facility will be monitored by automatic fire detection.

The need for structural firefighting capability is more likely in the non-radiological structures within the facility (e.g., Administration Building, CUB, Visitor Center, and Security Building). These buildings will not be subject to the same level of transient combustible and material control that will be used in the rest of the facility and will also have higher in-situ combustible loads.

The task analysis for firefighting staffing are presented below:

Incipient Firefighting Requirements		
Task Analysis	Personnel Required	Training Required
Initial Fire Extinguisher Team	2	Brigade Member
Backup Fire Extinguisher Team	2	Brigade Member
Safety/Criticality Officer	1	Incident Commander
Incident Commander	1	Incident Commander
Total Personnel	6	

Structural Firefighting Requirements		
Task Analysis	Personnel Required	Training Required
Entry Team	2	Structural
Backup Team	2	Structural
EMS Surveillance	2	Basic Life Support
Safety/Criticality Officer	1	Incident Commander
Incident Commander	1	Incident Commander
Total Personnel	8	

3. Criterion Assignment

Based on the discussion presented above, maintaining an incipient fire brigade is a regulatory commitment. Incipient fires at NEF are considered Criterion I level events. Structural fires are considered Criterion II level events.

B. SEARCH AND RESCUE - LIFE SAFETY FROM FIRE

1. Regulatory Commitments

There are no regulatory or licensing commitments to providing an onsite search and rescue capability for fire response.

2. Facility Needs Analysis

There is a potential need for search and rescue from fire at the facility.

All of the NEF process buildings - where there is bulk SNM/radioactive material content - will be staffed with a small number of employees in the process areas. For the same reason that flashover fires are not believed credible in these spaces, it is very unlikely that smoke/hot layer gases would develop in a timeframe that would incapacitate an employee before they could evacuate the area.

In those process spaces where flashover fires are possible (Technical Services Building), the spaces are small (egress can be accomplished quickly), and very few employees will be present.

The nonradiological structures with moderate combustible loading will have low occupant loading and are protected with sprinklers. The Administration Building will have the highest occupant load and is protected with sprinklers. There will also be periods of higher occupant load in the facility Visitor's Center.

All buildings on the NEF property meet the egress requirements of the New Mexico Building Code and NFPA 101, Code on Safety for Life from Fire.

In the event that Search and Rescue is required, the task analysis for this activity is comparable to that presented for Section III.A.2, Structural Firefighting. An incipient fire brigade cannot perform Search and Rescue under conditions which necessitate thermal protective clothing.

3. Criterion Assignment

Based on the discussion presented above, incipient fires at NEF are considered Criterion I level events. By their nature, incipient fires are very unlikely to generate need for search and rescue. Structural fires are considered Criterion II level for NEF. The likelihood of a need for rescue from these events is less than the likelihood of the event itself.

C. MEDICAL EMERGENCIES

1. Regulatory Commitments

There are several statements in the Safety Analysis Report indicating that NEF will provide basic first aid for the fire brigade (SAR Section 7.1.5 and 7.5) and other employees (Emergency Plan Section 6.3)

29 CFR 1910.151(b) requires that, in the absence of an infirmary, clinic, or hospital in near proximity to the workplace, a person or persons shall be adequately trained to render first aid.

29 CFR 1910.146 specifies that first aid and CPR capability is required of the "rescue" services for confined space.

2. Facility Needs Analysis

As with most industrial facilities, there is a potential need for care and treatment of individuals up to injuries of life-threatening severity. The nature of the industrial equipment involved, electrical energies, chemicals handled, work operations and construction activities requires that life support capability with response and transport are necessary. At least two individuals should be present on-site at all times to support basic life support (consistent with Task Analysis in other sections)

3. Criterion Assignment

Based on the discussion presented above, emergency medical response at NEF is considered a Criterion I level event.

D. HAZARDOUS MATERIALS

1. Regulatory Commitments

As noted in Appendix D, NEF will not be exempt from the NM Hazardous Waste Bureau hazardous waste regulations. These are the state version of US EPA RCRA regulations.

29 CFR 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER) provisions are applicable. The pertinent requirements for RCRA TSD facility is presented in section 1910.120(a)(2)(iii)(C):

. . . Compliance with the requirements of paragraph (q) of this section shall be deemed to be in compliance

If NEF develops an emergency response capability that conforms to 1910.120(q), then response activities will be compliant for the facility.

1910.120 requires other provisions of planning for emergency response which will need to be part of the facility program; these are not illustrated here. The

requirements of this standard are only presented with respect to staffing and training levels required for hazardous material response.

2. Facility Needs Analysis

There is a potential need for hazardous material response at the facility. Hazardous materials emergencies require some complementary, but mostly unique skill sets from those involving firefighting activities.

All hazardous chemicals intended for use at the NEF, are listed in Chapter 6 of the Safety Analysis Report. The primary hazardous material of concern at the NEF will be uranium hexafluoride (UF_6). The remaining hazardous chemicals to be stored and used have been synopsisized in Table III-1. In review of these other materials, it can be seen that most storage quantities are small, particularly when compared to UF_6 .

UF_6 , when released to atmosphere will react with the water vapor in the air to form hydrogen fluoride (HF) gas and a solid uranium-oxyfluoride compound (UO_2F_2) which is commonly referred to as uranyl fluoride.

UO_2F_2 is a radiological and chemical toxin due to its uranium content and solubility. Once inhaled, uranyl fluoride is easily absorbed into the bloodstream because of its solubility. If large quantities are inhaled, the uranium in the uranyl complex acts as a heavy metal poison that affects the kidneys.

Hydrogen fluoride gas is strongly corrosive and can cause severe burns to the skin, eyes and mucous membranes. Inhalation of hydrogen fluoride causes respiratory distress. Exposure to high concentrations can cause laryngitis, bronchitis and pulmonary edema which may not become apparent until 12-24 hours after the exposure.

In the event of a significant UF_6 release, a white vapor cloud will fume at the point of release. This cloud will include UO_2F_2 particulate matter within the gaseous stream. As the release plume diffuses into larger volumes and additional UF_6 hydrolysis occurs, UO_2F_2 particulate will settle on surfaces as a solid flake-like compound. This deposition will occur within piping/equipment, on lower surfaces within enclosures/rooms, and/or on the ground – wherever the UF_6 hydrolysis reaction is occurring.

The chemotoxicity of the HF gas dominates the potential severity of any exposure with the chemotoxicity/radiotoxicity of UO_2F_2 typically of less concern.

The release of UF_6 and its byproducts is the predominant hazard at the facility. The Integrated Safety Analysis for the facility bases the severity of potential release consequences on the public exposure not exceeding 30 minutes duration. This conclusion was drawn, not based on termination of the release, but on the exposed individuals taking self-protective action. Nevertheless, NEF should also be actively responding to any airborne releases to minimize the duration of the event for the protection of employees and the public, and to limit potential equipment damage (from HF vapors) and the spread of contamination (from uranyl fluoride). This includes having capability to take offensive mitigation/interdiction

efforts in potentially toxic/hazardous environments as soon as practicable after the onset of such a release.

In order to mount this type of response and to conform to HAZWOPER requirements, the following minimum complement of personnel must be available to sustain hazardous material response operations:

29CFR1910.120(q)		
HAZWOPER Requirements		
Task Analysis	Personnel Required	Training Level Required
Entry Team – Level A or B protection w/ SCBA	2	Technician
Safety Team	2	Technician
Decontamination Team and EMS/Medical Surveillance	3	Operations
Safety/Criticality Officer	1	Incident Commander
Incident Commander	1	Incident Commander
Total Personnel	9	

All emergency operations in either an Immediately Dangerous to Life and Health (IDLH) or an indeterminate chemical hazard environment require that entry and back-up personnel have the necessary personnel protective equipment (PPE). In the case of potential hydrogen fluoride (HF) exposures this would include appropriate level encapsulation to protect against skin exposure and self-contained breathing apparatus (SCBA) to protect against inhalation.

The decontamination team would need to set up in an adjacent zone to the chemical hazard (the "warm" zone) to decontaminate responders of any chemical/radiological contamination on the PPE and/or their persons. The basic life support team would establish medical surveillance/rehabilitation in the clean area or "cold" zone as required to check the vital signs (e.g., temperature, heart rate, blood pressure, respiratory rate, etc.) of response personnel and to ensure their rehydration/recuperation before being released from the emergency scene.

The responding officer corp consists of the Incident Commander who is responsible for scene leadership/control, team actions, communications with external responders, management, etc. A Safety Officer is also required separate from the Incident Commander and whose responsibility it is to identify and evaluate hazards and to monitor response actions and activities to ensure the following:

- the safety of the responders is maintained to the extent practical and that no imminent dangers are present, and
- that actions taken do not exacerbate the emergency conditions/release

This individual is empowered under OSHA regulation to suspend or alter the response operation and to notify the incident commander accordingly. Additionally, for the NEF, it would be appropriate for this individual to also have the following specific responsibility as another aspect of hazard control

- that actions taken do not encroach on criticality safety margins.

The Incident Commander is expected to be a designated member of the EHS staff or senior operations staff member. The Safety/Criticality Officer is expected to be a senior operations staff member.

The staffing level listed in the task analysis above would be sufficient for a roughly 30 minute response as standard SCBA cylinders cannot be relied upon for a longer duration. Additionally, physical exertion in chemical protective gear is exhausting (due to its lack of porosity/breathability) and crews must be rotated at frequent intervals to avoid heat exhaustion.

At a minimum, an additional 4 persons would be needed to form a second entry and backup team if active mitigation and response is required past 30 minutes with additional crews for each subsequent period.

Other supporting personnel will be needed for any significant hazardous material release. The Incident Commander has the responsibility for activating the NEF Emergency Plan in accordance with certain fixed criteria relative to SNM or other hazardous chemical release. Once the emergency has been secured, Health Physics personnel will need to assess the scene for needed decontamination activities. In the event of a public release, they will also need to perform exterior sampling to provide feedback to NEF Incident Commander/management to determine when certain emergency levels of the Emergency Plan can be reduced.

3. Criterion Assignment

Based on the discussion presented above, maintaining a HAZWOPER compliant response team is a regulatory commitment. A single entry hazardous material release (30 minute duration) is considered a Criterion I level event. Prolonged hazardous material release (greater than 30 minute duration and/or requiring more than one entry team) is considered a Criterion II level event.

E. SEARCH AND RESCUE - LIFE SAFETY FROM HAZARDOUS MATERIAL RELEASE

1. Regulatory Commitments

There are no regulatory or licensing commitments to providing an onsite search and rescue capability for hazardous material events. See III.D.1 for the commitment to maintain a HAZWOPER compliant response team.

2. Facility Needs Analysis

There is a potential need for search and rescue from hazardous material release at the facility.

As noted in Section III.D.1 above, UF_6 will be the predominate airborne release chemical. In addition to the visible warning signs of a UF_6 release (white vapor cloud), the odor threshold for resulting HF is less than 1 ppm and the irritating effects of HF are intolerable at concentrations well below those that could cause permanent injury or which produce escape-impairing symptoms. Therefore persons who can escape from UF_6 /HF concentrations can reliably be predicted to initiate self protective action.

All of the NEF process buildings - where there is bulk SNM/radioactive material content - will be staffed with a small number of employees in the process areas. Because of the volume of these spaces, it is unlikely that injurious concentrations of released chemicals would develop in a timeframe that would disable an employee from evacuating the release area. This assumption was applied consistently in the evaluation of potential worker exposure in the Integrated Safety Analysis. There is a small risk of an employee who is proximate to a maintenance operation being exposed to an incapacitating concentration of UF_6 /HF in the event of equipment or PPE malfunction. A similar asphyxia hazard exists for employees performing maintenance on the plant's nitrogen system. Of the other hazardous materials, there are no others that are believed to be an incapacitating toxic inhalation hazard.

In the event that Search and Rescue is required, the task analysis for this activity is comparable to that presented for Section III.D.2, Hazardous Material response.

3. Criterion Assignment

Based on the discussion presented above, maintaining a HAZWOPER compliant response team is a regulatory commitment. The need for search and rescue as the result of a hazardous material release is considered a Criterion II level event.

F. CONFINED SPACE RESCUE

1. Regulatory Commitments

NEF has committed to meet 29CFR1910. 1910.146 requires that the capability be in place for the rescue of entrants from confined spaces.

2. Facility Needs Analysis

While confined spaces have not been identified for the facility, it is reasonable to presume that confined space rescue capabilities will be needed at the facility (e.g., below grade, equipment entrance, tank/vessel maintenance, etc.

29CFR1910.146 Confined Space Rescue (assumes 1 entrant and 1 attendant require rescue)		
Task Analysis	Personnel Required	Training Level Required
Recovery Team – w/ SCBA	2	Rescue/Entrant
Safety Team	2	Rescue/Entrant
EMS/Medical Surveillance	2	Basic First Aid/CPR
Total Personnel	6	

3. Criterion Assignment

The need for Confined Space Rescue capability is considered a Criterion I level event.

G. OTHER TECHNICAL RESCUE

Other conditions that might necessitate emergency response are those involving “technical” rescue where specialized equipment is needed for an effective response. These conditions are described below:

- **High Angle Rescue** – rescue involving equipment above elevations where personnel can be safely removed by ground ladders alone.
- **Structural Collapse Rescue** – rescue from void spaces in collapsed structures that involves locating victims and minimizing risk of further injury in accessing them by evaluating rubble stability and heavy debris removal.

- Trench Collapse Rescue – rescue from collapsed trenches/tunnels that involves locating victims and minimizing risk of further injury in accessing them by evaluating pile stability and dirt/debris removal.
- Surface Water Rescue – rescue from surface bodies of water
- Vehicle Extrication – rescue from passenger vehicles and/or heavy equipment after collision/accident.
- Other identified conditions

1. Regulatory Commitments

There are no explicit regulatory requirements or commitments to provide any of these other forms of technical rescue.

2. Facility Needs Analysis

High Angle Rescue

There is a potential need for high angle rescue at the facility.

Most buildings are flat roof surface structures with the tallest buildings (CRDB and Separations Building Modules) being approximately 13 m (43 ft) tall. All roofs are expected to be accessible through standard stairs and doorways such that “Stokes” basket type stretchers will be able to be moved from the roof structure to lower elevations through interior stairs.

The potential need for high angle/rope rescue would be for elevators in the buildings. There will also be miscellaneous elevated structures including the water storage tank (surface tank) and radio repeater towers.

Structural Collapse Rescue

There is a potential need for structural collapse rescue at NEF.

Due to the high design margins for earthquake and tornado required for structures housing SNM and/or IROFS, collapse is not expected for any of these buildings.

Other NEF buildings and structures will be designed per the current edition of the New Mexico Building Code (NMBC). For earthquake, this code presumes a safe to egress condition (although not necessarily continued occupancy) is maintained for an earthquake that has a 10% likelihood of exceedance in 50 years (i.e., a 475 year return period). Collapse is possible for higher magnitude events. In the event of a tornado, the structures designed for straight line wind speeds of the NMBC (80 mph) might not survive tornadic wind speeds. The likelihood of direct tornado impact on one of these structures is estimated at less than 1×10^{-4} occurrences/yr. Facility procedures will be in place such that if a tornado warning is issued for the area around NEF, personnel will be directed to take shelter in one of the reinforced structures or other safe location.

Trench Collapse Rescue

There is a potential need for trench collapse rescue at NEF. This hazard is expected to be present primarily during the initial construction phase when the largest volume of excavation and trenching will occur. A lesser likelihood exists for subsequent construction periods and maintenance evolutions.

Surface Water Rescue

There is no anticipated need for surface water rescue at the facility.

The facility will have a treated effluent evaporative basin that could be up to 1.3 m (4.2 ft) deep and a storm water basin that could be up to 1.7 m (5.5 ft) deep however the maximum anticipated operating depth will be 0.3 m (1.1 ft). It is also projected that the water depth will rarely be this high in this arid climate.

If operating/maintenance practices require that personnel work over water in depth, NEF would be obligated to conduct these operations per OSHA 29 CFR 1926.106 which includes the use of personal flotation devices, buoys, and a rescue skiff.

Vehicle Extrication

There is a potential need for vehicle extrication at the facility. Vehicle traffic on the NEF site will have limited on-site travel distances and will be expected to conform to a low onsite speed limit (probably 20 mph or less). The likelihood of vehicle collision with sufficient force to entrap vehicle occupants is considered low.

Physical Hazard from Cylinder Movement

One other technical rescue possibility exists due to the routine movement of cylinders on the site. Uranium hexafluoride cylinders can weigh up to the following:

48Y cylinder – nominal gross weight 14,860 kg (32,760 lb)

30B cylinder – nominal gross weight 2,912 kg (6,420 lb)

These cylinders will be moved throughout the facility – by crane, cylinder transporters, and semi-tractor/trailer combinations. There exists a possibility of pinning/crushing type accidents in the event that a cylinder(s) were to be displaced or dislodged during transit or dropped during crane movement. This necessitates a capability to lift, move, restrain or immobilize cylinders in the event of an accident. This same hazard will exist along the transit routes where UF₆ cylinders are arriving/departing from the NEF site.

3. Criterion Assignment

High Angle Rescue, Structural Collapse Rescue, Trench Collapse Rescue, Vehicle Extrication, and Pinning/Crush Accidents due to cylinder movement are all considered Criterion II level events. Surface Water Rescue is not considered a credible "need".

IV. RESPONSE TO NEEDS

This section characterizes the anticipated response capabilities of NEF staff and those of the primary and secondary fire, medical, and hazardous material response agencies that will support the NEF. The primary response agency is the City of Eunice, New Mexico's Fire and Rescue organization. The secondary response agency is the City of Hobbs, New Mexico's Fire Department.

Other fire departments – including those of the Cities of Tatum, Lovington, and Jal, NM – and Fire Districts – including Maljamar, Knowles, and Monument – can be mobilized for response to NEF as part of the Lea County “Mutual Aid Agreement and Master Firefighting/Emergency Medical Services Plan.” The City of Andrews, Texas Volunteer Fire Department has also responded to mutual aid requests at or near the New Mexico/Texas state line.

In order to generally assess the potential response capabilities of the two agencies to the NEF, a review was conducted against standards published by the National Fire Protection Association (NFPA) as well as supplemental questions particular to response issues for the NEF.

Eunice Fire & Rescue, as a volunteer organization was reviewed using NFPA 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*, 2001 Edition. This review is contained in Appendix E. The information for completing this review was provided by Fire Chief, Jerry Harper and EMS Director, Steve Stevenson. Supplemental information was provided by Eunice Police Chief, Kevin Burnam.

The Hobbs Fire Department, as a career (compensated) organization was reviewed using NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*, 2001 Edition. This review is contained in Appendix F. The information for completing this review was provided by the Administration Division Commander, Lance Wiseman.

It is important to note that both of these departments are under no legal obligation to conform to these consensus standards and their obligations for departmental operations/capabilities are to meet New Mexico state requirements. The use of NFPA 1710 and 1720 serve only as a platform for understanding the available first response and mutual aid resources that can be brought to bear in the event of an emergency at the NEF. A summary of each departments capabilities and discussion of response times with different types of equipment is further characterized in the sections below.

A. NEF FIRE BRIGADE/EMERGENCY RESPONSE TEAM

As noted in the regulatory commitments, NEF will staff a fire brigade/emergency response team. The task analysis conducted in this assessment identifies that there will need to be at least nine (9) persons on-site who can respond. It is anticipated that the FB/ERT will be comprised of personnel from one or more departments including operations, maintenance, health & safety, radiological safety, security or others but who will be able to be immediately released from these primary duties to respond to any emergency on-site.

1. Training/Resources

Fire

All FB/ERT personnel will be trained in accordance with the requirements of NFPA 600 and 1910.156 (for incipient brigades). This will need to include (in addition to general site safety and other training) fire hazards/hazards recognition and fire extinguisher training.

FB/ERT members should receive additional training as required to perform all necessary fire protection and emergency equipment inspection, testing, and maintenance functions as applicable under NFPA and OSHA standards (e.g., NFPA 10, 13, 20, 25, 600, OSHA 1910.134, etc.) unless these services will be performed by others/contracted.

EMS

All personnel are committed to be a minimum basic first aid and cardio-pulmonary resuscitation (CPR) certified.

Hazardous Material

All personnel are committed to meet minimum requirements of OSHA 29 CFR 1910.120 including the capability to provide entry into hazardous spaces.

Technical Rescue

The need for on-site capability is addressed in the findings/recommendations section of this report.

Communications

NEF will have a minimum of two means of communicating with off-site response agencies. These are addressed in the NEF Emergency Plan Section 6.2.2.

B. EUNICE FIRE & RESCUE

1. Organization/Service Area

Eunice Fire and Rescue, headed by Chief Jerry Harper, prides itself on providing quality service delivery to the community with a robust volunteer spirit vital for communities comparable to Eunice's size and resources. Eunice Fire and Rescue serves a population of 2,700 citizens living in the 800 square miles that make up their response area.

The current department roster includes 20 members of the department who staff one fire station housing:

Three (3) Ambulances, each outfitted for providing intermediate level life support

Three (3) Pumpers:

- 1,500 gpm pumper with 1,000 gallon water tank,
- 1,000 gpm pumper with 500 gallon water tank,
- 1250 gpm pumper with 750 gallon water tank.

One (1) 6,000 gallon capacity tanker with 500 gpm pumping capacity

Three Grass trucks:

- 300 gpm pump with 1,000 gallon water tank,
- 150 gpm pump with 300 gallon water tank,
- 150 gpm pump with 250 gallon water tank.

One (1) Light Rescue (vehicle accidents) truck, 200 gpm pump and 100 gallon water tank

During 2003, Eunice Fire and Rescue responded to approximately 300 calls for help, of which 80% were for medical emergencies. The Department experiences approximately 50 fire responses annually.

The Department is organized in a typical "hierarchical" form of organization. The six levels of command are:

Fire Chief
Assistant Chief
EMS Director
Captain
Lieutenant
Firefighter

The Fire Chief and EMS Director are both compensated and work a 40 hour work week and call response at other hours. Other officers and firefighters can respond to any call as available and are obligated to serve a rotational duty schedule for weekend and

holiday coverage to ensure adequate resources. There are periods of time during the day, based on the current membership, where there may be delays in forming the minimum complement necessary for more than two emergency vehicles to respond.

A Chief or Company Officer and responding personnel on an engine company are the initial response to fire within the district. An ambulance crew of two will respond to basic medical calls with the Chief and/or the EMS Director responding to higher severity incidents. Engine company response is mandated for certain EMS calls (e.g., motor vehicle accidents).

For a typical fire response, a minimum of 2 individuals will respond per emergency vehicle with at least one officer (minimal day staff). Additional personnel are called out such that offensive structural firefighting (entry) would not be performed until a minimum of 4 firefighters are on-scene. For a typical emergency medical response, a minimum of 2 individuals will respond per ambulance with both of these personnel being EMT-Basic qualified as a minimum. Depending on the responding personnel, EMT-Intermediates may be available.

With respect to other responsibilities, the Fire Chief and EMS Director work on daily administrative duties including; fiscal planning & management, support of prevention activities, liaison with other City departments and mutual aid Fire Departments, and personnel management through the Asst Chief/Captains.

The EMS Director has the responsibility to ensure Eunice Fire and Rescue is in compliance with State and Federal regulations specifying Quality Assurance in patient care as well as overseeing infection control and firefighter safety issues. He also has responsibility for training coordination.

The Captains/Lieutenants manage personnel responding as the company officer. Each is responsible for ensuring his personnel are prepared for emergency response and maintaining vehicles and buildings. They also assist in specific administrative responsibilities and coordination of training.

The Eunice Fire Department applies the Incident Command System (ICS) designed to effectively and efficiently manage an emergency scene. The ICS is designed to expand as an emergency expands to include hazardous materials, mass casualty, technical rescue and other related emergencies. If other agencies take the lead Incident Command role, the senior on-scene Eunice Fire & Rescue officer will typically move to command the operations sector within the ICS organization.

2. Training/Resources

Current Eunice Fire and Rescue staff training breakdowns as follows:

Fire

All Eunice Firefighters must complete the New Mexico State Firefighter Level I curriculum which is administered locally, at New Mexico Firefighter's Training Academy in Socorro, and/or through other area Fire Departments (when the FFI course is offered).

Eunice has two instructors qualified to teach this curriculum. Some members have also completed the Firefighter II level curriculum. New members of the Department are not allowed to perform offensive structural firefighting until they have completed the FFI course and also have been released for these activities by a Eunice fire officer (after some period of observation at emergency scenes).

EMS

Ambulance attendants who provide patient care are New Mexico certified Emergency Medical Technician (EMT-Basic). Several ambulance/EMS personnel have also completed NM EMT-Intermediate. The department can provide up to intermediate level care (depending on available personnel). In the event that an advanced life support response is needed, there are arrangements in place for ALS intercept and transfer with the Hobbs Fire Department where their ambulance will respond from quarters to either the scene or to a transfer point where the patient is moved to the ALS ambulance for advanced life support and transportation to the local medical facility.

Life Flight helicopter service can be mobilized as required for critical traumas. Currently, the nearest helicopter is in Lubbock, TX. Helicopter service out of Hobbs and Midland/Odessa are in the planning stages.

EMT continuing education is conducted annually with EMT recertification conducted every two years as required under NM standard.

Hazardous Material

Eunice Fire and Rescue has some members who are trained up to Operations level with most members meeting Awareness level. At the present time, they cannot provide active entry and interdiction level hazardous material response. This would require four technician level qualified responders plus an Incident Commander (technician plus IC qualification) as well as the appropriate response equipment for the incident of concern.

Technical Rescue

Eunice Fire and Rescue can provide light rescue capability and vehicle extraction. They do not currently operate any technical rescue teams. They have informal agreements with several area employers (Waste Control Services, Duke, Dynegy, and Callaway) who can provide hazardous materials, high angle rescue, and confined space entry support as part of an overall response when requested.

Dispatch and Communications

Eunice Fire & Rescue is alerted to emergencies from its 911 emergency communications dispatchers located at the Eunice Police Department. Lea County is in the process of consolidating and modifying its Enhanced 911 system. Future emergency dispatch will be initiated through the Lea County Sheriff's Department.

The Incident Command Management System is used through Lea County for Mutual Aid response and there are currently no significant interoperability issues within the County.

3. Response Times

The proposed NEF site is approximately 4.4 miles east of Eunice Fire & Rescue Station

1. Response time is determined by the following formula:

$$RT = DT + MT + TT + AT$$

Response Time (RT) is the summation of

- Dispatch time (DT) – the amount of time to receive and process an alarm including: 1) receipt of alarm/telephone call, 2) determining the type of emergency, 3) verifying location of emergency, 4) determining resources to dispatch, and 5) notifying the units who will respond. (1 min. assigned)
- Muster time (MT) – the amount of time for each unit's crew to react to alarm notification, don/assemble PPE, and mount apparatus to depart for scene. (4 min for first company, 4 min additional company)
- Travel time (TT) – driving time from fire station to emergency scene (5 min to NEF site)
- Access time (AT)¹ – time required for crew to move to onsite location where actual emergency exists (e.g., pass through security and arrive at building/location)(1 min assigned)

The table below is an estimate of expected response times to the site:

Type of Response	Estimated Response Time
First Ambulance	11 min
Second Ambulance	15 – 18 min
First-in Fire Company	11 min
All Alarm Fire Response	15 – 25 min
HAZWOPER Compliant Entry Team (equipped for entry w/ back-up and equipment)	N/A capability not available

¹ Access time does not include any estimates for forcible entry, other impediments or reaching locations within structures. Due to the pre-emergency planning that will be in place, these types of delays are expected to be minimal.

C. HOBBS FIRE DEPARTMENT

1. Organization/Service Area

The Hobbs Fire Department, headed by Chief Manuel Gomez, prides itself for its progressive and professional approaches to service delivery and customer service. The Hobbs Fire Department serves a population of approximately 30,000 citizens living in the City of Hobbs and 8,000 or so persons in the remainder of the response district. The 70 members of the department staff 3 fire stations which house 4 Engines and 1 Reserve, 1 Ladder, 1 Heavy Rescue, (2 Engines serve as Light Rescue), 3 Grass Fire Vehicles, a Water Tanker as well as 2 on-shift (Batt Chief and Dist Chief) and 4 additional command vehicles.

During 2002, the Hobbs Fire Department responded to 3500 calls for medical emergencies and roughly 900 Fire/Rescue calls. The Department experiences approximately 200 structural fires annually.

The Department is organized in a typical "hierarchical" form of organization. The six levels of command are:

Fire Chief
Division Commander
Battalion Chief
District Chief
Station Commanders
Driver/Engineer and Paramedics (equivalent rank)
Firefighter

The Fire Chief and Division Commanders, which includes the Administration, Operations, and the Fire Marshal as well as support staff (Training, EMS, Fire Prevention, Code Enforcement, Administrative functions, etc.) work a typical 40 hour work week. The command personnel within these ranks are available for response on a call back basis. Battalion Chiefs, District Chiefs, Fire Apparatus Driver/Operators, Paramedics, and Firefighters, work a three shift rotation schedule with roughly 20 personnel each shift.

The Battalion Chief manages the shift personnel under his command. He is responsible for ensuring his personnel are prepared for emergency response and maintaining vehicles and buildings. The Battalion Chief is assigned specific administrative responsibilities and coordination of training. The North District Chief and Station Commanders are responsible for activities at the individual fire stations as well as supervision of the Fire Apparatus Driver/Operators and Firefighters.

A station commander, the driver/operator and four firefighters would be the initial engine company and/or truck company response with additional units/stations called based on subsequent alarm assignment. A typical emergency medical response would consist of an ALS ambulance with two EMT Paramedics and an EMT Basic (to drive). Additional units would be called as needed.

The Fire Department staffs all associated administrative functions including EMS Director, Training, Fire Prevention, Fire Code Enforcement, Public Education, ARFF staffing (Lea County Regional Airport), Budgeting, Accreditation, Safety, and other functions.

The Hobbs Fire Department applies the ICS system for complex or multi-agency incidents as needed.

2. Training/Resources

Current Hobbs Fire Department staff training breakdowns as follows:

Fire

All Hobbs Firefighters must complete the New Mexico State Firefighter Level I curriculum which is administered jointly with New Mexico Junior College as part of a 13-week academy. Hobbs has several instructors qualified to teach this curriculum. Many members have also completed the Firefighter II level curriculum.

EMS

All uniformed members of the Hobbs Fire Department are required to be New Mexico certified Emergency Medical Technicians (EMT-Basic). Most members have gone on to complete EMT-Intermediate and/or EMT-Paramedic level certification. On-shift ALS ambulance staffing and assignment is done by EMT-Paramedic for full ALS care and transport capability. EMT continuing education is conducted annually with EMT recertification conducted every two years as required under NM standard.

Life Flight helicopter service for Hobbs is the same as described for Eunice Fire & Rescue.

Hazardous Material

All HFD members are trained up to the Operational level with many members having qualified as technician. In the event of a hazardous material incident, HFD will send one qualified entry team with EMS and Decon personnel as well as the Incident Commander and Safety officer as part of the initial response. In 2003, two teams from Hobbs tied for 2nd place out of 16 teams who competed in the New Mexico State Hazmat Challenge.

Technical Rescue

The Hobbs Fire Department can provide light rescue and vehicle extraction capability. Additionally, the Hobbs Fire Department operates technical rescue teams in hazardous materials response, swift water rescue, and high angle rescue (ropes). A team specializing in trench rescue is to be implemented in the near future.

Dispatch and Communications

HFD is alerted to emergencies from its 911 emergency communications center with dispatchers located at the Hobbs Police Department. Lea County is in the process of consolidating and modifying its Enhanced 911 system and Hobbs is slated to be one of

the designated public service answering points (PSAP) along with the Lea County Sheriff's Department.

The Incident Management System is used through Lea County for Mutual Aid response and there are currently no significant interoperability issues within the County.

3. Response Times

The proposed NEF site is roughly 21 miles south and slightly east (driving distance) of the nearest Hobbs Fire Department station (Station 1). The table below is an estimate of expected response times to the site:

Type of Response	Estimated Response Time
First Mutual Aid Ambulance	21 – 25 min
Second Mutual Aid Ambulance	same as 1 st (from time of request)
First-in Mutual Aid Fire Company (Engine, Ladder, or Technical Rescue).	25 – 30 min
All Alarm Mutual Aid Fire Response	35 – 45 min
HAZWOPER Compliant Entry Team (equipped for entry w/ back-up and equipment – Haz Mat trailer is at HFD Station 3)	45 min

V. FINDINGS/RECOMMENDATIONS

Table V-1 lists each facility baseline need and response capability. Recommendations for enhancing response capability are presented in the table by number and are detailed below. General recommendations are also provided.

FINDINGS

Need	Criteria Level	Response by	Analysis	Specific Recom
Incipient Fire	I	NEF FB/ERT EFR	The combination of Fire Brigade and EFR support response is adequate. On-site staffing levels should be per incipient FF task analysis.	
Structural Fire	II	EFR HFD	NEF and EFR response needs enhancements	1, 2, 3
Search & Rescue – Fire	II	EFR HFD	The combination of Fire Brigade and EFR support response is adequate	
Medical Emergencies	I	EFR HFD	NEF and EFR response is adequate for most cases.	4
Hazardous Materials	I	NEF FB/ERT EFR HFD	NEF and EFR response needs enhancements	5
Search & Rescue – Hazardous Materials	II	NEF FB/ERT EFR HFD	The combination of Fire Brigade and EFR support response is adequate	
Confined Space Rescue	I	NEF FB/ERT EFR HFD	NEF may need enhancement.	6
High Angle Rescue	II	HFD	Existing capability is adequate	

Need	Criteria Level	Response by	Analysis	Specific Recom
Structural Collapse Rescue	II	None	Urban Search and Rescue (USAR) teams can be mobilized through state or federal government. Likelihood is too remote to warrant providing local capability.	
Trench Collapse Rescue	II	HFD	NEF may need enhancement	7
Vehicle Extrication	II	EFR HFD	Existing capability is adequate	
Physical Hazard from Cylinders	II	NEF FB/ERT EFR	NEF may need enhancement	8

SPECIFIC RECOMMENDATIONS

1. Provide mobile cart/vehicle(s) with hose/transportable hose packs (or otherwise locate hose) at NEF to cover all points of the facility. Minimum flow capability shall be two 1-1/2 inch diameter attack lines with a 2-1/2 inch diameter backup line (min. total flow of 300 gpm per NFPA 1410). In the event of fire with structural response need, NEF Fire Brigade would connect to the on-site hydrant system and extend lines to the nearest point where they can do so safely (without thermal protective gear). This concurrent response will alleviate need for EFR to pull hose and will minimize access time for EFR firefighters.
2. Hobbs Fire Department should be an automatic aid dispatch for any fire that is or has a high likelihood of requiring extended structural firefighting. Eunice Fire & Rescue will have daytime periods where an all call response may only muster two structural firefighting teams (four in-four out).
3. Provide sufficient training and equipment for a minimum of two on-shift NEF personnel to don structural firefighting gear. While interior firefighting would be performed by offsite agencies, the Criticality/Safety Officer must be able to accompany firefighting teams to any point in the facility where water hose streams could be deployed in criticality safety areas (to ensure moderator control, safe arrays, and safe geometries are maintained). The NEF IC would be the backup person to also perform this function.
4. Provide on-site medical equipment and training for initial circulatory and respiratory support. In addition to the regulatory commitments for basic first aid and CPR

training, NEF should be equipped to support life-saving functions within the first ten minutes of a medical emergency until an EFR ambulance arrives with EMTs. All Fire Brigade/ERT members should be able to perform the following:

- Automatic External Defibrillation
 - Administer oxygen by mask
5. Support Eunice Fire and Rescue in equipping and staffing a HAZWOPER compliant entry team. In addition to the regulatory commitment to provide a response team on the NEF site, Eunice Fire & Rescue needs to be able to provide a technician qualified level response team to support NEF operations. The Hobbs Fire Department can respond with a qualified team but cannot do so within the 30 minute window under which an NEF team may need to be relieved. Additionally EFR personnel will need to be relied upon to support the EMS/Decon functions prescribed by HAZWOPER for any hazardous material incident and may be necessary to support Rapid Intervention if NEF responders require rescue.
 6. Reevaluate confined space rescue needs at detailed design. The number of and need to access potential permit required confined spaces (PRCS) cannot be determined at this stage of design. NEF is required to have on-site rescue capability if they will allow PRCS entry. However, the nature of this type of work is such that rescue responsibility can also be ceded to contractor firms who make routine entries. Hobbs Fire Department could serve as a designated rescuer, however, initial rescue activities would need to be underway by on-site or local provider during HFD response to be considered "timely" under the OSHA standard 1910.146(k)(1)(i).
 7. Reevaluate need for trench rescue at detailed design/construction. The number and depth of excavations and trenching cannot be determined at this stage of design. The nature of this type of work is such that rescue responsibility can be ceded to constructors/contractors who do the digging. Hobbs Fire Department can provide support, however, their response time (if the sole rescue agency) might not be considered reasonable under OSHA standards (general duty clause).
 8. Provide cylinder stabilization and movement equipment for conceivable emergencies and coordinate with EFR/HFD for off-site transport accidents. It is anticipated that NEF will have the appropriate heavy equipment on-site to lift, move, restrain or immobilize cylinders in the event of any conceivable movement accident. Protocol should be developed to determine if NEF vehicles will be allowed to respond to other points in the jurisdiction if UF6 cylinder accidents occur and/or if this capability is available from others.

GENERAL RECOMMENDATIONS

1. Provide equipment and appropriate training for all necessary radiological monitoring equipment for both EFR and HFD. These agencies will be assisting NEF for most conceivable incidents and should have an independent capability to provide monitoring, detect contamination, and provide dose control to support NEF and to protect their own response personnel. A standard radiological response "kit" should

be developed and provided (NM state standards and/or protocols with other facilities such as WIPP or others may provide guidance).

2. In concert with NEF pre-fire and pre-emergency plan development, develop training curricula and presentation material for off-site response agencies. Topics to be included will need to address:
 - Basic NEF processes and hazards including nature and characteristics of UF6 under normal, upset, and emergency release conditions
 - Radiological treatment, decontamination, and transport protocols
 - Contamination/dose controls
 - Criticality hazards including firefighting and related activities in moderator control areas (i.e., maintenance of safe geometries)
 - Security issues and access
3. Develop annual training and drill protocols as prescribed in the NEF emergency plan. Training and drills should include the topical areas and subject matter as described in this assessment. Training and drill materials and scenarios should include full participation of off-site response agencies and should practice the needed coordination for differing types of events.
4. Revise SAR Chapter 7 and Emergency Plan Chapter 11 as required to reflect final staffing and capability levels as recommended by this analysis.

VI. REFERENCES

Document Number L4-50-01-FHA, Revision 01, *NEF Fire Hazards Analysis for License Application*, 30 October, 2003

Louisiana Energy Services (LES), NEF License Application, December, 2003.

- Safety Analysis Report
- Emergency Plan

National Fire Protection Association (NFPA) 600, 1996 Edition, *Standard on Industrial Fire Brigades*

NFPA 1710, 2001 Edition, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*

NFPA 1720, 2001 Edition, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*

US Code of Federal Regulations (CFR), Title 10, Part 70, Domestic Licensing of Special Nuclear Material

- Subpart H – Additional Requirements for Certain Licensees Authorized To Possess a Critical Mass of Special Nuclear Material, Standard 70.61, *Performance Requirements*

CFR, Title 29, Part 1910, Occupational Safety and Health Standards

- Subpart H – Hazardous Materials, Standard 1910.120, *Hazardous waste operations and emergency response*
- Subpart I – Personal Protective Equipment, Standard 1910.134, *Respiratory Protection*
- Subpart J – General Environmental Controls, Standard 1910.146, *Permit-required confined spaces*
- Subpart K – Medical and First Aid, Standard 1910.151, *Medical services and first aid*
- Subpart L – Fire Protection, Standard 1910.156, *Fire Brigades*

APPENDICES

A. LICENSING COMMITMENTS RELATED TO EMERGENCY RESPONSE/FIRE BRIGADE

SAR Section 6.1.1.3

General occupational chemical safety controls will be in place for protection of facility employees in the storage, handling, and use of all chemicals as required by 29 CFR1910 (CFR, 2003h)

SAR Section 6.3.2.1.1

Fire brigade/fire department members responding to emergencies are required by emergency response procedure (and regulation) to have suitable respiratory and personal protective equipment.

SAR Section 6.4.8

The NEF has a facility emergency plan and program which includes response to mitigate the potential impact of any process chemical release including requirements for notification and reporting of accidental chemical releases.

SAR Section 7.1.5

The qualifications, drills and training of the fire brigade members who are part of the Emergency Response Organization are in accordance with NFPA 600 (NFPA, 1996i). The primary purpose of the Fire Brigade Training Program is to develop a group of facility employees trained in fire prevention, fire fighting techniques, first aid procedures, and emergency response. They are trained and equipped to function as a team for the fighting of fires.

The Fire Brigade Program provides entrance and educational requirements for fire brigade candidates as well as the medical- and job-related physical requirements. The Fire Brigade Training Program provides for initial training of all new fire brigade members, semi-annual classroom training and drills, annual practical training, and leadership training for fire brigade leaders.

SAR Section 7.1.6

Detailed pre-fire plans will be developed for use by the facility fire brigade. The pre-fire plans include the location of fire protection equipment, approach paths for fire response, potential hazards in the area, power supply and ventilation isolation means, important plant equipment in the area and other information considered necessary by fire emergency response personnel.

SAR Section 7.3.5

Smoke control is accomplished by the Fire Brigade and off-site Fire Department utilizing portable smoke removal equipment.

SAR Section 7.3.8

Moderation control is applied for criticality safety of UF6 at this facility. Neither automatic sprinkler nor standpipe and hose systems are provided in the TSB, Separation Buildings, Blending and Liquid Sampling, CRDB, CAB, and Centrifuge Post Mortem areas. Procedures and training for both onsite fire brigade and offsite fire department emphasize the need for moderator control in these areas.

Fire protection concerns Fires will be extinguished in these areas by the fire brigade and / or local fire department with the use of portable and wheeled fire extinguishers. In the unlikely event that extinguisher cannot control or extinguish the fire, then the fire brigade, local fire department and the Emergency Operations Center will work together to ensure that moderator control is maintained in these areas. If deemed appropriate, hose streams are available from fire hydrants located throughout the facility.

SAR Section 7.3.10

The Physical Security Plan (PSP) addresses the establishment of permanent and temporary Controlled Areas. The PSP identifies the ingress and egress methodology during both normal and emergency conditions. This includes emergency response personnel both onsite and offsite. Two means of access to the site are provided, one via one of the two controlled gates continuously manned by Security and the other via designated emergency access gates (i.e., crash gates). Refer to the PSP for additional details.

SAR Section 7.5.2.1

The facility maintains a fire brigade made up of employees trained in fire prevention, fire fighting techniques, first aid procedures, and emergency response. The fire brigade is organized, operated, trained and equipped in accordance with NFPA 600 (NFPA, 1996i). The intent of the facility fire brigade is to be able to handle all minor fires and to be a first response effort designed to supplement the local fire department for major fires at the plant. The fire brigade members are trained and equipped to respond to fire emergencies and contain fire damage until offsite help from a neighboring fire department arrives. When the local fire department arrives onsite, the local fire department assumes control and is responsible for all fire fighting activities. The plant fire brigade, working with the plant's Emergency Operations Center, will coordinate offsite fire department activities to ensure moderator control and criticality safety. The fire brigade is staffed so that there are a minimum of five fire brigade members available per shift.

Periodic training is provided to offsite assistance organization personnel in the facility emergency planning procedures. Facility emergency response personnel meet at least annually with each offsite assistance group to accomplish training and review items of mutual interest including relevant changes to the program. This training includes facility tours, information concerning facility access control (normal and emergency), potential accident scenarios, emergency action levels, notification procedures, exposure guidelines, personnel monitoring devices, communications, contamination control, moderator control issues, and the offsite assistance organization role in responding to an emergency at the facility, as appropriate.

SAR Section 11.3.3.1.2**Fire Brigade Training**

The primary purpose of the Fire Brigade Training Program is to develop a group of facility employees skilled in fire prevention, fire fighting techniques, first aid procedures, and emergency response. They are trained and equipped to function as a team for the fighting of fires. The intent of the facility fire brigade is to be a first response effort designed to supplement the local fire department for fires at the plant and not to replace local fire fighters.

The Fire Brigade Training program provides for initial training of all new fire brigade members, semi-annual classroom training and drills, annual practical training, and leadership training for fire brigade leaders.

Emergency Plan Section 4.2.2**Onsite Staff Emergency Assignments****E. Fire Brigade**

The Shift Manager directs the Fire Brigade. Members of the Fire Brigade include operations personnel. Radiation protection and security personnel may accompany the fire brigade based on the nature of the emergency.

Emergency Plan Section 4.3**Local Offsite Assistance to Facility**

Numerous Sections committing to response

Emergency Plan Section 5.3.2

NEF maintains a facility fire brigade, which serves as the initial line of defense to contain or extinguish a fire pending the arrival of the local fire department.

Emergency Plan Section 10.1**Emergency Planning and Community Right-to-Know Act of 1986**

Beginning with construction and continuing into facility operations, the National Enrichment Facility (NEF) assures and maintains compliance with the Superfund Amendments and Reauthorization Act (SARA), entitled *Emergency Planning and Community Right-to-Know Act of 1986*, through the following activities:

- Conducting annual inventories regarding the description, hazards, amounts and location of hazardous chemicals (as defined in the OSHA Hazards Communications Standard), which are present and/or maintained at the facility;
- Compiling inventory information as required by SARA and providing this information to the New Mexico Department of Public Safety, Office of Emergency Management (OEM) for inventory reporting.

- Advising and/or training construction and operating personnel regarding the marking, storage and location of all hazardous chemicals, including the regulatory requirements for reporting accidental releases of these substances.

B. 29 CFR 1910.156**1910.156(a)**

Scope and application -

1910.156(a)(1)

Scope. This section contains requirements for the organization, training, and personal protective equipment of fire brigades whenever they are established by an employer.

1910.156(a)(2)

Application. The requirements of this section apply to fire brigades, industrial fire departments and private or contractual type fire departments. Personal protective equipment requirements apply only to members of fire brigades performing interior structural fire fighting. The requirements of this section do not apply to airport crash rescue or forest fire fighting operations.

1910.156(b)

Organization -

1910.156(b)(1)

Organizational statement. The employer shall prepare and maintain a statement or written policy which establishes the existence of a fire brigade; the basic organizational structure; the type, amount, and frequency of training to be provided to fire brigade members; the expected number of members in the fire brigade; and the functions that the fire brigade is to perform at the workplace. The organizational statement shall be available for inspection by the Assistant Secretary and by employees or their designated representatives.

1910.156(b)(2)

Personnel. The employer shall assure that employees who are expected to do interior structural fire fighting are physically capable of performing duties which may be assigned to them during emergencies. The employer shall not permit employees with known heart disease, epilepsy, or emphysema, to participate in fire brigade emergency activities unless a physician's certificate of the employees' fitness to participate in such activities is provided. For employees assigned to fire brigades before September 15, 1980, this paragraph is effective on September 15, 1990. For employees assigned to fire brigades on or after September 15, 1980, this paragraph is effective December 15, 1980.

1910.156(c)

Training and education.

1910.156(c)(1)

The employer shall provide training and education for all fire brigade members commensurate with those duties and functions that fire brigade members are expected to perform. Such training and education shall be provided to fire brigade members before they perform fire brigade emergency activities. Fire brigade leaders and training instructors shall be provided with training and education which is more comprehensive than that provided to the general membership of the fire brigade.

1910.156(c)(2)

The employer shall assure that training and education is conducted frequently enough to assure that each member of the fire brigade is able to perform the member's assigned duties and functions satisfactorily and in a safe manner so as not to endanger fire brigade members or other employees. All fire brigade members shall be provided with training at least annually. In addition, fire brigade members who are expected to perform interior structural fire fighting shall be provided with an education session or training at least quarterly.

1910.156(c)(3)

The quality of the training and education program for fire brigade members shall be similar to those conducted by such fire training schools as the Maryland Fire and Rescue Institute; Iowa Fire Service Extension; West Virginia Fire Service Extension; Georgia Fire Academy, New York State Department, Fire Prevention and Control; Louisiana State University Firemen Training Program, or Washington State's Fire

Service Training Commission for Vocational Education. (For example, for the oil refinery industry, with its unique hazards, the training and education program for those fire brigade members shall be similar to those conducted by Texas A & M University, Lamar University, Reno Fire School, or the Delaware State Fire School.)

1910.156(c)(4)

The employer shall inform fire brigade members about special hazards such as storage and use of flammable liquids and gases, toxic chemicals, radioactive sources, and water reactive substances, to which they may be exposed during fire and other emergencies. The fire brigade members shall also be advised of any changes that occur in relation to the special hazards. The employer shall develop and make available for inspection by fire brigade members, written procedures that describe the actions to be taken in situations involving the special hazards and shall include these in the training and education program.

1910.156(d)

Fire fighting equipment. The employer shall maintain and inspect, at least annually, fire fighting equipment to assure the safe operational condition of the equipment. Portable fire extinguishers and respirators shall be inspected at least monthly. Fire fighting equipment that is in damaged or unserviceable condition shall be removed from service and replaced.

1910.156(e)

Protective clothing. The following requirements apply to those employees who perform interior structural fire fighting. The requirements do not apply to employees who use fire extinguishers or standpipe systems to control or extinguish fires only in the incipient stage.

1910.156(e)(1)

General.

1910.156(e)(1)(i)

The employer shall provide at no cost to the employee and assure the use of protective clothing which complies with the requirements of this paragraph. The employer shall assure that protective clothing ordered or purchased after July 1, 1981, meets the requirements contained in this paragraph. As the new equipment is provided, the employer shall assure that all fire brigade members wear the equipment when performing interior structural fire fighting. After July 1, 1985, the employer shall assure that all fire brigade members wear protective clothing meeting the requirements of this paragraph when performing interior structural fire fighting.

1910.156(e)(1)(ii)

The employer shall assure that protective clothing protects the head, body, and extremities, and consists of at least the following components: foot and leg protection; hand protection; body protection; eye, face and head protection.

1910.156(e)(2)

Foot and leg protection.

1910.156(e)(2)(i)

Foot and leg protection shall meet the requirements of paragraphs (e)(2)(ii) and (e)(2)(iii) of this section, and may be achieved by either of the following methods:

1910.156(e)(2)(i)(A)

Fully extended boots which provide protection for the legs; or

1910.156(e)(2)(i)(B)

Protective shoes or boots worn in combination with protective trousers that meet the requirements of paragraph (e)(3) of this section.

1910.156(e)(2)(ii)

Protective footwear shall meet the requirements of 1910.136 for Class 75 footwear. In addition, protective footwear shall be water-resistant for at least 5 inches (12.7 cm) above the bottom of the heel and shall be equipped with slip-resistant outer soles.

1910.156(e)(2)(iii)

Protective footwear shall be tested in accordance with paragraph (1) of Appendix E, and shall provide protection against penetration of the midsole by a size 8D common nail when at least 300 pounds (1330 N) of static force is applied to the nail.

1910.156(e)(3)

Body protection.

1910.156(e)(3)(i)

Body protection shall be coordinated with foot and leg protection to ensure full body protection for the wearer. This shall be achieved by one of the following methods:

1910.156(e)(3)(i)(A)

Wearing of a fire-resistive coat meeting the requirements of paragraph (e)(3)(ii) of this section in combination with fully extended boots meeting the requirements of paragraphs (e)(2)(ii) and (e)(2)(iii) of this section; or

1910.156(e)(3)(i)(B)

Wearing of a fire-resistive coat in combination with protective trousers both of which meet the requirements of paragraph (e)(3)(ii) of this section.

1910.156(e)(3)(ii)

The performance, construction, and testing of fire-resistive coats and protective trousers shall be at least equivalent to the requirements of the National Fire Protection Association (NFPA) standard NFPA No. 1971-1975, "Protective Clothing for Structural Fire Fighting," which is incorporated by reference as specified in Sec. 1910.6, (See Appendix D to Subpart L) with the following permissible variations from those requirements:

1910.156(e)(3)(ii)(A)

Tearing strength of the outer shell shall be a minimum of 8 pounds (35.6 N) in any direction when tested in accordance with paragraph (2) of Appendix E; and

1910.156(e)(3)(ii)(B)

The outer shell may discolor but shall not separate or melt when placed in a forced air laboratory oven at a temperature of 500 deg. F (260 deg. C) for a period of five minutes. After cooling to ambient temperature and using the test method specified in paragraph (3) of Appendix E, char length shall not exceed 4.0 inches (10.2 cm) and after-flame shall not exceed 2.0 seconds.

1910.156(e)(4)

Hand protection.

1910.156(e)(4)(i)

Hand protection shall consist of protective gloves or glove system which will provide protection against cut, puncture, and heat penetration. Gloves or glove system shall be tested in accordance with the test methods contained in the National Institute for Occupational Safety and Health (NIOSH) 1976 publication, "The Development of Criteria for Fire Fighter's Gloves; Vol. II, Part II: Test Methods," which is incorporated by reference as specified in Sec. 1910.6, (See Appendix D to Subpart L) and shall meet the following criteria for cut, puncture, and heat penetration:

1910.156(e)(4)(i)(A)

Materials used for gloves shall resist surface cut by a blade with an edge having a 60 deg. included angle and a .001 inch (.0025 cm.) radius, under an applied force of 16 lbf (72N), and at a slicing velocity of greater or equal to 60 in/min (2.5 cm./sec);

1910.156(e)(4)(i)(B)

Materials used for the palm and palm side of the fingers shall resist puncture by a penetrometer (simulating a 4d lath nail), under an applied force of 13.2 lbf (60N), and at a velocity greater or equal to 20 in/min (.85 cm./sec); and

1910.156(e)(4)(i)(C)

The temperature inside the palm and gripping surface of the fingers of gloves shall not exceed 135 deg. F (57 deg. C) when gloves or glove system are exposed to 932 deg. F (500 deg. C) for five seconds at 4 psi (28 kPa) pressure.

1910.156(e)(4)(ii)

Exterior materials of gloves shall be flame resistant and shall be tested in accordance with paragraph (3) of Appendix E. Maximum allowable afterflame shall be 2.0 seconds, and the maximum char length shall be 4.0 inches (10.2 cm).

1910.156(e)(4)(iii)

When design of the fire-resistive coat does not otherwise provide protection for the wrists, protective gloves shall have wristlets of at least 4.0 inches (10.2 cm) in length to protect the wrist area when the arms are extended upward and outward from the body.

1910.156(e)(5)

Head, eye and face protection.

1910.156(e)(5)(i)

Head protection shall consist of a protective head device with ear flaps and chin strap which meet the performance, construction, and testing requirements of the National Fire Safety and Research Office of the National Fire Prevention and Control Administration, U.S. Department of Commerce (now known as the U.S. Fire Administration), which are contained in "Model Performance Criteria for Structural Firefighters' Helmets" (August 1977) which is incorporated by reference as specified in Sec. 1910.6, (See Appendix D to Subpart L).

1910.156(e)(5)(ii)

Protective eye and face devices which comply with 1910.133 shall be used by fire brigade members when performing operations where the hazards of flying or falling materials which may cause eye and face injuries are present. Protective eye and face devices provided as accessories to protective head devices (face shields) are permitted when such devices meet the requirements of 1910.133.

1910.156(e)(5)(iii)

Full facepieces, helmets, or hoods of breathing apparatus which meet the requirements of 1910.134 and paragraph (f) of this section, shall be acceptable as meeting the eye and face protection requirements of paragraph (e)(5)(ii) of this section.

1910.156(f)

Respiratory protection.

1910.156(f)(1)

General.

1910.156(f)(1)(i)

The employer must ensure that respirators are provided to, and used by, fire brigade members, and that the respirators meet the requirements of 29 CFR 1910.134 and this paragraph.

1910.156(f)(1)(ii)

Approved self-contained breathing apparatus with full-facepiece, or with approved helmet or hood configuration, shall be provided to and worn by fire brigade members while working inside buildings or confined spaces where toxic products of combustion or an oxygen deficiency may be present.

Such apparatus shall also be worn during emergency situations involving toxic substances.

1910.156(f)(1)(iii)

Approved self-contained breathing apparatus may be equipped with either a "buddy-breathing" device or a quick disconnect valve, even if these devices are not certified by NIOSH. If these accessories are used, they

shall not cause damage to the apparatus, or restrict the air flow of the apparatus, or obstruct the normal operation of the apparatus.

1910.156(f)(1)(iv)

Approved self-contained compressed air breathing apparatus may be used with approved cylinders from other approved self-contained compressed air breathing apparatus provided that such cylinders are of the same capacity and pressure rating. All compressed air cylinders used with self-contained breathing apparatus shall meet DOT and NIOSH criteria.

1910.156(f)(1)(v)

Self-contained breathing apparatuses must have a minimum service-life rating of 30 minutes in accordance with the methods and requirements specified by NIOSH under 42 CFR part 84, except for escape self-contained breathing apparatus (ESCBAs) used only for emergency escape purposes.

1910.156(f)(1)(vi)

Self-contained breathing apparatus shall be provided with an indicator which automatically sounds an audible alarm when the remaining service life of the apparatus is reduced to within a range of 20 to 25 percent of its rated service time.

1910.156(f)(2)

Positive-pressure breathing apparatus.

1910.156(f)(2)(i)

The employer shall assure that self-contained breathing apparatus ordered or purchased after July 1, 1981, for use by fire brigade members performing interior structural fire fighting operations, are of the pressure-demand or other positive-pressure type. Effective July 1, 1983, only pressure-demand or other positive-pressure self-contained breathing apparatus shall be worn by fire brigade members performing interior structural fire fighting.

1910.156(f)(2)(ii)

This paragraph does not prohibit the use of a self-contained breathing apparatus where the apparatus can be switched from a demand to a positive-pressure mode. However, such apparatus shall be in the positive-pressure mode when fire brigade members are performing interior structural fire fighting operations.

1910.156(f)(2)(iii)

[Removed]

C. TSB HAZARDOUS CHEMICALS

A complete list of NEF proposed chemicals is contained in Chapter 6 of the SAR. The list below are chemicals stored in individual rooms within the TSB that are flammable, toxic, corrosive, oxidizer, or health hazard (not including UF6, uranic, or radioactively contaminated material):

Decontamination Workshop

- 800 liters – 5-10% citric acid
- 10 kg – sodium carbonate
- 10 kg – diatomaceous earth

ME&I Workshop

- 11m3 – oxygen
- 6 m3 – acetylene
- 0.68 kg – propane
- 2.4 L – cutting oil
- 2.4 L – paint

Vacuum Pump Rebuild Workshop

- 0.08 kg – cutting oil
- 9.6 L – paint
- 0.5 kg – primus gas
- 2.4 L – degreaser solvent
- 0.44 L – penetrating oil
- 210 L – methylene chloride

Liquid Effluent Collection & Treatment

- 210 L – potassium or sodium hydroxide

Solid Waste Collection

- 420 L – methylene chloride
- 50 L – organic chemicals

Chemical Laboratory

- 26 L – nitric acid
- 5 L – ethanol
- 4 L – hydrogen peroxide
- 27 L – acetone
- 2 L – toluene
- 10 L – petroleum ether
- 10 L – sulfuric acid
- 44 L – phosphoric acid
- 5 L – sodium hydroxide

Environmental Laboratory

- std. cylinder - hydrogen

D. APPLICATION OF 29 CFR 1910.120

As noted in the NEF Environmental Report, Section 4.13: "NEF will generate approximately 1,770 kg (3,932 lbs) of Resource Conservation and Recovery Act (RCRA) hazardous wastes per year and 50 kg (110 lbs) of mixed waste. This is an average of 147 kg (325 lbs) per month. Under New Mexico regulations, a facility that generates less than 100 kg (220 lbs) per month is conditionally exempt. In New Mexico, hazardous waste generators are classified by the actual monthly generation rate, not the annual average. Given that the average is over 100 kg/mo (220 lbs/mo), NEF would be considered a small quantity generator and would not be conditionally exempt from the New Mexico Hazardous Waste Bureau NMHWB) hazardous waste regulations."

29 CFR 1910.120

1910.120(a)

Scope, application, and definitions. --

1910.120(a)(1)

Scope. This section covers the following operations, unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility for employee exposure to safety or health hazards:

1910.120(a)(1)(i)

Clean-up operations required by a governmental body, whether Federal, state local or other involving hazardous substances that are conducted at uncontrolled hazardous waste sites (including, but not limited to, the EPA's National Priority Site List (NPL), state priority site lists, sites recommended for the EPA NPL, and initial investigations of government identified sites which are conducted before the presence or absence of hazardous substances has been ascertained);

1910.120(a)(1)(ii)

Corrective actions involving clean-up operations at sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA) as amended (42 U.S.C. 6901 *et seq*);

1910.120(a)(1)(iii)

Voluntary clean-up operations at sites recognized by Federal, state, local or other governmental bodies as uncontrolled hazardous waste sites;

1910.120(a)(1)(iv)

Operations involving hazardous waste that are conducted at treatment, storage, disposal (TSD) facilities regulated by 40 CFR Parts 264 and 265 pursuant to RCRA; or by agencies under agreement with U.S.E.P.A. to implement RCRA regulations; and

1910.120(a)(1)(v)

Emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard.

1910.120(a)(2)

Application.

1910.120(a)(2)(i)

All requirements of Part 1910 and Part 1926 of Title 29 of the Code of Federal Regulations apply pursuant to their terms to hazardous waste and emergency response operations whether covered by this section or not. If there is a conflict or overlap, the provision more protective of employee safety and health shall apply without regard to 29 CFR 1910.5(c)(1).

1910.120(a)(2)(ii)

Hazardous substance clean-up operations within the scope of paragraphs (a)(1)(i) through (a)(1)(iii) of this section must comply with all paragraphs of this section except paragraphs (p) and (q).

1910.120(a)(2)(iii)

Operations within the scope of paragraph (a)(1)(iv) of this section must comply only with the requirements of paragraph (p) of this section.

Notes and Exceptions:**1910.120(a)(2)(iii)(A)**

All provisions of paragraph (p) of this section cover any treatment, storage or disposal (TSD) operation regulated by 40 CFR parts 264 and 265 or by state law authorized under RCRA, and required to have a permit or interim status from EPA pursuant to 40 CFR 270.1 or from a state agency pursuant to RCRA.

1910.120(a)(2)(iii)(B)

Employers who are not required to have a permit or interim status because they are conditionally exempt small quantity generators under 40 CFR 261.5 or are generators who qualify under 40 CFR 262.34 for exemptions from regulation under 40 CFR parts 264, 265 and 270 ("excepted employers") are not covered by paragraphs (p)(1) through (p)(7) of this section. Excepted employers who are required by the EPA or state agency to have their employees engage in emergency response or who direct their employees to engage in emergency response are covered by paragraph (p)(8) of this section, and cannot be exempted by (p)(8)(i) of this section.

1910.120(a)(2)(iii)(C)

If an area is used primarily for treatment, storage or disposal, any emergency response operations in that area shall comply with paragraph (p) (8) of this section. In other areas not used primarily for treatment, storage, or disposal, any emergency response operations shall comply with paragraph (q) of this section. Compliance with the requirements of paragraph (q) of this section shall be deemed to be in compliance with the requirements of paragraph (p)(8) of this section.

1910.120(a)(2)(iv)

Emergency response operations for releases of, or substantial threats of releases of, hazardous substances which are not covered by paragraphs (a)(1)(i) through (a)(1)(iv) of this section must only comply with the requirements of paragraph (q) of this section

E. NFPA 1720, EUNICE FIRE & RESCUE

The list below is a series of questions drawn from NFPA 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*, 2001 Edition. It is important to note, this document, and these questions, are not intended as any form of evaluation of Eunice Fire & Rescue (EFR). They only serve as a platform for understanding available first-line response resources in the event of an emergency at the National Enrichment Facility based on a national consensus standard.

CODE REQUIREMENT	EUNICE FIRE & RESCUE POSITION
<p>4.1* Fire Suppression Organization. Fire suppression operations shall be organized to ensure the fire department's fire suppression capability includes sufficient personnel, equipment, and other resources to efficiently, effectively, and safely deploy fire suppression resources.</p> <p>4.1.1* The authority having jurisdiction shall promulgate the fire department's organizational, operational, and deployment procedures by issuing written administrative regulations, standard operating procedures, and departmental orders.</p>	<p>City Code, Part 13, Public Safety, Chapter 2 specifies the organizational existence of the Fire Department. There are no explicit resource or performance provisions in this ordinance.</p> <p>A current set of draft Standard Operating and Fire Safety procedures has been submitted to the City Manager for review and ultimately approval by the City Council.</p> <p>There are currently two paid full-time positions, the Fire Chief and EMS director. These positions were converted to paid status in the last year and 3 years respectively. There is also a part-time Asst Chief.</p>
<p>4.1.2* The fire department shall participate in a process that develops a community risk management plan with respect to the risks associated with the storage, use, and transportation of hazardous materials. The specific role of the fire department and other responding agencies shall be defined by the community risk management plan for hazardous materials and other special operations.</p>	<p>There is no explicit community plan. Eunice is a member of the LEA county mutual aid agreement.</p> <p>EFR does receive SARA Title III reports from area companies that are required to provide them.</p>
<p>4.1.3* Fire department procedures shall clearly state the succession of command responsibility.</p>	<p>City code, Part 13 identifies command responsibility of the fire chief. EFR Hierarchy is well known/understood: Fire Chief, Asst. Chief, EMS Director, Captains, Lieutenants, Firefighters.</p> <p>ICS is currently being implemented within the City. If State Police assume Incident Commander role, local EFR officer typically takes over Operations Branch.</p>

CODE REQUIREMENT	EUNICE FIRE & RESCUE POSITION
4.1.4* Personnel responding to fires and other emergencies shall be organized into company units or response teams and shall have appropriate apparatus and equipment.	EFR personnel are organized and assigned by companies.
4.1.5 The fire department shall identify minimum staffing requirements to ensure that a sufficient number of members are available to operate safely and effectively.	<p>Roll with minimum complement. All respond to station, except Chief Officers (dependent).</p> <p>May roll initial apparatus with as few as two persons if they know (via radio) that more people are en route to the station to staff additional apparatus.</p> <p>EMS rolls with 2 EMTs minimum (4 person at night), multiple victim calls will have more personnel.</p> <p>General response staffing Fire – 6 to 8 (day), 12-15 (night) EMS – 4 to 6 (day), 12 – 15 (night)</p>
4.1.6* The fire department shall maintain a standard report containing specified information for each response. These reports shall include the location and nature of the fire or emergency and describe the operations performed. This report shall identify the members responding to the incident.	<p>Standard report form is used for fire.</p> <p>State Standard report form for EMS. Electronic entry of EMS is coming (mid-year).</p>
4.1.7* Standard response assignments and procedures, including mutual aid response and mutual aid agreements predetermined by the location, and nature of the reported incident, shall regulate the dispatch of companies, response groups, and command officers to fires and other emergency incidents.	<p>Standard SOPs are in development. There is an unwritten standard protocol for the order of apparatus to go based on the type of call received. Structure – pumper and tanker EMS – ambulance Vehicle – ambulance, rescue and/or pumper.</p> <p>Mutual Aid Agreement copy provided. Chavis Co., Lea Co. May need to develop agreement with Andrews Co. TX.</p>
4.1.8* The number and type of units assigned to respond to a reported incident shall be determined by either risk analysis and/or pre-fire planning.	<p>Standard response protocols are in place for routine calls.</p> <p>Pre-fire plans have been provided for Oil/Gas midstream facilities (Duke/Dynegy). Waste Control Specialists is a mixed waste storage and remediation facility. EFR routinely deals with potential hydrogen sulfide issues associated with oil/gas wells and processing operations.</p>
<p>4.2 Fire Suppression Operations.</p> <p>4.2.1* Incident Commander. One individual shall be assigned as the incident commander.</p>	Incident Commander is assigned and escalates to higher level command staff accordingly upon arrival.

CODE REQUIREMENT	EUNICE FIRE & RESCUE POSITION
<p>4.2.1.1* The assumption and identification of command shall be communicated to all units responding to or involved at the incident scene.</p> <p>4.2.1.2 The incident commander shall be responsible for the overall coordination and direction of all activities for the duration of the incident.</p> <p>4.2.1.3 The incident commander shall ensure that a personnel accountability system is immediately utilized to rapidly account for all personnel at the incident scene.</p>	<p>Personnel accountability is part of company officer responsibility, moves to sector command under ICS if mobilized.</p>
<p>4.2.1.4 The company officer/crew leader shall at all times be aware of the identity, location, and activity of each member assigned to the company.</p> <p>4.2.1.5 Each member of the company shall be aware of the identity of the company officer/crew leader.</p> <p>4.2.1.6 Orders addressed to individual members, particularly verbal orders and orders at incident scenes, shall be transmitted through the company officer.</p>	<p>Company officer is responsible for accountability of company members.</p> <p>Members are aware of officer identity. Individual orders are transmitted by company officer.</p>
<p>4.2.2 Initial Attack.</p> <p>4.2.2.1 Upon assembling the necessary resources at the emergency scene, the fire department shall have the capability to safely initiate an initial attack within two minutes 90 percent of the time.</p> <p>4.2.2.2* Initial attack operations shall be organized to ensure that at least four members shall be assembled before initiating interior fire suppression operations at a working structural fire.</p>	<p>This initial attack profile is a jurisdiction wide target. With respect to NEF, a combination of fire brigade and/or fire department actions will be utilized to establish fire hose streams.</p> <p>EFR does not initiate offensive interior structural attack until at least four members are present. This will be the case for NEF as well.</p>
<p>4.2.2.2.1 In the hazardous area, two individuals shall work as a team.</p> <p>4.2.2.2.2 Outside the hazardous area, two individuals shall be present for assistance or rescue of the team operating in the hazardous area. One of the two individuals assigned outside the hazardous area shall be permitted to be engaged in other activities.</p> <p>4.2.2.2.3 The assignment of any individuals shall not be permitted if abandoning their critical task(s) to perform rescue clearly jeopardizes the safety and health of any fire fighter operating at the incident.</p>	<p>Eunice's conforms to the minimum of two-in, two-out rule for entry into hazardous areas.</p> <p>This is not formally documented in training sessions, but is currently in the SOP under development/review.</p> <p>EFR may deploy hose streams or other activities at doorways without entry if less than 4 are available at first response.</p>
<p>4.2.2.3 Initial attack operations shall be organized to ensure that if, upon arrival at the emergency scene, initial attack personnel find an imminent life-threatening situation where immediate action could prevent the loss of life or serious injury, such action shall be permitted with less than four personnel when conducted in accordance with NFPA 1500, Standard on Fire Department Occupational Safety and Health Program.</p>	<p>EFR would permit immediate life-saving actions with less than 4 personnel provided it did not constitute undue risk to the responder.</p> <p>Rapid intervention capability may or may not be available as prescribed by NFPA 1500 depending on the number of entrants in this scenario.</p>

CODE REQUIREMENT	EUNICE FIRE & RESCUE POSITION
<p>4.2.2.4 The fire department shall have the capability for sustained operations, including fire suppression; engagement in search and rescue, forcible entry, ventilation, and preservation of property; accountability for personnel; a dedicated rapid intervention crew (RIC); and provision of support activities for those situations that are beyond the capability of the initial attack.</p>	<p>EFR can conduct sustained operations in all of these areas provided sufficient response personnel are available. Hobbs Fire Department would be called for mutual aid if the EFR response would not provide sufficient resource.</p>
<p>4.3 Intercommunity Organization. 4.3.1* Mutual aid, automatic aid, and fire protection agreements shall be in writing and shall address such issues as liability for injuries and deaths, disability retirements, cost of service, authorization to respond, staffing, and equipment, including the resources to be made available and the designation of the incident commander.</p>	<p>The LEA County Mutual Aid agreement is written. It addresses most aspects of cost/liability. It addresses authorization to respond, staffing and designation of incident commander. It does not explicitly exclude/include equipment and resource limitations.</p>
<p>4.3.2 Procedures and training of personnel for all fire departments in mutual aid, automatic aid, and fire protection agreement plans shall be comprehensive to produce an effective fire force and to ensure uniform operations.</p>	<p>Training on the mutual aid agreement is conducted on an ad-hoc basis periodically and may be initiated by any Lea County department. There is no formal drill/training schedule.</p>
<p>4.3.3 Companies responding to mutual aid incidents shall be equipped with communications equipment that allow personnel to communicate with the incident commander and division officers, group officers, or sector officers.</p>	<p>All departments to the Lea County agreement can communicate with one another. Lea County is currently revamping communications such that there will be two PSAPs (initial dispatch centers), the Lea Co. Sheriff's office and City of Hobbs E911 center. Eunice is currently on VHF, Hobbs is an 800 MHz system, but sufficient patch and repeater capability is in place for the required interoperability.</p> <p>There is also a common NM state fire radio channel which is accessible by all.</p> <p>Current upgrades are in the work for full telephone/radio interoperability (ACU 1000 unit) which will be in place well before NEF licensing.</p>
<p>4.4* Emergency Medical Services. 4.4.1 Purpose. Emergency medical services (EMS) operations shall be organized to ensure the fire department's emergency medical capability includes personnel, equipment, and resources to deploy the initial arriving company and additional alarm assignments. The fire department shall be permitted to use established automatic mutual aid or mutual aid agreements to comply with the requirements of Section 4.4. 4.4.1.1* The provisions of this chapter shall only apply</p>	<p>EFR organizes EMS capability to provide necessary response capability (to the Intermediate Level) directly.</p> <p>EMS roles, functions, and responsibilities are currently contained in draft SOPs/policies under City Manager review.</p>

CODE REQUIREMENT	EUNICE FIRE & RESCUE POSITION
<p>to those fire departments that are involved in the delivery of emergency medical services.</p> <p>4.4.1.2* The fire department shall clearly document its role, responsibilities, functions, and objectives for the delivery of EMS.</p>	
<p>4.4.2 System Components. The basic treatment levels within an EMS system, for the purposes of this standard, shall be categorized as first responder, basic life support (BLS), and advanced life support (ALS). The specific patient treatment capabilities associated with each level shall be determined by the authority having jurisdiction for the approval and licensing of EMS providers within each state and province.</p>	<p>New Mexico maintains three levels of Emergency Medical Technician training and care.</p> <p>Basic – Basic life support and care including defibrillator and respiratory/circulatory support.</p> <p>Intermediate – all basic functions plus administration of intravenous fluids and limited cardiac drug administration</p> <p>Advanced (Paramedic) – basic and intermediate plus additional cardiac drug administration and respiratory support (intubation).</p> <p>EFR can currently support up to Intermediate Level care.</p>
<p>4.4.3* EMS System Functions.</p> <p>4.4.3.1 The following shall be considered the five basic functions within an EMS system:</p> <ol style="list-style-type: none"> (1) First responder (2) BLS response (3) ALS response (4) Patient transport in an ambulance or alternative vehicle designed to provide for uninterrupted patient care at the ALS or BLS level while en route to a medical facility (5) Assurance of response and medical care through a quality management program <p>4.4.3.2 The fire department shall be involved in providing any or all of the functions as identified in 4.4.3.1(1) through 4.4.3.1(5).</p>	<p>EFR Firefighters receive training as Health Care providers (NOT an EMS function) which is a NM 4 hour course. EFR can provide this instruction in-house.</p> <p>EFR EMS personnel are either EMT-B or EMT-I level trained.</p> <p>EFR can provide up to Intermediate level transport.</p>
<p>4.5 Quality Management.</p> <p>4.5.1 The fire department shall institute a quality management program.</p> <p>4.5.2 All first responder and BLS medical care provided by the fire department shall be reviewed by the fire department medical personnel. This review process shall be documented.</p> <p>4.5.3 All fire departments with ALS services shall have a named medical director with the responsibility to oversee and ensure quality medical care in accordance with state or provincial laws or regulations. This review process shall be documented.</p> <p>4.5.4 Fire departments providing ALS services shall provide a mechanism for immediate communications with EMS supervision and medical oversight.</p>	<p>EFR has a quality management program administered by the EMS Director.</p> <p>The Regional Medical Director reviews all EMS training and reports. Quality Assurance program in place and is documented per NM state standard.</p> <p>EFR does not currently provide ALS service, but has transport protocols in place with Hobbs Fire Department as needed.</p> <p>City is in the planning stage to develop future paid ALS (paramedic) capability.</p>

CODE REQUIREMENT	EUNICE FIRE & RESCUE POSITION
<p>4.6* Special Operations Response.</p> <p>4.6.1 Special operations shall be organized to ensure that the fire department's special operations capability includes sufficient personnel, equipment, and resources to efficiently, effectively, and safely deploy the initial arriving company and additional alarm assignments providing such services. The fire department shall be permitted to use established automatic mutual aid or mutual aid agreements to comply with the requirements of Section 4.6.</p> <p>4.6.1.1 The provisions of this chapter shall apply to fire departments that are involved in the delivery of special operations response.</p>	<p>EFR does not currently provide any direct special operations response.</p> <p>These are provided either through contact with area private agency (i.e., Waste Control, Callaway Safety, etc.) or others as needed. This can include rope rescue, heavy equipment, and hazardous material technicians which have been summoned for past incidents.</p>
<p>4.6.2 The fire department shall adopt a special operations response plan and standard operating procedures that specify the role and responsibilities of the fire department and the authorized functions of members responding to hazardous materials emergency incidents.</p> <p>4.6.3 All fire department members who are expected to respond to emergency incidents beyond the first responder operations level for hazardous materials response shall be trained to the applicable requirements of NFPA 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents.</p>	<p>EFR has some personnel who are HAZWOPER trained including awareness, operations, technician, and incident commander trained. They are not currently staffed or equipped for Entry/Interdiction activities.</p> <p>Currently, EFR will secure and cordon area and respond to immediate life threats as can be conducted safely. Hobbs Fire Department and/or private agencies would be called for intervention type (full entry team) response.</p>
<p>4.6.4 The fire department shall have the capacity to implement an RIC during all special operations incidents that would subject fire fighters to immediate danger of injury, or in the event of equipment failure or other sudden events, as required by NFPA 1500, Standard on Fire Department Occupational Safety and Health Program.</p>	<p>N/A – RIC team would be provided by Hobbs or other response agency.</p>
<p>4.6.5* If a higher level of emergency response is needed beyond the capability of the fire department for special operations, the fire department shall determine the availability of outside recourses that deploy these capabilities and the procedures for initiating their response. The fire department shall be limited to performing only those specific special operations functions for which its personnel have been trained and are properly equipped.</p>	<p>See 4.6.3 for HAZMAT discussion.</p> <p>Hobbs Fire Dept provides ALS ambulance support.</p> <p>For critical care trauma, Life Flight can be summoned (Lubbock, TX). Plans are underway to establish a Life Flight capability in Hobbs as well as in Odessa. Nearest Level I trauma center is Lubbock. Hobbs and Andrews, TX are both Level III facilities.</p>
<p>5.1* Safety and Health System.</p> <p>A fire fighter occupational safety and health program shall be provided in accordance with NFPA 1500, Standard on Fire Department Occupational Safety and Health Program, to form the basic structure of</p>	<p>All personnel are required to have an initial physical examination. No other continuing exam or physical fitness program.</p> <p>It is recognized that annual physicals</p>

CODE REQUIREMENT	EUNICE FIRE & RESCUE POSITION
<p>protecting the health and safety of fire fighters, regardless of the scale of the department or the emergency.</p>	<p>will likely be required, but are not currently budgeted. No quantitative fit testing.</p> <p>Bunker Gear is informal inventoried and inspected approximately twice per year and after calls if damage suspected.</p> <p>Bunker gear is replaced on a budgetary cycle (typically 5 yrs). Gear and/or equipment are replaced sooner when damaged or contaminated.</p> <p>BBP program/training is provided.</p> <p>Other NFPA 1500 functions are applied on an ad-hoc, limited basis depending on available resources/funding.</p> <p>Critical Stress Incident Manager is available through Hobbs Fire Dept on an as-needed basis.</p>
<p>5.2* Incident Management System.</p> <p>5.2.1 An incident management system shall be provided in accordance with NFPA 1561, Standard on Emergency Services Incident Management System, to form the basic structure of all emergency operations of the fire department, regardless of the scale of the department or the emergency.</p> <p>5.2.2* An effective incident management system shall be designed to manage incidents of different types, including structure fires, wildland fires, hazardous materials incidents, emergency medical operations, and other types of emergencies that could be handled by the department.</p>	<p>SOPs are under development. ICS is in place and utilized for emergency incidents currently.</p>
<p>5.3 Training Systems.</p> <p>The fire department shall have a training program and policy that ensures that personnel are trained and competency is maintained to effectively, efficiently, and safely execute all responsibilities consistent with the department's organization and deployment as addressed in Chapter 4.</p>	<p>EFR has a task book that comports to NM FFI level qualification. Annual school in Sagurro is attended on a rotational schedule (non-mandatory). EFR FFs are currently NM state FF level 1 or 2 qualified.</p> <p>Structural fire entry is not allowed until FFI is complete (or equivalent through Intro to FF course taken – in-house or through attendance at Sagurro or area FD training) and based on officer judgment.</p> <p>EFR performs live burn training within the confines of environmental</p>

CODE REQUIREMENT	EUNICE FIRE & RESCUE POSITION
	regulation and availability of structures when possible.
<p>5.4* Communications Systems.</p> <p>5.4.1 The fire department shall have a reliable communications system to facilitate prompt delivery of public fire suppression, emergency medical services, and special operations.</p> <p>5.4.2 All communications facilities, equipment, staffing, and operating procedures shall comply with NFPA 1221, Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems.</p> <p>5.4.3 Operating procedures for radio communications shall provide for the use of standard protocols and terminology at all types of incidents.</p> <p>5.4.3.1 Standard terminology, in compliance with NFPA 1561, Standard on Emergency Services Incident Management System, shall be established to transmit information, including strategic modes of operation, situation reports, and emergency notifications of imminent hazards.</p>	<p>Two-tier system. Radio and cell phone. All units can contact EMSCOM (Emergency Medical Systems Communication) through radio repeaters for ambulance. Multiple repeaters are available throughout the District. No current issues with coverage (save 800 MHz issue).</p>
<p>5.5* Pre-Incident Planning.</p> <p>The fire department shall set forth operational requirements to conduct pre-incident planning. Particular attention shall be provided to target hazards.</p>	<p>Pre-incident plans will be developed for all incident types expected at the NEF. This will be done with conjunction with the response agencies.</p>

EUNICE FIRE AND RESCUE SUPPLEMENTAL QUESTIONS

SUPPLEMENTAL QUESTION	EUNICE FIRE & RESCUE POSITION
1. Do you have radiation monitoring equipment? If yes, state type and quantity of each.	None that is calibrated or maintained (old CD equipment).
2. Have you had an ISO FSRS evaluation? If yes, when was the last evaluation done and what is the rating level?	Current rating is Class V. Last evaluation in 1990.
3. Do your officers receive supplemental training (e.g., Nat'l Fire Academy, state training, Department Initiative)? If yes, please list types of classes and if mandatory or voluntary.	Fire Officer Training seminar in Albuquerque (voluntary). In-house training provided on topical areas. NM Fire Officer Level 1 and 2 through state. 2 individuals have Training Officer qualification.
4. Do you have confined space rescue equipment (e.g., harnesses, retrieval tripod, etc.)? If yes, state type and quantity of each.	None
5. Do you have confined space monitoring/control equipment (e.g., gas analyzers, blowers/fans, EP lighting, etc.)? If yes, state type and quantity of each.	Three (3) – four Gas Monitors, numerous H2S monitors. No specific confined space blowers or lighting.
6. What is your respiratory support capacity (e.g., cascade trailer, other)?	Cascade station in house, and mobile trailer (towed) with six - 4500 psi cylinders. Mutual aid companies through call back can provide additional air.
7. Do you have protocols for transporting radioactively contaminated victims?	None
8. In responding to NEF, do you have concerns about personnel resources? If yes, what are they?	Would like to develop entry level Haz Mat (HAZWOPER) team with appropriate equipment.
9. In responding to NEF, do you have concerns about equipment resources? If yes, what are they?	Interest in ladder or quint unit if NEF response will necessitate. City currently looking at need for ladder.
10. In responding to NEF, do you have concerns about training resources? If yes, what are they?	No
11. Do you have other concerns regarding emergencies/emergency response at NEF?	No

F. NFPA 1710, HOBBS FIRE DEPARTMENT

The list below is a series of questions drawn from NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*, 2001 Edition. It is important to note, this document, and these questions, are not intended as any form of evaluation of the Hobbs Fire Department. They only serve as a platform for understanding the available mutual aid resources in the event of an emergency at the National Enrichment Facility based on a national consensus standard.

CODE REQUIREMENT	HOBBS FD POSITION
<p>4.1 Fire Department Organizational Statement.</p> <p>4.1.1* The authority having jurisdiction shall maintain a written statement or policy that establishes the following:</p> <ul style="list-style-type: none"> (1) Existence of the fire department (2) Services that the fire department is required to provide (3) Basic organizational structure (4) Expected number of fire department members (5) Functions that fire department members are expected to perform <p>4.1.2* The fire department organizational statement shall include service delivery objectives.</p> <p>4.1.2.1 These objectives shall include specific response time objectives for each major service component (i.e., fire suppression, EMS, special operations, aircraft rescue and fire fighting, marine rescue and fire fighting, and/or wildland fire fighting) and objectives for the percentage of responses that meet the response time objectives.</p>	<p>There is a city ordinance in place which specifies the organizational existence of the Fire Department. EMS is covered under a separate ordinance. There are no explicit resource or performance provisions in either of these ordinances.</p> <p>The Hobbs Fire Department is currently seeking accreditation through the Commission on Fire Service Accreditation</p>
<p>4.1.2.1.1 The fire department shall establish the following time objectives:</p> <ul style="list-style-type: none"> (1) One minute (60 seconds) for turnout time (2)* Four minutes (240 seconds) or less for the arrival of the first arriving engine company at a fire suppression incident and/or 8 minutes (480 seconds) or less for the deployment of a full first alarm assignment at a fire suppression incident (3) Four minutes (240 seconds) or less for the arrival of a unit with first responder or higher level capability at an emergency medical incident (4) Eight minutes (480 seconds) or less for the arrival of an advanced life support unit at an emergency medical incident, where this service is provided by the fire department 	<p>Not Applicable. This is not an analysis of HFD performance characteristics within their response area.</p> <p>HFD will be a mutual aid response as requested by Eunice Fire & Rescue or other Incident Commander as appropriate.</p> <p>Response times to the NEF are characterized in the text of this analysis.</p>
<p>4.1.2.1.2 The fire department shall establish a performance objective of not less than 90 percent for the achievement of each response time objective specified in 4.1.2.1.1.</p>	<p>Not Applicable. This is not an analysis of HFD performance characteristics within their response area.</p>
<p>4.1.2.1.3 The fire department shall evaluate its level of</p>	<p>Not Applicable. This is not an analysis</p>

CODE REQUIREMENT	HOBBS FD POSITION
service and deployment delivery and response time objectives on an annual basis. The evaluations shall be based on data relating to level of service, deployment, and the achievement of each response time objective in each geographic area within the jurisdiction of the fire department.	of HFD performance characteristics within their response area.
4.1.2.1.4 The fire department shall provide the authority having jurisdiction with a written report, quadrennially, which shall be based on the annual evaluations required by 4.1.2.1.3.	Not Applicable. This is not an analysis of HFD performance characteristics within their response area.
4.1.2.1.4.1 The quadrennial report shall define the geographic areas and/or circumstances in which the requirements of this standard are not being met.	Not Applicable. This is not an analysis of HFD performance characteristics within their response area.
4.1.2.1.4.2 This report shall explain the predictable consequences of these deficiencies and address the steps that are necessary to achieve compliance.	Not Applicable. This is not an analysis of HFD performance characteristics within their response area.
4.2 Fire Suppression Services. The fire department organizational statement shall set forth the criteria for the various types of fire suppression incidents to which the fire department is required to respond.	HFD has Standard Operational Guidelines in place for four different types of responses: Fire, EMS, Haz Mat, and ARFF.
4.3 Emergency Medical Services. 4.3.1 The fire department organizational statement shall set forth the criteria for the various types of emergency medical incidents to which the fire department is required and/or expected to respond. 4.3.2 The fire department organizational statement shall ensure that the fire department's emergency medical response capability includes personnel, equipment, and resources to deploy at the first responder level with automatic external defibrillator (AED) or higher treatment level. 4.3.2.1 Where emergency medical services beyond the first responder with automatic defibrillator level are provided by another agency or private organization, the authority having jurisdiction, based upon recommendations from the fire department, shall include the minimum staffing, deployment and response criteria as required in Section 5.3 in the following: (1) The fire department organizational statement (2) Any contract, service agreement, governmental agreement, or memorandum of understanding between the authority having jurisdiction and the other agency or private organization	<p>EMS Operating Guidelines are in place.</p> <p>New Mexico maintains three levels of Emergency Medical Technician training and care. Basic – Basic life support and care including defibrillator and respiratory/circulatory support. Intermediate – all basic functions plus administration of intravenous fluids and limited cardiac drug administration Advanced (Paramedic) – basic and intermediate plus additional cardiac drug administration and respiratory support (intubation).</p> <p>HFD can provide Advanced Level Care and Transport.</p> <p>All HFD members can respond on EMS. All members are required to be minimum EMT-Basic. Of the current roster, roughly 15 are EMT-Basic, 30 are EMT- Intermediate, and 25 are EMT-Paramedic.</p> <p>6 ALS units on-line, 1 reserve. One of these is a multi-patient unit.</p>

CODE REQUIREMENT	HOBBS FD POSITION
4.4 Special Operations. 4.4.1 The fire department organizational statement shall set forth the criteria for the various types of special operations response and mitigation activities to which the fire department is required and/or expected to respond.	Special Operations response is part of Operating Guidelines.
4.4.2* The fire department organizational statement shall ensure that the fire department's hazardous materials response capability includes personnel, equipment, and resources to deploy at the first responder operational level as required by 29 CFR 1910.120.	All HFD members maintain a minimum Operational Level training under HAZWOPER. They commit a full technician level entry teams (4 technicians) to any Haz Mat response. On an all call response, they can provide one additional team.
4.4.3 The fire department organizational statement shall ensure that the fire department's confined space response capability includes personnel, equipment, and resources to deploy at the confined space operational level as required by 29 CFR 1910.146.	HFD has an SOG for Confined Space response. It does not detail the provisions of assigned personnel and resources contained in 1910.146. Nevertheless, HFD appears to have the necessary equipment and training to deploy for most Confined Space incidents as a rescue service. NOTE: 1910.146 does not use the term "operational level"
4.4.4 The fire department organizational statement shall set forth the criteria for the various types of fire department response during natural disasters or terrorism incidents, weapons of mass destruction incidents, or large scale or mass casualty events.	Some of these criteria are included in the HFD SOGs
4.5 Airport Rescue and Fire-Fighting Services. The fire department organizational statement shall set forth the criteria for the various types of airport rescue and fire-fighting incidents to which the fire department is required and/or expected to respond.	HFD does have an ARFF capability, however, it is not applicable for NEF related response.
4.6 Marine Rescue and Fire-Fighting Services. The fire department organizational statement shall set forth the criteria for the various types of marine rescue and fire-fighting incidents to which the fire department is required and/or expected to respond.	There is a water rescue SOG for rope rescue during Flash Flooding incidents. Hobbs does have wet and dry suits and PFDs for swift water rescue. This is not expected to apply to NEF related response.
4.7 Wildland Fire Suppression Services. The fire department organizational statement shall set forth the criteria for the various types of wildland fire suppression incidents to which the fire department is required and/or expected to respond.	All HFD personnel are Red Card certified and they implement the Lea County Wildland Fire Management Plan which includes Safety, Training, SOPs, resource management, and follow-up.
4.8 Intercommunity Organization. 4.8.1* Mutual aid, automatic aid, and fire protection agreements shall be in writing and shall address such issues as liability for injuries and deaths, disability retirements, cost of service, authorization to respond, staffing, and equipment, including the resources to be made available and the designation of the incident commander.	The LEA County Mutual Aid agreement is written. It addresses most aspects of cost/liability. It addresses authorization to respond, staffing and designation of incident commander. It does not explicitly exclude/include equipment and resource limitations.

CODE REQUIREMENT	HOBBS FD POSITION
<p>4.8.2 Procedures and training of personnel for all fire departments in mutual aid, automatic aid, and fire protection agreement plans shall be comprehensive to produce an effective fire force and to ensure uniform operations.</p> <p>4.8.3 Companies responding to mutual aid incidents shall be equipped with communications equipment that allow personnel to communicate with incident commander and division supervisors, group supervisors, or sector officers.</p>	<p>Training on the mutual aid agreement is conducted on an ad-hoc basis periodically and may be initiated by any Lea County department. There is no formal drill/training schedule.</p>
<p>5.1 Purpose.</p> <p>5.1.1 The services provided by the fire department shall include those activities as required by Chapter 4.</p> <p>5.1.2 The procedures involved in these services, including operations and deployment, shall be established through written administrative regulations, standard operating procedures, and departmental orders.</p>	<p>HFD has the appropriate administrative regulations to facilitate development of SOGs and other procedures/regulations.</p>
<p>5.2* Fire Suppression Services.</p> <p>Fire suppression operations shall be organized to ensure that the fire department's fire suppression capability includes personnel, equipment, and resources to deploy the initial arriving company, the full initial alarm assignment, and additional alarm assignments. The fire department shall be permitted to use established automatic mutual aid and mutual aid agreements to comply with the requirements of Section 5.2.</p> <p>5.2.1 Staffing.</p> <p>5.2.1.1* On-duty fire suppression personnel shall be comprised of the numbers necessary for fire-fighting performance relative to the expected fire-fighting conditions. These numbers shall be determined through task analyses that take the following factors into consideration:</p> <ul style="list-style-type: none"> (1) Life hazard to the populace protected (2) Provisions of safe and effective fire-fighting performance conditions for the fire fighters (3) Potential property loss (4) Nature, configuration, hazards, and internal protection of the properties involved (5) Types of fireground tactics and evolutions employed as standard procedure, type of apparatus used, and results expected to be obtained at the fire scene 	<p>Hobbs can muster for these assignments as needed within the community.</p> <p>Currently, the organizational structure is as follows: Fire Chief and 3 Division Commanders (administrative hours and call back as needed) 3 Battalion Chiefs (1 per shift), 3 North Dist Chiefs (1 per shift), 6 Lieutenants (2 per shift), 5 Driver/Operators per shift, 6 Paramedics per shift, and 5 Firefighters per shift.</p> <p>Initial fire response to NEF is expected to be 1 engine (4 person), truck co. (4 person), and Operations Commander, and an ambulance if warranted.</p> <p>Initial EMS response to NEF is expected to be 1 ambulance with min. EMT-P and EMT-I for patient care, EMT-B driving.</p> <p>Specific task analysis for the city of Hobbs is unnecessary for scope of this analysis.</p>
<p>5.2.1.2* On-duty personnel assigned to fire suppression shall be organized into company units and shall have appropriate apparatus and equipment assigned to such companies.</p> <p>5.2.1.2.1* The fire department shall identify minimum company staffing levels as necessary to meet the</p>	<p>Personnel are organized into Battalion, District, Stations and individual company assignments</p> <p>Hobbs will respond with a minimum of 4 personnel on an engine, 3 EMTs on</p>

CODE REQUIREMENT	HOBBS FD POSITION
<p>deployment criteria required in 5.2.3 to ensure that a sufficient number of members are assigned, on duty, and available to safely and effectively respond with each company.</p> <p>5.2.1.2.2 Each company shall be led by an officer who shall be considered a part of the company.</p>	<p>EMS calls with an engine company supporting more advanced calls and/or multi-injury events.</p> <p>Lieutenants are the individual company officers.</p>
<p>5.2.1.2.3* Supervisory chief officers shall be dispatched or notified to respond to all full alarm assignments.</p> <p>5.2.1.2.4 The supervisory chief officer shall ensure that the incident management system is established as required in Section 6.2.</p> <p>5.2.1.2.5* Supervisory chief officers shall have staff aides deployed to them for purposes of incident management and accountability at emergency incidents.</p>	<p>A District Chief and/or a Battalion Chief responds to all calls beyond basic EMS runs.</p> <p>The Hobbs Fire Department uses the ICS system.</p> <p>Additional officers are available with station chiefs and/or Lieutenants able to support the branch and aid positions within an ICS structure.</p> <p>Personnel accountability is handled by company officers unless assigned as a sector command function (as mobilized under ICS) for larger incidents.</p>
<p>5.2.2 Operating Units. Fire company staffing requirements shall be based on minimum levels for emergency operations for safety, effectiveness, and efficiency.</p> <p>5.2.2.1 Fire companies whose primary functions are to pump and deliver water and perform basic fire fighting at fires, including search and rescue, shall be known as engine companies.</p> <p>5.2.2.1.1 These companies shall be staffed with a minimum of four on-duty personnel.</p> <p>5.2.2.1.2 In jurisdictions with tactical hazards, high hazard occupancies, high incident frequencies, geographical restrictions, or other pertinent factors as identified by the authority having jurisdiction, these companies shall be staffed with a minimum of five or six on-duty members.</p>	<p>Engine companies are staffed with a minimum of four personnel.</p> <p>Supplemental staffing is available for advanced and/or high hazard incidents through backup response and/or call back "general" alarm alert throughout the Fire Department.</p>
<p>5.2.2.2 Fire companies whose primary functions are to perform the variety of services associated with truck work, such as forcible entry, ventilation, search and rescue, aerial operations for water delivery and rescue, utility control, illumination, overhaul, and salvage work, shall be known as ladder or truck companies.</p> <p>5.2.2.2.1 These companies shall be staffed with a minimum of four on-duty personnel.</p> <p>5.2.2.2.2 In jurisdictions with tactical hazards, high hazard occupancies, high incident frequencies, geographical restrictions, or other pertinent factors as identified by the authority having jurisdiction, these companies shall be staffed with a minimum of five or six on-duty personnel.</p>	<p>Truck companies are staffed with a minimum of four personnel.</p> <p>Additional staffing is available through backup response and/or call back "general" alarm alert throughout the Fire Department.</p>

CODE REQUIREMENT	HOBBS FD POSITION
<p>5.2.2.3 Other types of companies equipped with specialized apparatus and equipment shall be provided to assist engine and ladder companies where deemed necessary as part of established practice.</p> <p>5.2.2.3.1 These companies shall be staffed with a minimum number of on-duty personnel as required by the tactical hazards, high hazard occupancies, high incident frequencies, geographical restrictions, or other pertinent factors as identified by the authority having jurisdiction.</p> <p>5.2.2.4 Fire companies that deploy with quint apparatus, designed to operate as either an engine company or a ladder company, shall be staffed as specified in 5.2.2. If the company is expected to perform multiple roles simultaneously, additional staffing, above the levels specified in 5.2.2, shall be provided to ensure that those operations can be performed safely, effectively, and efficiently.</p>	<p>Hobbs currently staffs the following Technical Rescue Teams:</p> <ul style="list-style-type: none"> • 1 HAZWOPER compliant hazardous materials response teams (on shift) plus necessary IC, Safety Officer, EMS and Decon teams. • 1 High Angle Rescue Team (on shift) • 1 Confined Space Entry Team (on shift) • 0 Structural Collapse Team (there is a USAR team under development within Hobbs) • 0 Water Rescue Team – HFD does have personnel trained in Swift Water Rescue with wet and dry suits and PFDs and an operating guideline for this work.
<p>5.2.3 Deployment.</p> <p>5.2.3.1 Initial Arriving Company.</p> <p>5.2.3.1.1 The fire department's fire suppression resources shall be deployed to provide for the arrival of an engine company within a 4-minute response time and/or the initial full alarm assignment within an 8-minute response time to 90 percent of the incidents as established in Chapter 4.</p> <p>5.2.3.1.2* Personnel assigned to the initial arriving company shall have the capability to implement an initial rapid intervention crew (IRIC).</p>	<p>Not Applicable. This is not an analysis of HFD performance characteristics within their response area.</p> <p>HFD could provide an IRIC if required for NEF.</p>
<p>5.2.3.2 Initial Full Alarm Assignment Capability.</p> <p>5.2.3.2.1* The fire department shall have the capability to deploy an initial full alarm assignment within an 8-minute response time to 90 percent of the incidents as established in Chapter 4.</p> <p>5.2.3.2.2 The initial full alarm assignment shall provide for the following:</p> <p>(1) Establishment of incident command outside of the hazard area for the overall coordination and direction of the initial full alarm assignment. A minimum of one individual shall be dedicated to this task.</p> <p>(2) Establishment of an uninterrupted water supply of a minimum 1480 L/min (400 gpm) for 30 minutes. Supply line(s) shall be maintained by an operator who shall ensure uninterrupted water flow application.</p> <p>(3) Establishment of an effective water flow application rate of 1110 L/min (300 gpm) from two handlines, each of which shall have a minimum of 370 L/min (100 gpm). Attack and backup lines shall be operated by a minimum of two personnel each to effectively and safely maintain the line.</p>	<p>With respect to anticipated response times for this mutual aid assignment, these are characterized in the body of the Baseline Needs Assessment report.</p> <p>The NEF water supply capacity will be adequate to support minimum initial attack flows as specified herein.</p> <p>For an "all call" or general alarm request, HFD can support staffing of water supply personnel, search and rescue, ventilation, aerial operations, and IRIC as needed.</p>

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<p>(4) Provision of one support person for each attack and backup line deployed to provide hydrant hookup and to assist in line lays, utility control, and forcible entry.</p> <p>(5) A minimum of one victim search and rescue team shall be part of the initial full alarm assignment. Each search and rescue team shall consist of a minimum of two personnel.</p> <p>(6) A minimum of one ventilation team shall be part of the initial full alarm assignment. Each ventilation team shall consist of a minimum of two personnel.</p> <p>(7) If an aerial device is used in operations, one person shall function as an aerial operator who shall maintain primary control of the aerial device at all times.</p> <p>(8) Establishment of an IRIC that shall consist of a minimum of two properly equipped and trained personnel.</p>	
<p>5.2.3.3 Additional Alarm Assignments.</p> <p>5.2.3.3.1 The fire department shall have the capability for additional alarm assignments that can provide for additional personnel and additional services, including the application of water to the fire; engagement in search and rescue, forcible entry, ventilation, and preservation of property; accountability for personnel; and provision of support activities for those situations that are beyond the capability of the initial full alarm assignment.</p> <p>5.2.3.3.2 When an incident escalates beyond an initial full alarm assignment or when significant risk is present to fire fighters due to the magnitude of the incident, the incident commander shall upgrade the IRIC to a full rapid intervention crew(s) (RIC) that consists of four fully equipped and trained fire fighters.</p> <p>5.2.3.3.3 An incident safety officer shall be deployed to all incidents that escalate beyond an initial full alarm assignment or when significant risk is present to fire fighters. The incident safety officer shall ensure that the safety and health system is established as required in Section 6.1.</p>	<p>An all call response to the NEF will consist of a minimum of the following:</p> <p>INITIAL</p> <ul style="list-style-type: none"> 1 engine company (4 personnel) 1 truck company (4 personnel) 1 ALS ambulance (3 personnel) 3 command officers (BC plus 2 day staff). <p>ALL CALL</p> <ul style="list-style-type: none"> 1 additional engine company (4 personnel) up to 2 additional ALS ambulances (6 personnel) Mobile command unit (2 personnel, one of whom is command level). <p>HAZMAT (separate from Fire/ALS)</p> <ul style="list-style-type: none"> 1 entry team and 1 backup teams (4 personnel) 4 additional personnel for EMS/Decon/Rehab up to 3 additional command officers (depending on need).
<p>5.3* Emergency Medical Services.</p> <p>5.3.1 Purpose. EMS operations shall be organized to ensure that the fire department's emergency medical capability includes personnel, equipment, and resources to deploy the initial arriving company and additional alarm assignments. The fire department shall be permitted to use established automatic mutual aid or mutual aid agreements to comply with the requirements of Section 5.3.</p> <p>5.3.1.1 The purpose of this section shall be to provide standards for the delivery of EMS by fire departments.</p>	<p>The HFD has 6 ALS ambulances available. Each shift staffs 3 ambulances with 1 paramedic, 1 intermediate, 1 basic level EMT minimum. Additionally, all firefighters (5 Driver/Engineers and 5 Firefighters per shift) are qualified to minimum EMT Basic level.</p>

CODE REQUIREMENT	HOBBS FD POSITION
5.3.1.2 The fire department shall clearly document its role, responsibilities, functions, and objectives for the delivery of EMS.	
5.3.2* System Components. 5.3.2.1 The basic treatment levels within an EMS system, for the purposes of this standard, shall be categorized as first responder, basic life support (BLS), and advanced life support (ALS). The specific patient treatment capabilities associated with each level shall be determined by the authority having jurisdiction for the approval and licensing of EMS providers within each state and province. 5.3.2.2 The minimal level of training for all fire fighters that respond to emergency incidents shall be to the first responder/AED level. The authority having jurisdiction shall determine if further training is required.	See 5.3.1 above.
5.3.3 EMS System Functions. 5.3.3.1 The five basic functions within a career fire department EMS system shall be as follows: (1) Initial response to provide medical treatment at the location of the emergency (first responder with AED capability or higher) (2) BLS response (3) ALS response (4) Patient transport in an ambulance or alternative vehicle designed to provide for uninterrupted patient care at the ALS or BLS level while en route to a medical facility (5) Assurance of response and medical care through a quality management program 5.3.3.2 The fire department shall be involved in providing any or all of the functions as identified in 5.3.3.1(1) through 5.3.3.1(5).	HFD provides ALS treatment and transport capability. The HFD EMS program is overseen by the FD EMS Director. Quality Assurance is provided through a contract arrangement with an MD who serves as the Fire Department's Medical Director.
5.3.3.3 Staffing. 5.3.3.3.1 On-duty EMS units shall be staffed with the minimum numbers of personnel necessary for emergency medical care relative to the level of EMS provided by the fire department. 5.3.3.3.2 EMS staffing requirements shall be based on the minimum levels needed to provide patient care and member safety. 5.3.3.3.2.1 Units that provide emergency medical care shall be staffed at a minimum with personnel that are trained to the first responder/AED level. 5.3.3.3.2.2 Units that provide BLS transport shall be staffed and trained at the level prescribed by the state or provincial agency responsible for providing emergency medical services licensing. 5.3.3.3.2.3 Units that provide ALS transport shall be staffed and trained at the level prescribed by the state or provincial agency responsible for providing emergency medical services licensing.	ALS ambulances are staffed as minimally required by the New Mexico state EMS standards. HFD provides 3 individuals on each ambulance
5.3.3.4 Service Delivery Deployment.	Not Applicable.

CODE REQUIREMENT	HOBBS FD POSITION
<p>5.3.3.4.1 The fire department shall adopt service delivery objectives based on time standards for the deployment of each service component for which it is responsible.</p> <p>5.3.3.4.2 The fire department's EMS for providing first responder with AED shall be deployed to provide for the arrival of a first responder with AED company within a 4-minute response time to 90 percent of the incidents as established in Chapter 4.</p> <p>5.3.3.4.3* When provided, the fire department's EMS for providing ALS shall be deployed to provide for the arrival of an ALS company within an 8-minute response time to 90 percent of the incidents as established in Chapter 4.</p> <p>5.3.3.4.4 Personnel deployed to ALS emergency responses shall include a minimum of two members trained at the emergency medical technician – paramedic level and two members trained at the emergency medical technician – basic level arriving on scene within the established response time.</p>	<p>HFD will be a mutual aid response as requested by Eunice Fire & Rescue or other Incident Commander as appropriate.</p> <p>Response times to NEF are characterized in the body of this report.</p> <p>ALS level emergencies are staffed by 3 EMTs, 1 P, 1 I, and 1 B. They can also be supported by an engine company (4 EMTs of various levels), but this would not be an automatic response.</p>
<p>5.3.4 Quality Management.</p> <p>5.3.4.1 The fire department shall institute a quality management program to ensure that the service has appropriate response times as required in 4.1.2.1.1 for all medical responses.</p> <p>5.3.4.2 All first responder and BLS medical care provided by the fire department shall be reviewed by the fire department medical personnel. This review process shall be documented.</p> <p>5.3.4.3 All fire departments with ALS services shall have a named medical director with the responsibility to oversee and ensure quality medical care in accordance with state or provincial laws or regulations. This review process shall be documented.</p> <p>5.3.4.4 Fire departments providing ALS services shall provide a mechanism for immediate communications with EMS supervision and medical oversight.</p>	<p>Response times within the HFD district are outside the scope of this report.</p> <p>The HFD EMS program is overseen by the FD EMS Director. Quality Assurance is provided through a contract arrangement with an MD who serves as the Fire Department's Medical Director.</p> <p>Direct radio communication (redundant) are available to the Hobbs Hospital</p>
<p>5.4 Special Operations Response.</p> <p>5.4.1 Special operations shall be organized to ensure that the fire department's special operations capability includes personnel, equipment, and resources to deploy the initial arriving company and additional alarm assignments providing such services. The fire department shall be permitted to use established automatic mutual aid or mutual aid agreements to comply with the requirements of Section 5.4.</p>	<p>See 5.2.2.3 above</p>
<p>5.4.3 All fire department members who are expected to respond to emergency incidents beyond the first responder operations level for hazardous materials response shall be trained to the applicable requirements of NFPA 472, Standard for Professional Competence of Responders to Hazardous Materials</p>	<p>Hobbs currently staffs the following with respect to Hazardous Materials:</p> <ul style="list-style-type: none"> • 1 HAZWOPER compliant hazardous materials response teams for full entry (on shift) plus

CODE REQUIREMENT	HOBBS FD POSITION
Incidents.	necessary IC, Safety Officer, EMS and Decon teams. All HFD personnel are trained to HAZWOPER Operational level as a minimum.
5.4.4 All fire department members who are expected to respond to emergency incidents beyond the confined space operations level for confined space operations shall be trained to the applicable requirements of NFPA 1670, Standard on Operations and Training for Technical Rescue Incidents.	HFD provides training on various aspects of confined space rescue, it does not necessarily include all aspects of NFPA 1670.
5.4.5 The fire department shall have the capacity to implement an RIC during all special operations incidents that would subject fire fighters to immediate danger of injury, or in the event of equipment failure or other sudden events, as required by NFPA 1500, Standard on Fire Department Occupational Safety and Health Program.	HFD can implement an RIC as needed for special operations incidents
5.4.6 If a higher level of emergency response is needed beyond the capability of the fire department for special operations, the fire department shall determine the availability of outside resources that deploy these capabilities and the procedures for initiating their response. The fire department shall be limited to performing only those specific special operations functions for which its personnel have been trained and are properly equipped.	HFD can mount special operations response as needed for most conditions in their jurisdiction and would summon additional assistance through mutual aid and/or state/federal resources if required.
5.5 Airport Rescue and Fire-Fighting Services.	Not Applicable for NEF related response
5.6* Marine Rescue and Fire-Fighting (MRFF) Services.	Not Applicable for NEF related response
5.7 Wildland Fire Suppression Services. 5.7.2.1 All wildland fire suppression operations shall be organized to ensure compliance with NFPA 295, Standard for Wildfire Control. 5.7.3 Fire departments performing wildland operations shall have access to special tools, equipment, supplies, PPE, and other wildland resources that are required to perform operations safely and effectively in their assigned roles and responsibilities.	This is not expected to be generally applicable on NEF. The need for wildland firefighting would be in property surrounding NEF, not on the site itself. HFD members are NM "Red" Card certified for wildland firefighting. Wildland firefighting capability is not further analyzed in this analysis.
5.7.4 Staffing. 5.7.4.1 On-duty wildland fire-fighting personnel shall be comprised of the numbers necessary for safe and effective fire-fighting performance relative to the expected wildland fire-fighting conditions. 5.7.4.1.1 These numbers shall be determined through task analyses that take the following factors into consideration: (1) Life hazard to the populace protected (2) Provisions of safe and effective fire-fighting	See 5.7 above

CODE REQUIREMENT	HOBBS FD POSITION
<p>performance conditions for the fire fighters</p> <p>(3) The number of trained response personnel available to the department including mutual aid resources</p> <p>(4) Potential property loss</p> <p>(5) Nature, configuration, hazards, and internal protection of the properties involved</p> <p>(6) Types of wildland tactics and evolutions employed as standard procedure, type of apparatus used, and results expected to be obtained at the fire scene</p> <p>(7) Topography, vegetation, and terrain in the response area(s)</p> <p>5.7.4.2 On-duty personnel assigned to wildland operations shall be organized into company units and shall have appropriate apparatus and equipment assigned to such companies.</p>	
<p>5.7.4.2.1 The fire department shall identify minimum company staffing levels as necessary to meet the deployment criteria to ensure that a sufficient number of members are assigned, on duty, and available to safely and effectively respond with each company.</p> <p>5.7.4.2.2 Each company shall be led by an officer who shall be considered a part of the company.</p> <p>5.7.4.2.3 Supervisory chief officers shall be dispatched or notified to respond to all full alarm assignments. The supervisory chief officer shall ensure that the incident management system is established as required in Section 6.2.</p>	See 5.7 above
<p>5.7.5 Operating Units.</p> <p>5.7.5.1 Fire companies whose primary function is to deliver and pump water and extinguishing agents at the scene of a wildland fire shall be known as wildland companies.</p> <p>5.7.5.1.1 These companies shall be staffed with a minimum of four on-duty personnel.</p> <p>5.7.5.2 Engine and ladder (truck) companies that respond to wildland fire-fighting and/or urban interface wildland fire-fighting incidents shall be staffed as required by 5.2.2.</p> <p>5.7.5.3 Other types of companies equipped with specialized apparatus and equipment for wildland fire fighting, including aircraft, heavy equipment, mini pumpers, and fast attack vehicles, shall be provided to assist wildland engine and ladder companies where deemed necessary as part of established practice.</p> <p>5.7.5.3.1 These companies shall be staffed with a minimum number of on-duty personnel as required by the tactical, topographical, environmental, fuel (vegetation), and occupancy hazards.</p>	See 5.7 above
<p>5.7.6 Deployment.</p> <p>5.7.6.1 Required Number of Vehicles. The fire department's wildland resources shall deploy the required number of vehicles as required for a direct and/or an indirect attack.</p>	See 5.7 above

CODE REQUIREMENT	HOBBS FD POSITION
5.7.6.1.1* Prior to the initiation of any wildland fire attack, the fire department shall have the capacity to establish a lookout(s), communications with all crew members, escape route(s), and safety zone(s) for vehicles and personnel.	
5.7.6.2 Direct Attack. 5.7.6.2.1 The fire department shall have the capability to safely initiate a direct wildland attack within 10 minutes after arrival of the initial company or crew at the fire scene. 5.7.6.2.2 One individual in the first arriving company or crew shall be assigned as the incident commander for the overall coordination and direction of the direct attack activities. 5.7.6.2.3 The direct wildland attack shall include the following: (1) Establishment of an effective water flow application rate of 111 L/min (30 gpm) from at least two 150 m (500 ft) 1½ in. diameter attack handlines from two engines. Each attack handline shall be operated by a minimum of two personnel to effectively and safely deploy and maintain the line. (2) Provision of one operator who shall remain with each fire apparatus supplying water flow to ensure uninterrupted water flow application. (3) Provision of a wildland crew leader or company officer with each crew who shall be responsible for overall supervision of each of the crew and for maintaining personnel accountability and crew safety.	See 5.7 above
5.7.6.3 Indirect Attack. 5.7.6.3.1 The fire department providing wildland fire suppression operations shall have the capability to deploy an indirect attack, including application of water to the fire, engagement in search and rescue and preservation of property, accountability for personnel, and provision of support activities for those situations that are beyond the capability of the direct attack. 5.7.6.3.2 An incident safety officer shall be deployed to all incidents that escalate beyond a direct attack alarm assignment or when there is a significant risk to fire fighters.	See 5.7 above
5.7.7 Nonwildland Emergencies. 5.7.7.1 Wildland companies that deploy to structural incidents shall meet the response time requirements of 4.1.2.1.1. 5.7.7.2 Wildland companies that deploy to emergency medical incidents shall meet the response time requirements of 4.1.2.1.1.	See 5.7 above
6.1 Safety and Health System. A fire-fighter occupational safety and health program shall be provided in accordance with NFPA 1500, Standard on Fire Department Occupational Safety and Health Program.	HFD general conforms to provisions of NFPA 1500, a detailed evaluation is beyond the scope/needs of this assessment

CODE REQUIREMENT	HOBBS FD POSITION
	<p>For medical, there is an initial physical and an annual Physical Assessment. A full medical evaluation is conducted every other year (blood work, EKG, X-Ray).</p> <p>HFD has had a physical fitness program in place since 1984. Current program meets or exceeds IAFF Physical performance requirements. All members are tested 3 times a year on Fitness Level.</p> <p>Annual quantitative fit test</p> <p>PPE is inspected annually. It is replaced as damaged/equipment. Front line PPE is replaced roughly every 5 years. Each FF is assigned a personal SCBA</p>
<p>6.2* Incident Management System.</p> <p>6.2.1 An incident management system shall be provided in accordance with NFPA 1561, Standard on Emergency Services Incident Management System, to form the basic structure of all emergency operations of the fire department, regardless of the scale of the department or the emergency.</p> <p>6.2.2* An effective incident management system shall be designed to manage incidents of different types, including structure fires, wildland fires, hazardous materials incidents, emergency medical operations, and other types of emergencies that could be handled by the department.</p>	<p>HFD uses the ICS system</p>
<p>6.3 Training Systems.</p> <p>The fire department shall have a training program and policy that ensures that personnel are trained and competency is maintained to execute all responsibilities consistent with the department's organization and deployment as addressed in Chapters 4 and 5.</p>	<p>Personnel are trained and competent to perform the duties they are assigned.</p> <p>Hobbs Fire Department/New Mexico Junior College runs their own 13 week training academy. They have several instructors qualified to teach all of their course work.</p> <p>Courses offered include: FFI, FF2, Haz Mat Awareness/Operations, Wildland, Arson Detection , ARFF, Vehicle Extrication.</p>
<p>6.4 Communications Systems.</p> <p>6.4.1 The fire department shall have a reliable communications system to facilitate prompt delivery of public fire suppression, emergency medical services, and special operations.</p>	<p>All departments to the Lea County agreement can communicate with one another. Lea County is currently revamping communications such that there will be two PSAPs (initial</p>

CODE REQUIREMENT	HOBBS FD POSITION
<p>6.4.2 All communications facilities, equipment, staffing, and operating procedures shall comply with NFPA 1221, Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems.</p> <p>6.4.3 Operating procedures for radio communications shall provide for the use of standard protocols and terminology at all types of incidents.</p> <p>6.4.3.1 Standard terminology, in compliance with NFPA 1561, Standard on Emergency Services Incident Management System, shall be established to transmit information, including strategic modes of operation, situation reports, and emergency notifications of imminent hazards.</p>	<p>dispatch centers), the Lea Co. Sheriff's office and City of Hobbs E911 center. Eunice is currently on VHF, Hobbs is an 800 MHz system, but sufficient patch and repeater capability is in place for the required interoperability.</p> <p>There is also a common NM state fire radio channel which is accessible by all.</p> <p>Current upgrades are in the work for full telephone/radio interoperability (ACU 1000 unit) which will be in place well before NEF licensing.</p>
<p>6.5* Pre-Incident Planning.</p> <p>The fire department shall set forth operational requirements to conduct pre-incident planning. Particular attention shall be provided to all target hazards.</p>	<p>Pre-incident plans will be developed for all incident types expected at the NEF. This will be done with conjunction with the response agencies.</p>

**HOBBS FIRE DEPARTMENT
SUPPLEMENTAL QUESTIONS**

SUPPLEMENTAL QUESTION	EUNICE FIRE & RESCUE POSITION
1. Do you have radiation monitoring equipment? If yes, state type and quantity of each.	For Radiation Monitoring (1) Ludlum Model 14C monitor (2) OCD Model CDV715 monitor
2. Have you had an ISO FSRs evaluation? If yes, when was the last evaluation done and what is the rating level?	Class 2, Last evaluation was in 2001.
3. Do your officers receive supplemental training (e.g., Nat'l Fire Academy, state training, Department initiative)? If yes, please list types of classes and if mandatory or voluntary.	HFD participates in multiple external training courses at the state/federal level including attendees at several NFA class attendees each year over the last several years. Two HFD officers are NFA Exec. Fire Officer graduates. HFD also provides training through NMJC training academy.
4. Do you have confined space rescue equipment (e.g., harnesses, retrieval tripod, etc.)? If yes, state type and quantity of each.	Yes, 1 tripod, 3 harnesses matched to the tripod (carried on Heavy Rescue), chain sets, airlines and escape SCBA. (5) Neotronics Four Gas Monitors Most HFD members are Confined Space certified.
5. Do you have confined space monitoring/control equipment (e.g., gas analyzers, blowers/fans, EP lighting, etc.)? If yes, state type and quantity of each.	Smoke ejectors, air lines, gas monitors.
6. What is your respiratory support capacity (e.g., cascade trailer, other)?	Cascade trailer (tow) – Nine (9) 4500 psi bottles, currently being upgraded to 6000 psi bottles
7. Do you have protocols for transporting radioactively contaminated victims?	Yes, part of Haz Mat and EMS SOGs
8. In responding to NEF, do you have concerns about personnel resources? If yes, what are they?	Not at this time
9. In responding to NEF, do you have concerns about equipment resources? If yes, what are they?	Not at this time
10. In responding to NEF, do you have concerns about training resources? If yes, what are they?	Not at this time
11. Do you have other concerns regarding emergencies/emergency response at NEF?	Not at this time