TCEQ EPA

On this day, August 31, 2012,

the U.S. Environmental Protection Agency (EPA)

Determines that the

Big Tex Grain Site is Ready for Reuse

Pamela Phillips
Acting Director, Superfund Division
U.S. EPA Region 6

Beth Seaton
Director, Remediation Division
Texas Commission on
Environmental Quality

Pat DiGiovanni
Deputy City Manager
City of San Antonio

This Ready for Reuse (RfR) Determination is for the Big Tex Grain site ("Site") located in San Antonio, Bexar County, Texas. This RfR Determination provides that EPA has made a technical determination that the Site is ready for reuse, including residential and commercial land use (referred to as "unlimited use and unrestricted exposure") and the remedy will remain protective of human health and the environment. These conclusions are based on Pollution Reports written for the Site and summarized in the attached Ready for Reuse Determination report for the Big Tex Grain site, August 31, 2012. This RfR Determination remains valid unless new information becomes available to suggest that conditions at the Site are no longer protective of human health and the environment.

The RfR Determination is being prepared for potential users (current and future) of the Big Tex Grain site. EPA's final Pollution Report confirms the successful removal of all identified wastes at the Site. EPA has not currently placed any limitations on uses at the Site. The types of uses identified as protective in this RfR Determination remain subject to (i) applicable federal, state, and local regulations, including, but not limited to, zoning ordinances and building codes; and (ii) title documents, including, but not limited to, easements, restrictions, and institutional controls.

This RfR Determination is an environmental status report and does not have any legally binding effect, nor does it expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits of any party. EPA assumes no responsibility for reuse activities and/or any potential harm that might result from reuse activities. EPA retains any and all rights and authorities it has, including, but not limited to, legal, equitable, or administrative rights. EPA specifically retains any and all rights and authorities it has to conduct, direct, oversee, and/or require environmental response actions in connection with the Site, including, but not limited to, instances when new or additional information has been discovered regarding the contamination or conditions at the Site that indicate that the response and/or the conditions at the Site are no longer protective of human health or the environment for the uses identified in the RfR Determination.

BIG TEX GRAIN SITE
READY FOR REUSE DETERMINATION

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I. Executive Summary

This Ready for Reuse (RfR) Determination is for the Big Tex Grain site (the Site) located in the 300 block of Blue Star Street in San Antonio, Bexar County, Texas. The Site is bordered by grain silos converted to artist studios to the north-northwest, by Union Pacific Railroad tracks to the south and west, and by the San Antonio River to the north and east. The Site is currently owned by Big Tex San Antonio LP.

The conditions summarized in this RfR Determination are based on U.S. Environmental Protection Agency (EPA) documents for the Big Tex Grain site, which include thirteen Pollution Reports (POLREPS) and the 2008 Request for Removal Action. EPA has made a technical determination that the Site, located in San Antonio, Bexar County, Texas, is ready for multiple uses, including residential and commercial land uses (referred to as "unlimited use and unrestricted exposure"), but subject to applicable local zoning ordinances and all otherwise applicable laws. EPA's RfR Determination is being prepared for potential (current and future) users of the Big Tex Grain site.

A federal lien was filed at the Site on April 17, 2009, following the EPA's cleanup. Recently the EPA determined it appropriate to release the federal lien on the Site. On March 30, 2012, a Federal Lien Release was filed on the property by the Bexar County Clerk. Though the Site is designated for unlimited use and unrestricted exposure and is ready for reuse, any actual future use must comply with local zoning ordinances and all otherwise applicable laws. EPA is aware of no other environmental restrictions or limitations associated with the Site.

From March 2000 to January 2007, a number of contractors, the City of San Antonio, and the Texas Commission on Environmental Quality (TCEQ) took samples at the Site. These sampling events focused primarily on identifying the presence of asbestos in soil, subsurface soils, air samples, and sediments bordering the San Antonio River. Based on risk assessment data, the EPA determined that the primary concern at the Site was the presence of amphibole asbestos in the soils, buildings, and air located within the Site property boundaries. According to the 2008 Request for Removal Action, no asbestos contamination was found in sediments along the western bank of the San Antonio River and there is no evidence of contamination of drinking water supplies. All known contaminated materials present on the Site were removed during the time-critical removal action, which was completed on December 23, 2008. On January 19, 2009, the EPA received the results of the Asbestos Hazard Emergency Response Act (AHERA) indoor clearance sampling for two previously identified buildings (21 and 23) that contained unacceptable levels of amphibole asbestos. Both buildings were successfully decontaminated, and the results were well below the AHERA action level of 70 structures per cubic centimeter.

Post-removal site control was not necessary at the Site following the removal actions. EPA's removal actions addressed the Site's contamination by removing all identified wastes from the Site. Based on current information, EPA anticipates that no further EPA or State actions will be necessary.

As a result, based on information available as of this date, EPA has determined that the unacceptable levels of risk to current and future users of the Site have been abated. The Site is ready for multiple uses, including residential, retail and commercial, but remains subject to local zoning and all otherwise applicable laws. EPA has not placed any limitations on use at the Site.

EPA Region 6 issues this RfR Determination for the Big Tex Grain site, effective August 31, 2012.

By: Pamela Phillips

Pamela Phillips
Acting Director, Superfund Division
United States Environmental Protection Agency
Region 6

Beth Seaton

Beth Seaton
Director, Remediation Division
Texas Commission on Environmental Quality

Pat DiGiovanni
Deputy City Manager
City of San Antonio

Documents pertaining to the Site and the RfR Determination are part of the Administrative Record (AR) for the Site, which is available for review at the EPA Region 6 offices in Dallas, Texas, and TCEQ offices in Austin, Texas. Additional information can be obtained from Eric Delgado, the Site's On-Scene Coordinator (OSC), who can be reached at delgado.eric@epa.gov. Additional information about the Site is available online at www.epaosc.net/BigTex.

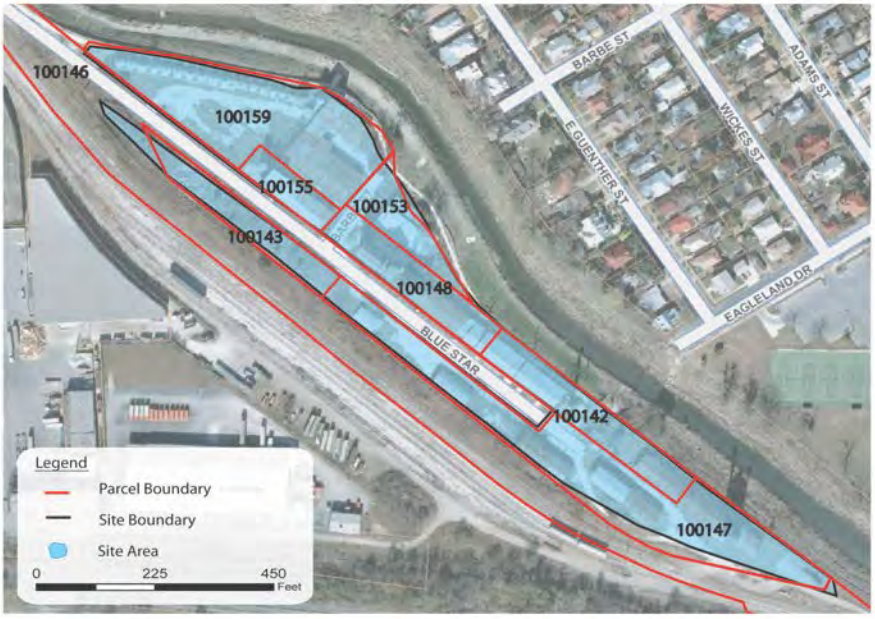
This RfR Determination is a technical document and an environmental status report that does not have any legally binding effect, nor does it expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits of any party. EPA assumes no responsibility for reuse activities or for any possible or potential harm that might result from reuse activities. EPA retains any and all rights and authorities it has, including but not limited to legal, equitable, or administrative rights. EPA specifically retains any and all rights and authorities it has to conduct, direct, oversee, and/or require environmental response actions in connection with the Site, including instances when new or additional information has been discovered regarding the contamination or conditions at the Site that indicate that the remedy and/or the conditions at the Site are no longer protective of human health or the environment for the uses identified in the RfR Determination.

II. Site Location

The Big Tex Grain site is located on a 7.5-acre lot at the 300 block of Blue Star Street in San Antonio, Bexar County, Texas. The geographic center of the Site is located at 29.405 north latitude and 98.492 west longitude. The Site is bordered by grain silos converted to artist studios to the north-northwest, by Union Pacific Railroad tracks to the south and west, and by the San Antonio River to the north and east. Residential neighborhoods, the San Antonio Independent School District's Brackenridge High School, and various commercial properties, such as small stores and shops, are located across the river from the Site. The Site property includes tax parcels 100159, 100155, 100153, 100148, 100142, 100143, and a small portion of tax parcel 100146. This Ready for Reuse (RfR) Determination applies to those portions of the Site investigated by the EPA, as highlighted in blue in Figure 1 below. The Site is currently owned by Big Tex San Antonio LP. Figure 1 shows the tax parcels that comprise the Site property. Figure 2 shows the Site's surroundings.

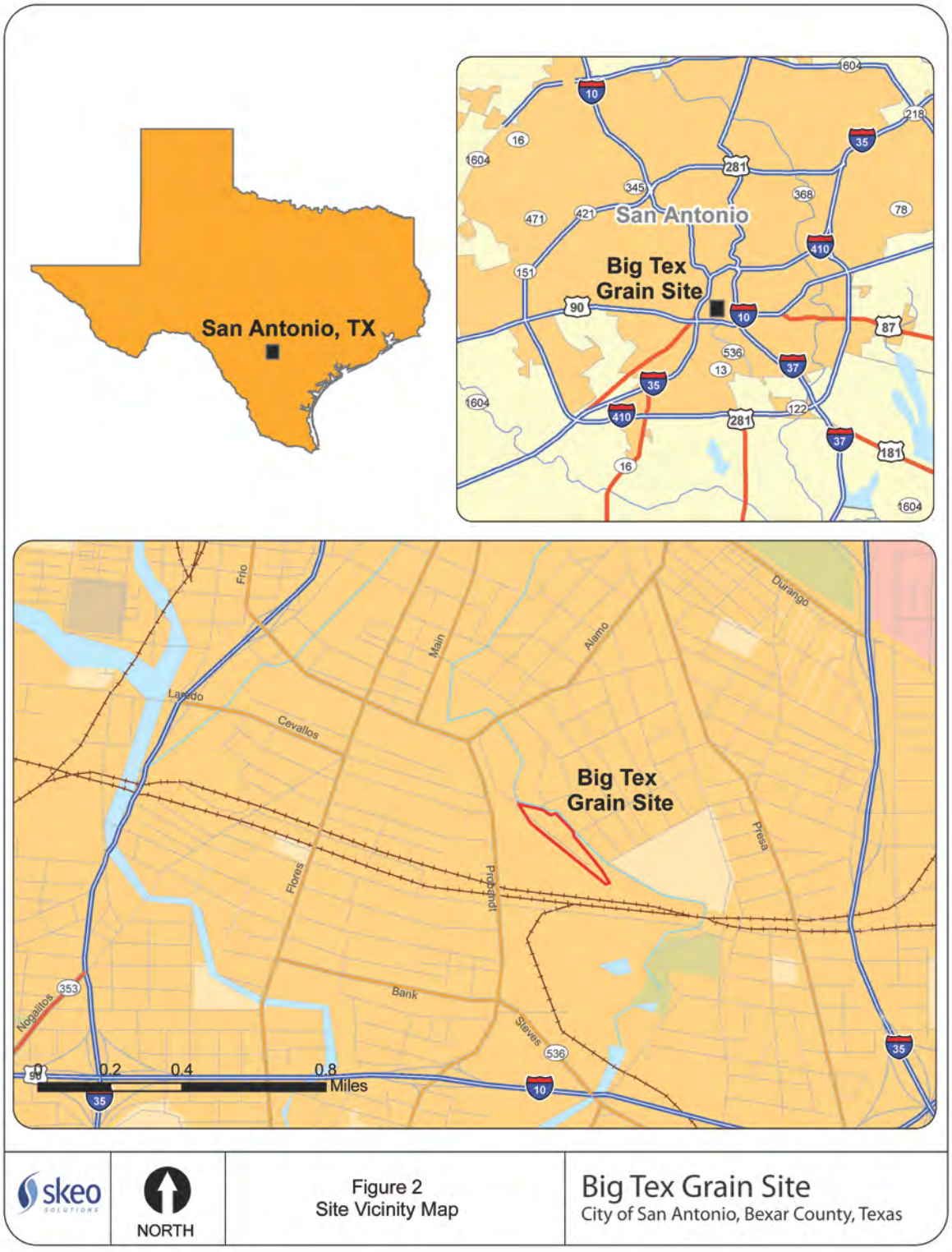
The Site is relatively flat. It currently includes the small silos which abut the San Antonio River bank, a large grain silo and two other structures. However, in 2008, when EPA commenced the removal action at the site it included 32 structures, as well as the Big Tex grain elevators and warehouses located on the eastern portion of the property. The tax parcels that comprise the Site are currently zoned for industrial use.

Figure 1: Big Tex Grain Site and Tax Parcel Map



skeo SOLUTIONS | NORTH | Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map does not purport to be a survey. The map is for informational purposes only, and is not intended for any other purpose. | Figure 1 Tax Parcel Map | Big Tex Grain Site City of San Antonio, Bexar County, Texas

Figure 2: Site Vicinity Map



III. Site Summary

Site and Contaminant History

The Big Tex Grain site has historically been associated with industrial activities, including a vermiculite exfoliation plant, grain production, and sawdust warehousing. The plant operated from 1961 until 1989 and received 103,889 tons of asbestos-contaminated raw vermiculite ore. The plant received vermiculite from the Libby Mine in Libby, Montana. The Site was contaminated with amphibole asbestos as a result of the vermiculite exfoliation operations. Material from the Libby Mine is known to contain amphibole asbestos. Libby amphibole asbestos is a mixture of up to five similar-but-different mineral fibers. These fibers have a mineral composition that includes winchite, richterite, and tremolite, while also containing trace amounts of actinolite and ferro-edenite.

Asbestos-related diseases associated with Libby amphibole asbestos do not present the typical characteristics associated with commercial asbestos exposure, also known as chrysotile asbestos. The key features include a higher incidence of diseases that predominantly involve the pleural surface of the chest cavity (the lining surrounding the lungs). Furthermore, there is an appearance of higher toxicity of fibers based on the lower level exposures, which have led to a significant incidence of lung disease. It has been demonstrated that the lung cancer rates of individuals exposed to Libby amphibole asbestos are significantly higher than the rates in similar, non-asbestos-exposed populations.

Description of Risks

Based on historical, process, and assessment information, the primary concern at the Site was the presence of Libby amphibole asbestos in the dust inside two on-site structures and in soils located throughout the Site. In the 2008 Action Memo, EPA determined that the Site could be accessed by the public and impacts on adjacent neighborhoods and a school were possible. There was also concern that possible exposure from trespassing was likely and that significant rainfall could wash asbestos contaminated soils into the adjacent San Antonio River, potentially impacting drinking water.

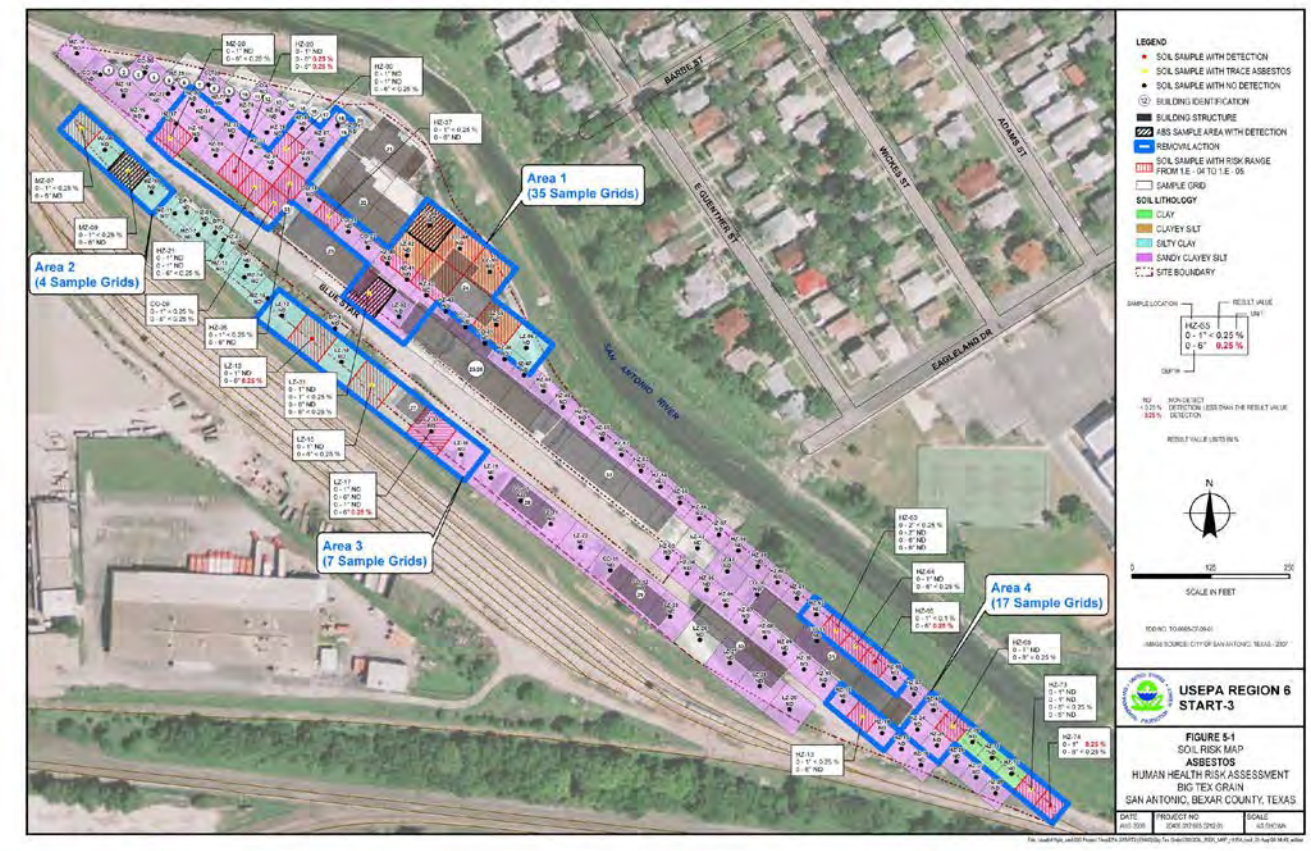
During the EPA investigation, soil contamination at the Site was divided into 63 prioritized grids (see Figure 3) in four areas. Surface and subsurface soils were tested in each grid.

EPA also sampled the dust inside each of the 32 buildings at the Site and performed activity-based sampling (ABS) in areas where soil contamination was found to test for air contamination. ABS mimics human activity in a contaminated area to determine whether the activities result in humans breathing in the contamination. EPA also performed ABS in areas with no contamination or trace amounts of contamination in order to cover a broad portion of the Site.

The results of the EPA investigation showed that 26 of the Site's 63 soil sampling grids were contaminated by asbestos, two buildings were contaminated by asbestos, and seven of eleven ABS

locations yielded asbestos detections. The contamination posed unacceptable risks to future users of the Site because excavation, construction and indoor building activities can readily cause asbestos contamination to become airborne.

Figure 3: Grids on the Big Tex Grain Site



Summary of Cleanup Activities

Table 1 shows a chronology of EPA activities performed at the Big Tex Grain site.

Table 1: Chronology of Site Activities

Date	Activity
1961	Vermiculite exfoliation operations begin.
1989	Vermiculite exfoliation operations end.
March 2000	Limited vermiculite investigation by Astex Environmental Services.

Date	Activity
March 2000	Soil and subsurface soil investigations by URS Corporation.
March 2005	Clean Environments, Inc. investigates soil around the perimeter of two buildings and a parking lot.
December 2005	City of San Antonio Environmental Services Department collects soil samples along the southern bank of the San Antonio River.
July 2006	TCEQ assesses data collected by Shaw Environmental, Inc. prior to construction of a city hike and bike trail.
August 2006	EPA requests that TCEQ perform a Screening Site Investigation (SSI). U.S. EPA identifies five samples to test further for asbestos.
October 2006	Extra Environmental, Inc. performs soil and air monitoring along the hike and bike trail at the direction of the City of San Antonio Environmental Services Department.
January 2007	Ecology and Environment, Inc. collect soil samples east and west of the W.R. Grace building located at the Site.
November 2008	EPA issues an Action Memo requesting funds to perform a time-critical removal action at the Big Tex Grain site.
November 2008	On November 11, 2008, START and ERRS contractors mobilize to the Site to begin EPA removal operations. Excavation begins on November 11, 2008.
December 2008	Removal operations end.
January 2009	Building results show no contamination above levels of concern.

Removal Action (11/05/2008–12/23/2008)

On November 5, 2008, EPA START and ERRS contractors mobilized to the Site to begin removal operations. A command post and a public relations trailer were established. The EPA On-Scene Coordinator (OSC) conducted a public meeting at Brackenridge High School to discuss assessment results and upcoming removal actions with the community. START contractors set up real-time air quality monitors on the perimeter of site operations to insure that no particulates were migrating off site and into adjacent neighborhoods. On November 11, 2008, excavation and cleanup operations began. Twenty-six predetermined grids were excavated to a depth of six inches. Throughout removal operations, soil samples were collected from grids adjacent to the 26 grids. These samples were analyzed for the presence of asbestos and/or vermiculite by an on-site microscopist. The findings of the initial removal sampling revealed that 19 additional grids showed the presence of asbestos and/or vermiculite. EPA excavated each grid where contamination was found, resulting in a total of 47 grids excavated.

ERRS transported and disposed of the impacted soils. Approximately 1,925 tons of soil and debris were disposed of at the Allied Waste-Tessman Road Landfill in San Antonio, Texas. ERRS also restored the excavated grids, bringing in approximately 2,240 cubic yards of clean soil, which was

spread into excavation areas. Material was tamped down to the Site's original grade.

ERRS crews completed the decontamination of the two contaminated site buildings. START contractors conducted AHERA indoor clearance sampling of the decontaminated buildings. START contractors worked with the on-site microscopist to ensure that the sample filter media was not overloaded and was in good shape to ship to LabCor Portland, an asbestos analytical laboratory, for analysis. On January 19, 2009, EPA received the results of the AHERA indoor clearance sampling. The two previously identified buildings (21 and 23) that contained unacceptable levels of amphibole asbestos were successfully decontaminated and the final sampling results were well below the AHERA action level of 70 structures per cubic centimeter. These building were deemed clean but have since been demolished to prepare the site for redevelopment.

During all site operations, continuous on-site and off-site air monitoring was conducted. Constant dust suppression operations at the Site were effective and no site operations generated dust levels that exceeded site action levels.

Redevelopment/Reuse History

The Big Tex Grain site is currently vacant. Most of the 32 structures on the site have been demolished; however, there are several silos which abut the San Antonio River bank, another large silo and two other structures remaining. The Site is currently fenced.

The site owner has expressed interest in converting the vacant and clean industrial property into a mixed use arts and entertainment destination, combining the Site with the neighboring Blue Star Complex. To facilitate redevelopment and reuse efforts, the site owner requested EPA issue a Ready for Reuse Determination for the Site. EPA's Ready for Reuse Determination clearly communicates to current and future users of the Site that EPA has not placed any limitations on use at the Site and has determined that the Big Tex Grain site is ready for reuse.

IV. EPA's Basis for the Ready for Reuse (RfR) Determination

The reasonably anticipated future land use for the Big Tex Grain site is mixed use, including residential and commercial uses, based on interest expressed by the site owner and consideration of surrounding land uses. The RfR Determination determines that the Site is ready for multiple uses, including residential and commercial land uses (referred to as "unlimited use and unrestricted exposure").

The RfR Determination for the Big Tex Grain site is based on the 2008 Request for Removal Action and thirteen POLREPS for the Site. According to the final POLREP, the EPA START and ERRS contractors completed removal operations within the grids on the Site that were determined to be contaminated. All 47 grids were successfully excavated and contaminated soil and debris were disposed of at the Allied Waste-Tessman Road Landfill in San Antonio, Texas. ERRS

completed restoration operations in the excavated grids. The AHERA indoor clearance sampling for the two previously identified structures (buildings 21 and 23) that contained unacceptable levels of amphibole asbestos showed that levels are well below the AHERA action level of 70 structures per cubic centimeter.

During all site cleanup operations, continuous on-site and off-site air monitoring was conducted. Constant dust suppression operations were effective and no site operations generated dust levels that exceeded site action levels. According to the 2008 Request for Removal Action, there is no known ground water contamination and sediments in the San Antonio River are not thought to be contaminated.

The final POLREP, dated January 20, 2009, was replicated as Appendix A in this report. This POLREP summarizes cleanup activities at the Site. The Site's November 2008 Request for Removal Action, which summarizes pre-cleanup conditions at the Site, is included as Appendix B.

V. Post-Removal Closure Activities

Post-removal site control was not necessary at the Site following the removal actions. EPA's removal actions addressed the Site's contamination by removing all identified wastes from the Site. A December 2008 sampling event indicated that no hazardous substance had spread to the nearby San Antonio River. Based on current information, the EPA anticipates that no further EPA or State actions will be necessary at the Site.

VI. Provisos

This RfR Determination is a technical document and an environmental status report and does not have any legally binding effect and does not expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits of any party. EPA assumes no responsibility for reuse activities and/or for any potential harm that might result from reuse activities. EPA retains any and all rights and authorities it has, including, but not limited to, legal, equitable, or administrative rights. EPA specifically retains any and all rights and authorities it has to conduct, direct, oversee, and/or require environmental response actions in connection with the Site, including but not limited to, instances when new or additional information has been discovered regarding the contamination or conditions at the Site that indicate that the response and/or the conditions at the Site are no longer protective of human health or the environment for the types of uses identified in the RfR Determination.

The types of uses identified as protective in this RfR Determination remain subject to (i) applicable federal, state, and local regulation; and (ii) title documents, including, but not limited to, easements, restrictions, and institutional controls.

APPENDIX A

United States Environmental Protection Agency
Region VI
POLLUTION REPORT

Date: Tuesday, January 20, 2009
From: Eric Delgado, OSC

To: Debbie Dietrich, Office of Emergency Management
Ragan Broyles, Superfund Division

Subject: Final POLREP
Big Tex Grain
354 Blue Star St, San Antonio, TX
Latitude: 29.405
Longitude: -98.492

POLREP No.:	13	**Site #:**	A628
Reporting Period:	12/23/2008 thru 01/20/2009	**D.O. #:**	
Start Date:	11/5/2008	**Response Authority:**	CERCLA
Mob Date:	11/5/2008	**Response Type:**	Time-Critical
Completion Date:		**NPL Status:**	Non NPL
CERCLIS ID #:	TXN000606634	**Incident Category:**	Removal Action
RCRIS ID #:		**Contract #**	EP-W-06-042

Site Description
The former Big Tex Grain Site is located on a 7.5-acre lot in San Antonio, Bexar County, Texas, at 328 Blue Star Road. The geographic center of the site is located at Latitude 29.405° North Longitude -98.492° West.

The Big Tex Grain Site has historically been associated with industrial activity, including operating a vermiculite exfoliation plant, grain production, and sawdust warehousing. The EPA Region 6 office performed an assessment of the subject property to determine potential impact to human health and the environment based on the transporting of vermiculite from Libby, Montana, to the W. R. Grace vermiculite exfoliation plant in San Antonio, Texas. The property has been listed in the EPA CERCLIS database since 2000.

The site consists of approximately 32 structures including the Big Tex grain elevators and warehouses on the eastern portion of the property. To the north-northwest of the site, there are numerous grain silos that were converted into office spaces. The site is bounded to the south and west by Union Pacific railroad tracks and to the north and east by the San Antonio River. The site is secured by a chain link and barbwire fence extending around the entire perimeter of the facility. Within the facility exposed soil areas are heavily vegetated, but still accessible. The Big

Tex Grain Site is scheduled to be developed into a “Mixed Use” facility.

Current Activities
The USEPA, START, and ERRS contractors completed removal operations within the identified grids on the Big Tex property. All 47 grids were successfully excavated.

ERRS completed transportation and disposal of the impacted soils. Approximately 1925 tons of soil and debris was disposed of at the Allied Waste-Tessman Road Landfill located in San Antonio, Texas.

ERRS completed restoration operations within excavated grids, approximately 2240 cubic yards of clean soil was delivered and spread into excavation areas. Material was tamped down to the original grade.

ERRS crews completed the decontamination of the two site building previously identified to be impacted. START conducted AHERA indoor clearance sampling of the decontaminated building. START utilized the on site microscopist to ensure that the sample filter media was not overloaded and was in good shape to ship to LabCor, Portland for analysis.

On 01/19/2009, the EPA received the results of the AHERA indoor clearance sampling. The two previously identified buildings (21 and 23) that contained unacceptable levels of amphibole asbestos were successfully decontaminated and the results were well below the AHERA action level of 70 structures per cubic centimeter. These building are now deemed clean and are ready for reuse.

During all site operations, continuous on site and off site air monitoring was conducted. Constant dust suppression operations have shown to be effective, and no site operations have generated dust levels that have exceeded site action levels.

Planned Removal Actions
No further removal actions are scheduled at the Big Tex Grain site.

Next Steps
The EPA will begin the transfer of the site back to the owner who plans on developing the site to a multi-use facility.

Key Issues
There are currently no removal issues regarding the site.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				

Intramural Costs				
Total Site Costs	$0.00	$0.00	$0.00	0.00%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

www.epaosc.net/BigTex

APPENDIX B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

NOV 10 2008

MEMORANDUM

SUBJECT: Request for Removal Action at the Big Tex Grain Company site, San Antonio, Bexar County, TX

FROM: Eric Delgado, On-Scene Coordinator
Prevention and Response Branch (6SF-PR)

TO: Samuel Coleman, P.E., Director
Superfund Division (6SF)

THRU: Ragan Broyles, Chief
Prevention and Response Branch (6SF-P)

I. PURPOSE

This memorandum requests the approval of a time-critical removal action as authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604 at the Big Tex Grain Company Site (hereinafter referred to as the "Site"). The general scope of the removal action will be to remove and dispose hazardous substances that are present in soils and dust from locations onsite.

The actions described in this memorandum meet the criteria for initiating a removal action under Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR § 300.415. This action is expected to require less than twelve months and $2 million to complete.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS No.:	TXN000606634
Category of Removal:	Time-Critical
Superfund Site ID No.:	A628
Latitude:	29.405° North
Longitude:	-98.492° West

A. Site Description

1. Removal site evaluation

The former Big Tex Grain Company Site is located on a 7.5 acre lot in San Antonio, Bexar County, Texas, at 354 Blue Star Road. The Site consists of 33 structures including the Big Tex grain elevators and warehouses on the eastern portion of the property.

Based on the sampling results, the levels in Building 21 and Building 23 exceeded 5,000 asbestos structures per square centimeter (s/cm2) (reference Figure 2-2 for locations of these buildings). Building 21 was used by the Big Tex Grain Corporation and Building 23 was the building in which the primary vermiculite exfoliation processes were carried out. The level associated with the Vermiculite Hopper (4,800 s/cm2) was slightly less than 5,000 s/cm2. Eight buildings/structures had levels between 2,000 s/cm2 and 4,000 s/cm2. Three buildings had levels between 1,000 s/cm2 and 2,000 s/cm2. The results from the remaining buildings were less than 1,000 s/cm2.

Trace levels of asbestos (0.25%) were observed through a microscope field of view qualitative examination of the prepared soil samples at 17 sample locations, and asbestos was detected at 0.25% or greater at 5 sample locations.

A total of 11 areas were identified for Activity-Based Sampling (ABS). The locations were selected based on soil sampling results, the soil characteristics, and previous industrial activities carried out at the site. Phase Contrast Microscopy Equivalent (PCME) asbestos structures were detected at 7 of the 11 ABS locations. The samples collected using the low-flow pumps (LF) had greater levels of PCME than the samples collected using the high-flow pumps (HF). The maximum PCME concentration was 0.0156 f/cc. The low-flow samples were 0.01006 f/cc and 0.01107 f/cc. The low-flow results from 2 samples were 0.00503 f/cc and 0.00302 f/cc, respectively.

The Environmental Protection Agency (EPA) has determined that the actual footprint and volume of soil requiring removal will be finalized during the removal action. EPA will contract an onsite microscopist to inspect soils of adjacent grids to the 21 identified contaminated grids. If the presence of vermiculite/asbestos is detected, those adjacent grids will also be excavated. The following scenarios are as follows:

- *Best Case* – 21 grids or approximately 923 *in situ* cubic yards of surface and subsurface soils (0- to 6-inches bgs) contaminated with asbestos.
- *Worst Case* – 63 grids or approximately 2,750 *in situ* cubic yards of surface and subsurface soils (0- to 6-inches bgs) contaminated with asbestos.

2. Physical location

The former Big Tex Grain Site is located on a 7.5-acre lot in San Antonio, Bexar County, Texas, at 354 Blue Star Road. The geographic center of the Site is located at Latitude 29.405°

The former Big Tex Grain Site is located on a 7.5-acre lot in San Antonio, Bexar County, Texas, at 354 Blue Star Road. The geographic center of the Site is located at Latitude 29.405° North, Longitude 98.492° West. A map identifying the location of the facility is provided (*see* Attachment 1).

The Site consists of 33 structures including the Big Tex grain elevators and warehouses on the eastern portion of the property. To the north-northwest of the Site, there are numerous grain silos that were converted into artist studios. The Site is bounded to the south and west by Union Pacific railroad tracks and to the north and east by the San Antonio River. The Site has a chain-link and barbwire fence extending around the entire perimeter of the Site. Within the facility there are areas of exposed soil, as well as heavily vegetated areas.

The Site owner installed perimeter fencing at the direction of EPA. This fencing is presently breached in several locations, and the doors to the onsite structures are not locked or secured. The EPA representatives observed that trespassers frequently visit the Site; consequently, the contaminated dust inside of the buildings and the areas of exposed contaminated soil are accessible to the public.

3. Site characteristics

The Site contains approximately 33 structures, including the Big Tex grain elevators and warehouses on the eastern portion of the Site. The north-northwest portion of the Site features numerous small-scale grain silos that were converted into artist studios in the late 1990s. The Site is bounded to the south and west by active Union Pacific railroad tracks and to the north and east by the San Antonio River. Residential neighborhoods, San Antonio Independent School District's Brackenridge High School, and various commercial properties such as small stores and shops are across the river. A chain-link and barbwire fence extends around the perimeter of the Site. Within the Site, exposed soil areas are generally vegetated with a variety of weeds and grasses as a result of the Site being dormant since the site was closed. Although not currently occupied, trespassers routinely access the site.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

The hazardous substance located on the property is amphibole asbestos, primarily asbestos-containing vermiculite from the Libby Montana mine. This substance is a "hazardous substance" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and 40 CFR § 302.4.

The primary concern at the Site is the presence of amphibole asbestos in the soil, buildings, and air. A Health Consultation performed by the Minnesota Department of Health (MDOH) for a similar plant, located in Minneapolis, Minnesota showed that elevated levels of asbestos exposure had occurred in the past to plant workers, their household contacts, and people who handled, played in, or otherwise had direct contact with wastes from the Site. The Health Consultation also suggested that residents living near the plant might also have been exposed to asbestos emitted from plant operations (MDOH, 2003).

Six soil samples from the previous sampling efforts at the Site were found to contain Libby amphibole, and each of the six samples originated from surface soils at depths from 0 to 2 inches bgs within the general area of the former W.R. Grace building (Building 21). Based on historical data, the contamination is likely the result of the exfoliation of vermiculite obtained from Libby, Montana, at the W. R. Grace Vermiculite exfoliation plant onsite. Material from the Libby Mine is known to contain amphibole asbestos. Libby amphibole asbestos is a mixture of up to five different, yet similar, mineral fibers. These fibers have a mineral composition that includes winchite, richterite, and tremolite, while also containing trace amounts of actinolite and ferro-edenite.

Based on risk assessment data, approximately 2 site buildings will be addressed, and roughly 1000-2700 cubic yards of soil will be transported and disposed of.

Asbestos-related diseases associated with Libby amphibole asbestos have presented in a way that does not fit the typical pattern associated with commercial asbestos exposure, also known as chrysotile asbestos. The key features include a higher incidence of diseases predominately involving the pleural surface of the chest cavity (lining surrounding the lungs). Furthermore, there is an appearance of a higher toxicity of fibers based on the lower level exposures, which have lead to significant lung disease. This has been observed clinically as well as recognized through ongoing research activities. Another observation over time is that this pleural plaque (scarring on the lung lining) cannot be assumed to be a benign problem. Many individuals have had progression of disease after plaques were initially identified despite the fact that plaques were traditionally perceived as a marker of exposure that did not have negative health implications. In addition, it is also noteworthy that lung cancer rates of those individuals who have had exposure to Libby amphibole asbestos are significantly higher than in similar non-asbestos exposed populations. Because of the increased frequency of health impacts, prolonged latency, and uncertain prognosis, ongoing specialty care and research is essential to further understand the impacts from exposure to Libby amphibole asbestos. A map identifying contamination locations is attached (*see* Attachment 2).

5. NPL status

The Site is not currently on and is not proposed for listing on the National Priorities List (NPL).

6. Maps, pictures and other graphic representations

Attachment 1: Map Identifying Location of Facility
Attachment 2: Map Identifying Contamination Locations

B. Other Actions to Date

1. Previous actions

The Big Tex Grain Company Site has historically been associated with industrial activity, including operating a vermiculite exfoliation plant, grain production, and sawdust warehousing.

The EPA Region 6 performed an assessment of the subject property to determine potential impact to human health and the environment based on the transporting of vermiculite from Libby, Montana, to the W. R. Grace vermiculite exfoliation plant in San Antonio, Texas and the subsequent exfoliation operations. The property has been listed in the EPA CERCLIS database since 2000.

The Site owner desires to redevelop the property as a multi-use residential, commercial, and retail facility and will be seeking the EPA "Ready for Reuse" designation of the Site.

In March 2000, the Astex Environmental Services conducted a limited vermiculite investigation at 401 Blue Star Road for Big Tex Grain, Inc. Five soil samples were collected from areas around a grain elevator and process facility, and analytical results showed the presence of tremolite asbestos in each sample. Three dust samples were collected from inside the 401 Blue Star Road building, and analytical results indicated no asbestos was present. The 401 Blue Star Road building was not suspected to be the main building that handled vermiculite for the W. R. Grace exfoliation plant.

In March 2000, the URS Corporation collected 19 soil samples from the Site at various locations and depths ranging from the surface to 1.5 feet below ground surface (bgs). Analytical results indicated that the samples contained amphibole asbestos ranging from 0 to 0.8499%. One sample also contained chrysotile asbestos.

In March 2005, the Clean Environments, Inc. collected soil samples around the perimeter of two onsite buildings (353 Blue Star and 357 Blue Star) and from an associated parking area at depths from the surface to 6 inches bgs. The 357 Blue Star building is the structure where the W. R. Grace vermiculite exfoliation plant was located. Analytical results indicated that no samples contained amphibole asbestos, while one sample contained 10% chrysotile asbestos.

In December 2005, the City of San Antonio Environmental Services Department collected four soil samples at a depth of 6 inches bgs along the southern bank of the San Antonio River directly adjacent to the Site. Analytical results showed no asbestos in the samples.

In July 2006, the Texas Commission on Environmental Quality (TCEQ) considered the results of soil sampling performed by Shaw Environmental, Inc. adjacent to the W. R. Grace exfoliation plant as part of its investigation prior to construction of the City of San Antonio Eagleland Hike and Bike Trail. Shaw collected 21 soil samples at depths ranging from 0 to 2 inches bgs and at one location at depths ranging from 0 to 4 inches bgs. Analytical results indicated that 2 of the 21 samples collected contained asbestos at levels exceeding the TCEQ protective concentration limits (PCLs) of 2,900 milligrams per kilogram (mg/kg), or 0.29%, for a 0.5-acre source area and of 1,500 mg/kg, or 0.15%, for a 30-acre source area. Five samples contained actinolite concentrations ranging from 0.002% to 4.251%. Samples with tremolite were collected from the upper 6 inches of soil.

In October 2006, the Extra Environmental, Inc. (Extra) performed soil sampling and air monitoring along the Eagleland Hike and Bike Trail at the direction of the City of San Antonio Environmental Services Department. Extra collected 10 soil samples (8 from 0 to 2 inches bgs,

one from 5 to 6 inches bgs, and 1 from 10 to 20 inches bgs). Eight of the 10 samples contained 0.001% asbestos. One sample contained 0.043% chrysotile asbestos and 0.154% Libby amphibole.

In January 2007, the Ecology and Environment, Inc. collected seven surface soil samples. Analytical results indicated that two samples contained Libby amphibole in concentrations ranging from 0.206% to 3.625%. The two samples containing Libby amphibole were collected from east and west of the former W.R. Grace building.

The EPA requested that TCEQ perform a Screening Site Investigation (SSI) at the Big Tex Grain Company Site in August 2006. TCEQ collected soil samples from the Site, but the samples were not analyzed for asbestos. Upon request of the Site owner, EPA located five soil samples from the TCEQ SSI to analyze for asbestos. Upon analysis, three of the five samples contained detectable levels of asbestos ranging from 0.0019% to 0.029%.

2. Current actions

The EPA continues to monitor site conditions and coordinate future cleanup with the TCEQ and the City of San Antonio.

C. State and Local Authorities' Roles

1. State and local actions to date

The TCEQ has requested the assistance of the EPA to address the hazards posed by the hazardous substances relative to this site.

2. Potential for continued State/Local response

The EPA anticipates that its actions will satisfactorily address the risks posed by this site and no further EPA or State actions will be necessary.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to Public Health or Welfare

Actual or potential exposure to nearby human populations or the food chain from hazardous substances or pollutants or contaminants, NCP Section 300.415(b)(2)(i): Based on historical, process, and past assessment information, the primary concern at the Site is the presence of Libby, Montana amphibole asbestos in the dust inside the onsite structures and in the soil throughout the Site.

Libby amphibole asbestos has been recognized as being very unique as it is both chemically and structurally different from chrysotile, the commercial asbestos most

common around the country. From a study conducted by the United States Geological Survey (USGS) released in 2003, it was learned that Libby amphibole asbestos is a mixture of at least five chemically similar fibers. One of the unique features of Libby amphibole asbestos is the tendency of larger fragments to fracture, forming long, thin mineral fibers that appear the same as naturally formed asbestos fibers. The toxicity of these fragments is currently unknown, but through observation of pulmonary diseases in the exposed population there are indications that suggest that these fibers contributed significant toxicity to the exposed individuals.

Asbestos-related diseases associated with Libby amphibole asbestos have presented in a way that does not fit the typical pattern associated with commercial asbestos exposure, also known as chrysotile asbestos. The key features include a higher incidence of diseases predominately involving the pleural surface of the chest cavity (lining surrounding the lungs). Furthermore, there is an appearance of a higher toxicity of fibers based on the lower level exposures that have lead to significant lung disease. This has been observed clinically as well as recognized through ongoing research activities. Another observation over time is that this pleural plaque (scarring on the lung lining) cannot be assumed to be a benign problem. Many individuals have had progression of disease after plaques were initially identified despite the fact that plaques were traditionally perceived as a marker of exposure that did not have negative health implications. In addition, it is also noteworthy that lung cancer rates of those individuals who have had exposure to Libby amphibole asbestos are significantly higher than in similar non-asbestos exposed populations. Because of the increased frequency of health impacts, prolonged latency, and uncertain prognosis, ongoing specialty care and research is essential to further understand the impacts from exposure to Libby amphibole asbestos.

There is a potential for exposure of human populations and animals to toxic concentrations of amphibole asbestos are located in three of the buildings, and the soil. The Site is easily accessible to the public. The impact to the adjacent neighborhood and school is likely. There is a potential exposure to human populations which could result from trespassing on the property. Evidence of trespassing is seen by beverage containers, graffiti, and general disarray of the inside of the building. Currently the perimeter fencing is dilapidated; but entry into the facility is easily accessible.

Actual or potential contamination of drinking water supplies, NCP Section 300.415(b)(2)(ii): There is currently no evidence of contamination of drinking water supplies. All drinking water is provided by the City of San Antonio. However, the Site does border the San Antonio River, and during periods of heavy rainfall site contaminants could drain from the site and into the San Antonio River.

Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release, NCP Section 300.415(b)(2)(iii): The Site contaminants are located in the soils and the dust of 3 facility buildings.

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released, NCP Section 300.415(b)(2)(v): During periods of high winds, Site contaminants are very susceptible to becoming airborne and migrating offsite or into new locations onsite.

Threat of fire or explosion, NCP Section 300.415(b)(2)(vi): The Site has had a previous fire. The facility buildings are primarily metal, but do contain burnable materials within them.

The availability of other appropriate Federal or State response mechanisms to respond to the release, NCP Section 300.415(b)(2)(vii): There are no other response mechanisms that could address the chemical hazards posed by the hazardous substances on this site in a timely manner. The City of San Antonio and TCEQ do not currently have the resources to address the Site. The EPA has and will continue to coordinate with the TCEQ and local government on this response action.

Other situations or factors that may pose threats to public health or welfare of the United States or the environment: Failure to address these hazardous substances may result in more significant on and offsite migration of these hazardous substances thereby creating a larger and more costly response action, and posing a greater impact on human health, welfare, or the environment.

B. Threats to the Environment

At this time, it is evident that the environment has been impacted by the Site as observed in the contaminated solids in the soils and buildings. Failure to take the proposed action could result in continued migration of these hazardous substances and the potential for exposure to sensitive receptors.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances, or pollutants or contaminants from this site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

CERCLA funds will be utilized for all removal activities. The proposed removal action

involves the removal of amphibole asbestos contaminated soils and dust from buildings. Hazardous substances will be profiled, packaged, and transported to offsite disposal facilities that are in compliance with the the EPA Offsite Rule. All waste streams will be profiled and disposed of appropriately. Contaminated soil will be excavated and backfilled. The property will be graded and stabilized.

2. Applicable or relevant and appropriate requirements (ARARs)

This removal action will be conducted to eliminate the actual or potential release of a hazardous substance, pollutant, or contaminant to the environment, pursuant to CERCLA, 42 U.S.C. § 9601 et seq. in a manner consistent with the NCP, 40 C.F.R. Part 300. As per 40 C.F.R. § 300.415(i), Fund-financed removal actions pursuant to CERCLA Section 104, 42 U.S.C. § 9604, and removal actions pursuant to CERCLA Section 106, 42 U.S.C. § 9606 shall, to the extent practicable considering the exigencies of the situation, attain the applicable or relevant and appropriate requirements under Federal environmental law, including the Toxic Substance and Control Act (TSCA), 15 U.S.C.§ 2601 et. seq., the Safe Drinking Water Act (SDWA), 42 U.S.C. § 300 et. seq., the Clean Air Act (CAA), 42 U.S.C. § 7401 et. seq., Clean Water Act (CWA), 33 U.S.C. § 1251 et. seq., the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et. seq., or any promulgated standard, applicable or relevant and appropriate requirements, criteria, or limitation under a state environmental or facility citing law that is more stringent than any Federal standard, requirement, criteria, or limitation contained in a program approved, authorized or delegated by the Administrator and identified to the President by the state.

Due to the fact that consolidation and offsite disposal are the principal elements of this removal action, RCRA waste analysis requirements found at 40 C.F.R. §§ 261.20 and 261.30, RCRA manifesting requirements found at 40 C.F.R. § 262.20, and RCRA packaging and labeling requirements found at 40 C.F.R. § 262.30 are deemed to be relevant and appropriate requirements for this removal action. Because onsite storage of hazardous wastes by the EPA is not expected to exceed ninety days, specific storage requirements found at 40 CFR Part 265 are not applicable or relevant and appropriate (See 40 CFR § 262.34). All hazardous substances, pollutants, or contaminants removed offsite for treatment, storage, or disposal shall be treated, stored, or disposed at a facility in compliance, as determined by the EPA, pursuant to 40 CFR § 300.440. All offsite transportation of hazardous materials will be performed in conformity with U.S. Department of Transportation (DOT) requirements at 49 CFR § 172.

3. Project schedule

The EPA expects to initiate removal action upon approval of this Action Memorandum. The removal action will last approximately 2-3 months.

B. Estimated costs

Extramural Costs:

Contractor	CERCLA Funds
Cleanup Contractor	$ 575,000
START	$ 300,000
Total Extramural	$ 875,000
Site Contingency (20%)	$ 175,000
TOTAL PROJECT CEILING	**$ 1,050,000**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If action is not taken at the Site, trespassers to the Site will continue to be exposed to amphibole asbestos that may lead to chronic lung diseases. Additionally, the Site is adjacent to a neighborhood and high school, which may lead to children potential exposure. A release from this Site could result in exposure to human populations.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues associated with this action.

VIII. ENFORCEMENT

The total for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be $1,999,191

(Direct Cost) + (Other Direct) + (52.61% of Total Direct {Indirect Cost}) =
Estimated EPA Cost for a Removal Action

$ 1,050,000 + $ 260,000 + (52.61% x $ 1,310,000) = $ 1,999,191

Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2002. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only, and their use is not intended to create any

rights for responsible parties. Neither the lack of a total cost estimate nor the deviation of actual total costs from this estimate will affect the United States right to cost recovery.

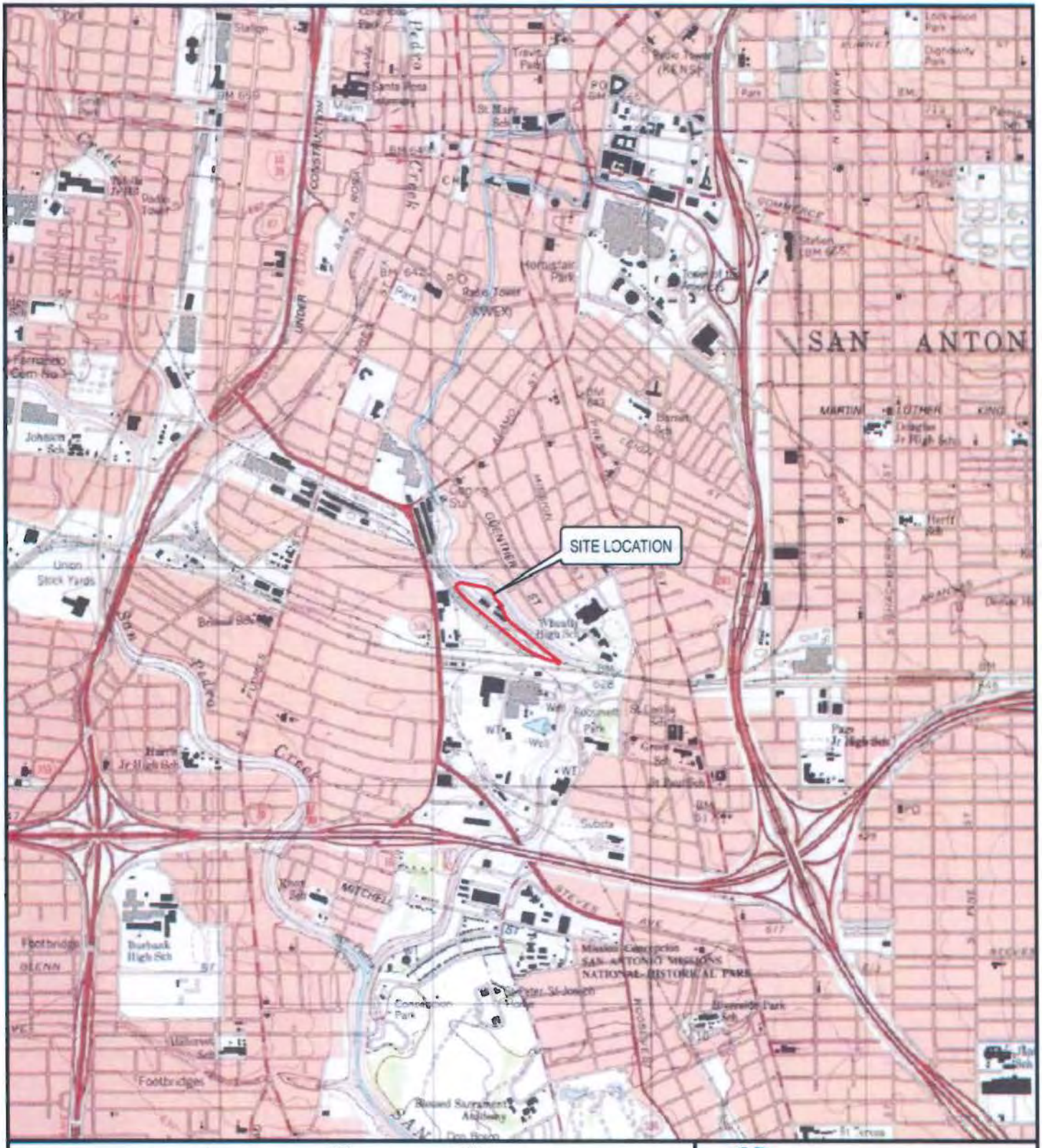
IX. RECOMMENDATION

This decision document recommends the selected removal action under CERCLA for the Big Tex Site, in San Antonio, Bexar County, Texas developed in accordance with CERCLA, 42 U.S.C. § 9601 et. seq., and is not inconsistent with the NCP, 40 CFR § 300. This decision is based on the Administrative Record for the Site.

Conditions at the Site meet the criteria defined in Section 300.415 and 300.305 of the NCP. I recommend your approval of the proposed removal action. The total CERCLA extramural project ceiling for the proposed action, if approved, will be $1,050,000. An estimated $1,050,000 comes from the Regional removal allowance.

APPROVED: _____ DATE: 11/10/08

Samuel Coleman, P.E., Director
Superfund Division



USEPA REGION 6
START- 3

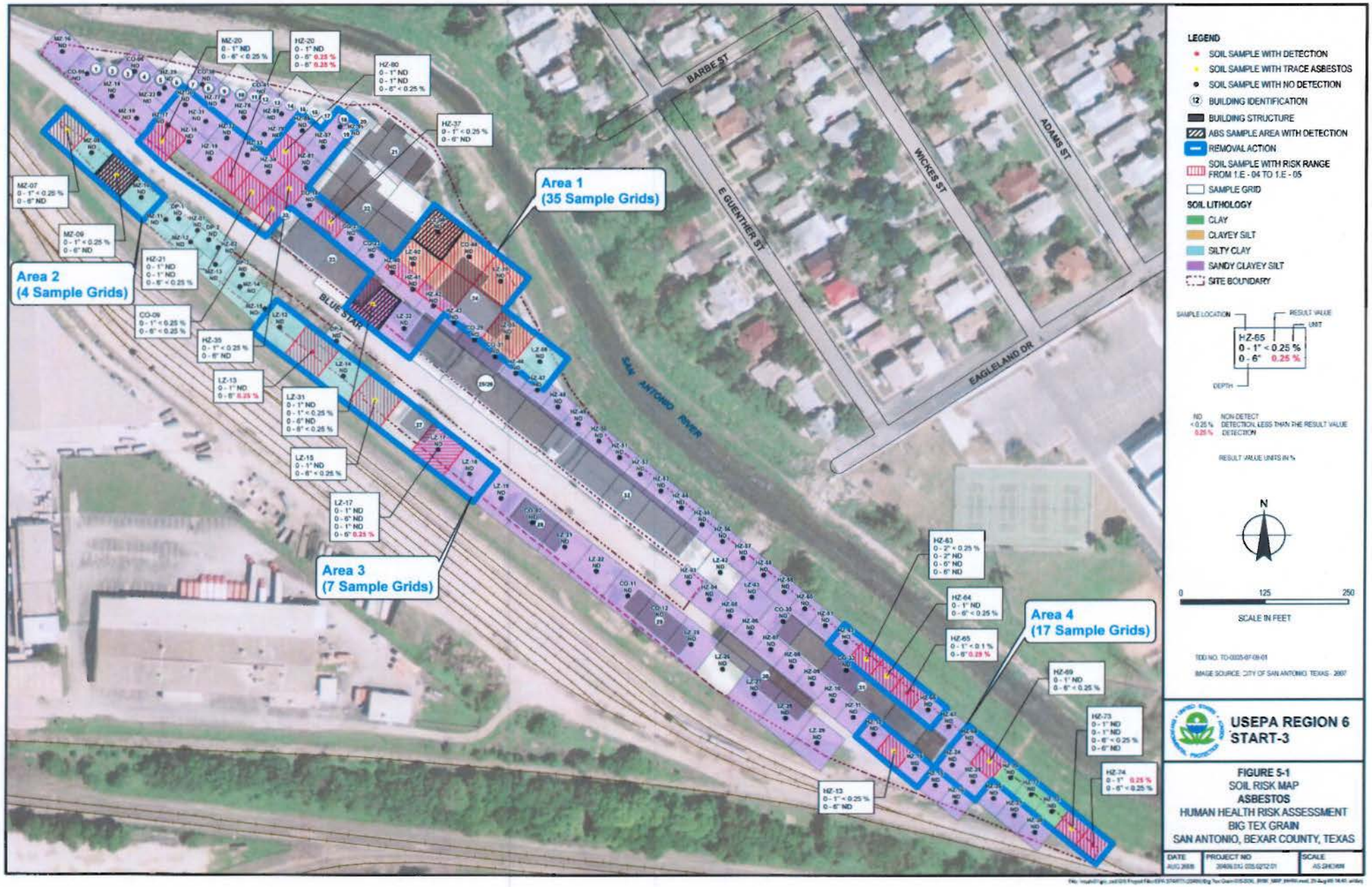
FIGURE 1-2
SITE AREA MAP
HUMAN HEALTH RISK ASSESSMENT
BIG TEX GRAIN
SAN ANTONIO, BEXAR COUNTY, TEXAS

DATE	PROJECT NO	SCALE
JUN 2008	20406.012.001.0216.01	AS SHOWN

TDD NO. TO-0005-07-09-01

SOURCE: USGS 7.5 MIN TOPOGRAPHIC QUADRANGLE: SAN ANTONIO EAST, TEXAS - 1995

File: \\sastx01\gis_cad\GIS Project Files\EPA START\3 (20406)\Big Tex Grain\GIS\SITE_AREA_MAP.mxd, 29-Aug-08 13:39, sklein


Area 1
(35 Sample Grids)
Area 2
(4 Sample Grids)
Area 3
(7 Sample Grids)
Area 4
(17 Sample Grids)
BARBE ST
WICKES ST
ADAMS ST
E GUENTHER ST
EAGLELAND DR
BLUE STAR
SAN ANTONIO RIVER
LEGEND
SOIL SAMPLE WITH DETECTION
SOIL SAMPLE WITH TRACE ASBESTOS
SOIL SAMPLE WITH NO DETECTION
BUILDING IDENTIFICATION
BUILDING STRUCTURE
ABS SAMPLE AREA WITH DETECTION
REMOVAL ACTION
SOIL SAMPLE WITH RISK RANGE FROM 1.E - 04 TO 1.E - 05
SAMPLE GRID
SOIL LITHOLOGY
CLAY
CLAYEY SILT
SILTY CLAY
SANDY CLAYEY SILT
SITE BOUNDARY
SAMPLE LOCATION
RESULT VALUE
UNIT
DEPTH
HZ-65
0 - 1' < 0.25 %
0 - 6' 0.25 %
ND NON DETECT
< 0.25 % DETECTION, LESS THAN THE RESULT VALUE
0.25 % DETECTION
RESULT VALUE UNITS IN %
N
0 125 250
SCALE IN FEET
TDD NO. TO-0005-07-09-01
IMAGE SOURCE: CITY OF SAN ANTONIO, TEXAS - 2007
USEPA REGION 6
START-3
FIGURE 5-1
SOIL RISK MAP
ASBESTOS
HUMAN HEALTH RISK ASSESSMENT
BIG TEX GRAIN
SAN ANTONIO, BEXAR COUNTY, TEXAS
DATE
PROJECT NO
SCALE

APPENDIX C

ABBREVIATIONS AND ACRONYMS

ABS – Activity Based Sampling
AHERA – Asbestos Hazard Emergency Response Act
AR – Administrative Record
CERCLIS – Comprehensive Environmental Response, Compensation, and Liability Information System
ERRS – Emergency and Rapid Response Services
OSC – On-Scene Coordinator
POLREPS – Pollution Reports
RfR Determination – Ready for Reuse Determination
SSI – Screening Site Investigation
START – Superfund Technical Assistance and Response Team
TCEQ - Texas Commission on Environmental Quality
U.S. EPA – United States Environmental Protection Agency