US Army Corps

of Engineers ®

Tulsa District

APPENDIX H: Hazardous, Toxic, and Radio Active Waste

Tulsa and West-Tulsa Levees Feasibility Study

September 2019

Tulsa and West-Tulsa Levees HTRW Appendix H

1.0 Introduction

In order to complete a feasibility level HTRW evaluation for the Tulsa and West Tulsa Feasibility Study, a records search was conducted following the rules and guidance of ER 1165-2-132: *HTRW Guidance for Civil Works Projects*, and American Society for Testing and Materials (ASTM) E1527-13: *Standard Practice for Environmental Site Assessment: Phase 1 Environmental Site Assessment Process*. The proposed project involves flood control measures along the Arkansas River, including the repair and addition to existing levees, repair of existing pump stations, and the construction of a small detention pond. For the purposes of this records search, the existing Levee A and B footprints, pump station pads, and planned detention ponds were considered the footprint of the project, along with a small buffer in the immediate vicinity of these features.

2.0 Records Review

In the records review, files, maps and other documents that provide environmental information about the project area are obtained and reviewed. To complete the records review, USACE reviewed publicly available databases and sources, using the proposed footprint of the project, along with an approximate 1 mile search distance for each of the sources shown in the below Table 1. In this case, all areas immediately adjacent to project features were searched. Once the database searches were complete, USACE analyzed the results for recognized environmental conditions (RECs) that could affect the proposed project or need further investigation, given the proposed project measures. The results of that analysis, specifics of the REC (where applicable), and justification for dismissal from further evaluation (where applicable) are discussed below. Note that only databases with results found are discussed in detail below.

Due to the extensive area of the search, environmental databases had to be searched manually. These databases included the Environmental Protection Agency (EPA) Cleanups in my Community database, the EPA Envirofacts database, and the US. Coast Guard's (USCG) National Response Center (NRC) database. The specific terms searched in the EPA databases included "Sand Springs, OK", "Tulsa, OK", and "Zip Code = 74127", for all environmental programs/databases. The results were then mapped to determine location in relation to the proposed project. The State of Oklahoma does not maintain an environmental site database, so State records such leaking petroleum storage tanks, voluntary cleanup sites, and landfills could not be queried. The Oklahoma Corporation Commission (OCC) maintains an oil and gas well and petroleum storage tank database, but specific geography search was impossible.

Table 1: Standard ASTM Search Distances and Records Review Results

ASTM Source	ASTM Distance (miles)	Distance Searched (miles)	Number of Results	Source Name
Federal National Priorities List (NPL) site list	1.0	1.0	1	EPA Cleanups In My Community
Federal Delisted NPL site list	0.5	0.5	0	EPA Cleanups In My Community
Federal CERCLIS (SEMS) list	0.5	0.5	0	EPA EnviroFacts
Federal NFRAP (SEMS archive) site list	0.5	0.5	0	EPA EnviroFacts
Federal RCRA Corrective Action facilities list	1.0	1.0	0	EPA Cleanups In My Community
Federal RCRA TSD facilities list	0.5	0.5	0	EPA EnviroFacts
Federal RCRA generators list	Property and adjacent properties only	Property and adjacent properties only	7, including unknown RCRA	EPA EnviroFacts
Federal ICs/Engineering Control registry	Property only	N/A	N/A, See below*	Source not found*
Federal ERNS list	Property only	N/A	See below*	National Response Center
State and tribal equivalent NPL list	1.0	1.0	0	EPA Cleanups In My Community
State and tribal equivalent CERCLIS	0.5	N/A	N/A	Source not found*
State and tribal landfill and/or solid waste disposal sites	0.5	N/A	N/A	Source not found*
State and tribal leaking AST/UST sites	0.5	N/A	N/A	Source not found*
State and tribal registered storage tank list	Property and adjacent properties only	1.0	N/A	Source unable to be searched*
State and tribal ICs/Engineering Control registry	Property only	N/A	N/A	Source not found*
State and tribal voluntary cleanup sites	0.5	N/A	N/A	Source not found*
Federal, State and tribal Brownfields site list	0.5	0.5	0	EPA Cleanups In My Community

* Denotes a data failure

Federal National Priorities List – The Sand Springs Petrochemical Complex (SSPC) NPL site is located adjacent to the north bank of the Arkansas River and Levee A (See Figures 1 and 2). The 235 acre site, formerly owned and used by Sinclair Oil, was placed on the NPL in 1986 as a result of risks posed by contaminated sludge from refinery processes. The remedial action involved the excavation, stabilization, solidification, and placement of approximately 206,500 cubic yards of petroleum waste in an onsite landfill, which was completed in 1995. In 2001, black sludge was discovered along the north bank of the

river, riverward of the existing levee. This material was removed and disposed of offsite in 2006. Fencing was placed around the landfill, and land use controls have been proposed for the site.

Due to the location and characteristics of the SSPC site, and the proposed plan to improve flood control on the north bank of the Arkansas River, there is a potential to encounter HTRW in this area. The proposed plan calls for the construction of a cutoff wall along with riverside placement of an impervious blanket along the existing levee. In order for this measure to be considered, an investigation needs to be conducted in this area to determine whether HTRW is present. The documented site history indicates that there was active seepage of contaminated sludge from the SSPC site into the river, presumably flowing along a path in the area of the proposed cutoff wall. The SSPC site will be carried forward as a REC, one that needs to be explicitly addressed through further investigation in subsequent phases of the project.

Federal RCRA Generators List – The RCRA generators list identifies sites that generate quantities of waste classified as hazardous under the Resource Conservation and Recovery Act, or RCRA. Seven sites were identified within immediately adjacent to the proposed project area, sorted by the quantity of waste they generate (Table 2). Four sites were classified as large quantity generators (LQG), 2 sites as a conditionally exempt small quantity generators (CESQG), and 1 site was listed as having an unknown classification. However, the simple fact of generator status is not sufficient to expect an impact from any of the 7 facilities found, although relocations may be necessary in the event of property acquisition (see Figures 3 and 4). As a result, these sites will be carried forward as conditional RECs.

Table 2: Resource Conservation and Recovery Act (RCRA) Results

Site Name	Location	RCRA Status
Baker Hughes/Baker Petrolite	9100 West 21st St., Sand Springs	LQG
Cust-O-Fab, Inc.	8888 West 21st St., Sand Springs	LQG
General Wire and Supply Co.	1800 South 81st West Ave., Sand Springs	LQG
Industrial Oils Ltd.	3633 Charles Page Blvd., Tulsa	LQG
Red Hawk Industries/Hensley Industrial	3306 Charles Page Blvd., Tulsa	CESQG
CRI Environmental Solutions/Fullerton Finish Systems	8645 W. 21st St., Sand Springs	CESQG
Brooks Aeronautical Services	2950 Charles Page Blvd., Tulsa	Unknown

Federal Institutional Controls (IC)/Engineering Controls Registry – Engineering controls and ICs are both methods of preventing exposure to contaminants on a particular site, typically sites where contaminants are confined or controlled on site as part of a cleanup remedy. This database is a listing of sites where one or both of those controls are in place. USACE was unable to locate this EPA database, and this can be considered a data failure as defined by the ASTM standard. However, the ASTM standard only requires that the proposed project property be searched for ICs or engineering controls. Since these controls are typically only used at cleanup sites where contaminants are confined onsite, and the other record searches identified no existing cleanup sites within the proposed project footprint, it can be assumed that no ICs or engineering controls are present within the proposed project footprint.

Federal ERNS List – The Federal Emergency Response Notification System (ERNS) records and stores information on reported releases of oil and hazardous substances which are reported to the NRC. However, much of the information in the database was incomplete, or did not give a specific location. Even if location information was recorded, it was often impossible to discern exactly what material or substance the release or spill consisted of. As a result of these limitations, it was impossible to resolve the data closer than a simple date range. There were 41 incidents reported to the NRC regarding Sand Springs

between 1982 and 2018, and 825 reported incidents regarding Tulsa in the same date range. The records do not list impacted waterway, so determining whether these releases were into the Arkansas River is impossible.

Other ASTM Records – During the records search, other items of environmental interest were uncovered that do not fit into the above categories. The records search indicated that the main wastewater treatment plant for the City of Sand Springs is located immediately adjacent to Levee A, within the area of the levee where landside filtered berms and toe drains are proposed (See Figure 5). No affect is expected, unless the levee footprint is to be expanded significantly, resulting in the potential for relocation. This site will be carried forward as a conditional REC.

Records also indicated three entities with active air emissions permits in the proposed project area. Although air emissions in of themselves do not have a likely impact on the project, recorded air emissions are likely indicators of heavy industrial activity and combustion of various materials. As a result, these sites will not be carried forward as RECs.

Records also indicated the presence of a railroad immediately adjacent to Levee B, running from approximately the Interstate 244 bridge to S 25th West Avenue (See Figure 6). No effect to the proposed project is expected from this railroad. However, if the footprint of Levee B is to be expanded significantly landward, the railroad line would need to be relocated. Additionally, acquisition of such land could be complicated by the presence of contaminants traditionally associated with railroad lines, which could require further investigation. The railroad will be carried forward as a conditional REC.

Three other sites not listed on any other records are of note in the vicinity of the proposed project, listed below (See Table 3, Figures 5 and 6). These sites may affect the current project if acquisition on these properties is needed for levee footprint expansion. If these sites need to be acquired, further investigation would likely be warranted. As a result, these sites will be carried forward as conditional RECs.

Table 3: Other Sites

Site Name	**Location**	**Concern**
Royal Manufacturing/Troco Oil	516 South 25th West Ave., Tulsa	Oil and grease production and storage
Smithey Environmental Services	7298 Charles Page Blvd., Tulsa	Asphalt shingle grinding, solid waste collection
Gerdau Ameristeel/Sheffield Steel/Olympic Mill	2300 S. Hwy 97, Sand Springs	Metal/Steel Production and loading, past hazardous waste handling

3.0 Conclusion

In order to complete a feasibility level HTRW evaluation for the Tulsa and West Tulsa project, a records search was conducted following the rules and guidance of ER 1165-2-132: *HTRW Guidance for Civil Works Projects*, and ASTM E1527-13: *Standard Practice for Environmental Site Assessment: Phase 1 Environmental Site Assessment Process*. Several sites were found that had recognized environmental conditions (RECs), shown below. Also shown below are action recommendations for each REC.

Table 4: Final HTRW Site List

Site Name	Location	REC	Action Recommendation
Sand Springs Petrochemical Complex (SSPC)	Approx. 36.131381° N, -96.103414° W	NPL Site	Further HTRW investigation in areas south of SSPC site to Arkansas River
Baker Hughes/Baker Petrolite	9100 West 21st St., Sand Springs	RCRA: Large Quantity Generator	Investigation may be needed if acquisition is required
Cust-O-Fab, Inc.	8888 West 21st St., Sand Springs	RCRA: Large Quantity Generator	Investigation may be needed if acquisition is required
General Wire and Supply Co.	1800 South 81st West Ave., Sand Springs	RCRA: Large Quantity Generator	Investigation may be needed if acquisition is required
Industrial Oils Ltd.	3633 Charles Page Blvd., Tulsa	RCRA: Large Quantity Generator	Investigation may be needed if acquisition is required
Red Hawk Industries/Hensley Industrial	3306 Charles Page Blvd., Tulsa	RCRA: Conditionally Exempt Small Quantity Generator	Investigation may be needed if acquisition is required
CRI Environmental Solutions/Fullerton Finish Systems	8645 W. 21st St., Sand Springs	RCRA: Conditionally Exempt Small Quantity Generator	Investigation may be needed if acquisition is required
Brooks Aeronautical Services	2950 Charles Page Blvd., Tulsa	Unknown RCRA	Investigation may be needed if acquisition is required
City of Sand Springs Wastewater Treatment Plant	Approx. 36.132713° N, -96.089882° W	Wastewater treatment plant	Investigation may be needed if acquisition is required
Railroad line	From Approx. 36.150597° N, -96.016410° W to 36.146032° N, -96.006707° W	Potential PAHs, petroleum products	Investigation may be needed if acquisition is required
Royal Manufacturing/Troco Oil	516 South 25th West Ave., Tulsa	Oil and grease production and storage	Investigation may be needed if acquisition is required
Smithey Environmental Services	7298 Charles Page Blvd., Tulsa	Asphalt shingle grinding, solid waste collection	Investigation may be needed if acquisition is required
Gerdau Ameristeel/Sheffield Steel/Olympic Mill	2300 S. Hwy 97, Sand Springs	Metal/Steel Production and loading, past hazardous waste handling	Investigation may be needed if acquisition is required

Figure 1: SSPC Boundary

Figure 2: SSPC, prior to excavation of sludge (early 1990's), looking West

Figure 3: RCRA Generators near Levee A

Figure 4: RCRA Generators near Levee B

Figure 5: Other Sites near Levee A

Figure 6: Other Sites near Levee B