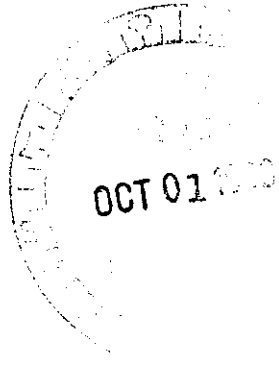




Clean Environments, Inc.
Industrial Hygiene & Environmental Engineering Consultants



September 30, 1993

Mr. Frank Jasso
San Antonio Housing Authority
818 South Flores
San Antonio, Texas 78295

RE: Phase One Environmental Assessment
10.6849 Acres Raw Land on 1901 South San Marcos Street
San Antonio, Bexar County, Texas
CEI Project N^o: BEZ-1343

Dear Mr. Jasso:

The Phase One Environmental Assessment report is forwarded to you for your information and necessary action.

We will be happy to answer any questions concerning the report. It has been a pleasure to work with you on this project. We look forward to being of continued service to you.

Very truly yours,

CLEAN ENVIRONMENTS, Inc.

Merrill R. Good, P.E., C.I.H.
President

A. Denese Huntsberry, R.E.M.
Manager, Environmental Assessments


ENVIRONMENTAL SITE ASSESSMENT
FOR THE
EVALUATION OF POTENTIALLY HAZARDOUS MATERIALS

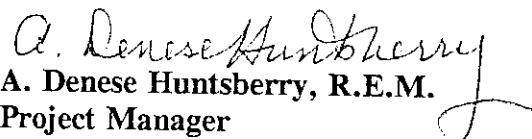
ESA - PHASE ONE

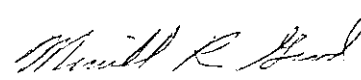
Asset Name: 10.6849 Acres Raw Land
Asset Location: San Antonio, Texas
CEI Project Nº: BEZ-1343

Prepared For:
San Antonio Housing Authority
San Antonio, Texas

Inspection Date:
September 16, 1993


Benjamin Hernandez, O.H.S.T.
Industrial Hygiene Technician
Inspector


A. Denese Huntsberry, R.E.M.
Project Manager
Technical Review


Merrill R. Good, P.E., C.I.H.
President
Executive Review



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EXECUTIVE SUMMARY

A Phase One Environmental Site Assessment was performed on the property known as 10.6849 Acres of Raw Land located at 1901 South San Marcos Street behind the Union Stock Yards, San Antonio, Texas. The inspection was conducted on September 16, 1993 by Mr. Benjamin Hernandez. The subject property is a large vacant tract of land that is secured with a chain linked fence.

The various types of floor tiles on the old foundation, near the southeast corner of the subject property were analyzed as asbestos containing materials (ACMs). The ACMs are significantly damaged and total about 700 square feet. The vinyl floor tile does not need to be removed from the foundation prior to demolition.

Two active water wells were observed on the property. Both wells are for domestic use, and there has never been contamination problems with the wells. One 55-gallon drum of an unknown substance was observed on the mid-section of the subject property. There were no odors or sheens nor signs of dead or distressed vegetation around the unlabeled drum. Pungent raw sewage was observed in an open manhole located on the east portion of the site. No other suspect hazardous materials were found through the site inspection or subsequent communication with local authorities.

A review of official records and/or communications with the federal, State, city agencies, and other sources revealed 18 registered underground storage tanks (USTs) at eight facilities within one half mile of the subject property. There are nineteen LUST facilities listed within one half mile of the subject property. One of those LUST facilities is the subject property which has been remediated and the case closed by the Texas Water Commission (TWC). Another LUST facility abuts the north property line. This LUST facility is still under remedial action, but the TWC records show that the subject property is not engulfed in the contaminant plume. This facility is not considered a threat to the subject property. There are seven Resource, Conservation, and Recovery Act (RCRA) facilities within one half mile of the subject site. The RCRA sites are either downgradient or sidegradient to the subject property and have not had any reported spills or emergency notifications related to hazardous waste generation. The TWC Spill Response Database showed that a minor PCB spill (no clean-up required) occurred on the subject property when the site was active. No other regulated activities or incidents on or within one half mile of the subject site were indicated through the regulatory data research or observed during the on-site inspection and area reconnaissance.

Based upon these findings and the limitations of a Phase One Environmental Site Assessment, the site is considered one of moderate environmental risk which indicates the need for additional sampling or investigation.

The contents of the drum should be analyzed for reactivity, corrosivity, ignitability (RCI) and toxicity to determine appropriate disposal or recycling procedures.

When the water wells are no longer used, immediate action should be taken to cap and plug them in accordance with Texas Administrative Code, Title 31, Chapter 338, Sections 4-8, 4-9, and 5-0, to avoid pollution and contamination of the Aquifer. This action and associated costs are the responsibility of the current owner and will require a City of San Antonio permit. The process will encompass removal of the current pumping apparatus and any removable casings. In addition, the top ten feet of the well must be filled with cement.

The City should be notified of the overflow of sewage in the manhole in order to locate and repair possible sewage leaks in the system.

1.0 SCOPE OF WORK

1.1 The environmental assessment consisted of an initial site visual inspection, a historical records search, a title abstract, and procurement of aerial photographs of the site. Discussions and/or record searches were held with various State and local agencies.

The objectives of this audit were to:

1. Assess past and current compliance with applicable environmental regulations except air emissions.
2. Identify, in general, the use and generation of hazardous materials.
3. Ascertain the past and current disposal practices of hazardous materials.
4. Determine the presence and use of storage tanks.
5. Perform an asbestos inspection to approximate the amounts of readily identifiable suspect asbestos material.

1.2 This study and report has been prepared solely for use in environmental evaluation of the subject property.

1.3 Our efforts in this study have been to identify the potential environmental hazard conditions of the subject property. Possible sources of contamination may have been omitted because of the limitations of this assessment, the inaccuracy of governmental records, or unreported or undetected situations of environmental concern. Our recommendations and conclusions which are based on our professional judgment concerning data obtained from various agencies, records of communication, and on-site observations may vary if additional sampling and analysis of subsoils and/or groundwater are conducted on the subject site.

1.4 We warrant the performance of our services in accordance with the standards of care and diligence normally practiced by recognized engineering firms in performing services of a similar nature under similar circumstances. We will not, however, undertake exposure to hazardous materials-related legal liability, especially third-party liability, which is disproportionate to the value of our services or to our ability to quantify and insure against such liability.

2.0 ASSET INFORMATION

Asset Name and Address: 10.6849 Acres of Vacant Land at 1901 South San Marcos Street, behind the Union Stock Yards, San Antonio, Bexar County, Texas.

3.0 SITE BACKGROUND

3.1 *Site Location and Description.*

3.1.1 Legal Description. A 10.6849 acre tract of land being all of Lots 369, 370, 377-390, and the remaining parts of Lots 391-395, all in New City Block 6186 Sotholme Addition revealed in Volume 368 at Page 79, of the plat recorded in Bexar County, Texas.

3.1.2 General Description. The subject property is a large vacant tract of land covered with grasses and weeds. The remains of several concrete foundations and asphalt parking areas are on the property. It is located in a commercial and residential area of San Antonio, Texas. The property is secured with a chain linked fence.

3.1.3 Current Use. None.

3.1.4 Previous Use. The property was previously occupied by Swift Independent Company (pork packing business). There were several buildings on the site which were demolished approximately three to four years ago.

3.2 Properties Surrounding the Site. The subject property is surrounded by single-family residential homes to the south and the Union Stock Yards to the north. No current land use in the surrounding area is suspected to have a negative environmental impact on the subject site. See Appendix D: Site Maps.

4.0 SITE HISTORY

4.1 Chain of Title. A review of the 50-year chain of title indicated that the sole owner of the property has been Swift and Company since 1938. See Appendix A: Recorded Chain of Title.

4.2 Historical Aerial Photographs. Aerial photographs from 1952 through 1991 were reviewed at the City of San Antonio Engineering and Planning Department.

4.2.1 The 1991 aerial photograph (scale: 1:500) shows the subject property as vacant land and surrounding properties as single-family homes to the south and east and the Union Stock Yards to the north and west. There are several cleared areas on the site. See Appendix B: Aerial Photographs.

4.2.2 The 1952 through 1978 aerial photographs show the subject property improved with several buildings. Single-family residential homes are south and east of the site. The Union Stock Yards are located north and west of the site.

4.3 *Historical Document Review.* Sanborn Maps and City Directories were reviewed at the City of San Antonio Public Library. Research indicated that the subject property was used as a meat packing plant since 1889. Swift Independent Company bought the property from Union Meat Company in 1938 and used it as a pork packing company. The plant was closed on July 5, 1986.

4.3.1 Sanborn Maps from 1912 through 1952 were reviewed and revealed the subject property improved with several buildings used as a meat packing company. No underground storage tanks and no other items that might have a negative environmental impact on the subject property were noted.

4.3.2 A review of Cole Polk Directories indicated that the subject property first appears in 1901 as the Union Meat Company. The last time the property appears is in 1983 as Swift Independent Company.

5.0 REGULATORY REVIEW

The area for which records are obtained and reviewed in accordance with the environmental database search of regulatory compliance records is referred to as the approximate minimum search distance. The term approximate minimum search distance is used in lieu of radius to include irregularly-shaped properties. This section defines the minimum search distance for each standard environmental source list used in this assessment.

5.1 *Federal Environmental Databases.*

5.1.1 The tract and neighboring tracts of land are not on the Environmental Protection Agency (EPA) National Priority List (NPL). This list contains information on Superfund Sites that have been designated as national priority clean-up sites. No NPL sites were listed within one half mile of the subject property.

5.1.2 The EPA Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) identifies all known, alleged, or potentially contaminated sites. The subject site is not listed. No sites are identified within one half mile of the site. No CERCLIS equivalent sites identified for investigation or remediation were listed within one mile of the subject property.

5.1.3 The subject property is not licensed under the EPA Resource, Conservation, and Recovery Act (RCRA). RCRA registrations information system identifies facilities that are known solid waste generators (GEN), hazardous waste treatment, storage, and/or disposal facilities (TSD), and hazardous waste transporters (TRS) registrations. None of the adjoining properties were identified as RCRA GEN or TRS facilities. There are seven EPA Resource, Conservation, and Recovery Act (RCRA) facilities within one half mile of the subject property. The RCRA sites have not had any reported spills or emergency notifications related to hazardous waste generation. See Appendix E for a description of these sites. None of these sites are suspected to pose a threat to the subject property.

5.1.4 The EPA TX Emergency Response Notification System (ERNS) contains information on releases of oil and hazardous substances and includes the name of the discharger, the cause of release, and incident location. The subject property is not listed on the ERNS. There are no ERNS sites within one half mile of the subject property.

5.2 *State Environmental Databases*

5.2.1 The Texas Water Commission (TWC) Solid Waste Registration (SWR) contains information on permitted landfills, incinerators, transfer stations, sludge application sites, illegal dump sites, recycling facilities, medical waste generators, and transporters. The subject property is not listed on the SWR. There are no SWR facilities within one half mile of the subject property.

5.2.2 The TWC Spill Response Sites (SPILL) file contains all reported spills to the TWC Texas Emergency Response Center of a harmful quantity of oil and hazardous substances or other substances or a release or threatened release. The subject property is listed on the SPILL file. The spill was classified as minor and did not require clean-up. The spill involved an unknown quantity of oil containing 20 parts per million of polychlorinated biphenyls (PCBs). A letter was sent to the Texas Water Commission to obtain additional information on the spill. As of this date, there has been no response. Clean Environments, Inc. will forward any pertinent information to the San Antonio Housing Authority when received.

5.3 *General Public Records*

5.3.1 The City of San Antonio Code Compliance Division does not have any current registered complaints involving environmentally-related activities or incidents on the subject property or abutting properties.

5.3.2 A letter was sent to the City of San Antonio Fire Department to obtain information on any underground storage tank (UST) installations, removals, or leaks, or fires involving toxic releases, hazardous substance spills or toxic releases, emergency response actions and any other information that could be of an environmental concern. As of this date, there has been no response. Clean Environments, Inc. will forward such information to the San Antonio Housing Authority when received.

5.3.3 A letter was sent to the City of San Antonio Department of Environmental Management, requesting information on any items of environmental concern that are on file for the subject property. As of this date, there has been no response. Clean Environments, Inc. will forward information to the San Antonio Housing Authority when received.

5.3.4 *Building and Demolition Permits.* A letter was sent to the City of San Antonio Records Facility requesting information on any permits that were issued to the subject property. According to their response, no permits were issued prior to 1984 for the subject property.

6.0 **SITE INVESTIGATION AND REVIEW OF HAZARDS**

The on-site inspection was accomplished on September 16, 1993 at 11:00 a.m. Mr. Benjamin Hernandez, a Clean Environments, Inc. environmental professional experienced in environmental assessments, performed the inspection and area reconnaissance. No one accompanied Mr. Hernandez during the site visit. Existing conditions, business activities, and operations on the subject property and on the abutting and adjacent sites were observed during the on-site inspection and inquiry. For the purpose of this assessment, the definition of "adjacent site or property" identifies those sites separated from the subject site by an easement, such as a street, highway, railroad, etc., which would otherwise be abutting the subject site.

6.1 *Topography.*

6.1.1 *Geographic Coordinates:*

Latitude: 29 degrees, 29 minutes, 00 seconds, North
Longitude: 98 degrees, 30 minutes, 30 seconds, West

6.1.2 The subject property is approximately 646 feet above sea level. Surface drainage for the site is to the southeast.⁽¹⁾

6.2 *Soils/Geology.* The soil in this area is the Lewisville silty clay, 0 to 1 percent slope. This soil occurs as nearly level, broad terraces along rivers and creeks. The surface layer is either silty clay or light clay and is about 24 inches thick. The subsurface layer is brown silty clay that is very firm but crumbly when moist. It is 20 inches thick. This layer has a few worm casts and a few hard and soft lime concretions. There is no hazard of water erosion. Lack of soil moisture is a limitation. This soil is slowly to moderately permeable and the potential for leachate migration is low.⁽²⁾

6.3 *Surface Water Hydrology.* The subject property is approximately two or four feet above street grade. The closest surface water is Apache Creek which is approximately 75 feet east of the site.⁽¹⁾

6.4 *Hydrogeology.*

6.4.1 The subject property sits above the Artesian Zone of the Edwards Aquifer. The Aquifer consists of the Edwards and associated Georgetown and Comanche Peak Formations in the north and the Edwards Group in the south. The Aquifer is composed of evaporitic, tidal flat, and reef deposits of Cretaceous age. The uneroded thickness of the massive to thinbedded, nodular, cherty, gypsiferous, clayey, white to gray limestone and dolomite which are in hydraulic continuity, increases from northeast to southwest along strike and expands down dip from the outcrop. Thickness ranges from 225 feet to 1,000 feet. The Edwards limestone is the primary water bearing formation, and yields moderate to large quantities of fresh water. Over wide areas, the Aquifer produces water from several layers of highly permeable and porous karstic rocks caused by groundwater dissolution. Recharge occurs by downward percolation of surface water from rivers and streams crossing the aquifer outcrop and/or infiltration zone and secondarily by direct infiltration of precipitation on the outcrop. Some streams crossing the outcrop flow only during floods because of the high rate of surface-water seepage into the underlying strata. Recharge waters reach the Aquifer mainly through solution crevices and faults within the Balcones Fault Zone. Small amounts of groundwater enter the Aquifer from the

underlying Glen Rose Formation as either lateral underflow or upward leakage along faults. Water moves regionally from recharge areas, through highly permeable solution zones, to discharge at wells and naturally at numerous small and large springs. The direction of groundwater flow is controlled by the presence and continuity of permeable strata within the Aquifer and by faults which abruptly disrupt the lateral continuity of these permeable zones. The general direction of groundwater flow is in a southeast direction. As groundwater moves downgradient, the displacement of high permeable layers can cause a partial to complete barrier to flow within the Aquifer, and can result in a redirection of flow parallel to the fault.⁽³⁾

6.4.2 Public water supply for the subject property comes from the Mission Well Station which has seven wells with an average depth of 1,290 feet to the top of the Aquifer.⁽⁴⁾

6.5 *Improvements and Old Ruins.* The remains of old foundations, truck weight stations, and asphalt parking areas were throughout the site.

6.6 *Chemicals and Raw Materials.*

6.6.1 *Labeled Containers.* None.

6.6.2 *Unmarked Containers.* One 55-gallon drum of an unknown substance was observed on the eastern portion of the subject property. The drum was not labeled. It was in good condition with no obvious signs of leakage. There were no odors or sheens nor signs of dead or distressed vegetation identified in or around this area.

6.6.3 *Emergency Response Preparation.* None.

6.6.4 *Material Safety Data Sheets (MSDS).* None.

6.6.5 *Visible Hazards Communication.* None.

6.7 *Polychlorinated Biphenyls (PCBs).* None.

6.8 *Asbestos-Containing Materials.*

6.8.1 Construction materials containing asbestos have been used extensively in buildings. Asbestos possesses excellent properties for fireproofing and insulation materials. Asbestos may be found in: (1) cement products; (2) spray applied or trowel applied materials on ceiling, walls, and other surfaces; (3) insulation on pipes, boilers, tanks, ducts, and other equipment; (4) vinyl floor tiles; (5) roofing felts; (6) roofing coatings; and (7) other miscellaneous products. Friable asbestos material is any material

that contains more than one percent asbestos by weight which can be crumbled, pulverized, or reduced to powder, when dry, by hand pressure. Some of these asbestos-containing materials (ACM) are not considered friable now, but could become friable if not properly managed and maintained under an asbestos management program.

6.8.2 Suspect Asbestos Sample Collection.

6.8.2.1 An asbestos inspection was conducted by Mr. Benjamin Hernandez, Texas Department of Health (TDH) License Number 60-0046 and Asbestos Inspector Certificate N^o 457-94-7119 under TDH Asbestos Consultant Agency License N^o 10-0005.

6.8.2.2 Three types of suspect asbestos-containing floor tiles were identified, sampled, and classified as to their condition and potential for disturbance. The floor tiles were non friable but significantly damaged because of exposure to weathering. See Appendix G: Support Data for an overview of the samples collected and analytical results.

6.8.3 Bulk Asbestos Sample Results. All three tiles were analyzed as containing asbestos. The vinyl asbestos tiles are located on top of an old foundation, near the southeast corner of the subject property, south of the entrance where an office building used to occupied that space. The approximate amount of ACM is 700 square feet. Appendix G - Support Data for further information. RJ Lee Group, Inc., Houston, Texas, TDH Asbestos Laboratory License N^o 30-0051, performed the analyses.

6.9 Radon. Bexar County has an arithmetic mean radon level of 1.1 picocuries per liter. This level is below the EPA action level of 4 picocuries per liter.⁽⁵⁾

6.10 Lead-based Paint. None.

6.11 Lead in Drinking Water. According to a representative of the City of San Antonio Water Systems, the City conducted a lead and copper study of drinking water in December 1992. Results of the study indicate the lead and copper levels are in compliance with federal directives.

6.12 Hazardous Substances. None.

6.13 Landfills. None.

6.14 Pits, Sumps, Drywells, and Catchbasins. None.

6.15 On-Site Petroleum Storage Tanks.

6.15.1 *Underground Storage Tanks (USTs).* There is no evidence of USTs on the subject property. Conversations with a long time resident in the area and with a previous employee of Swift Independent Company, revealed that there were several USTs on the site. They stated that the USTs were located near the southern border of the property. They indicated that the USTs were removed. A review of Texas Water Commission (TWC) records revealed that there were five USTs on the site. Records indicated that the USTs were removed from three tank holds on September 27, 1990. Three of the USTs were located near the southern border of the site. The other two were located near the northeast corner of the site. Table 1 gives some information on these USTs. More detailed information is listed on the TWC data searches in Appendix G.

TABLE 1: PREVIOUS USTs ON SITE			
UST ID N ^o	DATE INSTALLED	CAPACITY	SUBSTANCE
1	1954	7,000	Diesel
2	1958	8,000	Gasoline
3	1958	1,000	Gasoline
4	1934	34,000	Unknown
5	1934	34,000	Unknown

6.15.2 *Leaking USTs on Site.* Records reviewed at the TWC showed that during the UST removal a release of hydrocarbons was detected in the tank hold located near the northeast corner of the property. All contaminated soil was removed and taken to an approved landfill for disposal. Three monitoring wells (MW) were installed in April 1991. MW N^o 1 was located downgradient from the tank hold. MW N^{os} 2 and 3 were located upgradient. The MWs were installed to a depth of approximately twenty feet. Adsorbed-phase contaminant levels in excess of 100 parts per million (ppm) total petroleum hydrocarbon (TPH) and 30 ppm benzene, toluene, ethylene, xylene (BTEX) were detected in the northeast corner of the excavation in the saturated zone. Borings placed 30 feet from the northeast corner indicated only 9 ppm TPH. The only parameter to exceed the groundwater cleanup levels for the site (1 ppm BTEX and 5 ppm TPH) was TPH levels of 6 ppm and 7 ppm during the initial sampling event in Monitoring Well N^o 1 and Monitoring Well N^o 2 respectively. However, the analytical results for three subsequent quarterly monitoring events have all been below the cleanup levels for this site. Records indicate that based on the limited extent of soil contamination and the absence of groundwater contamination above the cleanup levels, it is recommended that

the case be assigned final status. A letter dated July 28, 1993 from the TWC to the current owner of the subject property states that no further remediation action is required and that all monitor wells which will no longer be used be abandoned in place in accordance with Title 31, TAC Chapter 338. The case has been closed. See Appendix G for copies of TWC correspondence regarding this site.

6.15.3 *Above Ground Storage Tanks (ASTs).* There is no evidence of ASTs on the subject property.

6.15.4 *Petroleum Product Pipelines.* None.

6.16 *Off-Site Petroleum Storage Tanks.*

6.16.1 *Underground Storage Tanks.* There are eighteen USTs registered at eight facilities within one half mile of the subject property. There are nineteen leaking USTs (LUSTs) facilities facility listed on the LUST listing within one half mile of the subject property. See Table 2: Registered Petroleum Storage Tanks Within 0.5 Mile of Subject Property and Table 3: Leaking USTs Within 0.5 Mile of Subject Property, for a detailed description of these facilities. One of the LUST facilities abuts the northern border of the subject property. The facility is known as Union Stock Yards. According to records reviewed at the TWC, the LUST facility is categorized as a Priority 1D which signifies a Group 1 groundwater impact with a plume showing possible migration. Further review of records indicated that ten, 2,000 gallon USTs and one waste oil UST were permanently removed from the facility in February 1990. A small amount of phased separated hydrocarbons were observed in one of the UST excavations. A total of eleven exploratory borings indicated hydrocarbon concentration greater than the target cleanup levels. Three monitoring wells were installed to determine the extent of plume. Research indicated that the direction of groundwater flow is northeast, the subject property is southwest of the LUST facility. Records at TWC indicate that a Phase 3 remediation process is on-going. This site is not suspected to have impacted the subject property because of the direction of groundwater and surface water flow, which is to the northeast, and the location of the LUST which was approximately 200 feet north of the subject property. The other UST and LUST facilities are not suspected to pose an environmental threat to the subject property. For more information on the details on these registered tanks also see the TWC database listings in Appendix E.

6.16.2 *Above Ground Storage Tanks.* No ASTs are registered within one half mile of the subject property.

6.16.3 *Petroleum Product Pipelines.* No petroleum pipelines are on any adjoining properties.

TABLE 2: REGISTERED PETROLEUM STORAGE TANKS WITHIN 0.5 MILE OF SUBJECT PROPERTY

Property Name Address ID Number	Distance and Direction	Topographic Relation	Leaker List Yes/No	Size (Gallons)	Contents	Type AST/UST	Year Installed
J&L Food & Gas 901 Nogalitos St. ID #0044434 See Note 1	0.3 Mile Southeast	Downgradient	Yes	2,000(3) 5,000	Gasoline(4)	UST(4)	1974 1974 1974 1974
Ace Welding Co. 900 Nogalitos St. ID #0003825 See Note 1	0.3 Mile Southeast	Downgradient	Yes	3,000	Gasoline	UST	1961
James Coggeshall 1216 Nogalitos St. ID #0025124 See Note 2	0.4 Mile Southeast	Downgradient	Yes	500 (6)	Gasoline	UST(6)	1922(2) 1945(2) 1952(2)
Van Delden Co. 829 Nogalitos St. ID #0027936 See Note 1	0.25 Mile Southeast	Downgradient	Yes	3,000(3)	Diesel Gasoline Gasoline	UST(3)	1966(3)
De La Rose Home & Auto 730 Nogalitos ID #0040626 See Note 1	0.4 Mile East	Sidegradient	Yes	3,000(3) 500(1)	Gasoline(3) Used Oil(1)	UST(4)	1960(4)
National Linen Serv. 612 Nogalitos ID #0041446 See Note 1	0.5 Mile East	Sidegradient	No	10,000 10,000	Unknown(2)	UST(2)	1974(2)
City of San Antonio 1115 Nogalitos ID #0053510 See Note 1	0.4 Mile Southeast	Downgradient	No	250	Empty	UST(1)	Unknown
Realty Alliance of Texas, LT 611 Oriental St. ID #0048112 See Note 1	0.5 Mile Southwest	Downgradient	Yes	10,000 1,000 3,000	Empty(3)	UST(3)	Unknown Unknown 1973
WEPACO, Inc. 1700 S. Brazos ID #0003034 See Note 3	0.2 Mile West	Sidegradient	No	10,000 10,000 10,000	Diesel(2) Gasoline(1)	UST(3)	1971 1978 1971
San Antonio Housing Authority 1310 S. Brazos ID #0031857 See Note 4	0.5 Mile Northwest	Sidegradient	Yes	2,000 10,000	Gasoline(2)	UST(2)	Unknown 1989

TABLE 2: REGISTERED PETROLEUM STORAGE TANKS WITHIN 0.5 MILE OF SUBJECT PROPERTY

Property Name Address ID Number	Distance and Direction	Topographic Relation	Leaker List Yes/No	Size (Gallons)	Contents	Type AST/UST	Year Installed
P&M Products 2022 S. Brazos ID #0034966 See Note 1	0.15 Mile West	Sidegradient	No	550	Unknown	UST	1966
Kiobassa Provision 1325 S. Brazos ID #0035904 See Note 1	0.5 Mile Northwest	Sidegradient	Yes	565	Gasoline	UST	1956
Union Stockyards 2020 S. Brazos ID #0049448 See Note 1	0.1 Mile West	Sidegradient	No	1,000(2)	Empty	UST(2)	1977(2)
Union Stockyards 2002 S. Brazos ID #0049449 See Note 1	0.1 Mile West	Sidegradient	Yes	500	Gasoline	UST	1964
Ed Auge Packing 1305 S. Brazos ID #0012457 See Note 3	0.5 Mile Northwest	Sidegradient	No	1,000	Empty	UST	1977
San Antonio Packing Company 1717 S. Brazos ID #0043189	0.3 Mile Northwest	Sidegradient	No	Unknown	Gasoline	UST	Unknown
San Antonio Fire Station N° 11 323 S. Frio ID #0014166	0.4 Mile Southwest	Sidegradient	No	280	Diesel	UST	1975
River City Produce 1616 S. Laredo ID #0055139	0.5 Mile North	Sidegradient	No	Unknown	Diesel	UST	1988
Gebhardt Mexican Foods 1810 S. Laredo ID #0012583 See Note 1	0.5 Mile North	Sidegradient	Yes	10,000 10,000 3,000	Empty Empty Gasoline	UST(3)	1976(3)
P.A.G., Inc. 1631 S. Laredo ID #0032519	0.5 Mile North	Sidegradient	No	10,000 10,000 5,000 5,000	Diesel(1) Gasoline(3)	UST(4)	1979(1) 1976(3)

TABLE 2: REGISTERED PETROLEUM STORAGE TANKS WITHIN 0.5 MILE OF SUBJECT PROPERTY

Property Name Address ID Number	Distance and Direction	Topographic Relation	Leaker List Yes/No	Size (Gallons)	Contents	Type AST/UST	Year Installed
Gebhardt Mexican Foods 1711 S. Laredo ID #0063786 See Note 1	0.5 Mile North	Sidegradient	No	10,000 10,000 550	Empty(3)	UST(3)	1978(2) Unknown
Stock Yards Service Center 1666 San Marcos ID #0009541 See Note 1	0.15 Mile North	Sidegradient	Yes	12,000 15,000 15,000 10,000 10,000	Diesel(2) Gasoline(2) Empty(1)	UST(5)	1971(5)
Swift Independent 1901 San Marcos ID #0025533 See Note 1	ON-SITE	Sidegradient	Yes	7,000 8,000 1,000 34,000 34,000	Diesel Gasoline Gasoline Unknown Unknown	UST(5)	1954 1958 1958 1934 1934
City Towing 1667 San Marcos ID #0040035 See Note 1	0.15 Mile North	Sidegradient	Yes	Eight are Unknown 20,000 20,000	Diesel(6) Gasoline(4)	UST(10)	Unknown
Surlean Meat 1545 San Marcos ID #0055811 See Note 1	0.2 Mile North	Sidegradient	Yes	Unknown	Unknown	UST(2)	Unknown
De La Rosa 730 Nogalitos St. ID #0040626 See Note 1	0.20 Mile Southwest	Downgradient	Yes	3,000(3) 500	Gasoline(3) Used Oil	UST(4)	1960(4)

NOTE 1: Permanently removed from the ground.

NOTE 2: Permanently abandoned in-place.

NOTE 3: Temporarily out of service.

NOTE 4: One active and one permanently removed from the ground.

TABLE 3: LEAKING UST's WITHIN 0.5 MILE OF SUBJECT PROPERTY

Responsible Party	Address	Priority	Status	Topographical Relation and Distance:	Potential Impact
Coggeshall, James F.	1216 Nogalitos	Minor soil contamination.	Initial response overdue.	0.4 Mile Southeast	None
Crysanthe Galnos	901 Nogalitos	Soil contamination only.	Unknown	0.3 Mile Southeast	None

TABLE 3: LEAKING UST's WITHIN 0.5 MILE OF SUBJECT PROPERTY

Responsible Party	Address	Priority	Status	Topographical Relation and Distance:	Potential Impact
City of San Antonio	1519 Nogalitos	Soil contamination only.	Final concurrence issued, case closed.	0.5 Mile Southeast	None
City of San Antonio	1428 Nogalitos	Soil contamination only.	Final concurrence issued, case closed.	0.5 Mile Southeast	None
Walsh, MS EP	900 Nogalitos	Soil contamination only.	Initial directives issued awaiting initial response.	0.3 Mile Southeast	None
De La Rosa	730 Nogalitos	Soil contamination only.	Unknown	0.4 Mile East	None
Van Delden Co.	829 Nogalitos	Soil contamination only.	Unknown	0.25 Mile Southeast	None
National Linen Service	614 Nogalitos	Group 1 groundwater, off-site migration unlikely.	Phase 2 report received, review pending.	0.5 Mile East	None
Realty Alliance	611 Oriental	Minor soil contamination.	Final concurrence issued, case closed.	0.5 Mile Southwest	None
SA Housing Authority	1310 Brazos	Group 1 groundwater, off-site migration unlikely.	Phase 2 in progress.	0.5 Mile Northwest	None
Union Stock Yards	2002 S. Brazos	Soil contamination only.	Final concurrence issued, case closed.	0.1 Mile West	None
Southland Corporation	1822 S. Brazos	Groundwater other than drinking water impacted.	Phase 3 in progress.	0.2 Mile West	None
Kiobassa, Robert	1325 S. Brazos	Soil contamination only.	Final concurrence issued, case closed.	0.5 Mile Northwest	None
Union Stock Yards	1667 San Marcos	Group 1 groundwater, plume has/likely to migrate.	Phase 3 in progress.	0.15 Mile North	None
Union Stock Yards	1666 San Marcos	Minor soil contamination.	Phase 2 report received, review pending.	0.15 Mile North	None
Surlean Meat Company	1545 San Marcos	Group 1 groundwater, off-site migration unlikely.	Phase 3 report overdue.	0.2 Mile North	None
Swift Packing Company	1901 San Marcos	Groundwater other than drinking water impacted.	Recommended for final concurrence and case closed.	ON-SITE	None
Union Stock Yards	1666 San Marcos	Minor soil contamination.	Phase 2 report received, review pending.	0.15 Mile North	None

6.17. *Storm Water Drainage.* Water drainage off of the subject property is south and east to Apache Creek and the City drainage system.

6.18. *Other Suspect Conditions.*

6.18.1 *Utilities, Wells and Cisterns.* All City utilities are provided to the property. There is no evidence to indicate that a cistern exists on the subject property. Two active water wells were observed on the property. According to the San Antonio Water System, Water Well Listings, Revised 1993, there are two active and one inactive plugged water well on the subject property. According to representatives of the City of San Antonio Water System, Water Engineering Department, Water Well N^o 1 was plugged in 1953; Water Well N^o 2 (the south well) has a depth to the Aquifer of 1,400 feet; Water Well N^o 3 has a depth of 1,600 feet. The casings on both wells were repaired in 1953. Both wells are for domestic use. There has never been contamination problems with the wells. See Appendix D, Drawing 1, for the location of these water wells.

6.18.2 *Water Bodies.* None.

6.18.3 *Drainage Pathways and Erosion Plains.* None.

6.18.4 *Outcroppings, Stockpiles, and Embankments.* None.

6.18.5 *Wooded Areas and Variations in Vegetation.* None.

6.18.6 *Heavy Equipment.* None.

6.18.7 *Odors.* A strong odor of raw sewage was coming from a manhole located approximately 150 feet south of the north property line and approximately 80 feet west of the east property line. The manhole cover was laying next to the manhole and raw sewage was seen at less than two feet below the surface.

6.18.8 *Landfills or Dumping.* There are no landfills within one half mile of the subject property. Several small piles of household garbage and brush were seen scattered throughout the middle portion of the site.

6.18.9 *Surface Impoundments or Holding Ponds.* None.

6.18.10 *Air Emissions.* None.

6.18.11 *Waste Water Discharges.* None.

6.18.12 *Monitoring Wells or Remedial Activities.* Records reviewed at the TWC showed that during tank removal a release of hydrocarbons was reported on the tank hold located near the northeast corner of the property. Three monitoring wells were installed to further assess the degree and extent of subsurface contamination. The monitoring wells (MW) were installed in April 1991. MW N^o 1 was located downgradient from the tank hold. MW N^{os} 2 and 3 were located upgradient. The MWs were installed to a depth of approximately twenty feet. Based on the limited extent of soil contamination and the absence of groundwater contamination above the cleanup levels, it was recommended that the case be assigned final status. A letter dated July 28, 1993 from the TWC to the current owner of the subject property states that no further remedial action is required, and that since all monitoring wells will no longer be used, they must be abandoned in place in accordance with Title 31, TAC Chapter 338.

6.18.13 *Stained or Discolored Soil.* None.

6.18.14 *Leachate or Seeps.* None.

6.18.15 *Dead, Distressed, Discolored, or Stained Vegetation.* None.

6.18.16 *Chemical Spills or Releases.* No evidence of chemical spills or releases was observed during the on-site inspection. The subject property was identified on the TWC SPILL. The spill was classified as minor and did not require clean-up. See paragraph 5.2.2.

6.18.17 *Ground Water or Surface Water Contamination.* Not tested.

6.18.18 *Oil/Gas Well Exploration, Abstraction, or Refinery Activities.* None.

6.18.19 *Farm Waste Concerns.* None.

6.18.20 *Use of Pesticides, Herbicides, Soil Conditioners, or Fertilizers.* None.

6.18.21 *Proximity and Potential Exposure to Electromagnetic Radiation Sources.* There are low voltage power lines located on the east and southern perimeters of the site. The potential for exposure to electromagnetic radiation from these transformers is unknown.

6.18.22 *Discharge, Migration, or Run-Off of Potential Contaminates from Off-Site Sources.* None.

7.0 SITE INVESTIGATION AND REVIEW OF SPECIAL RESOURCES

7.1 *Threatened or Endangered Species.* Endangered species refers to federally-listed or proposed threatened or endangered plants and animals, including their habitat. No State listed threatened or endangered species are suspected to exist on the subject property because it is located in a built-up commercial and residential area.⁽⁶⁾

7.2 *U. S. Army Corps of Engineers, Designated Wetlands Surveys.* Ponding and excessively wet areas were not present on the subject property. A review of the Fish and Wildlife Service National Wetlands Inventory Map for the subject property indicates no wetland areas on or adjacent to the subject property.⁽⁷⁾ A detailed Corps of Engineers ground survey for wetland determination is not recommended.

7.3 *Floodplains/Wild and Scenic Rivers.* A representative of the City of San Antonio Engineering and Planning Department stated that the subject property is not in the 100 year flood plain. This is according to Flood Insurance Rate Map, Community N^o 48045-0044B, dated December 15, 1983. There is no evidence or reason to believe that a river or stream on or immediately adjacent to the property is a wild and scenic river as designated by the National Park Service, Bureau of Land Management and the U. S. Forest Service.

7.4 *Scientific Significance.* There is no evidence or reason to believe that the subject property or any adjacent property is designated a paleontological resource, artifact, fossil, or historic property that is valued for scientific study or research.

7.5 *Wilderness Areas.* There is no evidence or reason to believe that the subject property is an inholding in, contiguous with, or adjacent to Federally-owned lands, or lands legally designated for acquisition by a Federal agency, that are designated or proposed for designation as part of the National Wilderness Preservation System.

7.6 *Archeological Resources and Natural Landmarks.* There is no evidence or reason to believe that the subject property or any adjacent property is listed on the National Register of Historic Places or National Registry of Natural Landmarks as published by the National Park Service and the State of Texas Historic Preservation Society.

7.7 *Sole Source Aquifers.* The subject property is located within the boundaries of the Edwards Aquifer which is a designated sole source aquifer for San Antonio, Texas under the Safe Drinking Water Act. The subject property does not have any features that contribute to the recharge of the Aquifer, such as wetlands, springs, watercourses, sink holes, or karst topography.

7.8 *Historic Property.* The subject property does not have any structural improvements that are fifty years of age or older. There is no reason to suspect that the subject property would be designated as a historic property or eligible for listing in the National Register of Historic Places.

7.9 *Recreational Areas.* There is no indication that the subject property or any adjacent property is used as a recreational area such as a park, or for other outdoor recreational activities such as camping, hiking, fishing, or hunting, including nature trails.

7.10 *Coastal Barrier Unit.* The subject property is not within 1,000 feet of a coastal shoreline. There is no evidence or reason to believe that the subject property or any adjacent property is designated a unit of the Coastal Barrier Resources System under the Coastal Barrier Improvement Act of 1990.

8.0 SUMMARY AND RECOMMENDATIONS

8.1 Three variations of vinyl asbestos tile were identified on the old foundation, near the southeast corner of the subject property, south of the entrance where an office building used to occupied that space. The approximate amount of floor covering material is 700 square feet. The vinyl asbestos floor tile is not required to be removed prior to demolition as stated in the asbestos National Emissions Standard for Hazardous Air Pollutants (NESHAP).

8.2 One 55-gallon drum of an unknown substance was observed on the mid-section of the subject property. The drum was in good condition with no obvious signs of leakage on or around the drum.

8.3 Two active water wells were observed on the property. Both wells are for domestic use and there has never been contamination problems with the wells.

8.4 A strong odor of raw sewage was coming from a manhole located on the east portion of property. The manhole was not covered.

8.5 There are no indications of environmental pollution, such as soil discoloration, dead animals, or odors on the site. No other suspect hazardous materials were found through the site inspection or subsequent communication with local authorities.

8.6 A review of official records and/or communications with the federal, State, city agencies, and other sources revealed 18 registered underground storage tanks (USTs) at eight facilities within one half mile of the subject property. Two of the nineteen LUST

facilities were suspected to impact the subject property. One LUST was located on the subject property and the other on the property abutting the northwest property line. Agency research revealed that neither of these two LUST sites are an environmental threat to the subject property at this time. The RCRA facilities within one half mile of the subject site are not a threat to the subject property because they are not listed as having any spills or emergency notifications related to hazardous waste generation. There was a small spill on the subject property. The spill was classified as minor and did not require clean-up. The spill involved an unknown quantity of oil containing 20 parts per million of polychlorinated biphenyls (PCBs). No other regulated activities or incidents on or within one half mile of the subject site were indicated through the regulatory data research or observed during the on-site inspection and area reconnaissance.

8.7 Conclusions. Based upon these findings and the limitations of a Phase One Environmental Site Assessment, the site is considered one of moderate environmental risk which indicates the need for additional sampling or investigation.

8.8 Recommendations.

8.8.1 The contents of the drum should be analyzed for reactivity, corrosivity, ignitability (RCI) and toxicity to determine appropriate disposal or recycling procedures.

8.8.2 If the water wells are not to be used, immediate action should be taken to cap and plug them in accordance with Texas Administrative Code, Title 31, Chapter 338, Sections 4-8, 4-9, and 5-0, to avoid pollution and contamination of the underground aquifer. This action and associated costs are the responsibility of the current owner and will require a City of San Antonio permit. The process will encompass removal of the current pumping apparatus and any removable casings. In addition, the top ten feet of the well must be filled with cement.

8.8.3 The City of San Antonio, Sewer Maintenance Department should be notified of the overflow of sewage in the manhole in order to locate and repair possible sewage leaks in the system and to cover the manhole.

9.0 PERSONS PERFORMING THE PHASE ONE ENVIRONMENTAL SITE ASSESSMENT (ESA)

The following Clean Environments, Inc. personnel conducted the Phase One ESA on the subject property:

Inspector: Benjamin Hernandez, O.H.S.T
Industrial Hygiene Technician

Project Manager: A. Denese Huntsberry, R.E.M
Manager, Environmental Assessments

Executive Review: Merrill R. Good, P.E., C.I.H.
President