

**Phase I
Environmental Site Assessment**

**Chouteau Courts
1220 Independence Avenue
Kansas City, Jackson County, Missouri**

Prepared for:

**Housing Authority of Kansas City, Missouri
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Acronyms and Abbreviations

AAI	All appropriate inquiry
AIRS	Aerometric information retrieval system
ASTM	.....	American Society for Testing and Materials
AST	.....	Aboveground storage tank
AUL	.....	Activity and use limitation
BER	.....	Business Environmental Risk
BGS	.....	Below ground surface
CERCLA	.....	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	.....	CERCLA Information System
CESQG	.....	Conditionally exempt small quantity generator
CFR	.....	Code of Federal Regulations
CORRACTS	.....	Corrective Action Sites
CREC	.....	Controlled recognized environmental condition
EPA	.....	U.S. Environmental Protection Agency
ERNS	.....	Emergency Response Notification System
ESA	.....	Environmental Site Assessment
FINDS	.....	Facility Index System
HREC	.....	Historical recognized environmental condition
LAST	.....	Leaking aboveground storage tank
LQG	.....	Large quantity generator
LUST	.....	Leaking underground storage tank
MCL	.....	Maximum contaminant level
MSDS	.....	Material safety data sheet
NFA	.....	No further action
NFRAP	.....	No further remedial action planned
NGVD	.....	National Geodetic Vertical Datum
NonGens	.....	No longer generates hazardous waste
NOV	.....	Notice of violation
NPL	.....	National priorities list
NRCS	.....	U.S. Natural Resource Conservation Service
PCB	.....	Polychlorinated biphenyl
RCRA	.....	Resource Conservation and Recovery Act
REC	.....	Recognized environmental condition
SHWS	.....	State hazardous waste site
SQG	.....	Small quantity generator
TRI	.....	Toxic release inventory
TSDf	.....	Treatment, storage, and disposal facility
TSCA	.....	Toxic Substances Control Act
USGS	.....	U.S. Geological Survey

UST Underground storage tank
VCP Voluntary cleanup program
VES Vapor Encroachment Screening

Units of Measure

ft² square feet
mg/kg milligrams per kilogram
mg/L milligrams per liter
µg/L micrograms per liter
ppb parts per billion
ppm parts per million

3. User-Provided Information

The following information was provided by the User in order to assist in the identification of RECs. A copy of the User-provided information is included in Appendix B.

3.1 Environmental Liens or Activity and Use Limitations

According to the User, no environmental liens or activity and use limitations (AULs) were found.

3.2 Specialized Knowledge

Mr. Dale Williamson (User representative) reported no specialized knowledge or experience that may be material to the identification of RECs in connection with the Property. He was not aware of the presence or likely presence of contamination at the Property.

3.3 Commonly Known or Reasonably Ascertainable Information

Mr. Williamson was not aware of any commonly known or reasonably ascertainable information within the local community about the Property material to RECs in connection with the Property.

3.4 Valuation Reduction for Environmental Issues

Purchase price valuation for the Property is not applicable at this time.

3.5 Obvious Indicators of Presence or Absence of Contamination

The User representative was not aware of obvious indicators regarding the presence or likely presence of releases or threatened releases at the Property.

4. Property Description

4.1 Location

The Property is located at 1220 Independence Avenue, Kansas City, Jackson County, Missouri. The Property legal description is Section 33, Township 50 North, Range 32 West. A topographic map (Figure 2) depicting the Property location is included in Appendix A.

4.2 Property and General Vicinity Characteristics

The Property and vicinity setting is generally characterized as light residential and undeveloped.

Property Description and Physical Setting

Property Name	Chouteau Courts	
Property Location/Address	1220 Independence Avenue, Kansas City, Jackson County, Missouri	
Property Improvements	The Property is improved with 19 multifamily residential buildings.	
Potable Water Provider	Kansas City Water Services	
Sanitary Sewer Provider	Kansas City Water Services	
PHYSICAL SETTING INFORMATION FOR SITE AND SURROUNDING AREA		SOURCE
Topography (<i>Refer to Appendix A for an excerpt of the USGS Topographic Map</i>)		
Property Elevation	905 feet (NGVD)	U.S. Geological Survey (USGS) 7.5-Minute Topographic Map, Kansas City, Missouri, Quadrangle; 2015
Groundwater Flow Direction *	Northwest	
Surface Runoff/Topographic Gradient	Generally northwest	
Closest Surface Water	The Missouri River is located 0.80 mile north-northwest of the Property.	

* The hydrogeologic gradient is not known but is inferred as parallel to topographic gradient in the immediate Property vicinity. The regional groundwater flow direction and the depth to shallow, unconfined groundwater, if present, would likely vary depending upon seasonal variations in rainfall and other hydrogeological features. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the Property cannot be directly ascertained.

5. Site Reconnaissance

The following sections describe the Property and adjoining property features noted during Olsson's site reconnaissance on December 8, 2016.

5.1 Reconnaissance Methodology and Limiting Conditions

Information contained in this section is based on Olsson's visual reconnaissance of the Property and adjoining properties, interviews, and other references discussed throughout this report. Ms. Jessica Casey and Mr. Will Chatfield-Taylor of Olsson conducted the site reconnaissance. The weather at the time sunny and 24 degrees Fahrenheit. Observation of the Property surface features was not restricted at the time of the site reconnaissance. Olsson observed adjacent property features from readily accessible areas (property boundaries and/or public rights-of-way). Photo documentation of representative features observed during the Property reconnaissance is provided in Appendix C.

5.2 Current Property Use

The Property is a residential housing complex (as shown on Figure 3 in Appendix A). The Property can be accessed via Independence Avenue.

5.3 Property Reconnaissance

Features noted during Olsson's site reconnaissance are designated by an "X" in the following table. Paragraphs following the summary table discuss the reconnaissance observations in greater detail.

Category	Item or Feature	Observed
Site Operations, Processes, and Equipment	Emergency generators	
	Elevators	
	Air compressors	
	Hydraulic lifts	
	Dry cleaning	
	Photo processing	
	Other processes or equipment	
Aboveground Petroleum or Chemical Storage	Aboveground storage tanks (AST)	
	Drums, barrels and/or containers \geq 5 gallons	

Category	Item or Feature	Observed
Underground Petroleum or Chemical Storage, or Waste and Drainage Collection Systems	Evidence of underground storage tanks (UST) or ancillary UST equipment	
	Floor drains, sumps, or stormwater drains	
	Cisterns or sand traps	
	Oil/water separators	
	Septic tanks and/or leach fields	
	Grease traps	
Equipment Containing Potential Polychlorinated Biphenyls (PCBs)	Pad or pole-mounted electrical transformers and/or capacitors	X
	Other equipment	
Potential Release Sources and/or Indicators	Stressed vegetation	
	Stained soil or pavement	
	Strong, pungent, or noxious odors other than that associated with property processes	
	Surface water discoloration, odor, sheen, and/or floating free product	
	Dumped trash, construction or demolition debris, fill dirt, artificial fill, or disposal areas	
	Exterior pipe discharges and/or other effluent discharges	
	Leachate and/or waste seeps	
	Laboratory hoods and/or incinerators	
	Waste treatment systems and/or water treatment systems	
	Material safety data sheets (MSDS)	
Other Notable Property Features	Pits, ponds, or lagoons	
	Pipeline markers	
	Wells – irrigation, dry, monitoring, or abandoned	
	Other features	

Equipment Containing Potential Polychlorinated Biphenyls (PCBs)

Pad- or Pole-Mounted Electrical Transformers and/or Capacitors

Multiple pole-mounted electrical transformers were observed during the site reconnaissance. None of the transformers showed signs of leakage or staining. Based on visual observations the transformers do not represent a REC for the Property.

5.4 Adjoining Property Reconnaissance

Visual observations of adjoining properties are summarized below and are depicted on Figure 3 in Appendix A.

Direction	Description
North	The Property is bounded by Interstate 29 and Interstate 35 on the north.
East	The Property is bounded by Lydia Avenue on the east.
South	The Property is bounded by Independence Avenue on the south.
West	The Property is bounded by Interstate 29 on the west.

6. Historical Resource Review

Olsson reviewed historical resources for indications of RECs for the Property. Copies of pertinent historical documents are included in Appendix D.

6.1 Historical Topographic Maps

Historical U.S. Geological Survey (USGS) topographic maps were reviewed for this ESA. Maps for the following years were reviewed: 1890, 1894, 1935, 1940, 1957, 1964, 1970, 1975, 1995, 1996, and 2015. The following table summarizes the topographic map review.

Historical Topographic Map Information

Direction	Date	Description
<i>Property and Surrounding Area</i>	1890, 1894, 1935, and 1940	No structures are depicted on the Property.
	1957, 1964, 1970, and 1975	A structure is now depicted on the Property. The Garrison School is depicted immediately adjacent to the north of the Property. Also, interstates are now depicted around the Property.
	1995, 1996, and 2015	The map no longer depicts structures; it just depicts the contour lines of the area.

6.2 Historical Aerial Photographs

Historical aerial photographs for the years 1936, 1940, 1952, 1957, 1963, 1969, 1976, 1983, 1985, 1991, 1995, 2002, 2005, 2006, 2007, 2008, 2009, 2010, and 2012 were evaluated for historic features. Inspection of the aerials can be limited by a photograph's quality and scale. Aerial photo copies are presented in Appendix D.

Historical Aerial Photographs

Direction	Date	Description
<i>Property and Surrounding Areas</i>	1936, 1940, and 1952	The Property and adjoining properties are developed with multiple structures.
	1957, 1963, and 1969	The interstates are now depicted near the Property and Garrison School is depicted immediately adjacent to the north.
	1976, 1983, 1985, 1991, 1995, 2002, 2005, 2006, 2007, 2008, 2009, 2010, and 2012	The school to the north has now been removed from the adjacent property. The Property appears similar to today with several multifamily buildings.

6.3 Historical Fire Insurance Maps

Based upon inquiries to the database provider, Sanborn maps were available for the property vicinity for the years 1896, 1909, 1939, 1950, and 1969. Copies of the maps are provided in Appendix D.

Historical Fire Insurance Map Information

Direction	Date	Description
<i>Property and Surrounding Areas</i>	1896	The Property depicts multiple dwellings and the Pleasant Green Baptist Church. Emerson School is depicted to the northeast of the Property.
	1909	The Property is similar to previous map with the addition of the Pleasant Green Baptist Church on the eastern half. The Pleasant Green Baptist Church is now considered a private building.
	1939, 1950	The private building is no longer present north of the Property. The Pleasant Green Baptist Church is now the Gain Memorial Church. Emerson School is now called Garrison Public School.
	1969	The Property is now labeled as Chouteau Court with multiple dwellings. The churches are no longer depicted.

7. Environmental Records Review

Database information provided by a contract information service company was reviewed to identify RECs in connection with the Property or in the Property vicinity. Information in this section is subject to the accuracy of the data and the date at which the information was updated by the information services company.

Olsson reviewed the database information for its relevance to the Property; that is, as the information referred to spills or releases either occurring on the Property, or at properties having the potential to affect the Property. As used in this report, the terms “upgradient,” “downgradient,” and “crossgradient” are used to describe the topographic relationship between the Property and off-site properties relative to the general surface and/or groundwater flow direction. Refer to the discussion provided in Section 2.

7.1 State and Federal Regulatory Databases

Appendix E contains the database report including the list of searched databases (both ASTM-required as well as supplemental databases), database descriptions and results, dates of updates, approximate minimum search distances, and maps. The following table summarizes ASTM information provided in the database.

Database Findings Summary

Database Record	ASTM Search Distance (Miles)	Identified Listings
Federal Databases		
NPL	1.0	0
Delisted NPL	0.5	0
CERCLIS	0.5	0
CERCLIS NFRAP	0.5	0
RCRA CORRACTS	1.0	1
RCRA TSDF	0.5	0
RCRA Generators List - RCRA-LQG	Property/Adjoining Properties	0
RCRA-SQG		2
RCRA-CESQG		2
RCRA-NonGen		6
Federal Institutional Controls	Property Only	0
Federal Engineering Controls	Property Only	0
ERNS	Property Only	0

Database Record	ASTM Search Distance (Miles)	Identified Listings
State and Tribal Databases		
State/Tribal NPL (SCS or SHWS)	1.0	0
State/Tribal CERCLIS	0.5	0
State/Tribal Licensed Landfill List	0.5	0
LUST	0.5	17
LAST	Property/Adjoining Properties	0
USTs	Property/Adjoining Properties	7
ASTs	Property/Adjoining Properties	2
State/Tribal Institutional Controls	Property Only	0
State/Tribal Engineering Controls	Property Only	0
State/Tribal Voluntary Cleanup Sites	0.5	3
State/Tribal Brownfield Sites	0.5	0

Database providers frequently report supplemental database search findings outside the required ASTM E1527-13 coverage. These may include Facility Index System/Facility Registry System (FINDS), the Aerometric Information Retrieval System (AIRS), Spills, Tanks, Historical Gas Stations, Historical Dry Cleaners, and other supplemental database resources. The supplemental database information is discussed where relevant to the Property. The following sections provide a description of the ASTM databases, and Section 7.2 provides discussions regarding pertinent database listings for the Property and immediate vicinity.

7.1.1 RCRA CORRACTS

The Environmental Protection Agency (EPA) maintains a Resource Conservation and Recovery Act (RCRA) corrective action facility database (CORRACTS) of hazardous waste handler facilities where corrective action activity has occurred or is occurring. *One site was listed in the CORRACTS database. This site has been closed and does not represent a REC for the Property.*

7.1.2 RCRA Generators

The EPA manages a database of RCRA facilities that generate hazardous waste. RCRA large quantity generator (LQG) facilities generate more than 1,000 kilograms (kg) of hazardous waste or more than 1 kg of acutely hazardous waste per month. RCRA small quantity generator (SQG) facilities generate between 100 kg and 1,000 kg of hazardous waste per month. RCRA conditionally exempt small quantity generator (CESQG) facilities generate less than 100 kg of hazardous waste or 1 kg of acutely hazardous waste per month. The EPA RCRA generator database also lists facilities that have filed a status change from RCRA waste generator to an operation that no longer generates hazardous waste (NonGens). *Ten sites were listed in the*

RCRA SQG, RCRA CESGQ, and the RCRA NonGen databases. None of these sites had violations and therefore do not represent RECs for the Property.

7.1.3 State/Tribal Leaking Storage Tank Lists

The Missouri Department of Natural Resources (MDNR) maintains a listing of leaking underground storage tank (LUST) and leaking aboveground storage tank (LAST) facilities. *Seventeen sites were listed in the LUST database. All of the sites have been closed and do not represent RECs for the Property.*

7.1.4 State/Tribal Storage Tanks

MDNR maintains a database of registered aboveground storage tanks (AST) and underground storage tanks (UST). *Nine sites have been listed in the AST and UST databases. All of the sites have been closed and do not represent RECs for the Property.*

7.1.5 State/Tribal Voluntary Cleanup Sites

MDNR maintains a listing of facilities where owners and parties responsible for contamination have voluntarily undertaken cleanup activities overseen by the state. *Three sites have been listed in the voluntary cleanup database. Two of the three sites have been issued certificates of completion. The remaining site—Kansas City Central Plant—is still listed as active; however, this site is downgradient of the Property. These sites do not represent RECs for the Property.*

7.2 Database Information

The regulatory database review identified 98 database listings within the prescribed ASTM search radii. The following sections discuss database listings pertaining to the Property and in the immediate vicinity.

7.2.1 Property Database Listings

The Property was not identified within the environmental database.

7.2.2 Vicinity Database Listings

The following paragraphs summarize the off-site database report listings that represent a REC in order of closest proximity to within approximately 0.5 mile of the Property. The remaining database listings were not considered RECs based on either their regulatory status and/or distance from or location relative to the Property and are not detailed below.

Quality Detail and Auto Sales, 1001 Forest

This site, which is located 0.374 mile south-southwest of the Property, is listed in the LUST and UST databases. The databases detail the site as having four USTs that were removed. One of the tanks was determined to be leaking, and contamination was found. This site was closed in

1992. This site represents a historical REC but is no longer an environmental issue for the Property.

7.2.3 Unmapped “Orphan” Listings

Unmapped – or “orphan” – database listings are facilities that a database provider typically could not locate because of inadequate geocode or address information. The database report listed 10 orphan facilities located in the property zip code area. Confirmation of the location of unmappable facilities listed by the information service company is beyond the scope of this study. However, a cursory review of the unmapped listings was performed.

Ten orphan facilities were reported, but based on the facilities’ names and/or location information, they were not identified on, or adjacent to, the Property.

8. Interviews

Olsson interviewed the current Property user representative and local agencies as appropriate regarding the Property. The following table summarizes those interviews.

Database Findings Summary

Contact Name	Agency/Affiliation	Interview Method	Information Obtained
Mr. Dale Williamson	HAKC – User Representative	Via Questionnaire	Mr. Williamson's interview information was used to complete sections of this report. Mr. Williamson was not aware of any possible contamination on the Property.

The ESA interviews did not identify RECs in association with the Property beyond those previously discussed in earlier sections of the report.

9. Additional Services

Other additional services including non-scope issues detailed in ASTM E1527-13 (e.g., asbestos sampling, lead-based paint sampling, wetlands review, lead in drinking water sampling, radon testing, etc.) were not conducted as part of the Phase I ESA for the Property.

10. Findings and Conclusions

The following paragraphs summarize the findings and conclusions of the Phase I ESA report. The report must be read in its entirety to develop a comprehensive understanding of the ESA information process.

There were no RECs identified from review of historic records, regulatory databases, the site reconnaissance, and interviews.