

## 2 PROPERTY EVALUATION

### A. INTRODUCTION

This chapter provides an overview description of the properties at the LSAAP and RRAD-WEP. The section includes a site overview and regional context, past and current land uses and a description of the various areas identified within each facility. This analysis established the framework for recommendations about the reuse potential of each facility.

It is important to note that access to, and information about, LSAAP was closely restricted by the current operating contractor, Day and Zimmerman, Inc. As such, the consultants relied heavily on secondary data sources such as the Environmental Condition of Property Report for LSAAP and RRAD-WEP completed by URS in November 2006 and the Site Assessment Reports for LSAAP and RRAD-WEP prepared by the Staubach Company in May 2006.

### B. SUMMARY OF MAJOR FINDINGS AND CONCLUSIONS

- The LSAAP and west excess property of RRAD-WEP total roughly 19,335 acres of land within Bowie County, approximately 10 miles west of the City of Texarkana. Both properties are located immediately to the south of U.S. Highway 82 and Interstate 30. Lone Star has limited utility, rail and infrastructure concentrated in the production areas. The RRAD excess property is served only by gravel roads.
- Day and Zimmerman, Inc. has expressed an interest in remaining at the Lone Star facility. Current plans provide a 2,213 acre location in the northeast portion of the facility, including offices and shop buildings in Area I.
- Substantial utility and infrastructure improvements are necessary to open the entire facility to redevelopment. The existing munitions production areas are the only parts of the facility served with utilities, rail and a paved road network. Improvements will be needed throughout the LSAAP facility to realize its development potential...
- Reuse of the Red River excess property likely is a long-term strategy. The existing bunkers occupy a large portion of this facility. The cost of removal is prohibitive,

#### **Reuse Challenge Environmental Mitigation**

*The largest challenge for reuse will be the extent and cost of environmental clean-up needed throughout LSAAP facility. Almost all designated areas will require some form of remediation to make the site useable for new development. Once the facility is conveyed, the clean up process likely will take 2-3 years before substantial redevelopment can occur.*

*Where possible, the RRRR pursue redevelopment activities during the remediation phase.*

unless a user can be identified. In addition, the west excess property has no utilities, rail, or paved roads and the property is encumbered by large areas of federally protected wetlands.

- The continuing RRAD mission will encumber substantial portions of the surplus RRAD-WEP footprint due to blast arcs and utility limitations.

### **C. SITE OVERVIEW AND REGIONAL CONTEXT**

The LSAAP occupies roughly 15,500 acres, and is bounded on the north by US Highway 82. Interstate 30, the major east-west highway in the area, generally runs parallel to Highway 82 within 1 mile to the north. Red River Army Depot is adjacent to LSAAP to the south and west (Exhibit 2-1). The Red River Commerce Park is a 790-acre industrial/business park owned, managed, and leased by the RRRRA.

Several towns are located around the perimeter or in close proximity to the LSAAP and RRAD, both of which are located in Bowie County in the northeast corner of Texas. The largest of these, Texarkana, TX (35,500 +/- pop.), is located approximately 12 miles east of the main entrance to the LSAAP. The small semi-rural town of New Boston (4,600 +/- pop.) is located immediately to the west and northwest of the RRAD facility, and serves as the county seat for Bowie County.

Other small communities, including Hooks (2,900 +/- pop.), Leary (565 +/- pop.), Redlick (860 +/- pop.), Nash (2,350 +/- pop.), Wake Village (5,200 +/- pop.), and Redwater (885 +/- pop.), are located in close proximity to the LSAAP site along its northern, eastern, and southern borders, while the town of Maud (1,015 +/- pop.) is located south of RRAD along U.S. Highway 8. Most of these small communities can be characterized as having low to medium residential density made up of conventional and mobile homes, with large open rural agricultural farm land or forested areas along their perimeters. These communities have locally-oriented, small commercial and industrial businesses, including small shopping centers, convenience stores, restaurants, and gas stations that serve their residents.

### **D. SITE HISTORY**

#### **1. Lone Star Army Ammunition Plant**

LSAAP is a government-owned/contractor operated (GO/CO), shell loading installation constructed during World War II (WWII). Construction began in mid-1941 and was completed during the summer of 1942. The installation was originally called the Lone Star Ordnance Plant, and is divided into 27 separate areas. The production areas (B, C, E, F, G, J, K, M, O, P, Q, R, and S) support, or supported in the past, load, assembly, and pack (LAP) operations of ammunition items. The areas not used for production of munitions (A, D, H, I, T, U, V, W, X, Z, AA, BB, CC, and XX) were or are used variously for the storage of inert materials, storage of munitions and raw materials, administrative and support functions, landfills, and munitions and components destruction areas. Activities on the production lines have increased or decreased several times from LSAAP's construction to the present, as munitions needs fluctuated during wars, conflicts, and periods in between.



Immediately following the completion of initial construction (1942), the Lone Star Defense Corporation, a subsidiary of the B.F. Goodrich Company, Akron, Ohio, placed the installation into active production. B.F. Goodrich operated the installation during WWII and for several months thereafter in conjunction with deactivation procedures in 1945. Effective 4 November 1945, Lone Star Ordnance Plant was incorporated with Red River Ordnance Depot. A few months later the name of the merged installation was changed to Red River Arsenal. The installation's operation consisted primarily of demilitarization and renovation work, while under the jurisdiction of Red River Arsenal. The operations were being administered by the Ammunition Division of Red River Arsenal.

Today the facility is operated by Day and Zimmerman, which has been the site operator since 1951. Day and Zimmerman are engaged in the production of various munitions components.

## **2. Red River Army Depot**

Red River Army Depot came into being on August 9, 1941. Today the depot reservation occupies more than 18,000 acres of rolling hills and pine forests, making it one of the U.S. Army Materiel Command's largest supply and maintenance installations. With the adjacent LSAAP, the combined reservation is more than 54 square miles.

Originally, Red River was intended only as an ammunition storage depot. However, no sooner had the first trainloads of ammunition begun to arrive, than the demands of World War II caused top defense planners to take another look at the new installation. A good labor market, excellent transportation facilities, and the installation's nearness to the great southwestern training areas and southern ports were reason enough to expand the depot mission to include general supply storage and tank repair facilities.

Throughout the years, the depot's missions have evolved, and today Red River is engaged in activities ranging in scope from rubber products to recertification of Patriot missiles.

The depot is host to 16 tenant organizations making it a model for synergy. On-site strategic partners, each under a different command, work together manufacturing, certifying, storing and shipping equipment and ammunition to America's war fighters throughout the United States and around the world. With the implementation of the LEAN/Six Sigma processes in 2002, quality work for the soldier is important to the employees of the depot. Red River was projected to realize over \$100 million of net cost avoidance by the end of the 2006 work year.

The west excess property of RRAD is largely comprised of pine forest and storage bunkers. There are no building structures on the property and essential utilities and road infrastructure are not currently available.

## **E. DESCRIPTION OF MAJOR FACILITIES AND BUILDINGS**

The following narrative provides an overview description of the various areas within the LSAAP (Exhibit 2-2). The Red River West Excess Property largely consists of undeveloped forest land, with no operational structures other than storage bunkers.

### **1. Lone Star Army Ammunition Plant**

#### a.) Area A - (Commercial Fertilizer Production)

Area A is located in the northwest corner of the LSAAP, adjacent to the operating landfill. Originally used for the production of ammonium nitrate, this area of the Plant currently is used for dunnage processing and hazardous material storage. Area A has 9 buildings totaling

slightly more than 20,000 square feet of space (Table 2-1). Most of the buildings are identified as storage facilities including a semi-permanent lumber shed. However, the largest building is a 6,000 square foot dunnage mill built in 1953.

b.) Area B - (Grenade and Munitions Production)

Area B is one of the operating munitions production and assembly lines. Major and medium caliber munitions, howitzer projectiles, and a variety of grenades are made in this area. Building construction dates generally range from 1942 to 1963, with three buildings having been constructed since then. There are 73 buildings totaling nearly 214,000 square feet of space used for production and assembly. The largest buildings generally are the explosive packing and grenade assembly areas.

c.) Area BB - (Chemical Storage)

Area BB is located adjacent to Highway 82. The area primarily is an herbicide and pesticide holding area, with more than 120 storage tanks of varying sizes. Area BB originally served as the Plant maintenance complex and central receiving depot for train-bound shipments. However, most of the buildings associated with these activities have been removed. Only the locomotive repair shed and the machine & tin shop remain, with the machine shop scheduled to be demolished in early 2007. The five habitable buildings total 2,500 square feet of space.

d.) Area C - (Inactive)

Production line C was used to make major and medium caliber munitions. The area was also used to disassemble various bombs and munitions, with the casings washed out and sent to other areas of the facility for reuse/reconditioning after World War II. The 38 buildings totaling more than 147,000 square feet of space were built between 1942 and 1976. Area C currently is inactive.

e.) Area D - (Inert Storage and Warehousing)

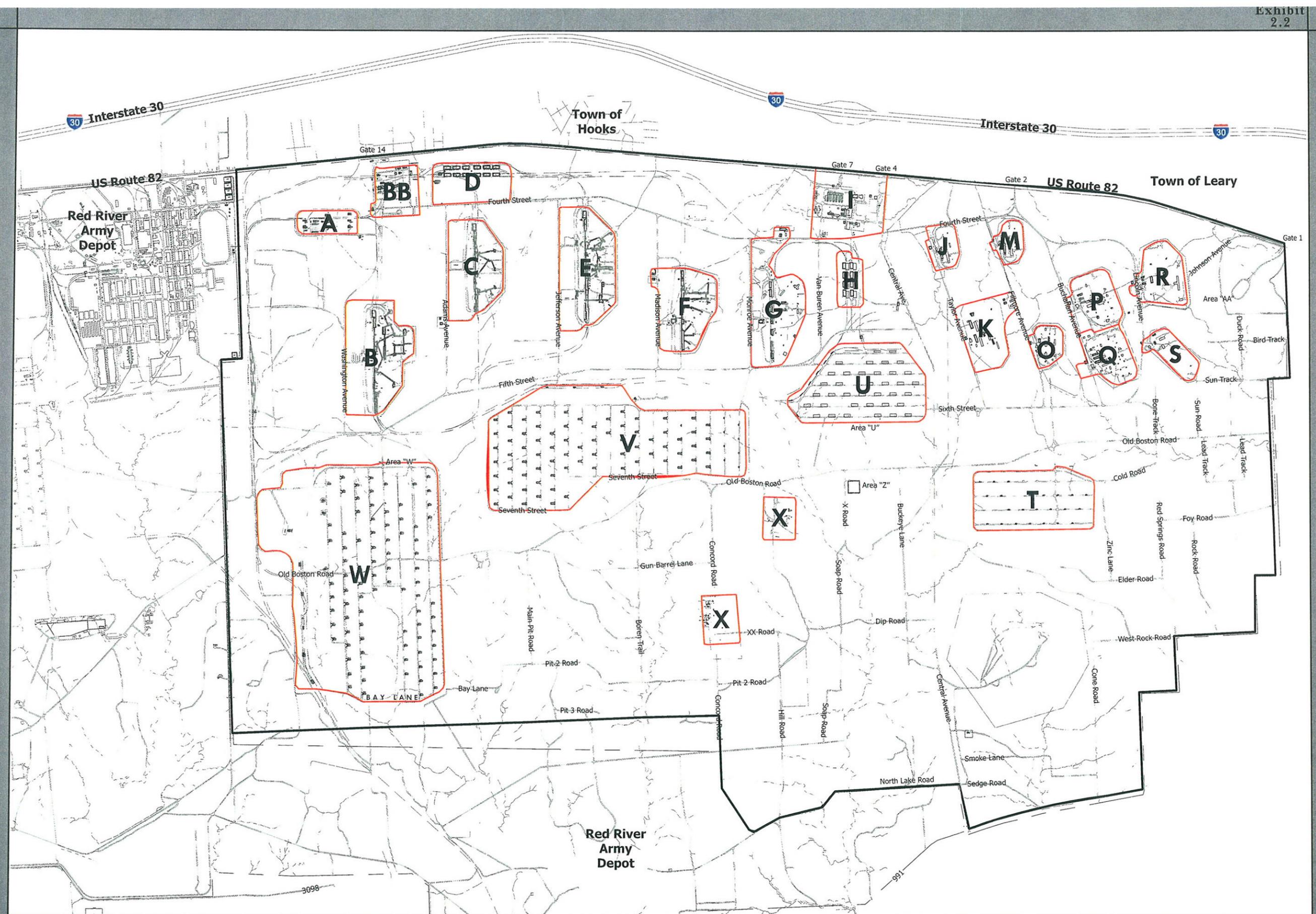
Area D is located along Highway 82. The buildings in this area are used to store inert equipment and material. The 12 storage warehouses and one out-building total nearly 270,000 square feet. The area briefly was used to remove activators and fuses from land mines during the period after World War II. One of the 12 storage buildings has a washing station, used to clean munitions casings and may need some environmental remediation. Area D currently is active.

f.) Area E - (Inactive)

Area E initially was a major and medium caliber munitions production line when the facility opened. The area was also used for the demilitarization of bombs and munitions after World War II. There are 56 buildings totaling nearly 252,000 square feet. The largest buildings, roughly 20,000 to 25,000 square feet in size, are the remaining production and assembly buildings. However, there are several cleaning and extracting buildings as well. Area E currently is inactive.

g.) Area F - (Mine and Munitions Production)

Area F is one of the operational munitions production lines at Lone Star. The line currently produces a variety of anti-personnel and anti-tank mines. There are 38 buildings totaling more than 176,000 square feet of space. Although most of the buildings are dedicated to munitions production, the area also has some permitted waste storage facilities and a salvage yard.



Lone Star Army Ammunition Plant  
 Building Areas  
 Bowie County, Texas

**Table 2-1  
Lone Star Army Ammunition Plant  
Area Building Profile  
2007**

Profile Data	Area A	Area B	Area BB	Area C	Area D	Area E
Existing Buildings	9	73	5	38	13	56
Total Square Footage	20,103	213,648	2,520	147,256	269,625	251,981
Year Opened	1942	1942	1942	1942	1942	1942
Most Recent Construction	1969	1975	1969	1976	1973	1978
Primary Use	Commercial fertilizer production	Grenade and munitions production	Chemical storage and rail activities	Mortar production and explosive disassembly	Inert storage and warehousing	TNT production and explosive disassembly
Unaccounted Structures	0	3	4	2	0	12
Current Status	Partially Active	Active	Active	Inactive	Active	Inactive
<b>Profile Data</b>	<b>Area F</b>	<b>Area G</b>	<b>Area H</b>	<b>Area I</b>	<b>Area J</b>	<b>Area K</b>
Existing Buildings	38	72	10	35	13	24
Total Square Footage	176,106	233,808	177,507	188,781	42,035	95,133
Year Opened	1942	1942	1942	1942	1942	1942
Most Recent Construction	1985	2000	1942	1981	1972	1972
Primary Use	Mine and munitions production	Cable cutter and tracer production	Inert storage and warehousing	Administration, maintenance and storage	Fuse and booster production	Fuse and booster production/wastewater treatment
Unaccounted Structures	15	7	0	4	2	11
Current Status	Partially Active	Partially Active	Active	Partially Active	Inactive	Partially Active
<b>Profile Data</b>	<b>Area M</b>	<b>Area O</b>	<b>Area P</b>	<b>Area Q</b>	<b>Area R</b>	<b>Area S</b>
Existing Buildings	17	28	42	17	35	10
Total Square Footage	43,331	52,648	86,533	31,960	93,760	26,117
Year Opened	1942	1942	1942	1942	1942	1942
Most Recent Construction	1972	1980	1989	2000	1973	1943
Primary Use	Fuse and booster production	Mine and grenade production	Detonator and fuse production	Detonator production	Fuse, primer and booster production	X-ray area and equipment storage
Unaccounted Structures	0	3	19	8	0	6
Current Status	Inactive	Partially Active	Partially Active	Inactive	Partially Active	Partially Active
<b>Profile Data</b>	<b>Area T</b>	<b>Area U</b>	<b>Area V</b>	<b>Area W</b>	<b>Area X</b>	<b>Totals</b>
Existing Buildings	30	42	86	89	34	816
Total Square Footage	36,687	442,275	103,640	140,141	9,500	2,152,852
Year Opened	1942	1942	1942	1942	1942	---
Most Recent Construction	1969	1976	1990	1990	1992	---
Primary Use	Explosives and raw materials storage	Finished munitions storage	Explosives and raw materials storage	Finished munitions storage	Sewage plant and firing range	---
Unaccounted Structures	0	3	3	4	0	106
Current Status	Active	Active	Active	Active	Active	---

Source: ECP, URS Corporation, November 2006 and RKG Associates, Inc., 2007

h.) Area G – (Cable Cutter and Tracer Production)

Area G was the first production line to begin operations in 1942. The area was used to make a wide variety of rockets and projectile munitions. The area also participated in the demilitarization of ordnance after World War II including burning out tracers and torches. There are 72 buildings totaling almost 234,000 square feet of space. The line is still partially active, making cable cutters and tracers.

i.) Area H – (Inert Storage and Warehousing)

Area H is an inert equipment and material storage area. The 8 storage warehouses and one temporary office trailer total nearly 178,000 square feet. Some of the space is leased to Defense Reutilization and Marketing Service (DRMS). Area H currently is active.

j.) Area I – (Administration, Maintenance and Storage)

Area I is the administrative pod at Lone Star AAP that houses the facility headquarters and most non-production operations. Plant maintenance facilities are concentrated in this area. It is located at the main entrance off of Highway 82. There are 35 buildings totaling nearly 189,000 square feet. Construction in this area was last done in 1981, with the completion of the fire and guard headquarters.

k.) Area J – (Inactive)

Area J was used as a support production line for fuses and boosters when the facility opened. No demilitarization or cleaning activities took place here despite its auxiliary status. The 13 buildings totaling 42,000 square feet include production facilities and a paint storage building. The area is in caretaker status.

l.) Area K – (Fuse and Booster Production/Wastewater Treatment)

Similar to Area J, Area K was used as a support production line for fuses and boosters when the facility opened in 1942. However, the line was activated in 1953 to partial production and remains partially active. The area has 24 buildings totaling more than 95,000 square feet. The largest buildings are dedicated to assembly, packing and shipping the fuses and boosters.

m.) Area M – (Inactive)

Area M was used to produce fuses and boosters for a variety of bombs and grenades when the facility was opened in 1942. There are 17 buildings totaling more than 43,000 square feet including the assembly facility and the employee changing house. The line was deactivated and remains in caretaker status. Building M-24 currently is used as an oil storage facility.

n.) Area O – (Mine and Grenade Production)

Area O primarily was a grenade production line when the facility was in full operation. This area was also used during the demilitarization efforts, where 250-pound bomb casings were washed out after they left Area C. There are 28 buildings totaling nearly 53,000 square feet. The three assembly and packing buildings total 33,000 square feet of this total. The Area currently is partially active.

o.) Area P – (Detonator and Fuse Production)

Area P is a production and assembly cluster for detonators and igniters. In addition, building P-78 is used to treat lead-contaminated wastewater from explosive loading operations. There are 42 structures dedicated to these uses totaling approximately 86,500 square feet. The assembly facilities and the employee changing house are the largest buildings in Area P.

p.) Area Q – (Inactive)

Area Q was also used as a detonator and igniter production and assembly line at the opening of the Lone Star facility. Line Q was reactivated in 1953 and was in production until 2000,

when a fire destroyed more than 40 buildings. Today, the area is inactive, with only 17 structures remaining totaling nearly 32,000 square feet. The employee changing house accounts for roughly 50% of this total.

q.) Area R – (Fuse, Primer and Booster Production)

Production line R primarily is used in the production of primers. In addition, the area has paint storage facilities and a sewage lift station. The majority of buildings in this area were constructed during the late 1960s, with existing buildings receiving some modernization. There are 35 buildings totaling nearly 94,000 square feet of space. The production buildings account for nearly 28,000 square feet.

r.) Area S – (X-ray Area and Equipment Storage)

Area S was an artillery primer production line during World War II. After production stopped following the war, one of the buildings was converted into an x-ray facility for production items from other areas in the Plant. Today, the x-ray activities continue along with some non-related uses such as equipment storage. No production occurs in Area S. There are 10 buildings totaling more than 26,000 square feet.

s.) Area X

Area X encompasses a few different clusters of facilities within the Lone Star AAP. Most notably, the wastewater treatment plant in Area X is owned and operated by the RRRRA. In addition, several burning areas, the firing and pistol range and detonation fields and related structures are classified in this group as well. In total, there are 34 structures accounting for 9,500 square feet in Area X.

## **F. STORAGE BUNKERS AND MAGAZINES**

LSAAP contains four areas consisting primarily of munitions storage bunkers (igloos) and magazines. Two types of igloos are used at Lone Star, a single unit containing 1,600 SF and double units containing 3,200 SF. The storage igloo areas are located primarily south of Fifth Street and west of Central Avenue and cover over 2,000 acres of land.

a.) Area T – (Explosives and Raw Materials Storage)

Area T is a raw material and explosive storage area. The 27 earthen-covered magazines were constructed in 1942. The remaining 3 out-buildings were added at various times, providing a guard house and truck inspection shelter, among other things. These structures total approximately 36,700 square feet. The storage facilities remain active.

b.) Area U

Area U contains 38 above-ground storage facilities for finished munitions. Each building totals approximately 11,500 square feet. The Area also has 4 non-storage buildings that total roughly 7,800 square feet. Each of the storage facilities remain in active use.

c.) Area V

Similar to Area T, Area V is used for storage of raw materials and explosives. There are 85 igloos totaling nearly 104,000 square feet of storage space. The igloos are still used.

d.) Area W

Area W contains 88 igloos used to store finished munitions. Each igloo totals 1,600 square feet. The area also has a badge house and a guard house. The igloos currently are in use.

## G. SECURITY FENCING

The LSAAP and RRAD sites are secured from the public by a series of perimeter fences, guards and limited entry points. A brief synopsis of these controls follows:

### 1. Lone Star Army Ammunition Plant

LSAAP has a perimeter fence that limits site access to a few controlled entry points. The main entrance to U.S. Highway 82 and I-30 is also called Gate 7. This gate remains guarded and access is by pass with chaperones provided by either DZI or the Corps. There are four other gates to the north or U.S. HIGHWAY 82 that remained locked with use given only by temporary permit. There are two access points by gravel road located on the east side of the site that remain closed. There is one gate on the south side of the site to FM 991 that remains closed. All other access points are to the RRAD. These access points remain closed.

Internally there are several controlled access points. These are located near the High Explosive Demolition Ground (HEDG) where safety issues are the main concern.

### 2. Red River Army Depot – West Excess Property

RRAD has a perimeter fence that limits site access to a few controlled entry points. The site entrance is a gate located approximately 0.5 miles east of State Highway 8 and accesses U.S. Highway 82. This gate is typically closed and access is by pass with chaperones provided by the Corps. There are a few other gates on the west side that access State Highway 8 that remain locked. These access points are all located on gravel roads.

## H. PERSONAL PROPERTY

The personal property list at the LSAAP and RRAD-WEP consists of over 4,000 items. At this time, no decision has been made about the disposition of this property. However, the Base Redevelopment and Realignment Manual (BRRM) makes the following provisions.

The Department of Defense disposes of personal property at closing installations after considering the continued military needs for the equipment and the redevelopment needs of the community. This task is typically accomplished in consultation with the LRA. The needs of the Military Department to continue using the personal property to support its relocating units or other military missions and functions at another installation are of paramount consideration in determining the ultimate disposition of the property. At the same time, personal property not required by the Military Department can have an important impact on the local community's prospects for economic recovery.

**Definition – Personal Property**

Personal property includes all property except land and fixed-in-place buildings, naval vessels, and records of the Federal government. Personal property does not normally include fixtures.

### 1. Principal Authorities Affecting Personal Property Transfers

Several authorities guide the transfer of personal property, including the following:

- 32 CFR Parts 174 and 176 (Base closure community assistance and homeless assistance conveyances to LRAs or representatives of the homeless).

- 41 CFR Part 102–75 (Special disposal provisions for public airports; historic monuments; education and public health uses; shrines, memorials or religious uses as part of another public benefit conveyance; public park or recreation uses; housing for displaced persons; and non-federal correctional facility uses).
- 41 CFR Part 102–75 (Negotiated sales and public sales).
- 41 CFR Part 102–14 through 102-220 (Utilization of personal property)
- 41 CFR Part 102–37 (Donation of personal property)
- 41 CFR Part 102–38 (Sale, abandonment, or destruction of personal property)
- Stevenson-Wydler Technology Innovation Act of 1980, Public Law 96-480, (Donation of research equipment to educational institutions and nonprofit organizations).
- Executive Order 12999 (Donation of personal property to further math and science education).

## 2. Personal Property Disposition and Disposal Methods

The Military Department develops a personal property disposal plan that coincides with its real property disposal plans. The Military Department must determine how to convey the personal property needed for redevelopment to the intended recipient. In accordance with the available actions below, the personal property that supports the intended reuse and adds value to the real property should be conveyed at fair market value unless otherwise authorized (e.g., PBC and homeless conveyances) along with the real property.

### a.) Leases

Personal property associated with a lease will typically be included in the. However, that property cannot be used outside the leasehold premises.

### b.) Public Sales of Personal Property with Real Property

Under a public sale, personal property is sold and conveyed as an economic unit with the realty to the highest bidder at no less than fair market value. The Federal disposal agent is not obligated to accept less than fair market value bids.

### c.) Negotiated Sales of Related Personal Property to Public Entities

Under a negotiated sale, related personal property should be valued with the realty as an economic unit. Negotiated sales are at no less than the appraised fair market value.

### d.) Public Airport Conveyances

Surplus personal property may be transferred apart of an airport conveyance.

### e.) Public Benefit Conveyances and Similar Approved, Sponsored, or Requested Conveyances

When personal property is required for the redevelopment of real property subject to a PBC, it may be related and treated as part of the real property conveyance. These transfers can be further categorized as described below:

- **Sponsored public benefit conveyances** - These conveyances include PBCs for education, public health, public parks or recreation, and port facility purposes.

- **Approved public benefit conveyances** - These conveyances include PBCs for non-federal correctional facilities, law enforcement, emergency management response, wildlife conservation, historic monuments, and power transmission lines.

f.) Homeless Assistance Conveyances

Personal property may also be transferred to an LRA or a homeless assistance provider for homeless assistance purposes.

g.) Economic Development Conveyance (EDC)

Personal property may be transferred as part of an EDC of the real property. Personal property EDCs can be made only to the LRA. Any proceeds from the sale of BRAC personal property to EDCs must be deposited into the BRAC account.<sup>1</sup>

## I. DESCRIPTION OF EXISTING LAND USES

### 1. Internal Land Uses

a.) Lone Star Army Ammunition Plant

The LSAAP is an operating munitions production facility. As such, there are several uses currently operating at the facility. The following narrative provides a brief description of these uses.

- **Munitions Production** - The most prevalent use at the LSAAP is munitions production. There are fourteen separate areas of the facility dedicated to production of grenades, bombs, mines and other projectile munitions (A, B, C, E, F, G, J, K, M, O, P, Q, R and S). However, not all areas are active. Some have been placed in caretaker status due to overcapacity of the facility. Within these areas, there are a series of buildings used as short-term storage of hazardous & non-hazardous materials, production & assembly, maintenance and employee functions (Exhibit 2-3).
- **Munitions Storage** - There are four separate munitions storage areas in LSAAP (T, U, V and W). Three contain earthen-covered igloos and the final has above ground storage sheds. In total, there are 197 igloos and 38 storage sheds at the facility. These facilities hold finished munitions constructed on the facility. All four areas reportedly are operational.
- **Administration and Support** - Area I houses the Plants administration facilities. It is located at the main entrance to the facility, along Highway 82. This area also houses several support functions as well including repair and maintenance operations, the base cafeteria and some support activity storage buildings.
- **Non-Production Storage** - There are three distinct areas at Lone Star used to store equipment and materials that are not directly part of munitions production (BB, D and H). Areas D and H are collections of storage sheds that house equipment and non-hazardous materials. In total, there are 20 storage buildings. Area BB has more than 120 storage tanks of various size that hold a variety of chemicals and pesticides. Area BB also has a few remaining buildings left from when this area also served as rail-related maintenance.

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<sup>1</sup> Base Redevelopment and Realignment Manual, Office of Deputy Under Secretary of Defense (Installations and Environment), March 1, 2006, pp. 76-87.

- **Testing and Demolition** - The Lone Star facility has two primary munitions testing and demolition areas (unnamed). The largest area is located in the southeast corner of the base. This area is used for demolition and detonation testing. The other area, located due west of the demolition area, is used for test firing and burning. As such, there are no permanent buildings in these areas.
- **Landfills** - There are currently two active landfills present at LSAAP that can be utilized during the remediation of the site to minimize the volume of material that would need to be transported offsite for disposal. The Area A Landfill is a RCRA-D permitted landfill currently permitted to serve the needs of LSAAP and RRAD. This landfill is a Type 1 facility capable of accepting municipal solid wastes (MSW) and Class II industrial wastes, including materials contaminated with up to 1,500 ppm total petroleum hydrocarbons (TPH). The landfill site is not large, but the permit can be modified to increase capacity as needed. The second active landfill at LSAAP is the registered (non-permitted) Eastern Active Landfill. This landfill contains construction waste and asbestos. Approximately one million pounds of asbestos from RRAD have been disposed in separate asbestos cells in the Eastern Active Landfill.
- **Sewage Treatment Facility** - There is an operating sewage treatment facility at Lone Star supporting the other operations. The facility is centrally located, south of Old Boston Road and is owned and operated by the RRRRA. The facility is rated to treat and release 1.5 million gallons per day. There are also two industrial wastewater pre-treatment facilities located in Areas P and Q that are operated by the facility contractor and the Army.
- **Miscellaneous Areas** - The two 'miscellaneous' areas within Lone Star (Area X) contain collections of buildings that provide various support services. One of the areas houses a pistol and rifle range, among other uses. Other uses include guard houses, testing buildings, a photo lab and an oven & deep freeze building. In addition, there are nine cemeteries scattered throughout the facility, most of them located south of Old Boston Road.
- **Open Space** - The remainder of the facility is comprised of the road & rail network and wooded open space. Approximately 80% of Lone Star's 15,500 acres consists of forest-covered land.



**Lone Star Army Ammunition Plant**  
 Interior Land Uses  
 Bowie County, Texas

Red River Redevelopment Authority  
 May 08, 2007

### b.) Red River Army Depot – West Excess Property

The proposed excess area within RRAD consists of approximately 3,835 acres, and is referred to in this report as RRAD-WEP. Much of this area consists of forested land with several small interior roads crossing it. Like the LSAAP, much of the site features pine and hardwood forests. During a U.S. Fish & Wildlife Service (USFWS) field inventory study, several areas of forested wetlands and streams were identified in locations mostly west of the large concentration of storage igloos. These areas will require site specific verification of wetlands at the time that development activity is considered and under review.

Active areas within the RRAD-WEP Site primarily consist of 159 storage igloos. The forested areas on the RRAD continue to produce timber-related revenues as well as hunting and fishing recreational opportunities. RRAD's Forestry Division provides supervision, inspection, and harvest specifications for all harvest activities to help ensure that applicable best management practices are used to protect soil and water quality. (Tetra Tech 2006)<sup>2</sup>

## **2. Perimeter Land Uses**

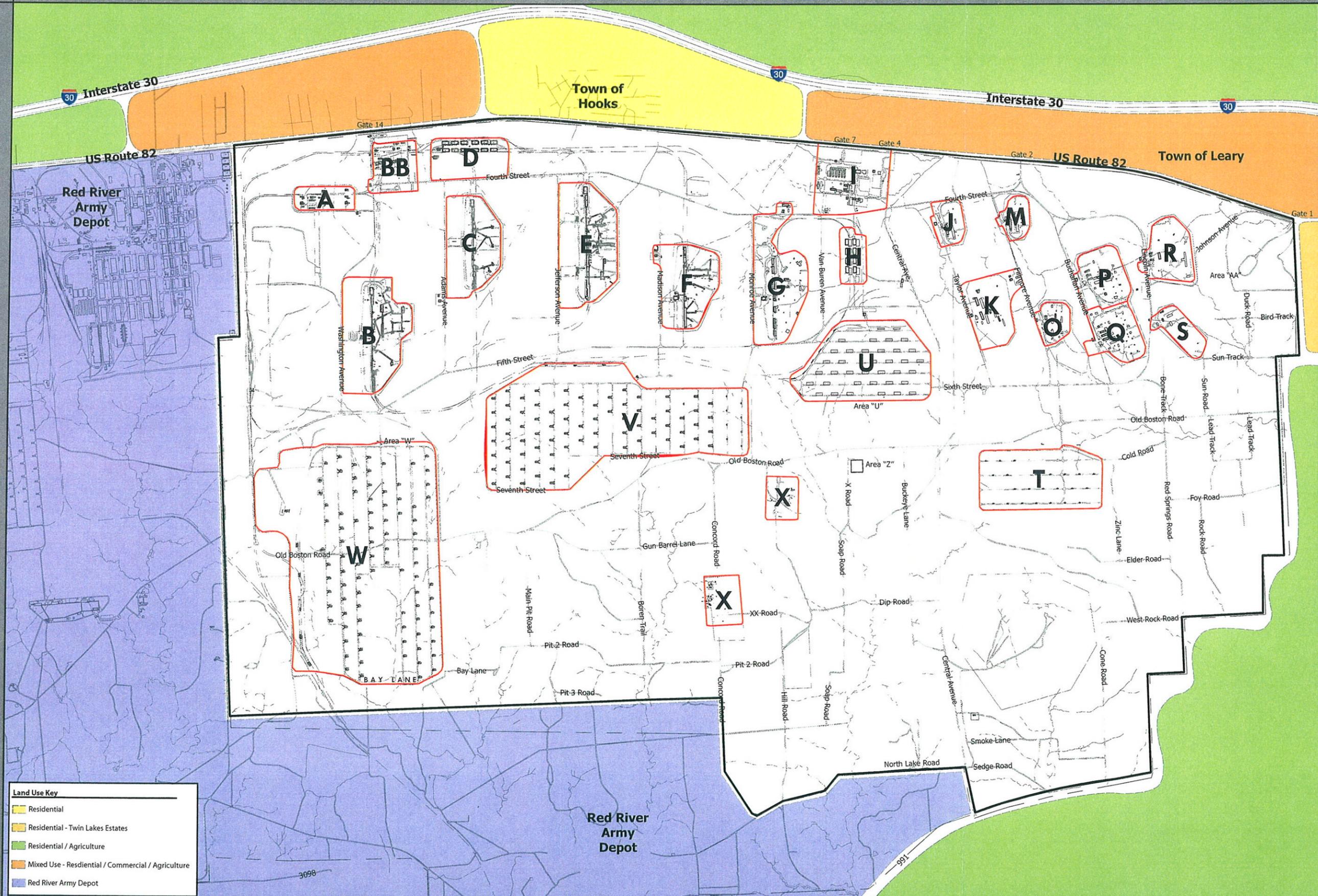
The semi-rural town of New Boston (population  $\pm$  4,600) is located immediately to the west and northwest of the RRAD, and serves as the county seat for Bowie County. The  $\pm$  3,835 acre parcel of RRAD under consideration for conveyance is located on the western side of the larger  $\pm$  18,500 acre facility. The remaining lands of RRAD are located along the eastern boundary of the conveyance area, consisting primarily of storage bunkers and forest. A Texas National Guard facility occupies a site adjacent to the northeast corner of the parcel (Exhibit 2-4). U.S. Highway 82 and an abandoned railroad line run along the northern boundary of the site. County Road (CR) 2003, located on the north side of U.S. Highway 82 about 0.35 miles to the west of the northeast corner of the site, forms the eastern boundary of the International Paper Sawmill facility and the western boundary for a recently clear-cut parcel. The land along the north side of U.S. Highway 82 west from the International Paper site to State Highway 8 is partially vegetated and currently unoccupied. The New Boston Industrial Park, the International Paper Sawmill, and the Red River Commerce Park provide business and employment opportunities in the New Boston area.

The intersection of U.S. Highway 82 and State Highway 8 is located at the northwestern corner of the site, where the old town center of New Boston meets the more recent commercial corridor running north along State Highway 8 to the local I-30 interchange. State Highway 8 forms the western boundary of the site for approximately one mile south of U.S. Highway 82.

The New Boston Wastewater Treatment Facility lies adjacent to the west boundary about 1.5 miles south of U.S. Highway 82. From this point south to FM 2149, measuring just short of 2.5 miles, the western boundary of RRAD lies adjacent to predominantly low density residential and agricultural uses with intermittent stands of forest. The  $\pm$  2.1 mile southern boundary lies across FM 2149 from mostly open livestock pastures and occasional residential structures. The town of Maud (population  $\pm$  1,015) is located about 8 miles south and east of RRAD along State Highway 8 and U.S. Route 67.

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<sup>2</sup> U.S. Army BRAC 2005, Environmental Condition of Property Report, Red River Army Depot, Texarkana, TX, page 3-1, URS, November 20, 2006.



**Land Use Key**

- Residential
- Residential - Twin Lakes Estates
- Residential / Agriculture
- Mixed Use - Residential / Commercial / Agriculture
- Red River Army Depot

**Lone Star Army Ammunition Plant**  
 Perimeter Land Uses  
 Bowie County, Texas

Red River Redevelopment Authority  
 May 08, 2007

Scale bar: 0 500 1000 2500 5000 NORTH

**RKG** **EDSA**

RRAD borders LSAAP both on the west and along approximately 80% of its mostly wooded southern boundary. The remaining 20% of the LSAAP southern boundary lies adjacent to scattered low density residential and/or agricultural farm fields along FM 991. Adjacent uses along the eastern edge of LSAAP are characterized as mostly low density residential properties with occasional wooded areas extending northward from the southeast corner for about 75% of the eastern boundary. The remaining 25% of the eastern edge lies adjacent to the Beaver Lake Estates residential community, a new medium density community of upscale single family homes.

Both U.S. Highway 82 and an active railroad short-line (TNER, Texas Northeastern Railroad) serving LSAAP form the  $\pm 6.7$  mile northern boundary of the facility. The intersection of FM 2253 and U.S. Highway 82 lies about 0.8 miles west of the northeast corner in the town of Leary (population  $\pm 565$ ); an Interstate 30 interchange is located about 0.4 miles north of the site off FM 2253. Land uses along the north side of U.S. Highway 82 extending from the northeast corner of the site  $\pm 2.8$  miles west to FM 74 are mostly low density rural residential, scattered small businesses, and agricultural farm fields. A school is located just to the west of FM 2253 along U.S. Highway 82. FM 74 intersects U.S. Highway 82 at the main entrance into the Day and Zimmerman, Inc. (DZI) Operations Center, and is located less than one half mile from another I-30 interchange to the north.

Continuing along the northern perimeter, the intersection of FM 560 and U.S. Highway 82 is located 3 miles to the west in the town of Hooks, and provides direct access between the main gate of LSAAP and Interstate 30. Land uses along this section are characterized by low density residential uses from FM 2253 in the east and becoming a more densely populated residential area closer to Hooks. Mixed uses dominate the area near the intersection of FM 560 and U.S. Highway 82, including residential, commercial, and a school. The remaining  $\pm 0.9$  mile length of perimeter west of FM 560 includes mostly low to medium density residential uses mixed with a few small businesses.

## J. EXISTING TENANT BASE

The following companies make up the business tenants at the LSAAP. There are no tenants in the west excess property of the Red River Army Depot.

- American Dehydrated Foods, Inc. - (ADF) is located in Area E of the Lone Star facility. It has been a tenant at Lone Star since 1993. ADF collects waste eggs from hatcheries and converts them to pet food.
- Lone Star Railcar Storage Co. - Lone Star Railcar Storage Co. has been a tenant since 1998. It uses the 51 miles of underutilized track in the northwest portion of the Lone Star facility for storing railcars.
- TEC Linens, Inc. - Tech Linens has been a tenant in Area K since 2001 at Lone Star. The company uses the existing laundry equipment to provide contract laundry services to local health care providers.
- Day and Zimmerman, Inc. - Munitions Technologies Division (MTD) operates the facility under the Armament, Refooling, and Manufacturing Support (ARMS) program since 1998. MTD provides Load, Assemble, and Pack (LAP) technology, equipment, installation, training, and start-up services to both U.S. and foreign manufacturers of ammunition and ammo components.

- Demanufacturing of Electronic Equipment for Reuse and Recycling (DEER2) – DEER2 has been a tenant in Area C since 2003. DEER2 is a Congressionally mandated program managed by the National Defense Center, which provides funding to DZI to operate the disassembly and recycling operations at Lone Star.
- Z-Pond - Z-Pond is listed as a tenant of Lone Star under the ARMS program. However, not data is available about the company or its operations. An orientation map indicates Z-Pond operates between Areas U and V.

## K. CONCLUSIONS

### 1. Lone Star Army Ammunition Plant

- Environmental Remediation – The most notable implication of this evaluation is the potential time and cost of environmental clean up needed throughout most of the developed area. Almost all designated areas will require some form of remediation effort to make the site useable for new development. Once the facility is conveyed, the clean up process likely will take several years before substantial new development can occur. Where possible, redevelopment activities will be initiated during the remediation process.
- Existing Uses – Day and Zimmerman has expressed an interest in remaining at the Lone Star facility. Current plans provide operating space in the northeast portion of the facility. DZI also expressed an interest in remaining in Area I for its administrative operations and has requested the use of other production lines and support facilities until the first quarter of 2009.
- Infrastructure – Substantial infrastructure improvements will need to be made to redevelop remote areas of the facility. The existing production areas are the only parts of the facility served by utilities, rail and paved roads. However, these facilities will need substantial upgrading as well.
- Landfills – The two landfills that could be utilized during the clean up phase, and the demolition area could become a hazardous material landfill.

### 2. Red River Army Depot-West Excess Property

- Environmental Remediation – Due to the relative inactivity in the west excess property, environmental clean-up is considerably less.
- Existing Uses – The existing bunkers occupy significant acreage in RRAD-WEP. The cost of removal, estimated to be \$60,000 per bunker, is prohibitive unless an end-user can be identified. As such, it is likely that no action will be taken in this area until such an opportunity arise.
- Infrastructure – The west excess property has no utilities, rail or adequate road infrastructure. Substantial improvements will be necessary to reposition this property for development.