CTL | THOMPSON INCORPORATED

PHASE I ENVIRONMENTAL SITE ASSESSMENT
PROPOSED ANYTHINK LIBRARY
THORNTON, COLORADO

Prepared for:

Anythink Libraries
5877 E. 120th Avenue
Thornton, CO 80602

Attention: Pam Sandlian-Smith

Project No. FC10326.000-200 R2

April 5, 2022

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EXECUTIVE SUMMARY

This report presents the results of the Phase I Environmental Site Assessment (ESA) that was performed by CTL | Thompson, Inc. for the proposed Anythink Library in Thornton, Colorado.

The Phase I ESA was conducted in general conformance with the methods and procedures described in the American Society for Testing and Materials (ASTM) E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

The Subject Property is generally located northwest of the intersection of 136th Avenue and Quebec Street, Colorado. Adams County Assessor records indicate the Subject Property consists of a portion of a larger parcel of land that has a total area of approximately 132 acres. Based on a map provided of the Subject Property boundaries, we estimate the size of the Subject Property is approximately 14 acres. The Subject Property consists of vacant land. Adjoining properties consist of vacant land.

As of 1937, or earlier, the Subject Property appears to have been used for farming or possibly grazing (vacant land). By 1993, the Subject Property use is clearly farmland. An oil and gas well is visible west of the Subject Property from 1978 to 2019. Adjoining properties were historically farmland, with the adjoining area to the northwest, and later to the north and northeast, being redeveloped with several buildings and extensive outdoor materials and equipment storage.

The Subject Property was in agricultural use. The use of pesticides and herbicides can sometimes present a potential concern because these chemicals can adversely impact the soil and ground water beneath the Subject Property. However, many of these chemicals used today degrade quickly in the natural

environment. We did not observe evidence of the usage or storage of banned chemicals (e.g. DDT, Dieldrin) at the Subject Property. We believe that normal application of agricultural chemicals at the Subject Property is a *de minimis* environmental condition.

One Recognized Environmental Condition was identified. An oil and gas well is located approximately 150 feet west of the Subject Property. This oil and gas well is identified as Aylor #2, which is operated by Extraction Oil & Gas, was drilled in 1975, and was plugged and abandoned in 2018. COGCC inspection records indicate this oil and gas well failed multiple inspections for stained soils at the wellhead, as well as other violations that may not be associated with potential releases. COGCC records document the assessment and remediation of soil contamination that was discovered near the wellhead in 2019. Initial soil contamination consisted of low levels of benzene, toluene, ethylbenzene, and xylenes (BTEX) below COGCC standards and total petroleum hydrocarbon (TPH) concentrations in excess of 13,000 milligrams per kilogram, which exceeded the COGCC limit of 500 mg/kg. Following excavation, removal, and offsite disposal of contaminated soils, remaining soil samples from the excavation had BTEX concentrations less than COGCC limits and laboratory reporting limits and TPH concentrations up to 2.2 mg/kg, which is less than the COGCC limit of 500 mg/kg. It is unclear why groundwater was not assessed for impacts from the spill. Based on the general risk of releases from up-gradient oil and gas wells and the release that was remediated without assessing groundwater, this offsite oil and gas well is considered a REC.

This executive summary does not contain all the information that is found in the full report. The report should be read in its entirety to obtain a more complete understanding of the information provided and to aid in any decisions made or actions taken based on this information.

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1.0 INTRODUCTION

This report was prepared by CTL | Thompson, Inc. (CTL) for Anythink Libraries and presents the results of the Phase I Environmental Site Assessment (ESA) for the proposed Anythink Library in Thornton, Colorado (Subject Property). The project was performed in general accordance with our Service Agreement number FC-22-0088-CM-2, dated March 22, 2022, and subsequent authorization by Anythink Libraries.

1.1 Purpose

The purpose of the Phase I ESA was to identify Recognized Environmental Conditions (REC), to the extent feasible, pursuant to the methods and procedures described in the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessments, E 1527-13.

A REC is defined as the presence or likely presence of hazardous substances or petroleum products on a site under conditions that indicate an existing release, a past release, or a material threat of a release of hazardous substances or petroleum products into the ground, ground water, or surface water of the site. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

ASTM Standard E1527-13 also has separate definitions for past conditions that would otherwise be considered a REC but have been addressed to the satisfaction of the applicable regulatory agencies and would either allow for

generally unrestricted use of the Subject Property (referred to as a Historic Recognized Environmental Condition, or HREC) or for use of the Subject Property with various restrictions (referred to as a Controlled Recognized Environmental Condition, or CREC).

1.2 Scope of Services

The scope of services for this assessment consisted of a records review, a site reconnaissance, historical research, interviews, and documentation of findings in a report.

1.3 Limitations

This Phase I ESA was prepared in general accordance with ASTM Standard E 1527-13. There may be additional environmental issues present at the Subject Property that are outside the scope of this practice that includes, but are not limited to the following:

- Asbestos-containing materials;
- Radon;
- Lead-based paint;
- Lead in drinking water;
- Cultural and historic resources;
- Mold and fungi;
- Industrial hygiene;
- Indoor air quality;
- Health & safety;
- Ecological resources;
- Endangered species;
- Biological or infectious agents and pathogens;
- Wetlands;
- Jurisdictional waters of the U.S;
- Regulatory compliance;
- High voltage power lines;
- Mine subsidence; and
- Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS).

CTL provided an opinion based upon the condition of the Subject Property on the day it was observed and a review of existing and reasonably ascertainable regulatory records and historical information. Our scope did not include chemical testing of soil, ground water, air, or building materials. The opinion, conclusions, and recommendations of this report are not intended to be used or relied upon by a third party to this Agreement. With the written consent of our client, CTL may be available to contract with other parties to provide an opinion or conduct additional environmental assessment services. Due to latent conditions and other contingencies which may become evident in the future, the current assessment does not result in any guarantee the Subject Property is free and clear of hazardous materials. Should additional surface, subsurface or chemical data become available, the conclusions and recommendations contained in this report shall not be considered valid unless the data is reviewed and the conclusions of this report are modified or approved in writing by our firm.

We believe that this investigation was conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the locality of the project. No warranty, express or implied, is made.

2.0 SUBJECT PROPERTY DESCRIPTION AND LOCATION

2.1 Location and Legal Description

The Subject Property is generally located northwest of the intersection of 136th Avenue and Quebec Street, Colorado. The geographic location of the Subject Property is within Section 20, Township 1 South, Range 67 West of the 6th Principal Meridian, Adams County, Colorado. Adams County Assessor records indicate the Subject Property consists of a portion of a larger parcel of land that has a total area of approximately 132 acres. Based on a map provided of the Subject Property boundaries, we estimate the size of the Subject Property is

approximately 14 acres. According to the Adams County Assessor, the parcel containing the Subject Property has the following legal description (as abbreviated by the assessor): "SECT,TWN,RNG:20-1-67 DESC: SE4 EXC PARCS AND EXC PT PLATTED AND EXC RD 128/290A." The Subject Property location and site plan are shown on Figure 1 (Area Map) and Figure 2 (Site Plan), respectively.

2.2 General Description of Subject Property and Improvements

The Subject Property consists of vacant land. A photographic record of our site reconnaissance is presented in Appendix A.

2.3 General Uses of Adjoining Properties

The Subject Property is located within a developing area of Thornton used primarily for residential purposes. Adjoining properties consist of vacant land. Additional details regarding our observations of adjacent properties are presented in Section 7.4 of this report.

3.0 USER PROVIDED INFORMATION

Ms. Pam Sandlian-Smith, Executive Director of Anythink Libraries, responded to our Environmental Questionnaire on February 21, 2022. Ms. Sandlian-Smith's answers to our questions are detailed below.

3.1 Environmental Liens/Title Records

An environmental lien is a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous material or petroleum products upon a property.

CTL was not provided with title records for the Subject Property. On behalf of the Client, CTL obtained a search for environmental liens and activity and use limitations (AULs) from ERIS. The search did not reveal the presence of environmental liens or AULs recorded against the Subject Property deed records. The search results are presented in Appendix B.

3.2 Activity and Use Limitations (AULs)

Environmental AULs are legal or physical restrictions or limitations on the use of, or access to, a site or facility to: 1) reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil or ground water on the property, or 2) prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions may include engineering controls, institutional controls, or land use restrictions. The aforementioned search did not reveal the presence of AULs recorded against the Subject Property deed records.

3.3 Specialized Knowledge

Ms. Sandlian-Smith was not aware of specialized knowledge or experience related to previous environmental activities on the Subject Property.

3.4 Valuation Reduction for Environmental Issues

Ms. Sandlian-Smith was not aware of valuation reduction of the Subject Property because of environmental issues.

3.5 Commonly Known or Reasonably Ascertainable Information

Ms. Sandlian-Smith was not aware of commonly known or reasonably ascertainable information regarding environmental issues related to the Subject Property.

3.6 Reason for Performing a Phase I ESA

A Phase I ESA was requested for “site due diligence required by underwriter of certificates of participation.”

3.7 Previous Environmental Site Assessments

CTL was provided with a Phase I ESA report of a larger area that included the Subject Property, performed by ERO Resources Corporation (ERO) in 2019 (Project No. 10689, report dated July 9, 2019); excerpts from the ERO Phase I ESA are presented in Appendix C. ERO described the Subject Property as vacant land at the time of their assessment, located adjoining to a plugged and abandoned oil and gas well identified as Aylor #2. According to ERO, the oil and gas well failed several COGCC inspections for various reasons, including having oil-contaminated soils near the wellhead. Also, ERO stated that petroleum-contaminated soils were encountered near the wellhead during reclamation activities that occurred in 2019. ERO indicated that contaminated soils were excavated and removed to a depth of approximately 12 feet and that a total of 410 cubic yards of contaminated soils were excavated and removed. No groundwater sampling and analysis appears to have occurred, although ERO did not address why groundwater sampling did not occur, and ERO did not include documentation of the investigation or remediation activities. ERO concluded that the oil and gas well represented an HREC. Oil and gas information is discussed further in Section 4.5.

4.0 RECORDS REVIEW

4.1 Physiography

The Subject Property is located on gradually to moderately sloping terrain, as presented on the topographic area map (Figure 1). The Subject Property generally slopes gently downward to the south (west side of Subject Property) and southeast (east side of Subject Property), with elevations ranging from approximately 5,200 to 5,240 feet above mean sea level. The closest mapped surface water is an unnamed drainage and pond located along the east boundary of the Subject Property.

4.2 Geology and Soils

According to the USGS geologic map, the Subject Property is underlain by Post-Piney Creek alluvium, described as sand, gravel, silt, and clay. According to the USDA Web Soil Survey, the Subject Property is underlain by soils described as loams.

4.3 Groundwater

Based on relative elevations of the Subject Property and the nearby surface water to the east, depth to groundwater under the Subject Property would generally be expected to be approximately 15 to 30 feet below grade. It is our experience that the flow direction of shallow, unconfined groundwater is generally controlled by topography. Based on topography, we estimate the general direction of groundwater flow below the Subject Property is generally to the south to southeast. Topographic data suggests areas up-gradient of the Subject Property are generally to the north and northwest.

4.4 Water Wells

Water wells are generally identified through the Colorado Division of Water Resources online water well permit database. The database does not show water supply wells on the Subject Property. The nearest mapped water supply well is located approximately 1,300 feet to the east-southeast (topographically downgradient) and is registered to the City of Thornton for groundwater monitoring. Although groundwater monitoring wells would generally be of concern, based on distance and topography, this City of Thornton well is not considered a REC.

4.5 Oil/Gas Wells

Oil and gas wells are identified through the Colorado Oil and Gas Conservation Commission (COGCC) online database. One oil and gas well was shown adjoining to the west of the Subject Property. This oil and gas well is identified as Aylor #2, which is operated by Extraction Oil & Gas, was drilled in 1975, and was plugged and abandoned in 2018. COGCC inspection records indicate this oil and gas well failed multiple inspections for stained soils at the wellhead, as well as other violations that may not be associated with potential releases. COGCC records document the assessment and remediation of soil contamination that was discovered near the wellhead in 2019, as discussed previously in Section 3.7. Initial soil contamination consisted of low levels of benzene, toluene, ethylbenzene, and xylenes (BTEX) below COGCC standards and total petroleum hydrocarbon (TPH) concentrations in excess of 13,000 milligrams per kilogram, which exceeded the COGCC limit of 500 mg/kg. Following excavation, removal, and offsite disposal of contaminated soils, remaining soil samples from the excavation had BTEX concentrations less than COGCC limits and laboratory reporting limits and TPH concentrations up to 2.2 mg/kg, which is less than the COGCC limit of 500 mg/kg. It is unclear why groundwater was not assessed for impacts from the spill. Based on the general risk of releases from oil and gas wells and the release that was remediated without

assessing groundwater, CTL considers this off-site oil and gas well to represent a current REC. Excerpts from the COGCC file review are presented in Appendix D.

One additional nearby oil and gas well, identified as Aylor #4, was mapped approximately 650 feet to the north (topographically upgradient) of the Subject Property. However, based on distance, releases from this oil and gas well would not be expected to impact the Subject Property, and therefore, this oil and gas well is not considered a REC.

4.6 Physical Setting Analysis of Migration of Hazardous/Petroleum Substances

A hypothetic spill of a hazardous or petroleum substance on the Subject Property would be expected to migrate along the ground surface following topography, flowing generally toward the south or southeast. Off-site surface spills within the areas to the north and northwest appear to have the highest potential to migrate on-site. Based on local topography, we estimate groundwater generally flows to the south and southeast. Sources of contamination to ground water beneath the Subject Property, if present, would most likely be located to the north or northwest.

5.0 HISTORICAL USE INFORMATION

5.1 Historical Aerial Photographs and Topographic Maps

Historical aerial photographs of the Subject Property and surrounding area were reviewed for 1937, 1953, 1963, 1971, 1978, 1984, 1993, 1999, 2005, 2006, 2011, 2013, 2015, 2017, and 2019; copies of the aerial photographs are presented in Appendix E. Topographic maps were reviewed for the years 1940, 1944, 1957, 1965, 1971, 1980, and 1994. An interpretation of the aerial photographs and topographic maps is presented, as follows:

1937 - 1971: The Subject Property appears to be vacant land or farmland, traversed by several dirt roads, although details are difficult to discern due to the scale and quality of the photos. A drainage and pond are located immediately to the east and a ditch is visible immediately to the northwest. Adjoining properties in all directions are vacant or farmland. 136th Avenue has not been constructed further to the south. By 1965, an unspecified pipeline is shown immediately to the west of the Subject Property.

1978 - 2017: The offsite oil and gas well (Aylor #2) is visible to the west of the Subject Property. By 1993, the Subject Property use is clearly farmland. The adjoining area to the northwest, north of the ditch, is now developed with several buildings and extensive outdoor materials and equipment storage, which are largely moved northward and eastward by 2005. No significant changes are evident on other adjoining properties. 136th Avenue has been constructed further to the south. Residential development increases over time in the surrounding area.

2019: The oil and gas equipment that had been visible to the west is no longer present, although the oil and gas well pad and associated dirt road remain. No significant changes are evident on adjoining properties.

5.2 Sanborn Fire Insurance Maps

Sanborn fire insurance maps were a tool used by the fire insurance industry to evaluate property risk. The maps often show details of historic dwellings, commercial buildings, and factories, indicate property uses and addresses, and show locations of items such as wells, cisterns, and fuel storage tanks. Sanborn fire insurance map coverage was not available for the Subject Property and surrounding area.

5.3 Historical City Directories

Due to the predominant agricultural/vacant state of the Subject Property, city directories were not reviewed.

5.4 Assessor Records

We reviewed Adams County Assessor online files for the Subject Property. Records indicate the Subject Property consists of a portion of Parcel No. 0157120400002, owned by the City of Thornton. No improvements are listed.

5.5 Zoning/Land Use Records

The City of Thornton Zoning Map indicates that the Subject Property is currently zoned for parks and open space use.

6.0 REGULATORY AGENCY RECORDS

Regulatory agency records were provided by ERIS. The database report, dated March 28, 2022, is presented in Appendix F, and contains a full description of findings, definitions of databases reviewed, and a list of database acronyms. The following discusses pertinent findings of the database search.

6.1 Summary of Findings

The Subject Property is not listed in the databases searched. Several facilities were listed in the surrounding area, and these include, but are not limited to:

- Extraction Oil & Gas Inc, located approximately 150 feet to the west and 655 feet to the north is listed three times on the non-ASTM Oil and Gas Spills (OG Spills) database. The listings indicate the spill to the west is related to

the spill that was remediated in 2019 and discussed in Section 4.5; however, according to the database, the spill case has not been closed by COGCC. As discussed in Section 4.5, this offsite oil and gas well is considered a REC. The listing to the north also appeared under the name "Extraction Oil & Gas Inc" and indicated a spill. Based on distance, the spill to the north would not be expected to impact the Subject Property.

- Offen Petroleum, located approximately 1,300 feet to the southeast and topographically downgradient at Quebec Street and 128th Avenue (possibly mis-plotted – listed intersection is more than one mile away), is listed as a Resource Conservation and Recovery Act Corrective Action (RCRA CORRACTS) facility. The database indicates the facility had a petroleum spill in 2012 that was remediated by 2014. Based on completed remediation, distance, and topography, this spill is unlikely to have impacted the Subject Property, and therefore, is not considered a REC.

- Amber Creek, located approximately 1,300 feet to the southeast and topographically downgradient at the southwest corner of the intersection of Quebec Street and 136th Avenue, is listed as a Voluntary Cleanup (VCP) facility. The database indicates that soil, groundwater, and surface water are/were contaminated with petroleum hydrocarbons and that a No Action Determination was issued in 2006. Based on distance and topography, this facility is unlikely to have impacted the Subject Property, and therefore, is not considered a REC.

- A gravel pit, located approximately ,1,400 feet to the northwest and topographically upgradient at an unspecified address, is listed on the non-ASTM Mineral Resource Data System (MRDS) database. The database indicates the facility is a sand and gravel mine. The facility does not appear on a database indicating a known or suspected release. Based on this, along

with its distance, this facility is not considered a REC.

- An unspecified facility, located approximately one mile to the west-northwest and topographically crossgradient, is listed on the MRDS database as a sand and gravel facility. Based on distance and topography, releases from this facility are unlikely to impact the Subject Property, and therefore, this facility is not considered a REC.

The database report contained no “unplottable” facilities, which are facilities that cannot be mapped due to incomplete or inaccurate location information.

6.2 Local Government Records

CTL contacted the North Metro Fire Department and the Tri-County Health Department for information or knowledge of hazardous spills and UST releases that have occurred on or near the Subject Property. The fire department responded that it did not have records for the Subject Property. The health department has not responded at this time. If the agency responds and it significantly alters our conclusions, we will notify you in writing.

7.0 SITE RECONNAISSANCE

The following section discusses observations made during our site reconnaissance.

7.1 Methodology and Limiting Conditions

Mr. Hadi Al-Jassim conducted a site visit on March 23, 2022. The Subject Property was accessed by walking. A photographic record of the site reconnaissance is presented in Appendix A.

7.2 Description of Subject Property Structures and Roads

The Subject Property is not improved with structures. One overgrown dirt road crosses the west end of the Subject Property in a general north-south direction.

7.3 Subject Property Observations

During our reconnaissance, we specifically looked for obvious evidence of the Subject Property features listed in Table I. Table I lists features typically observed outside of Subject Property structures. An "X" located within the table indicates that the feature was readily observable during our visit. Those features which were observed on the Subject Property are discussed in further detail within the following subsection(s).

Table I
Exterior Subject Property Features

	Aboveground Storage Tanks		Stained Soil and/or Pavement
	Air Emissions Sources		Stockpiles of Soil or Debris
	Cultivated Land/Crops		Stressed Vegetation
	Drains, Sumps, Pits	X	Surface Water, Streams, Ponds, Lagoons
	Hazardous Material Storage		Transformers (Potential PCB)
	High Power Transmission Lines		Underground Storage Tanks
	Natural Gas Pipelines		Unidentified Piping Below Grade
	Odors		Unidentified Substance Containers
	Petroleum Pipelines		Vehicle Maintenance Areas
	Physical Irregularities		Wastewater Discharge
	Placed Fill or Imported Soils		Waste Treatment Processes
	Railroad Lines		Wells (Agricultural, Water Supply)
	Septic Systems or Leach Fields		Wells (Monitoring)
	Solid Waste or Disposal Areas		Wells (Oil or Natural Gas)

7.3.1 Surface Water, Streams, Ponds, Lagoons

CTL observed a stream on or immediately east of the east Subject Property

boundary. No obvious staining was observed along the banks of the stream. Therefore, this surface water is not considered a REC.

7.4 Review of Adjoining Properties

General observations of properties adjacent to the Subject Property were performed in conjunction with on-site observations made on March 23, 2022. Land use in the vicinity of the Subject Property consists primarily of residential and agricultural uses. Properties immediately adjacent to the Subject Property are described below, based on outdoor observations from the Subject Property or nearby public streets.

- North: The Subject Property is bordered to the north by vacant land, with a farm homestead further to the north.

- East: The Subject Property is bordered to the east by vacant land with a stream and pond. Further to the east are several residences.

- South: The Subject Property is bordered to the south by vacant land, beyond which are 136th Avenue and a residential development.

- West: The Subject Property is bordered to the west by vacant land on which an oil and gas well pad is present. A residential development exists further to the west.

Observation of adjacent properties did not reveal obvious visual indications of environmental concern. We did not observe obvious evidence of landfills, lagoons, pits, or other waste treatment or disposal operations; underground

storage tanks, spills, releases, or discharge of hazardous material; however as explained in Section 4.5, the oil and gas well to the west is considered a REC.

8.0 INTERVIEWS

8.1 Owner, Site Manager and/or Occupants

Mr. Andrew Tadross, Project Manager for the City of Thornton (current owner), responded to our interview questionnaire on February 25, 2022. Mr. Tadross indicated that the City of Thornton acquired the Subject Property and adjoining areas in 2003 from Bill and John Aylor. The land acquired was being used as a residence, but it does not appear that the residence was located on the portion of the land that comprises the Subject Property. The non-residential portions of the land were reserved for farming and were planned for long term use as a park an open space. Mr. Tadross referred CTL to the prior Phase I ESA of the Subject Property and surrounding area for additional details on the use and history of the parcel (see Section 3.7). Mr. Tadross indicated they did not have information regarding the adjoining oil and gas well (see Section 4.5), additional to records maintained by COGCC.

9.0 DEVIATIONS

9.1 Exceptions and Deletions

ASTM Standard E 1527-13 for Phase I Environmental Site Assessments, Section 8.3.2, states that “all obvious uses of the site shall be identified from the present, back to the site’s obvious first developed use, or back to 1940, whichever is earlier.” The term “developed use” includes agricultural uses (i.e., cultivated land/agricultural crops) and placement of fill. In our opinion, livestock rangeland is not a developed use.

The historical documentation for this assessment went back to 1937 (based on aerial photos), at which time the Subject Property appeared to be farmland or possibly vacant land. We were not able to obtain historical records dating back to first developed use. Thus, the historical documentation was not fully satisfied for the ASTM standard.

It is the opinion of CTL that obtaining earlier historical information would not be sufficiently useful, reasonably ascertainable, or change the likelihood for the presence of a REC on the Subject Property.

9.2 Data Gaps

CTL contacted the local fire and health departments for information regarding hazardous materials incidents that may have occurred on or near the Subject Property. The agencies have not responded at this time. This does not appear to be a significant data gap based on other information reviewed during this assessment.

10.0 FINDINGS AND OPINION

10.1 Summary of Subject Property Historical Use

As of 1937, or earlier, the Subject Property appears to have been used for farming or possibly grazing (vacant land). By 1993, the Subject Property use is clearly farmland. Adjoining properties were historically farmland, with the adjoining area to the northwest, and later to the north and northeast, being redeveloped with several buildings and extensive outdoor materials and equipment storage.

The Subject Property was in agricultural use. The use of pesticides and herbicides can sometimes present a potential concern because these chemicals can adversely impact the soil and ground water beneath the Subject Property.

However, many of these chemicals used today degrade quickly in the natural environment. We did not observe evidence of the usage or storage of banned chemicals (e.g. DDT, Dieldrin) at the Subject Property. We believe that normal application of agricultural chemicals at the Subject Property is a *de minimis* environmental condition.

10.2 Nearby Environmental Concerns

An oil and gas well is visible west of the Subject Property from 1978 to 2019. This oil and gas well is considered a REC.

11.0 CONCLUSIONS

We have performed a Phase I Environmental Site Assessment (ESA) in general conformance with the scope and limitations of ASTM Practice E 1527-13 of the proposed Anythink Library in Thornton, Colorado (Subject Property). Any exceptions to, or deletions from, this practice are described in Section 9.1 of this report. No recognized environmental conditions were identified in association with the Subject Property, with the following exception:

- One oil and gas well is located approximately 150 feet west of the Subject Property. This oil and gas well is identified as Aylor #2, which is operated by Extraction Oil & Gas, was drilled in 1975, and was plugged and abandoned in 2018. COGCC inspection records indicate this oil and gas well failed multiple inspections for stained soils at the wellhead, as well as other violations that may not be associated with potential releases. COGCC records document the assessment and remediation of soil contamination that was discovered near the wellhead in 2019. Initial soil contamination consisted of low levels of benzene, toluene, ethylbenzene, and xylenes (BTEX) below COGCC standards and total petroleum

hydrocarbon (TPH) concentrations in excess of 13,000 milligrams per kilogram, which exceeded the COGCC limit of 500 mg/kg. Following excavation, removal, and offsite disposal of contaminated soils, remaining soil samples from the excavation had BTEX concentrations less than COGCC limits and laboratory reporting limits and TPH concentrations up to 2.2 mg/kg, which is less than the COGCC limit of 500 mg/kg. Groundwater was not assessed for impacts. Based on the general risk of releases from oil and gas wells and the release that was remediated without assessing groundwater, this oil and gas well is considered a REC.

12.0 QUALIFICATIONS

This Phase I ESA was performed under the responsible charge of Mr. Dana L. Harris. Mr. Harris has performed or reviewed over 1,000 Phase I ESAs in the State of Colorado and has been practicing within the local environmental consulting profession for at least 20 years. The resumes of the individuals conducting this Phase I ESA are included in Appendix G.

Mr. Harris declares that, to the best of his professional knowledge and belief, he meets the definition of an Environmental Professional as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject site. I have developed and performed all appropriate inquiries in general conformance with the standards and practices set forth in 40 CFR Part 312.

We believe that this ESA was conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the locality of the project. No warranty, express or implied, is made.

If we can be of further service in discussing the contents of this report, please call.

CTL | THOMPSON, INC.

Hadi Al-Jassim, EIT
Staff Engineer

Dana L. Harris
Environmental Department Manager
Fort Collins Branch

REFERENCES

Adams County Assessor online records accessed March 30, 2022. https://gisapp.adcogov.org/QuickSearch/doreport.aspx?pid=0157120400002

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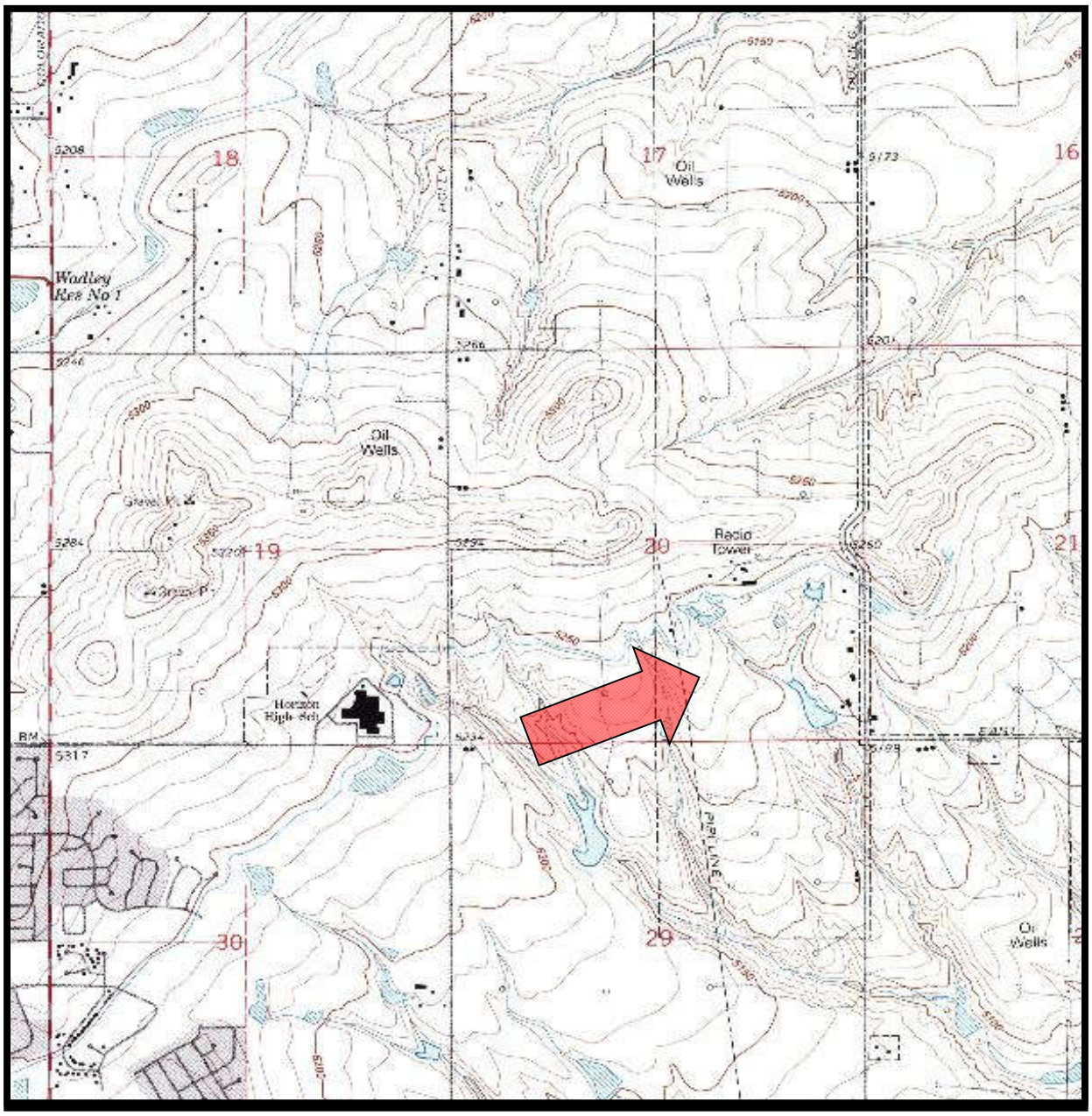


Source:
U.S.G.S. Topographic Map
Eastlake Quadrangle, Colorado
Revised 1994

Not to Scale

TOPOGRAPHIC AREA MAP

Anythink Libraries
Proposed Anythink Library, Thornton, CO
Job No. FC10326.000-200 R2

Figure. 1

N

Approximate Subject Property boundaries

Source:
Google Earth
2022

Not to Scale

SITE PLAN

Anythink Libraries
Proposed Anythink Library, Thornton, CO
Job No. FC10326.000-200 R2

Figure. 2

APPENDIX A

SITE PHOTOGRAPHS

Remnant of old dirt road within northern portion of Subject Property

Northwest portion of Subject Property looking northwest

Northwest portion of Subject Property looking southwest

Northeast portion of Subject Property looking northeast

CTL | THOMPSON

Site Photographs – Phase I ESA

Proposed Anythink Library
Thornton, Colorado
March 2022

Northeast border of Subject Property looking southeast

Northeast border of Subject Property looking northwest

East corner of Subject Property looking southwest

Southeast corner of Subject Property looking west

CTL|THOMPSON

Site Photographs – Phase I ESA

Proposed Anythink Library
Thornton, Colorado
March 2022

Southeast corner of Subject Property looking northwest

Southeast corner of Subject Property looking north

Southeast corner of Subject Property looking southeast

Southeast corner of Subject Property looking east

CTL | THOMPSON

Site Photographs – Phase I ESA

Proposed Anythink Library
Thornton, Colorado
March 2022

APPENDIX B

RESULTS OF ENVIRONMENTAL LIEN/AUL SEARCH

CHAIN OF TITLE & LIEN SEARCHES

Project Property: *39.945114, -104.910013*
THORNTON, CO 80602
Order No: *22022200925*
Date Completed: *02/27/2022*

Title to the estate or interest covered by this report appears to be vested in:
CITY OF THORNTON

The following is the current property legal description (See deed for full legal description):
SECT,TWN,RNG:20-1-67 DESC: SE4 EXC PARCS AND EXC PT PLATTED AND EXC RD 128/290A

Assessor's Parcel Number(s):
R0155773 AND 1571-20-4-00-002

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

ENVIRONMENTAL LIEN TO 1980 REPORT

Order No: *22022200925*

TARGET PROPERTY INFORMATION

ADDRESS

39.945114, -104.910013
THORNTON, CO 80602

RESEARCH SOURCES

RECORDER:	ADAMS COUNTY RECORDER'S OFFICE
ASSESSOR:	ADAMS COUNTY ASSESSOR'S OFFICE
STATE:	COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
FEDERAL:	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OTHER:	JUDICIAL RECORDS NOT SEARCHED. BASED ON AVAILABLE INFORMATION EVALUATED BY THE TITLE SEARCH PROFESSIONAL, THE JURISDICTION DOES NOT REQUIRE A SEARCH OF JUDICIAL RECORDS IN ORDER TO IDENTIFY ENVIRONMENTAL LIENS.
NOTES:	PUBLIC RECORDS OF ADAMS COUNTY, CO WERE SEARCHED FROM JANUARY 1, 1980 TO FEBRUARY 23, 2022, AND NO OTHER DEEDS VESTING TITLE IN THE SUBJECT PROPERTY WERE FOUND OF RECORD DURING THE PERIOD SEARCHED.

ENVIRONMENTAL LIENS

Environmental Lien: [X] NOT FOUND

ACTIVITY AND USE LIMITATIONS (AULs)

AULs: [X] NOT FOUND

CHAIN OF TITLE TO 1980

1. Deed Type: WARRANTY DEED
   Deed Date: 03/14/2003
   Recorded: 04/01/2003
   Grantor: WILLIAM R AYLOR, SR AND THE JOHN L AYLOR JR REVOCABLE INTERVIVOS LIVING TRUST AND THE JOHN L AND CARMELLA MARY AYLOR REVOCABLE INTERVIVOS LIVING TRUST
   Grantee: CITY OF THORNTON
   Instrument: C1118355
   Notes:

2. Deed Type: WARRANTY DEED
   Deed Date: 02/23/2000
   Recorded: 04/17/2000
   Grantor: JOHN L AYLOR JR
   Grantee: JOHN L AND CARMELLA MARY AYLOR REVOCABLE INTERVIVOS LIVING TRUST
   Instrument: C0660856
   Notes:

3. Deed Type: WARRANTY DEED
   Deed Date: 02/23/2000
   Recorded: 04/17/2000
   Grantor: JOHN L AYLOR JR
   Grantee: THE JOHN L AYLOR JR REVOCABLE INTERVIVOS LIVING TRUST
   Instrument: C0660854
   Notes:

4. Deed Type: WARRANTY DEED
   Deed Date: 02/23/2000
   Recorded: 04/17/2000
   Grantor: JOHN LOUIS AYLOR AKA JOHN L AYLOR
   Grantee: JOHN L AYLOR JR
   Instrument: C0660852
   Notes: JOHN L AYLOR JR, WILLIAM RAY AYLOR AND MABEL A AYLOR GAINED TITLE PRIOR TO 1980 MABEL A AYLOR PASSED AWAY IN 1996
   RESEARCH CONDUCTED BACK TO 1980. THIS IS THE OLDEST DEED OF RECORD FOUND POST DECEMBER 31, 1979 (BETWEEN 01/01/1980 AND 04/17/2000).

LEASES AND MISCELLANEOUS

Comments: NONE IDENTIFIED.

ENVIRONMENTAL LIEN TO 1980 REPORT

Order No: *22022200925*

The ERIS Environmental Lien Search Report to 1980 provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied property information to:

- Search for parcel information and / or legal description
- Search for ownership information
- Research official land title documents recorded at jurisdictional agencies such as recorder's' office, registries of deeds, county clerks' offices, etc.
- Access copies of deeds to 1980
- Search for environmental encumbrance(s) associated with the deeds
- Provide a copy of any environmental encumbrance(s) based upon a review of keywords in the instrument(s) (title, parties involved and description)
- Provide a copy of the deeds or cite documents reviewed

Thank You for Your Business
Please contact ERIS at **416-510-5204** or **info@erisinfo.com**
with any questions or comments

LIMITATION

This report is neither a guarantee of title, a commitment to insure, or a policy of title insurance. ERIS – Environmental Risk Information Services does not guarantee nor include any warranty of any kind whether expressed or implied, about the validity of all information included in this report since this information is retrieved as it is recorded from various agencies that make it available. The total liability is limited to the fee paid for this report.

DEED EXHIBIT

(1)

C1118355
4/01/2003 12:02:55
PG: 0001-002
11.00 DOC FEE: 0.00
CAROL SNYDER
ADAMS COUNTY

WARRANTY DEED

THIS DEED, dated _____
between William R. Aylor, Sr. and The John L Aylor, Jr. Revocable Intervivos Living Trust and the John L. and Carmella Mary Aylor Revocable Intervivos Living Trust, grantors, and the City of Thornton, a Colorado Municipal Corporation, a corporation duly organized and existing under and by virtue of the laws of the State of Colorado, whose legal address is 9500 Civic Center Drive, Thornton, Colorado 80229 of the County of Adams and State of Colorado, grantee:

WITNESS, that the grantor, for and in consideration of the sum of *** Ten Dollars ($10.00) and other good and valuable consideration********** DOLLARS, the receipt and sufficiency of which is hereby acknowledged, has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell, convey and confirm unto the grantee, its successors and assigns forever, all the real property, together with improvements, if any, situate, lying and being in the County of Adams and State of Colorado, described as follows:

THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE 6TH PRINCIPAL MERIDIAN, EXCEPT THE FOLLOWING DESCRIBED PARCELS OF LAND:
THAT PORTION OF THE SOUTHEAST QUARTER OF SAID SECTION PLATTED AS AYLOR SUBDIVISION;
PARCEL OF LAND DESCRIBED IN DEED RECORDED OCTOBER 22, 1962 IN BOOK 1023 AT PAGE 34;
PARCEL OF LAND DESCRIBED IN DEED RECORDED JULY 25, 1969 IN BOOK 1533 AT PAGE 68;
PARCEL OF LAND DESCRIBED IN DEED RECORDED JULY 29, 1970 IN BOOK 1616 AT PAGE 345;
PARCEL OF LAND DESCRIBED IN DEED RECORDED MAY 24, 1984 IN BOOK 2875 AT PAGE 917;
AND PARCEL OF LAND DESCRIBED IN DEED RECORDED NOVEMBER 11, 1992 IN BOOK 3989 AT PAGE 713, COUNTY OF ADAMS, STATE OF COLORADO.

TOGETHER with all and singular the hereditaments and appurtenances thereunto belonging, or in anywise appertaining, the reversion and reversions, remainder and remainders, rents, issues and profits thereof, and all the estate, right, title, interest, claim and demand whatsoever of the grantor, either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances;

TO HAVE AND TO HOLD the said premises above bargained and described, with the appurtenances, unto the grantee, his heirs and assigns forever. The grantor, for itself, its successors and assigns, does covenant, grant, bargain and agree to and with the grantee, its successors and assigns, that at the time of the ensealing and delivery of these presents, it is well seized of the premises above conveyed, has good, sure, perfect, absolute and indefeasible estate of inheritance, in law, in fee simple, and has good right, full power and authority to grant, bargain, sell and convey the same in manner and form as aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, taxes, assessments, encumbrances and restrictions of whatever kind or nature soever, except none.

The grantor shall and will WARRANT AND FOREVER DEFEND the above bargained premises in the quiet and peaceable possession of the grantee, its successors and assigns, against all and every person or persons lawfully claiming the whole or any part thereof.

The singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

IN WITNESS WHEREOF, the grantors have executed this deed on the date set forth above.

William R Aylor Sr
William R. Aylor, Sr.

The John L. Aylor, Jr. Revocable Intervivos Living Trust

By: John L. Aylor Jr. Revocable Intervivos Living Trust

STATE OF COLORADO
County of Denver

The John L. and Carmella Mary Aylor Revocable Intervivos Living Trust

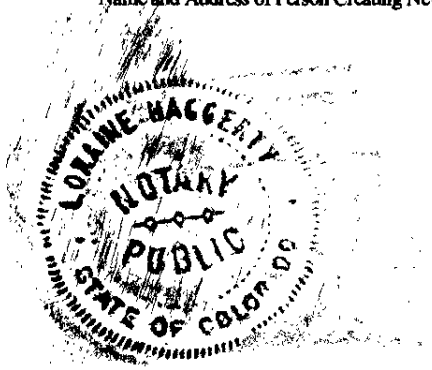
By: John L & Carmella Mary Aylor Revocable Living Trust

The foregoing instrument was acknowledged before me this 14th day of March, 2008 by William R. Aylor, Sr, and The John L Aylor, Jr. , Trustee and The John L. + Carmella Mary Aylor Trustee.
Revocable Intervivos Living Trust Revocable Intervivos Living Trust
Witness my hand and official seal.

My commission expires: 8/11/05

Loraine Haggerty
Notary Public

Name and Address of Person Creating Newly Created Legal Description (§38-35-106.5, C.R.S.)



APPENDIX C

EXCERPTS FROM PRIOR PHASE I ESA

ERO

Consultants in Natural Resources and the Environment

Phase I Environmental Site Assessment
Aylor Property
Northwest of East 136th Avenue at Quebec Street
Thornton, Colorado

Prepared for—

City of Thornton
12450 Washington Street
Thornton, CO 80241

Prepared by—

ERO Resources Corporation
1842 Clarkson Street
Denver, Colorado 80218
(303) 830-1188
ERO Project #10689

July 9, 2019

Per ASTM E1527-13 §4.6, this Phase I ESA is considered valid through:
November 31, 2019

Summary

The City of Thornton retained ERO Resources Corporation (ERO) to conduct a Phase I Environmental Site Assessment (Phase I ESA) for the Aylor Property at 13981 Quebec Street, in Thornton, Adams County, Colorado (hereafter called the property). ERO performed this Phase I ESA according to the "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM International E1527-13 2013) (ASTM 2013). This Phase I ESA consists of a review of historical information and federal, state, and local records; interviews with persons knowledgeable of the property; a site reconnaissance; and preparation of this report.

Property Description. The property consists of a 139.17-acre parcel of vacant land currently housing an abandoned farmstead, two telecommunication facilities, one active oil and gas well, and an oil and gas well tank battery facility. Historically, the property and surrounding area has been rural residential, agricultural, developed for oil and gas production, and undeveloped. Historical aerial photographs detail former oil and gas wells on the property as well as large portions of the north and western portions of the property to be used during the 1980s and 1990s for significant equipment and/or materials storage and/or disposal.

Database Records. Federal, state, and local records did not identify any sites or incidents on or near the property typically associated with recognized environmental conditions (RECs) with the exception of four oil and gas wells on the property, three of which have been plugged and abandoned and two of which had had historical releases reported to the regulatory agency. Both releases have been granted regulatory closure. The parcel adjacent to the south was also the subject of a Voluntary Cleanup Program (VCP) action, which was also granted regulatory closure.

Site Reconnaissance. During the site reconnaissance, ERO inspected the property by walking the perimeter and traversing the interior. The property consists of undeveloped grassland, oil and gas operations, and an abandoned farmstead. The farmstead consists of numerous structures including a residence, poultry shed, a well house, several storage sheds, a subgrade poultry barn, subterranean storage shelter, and block stables. All the structures were observed to be in extremely poor condition. Solid waste was observed in numerous areas around the farmstead and included containers and drums that continue to, or formerly held, a variety of petroleum products. Five above ground petroleum storage tanks and a field sprayer were observed in the farmstead area as well as two larger tanks associated with the Aylor #3 tank battery west of the farmstead area.

Interviews. Interviews with persons knowledgeable about the property indicated the previous owner had owned the property since the 1930s and that the property was since acquired by the User. During the operational period of the property, the property was primarily used as a chicken farm. No known releases or disposal activities aside from the documented oil and gas releases are known to have occurred on the property.

Conclusions. This assessment has revealed no evidence of RECs in connection with the property except for the following:

- Current oil and gas operations at the Aylor #3 oil and gas well and associated tank battery;
- Multiple areas of solid waste disposal across the property, including areas with suspect ACBM and petroleum product

In accordance with the ASTM standard, this Phase I ESA is valid if completed less than 180 days prior to property acquisition or intended transaction.

Path: P:\10600 Projects\10689 COT Aylor Property Phase I ESA\Maps\10689 Figure 2.mxd

Aylor Property, Thornton, Adams County, CO

Property
Disposal Site
Producing Oil and Gas Well
Plugged and Abandoned Oil and Gas Well

0 200 400 feet

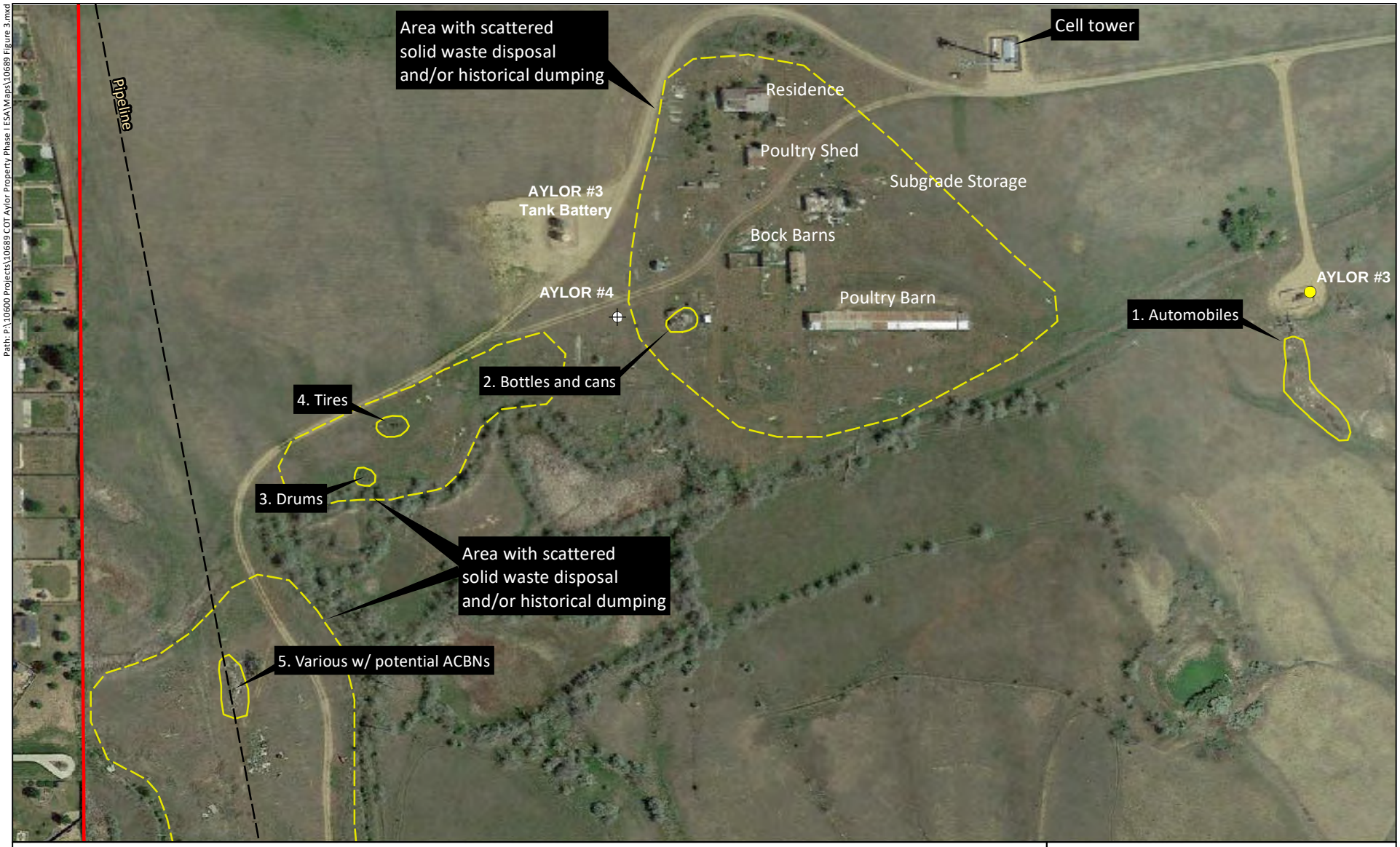
N

Figure 2
Site Plan

Prepared for: City of Thornton
File: 10689 Figure 2.mxd [dlH]
July 3, 2019

ERO Resources Corp.

Aerial Image: © Copyright Google Earth Pro 5/31/2018



Path: P:\10600 Projects\10689 COT Aylor Property Phase I ESA\Maps\10689 Figure 3.mxd

Aylor Property, Thornton, Adams County, CO

Property
Disposal Site
Producing Oil and Gas Well
Plugged and Abandoned Oil and Gas Well

0 100 200 feet

N

Figure 3
Farmstead Detail

ERO Resources Corp.

Aerial Image: © Copyright Google Earth Pro 5/31/2018

2.5 Commonly Known or Reasonably Ascertainable Information

According to Mr. Twombly, he is not aware of any commonly known or reasonably ascertainable information within the local community that would indicate RECs in connection with the property aside from releases associated with the oil and gas wells on the property (Twombly 2019).

2.6 Degree of Obviousness

According to Mr. Twombly, to his knowledge, there is no obvious indication of releases or threatened releases on the property (Twombly 2019).

2.7 Reason for Performing Phase I

According to Mr. Twombly, this Phase I ESA is being conducted for future development and improvements to the property (Twombly 2019).

3.0 Records Review

3.1 Physical Setting

The elevation of the property is approximately 5,190 to 5,280 feet above sea level (USGS 2016). Surface geology in the area is characterized by alluvial deposits of sand and gravel underlain by sandstones, claystones, and conglomerates of the Denver Formation (Trimble and Machette 1979). According to the U.S. Geological Survey (USGS), depth to the uppermost groundwater beneath the property and vicinity is 5 to 20 below ground surface (bgs) (Hillier et al. 1983), but is also likely to be highly variable depending on topography. According to topographic information from the USGS 7.5-minute quadrangle map, surface water on the property flows to the southeast (USGS 2016). Based on the topography and field observations, the expected flow direction of the uppermost groundwater is to the southeast.

3.2 Current and Future Use of the Property

The property is currently developed with an abandoned farmstead, a radio tower with associated equipment, a monopole cell tower with associated equipment, one active oil and gas well, and tank battery. The only currently active oil and gas well, Aylor #3, is located near the north-central border of the property. The well was not operating during site reconnaissance. The remainder of the property is undeveloped and vegetated with native grasses and shrubs.

According to the City of Thornton, the property is proposed for development of parks, open space, and possible recreational uses (Twombly 2019).

3.3 Structures, Roads, or Other Improvements on the Property

Numerous structures are located in the farmstead area of the property and include a residence, poultry shed, a well house, numerous storage sheds, a subgrade poultry barn, subterranean storage shelter, and portions of block stables. All the structures were in extremely poor condition. Water to the property residence is provided via an on-site well, the residence is equipped with a septic system and leach field.

Natural gas services to the property are provided by Public Service, and electricity is provided through United Power (Twombly 2019).

A well access road, accessed from a gate off Quebec Street, crosses the property and provides locked gate access to the residence, the telecommunications tower, and the on-site oil and gas wells.

3.4 Historical Use Information for the Property and Adjoining Properties

ERO used the following standard historical sources to evaluate current and past uses of the property and adjoining properties:

- Aerial photographs from 1953 to 2017
- Historical topographic maps from 1938 to 2016

Other standard historical sources for the site, such as fire insurance maps, street directories, property tax files, recorded land title records, building department records, or zoning/land use records, were not reasonably ascertainable, were not available, or, based on ERO's professional experience, are unlikely to be sufficiently useful, accurate, or complete and are unlikely to provide significant additional historical information with regard to the property.

3.4.1 Historical Aerial Photographs

Historical aerial photographs from 1953 to 2017 showing the property and surrounding area were reviewed and are discussed below (USGS 1953; Environmental Data Resources, Inc. [EDR] 2019a).

1953 Aerial Photograph; Scale 1:63,300
The 1953 aerial photograph shows the property to be developed with residential and farm structures near the north-central and northwest portions of the parcel. Several ponds are located on the property, with accompanying streams/channels and vegetated areas. The southern portion of the property is shown to be cultivated fields.

The north, south, and west adjoining parcels appear to be undeveloped and used for cultivated agricultural fields. The east adjoining property is developed with rural residences and a paved road.

1963 Aerial Photograph; Scale: 1 inch = 500 feet
The 1963 aerial photograph shows the property and surrounding area to be used for the same agricultural land use as noted in the previous photograph, but the larger scale allows more detail of the site activities to be visible.

1969, 1970 Aerial Photographs; Scale: 1 inch = 500 feet
No significant changes to the property or surrounding area are visible in the 1969 and 1970 aerial photographs compared with the previous photograph.

1979 Aerial Photograph; Scale: 1 inch = 500 feet
Significant changes to the property and surrounding area in the 1979 aerial photograph compared with the previous photograph consist of the following:

- All four registered oil and gas wells are visible on the property with additional wells located on the north, south, and west adjoining parcels.
- Several areas of the farmstead operations area in the northern portion and to the west of the farmstead appear to be used for vehicle and/or equipment storage and/or disposal;
- The remainder of the adjoining parcels appear to be used for cultivated agriculture. The east adjoining parcel remains rural residential in use.

1984, 1988, 1991, 1994, 1999 Aerial Photographs; Scale: 1 inch = 500 feet
No significant changes to the property or surrounding area are visible in the 1984 through 1999 aerial photographs compared with the previous photographs except for the following:

- An increase in the volume of material stored/disposed and vehicle usage of the area in the western portion of the property in visible throughout the time period;
- A pond is visible in the southeast corner of the property, between the oil and gas well lease area and the eastern property boundary;
- A cell phone/transmission tower is visible in the northern portion of the property in photographs from 1991; and
- The pond complex in the central portion of the property appears to vary widely in surface area by water level.

2006 Aerial Photograph; Scale: 1 inch = 500 feet
Significant changes to the property and surrounding area in the 2006 aerial photograph compared with the previous photograph consist of the following:

- The west adjoining parcel is developed with a residential community and associated roads.
- The east adjoining parcel appears developed with more residences and/or commercial structures.

2009, 2013 Aerial Photographs; Scale: 1 inch = 500 feet

No significant changes to the property or surrounding area are visible in the 2009 and 2013 aerial photographs compared with the previous photograph.

2017 Aerial Photograph; Scale: 1 inch = 500 feet
Significant changes to the property and surrounding area in the 2006 aerial photograph compared with the previous photograph consist of the following:

- The south adjoining parcel is graded, and the development of a residential community and associated roads is present.

3.4.2 Historical Topographic Maps

Historical USGS topographic maps from 1938 to 2016 showing the property and surrounding area were reviewed and are discussed below.

1938 USGS 7.5-Minute Series, Eastlake, CO; Scale: 1:24,000
The USGS topographic map from 1938 shows the property to be primarily undeveloped with only an unimproved road and one small structure along the northern border. In addition, Lee Lateral Ditch bisects the northern half of the property from east to west, and a pond is present at the southeast corner of the property.

The adjoining parcels are shown to be undeveloped, with the exception of Lee Lateral Ditch on the east and west, intermittent water features on the south and east, and a paved road on the east.

1944 USGS 7.5-Minute Series, Eastlake, CO; Scale: 1:24,000
No significant changes to the property or surrounding area are shown on the USGS topographic map from 1944.

1957 USGS 7.5-Minute Series, Eastlake, CO; Scale: 1:24,000
Significant changes to the property and surrounding area shown on the USGS topographic map from 1957 consist of the following:

- Additional structures are shown near the unimproved road, and several ponds are present throughout the property.
- One structure is shown on the east adjoining parcel, near the southern border and across the paved road.

1965 USGS 7.5-Minute Series, Eastlake, CO; Scale: 1:24,000
Significant changes to the property and/or surrounding area shown on the USGS topographic map from 1965 consist of the following:

- Several additional small structures are shown on the east adjoining parcel.

1971 USGS 7.5-Minute Series, Eastlake, CO; Scale: 1:24,000
Significant changes to the property and surrounding area shown on the USGS topographic map from 1971 consist of the following:

- A pipeline is shown along the western property boundary, which continues south through the south adjoining parcel.

1980 USGS 7.5-Minute Series, Eastlake, CO; Scale: 1:24,000
Significant changes to the property and surrounding area shown on the USGS topographic map from 1980 consist of the following:

- Oil and gas wells are shown on the north, south, and west adjoining parcels.

1994 USGS 7.5-Minute Series, Eastlake, CO; Scale: 1:24,000
Significant changes to the property and surrounding area shown on the USGS topographic map from 1994 consist of the following:

- A radio tower and one oil well are shown along the northern border, and a second oil well is depicted on the southern portion of the property.

2010, 2013, 2016 7.5-Minute Series, Eastlake, CO; Scale: 1:24,000
No significant changes to the property or surrounding area are shown on the USGS topographic maps from 2010 to 2016 with aerial photographs for base, with the exception of the oil and gas well known to be on the property, but are not shown on previous topographic maps.

3.4.3 Historical City Directories

Due to the rural nature of the property, historical city directories covering the property and surrounding areas were not reviewed.

3.5 Previous Environmental Reports

ERO did not identify and was not made aware of any previous environmental reports for the property aside from those discussed below and associated with the oil and gas wells on the property.

3.6 Standard Environmental Record Sources

ERO contracted with a commercial database search company, EDR, to conduct a search of publicly available database records (EDR 2019b). All ASTM search distance sites are measured from the property boundary.

ERO reviewed initial search results for inaccuracies using both field and mapping data sources. In addition, ERO attempted to locate orphan sites, those that lack adequate location information to map, using zip code, city name, site name, or other information. No orphan sites were found to be within the approximate ASTM search distances. A spill associated with one of the on-site oil and gas wells was listed in the database search and one additional VCP site was listed on the adjoining parcel to the south. The sites identified are discussed in the following sections and assessed as to their potential to be historical, known, or suspect RECs associated with the property. A summary is included in Table 1, and copies of records reviewed are in Appendix B.

Table 1. Summary of publicly available environmental records.

Record Sources	Search Distance (miles)[1]	Property	No. of Sites
Federal NPL site list	1.0	No	0
Federal Delisted NPL site list	0.5	No	0
Federal SEMS list	0.5	No	0
Federal SEMS-Archive site list	0.5	No	0
Federal RCRA CORRACTS site list	1.0	No	0
Federal RCRA TSD facilities list	0.5	No	0
Federal RCRA generators list	property and adjoining	No	0
Federal institutional control/engineering control registries	property only	No	0
Federal ERNS list	property only	Yes	1
State NPL-equivalent sites[2]	1.0	No	0
State CERCLIS-equivalent sites[2]	0.5	No	0
State landfill and/or solid waste disposal site list	0.5	No	0
State leaking storage tank list	0.5	No	0
State registered storage tank list	property and adjoining	No	0
State institutional control/engineering control registries	property only	No	0
State Voluntary Cleanup Program sites	0.5	No	1
State Brownfields sites	0.5	No	0

[1]ASTM E1527-13 standard search distances.
[2]In Colorado, the lead agency for NPL/CERCLA may be either the Environmental Protection Agency (EPA) or Colorado Department of Public Health and Environment (CDPHE).

3.6.1 Federal National Priorities List

The National Priorities List (NPL) consists of properties with the highest priority for cleanup under the Superfund program pursuant to the EPA's Hazard Ranking System.

- No NPL sites are located within 1 mile of the property.

3.6.2 Federal Delisted NPL Site List

The EPA tracks sites that have been removed from the NPL because no further response is appropriate.

- No Delisted NPL sites are located within 0.5 mile of the property.

3.6.3 Federal Comprehensive Environmental Response, Compensation, and Liability Act Superfund Enterprise Management System

The federal Superfund program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the NPL as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.

- No SEMS-listed sites are located within 0.5 mile of the property.

3.6.4 Federal SEMS-Archive List

The federal SEMS-Archive list contains a listing of sites for which, once archived, the EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

- According to this list, no SEMS-Archive sites are located within 0.5 mile of the property.

3.6.5 Federal Resource Conservation and Recovery Act Corrective Action Site List

The federal Resource Conservation and Recovery Act (RCRA) Corrective Action Site (CORRACTS) List provides a list of sites that have had or are undergoing corrective action or cleanup pursuant to the RCRA.

- No corrective action sites are located within 1 mile of the property.

3.6.6 Federal Resource Conservation and Recovery Information System

The Resource Conservation and Recovery Information System (RCRIS) includes two lists: (1) facilities on which treatment, storage, and/or disposal (TSD) of hazardous wastes occur; and (2) persons or entities that generate hazardous waste as defined and regulated by the RCRA.

- According to these lists, no TSD facilities are located within 0.5 mile of the property, and no hazardous waste generators are located on or adjoining the property.

3.6.7 Federal Institutional Control/Engineering Control Registries

The EPA lists sites with institutional or engineering controls in place that prevent exposure to contamination remaining on a site. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post-remediation care requirements. Engineering controls include various forms of caps, building foundations, liners, and treatment methods.

- According to the registry, the property is not listed as having institutional or engineering controls placed on it.

3.6.8 Federal Emergency Response and Notification System

The federal Emergency Response and Notification System (ERNS) List reports hazardous substance releases and spills in quantities greater than the reportable quantity as defined and regulated by CERCLA.

- Aylor #2, located near the southwest corner of the property, was the subject of a spill response during the reclamation work following the plugging and abandonment of the well. The well was shut in on April 1, 2015 and the operator filed a Notice of Intent to Abandon on August 28, 2018 due to sub-economic production. A Field Operations Notice was filed by the operator on January 14, 2019 to inform COGCC flowlines were abandoned in accordance with COGCC Rule 1033. During excavation work, potential surface staining was discovered, and on January 23, 2019, a Form 19 Spill Report was filed with COGCC. According COGCC documents, 410 cubic yards of petroleum-contaminated soils were removed and COGCC closed the spill in May 2019.

3.6.9 State NPL-Equivalent Sites

The CDPHE can be the lead agency (in addition to the EPA) for NPL sites in Colorado. All sites listed under this database are also listed in Section 3.6.1. No such sites were identified in the search of publicly available records.

3.6.10 State CERCLIS-Equivalent Sites

The CDPHE can be the lead agency for CERCLIS sites in Colorado. All sites listed under this database are also listed in Section 3.6.3. No such sites were identified in the search of publicly available records.

3.6.11 State Landfill and Solid Waste Disposal Sites

The CDPHE lists no permitted landfills or other solid waste disposal sites within 0.5 mile of the property.

3.6.12 State Leaking Storage Tank Sites

The Colorado Department of Labor and Employment, Division of Oil and Public Safety (CDLE/OPS) lists no state leaking underground storage tank (LUST) or leaking aboveground storage tank (LAST) sites on the property.

- No LUST or LAST sites are located within 0.5 mile of the property.

3.6.13 State Registered Storage Tank Sites

CDLE/OPS lists no registered storage tank sites on or adjoining the property.

3.6.14 State Institutional Control/Engineering Control Registries

The CDPHE maintains a list of all sites that have been issued environmental covenants that dictate institutional or engineering controls on real property to mitigate potential exposure to contaminants.

- No state-recorded environmental covenants or institutional controls are listed for the property.

3.6.15 State Voluntary Cleanup Program Sites

The CDPHE lists one Voluntary Cleanup Program site:

- The Amber Creek Residential Development VCP site, located on the south adjoining parcel, was investigated because of former oil and gas wells and a tank battery in early 2006. Several investigations documented the identification and removal of petroleum-contaminated soils associated with the former tank battery located along Quebec Street. Based on the results of the investigations, CDPHE granted a No Action Determination (NAD) for the Amber Creek VCP site on March 22, 2006.

3.6.16 State Brownfields Sites

The CDPHE lists no Brownfields sites within 0.5 mile of the property.

3.7 Additional Environmental Record Sources

3.7.1 Colorado Oil and Gas Conservation Commission Records

ERO reviewed records maintained by the Colorado Oil and Gas Conservation Commission (COGCC), the agency that regulates oil and natural gas exploration and production in Colorado. Table 2 lists oil and gas wells on the property and provides a summary of recorded incidences associated with the wells.

Table 2. COGCC records summary for property wells.

Well	Incidences (Date)	Incident Description	Documented Resolution
Aylor Mabel #1 Completed (1/16/1973) Plugged and Abandoned (12/6/2018)	Failed field inspection (10/6/1997)	Well sign should be posted at tank battery; oil saturated soil around wellhead; equipment and drums sound wellhead and battery; weeds overgrown around well site	None listed
	Failed field inspection (2/28/2000)	Post sign at battery with currently required information; clean up oil saturated soil around wellhead, pumpjack, and product tank load out; remove junk around well site and battery	Inspection on 5/1/2000 noted violations have been remedied
	Failed field inspection (12/10/2004)	Clean up oil saturated soil and free-standing oil; remove junk from well site	None listed
	Failed field inspection (9/17/2014)	Repair erosion damage along lease access road; and implement stormwater BMP; install capacity signage at steel crude oil tank and fiberglass produced water tank; remove weeds; remove or remediate stained soil caused by leaking contaminants from pumpjack motor; remove or remediate hardened contaminated soil underneath front load valve on crude oil tank	Inspection on 3/11/2015 noted all violations have been remedied
	Follow-up inspection and failed field inspection (3/11/2015)	Remove trash; utilize or remove belt guard; remove or remediate stained soil on north side of location	Follow-up inspection on 2/24/2017 noted no violations
Aylor #2 Completed (7/12/1975) Plugged and Abandoned (11/21/2018)	Failed Field Inspection (10/6/1997)	Weeds are overgrown around well site; oil saturated soil around pumpjack motor	None listed
	Failed Field Inspection (5/26/2005)	Remove junk and cleanup saturated soil; fence down around well	None listed
	Failed Field Inspection (6/8/2005)	Reduce noise levels from pumpjack motor	None listed
	Failed Field Inspection (7/13/2009)	Remove unused equipment from well site, File form 27 to close pit at well site; maintain lease road; remove or control weeds on well site; repair fence around wellhead; remove trash and junk from well site; repair all leaks; remove all saturated soil.	None listed
	Spill identified during	Petroleum-contaminated soils around former wellhead were encountered during site reclamation activities in January 2019.	410 CY of soil removed to depth of 12 feet around well

Well	Incidences (Date)	Incident Description	Documented Resolution
	abandonment (1/17/2019)		area. Remediation event closed May 2019.
Aylor #3 Completed (9/15/1974)	Failed Field Inspection (10/6/1997)	Post well sign at tank battery, weeds overgrown around well site, tank berm worn down and incapable of containing 400 bbl spill around production tank load out	None listed
	Failed Field Inspection (5/26/2005)	Remove junk and clean up saturated oil	None listed
	Field Inspection (9/11/2006)	Passed field inspection	N/A
	Failed Field Inspection (10/6/2014)	Remove unused equipment on battery location, paint tanks according to COGCC regulations	Corrections noted during 3/11/2015 inspection
	Failed Field Inspection (3/11/2015)	Utilize or remove beltguard at pumpjack location, remove trash, mark anchors	None listed
	Field Inspection 11/22/2016	COGCC flowline integrity inspection performed in response to initial Form 19 spill report on 11/18/2016	External corrosion holes (numerous) observed in the existing dump lines between the separator and production tanks. Lines removed/replaced, 490 CY soil removed.
Aylor #4 Completed (9/1/1974)	Plugged and abandoned well inspection (5/30/1990)	Passed inspection 5/30/1990	Approved Well Abandonment Report Passed Field Inspection (5/30/1990)

Aylor, Mabel #1 (API #05-001-06628) was completed on March 9, 1973 to a depth of 5,307 ft bgs and was operated by Extraction Oil & Gas Inc. COGCC records indicate the well has been the subject of a several failed field inspections on October 6, 1997, February 28, 2000, December 10, 2004, September 17, 2014, and March 11, 2015. Violations consisted of missing signs, unused equipment, weeds, trash, free standing oil and saturated soil, leaks, and poor road maintenance. Deficiencies were apparently mitigated and the well passed a February 24, 2017 field inspection. The well was shut in on January 1, 2015. The well failed a Mechanical Integrity Test on August 27, 2018 and a Notice of Alleged Violation was issued on October 5, 2018. On October 10, 2018, the operator filed a Notice of Intent to Abandon due to mechanical problems. A Field Operations Notice was filed by the operator on December 12, 2018 to inform COGCC flowlines were abandoned per Rule 1103. Records indicate the produced water pit associated with the site was an open-top fiberglass tank with the one recent (2017 inspection) stating there were no surface indication of pits. The well was ultimately plugged and abandoned in December 2018, with records indicating the surface casing was cut 7 feet below grade, and the site reclaimed.

Aylor #2 (API #05-001-07053) was completed on November 17, 1975 to a depth of 5,291 ft bgs and was operated by Extraction Oil & Gas Inc. COGCC records indicate the well has been the subject of a complaint and several failed fields inspections. On May 18, 2005, a local homeowner filed a complaint alleging the pumpjack exhaust noise exceeded applicable standards. A subsequent field inspection confirmed the complaint. A Notice of Alleged Violation was issued, and the complaint was resolved on June 28, 2005. In total, the well failed field inspections on October 6, 1997, May 26, 2005, October 6, 2014, and March 11, 2015. Violations consisted of unused equipment, weeds, trash, saturated soil, leaks, an unauthorized pit, and poor road maintenance. Deficiencies were mitigated and the well passed a December 8, 2016 field inspection. The well was shut in on April 1, 2015 and the operator filed a Notice of Intent to Abandon on August 28, 2018 due to sub-economic production and well plugging and abandonment was completed on November 29, 2018. A Field Operations Notice was filed by the operator on January 14, 2019 to inform COGCC flowlines were abandoned per Rule 1103.

During excavation work associated with reclamation activities in January 2019, "potential surface staining was discovered" and a Form 19 Spill Report was filed with COGCC (discussed in Section 3.6.8). Between January and February 2019, 410 cubic yards of petroleum-contaminated soils were excavated to a maximum depth of 12 feet below grade with the petroleum-contaminated soils disposed off-site at the Front Range Landfill in Erie, Colorado. Subsequent excavation sampling documented in COGCC files indicates that remaining petroleum concentrations in soils do not exceed COGCC cleanup standards and COGCC closed the remediation event in May 2019.

Aylor #3 (API #05-001-06896) was completed on September 15, 1974 to a depth of 5,230 ft bgs and is operated by Extraction Oil & Gas Inc. COGCC records indicate the well has been the subject of several failed fields inspections on October 6, 1997, May 26, 2005, July 13, 2009, October 6, 2014, and March 11, 2015. Violations consisted of unused equipment, weeds, trash, saturated soil, tank berm deficiencies, tank paint deficiency, and anchor marking deficiency. The 1997 inspection report notes water disposal was via an on-site pit consisting of a buried fiberglass tank with wire screen over top. Corrective actions were apparently mitigated and the well site passed a July 11, 2016 field inspection. The final testing report available for Aylor #3 was a Bradenhead Test performed on December 12, 2018. Aylor #3 is listed currently listed as producing.

Aylor #4 (API #05-001-06899) was completed on September 1, 1974 to a depth of 5,293 ft bgs and is operated by Haberhsam Energy Company. COGCC records indicate the well has not been the subject of complaints or failed field inspections. The operator filed an Intent to Abandon notice on April 9, 1990, and the well was abandoned on April 13, 1990. The job logs reviewed did not indicate evidence of staining or leakage during the removal process. The abandonment of the well was approved by the COGCC on May 30, 1990.

Aylor Tank Battery. The Aylor Tank Battery is located to the northwest of the Aylor #4 well. During a 2016 flow line pressure testing, a leak was discovered between the tank battery and the separator facilities. Extraction Energy submitted a Form 19 Spill Report to COGCC on November 18, 2016, noting petroleum-contaminated soils had been encountered around the piping. The lines were removed and replaced on November 22, 2016 and Extraction Energy reported 900 cubic yards of petroleum-

contaminated soils were removed from the site and disposed at the Front Range Landfill in Erie, Colorado. Excavation confirmation samples presented in the final closure report do not indicate residual petroleum contamination above COGCC cleanup standards on the property and COGCC issued a NFA for the release in December 2016.

COGCC records do not indicate the location of product flow lines from the wells. COGCC regulations only require product lines to be buried 3 to 5 feet below the surface within agricultural areas. As part of the plugging and abandoning process, flow lines are required to be abandoned per COGCC Rule 1103. Lines associated with historical wells prior to the implementation of Rule 1103 may have been present on or adjacent to the property and adjoining parcels which may have resulted in isolated areas of petroleum contamination should the lines have been breached. In addition, although the COGCC does not have any regulations restricting surface development over plugged and abandoned wells, ERO does not recommend placing residential structures over former well borings. Should well casings be encountered during development activities, the COGCC recommends that the well casing be cut and reabandoned pursuant to the COGCC Surface Development Policy (COGCC 2001).

3.7.2 Colorado Department of Public Health and Environment

ERO reviewed the CDPHE Hazardous Materials and Waste Management Division online mapping application for any known sites that may indicate RECs on or near the property. Records for the property addresses was identified in a search of the online records (CDPHE 2019). Adjoining parcels were identified in the online records and are discussed in the appropriate sections above.

3.7.3 Colorado Department of Labor and Employment, Division of Oil and Public Safety (CDLE/OPS)

ERO reviewed records maintained by CDLE/OPS via the Colorado Storage Tank Information Site (COSTIS), for indications of petroleum storage tanks on or adjoining to the property. The records did not indicate the presence of tanks within ½ mile of the property.

3.7.4 Colorado Division of Water Resources

ERO reviewed records maintained by the Colorado Division of Water Resources (CDWR) for the property. The CDWR has no records of wells on the property (CDWR 2019). It should be noted that no record for the well was identified on the property was identified in agency records.

3.8 Vapor Encroachment Evaluation

ERO evaluated the results of the environmental record searches detailed in Sections 3.6 and 3.7 with respect to potential vapor encroachment in accordance with ASTM E2600-15, the “Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions” (ASTM 2015).

Aside from the oil and gas exploration and production activity on the property, no sites were identified during ERO’s vapor encroachment analysis within the applicable search distance criteria denoting the Area of Concern for vapor encroachment. Two releases associated with the oil and gas production facilities have been reported on the property. According to site reports, both releases have been

remediated by removal of petroleum-contaminated soils from the property with documented residual contamination at low levels, well below cleanup standards. Because of the history of oil and gas production on the property and possibility of unknown localized releases associated with production or pipeline facilities that have historically crossed the property, it is ERO's professional opinion that a vapor encroachment condition cannot be ruled out for the property.

4.0 Site Reconnaissance

4.1 Methodology and Limiting Conditions

Nancy Otterstrom and Jack Denman, Environmental Professionals with ERO, conducted the site reconnaissance on June 4 and July 8, 2019. They investigated the entire property by walking the perimeter and traversing the interior. Representative photographs taken during the site reconnaissance are presented in Appendix A.

4.2 General Site Setting

The property is currently developed with a farmstead, a radio tower with associated equipment, a monopole cell tower with associated equipment, one active oil and gas well, and tank battery. The farmstead structures include a residence, two poultry sheds, a well house, numerous storage sheds, a subgrade poultry barn, subterranean storage shelter, and portions of block stables. The farmstead has reportedly been out of use for approximately six years. The radio tower is located near the north-central border of the property and is contained within fencing. ERO was able to observe an equipment shelter and associated tower, emergency generator, and fuel tank within the fenced area. The cellular tower is located in the far northeast corner of the property, east of Quebec Street from the remainder of the property. The oil and gas well, Aylor #3, is also located in the north-central portion of the property with grading visible in the area of the former Aylor #2 and Aylor, Mabel #1 well locations. The Aylor #3 well was not operating during site reconnaissance. The remainder of the property is undeveloped and vegetated with native grasses, trees, and shrubs. The topography in the vicinity of the property generally slopes to the south.

The east, west, and western portion of the south adjoining parcels are developed for residential use, while the north and eastern portion of the south adjoining parcels remain undeveloped.

4.2.1 Storage Tanks

No vent pipes, fill ports, tank pits, or other indications of underground storage tanks were observed on the property.

Seven aboveground storage tanks (ASTs) were observed on the property. Three tanks, ranging from approximately 250 to 500-gallons in size were observed immediately south of the residence in the northwest portion of the property. The tanks appeared to be empty and no signage indicating previous contents. A petroleum odor was emanating from the nozzle and ground near the elevated AST, and stained, stressed vegetation was observed on the ground directly beneath the tank. The second tank was located atop concrete cinder blocks and appeared slightly corroded. No indications of leaking or

staining was observed. The third tank was situated on a tractor tire on the ground and ERO was unable to assess the surface beneath the tank.

The fourth AST was located along the western portion of the property, along the dirt path leading to the former Aylor #2 well location. The tank showed signs of corrosion; however, a mixture of rainwater and sediment was observed within the tank. ERO was unable to assess the condition of the ground beneath the tank during site reconnaissance.

One AST was noted within the fenced area of the radio tower, presumably associated with emergency power generation. Due to locked gates, ERO was unable to ascertain the tank contents; however, no evidence of corrosion of the tank or staining of the ground surfaces was noted during the site reconnaissance.

Two, approximately 16,800-gallon (400 BBL) crude oil tanks within the battery were located directly west of the farmstead area, within an earthen berm for the Aylor #3 Tank Battery. No evidence of staining, leaking, or corrosion of the tanks was noted during the site reconnaissance. *De minimis* staining of the ground was observed at the delivery pipe.

4.2.2 Odors

ERO noted a petroleum odor described in Section 4.2.1 as well as a dank or manure-like odor within a heavily vegetated berm area north of the residence. Stale manure odors were also noted within and around the poultry barns/sheds.

4.2.3 Pools of Liquid

No pools of liquid were observed on the property.

4.2.4 Drums/Containers

Numerous containers, ranging from less than 1 gallon cans up to 55-gallon drums, were observed throughout the farmstead. The drums ranged in condition from slightly to heavily corroded, but no evidence of liquids inside the drums was observed during site reconnaissance. Some labeled containers indicated the former contents consisted of petroleum substances (oils, greases, lubricants), paints, or paint thinners. The containers were observed to be stored, scattered, or haphazardly strewn about the farmstead area, some with indications of small, *de minimis* releases of petroleum products.

Drums were observed in piles south of the ASTs and near a stream bed south of the residence, and in various locations throughout the farmstead area.

4.2.5 Hazardous Substance and Petroleum Products Materials/Waste Use or Storage

ERO observed the ASTs, discussed in Section 4.2.1 and presumes that petroleum products were used and stored on the property. ERO also observed an approximately 60-gallon broken agricultural sprayer tank and a tractor-towed field sprayer within the farmstead area, likely indicative of historical horticultural spraying on the property. Based on the number of containers observed during the site

reconnaissance, numerous petroleum products, paints, and associated thinners, lacquers or cleaners appear to have been used or stored on the property.

4.2.6 Transformers/PCBs

One pole-mounted transformer was observed near the residence of the property. No indication of leaks or releases were observed on or around the transformer.

4.3 Exterior Observations

4.3.1 Pits, Ponds, and Lagoons

ERO observed a pond on the southwest corner of the property. No indication that the pond was used for waste disposal or treatment was observed or identified. A stormwater drainage pond was also observed in the southwest corner of the property. In addition, several "dry" ponds were observed in the northeast, northwest, and central portions of the property. Vegetation was noted in these areas, and no indication of dumping or waste disposal was noted at the dry ponds.

4.3.2 Stained Soil or Pavement

No areas of stained soils or pavement were observed in areas visually accessible on the property.

4.3.3 Stressed Vegetation

ERO observed several areas of stressed vegetation:

- One area of stressed vegetation was observed beneath the elevated AST south of the residence. ERO observed the ground beneath the AST to be stained yellow, and stressed vegetation coinciding with the stained area. A petroleum odor was also observed in the area. The staining appeared to be approximately 1 foot by 3 feet.
- One area of stressed vegetation was located on the south side of the residence, around the end of a discharge hose from the kitchen in the residence. No staining or odors were noted to the soils in this area.
- Numerous other areas devoid of vegetation from prior usage or material storage on the property were also observed within the farmstead area of the property.

4.3.4 Solid Waste Disposal

Several areas of solid waste disposal were observed on the property as described below:

1. Several abandoned and rusted automobiles were observed south of Aylor #3, in the dry stream bed. The vehicles were corroded, and vegetation was overgrown in the immediate vicinity. ERO was not able to assess the soil conditions beneath the vehicles.
2. A large area of solid waste disposal was observed adjacent to a shed, located immediately south of the ASTs. The materials observed were numerous 55-gallon drums (corroded and unlabeled),

plastic bottles, aluminum cans, and general refuse, totaling approximately 5 cubic yards. Due to the volume observed, ERO was not able to assess the soil conditions beneath the solid waste.

3. At least ten 55-gallon drums were observed southwest of the farmstead, near the dry stream beds on the western portion of the property. The drums were observed to be in various stages of corrosion; however, no evidence of leakage was observed. The ground surface beneath the drums appeared to be in good condition with no odors and no evidence of stressed vegetation in the vicinity of the drums was observed.
4. Numerous rubber tires were observed in a pile southwest of the crude oil tank battery, along the path to Aylor #2 well. Other refuse, such as wood products, were observed on the immediate vicinity. No evidence of staining or noxious odors was observed; however, ERO was not able to assess the soil conditions beneath the tires.
5. A large area of solid waste disposal was observed just west of the path leading from the tank battery to Aylor #2. Materials observed included an AST which was corroded and contained water and sediment, various metal debris, piping, and building materials. ERO also observed evidence of broken floor tiles in the pile. ERO was unable to assess the extent of the tile debris within the pile, and if additional suspect asbestos-containing building materials (ACBMs) are present.

Figure 3 shows the approximate location of the disposal areas described above. Note that numerous areas of site-wide solid waste disposal were located throughout the farmstead property, both within and around the structures. The materials observed generally consisted of wood pallets and products, appliances, plastics, metal and PVC piping, hoses, chicken wire, metal products, and general refuse. Occasional 1-gallon to 5-gallon pails of petroleum products (e.g. motor oil, lubricants) were observed in and around the disposal sites with occasional spillage and indications of *de minimis* releases.

Several excavated berms and a pothole containing debris were observed around the farmstead area, the purpose of which was not able to be determined.

4.3.5 Wastewater Discharge

ERO did not observe a wastewater discharge system into which wastewater and liquids on or adjacent to the property discharge aside from a drainage hose that appeared to be connected to the kitchen sink in the residence, discharging the sink water south of the residence.

4.3.6 Wells

ERO observed the domestic water well within a shed southeast of the residence. No other monitoring, domestic, irrigation, injection, abandoned, or other wells (aside from the Aylor #3 oil well) were observed on the property.

4.3.7 Process Equipment

No manufacturing, remediation, or other chemical process equipment was observed on the property.

4.3.8 On-Site Septic Systems

ERO observed the septic tank cover on the south side of the residence, consistent with reports of the residential septic system.

4.4 Interior Observations

Structures within the farmstead area included a residence, poultry shed, a well house, numerous storage sheds, a subgrade poultry barn, subterranean storage shelter, and portions of block stables. All the structures were in extremely poor condition.

Residence. The residence consists of a single-story 1,900 square foot (SF) residential structure constructed at grade, with a basement on the west half. The wood-framed structure consists of a mixture of building, roofing, and siding materials including wood, Transite, and tar-impregnated shingles. As observed through windows, the interior consists of plaster siding and tile ceilings. A concrete pad is on the south side of the structure, the purpose of which was not able to be determined. The structure was locked/boarded shut and not able to be accessed except visually through windows.

Poultry Shed. The poultry shed consists of an approximately 1,600 SF wood-framed, metal and wood-sided structure constructed on a concrete slab on grade. The structure has a car port on the north side used for storage and the enclosed interior consists of corrugated siding, refrigerators, and poultry processing equipment.

Well House. The well house consists of an approximately 60 SF, wood framed and sided, structure constructed on a concrete pad that houses the well and pump motor.

Storage Sheds. The storage sheds consist of small (<200 SF) wood structures on grade. The structure were not able to be accessed except through the open windows.

Poultry Barn. The subgrade poultry barn consists of an approximately 4,136 SF wood framed, metal and wood-sided structure situated partially below grade with a dirt floor. The structure was partially collapsed and not able to be accessed aside from open windows and collapsed walls.

Storage Shelter. The subterranean storage shelter consists of an approximately 400 SF subgrade, wood-framed structure accessed by a concrete stairway at the east end. The structure was partially collapsed and only visually accessible from the east doorway and used for storage of poultry cages.

Block Stables. The block stables consist of concrete-block structures constructed on grade on a concrete slab with metal roofing. The buildings were accessible from the collapsed walls of the structures.

4.4.1 Heating and Cooling

Only the residence appeared to have been insulated and, although the structure was locked, a propane heater was observed through the east window of the structure. As a propane tank nor regulator was observed around the exterior of the structure, the source of heating fuel was not able to be confirmed.

No indication of any cooling system was observed beyond a discarded swamp cooler fan in the yard on the west side of the structure.

4.4.2 Drains and Sumps

ERO was not able to access the locked residential structure, however the kitchen drain was observed to drain to the yard area south of the residence via a hose. The floors of the remaining structures on the property were obscured by manure, debris or solid waste disposed within the structures. Those areas of flooring that were able to be observed did not contain any floor drains or sumps.

4.4.3 Stains or Corrosion

ERO did not observe staining or corrosion on the structures, or portions of structures, able to be observed that was not able to be attributable to water, manure, or a nearby container of petroleum product.

5.0 Interviews

5.1 Interview with Owner

Mr. Scott Twombly, the current property owner representative, was interviewed by telephone on June 6, 2019(Twombly, pers. comm. 2019). Mr. Twombly stated that the City of Thornton has owned the property for approximately 16 years. He was not aware of any environmental problems with the property or in the surrounding area. Mr. Twombly stated that the City of Thornton purchased the property from the previous owner, Mr. William Aylor, in 2003. Mr. Aylor's mother, Mabel Aylor, had owned the property since the 1930's, and had the current residence built in 1937. Mr. Aylor was given the property after his mother's death and was utilized as a chicken farm for the majority of its tenure. When the City of Thornton purchased the property, they leased approximately 5 acres of the property back to Mr. Aylor, to continue using it for growing various grasses and for horse grazing until 2013. Mr. Aylor passed away approximately 3 years ago. Mr. Twombly stated that Mr. Aylor did not indicate any hazardous material usage or landfilling at the property during the Aylors' ownership. He is also unaware of the location of the water well or septic system at the property.

5.2 Interview with Site Manager

Mr. Dave Stover, the current site manager, was interviewed by phone and has been associated with the site since the sale of the property to the City of Thornton (Stover pers. comm 2019). He stated that he is unaware of the location of the water well or septic system and has no knowledge of hazardous materials being dumped at the property. He is also unaware of landfilling activities at the property.

5.3 Interviews with Local Government Officials

5.3.1 Interview with Local Health Department

ERO was able to review the Tri-County Health Department (TCHD) online landfill mapping database, and no landfills were identified on or within 0.5 mile of the property (TCHD 2019).

In addition, the TCHD has a septic system database, which does not contain records for the septic system reported at the property.

5.3.2 Interview with Local Fire Department

ERO contacted the Thornton Fire Department (TFD) on June 4, 2019 for information that may indicate RECs on or near the property. Ms. Laure Davidson, Executive Assistant, provided a letter documenting records for the TFD from January 1, 1990 through June 4, 2019. The TFD letter stated that Fire Department has not responded to any calls concerning hazardous conditions at the property (Davidson 2019).

6.0 Evaluation

6.1 Findings

The property consists of a 139.17-acre parcel of vacant land currently housing an abandoned farmstead, two telecommunication facilities, one active oil and gas well, and an oil and gas well tank battery facility. Historically, the property and surrounding area has been rural residential, agricultural, developed for oil and gas production, and undeveloped. Historical aerial photographs detail former oil and gas wells on the property as well as large portions of the north and western portions of the property to be used during the 1980s and 1990s for significant equipment and/or materials storage and/or disposal.

Federal, state, and local records did not identify any sites or incidents on or near the property typically associated with RECs except for the following:

- Four oil and gas wells are located on the property, three of which have been plugged and abandoned;
- Two releases associated with the oil and gas operations have been reported on the property, both releases have been granted regulatory closure; and
- The parcel adjacent to the south was subject of a VCP action;

During the site reconnaissance, ERO inspected the property by walking the perimeter and traversing the interior. The property consists of undeveloped grassland, oil and gas operations, and an abandoned farmstead. The farmstead consists of numerous structures including a residence, poultry shed, a well house, several storage sheds, a subgrade poultry barn, subterranean storage shelter, and block stables. All the structures were observed to be in extremely poor condition. Solid waste was observed in numerous areas around the farmstead and included containers and drums that continue to, or formerly held, a variety of petroleum products. Five above ground petroleum storage tanks and a field sprayer were observed in the farmstead area as well as two larger tanks associated with the Aylor #3 battery west of the farmstead area.

Interviews with persons knowledgeable about the property indicated the previous owner had owned the property since the 1930s and that the property was since acquired by the User. During the operational period of the property, the property was primarily used as a chicken farm. No known

releases or disposal activities aside from the documented oil and gas releases are known to have occurred on the property.

6.2 Opinion

A summary of identified findings and ERO's determination if the findings constitute RECs associated with the property is presented in Table 3. It is ERO's professional opinion that RECs are associated with the property.

Table 3. Findings and opinion summary.

Finding	REC, CREC, or HREC?	Rationale
Oil and gas well on site, Aylor #3	REC	The oil and gas well has been operational on the property since 1974 with no known investigations around the well head or associated piping. Because two historical releases have been reported for other wells and site infrastructure of a similar age, it is reasonable to assume the likely presence of a release at this location.
Plugged and abandoned oil and gas wells (Aylor #2 and Aylor, Mabel #1)	HREC	COGCC records indicate that the wells have been abandoned with approvals provided by COGCC. A release at one of the wells (Aylor 2) was identified, but has been remediated to the satisfaction of the COGCC with no further action required. No release was reported for the Aylor, Mabel #1 well during the recent plugging and abandonment.
Aylor #3 tank battery on site	REC	Historical release associated with piping was remediated and closed by regulatory authorities. Conditions directly beneath the tanks are unknown and cannot be assessed until the tank removal. Given the age of the facilities, it is not unreasonable to suspect a release beneath or near the tanks to be present.
Multiple areas of solid waste disposal on the property near the farmstead	REC	Numerous containers of petroleum products were observed throughout the property disposal sites. Releases are likely to be de minimis in nature due to small container sizes observed. The absence of the ability to assess soils beneath the disposal sites and the presence of containers formerly containing petroleum products or hazardous substances indicates a likely release to the property.
Solid waste disposal on the path to Aylor #2	REC	ERO observed indications of potentially asbestos-containing materials (floor tile) in the disposal area along the path to Aylor #2. The tile was observed to be broken and dispersed throughout the area. Based on the potential for asbestos containing materials to be dumped at the site, and the CDPHE regulations governing asbestos spills, this represents a REC to the property.
Stained soil and stressed vegetation on site at the elevated AST	No	Based on the *de minimis* nature of the staining, it does not represent a REC to the property.
VCUP listing on south adjoining parcel	No	CDPHE issued a No Action Determination (NAD) for the property and the site is located downgradient from the property.

Based on ERO's vapor encroachment analysis, it is ERO's professional opinion that a vapor encroachment condition cannot be ruled out for the property.

APPENDIX D

COGCC FILE REVIEW DOCUMENTATION

COGIS - WELL INFORMATION

Scout Card Related Insp MIT GIS Doc COA Wellbore Orders Bradenhead

Surface Location Data for API # 05-001-07053

Status: PA - 11/29/2018

Well Name/No:	AYLOR #2 (click well name For production)	Click Here for Transporter Gatherer Info	
Operator:	EXTRACTION OIL & GAS INC - 10459	Federal Or State Lease #:	
Facility Status:	PA	Status Date	11/29/2018
FacilityID:	**201650**	LocationID:	319865
Municipality/County:	THORNTON / ADAMS #001	Location:	SWSE 20 1S67W 6
Field:	SPINDLE - #77900	Elevation:	5221 ft.
Planned Location:	660FSL 1980 FEL	Lat/Long: 39.944839 / -104.910102	Lat/Long Source: Calculated From Footages
As Drilled Location:	Footages Not Available	Lat/Long: 39.944799 / -104.910133	Lat/Long Source: Field Measured

Wellbore and Formation Details -- select either a wellbore or formation to expand.

Expand Section

Wellbore #00 **Status: PA - 11/29/2018** **Measured TD: 5291 ft.**

Wellbore Data for the original wellbore

PA - 11/29/2018

Wellbore Permit

DRIFTED

Permit #:	19750567	Expiration Date:	11/2/1975
Prop Depth/Form:	5300 ft.		

Surface Mineral Owner Same:	Not available		
Mineral Owner:	FEE	Surface Owner:	Not available
Unit:		Unit Number:	
Formation And Spacing:	Code: SUSX , Formation: SUSSEX , Order: , Unit Acreage: 40, Drill Unit: SWSE		

Wellbore Completed

Completion Date:	11/17/1975		
Spud Date:	7/12/1975	Spud Date Is:	ACTUAL
Measured TD:	5291 ft.	Measured PB depth:	5260 ft.
True Vertical TD:		True Vertical PB depth:	
Log Types:	IEL, CDL		
Casing:	String Type: SURF, Hole Size: 12.25 in., Size: 8.625 in., Top: 0 ft., Depth: 107 ft., Weight: 24 , Citings Type: ACTUAL		
Cement:	Sacks: 100, Top: 0 ft., Bottom: 107 ft., Determination Method: VISU		
Casing:	String Type: 1ST, Hole Size: 7.875 in., Size: 4.5 in., Top: 0 ft., Depth: 5291 ft., Weight: 10.5 , Citings Type: ACTUAL		
Cement:	Sacks: 250, Top: 4597 ft., Bottom: 5291 ft., Determination Method: CALC		
Casing:	String Type: STAGE TOOL, Hole Size: , Size: , Top: , Depth: 1173 ft., Weight: 10.5 , Citings Type: ACTUAL		
Cement:	Sacks: 200, Top: 0 ft., Bottom: 1180 ft., Determination Method: CBL		

Formation	Log Top	Log Bottom	Cored	DSTs
SUSSEX	5116 ft.			

Formation SUSX Status: AB -
11/29/2018 Log Top: 5135 ft. Interval Bottom: 5180 ft.

COGIS - Field Inspection Report

Facility Type	Facility ID/ API	Facility Name/ Number	Operator Name/ Number	Status	Field Name/ Number	Location	Location ID	Related Facilities
WELL	05-001-07053	AYLOR 2	EXTRACTION OIL & GAS INC 10459	PA 11/29/2018	SPINDLE 77900	THORNTON/ADAMS 001 SWSE 20 1S67W 6	319865	

Related GIS Doc

API Number: **05-001-07053**	Name: **AYLOR #2**
Location: **SWSE 20 1S67W**	Lat: **39.944799** Long: **-104.910133**
Operator #: **70385**	Operator Name: **SMITH ENERGY CORP**
Inspection Date: **10/6/1997**	Inspector: **Larry Robbins**
Inspection was: **No Satisfactory/Unsatisfactory Indicator**	

Insp. Type: **PR**	Insp. Stat: **PR**	Reclamation (Pass, Interim Or Fail): **F**	P&A (Pass/Fail):
Brhd. Pressure:	Inj. Pressure:	T-C Ann. Pressure:	UIC Violation Type:
Violation: **Y**	NOAV Sent:	Date Corrective Action Due: **N/A**	Date Remedied: **N/A**

Field Inspection Comments And Observations

Insp. Comment	Inspection/Violation Comments
HISTORICAL	WELLSIGN POSTED AT WELL, TANK BATTERY OFFSITE WEEDS OVERGROWN AROUND WELLSITE, OIL SATURATED SOIL AROUNDPUMPJACK MOTOR

Monday, February 21, 2022

COGIS - Field Inspection Report

Facility Type	Facility ID/ API	Facility Name/ Number	Operator Name/ Number	Status	Field Name/ Number	Location	Location ID	Related Facilities
WELL	05-001-07053	AYLOR 2	EXTRACTION OIL & GAS INC 10459	PA 11/29/2018	SPINDLE 77900	THORNTON/ADAMS 001 SWSE 20 1S67W 6	319865	

Related GIS Doc

API Number: **05-001-07053**	Name: **AYLOR #2**
Location: **SWSE 20 1S67W**	Lat: **39.944799** Long: **-104.910133**
Operator #: **70385**	Operator Name: **SMITH ENERGY CORP**
Inspection Date: **5/26/2005**	Inspector: **Larry Robbins**
Inspection was: **Unsatisfactory**	

Insp. Type: **PR**	Insp. Stat: **PR**	Reclamation (Pass, Interim Or Fail): **F**	P&A (Pass/Fail):
Brhd. Pressure:	Inj. Pressure:	T-C Ann. Pressure:	UIC Violation Type:
Violation: **Y**	NOAV Sent: **N**	Date Corrective Action Due: **6/30/2005**	Date Remedied: **N/A**

Field Inspection Comments And Observations

Insp. Comment	Inspection/Violation Comments
ACTION	REMOVE JUNK AND CLEAN UP OIL SATURATED SOIL.
FENCECOMMENT	FENCE DOWN AROUND WELL
GENHOUSE	MISC JUNK (BELTS, TUBING, PIPING, PIPE RACKS, FIBERGLASS/STEEL TANKS, 5 GAL BUCKET WITH OIL, ETC) AROUND WELLSITE.
MISC	PUMPJACK OPERATING
SPILCOM	OIL SATURATED SOIL AROUND WELLSITE, WELLHEAD AND PUMPJACK MOTOR.
TANKBAT	BATTERY OFFSITE
WELLSIGN	SIGN POSTED AT WELL

Monday, February 21, 2022

COGIS - Field Inspection Report

Facility Type	Facility ID/ API	Facility Name/ Number	Operator Name/ Number	Status	Field Name/ Number	Location	Location ID	Related Facilities
WELL	05-001-07053	AYLOR 2	EXTRACTION OIL & GAS INC 10459	PA 11/29/2018	SPINDLE 77900	THORNTON/ADAMS 001 SWSE 20 1S67W 6	319865	

Related GIS Doc

API Number: **05-001-07053**	Name: **AYLOR #2**
Location: **SWSE 20 1S67W**	Lat: **39.944799** Long: **-104.910133**
Operator #: **70385**	Operator Name: **SMITH ENERGY CORP**
Inspection Date: **7/13/2009**	Inspector: **Jim Precup**
Inspection was: **Unsatisfactory**	

Insp. Type: **PR**	Insp. Stat: **PR**	Reclamation (Pass, Interim Or Fail):	P&A (Pass/Fail):
Brhd. Pressure:	Inj. Pressure:	T-C Ann. Pressure:	UIC Violation Type:
Violation: **Y**	NOAV Sent: **N**	Date Corrective Action Due: **1/15/2009**	Date Remedied: **N/A**

Field Inspection Comments And Observations

Insp. Comment	Inspection/Violation Comments
ACTION	REMOVE UNUSED EQUIPMENT FROM WELLSITE / FILE FORM 27 TO CLOSE PIT AT WELLSITE / MAINTAIN LEASE ROAD / REMOVE OR CONTROL WEEDS ON WELLSITE / REPAIR FENCE AROUND WELLHEAD / REMOVE TRASH AND JUNK FROM WELLSITE / REPAIR ALL LEAKS / REMOVE ALL OIL SATURATED SOIL
GENHOUSE	PRODUCED WATER TANKS ON WELLSITE / UNAUTHORIZED PIT ON WELLSITE / NO LEASE ROAD / WEEDS ON WELLSITE / WELLSITE FENCE IN DISREPAIR / JUNK AND TRASH ON WELLSITE
MISC	PUMPJACK / AJAX / SIGN / FENCE
SPILCOM	OIL SATURATED SOIL AT WELLSITE
TANKBAT	SHARED

Monday, February 21, 2022

Inspector Name: JOHNSON, RANDELL

FORM INSP Rev 05/11

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

DE	ET	OE	ES

Inspection Date: 10/06/2014

Document Number: 668302777

Overall Inspection: **ACTION REQUIRED**

FIELD INSPECTION FORM

Location Identifier	Facility ID	Loc ID	Inspector Name:	On-Site Inspection	2A Doc Num:
	201650	319865	JOHNSON, RANDELL	☐	

Operator Information:

OGCC Operator Number: 10459

Name of Operator: EXTRACTION OIL & GAS LLC

Address: 1888 SHERMAN ST #200

City: DENVER State: CO Zip: 80203

- ☒ THIS IS A FOLLOW UP INSPECTION
- ☒ FOLLOW UP INSPECTION REQUIRED
- ☐ NO FOLLOW UP INSPECTION REQUIRED
- ☒ INSPECTOR REQUESTS FORM 42 WHEN CORRECTIVE ACTIONS ARE COMPLETED

Contact Information:

Contact Name	Phone	Email	Comment
Keidel, Janni	720-382-2682	jkeidel@extractionog.com	Sr. Regulatory Specialist
Owens, Matt	720-382-2693	mowens@extractionog.com	President
Silva, Jesse	970-396-0421	jsilva@extractionog.com	Operations Manager

Compliance Summary:

QtrQtr: SWSE Sec: 20 Twp: 1S Range: 67W

Insp. Date	Doc Num	Insp. Type	Insp Status	Satisfactory /Action Required	PA P/F/I	Pas/Fail (P/F)	Violation (Y/N)
07/13/2009	200223136	PR	PR	ACTION REQUIRED			Yes
06/08/2005	200072251	CO	PR	ACTION REQUIRED		Fail	Yes
05/26/2005	200071524	PR	PR	ACTION REQUIRED		Fail	Yes
10/06/1997	500131750	PR	PR			Fail	Yes

Inspector Comment:

Related Facilities:

Facility ID	Type	Status	Status Date	Well Class	API Num	Facility Name	Insp Status	
201650	WELL	PR	04/30/2008	OW	001-07053	AYLOR 2	PR	☒

Equipment: Location Inventory

Special Purpose Pits:		Drilling Pits:		Wells:		Production Pits:	
Condensate Tanks:		Water Tanks:		Separators:		Electric Motors:	
Gas or Diesel Mortors:		Cavity Pumps:		LACT Unit:		Pump Jacks:	
Electric Generators:		Gas Pipeline:		Oil Pipeline:		Water Pipeline:	
Gas Compressors:		VOC Combustor:		Oil Tanks:		Dehydrator Units:	
Multi-Well Pits:		Pigging Station:		Flare:		Fuel Tanks:	

Location

Inspector Name: JOHNSON, RANDELL

Signs/Marker:

Type	Satisfactory/Action Required	Comment	Corrective Action	CA Date
WELLHEAD	SATISFACTORY			

Emergency Contact Number (S/A/V): SATISFACTORY Corrective Date:

Comment:

Corrective Action:

Good Housekeeping:

Type	Satisfactory/Action Required	Comment	Corrective Action	CA Date
UNUSED EQUIPMENT	ACTION REQUIRED	Unused equipment on wellhead location - i.e., old pumpjack pieces/See attached photos on last page of document	Remove unused equipment	12/06/2014

Spills:

Type	Area	Volume	Corrective action	CA Date

☐ Multilple Spills and Releases?

Equipment:

Type	#	Satisfactory/Action Required	Comment	Corrective Action	CA Date
Prime Mover	1		Gas pumpjack motor		
Pump Jack	1				

Facilities: ☐ New Tank Tank ID:

Contents	#	Capacity	Type	SE GPS
			CENTRALIZED BATTERY	39.949112,-104.910022

S/A/V: Comment: See related inspection document #668302774 for information concerning shared facilities and equipment

Corrective Action: Corrective Date:

Paint

Condition	

Other (Content)

Other (Capacity)

Other (Type)

Berms

Type	Capacity	Permeability (Wall)	Permeability (Base)	Maintenance
Earth	Adequate	Walls Sufficent	Base Sufficient	Adequate

Corrective Action		Corrective Date	
Comment			

Venting:

Yes/No	Comment
NO	

Inspector Name: JOHNSON, RANDELL

Flaring:				
Type	Satisfactory/Action Required	Comment	Corrective Action	CA Date

Predrill

Location ID: 201650

Site Preparation:

Lease Road Adeq.: Pads: Soil Stockpile:

S/A/V:

Corrective Action: Date: CDP Num.:

Form 2A COAs:

S/A/V: **Comment:**

CA: **Date:**

Wildlife BMPs:

S/A/V: **Comment:**

CA: **Date:**

Stormwater:

Comment:

Staking:

On Site Inspection (305):

Surface Owner Contact Information:

Name: Address:

Phone Number: Cell Phone:

Operator Rep. Contact Information:

Landman Name: Phone Number:

Date Onsite Request Received: Date of Rule 306 Consultation:

Request LGD Attendance:

LGD Contact Information:

Name: Phone Number: Agreed to Attend:

Summary of Landowner Issues:

Summary of Operator Response to Landowner Issues:

Onsite Inspection Memorandum Summarizing Discussions at Inspection as Attachment:

Facility

Facility ID: 201650 Type: WELL API Number: 001-07053 Status: PR Insp. Status: PR

Producing Well

Comment:

BradenHead

Comment: Bradenhead is plumbed to the surface.

CA:

CA Date:

Environmental

Spills/Releases:

Type of Spill: Description: Estimated Spill Volume:

Comment:

Corrective Action: Date:

Reportable: GPS: Lat Long

Proximity to Surface Water: Depth to Ground Water:

Water Well:

DWR Receipt Num: Owner Name: GPS : Lat Long

Field Parameters:

Sample Location:

Emission Control Burner (ECB): N

Comment:

Pilot: Wildlife Protection Devices (fired vessels): YES

Reclamation - Storm Water - Pit

Interim Reclamation:

Date Interim Reclamation Started: Date Interim Reclamation Completed:

Land Use:

Comment:

1003a. Debris removed? Pass CM

CA CA Date

Waste Material Onsite? Pass CM

CA CA Date

Unused or unneeded equipment onsite? In CM

CA CA Date

Pit, cellars, rat holes and other bores closed? Pass CM

CA CA Date

Guy line anchors removed? CM

CA CA Date

Guy line anchors marked? CM

CA CA Date

1003b. Area no longer in use? In Production areas stabilized ? In

1003c. Compacted areas have been cross ripped?

Inspector Name: JOHNSON, RANDELL

1003d. Drilling pit closed? _____ Subsidence over on drill pit? _____

Cuttings management: _____

1003e. Areas no longer needed for drilling or subsequent operations for have been re-vegetated to 80% of pre-existing? In

Production areas have been stabilized? In Segregated soils have been replaced? _____

RESTORATION AND REVEGETATION

Cropland

Top soil replaced _____ Recontoured _____ Perennial forage re-established _____

Non-Cropland

Top soil replaced _____ Recontoured _____ 80% Revegetation _____

1003 f. Weeds Noxious weeds? _____

Comment:

Overall Interim Reclamation In Process

Final Reclamation/ Abandoned Location:

Date Final Reclamation Started: _____ Date Final Reclamation Completed: _____

Final Land Use: _____

Reminder: _____

Comment:

Well plugged _____ Pit mouse/rat holes, cellars backfilled _____

Debris removed _____ No disturbance /Location never built _____

Access Roads Regraded _____ Contoured _____ Culverts removed _____

Gravel removed _____

Location and associated production facilities reclaimed _____ Locations, facilities, roads, recontoured _____

Compaction alleviation _____ Dust and erosion control _____

Non cropland: Revegetated 80% _____ Cropland: perennial forage _____

Weeds present _____ Subsidence _____

Comment:

Corrective Action: Date _____

Overall Final Reclamation _____ Well Release on Active Location ☐ Multi-Well Location ☐

Storm Water:						
Loc Erosion BMPs	BMP Maintenance	Lease Road Erosion BMPs	Lease BMP Maintenance	Chemical BMPs	Chemical BMP Maintenance	Comment
Gravel	Pass	Gravel	Pass			
Other	Pass	Other	Pass			Vegetation
Compaction	Pass	Compaction	Pass			

S/A/V: SATISFACTORY Corrective Date: _____

Comment:

CA:

Pits: ☒ NO SURFACE INDICATION OF PIT

Inspector Name: JOHNSON, RANDELL

Attached Documents

You can go to COGCC Images (https://cogcc.state.co.us/weblink/) and search by document number:

Document Num	Description	URL
668302778	Extraction - Aylor 2 (001-07053)	http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=3452083

ACTION REQUIRED

ANY ACTION REQUIRED items listed on this report indicate that the oil and gas facility or the oil and gas operations listed on the report may be in violation of the rules and regulations of the Colorado Oil and Conservation Commission ("COGCC") and corrective action is required.

There is reasonable cause to believe that a violation of the Oil and Gas Conservation Act, or of any rule, regulation, or order of the Commission, or of any permit issued by the Commission, has occurred. The Operator's compliance with this Inspection Report is required to resolve these alleged violations. This document requires the Operator to timely respond to the COGCC and to comply with directives as listed by the **Corrective Action Deadline Date.** Failure to do so will result in the issuance of a Notice of Alleged Violation and initiation of enforcement proceedings in which COGCC will seek monetary penalties for the alleged violations pursuant to § 34 -60-121, C.R.S. and Rule 523, COGCC Rules of Practice and Procedure, 2 CCR 404-1. (Please note that the COGCC's penalty authority was recently increased to a maximum of $15,000 per day and penalties are no longer capped at a maximum of $10,000 per violation.)

Inspector Name: Peterson, Tom

FORM INSP Rev 05/11

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

DE	ET	OE	ES

Inspection Date: 03/11/2015

Document Number: 670900303

Overall Inspection: **ACTION REQUIRED**

FIELD INSPECTION FORM

Location Identifier	Facility ID	Loc ID	Inspector Name:	On-Site Inspection	2A Doc Num:
	201650	319865	Peterson, Tom	☐	

Operator Information:

OGCC Operator Number: 10459

Name of Operator: EXTRACTION OIL & GAS LLC

Address: 1888 SHERMAN ST #200

City: DENVER State: CO Zip: 80203

☒ THIS IS A FOLLOW UP INSPECTION

☒ FOLLOW UP INSPECTION REQUIRED

☐ NO FOLLOW UP INSPECTION REQUIRED

☒ INSPECTOR REQUESTS FORM 42 WHEN CORRECTIVE ACTIONS ARE COMPLETED

Contact Information:

Contact Name	Phone	Email	Comment
Keidel, Janni	(720)382-2682	jkeidel@extractionog.com	Sr Regulatory Specialist

Compliance Summary:

QtrQtr: SWSE Sec: 20 Twp: 1S Range: 67W

Insp. Date	Doc Num	Insp. Type	Insp Status	Satisfactory /Action Required	PA P/F/I	Pas/Fail (P/F)	Violation (Y/N)
10/06/2014	668302777	PR	PR	ACTION REQUIRED	I		No
07/13/2009	200223136	PR	PR	ACTION REQUIRED			Yes
06/08/2005	200072251	CO	PR	ACTION REQUIRED		Fail	Yes
05/26/2005	200071524	PR	PR	ACTION REQUIRED		Fail	Yes
10/06/1997	500131750	PR	PR			Fail	Yes

Inspector Comment:

Shared battery location with API #001-06896

Related Facilities:

Facility ID	Type	Status	Status Date	Well Class	API Num	Facility Name	Insp Status	
201650	WELL	PR	04/30/2008	OW	001-07053	AYLOR 2	PR	☒

Equipment:

Location Inventory

Special Purpose Pits:	Drilling Pits:	Wells:	Production Pits:
Condensate Tanks:	Water Tanks:	Separators:	Electric Motors:
Gas or Diesel Mortors:	Cavity Pumps:	LACT Unit:	Pump Jacks:
Electric Generators:	Gas Pipeline:	Oil Pipeline:	Water Pipeline:
Gas Compressors:	VOC Combustor:	Oil Tanks:	Dehydrator Units:
Multi-Well Pits:	Pigging Station:	Flare:	Fuel Tanks:

Location

Inspector Name: Peterson, Tom

Signs/Marker:				
Type	Satisfactory/Action Required	Comment	Corrective Action	CA Date
WELLHEAD	SATISFACTORY			

Emergency Contact Number (S/A/V): SATISFACTORY

Corrective Date:

Comment:

Corrective Action:

Spills:				
Type	Area	Volume	Corrective action	CA Date
Lube Oil	Pump Jack	<= 5 bbls	Remove or remediate stained soil (<1 bbl) below engine oil supply drum. Repair all leaks. See attached photo.	04/30/2015
Crude Oil	Pump Jack	<= 5 bbls	Remove or remediate stained soil (<1 bbl) on north edge of location. See attached photo.	04/30/2015

☐ Multilple Spills and Releases?

Equipment:					
Type	#	Satisfactory/Action Required	Comment	Corrective Action	CA Date
Deadman # & Marked	4	SATISFACTORY			

Venting:	
Yes/No	Comment
NO	

Flaring:				
Type	Satisfactory/Action Required	Comment	Corrective Action	CA Date

Inspector Name: Peterson, Tom

Predrill

Location ID: 201650

Site Preparation:

Lease Road Adeq.: Pads: Soil Stockpile:

S/A/V:

Corrective Action: Date: CDP Num.:

Form 2A COAs:

S/A/V: **Comment:**

CA: **Date:**

Wildlife BMPs:

S/A/V: **Comment:**

CA: **Date:**

Stormwater:

Comment:

Staking:

On Site Inspection (305):

Surface Owner Contact Information:

Name: Address:

Phone Number: Cell Phone:

Operator Rep. Contact Information:

Landman Name: Phone Number:

Date Onsite Request Received: Date of Rule 306 Consultation:

Request LGD Attendance:

LGD Contact Information:

Name: Phone Number: Agreed to Attend:

Summary of Landowner Issues:

Summary of Operator Response to Landowner Issues:

Onsite Inspection Memorandum Summarizing Discussions at Inspection as Attachment:

Facility

Facility ID: 201650 Type: WELL API Number: 001-07053 Status: PR Insp. Status: PR

Idle Well

Purpose: ☒ Shut In ☐ Temporarily Abandoned Reminder:

S/A/V: CA Date:

CA:

Comment: Well is SI for engine repair.

Environmental

Spills/Releases:

Type of Spill: Description: Estimated Spill Volume:

Inspector Name: Peterson, Tom

Comment:

Corrective Action: Date:

Reportable: GPS: Lat Long

Proximity to Surface Water: Depth to Ground Water:

Water Well:

Lat Long

DWR Receipt Num: Owner Name: GPS :

Field Parameters:

Sample Location:

Emission Control Burner (ECB): N

Comment:

Pilot: Wildlife Protection Devices (fired vessels): YES

Reclamation - Storm Water - Pit

Interim Reclamation:

Date Interim Reclamation Started: Date Interim Reclamation Completed:

Land Use:

Comment:

1003a. Debris removed? Pass CM

CA CA Date

Waste Material Onsite? Pass CM

CA CA Date

Unused or unneeded equipment onsite? Pass CM

CA CA Date

Pit, cellars, rat holes and other bores closed? Pass CM

CA CA Date

Guy line anchors removed? CM

CA CA Date

Guy line anchors marked? Pass CM

CA CA Date

1003b. Area no longer in use? Production areas stabilized ?

1003c. Compacted areas have been cross ripped?

1003d. Drilling pit closed? Subsidence over on drill pit?

Cuttings management:

1003e. Areas no longer needed for drilling or subsequent operations for have been re-vegetated to 80% of pre-existing?

Production areas have been stabilized? Segregated soils have been replaced?

RESTORATION AND REVEGETATION

Cropland

Top soil replaced Recontoured Perennial forage re-established

Non-Cropland

Top soil replaced _____ Recontoured _____ 80% Revegetation _____

1003 f. Weeds Noxious weeds? _____

Comment:

Overall Interim Reclamation _____

Final Reclamation/ Abandoned Location:

Date Final Reclamation Started: _____ Date Final Reclamation Completed: _____

Final Land Use: _____

Reminder: _____

Comment:

Well plugged _____ Pit mouse/rat holes, cellars backfilled _____

Debris removed _____ No disturbance /Location never built _____

Access Roads Regraded _____ Contoured _____ Culverts removed _____

Gravel removed _____

Location and associated production facilities reclaimed _____ Locations, facilities, roads, recontoured _____

Compaction alleviation _____ Dust and erosion control _____

Non cropland: Revegetated 80% _____ Cropland: perennial forage _____

Weeds present _____ Subsidence _____

Comment:

Corrective Action: Date _____

Overall Final Reclamation _____ Well Release on Active Location ☐ Multi-Well Location ☐

Storm Water:

Loc Erosion BMPs	BMP Maintenance	Lease Road Erosion BMPs	Lease BMP Maintenance	Chemical BMPs	Chemical BMP Maintenance	Comment
Gravel	Pass	Gravel	Pass			

S/A/V: SATISFACTORY Corrective Date: _____

Comment:

CA:

Pits: ☒ NO SURFACE INDICATION OF PIT

Attached Documents

You can go to COGCC Images (https://cogcc.state.co.us/weblink/) and search by document number:

Document Num	Description	URL
670900304	Engine oil supply drum	http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=3567581
670900306	Stained soil on north edge of location	http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=3567582

ACTION REQUIRED

ANY ACTION REQUIRED items listed on this report indicate that the oil and gas facility or the oil and gas operations listed on the report may be in violation of the rules and regulations of the Colorado Oil and Conservation Commission ("COGCC") and corrective action is required.

There is reasonable cause to believe that a violation of the Oil and Gas Conservation Act, or of any rule, regulation, or order of the Commission, or of any permit issued by the Commission, has occurred. The Operator's compliance with this Inspection Report is required to resolve these alleged violations. This document requires the Operator to timely respond to the COGCC and to comply with directives as listed by the **Corrective Action Deadline Date.** Failure to do so will result in the issuance of a Notice of Alleged Violation and initiation of enforcement proceedings in which COGCC will seek monetary penalties for the alleged violations pursuant to § 34 -60-121, C.R.S. and Rule 523, COGCC Rules of Practice and Procedure, 2 CCR 404-1. (Please note that the COGCC's penalty authority was recently increased to a maximum of $15,000 per day and penalties are no longer capped at a maximum of $10,000 per violation.)

FORM INSP Rev X/15

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

FIELD INSPECTION FORM

Inspection Date: 06/16/2020
Submitted Date: 06/18/2020
Document Number: 697501653

Loc ID	Inspector Name:	On-Site Inspection	
319865	Binschus, Chris	2A Doc Num:	

Operator Information:

OGCC Operator Number: 10459
Name of Operator: EXTRACTION OIL & GAS INC
Address: 370 17TH STREET SUITE 5300
City: DENVER State: CO Zip: 80202

Status Summary:

- ☐ THIS IS A FOLLOW UP INSPECTION
- ☒ FOLLOW UP INSPECTION REQUIRED
- ☐ NO FOLLOW UP INSPECTION REQUIRED

Findings:

- 5 Number of Comments
- 1 Number of Corrective Actions
- ☒ Corrective Action Response Requested

ANY CORRECTIVE ACTION(S) FROM PREVIOUS INSPECTIONS THAT HAVE NOT BEEN ADDRESSED ARE STILL APPLICABLE

Contact Information:

Contact Name	Phone	Email	Comment
,		COGCCInspections@extractionog.com	All inspections

Inspected Facilities:

Facility ID	Type	Status	Status Date	Well Class	API Num	Facility Name	Insp Status
319865	LOCATION	CL			-	AYLOR-61S67W 20SWSE	RI

General Comment:

This is a Final Reclamation Inspection for PA Well API# 001-07053 and its associated tank battery. Well was plugged and abandoned 11/29/2018.

Inspector Name: Binschus, Chris

Location

Overall Good: ☐

Emergency Contact Number:

Comment:

Corrective Action: Date:

Overall Good: ☐

Spills:					
Type	Area	Volume			

In Containment: No

Comment:

☐ Multilple Spills and Releases?

Equipment:				corrective date
Type:	#			
Comment:	No visual evidence of oil and gas equipment at the well location. The associated offsite tank battery is still in use for another nearby well.			
Corrective Action:			Date:	

Venting:

Yes/No			
Comment:			
Corrective Action:		Date:	

Flaring:

Type			
Comment:			
Corrective Action:		Date:	

Inspected Facilities

Facility ID:	319865	Type:	LOCATION	API Number:	-	Status:	CL	Insp. Status:	RI

Reclamation - Storm Water - Pit

Interim Reclamation:

Date Interim Reclamation Started: _____ Date Interim Reclamation Completed: _____

Land Use: _____

Comment:

1002 SITE PREPARATION AND STABILIZATION

1002a. FENCING _____

Comment

Corrective Action Date _____

1002b. SOIL REMOVAL AND SEGREGATION _____

Comment

Corrective Action Date _____

1002c. PROTECTION OF SOILS _____

Comment

Corrective Action Date _____

1002E. SURFACE DISTRURBANCE MINIMIZATION _____

Comment

Corrective Action Date _____

1003a. Waste and Debris removed? _____

Comment

Corrective Action Date _____

Unused or unneeded equipment onsite? _____

Comment

Corrective Action Date _____

Pit, cellars, rat holes and other bores closed? _____

Comment

Corrective Action Date _____

Guy line anchors marked? _____

Comment

Corrective Action Date _____

Inspector Name: Binschus, Chris

1003b. Area no longer in use? _____ Production areas stabilized ? _____

1003c. Compacted areas have been cross ripped? _____

1003d. Drilling pit closed? _____ Subsidence over on drill pit? _____

Cuttings management: _____

1003e. Areas no longer needed for drilling or subsequent operations for have been re-vegetated to 80% of pre-existing? _____

Production areas have been stabilized? _____ Segregated soils have been replaced? _____

RESTORATION AND REVEGETATION

Cropland

Top soil replaced _____ Recontoured _____ Perennial forage re-established _____

Non-Cropland

Top soil replaced _____ Recontoured _____ 80% Revegetation _____

1003e. INTERIM VEGETATION TRANSECT

TRANSECT RESULTS OF DISTURBED AREA% _____

TRANSECT RESULTS OF REFERENCE AREA% _____

TOTAL % OF DESIRABLE VEGETATION COVEF _____

VEGETATIVE COVER _____

1003 f. Weeds Noxious weeds? _____

Comment

Corrective Action Date _____

Overall Interim Reclamation

Final Reclamation/ Abandoned Location:

Date Final Reclamation Started: _____ Date Final Reclamation Completed: _____

Final Land Use: _____

Reminder: _____

Comment:

Well plugged Pass Pit mouse/rat holes, cellars backfilled _____

Debris removed Pass No disturbance /Location never built _____

Access Roads Regraded _____ Contoured Fail Culverts removed Fail

Gravel removed _____

Location and associated production facilities reclaimed _____ Locations, facilities, roads, recontoured _____

Compaction alleviation _____ Dust and erosion control _____

Non cropland: Revegetated 80% _____ Cropland: perennial forage _____

Weeds present Fail Subsidence _____

1004.d. FINAL VEGETATION TRANSECT

TRANSECT RESULTS OF DISTURBED AREA% _____

TRANSECT RESULTS OF REFERENCE AREA% _____

TOTAL % OF DESIRABLE VEGETATION COVEF _____

VEGETATIVE COVER _____

Comment:

Operator attempted to conduct final reclamation activities; however, the establishment of desirable plant species was not uniform throughout. Patches of weedy, undesirable annuals (mostly Kochia) were observed along the access road and well location. Operator shall perform additional reclamation activities no later than 11/16/2020.

Scotch and Musk thistle, both List B CO Noxious weeds, were observed at the well location. Musk appears to recently flower while no Scotch was observed flowering at the time of this inspection.

Corrective Action: Comply with Rule 1004.e. to control and manage Scotch and Musk thistle no later than 6/23/2020.

Note: weed management will also need to be conducted to control and manage Kochia but Operator does not have to do that by 6/23/2020.

Operator shall also perform additional reclamation activities no later than 11/23/2020, including the removal of culverts, which will likely mean additional recontouring.

Date **06/23/2020**

Overall Final Reclamation Fail Well Release on Active Location ☐ Multi-Well Location ☐

Storm Water:

Loc Erosion BMPs	BMP Maintenance	Lease Road Erosion BMPs	Lease BMP Maintenance	Chemical BMPs	Chemical BMP Maintenance	Comment

Comment: At the time of this inspection, no erosion issues were observed.

Corrective Action: Date:

Pits: ☐ NO SURFACE INDICATION OF PIT

Attached Documents

You can go to COGCC Images (https://cogcc.state.co.us/weblink/) and search by document number:

Document Num	Description	URL
402426489	INSPECTION SUBMITTED	http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=5179520
697501654	Inspection Photos	http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=5179519

COGIS - SPILL OR RELEASE INFORMATION

Scout Card

Related Insp GIS Doc COA

AYLOR-61S67W 20SWSE - #461373 Information Status: CL - 5/8/2019

Spill Type:	**Release**	Facility Name/No.:	**AYLOR-61S67W 20SWSE /**
Facility Type:		Facility Status:	CL
Date of Discovery:	**1/17/2019**	Date Closed:	**5/8/2019**
Operator:	EXTRACTION OIL & GAS INC	Operator Number:	**10459**
Municipality/County:	**THORNTON / ADAMS - #001**	Location:	**SWSE 20 1S67W**
Doc Number:	401914968	Lat/Long:	**39.944839 / -104.910102** Source: ACTUAL based On LatLong
Municipality (if within municipal boundaries):	**THORNTON**		
Waters of the State:		Impacted Media:	
Related Remediation Project Number if work proceeding under an approved Form 27:	**N/A**		

Spill Description:

Potential surface staining impacts were discovered while conducting reclamation work on location. Vertical and horizontal definition is being pursued with conventional excavation, and clearance samples

will be collected from the bottom and sidewalls of the excavation. Collected samples will be field-screened and submitted for laboratory analysis.

Resolution:

Resolving Document: 402027329 **Closure Requested:** 05/08/2019

Resolution: --

Operator Information:

Operator: EXTRACTION OIL & GAS INC

Oper. No. 10459

Address: 370 17TH STREET SUITE 5300 DENVER CO 80202

Type of Facility:

Fac. Name: AYLOR-61S67W 20SWSE -

County Name: ADAMS

qtrqtr: SWSE **section:** 20 **township:** 1S **range:** 67W **meridian:** 6

FORM 19 Rev 03/18

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number: 401914968
Date Received: 01/23/2019

Spill report taken by: CANFIELD, CHRIS

Spill/Release Point ID: 461373

SPILL/RELEASE REPORT (INITIAL /w SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATON

Name of Operator: EXTRACTION OIL & GAS INC Operator No: 10459

Address: 370 17TH STREET SUITE 5300

City: DENVER State: CO Zip: 80202

Contact Person: Blake Ford

Phone Numbers

Phone: (720) 481-2362

Mobile: ( )

Email: bford@extractionog.com

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401914968

Initial Report Date: 01/23/2019 Date of Discovery: 01/17/2019 Spill Type: Historical Release

Spill/Release Point Location:

Locationof Spill/Release: QTRQTR SWSE SEC 20 TWP 1S RNG 67W MERIDIAN 6

Latitude: 39.944839 Longitude: -104.910102

`Municipality (if within municipal boundaries): Thornton County: ADAMS

Reference Location:

Facility Type: WELL PAD ☒ Facility/Location ID No 319865

Spill/Release Point Name: AYLOR-61S67W 20SWSE ☐ No Existing Facility or Location ID No.

Number: ☐ Well API No. (Only if the reference facility is well) 05- -

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

*Secondary containment, **including walls & floor regardless of construction material**, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.*

Were Five (5) barrels or more spilled? No

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): Unknown Estimated Condensate Spill Volume(bbl): 0

Estimated Flow Back Fluid Spill Volume(bbl): 0 Estimated Produced Water Spill Volume(bbl): 0

Estimated Other E&P Waste Spill Volume(bbl): 0 Estimated Drilling Fluid Spill Volume(bbl): 0

Specify:

Land Use:

Current Land Use: NON-CROP LAND Other(Specify):

Weather Condition: 40's and cloudy

Surface Owner: OTHER (SPECIFY) Other(Specify): City of Thornton

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

Potential surface staining impacts were discovered while conducting reclamation work on location. Vertical and horizontal definition is being pursued with conventional excavation, and clearance samples will be collected from the bottom and sidewalls of the excavation. Collected samples will be field-screened and submitted for laboratory analysis.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

Date	Agency/Party	Contact	Phone	Response
1/23/2019	City of Thornton		-	Email notification & voicemail

Was there a Grade 1 Gas Leak associated with this E & P waste spill or release? Yes ☐ No ☒

If YES, enter the Document Number of the Initial Grade 1 Gas Leak Report Form 44: _____

Was there a reportable accident associated with this E & P waste spill or release? Yes ☐ No ☒

If YES, enter the Document Number of the Initial Accident Report, Form 22: _____

SPILL/RELEASE DETAIL REPORTS

#1 Supplemental Report Date: 01/23/2019

FLUIDS	BBL's SPILLED	BBL's RECOVERED	Unknown
OIL			☒
CONDENSATE	0	0	☐
PRODUCED WATER	0	0	☐
DRILLING FLUID	0	0	☐
FLOW BACK FLUID	0	0	☐
OTHER E&P WASTE	0	0	☐

specify: _____

Was spill/release completely contained within berms or secondary containment? NO Was an Emergency Pit constructed? NO

*Secondary containment, **including walls & floor regardless of construction material**, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.*

A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit

Impacted Media (Check all that apply) ☒ Soil ☐ Groundwater ☐ Surface Water ☐ Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): _____ Width of Impact (feet): _____

Depth of Impact (feet BGS): _____ Depth of Impact (inches BGS): _____

How was extent determined?

Potential surface staining was discovered during reclamation activities on site. Additional excavations will be conducted in order to determine the extent. Impacted soils will be removed and transported to a disposal facility. Transport and disposal records will be kept on file under usual and customary practice and are available upon request. Soil samples will be collected and analyzed for organic constituents (TPH and BTEX) and inorganics (SAR, EC and pH) until the areal and vertical extents of the excavation are within COGCC Table 910-1 allowable limits. If present, a groundwater sample will be collected and submitted for laboratory analysis to support site characteristics and excavation clearance.

Soil/Geology Description:

Renohill loam

Depth to Groundwater (feet BGS) 125 Number Water Wells within 1/2 mile radius: 3

If less than 1 mile, distance in feet to nearest Water Well 2124 None ☐ Surface Water 545 None ☐

Wetlands 558 None ☐ Springs _____ None ☒

Livestock _____ None ☒ Occupied Building 732 None ☐

Additional Spill Details Not Provided Above:

CORRECTIVE ACTIONS

#1 Supplemental Report Date: 01/23/2019

Cause of Spill (Check all that apply) ☐ Human Error ☒ Equipment Failure ☒ Historical-Unknown

☐ Other (specify) _____

Describe Incident & Root Cause (include specific equipment and point of failure)

While conducting remediation work, potential surface staining was discovered.

Describe measures taken to prevent the problem(s) from reoccurring:

The entire site is being decommissioned and will be reclaimed. More details will follow in an Form 19 supplemental submital pending further investigation.

Volume of Soil Excavated (cubic yards): _____

Disposition of Excavated Soil (attach documentation) ☐ Offsite Disposal ☐ Onsite Treatment

☐ Other (specify) _____

Volume of Impacted Ground Water Removed (bbls): _____

Volume of Impacted Surface Water Removed (bbls): _____

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

Inclement weather conditions and muddy access roads delayed investigation activities from occurring. The estimated quantity of potentially impacted soils exceeded the reporting limit of 1 barrel outside of secondary containment as of January 23, 2019. Laboratory results and site investigation details will be provided in the Supplemental Form 19 submitted to document closure of the assigned remediation project.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Maggie Graham

Title: Senior Project Manager Date: 01/23/2019 Email: maggie.graham@apexcos.com

COA Type	Description

Attachment Check List

Att Doc Num	Name
401914968	SPILL/RELEASE REPORT(I/S)
401915408	SITE MAP
401915410	TOPOGRAPHIC MAP

401922177	FORM 19 SUBMITTED

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)

FORM 19 Rev 03/18

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109

Document Number: 402027329
Date Received: 05/08/2019

Spill report taken by: CANFIELD, CHRIS
Spill/Release Point ID: 461373

SPILL/RELEASE REPORT (SUPPLEMENTAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 906.b. for reporting requirements of spills or releases of E&P Waste or produced fluids. Submit a Site Investigation and Remediation Workplan (Form 27) when requested by the Director.

OPERATOR INFORMATON

Name of Operator: EXTRACTION OIL & GAS INC Operator No: 10459
Address: 370 17TH STREET SUITE 5300
City: DENVER State: CO Zip: 80202
Contact Person: Blake Ford

Phone Numbers
Phone: (720) 4812362
Mobile: ( )
Email: blake.ford@ExtractionOG.com

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 401914968

Initial Report Date: 01/23/2019 Date of Discovery: 01/17/2019 Spill Type: Historical Release

Spill/Release Point Location:

Locationof Spill/Release: QTRQTR SWSE SEC 20 TWP 1S RNG 67W MERIDIAN 6
Latitude: 39.944839 Longitude: -104.910102
`Municipality (if within municipal boundaries): Thornton County: ADAMS

Reference Location:

Facility Type: WELL PAD ☒ Facility/Location ID No 319865
Spill/Release Point Name: AYLOR-61S67W 20SWSE ☐ No Existing Facility or Location ID No.
Number: ☐ Well API No. (Only if the reference facility is well) 05- -

Fluid(s) Spilled/Released (please answer Yes/No):

Was one (1) barrel or more spilled outside of berms or secondary containment? Yes

*Secondary containment, **including walls & floor regardless of construction material**, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.*

Were Five (5) barrels or more spilled? No

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): Unknown
Estimated Condensate Spill Volume(bbl): 0
Estimated Flow Back Fluid Spill Volume(bbl): 0
Estimated Produced Water Spill Volume(bbl): 0
Estimated Other E&P Waste Spill Volume(bbl): 0
Estimated Drilling Fluid Spill Volume(bbl): 0
Specify:

Land Use:

Current Land Use: NON-CROP LAND Other(Specify):
Weather Condition: 40's and cloudy
Surface Owner: OTHER (SPECIFY) Other(Specify): City of Thornton

Check if impacted or threatened by spill/Release (please answer Yes/No to all that apply):

Waters of the State ☐ Residence/Occupied Structure ☐ Livestock ☐ Public Byway ☐ Surface Water Supply Area ☐

As defined in COGCC 100-Series Rules

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

Potential surface staining impacts were discovered while conducting reclamation work on location. Vertical and horizontal definition is being pursued with conventional excavation, and clearance samples will be collected from the bottom and sidewalls of the excavation. Collected samples will be field-screened and submitted for laboratory analysis.

List Agencies and Other Parties Notified:

OTHER NOTIFICATIONS

Date	Agency/Party	Contact	Phone	Response
1/23/2019	City of Thornton		-	Email notification & voicemail

Was there a Grade 1 Gas Leak associated with this E & P waste spill or release? Yes ☐ No ☒

If YES, enter the Document Number of the Initial Grade 1 Gas Leak Report Form 44: _____

Was there a reportable accident associated with this E & P waste spill or release? Yes ☐ No ☒

If YES, enter the Document Number of the Initial Accident Report, Form 22: _____

SPILL/RELEASE DETAIL REPORTS

#1 Supplemental Report Date: 05/08/2019

FLUIDS	BBL's SPILLED	BBL's RECOVERED	Unknown
OIL			☒
CONDENSATE	0	0	☐
PRODUCED WATER	0	0	☐
DRILLING FLUID	0	0	☐
FLOW BACK FLUID	0	0	☐
OTHER E&P WASTE	0	0	☐

specify: _____

Was spill/release completely contained within berms or secondary containment? NO Was an Emergency Pit constructed? NO

*Secondary containment, **including walls & floor regardless of construction material**, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.*

A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit

Impacted Media (Check all that apply) ☒ Soil ☐ Groundwater ☐ Surface Water ☐ Dry Drainage Feature

Surface Area Impacted: Length of Impact (feet): 100 Width of Impact (feet): 85

Depth of Impact (feet BGS): 9 Depth of Impact (inches BGS): _____

How was extent determined?

The extent of impacts was determined through removing visually impacted soil and sampling the extent of the impacted area. Soil samples were submitted to an accredited laboratory for analysis of total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and total xylenes (BTEX). Site investigation efforts continued until laboratory analysis confirmed TPH and BTEX soil concentrations below COGCC Table 910-1 allowable levels. 410 cubic yards of impacted or potentially impacted soils were removed and transported to Front Range Landfill in Erie, Colorado.

Soil/Geology Description:

Renohill loam

Depth to Groundwater (feet BGS) 35 Number Water Wells within 1/2 mile radius: 3

If less than 1 mile, distance in feet to nearest Water Well 2124 None ☐ Surface Water 545 None ☐

Wetlands 558 None ☐ Springs _____ None ☒

Livestock _____ None ☒ Occupied Building 732 None ☐

Additional Spill Details Not Provided Above:

CORRECTIVE ACTIONS

#1 Supplemental Report Date: 05/08/2019

Cause of Spill (Check all that apply) ☐ Human Error ☐ Equipment Failure ☒ Historical-Unknown

☐ Other (specify) _____

Describe Incident & Root Cause (include specific equipment and point of failure)

While conducting reclamation work, hydrocarbon surface staining was discovered around the location of the plugged and abandoned well head.

Describe measures taken to prevent the problem(s) from reoccurring:

The entire site is being decommissioned and will be reclaimed.

Volume of Soil Excavated (cubic yards): 410

Disposition of Excavated Soil (attach documentation) ☒ Offsite Disposal ☐ Onsite Treatment

☐ Other (specify) _____

Volume of Impacted Ground Water Removed (bbls): 0

Volume of Impacted Surface Water Removed (bbls): 0

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☒ Corrective Actions Completed (documentation attached)

☐ Work proceeding under an approved Form 27

Form 27 Remediation Project No: _____

OPERATOR COMMENTS:

Inclement weather conditions and muddy access roads delayed investigation activities from occurring. The estimated quantity of potentially impacted soils exceeded the reporting limit of 1 barrel outside of secondary containment as of January 23, 2019. This Form 19 is being submitted to document remediation efforts at this site. Please find attached a topographic location map, site diagram, waste manifestes, and laboratory results.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Maggie Graham

Title: Senior Project Manager Date: 05/08/2019 Email: Maggie.Graham@apexcos.com

COA Type	Description

Attachment Check List

Att Doc Num	Name
402036939	TOPOGRAPHIC MAP
402036946	SITE MAP
402036962	ANALYTICAL RESULTS

402036963	DISPOSAL MANIFEST
402036967	ANALYTICAL RESULTS

Total Attach: 5 Files

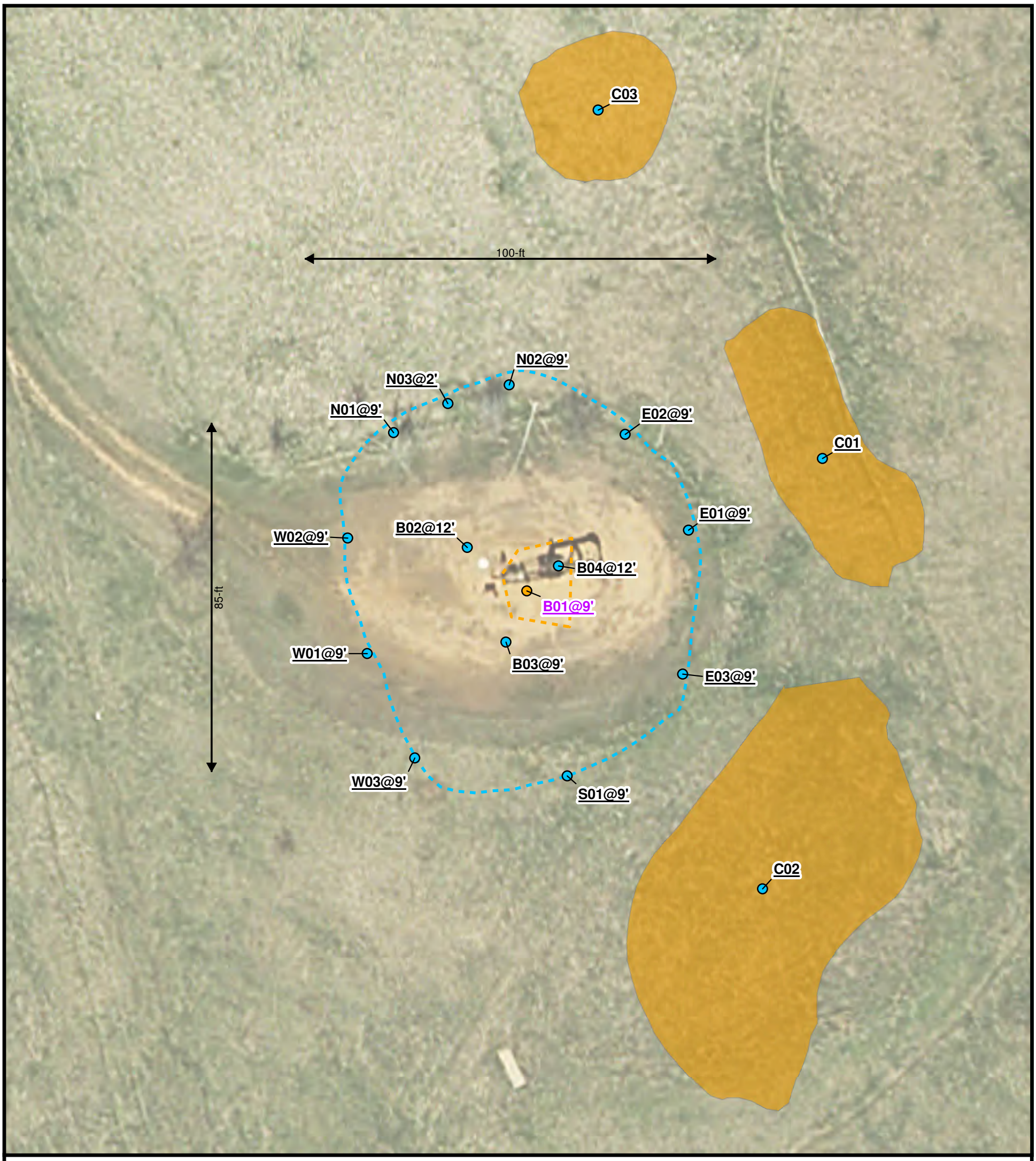
General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)

EXTRACTION
Oil & Gas
AYLOR-61S67W 20SWSE
(Location ID: 319865)
"Aylor 2"
N
Aylor 2
Google Earth
© 2018 Google
100 ft

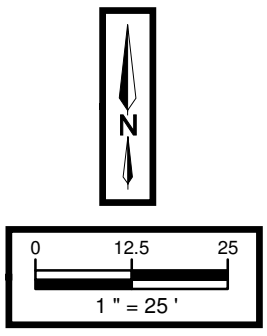
Extraction Oil & Gas
Aylor-61S67W 20SWSE
COGCC Location ID: 319865
Site Diagram



Legal Description: SWSE, Sec 20, T1S R67W
County: Adams
Land Use: Non-cropland
Topography: 3-9% Slopes
Run-Off Risk: Medium
Soil Type: Renohill loam
Receiving Waters: Unnamed ditch

- Soil Sample (1/16/2019)
- Soil Sample (2/1/2019)
- Stockpile
- Excavation Extent (1/16/2019)
- Excavation Extent (2/1/2019)

* **Sample ID in Purple font indicates a regulatory exceedance.**



APEX

Sample ID	Latitude NAD83	Longitude NAD83	Sample ID	Latitude NAD83	Longitude NAD83
E02@9'	39.944876	-104.910099	B02@12'	39.944800	-104.910236
N02@9'	39.944909	-104.910200	B03@9'	39.944737	-104.910203
N01@9'	39.944877	-104.910300	B04@12'	39.944788	-104.910157
W02@9'	39.944807	-104.910340	N03@2'	39.944897	-104.910253
W01@9'	39.944730	-104.910323	B01@9'	39.944771	-104.910185
W03@9'	39.944660	-104.910282	C03	39.945093	-104.910122
S01@9'	39.944647	-104.910150	C01	39.944860	-104.909928
E03@9'	39.944716	-104.910049	C02	39.944572	-104.909980
E01@9'	39.944812	-104.910044			

SOIL SAMPLE RESULTS

		Organics (mg/kg)					(mmhos/cm)	Units	(pH Units)
COGCC Allowable Concentration (Soil) -->		500	0.17	85	100	175	4	12	(6-9)
Sample Date	Sample ID	TPH (total volatile and extractable petroleum hydrocarbons) (TPH-GRO + TPH-DRO)	Benzene	Toluene	Ethylbenzene	Xylenes - total	EC (<4 mmhos/cm or 2x background)	SAR (calculation)	pH
1/16/19	B01@9'	13029	0.0079	0.041	0.0090	0.12			
2/1/19	E01@9'	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	S01@9'	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	W01@9'	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	N01@9'	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	E02@9'	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	B04@12'	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	B02@12'	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	C02	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	E03@9'	2.2	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	W03@9'	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	W02@9'	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	N02@9'	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	B03@9'	<50	<0.0020	<0.0050	<0.0050	<0.010			
2/1/19	N03@2'						2.71	0.424	7.87

Spatial data collected for this project was acquired using a GPS with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. To accurately reflect field conditions, illustrated data may have been manually corrected in order to fit with the aerial imagery reference points and other collected data points.

M:\Projects\Extraction_Oil_Gas\Remediation\Aylor-61S67W_20SWSE\Aylor-61S67W_20SWSE_dig_20190206.mxd Modified 5/1/2019 by beau.bergstrom Apex Companies, LLC NAD 1983 UTM Zone 13N Coordinate System Service Layer Credits: Google Earth

Laboratory Results Summary Table - Soil

			Organics (mg/kg)					(mmhos/cm)	Units	(pH Units)
COGCC Allowable Concentration (Soil) -->			500	0.17	85	100	175	4	12	(6-9)
Location	**Sample Date**	**Sample ID**	TPH (total volatile and extractable petroleum hydrocarbons) (TPH-GRO + TPH-DRO)	Benzene	Toluene	Ethylbenzene	Xylenes - total	EC (Specific Conductance) (<4 mmhos/cm **or** 2x background)	SAR (Sodium Adsorption Ratio) (calculation)	pH
Aylor 2	**1/16/19**	**B01@9'**	**13029**	**0.0079**	**0.041**	**0.0090**	**0.12**	NA	NA	NA
Aylor 2	**2/1/19**	**E01@9**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**S01@9**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**W01@9**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**N01@9**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**E02@9**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**B04@12**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**B02@12**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**C02**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**E03@9**	**2.2**	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**W03@9**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**W02@9**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**N02@9**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**B03@9**	*<50*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	NA	NA	NA
Aylor 2	**2/1/19**	**N03@2**	NA	NA	NA	NA	NA	**2.71**	**0.424**	**7.87**

NA - Not Analyzed
Orange Highlight - Exceedance
Yellow Highlight - TPH Detection
Grey Highlight - Below Detection Limit

mg/kg - milligrams per kilogram
mmhos/cm - millimhos per centimeter

Apex Companies, LLC
1746 Cole Blvd., Suite 250
Lakewood, CO 80401

APPENDIX E

HISTORICAL DOCUMENTATION

HISTORICAL AERIALS

Project Property: Proposed Anythink Library
Anythink Library
Thornton CO

Project No: FC10326.000v-200

Requested By: CTL | Thompson, Inc.

Order No: 22021800757

Date Completed: February 19,2022

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1.866.517.5204 | info@erisinfo.com | erisinfo.com

Date	Source	Scale	Comments
2019	United States Department of Agriculture	1" = 500'	
2017	United States Department of Agriculture	1" = 500'	
2015	United States Department of Agriculture	1" = 500'	
2013	United States Department of Agriculture	1" = 500'	
2011	United States Department of Agriculture	1" = 500'	
2006	United States Department of Agriculture	1" = 500'	
2005	United States Department of Agriculture	1" = 500'	
2004	United States Department of Agriculture	1" = 500'	
1999	United States Geological Survey	1" = 500'	
1993	United States Geological Survey	1" = 500'	
1984	United States Geological Survey	1" = 500'	
1978	United States Geological Survey	1" = 500'	
1971	United States Geological Survey	1" = 500'	
1963	United States Geological Survey	1" = 500'	
1953	Army Mapping Service	1" = 500'	
1937	Agricultural Stabilization & Conserv. Service	1" = 500'	

Year: 2019
Source: USDA
Scale: 1" = 500'
Comment:

Address: Anythink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000757

ERIS

Year: 2017
Source: USDA
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000757

ERIS

Year: 2015
Source: USDA
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000757

ERIS

Year: 2013
Source: USDA
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000757

ERIS

Year: 2011
Source: USDA
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000757

ERIS

Year: 2006
Source: USDA
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000737

ERIS

Year: 2005
Source: USDA
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000757

ERIS

Year: 2001
Source: USDA
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000757

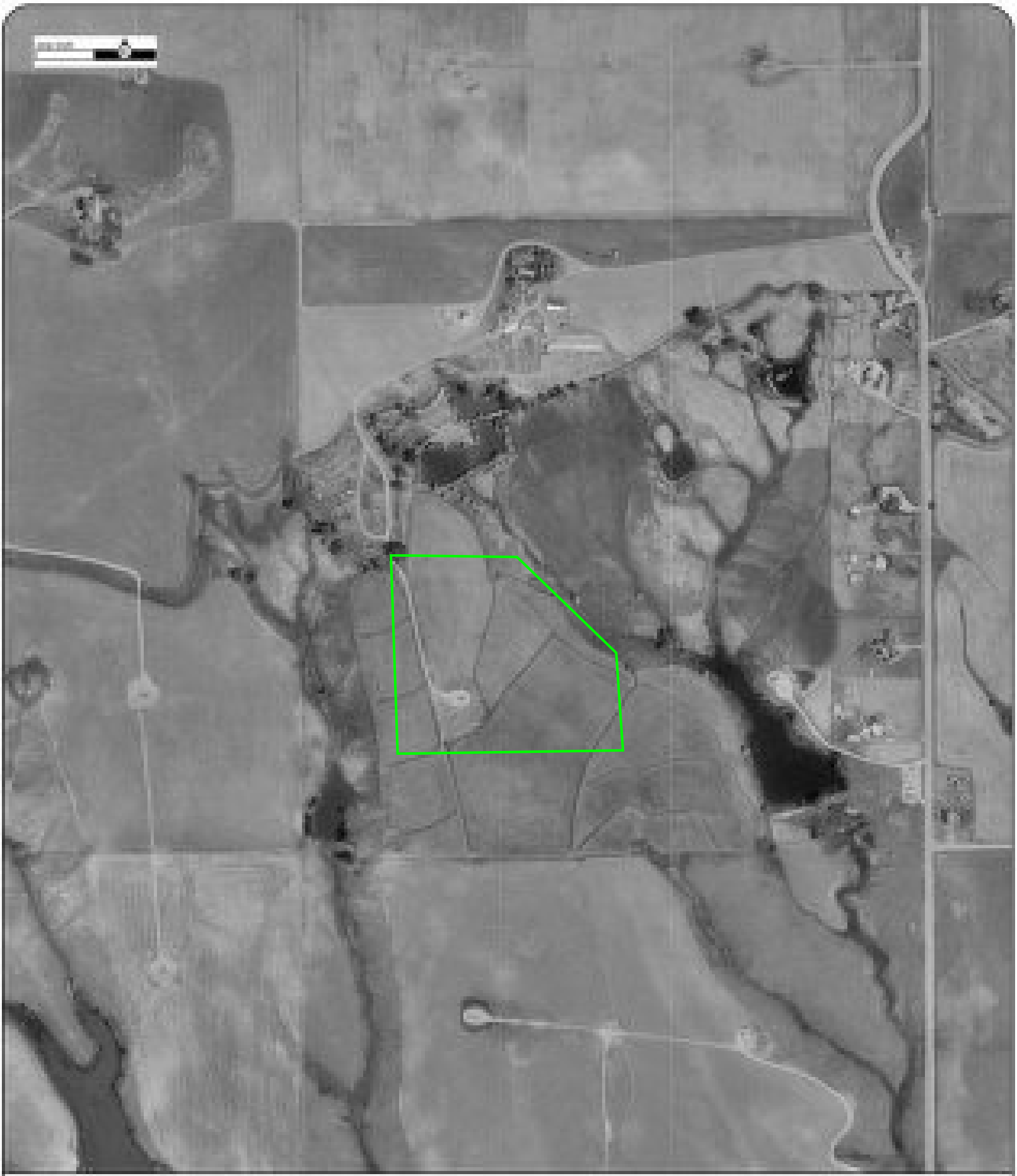
ERIS

Year: 1999
Source: USGS
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 20031000737

ERIS



Year: 1993
Source: USGS
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000737

ERIS

Year: 1984
Source: USGS
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 20021000737

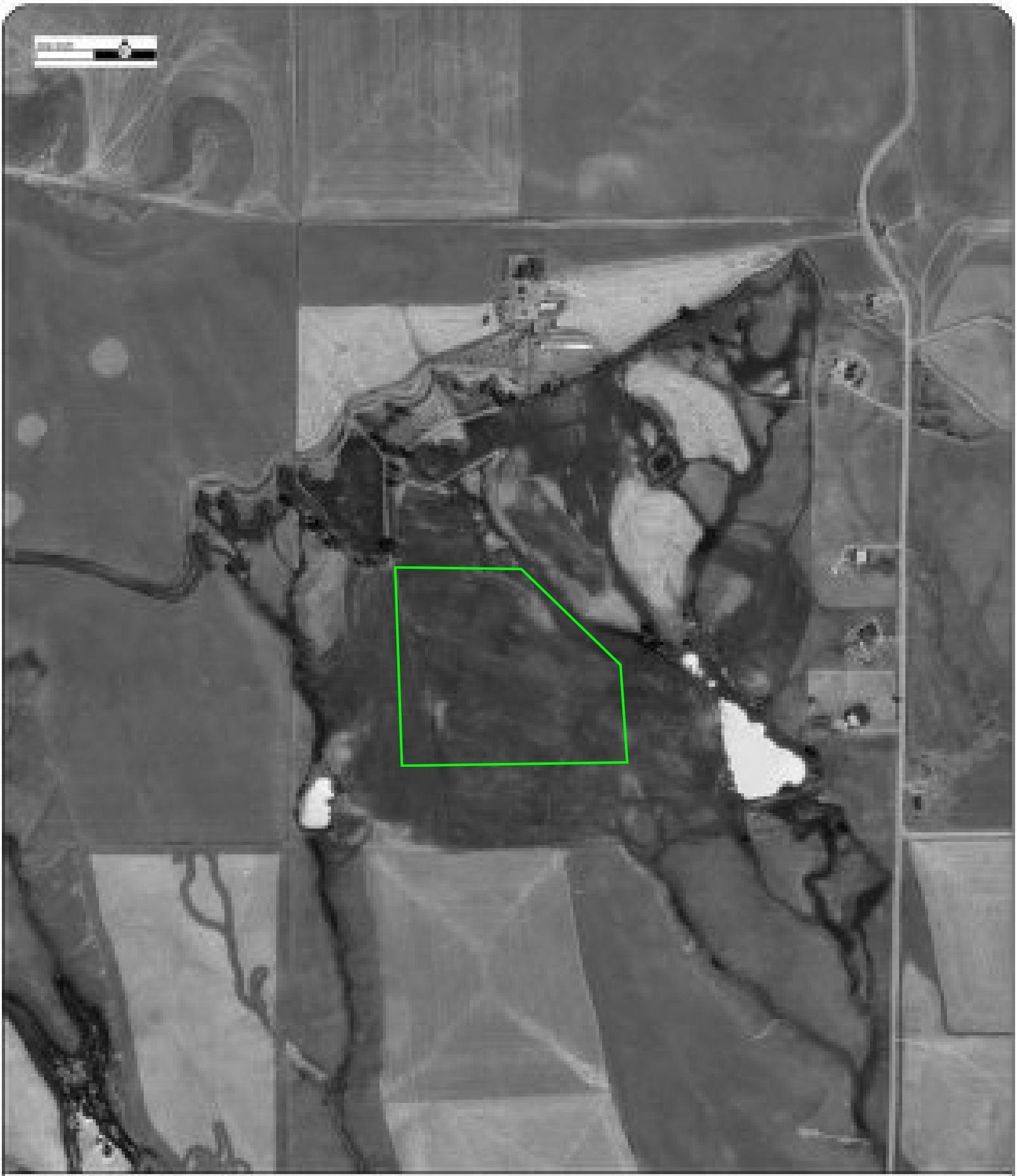
ERIS

Year: 1978
Source: USGS
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000757

ERIS



Year: 1971
Source: USGS
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514901

Order No: 22021000737

ERIS

Year: 1963
Source: USGS
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000757

ERIS

Year: 1953
Source: AMS
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000737

ERIS

Year: 1937
Source: ASCS
Scale: 1" = 500'
Comment:

Address: Anydrink Library, Thornton, CO
Approx Center: -104.9896175,39.94514801

Order No: 22021000757

ERIS

APPENDIX F

ERIS DATABASE REPORT

DATABASE REPORT

Project Property:	*Proposed Anythink Library* *Proposed Anythink Library* *Thornton CO 80602*
Project No:	*FC10326.000v-200*
Report Type:	*Database Report*
Order No:	*22032500694*
Requested by:	*CTL | Thompson, Inc.*
Date Completed:	*March 28, 2022*

Environmental Risk Information Services
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Executive Summary

Property Information:

Project Property:		*Proposed Anythink Library* *Proposed Anythink Library Thornton CO 80602*
Project No:		*FC10326.000v-200*
Coordinates:		
	Latitude:	*39.9455116*
	Longitude:	*-104.90953833*
	UTM Northing:	*4,421,713.49*
	UTM Easting:	*507,727.92*
	UTM Zone:	*13S*
Elevation:		*5,222 FT*

Order Information:

Order No:	*22032500694*
Date Requested:	*March 25, 2022*
Requested by:	*CTL | Thompson, Inc.*
Report Type:	*Database Report*

Historicals/Products:

ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
DOE FUSRAP	Y	1	0	0	0	0	0	0
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	**1**	0	0	**1**
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	0	0	-	-	0
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
State								
LANDFILL METHANE	Y	0.5	0	0	0	0	-	0
COVENANTS	Y	0.5	0	0	0	0	-	0
SUPERFUND NRD	Y	1	0	0	0	0	0	0
SHWS	Y	1	0	0	0	0	0	0
DELISTED SHWS	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	0	0	-	0
HIST LF	Y	0.5	0	0	0	0	-	0
HIST LANDFILLS	Y	0.5	0	0	0	0	-	0
RECYCLING	Y	0.5	0	0	0	0	-	0
LST	Y	0.5	0	0	0	0	-	0
LUST TRUST	Y	0.5	0	0	0	0	-	0
DELISTED LST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	0	-	-	0
AST	Y	0.25	0	0	0	-	-	0
TANKS	Y	0.25	0	0	0	-	-	0
DTNK	Y	0.25	0	0	0	-	-	0
AUL	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	***1***	0	-	***1***
BROWNFIELDS	Y	0.5	0	0	0	0	-	0
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED ILST	Y	0.5	0	0	0	0	-	0
DELISTED IUST	Y	0.25	0	0	0	-	-	0

County ***No County databases were selected to be included in the search.***

Additional Environmental Records

Federal

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
FINDS/FRS	Y	PO	0	-	-	-	-	0
TRIS	Y	PO	0	-	-	-	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	**1**	**1**	**2**
URANIUM	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCB	Y	0.5	0	0	0	0	-	0
State								
SPILLS	Y	0.125	0	0	-	-	-	0
OG SPILLS	Y	0.125	0	**3**	-	-	-	**3**
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
AIR PERMITS	Y	0.125	0	0	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
PFAS	Y	0.5	0	0	0	0	-	0
ASBESTOS	Y	0.125	0	0	-	-	-	0
HAZ GEN	Y	0.125	0	0	-	-	-	0
NPDES	Y	PO	0	-	-	-	-	0
HAZ TSD	Y	0.5	0	0	0	0	-	0
HAZ CORRACT	Y	1	0	0	0	0	0	0
UMTRA	Y	0.5	0	0	0	0	-	0

Tribal ***No Tribal additional environmental record sources available for this State.***

County ***No County additional environmental databases were selected to be included in the search.***

Total:	0	**3**	**2**	**1**	**1**	**7**

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	OG SPILLS	EXTRACTION OIL & GAS INC	Thornton CO	SW	0.02 / 113.33	3	17
1	OG SPILLS	EXTRACTION OIL & GAS INC	Thornton CO	SW	0.02 / 113.33	3	18
2	OG SPILLS	EXTRACTION OIL & GAS INC	CO	N	0.12 / 655.10	36	19
3	RCRA CORRACTS	OFFEN PETROLEUM SPILL 2012-0757	QUEBEC ST S OF E 128TH AVE THORNTON CO 80602 ***EPA Handler ID:*** COR000229906	ESE	0.25 / 1,315.42	-33	21
3	VCP	Amber Creek	E. 136th Ave. and Quebec Street Thornton CO 80602	ESE	0.25 / 1,315.42	-33	24
4	MRDS	GRAVEL PIT	ADAMS COUNTY BRIGHTON CO 80602 ***Dep ID:*** 10207357	NW	0.26 / 1,378.36	87	25
5	MRDS	UNKNOWN	ADAMS COUNTY BRIGHTON CO 80602 ***Dep ID:*** 10091386	WNW	0.99 / 5,248.48	89	25

Executive Summary: Summary by Data Source

Standard

Federal

RCRA CORRACTS - RCRA CORRACTS-Corrective Action

A search of the RCRA CORRACTS database, dated Jan 31, 2022 has found that there are 1 RCRA CORRACTS site(s) within approximately 1.00 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
OFFEN PETROLEUM SPILL 2012-0757	QUEBEC ST S OF E 128TH AVE THORNTON CO 80602 ***EPA Handler ID**: COR000229906*	ESE	0.25 / 1,315.42	3

State

VCP - The Voluntary Cleanup and Redevelopment Program

A search of the VCP database, dated Feb 14, 2022 has found that there are 1 VCP site(s) within approximately 0.50 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Amber Creek	E. 136th Ave. and Quebec Street Thornton CO 80602	ESE	0.25 / 1,315.42	3

Non Standard

Federal

MRDS - Mineral Resource Data System

A search of the MRDS database, dated Mar 15, 2016 has found that there are 2 MRDS site(s) within approximately 1.00 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
GRAVEL PIT	ADAMS COUNTY BRIGHTON CO 80602 ***Dep ID**: 10207357*	NW	0.26 / 1,378.36	4
UNKNOWN	ADAMS COUNTY BRIGHTON CO 80602 ***Dep ID**: 10091386*	WNW	0.99 / 5,248.48	5

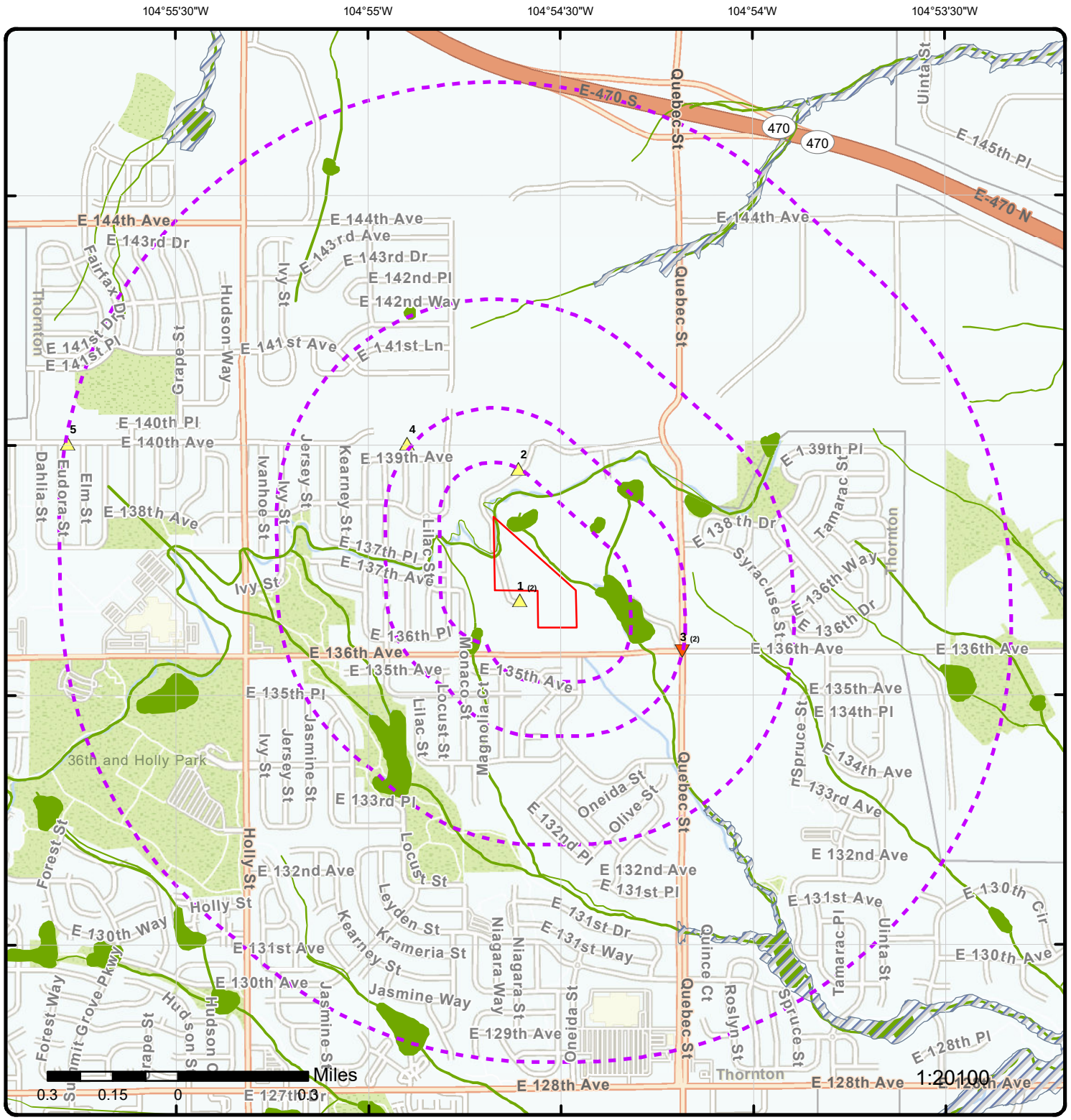
State

OG SPILLS - Colorado Oil and Gas Conservation Commission Spills

A search of the OG SPILLS database, dated Feb 6, 2022 has found that there are 3 OG SPILLS site(s) within approximately 0.12 miles

of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
EXTRACTION OIL & GAS INC	Thornton CO	SW	0.02 / 113.33	1
EXTRACTION OIL & GAS INC	Thornton CO	SW	0.02 / 113.33	1
EXTRACTION OIL & GAS INC	CO	N	0.12 / 655.10	2



Map: 1.0 Mile Radius

Order Number: 22032500694

Address: Proposed Anythink Library, Thornton, CO

ERIS

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Eris Areas with Higher Elevation
- Eris Areas with Same Elevation
- Eris Areas with Lower Elevation
- Eris Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- Historic Fill
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- Plume

Source: © 2021 ESRI StreetMap Premium

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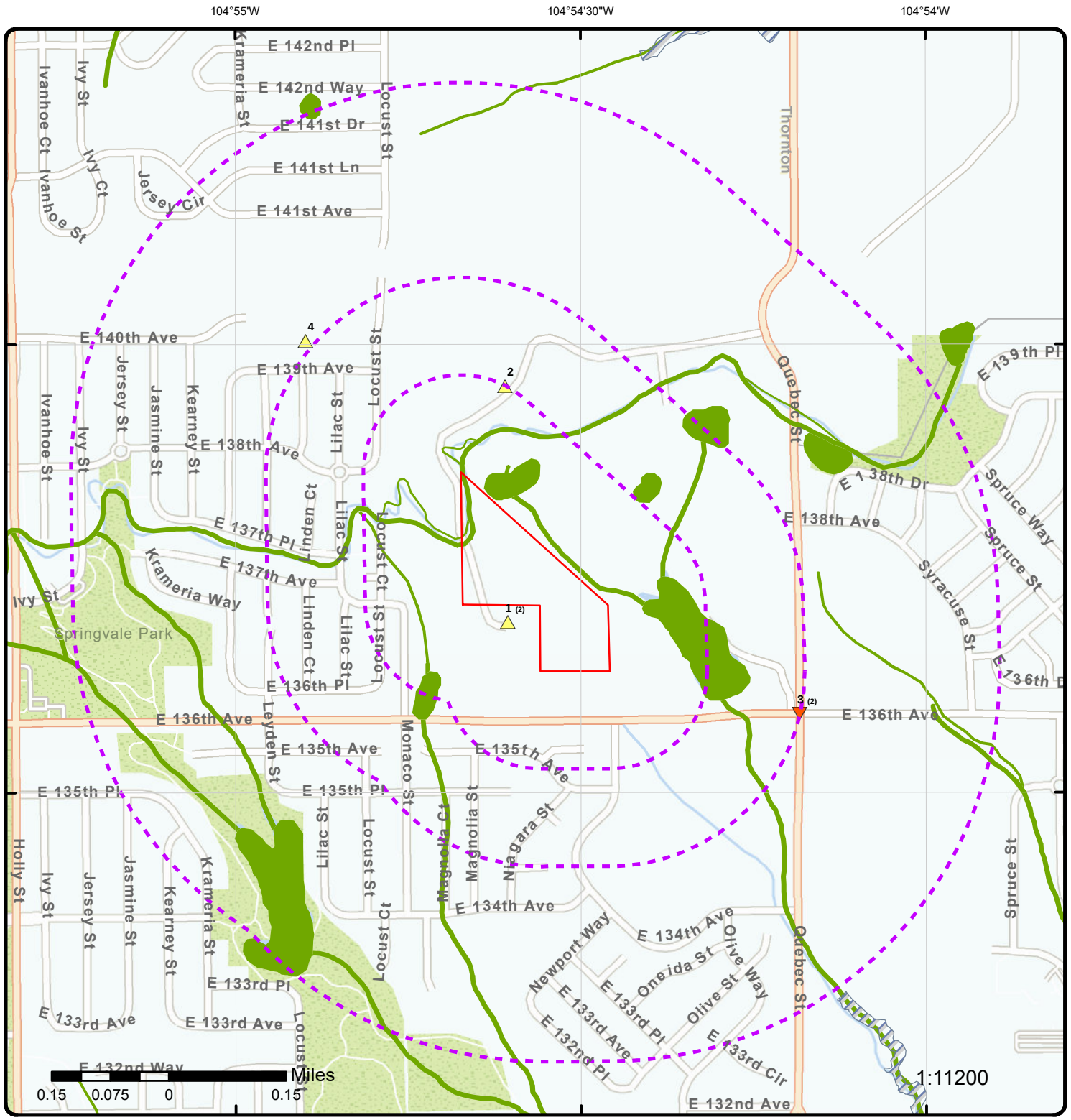

Map: 0.5 Mile Radius

Order Number: 22032500694

Address: Proposed Anythink Library, Thornton, CO

ERIS

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Eris Areas with Higher Elevation
- Eris Areas with Same Elevation
- Eris Areas with Lower Elevation
- Eris Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- Historic Fill
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- Plume

Source: © 2021 ESRI StreetMap Premium

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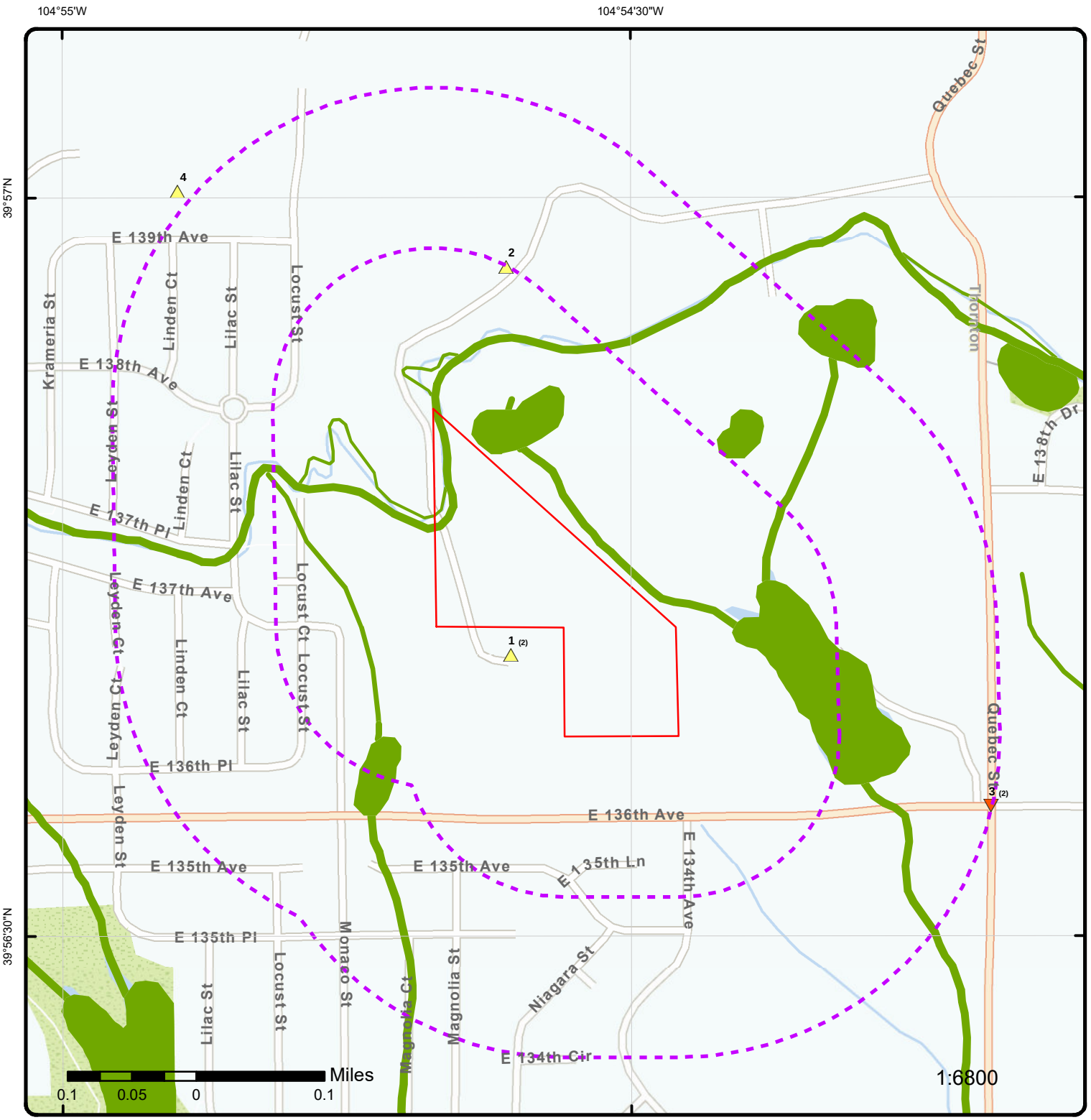

Map: 0.25 Mile Radius

Order Number: 22032500694

Address: Proposed Anythink Library, Thornton, CO

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Eris Areas with Higher Elevation
- Eris Areas with Same Elevation
- Eris Areas with Lower Elevation
- Eris Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- Historic Fill
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- Plume

Source: © 2021 ESRI StreetMap Premium

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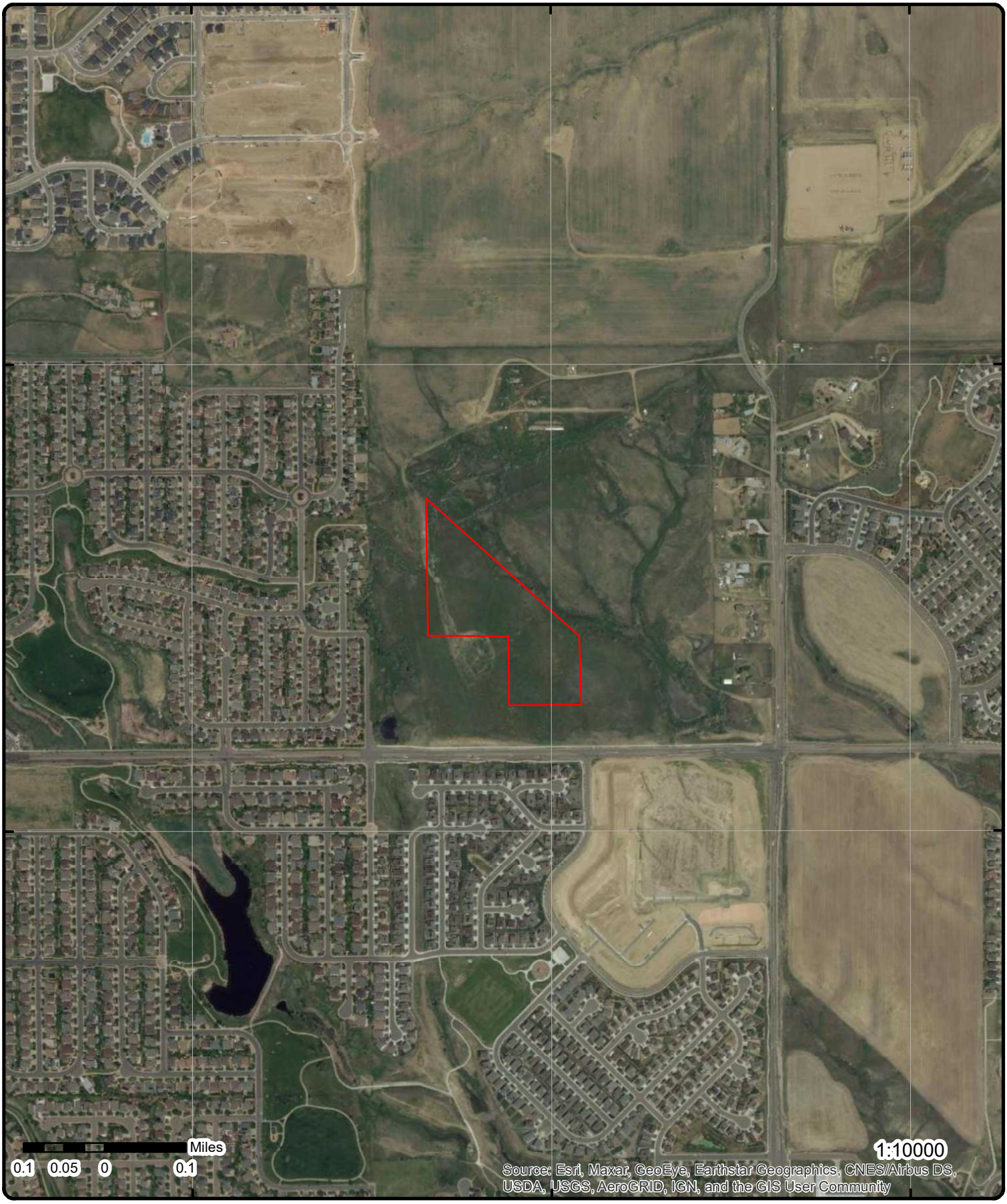

Aerial **Year: 2021**

Order Number: 22032500694

Address: Proposed Anythink Library, Thornton, CO

Source: ESRI World Imagery

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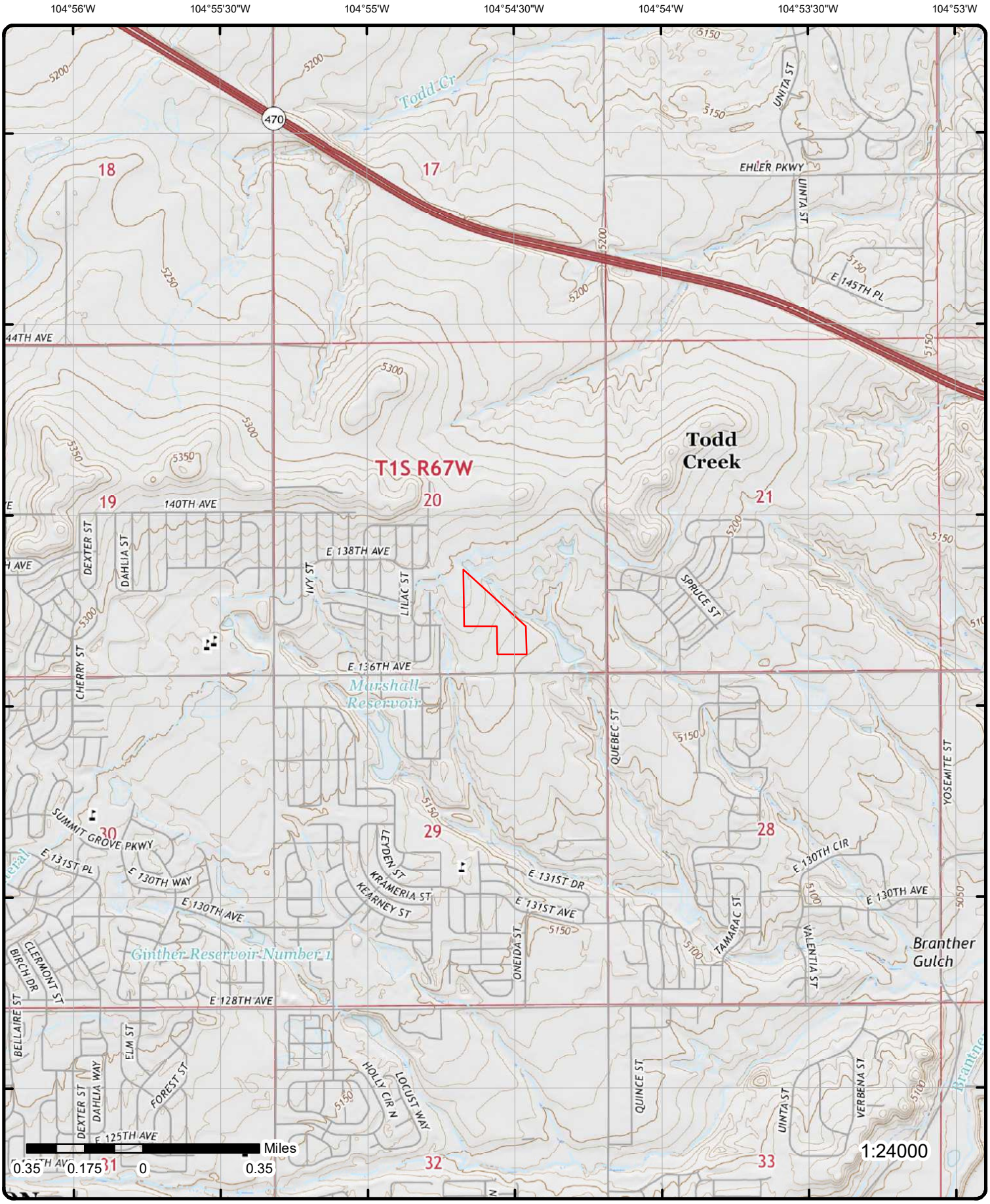

Topographic Map

Year: 2016

Order Number: 22032500694

Address: Proposed Anythink Library, CO

Quadrangle(s): Eastlake, CO; Brighton, CO

Source: USGS Topographic Map

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Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 2	SW	0.02 / 113.33	5,224.71 / 3	EXTRACTION OIL & GAS INC Thornton CO	OG SPILLS

Facility ID:	319865	**County:**	ADAMS
Document No:	402027329	**API County Code:**	
Operator No:	10459	**Latitude:**	39.944839
Tracking No:	401914968	**Longitude:**	-104.910102
Initial Report Dt:	01/23/2019	**Qtr Qtr:**	SWSE
Facility Type:	WELL PAD	**Section:**	20
Date of Discovery:	01/17/2019	**Township:**	1S
Spill Type:	Historical	**Range :**	67W
Report:	S - Supplemental	**Meridian:**	6
Approved Form 27:	FALSE	**Oil Spill Volume:**	Unknown
Form 27 Project No:		**Weather Conditions:**	40's and cloudy
Current Land Use:	NON-CROP LAND	**Surface Owner:**	OTHER (SPECIFY)
Other Land Use:		**Surface Owner Other:**	City of Thornton
Groundwater:	FALSE	**Waters of The State:**	No
Other:	FALSE	**Livestock:**	0
Other Description:		**Public Byway:**	No
Onsite Treatment:	FALSE		

Spilled Outside of Berms:	Yes
More Than Five Barrels Spille:	No
Condensate Spill Volume:	0
Flow Back Spill Volume:	0
Produced Water Spill Volume:	0
E P Waste Spill Volume:	0
Drilling Fluid Spill Volume:	0
Residence Occupied Structur:	0
Surface Water Supply Area:	No
Corrective Actions Completed:	TRUE
Other Waste:	
Spill Description:	Potential surface staining impacts were discovered while conducting reclamation work on location. Vertical and horizontal definition is being pursued with conventional excavation, and clearance samples will be collected from the bottom and sidewalls of the excavation. Collected samples will be field-screened and submitted for laboratory analysis.

Details

Oil BBLs Spilled:		**Soil:**	TRUE
Oil BBLs Recovered:		**Springs:**	
Oil Unknown:	TRUE	**Springs None:**	TRUE
Condensate Unk:	FALSE	**Livestock Near:**	
Surface Water:	FALSE	**Livestock None:**	TRUE
Water Wells:	2124	**Human Error:**	FALSE
Water Wells None:	FALSE	**Equipment Failure:**	FALSE
Surface Water Near:	545	**Historical Unkown:**	TRUE
Surface Water None:	FALSE	**Soil Excavated:**	410
Wetlands:	558	**Offsite Disposal:**	TRUE
Wetlands None:	FALSE		

Supplemental Report Date:	05/08/2019
Condensate BBLS Spilled:	0
Condensate BBLS Recovered:	0
Produced Water BBLS Spilled:	0
Produced Water BBLS Recov:	0
Produced Water Unknown:	FALSE
Drilling Fluid BBLS Spilled:	0
Drilling Fluid BBLS Recovered:	0

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Drilling Fluid Unknown:	FALSE
Flow Back Fluid BBLS Spilled:	0
Flow Back Fluid BBLS Recov:	0
Flow Back Fluid Unkown:	FALSE
Other E P Waste BBLS Spilled:	0
Other E P Waste BBLS Recov:	0
Other E P Waste Unknown:	FALSE
Other E P Waste:	
Spill Contained Within Berm:	No
Emergency Pit Constructed:	No
Dry Drainage Feature:	FALSE
Surface Area Length:	100
Surface Area Width:	85
Depth of Impact(Feet):	9
Depth of Impact (Inches):	
Depth to Groundwater:	35
Water Wells in Area:	3
Occupied Buildings:	732
Occupied Buildings None:	FALSE
Supplemental Report Date Ca:	5/8/2019
Ground Water Removed:	0
Surface Water Removed:	0
Area Depth Determined:	The extent of impacts was determined through removing visually impacted soil and sampling the extent of the impacted area. Soil samples were submitted to an accredited laboratory for analysis of total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and total xylenes (BTEX). Site investigation efforts continued until laboratory analysis confirmed TPH and BTEX soil concentrations below COGCC Table 910-1 allowable levels. 410 cubic yards of impacted or potentially impacted soils were removed and transported to Front Range Landfill in Erie, Colorado.
Geology Description:	Renohill loam
Additional Spill Details:	
Root Cause:	While conducting reclamation work, hydrocarbon surface staining was discovered around the location of the plugged and abandoned well head.
Preventative Measures:	The entire site is being decommissioned and will be reclaimed.
Other Disposition:	FALSE
Other Disposition Description:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	2 of 2	SW	0.02 / 113.33	5,224.71 / 3	EXTRACTION OIL & GAS INC Thornton CO	OG SPILLS

Facility ID:	319865	**County:**	ADAMS
Document No:	401914968	**API County Code:**	
Operator No:	10459	**Latitude:**	39.944839
Tracking No:	401914968	**Longitude:**	-104.910102
Initial Report Dt:	01/23/2019	**Qtr Qtr:**	SWSE
Facility Type:	WELL PAD	**Section:**	20
Date of Discovery:	01/17/2019	**Township:**	1S
Spill Type:	Historical	**Range :**	67W
Report:	I w/S - Initial with Supplemental	**Meridian:**	6
Approved Form 27:	FALSE	**Oil Spill Volume:**	Unknown
Form 27 Project No:		**Weather Conditions:**	40's and cloudy
Current Land Use:	NON-CROP LAND	**Surface Owner:**	OTHER (SPECIFY)
Other Land Use:		**Surface Owner Other:**	City of Thornton
Groundwater:	FALSE	**Waters of The State:**	No
Other:	FALSE	**Livestock:**	0
Other Description:		**Public Byway:**	No
Onsite Treatment:	FALSE		

Spilled Outside of Berms:	Yes
More Than Five Barrels Spille:	No
Condensate Spill Volume:	0
Flow Back Spill Volume:	0
Produced Water Spill Volume:	0
E P Waste Spill Volume:	0
Drilling Fluid Spill Volume:	0
Residence Occupied Structur:	0
Surface Water Supply Area:	No
Corrective Actions Completed:	FALSE
Other Waste:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Spill Description: Potential surface staining impacts were discovered while conducting reclamation work on location. Vertical and horizontal definition is being pursued with conventional excavation, and clearance samples will be collected from the bottom and sidewalls of the excavation. Collected samples will be field-screened and submitted for laboratory analysis.

Details

Oil BBLs Spilled:		**Soil:**	TRUE
Oil BBLs Recovered:		**Springs:**	
Oil Unknown:	TRUE	**Springs None:**	TRUE
Condensate Unk:	FALSE	**Livestock Near:**	
Surface Water:	FALSE	**Livestock None:**	TRUE
Water Wells:	2124	**Human Error:**	FALSE
Water Wells None:	FALSE	**Equipment Failure:**	TRUE
Surface Water Near:	545	**Historical Unkown:**	TRUE
Surface Water None:	FALSE	**Soil Excavated:**	
Wetlands:	558	**Offsite Disposal:**	FALSE
Wetlands None:	FALSE		

Supplemental Report Date:	01/23/2019
Condensate BBLS Spilled:	0
Condensate BBLS Recovered:	0
Produced Water BBLS Spilled:	0
Produced Water BBLS Recov:	0
Produced Water Unknown:	FALSE
Drilling Fluid BBLS Spilled:	0
Drilling Fluid BBLS Recovered:	0
Drilling Fluid Unknown:	FALSE
Flow Back Fluid BBLS Spilled:	0
Flow Back Fluid BBLS Recov:	0
Flow Back Fluid Unkown:	FALSE
Other E P Waste BBLS Spilled:	0
Other E P Waste BBLS Recov:	0
Other E P Waste Unknown:	FALSE
Other E P Waste:	
Spill Contained Within Berm:	No
Emergency Pit Constructed:	No
Dry Drainage Feature:	FALSE
Surface Area Length:	
Surface Area Width:	
Depth of Impact(Feet):	
Depth of Impact (Inches):	
Depth to Groundwater:	125
Water Wells in Area:	3
Occupied Buildings:	732
Occupied Buildings None:	FALSE
Supplemental Report Date Ca:	1/23/2019
Ground Water Removed:	
Surface Water Removed:	
Area Depth Determined:	Potential surface staining was discovered during reclamation activities on site. Additional excavations will be conducted in order to determine the extent. Impacted soils will be removed and transported to a disposal facility. Transport and disposal records will be kept on file under usual and customary practice and are available upon request. Soil samples will be collected and analyzed for organic constituents (TPH and BTEX) and inorganics (SAR, EC and pH) until the areal and vertical extents of the excavation are within COGCC Table 910-1 allowable limits. If present, a groundwater sample will be collected and submitted for laboratory analysis to support site characteristics and excavation clearance.
Geology Description:	Renohill loam
Additional Spill Details:	
Root Cause:	While conducting remediation work, potential surface staining was discovered.
Preventative Measures:	The entire site is being decommissioned and will be reclaimed. More details will follow in an Form 19 supplemental submital pending further investigation.
Other Disposition:	FALSE
Other Disposition Description:	

2	*1 of 1*	*N*	*0.12 / 655.10*	*5,258.14 / 36*	***EXTRACTION OIL & GAS INC*** ***CO***	***OG SPILLS***

Facility ID:	462729	**County:**	ADAMS
Document No:	402690871	**API County Code:**	
Operator No:	10459	**Latitude:**	39.949219
Tracking No:	402690871	**Longitude:**	-104.910164
Initial Report Dt:	05/17/2021	**Qtr Qtr:**	SWSE
Facility Type:	FLOWLINE SYSTEM	**Section:**	20
Date of Discovery:	05/17/2021	**Township:**	1S
Spill Type:	Historical	**Range :**	67W
Report:	I w/S - Initial with Supplemental	**Meridian:**	6
Approved Form 27:	TRUE	**Oil Spill Volume:**	Unknown
Form 27 Project No:	17346	**Weather Conditions:**	60F and sunny
Current Land Use:	NON-CROP LAND	**Surface Owner:**	FEE
Other Land Use:		**Surface Owner Other:**	Private Landowner
Groundwater:	FALSE	**Waters of The State:**	
Other:	FALSE	**Livestock:**	
Other Description:		**Public Byway:**	
Onsite Treatment:	FALSE		
Spilled Outside of Berms:			
More Than Five Barrels Spille:	No		
Condensate Spill Volume:	0		
Flow Back Spill Volume:	0		
Produced Water Spill Volume:	Unknown		
E P Waste Spill Volume:	0		
Drilling Fluid Spill Volume:	0		
Residence Occupied Structur:			
Surface Water Supply Area:			
Corrective Actions Completed:	FALSE		
Other Waste:			

Spill Description: While removing production flowlines at the Aylor 3 Tank Battery (Location ID: 462729), legacy suspected soil impacts were observed. The release became State reportable on May 17, 2021 due to the discovery of 10 cubic yards or more of impacted material. Vertical and horizontal definition is being pursued with conventional excavation, and clearance samples will be collected from the base and sidewalls of the excavation. In accordance with the approved Form 27, and COGCC assigned remediation project number 17346, collected samples were field-screened and submitted for laboratory analysis. Please refer to the Form 27 submitted prior to excavation, COGCC Document #: 402631543, for further details.

Details

Oil BBLs Spilled:		**Soil:**	TRUE
Oil BBLs Recovered:		**Springs:**	
Oil Unknown:	TRUE	**Springs None:**	TRUE
Condensate Unk:	FALSE	**Livestock Near:**	
Surface Water:	FALSE	**Livestock None:**	TRUE
Water Wells:	1935	**Human Error:**	FALSE
Water Wells None:	FALSE	**Equipment Failure:**	FALSE
Surface Water Near:	1696	**Historical Unkown:**	FALSE
Surface Water None:	FALSE	**Soil Excavated:**	10
Wetlands:	560	**Offsite Disposal:**	TRUE
Wetlands None:	FALSE		
Supplemental Report Date:	05/17/2021		
Condensate BBLS Spilled:	0		
Condensate BBLS Recovered:	0		
Produced Water BBLS Spilled:			
Produced Water BBLS Recov:			
Produced Water Unknown:	TRUE		
Drilling Fluid BBLS Spilled:	0		
Drilling Fluid BBLS Recovered:	0		
Drilling Fluid Unknown:	FALSE		
Flow Back Fluid BBLS Spilled:	0		
Flow Back Fluid BBLS Recov:	0		
Flow Back Fluid Unkown:	FALSE		
Other E P Waste BBLS Spilled:	0		
Other E P Waste BBLS Recov:	0		
Other E P Waste Unknown:	FALSE		
Other E P Waste:			
Spill Contained Within Berm:	No		
Emergency Pit Constructed:	No		
Dry Drainage Feature:	FALSE		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Surface Area Length:
Surface Area Width:
Depth of Impact(Feet):
Depth of Impact (Inches):
Depth to Groundwater: 15
Water Wells in Area: 3
Occupied Buildings: 315
Occupied Buildings None: FALSE
Supplemental Report Date Ca: 5/17/2021
Ground Water Removed:
Surface Water Removed:
Area Depth Determined: Additional excavations will be conducted in order to determine the extent. Impacted soils will be removed and transported to a disposal facility. Transport and disposal records will be kept on file under usual and customary practice and are available upon request. Soil samples will be collected and analyzed for full Table 915-1 constituents until the areal and vertical extents of the excavation are within COGCC Table 915-1 allowable limits. If present, a groundwater sample will be collected and submitted for laboratory analysis to support site characteristics and excavation clearance.
Geology Description: Ulm Loam
Additional Spill Details:
Root Cause: While removing a production flowline, legacy soil impacts were observed in the sidewalls and base of the excavation. It appears that equipment failure of the flowline resulted in a release of fluids and soil impacts.
Preventative Measures: The entire site is being decommissioned and will be reclaimed. More details will follow on a supplemental f27 submittal pending investigation.
Other Disposition: FALSE
Other Disposition Description:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of 2	ESE	0.25 / 1,315.42	5,188.87 / -33	OFFEN PETROLEUM SPILL 2012-0757 QUEBEC ST S OF E 128TH AVE THORNTON CO 80602	RCRA CORRACTS

EPA Handler ID: COR000229906
Gen Status Universe: No Report
Contact Name:
Contact Address: US
Contact Phone No and Ext:
Contact Email:
Contact Country: US
County Name: ADAMS
EPA Region: 08
Land Type:
Receive Date: 20130419
Location Latitude:
Location Longitude:

Event/Area Details

Area Name: SPILL#2012-0757
Event Code: CA834IM
Corrective Action Event Descri: OTHER REPORT APPROVED
Actual Date of Event: 20130729
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20130729
Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:
Event Responsible Agency: S

Area Name: SPILL#2012-0757
Event Code: CA831AS
Corrective Action Event Descri: OTHER REPORT RECEIVED
Actual Date of Event: 20140602
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20140602

Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:
Event Responsible Agency: S

Area Name: SPILL#2012-0757
Event Code: CA060
Corrective Action Event Descri: NOTICE OF CONTAMINATION
Actual Date of Event: 20121105
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20121105
Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:
Event Responsible Agency: S

Area Name: SPILL#2012-0757
Event Code: CA190
Corrective Action Event Descri: INVESTIGATION REPORT RECEIVED
Actual Date of Event: 20140320
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20140320
Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:
Event Responsible Agency: S

Area Name: SPILL#2012-0757
Event Code: CA110
Corrective Action Event Descri: INVESTIGATION WORKPLAN RECEIVED
Actual Date of Event: 20130925
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20130925
Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:
Event Responsible Agency: S

Area Name: SPILL#2012-0757
Event Code: CA200
Corrective Action Event Descri: INVESTIGATION COMPLETE
Actual Date of Event: 20140402
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20140402
Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:
Event Responsible Agency: S

Area Name: SPILL#2012-0757
Event Code: CA834AS
Corrective Action Event Descri: OTHER REPORT APPROVED
Actual Date of Event: 20140616
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20140616
Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:

Event Responsible Agency: S

Area Name: SPILL#2012-0757
Event Code: CA999RM
Corrective Action Event Descri: CA PROCESS IS TERMINATED-REMEDIAL ACTIVITIES COMPLETE
Actual Date of Event: 20140616
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20140616
Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:
Event Responsible Agency: S

Area Name: SPILL#2012-0757
Event Code: CA100
Corrective Action Event Descri: INVESTIGATION IMPOSITION
Actual Date of Event: 20130925
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20130925
Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:
Event Responsible Agency: S

Area Name: SPILL#2012-0757
Event Code: CA831IM
Corrective Action Event Descri: OTHER REPORT RECEIVED
Actual Date of Event: 20130417
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20130417
Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:
Event Responsible Agency: S

Area Name: SPILL#2012-0757
Event Code: CA150
Corrective Action Event Descri: INVESTIGATION WORKPLAN APPROVED
Actual Date of Event: 20131003
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20131003
Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:
Event Responsible Agency: S

Area Name: SPILL#2012-0757
Event Code: CA100
Corrective Action Event Descri: INVESTIGATION IMPOSITION
Actual Date of Event: 20130729
Orig Sched Event Date:
New Sched Event Date:
Best Date: 20130729
Groundwater Release Indicator: Yes
Soil Release Indicator: Yes
Air Release Indicator:
Surface Waste Release Ind:
Event Responsible Agency: S

Violation/Evaluation Summary

Note: NO RECORDS: As of Jan 2022, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner:	No
Smelting, Melting and Refining:	No
Underground Injection Control:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20130419
Handler Name:	OFFEN PETROLEUM SPILL 2012-0757
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified
Source Type:	Implementer

---

3 **2 of 2** **ESE** **0.25 / 1,315.42** **5,188.87 / -33** ***Amber Creek***
E. 136th Ave. and Quebec Street
Thornton CO 80602 ***VCP***

File No:	060209-1	**ID:**	480
City:	Thornton	**Project Active:**	FALSE
ZIP Code:	80602	**Received Date:**	2/9/2006
Site No:	361	**ID (MA):**	518
Review Due Dt:	3/26/2006	**FID (MA):**	0
Extension:	0	**City (MA):**	Thornton
Actual Review Dt:	3/22/2006	**Zip Code:**	80602
REM Start Due Dt:		**County (MA):**	ADAMS
REM Comp Due Dt:		**Received Date (MA):**	2/8/2006, 7:00 PM
Actual Cost:	$1,360.00	**Longitude:**	-104.903114
Rebate:	$640.00	**Latitude:**	39.943054
Tax Credit:		**X:**	-11677761
App Type:	NAD	**Y:**	4857670
App Status:	APPROVAL	**Content Type:**	Application
Land Use Zoning:	RESIDENTIAL	**Created:**	5/9/2017 7:51:31 AM
Acreage:	17.9	**Modified:**	7/31/2017 4:27:13 PM
Residences:	102	**Expr1000:**	FALSE
Jobs:		**Project ID Admin:**	300
Public View:	Yes		

Site:	Amber Creek
Address:	SW Corner of E. 136th Ave. and Quebec Street
Site (MA):	Amber Creek
Address (MA):	E. 136th Ave. and Quebec Street
Source:	Colorado Department of Public Health and Environment (CDPHE); Colorado Environmental Records Search (Map Application): CDPHE Colorado VCUP Layer

Site Detail(s)

Issues/Comments:	
Media Sediment:	BTEX

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Media Soil:		BTEX				
Media Ground Water:		BTEX				
Media Surface Water:		BTEX				

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	1 of 1	NW	0.26 / 1,378.36	5,309.10 / 87	GRAVEL PIT ADAMS COUNTY BRIGHTON CO 80602	MRDS

Dep ID: 10207357
Dev Status: PAST PRODUCER
Code List: SDG
Url: http://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10207357
I1: 72
Latitude: 39.950073
Longitude: -104.914978

Commodity

I1: 96
Code: SDG
Commodity: Sand and Gravel, Cons
Commodity Type: Non-metallic
Commodity Group: Sand and Gravel
Importance: Primary
Line: 1
Inserted By: MAS migration
Insert Date: 29-OCT-2002 09:00:24
Updated By: USGS
Update Date: 29-OCT-2002 09:01:54

Names

I1: 35
Status: Current
Site Name: Gravel Pit
Line: 1
Inserted By: MAS migration
Insert Date: 29-OCT-02
Updated By: USGS
Update Date: 29-OCT-02

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	1 of 1	WNW	0.99 / 5,248.48	5,310.65 / 89	UNKNOWN ADAMS COUNTY BRIGHTON CO 80602	MRDS

Dep ID: 10091386
Dev Status: OCCURRENCE
Code List: SDG
Url: http://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10091386
I1: 18
Latitude: 39.950073
Longitude: -104.929687

Commodity

I1: 63
Code: SDG
Commodity: Sand and Gravel, Cons
Commodity Type: Non-metallic
Commodity Group: Sand and Gravel
Importance: Primary
Line: 1
Inserted By: MRDS migration
Insert Date: 29-OCT-2002 09:00:24
Updated By: USGS
Update Date: 29-OCT-2002 09:01:08

Materials

I1: 45
Material: Gravel
Ore or Gangue: Ore
Rec: 1
Inserted B: MRDS migration
Insert Dat: 29-OCT-2002 09:44:3
Updated By:
Update Dat:

Names

I1: 22
Status: Current
Site Name: Unknown
Line: 1
Inserted By: MRDS migration
Insert Date: 29-OCT-02
Updated By: USGS
Update Date: 29-OCT-02

Unplottable Summary

Total: 0 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID

No unplottable records were found that may be relevant for the search criteria.

Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

Formerly Utilized Sites Remedial Action Program: DOE FUSRAP

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

National Priority List: NPL

Sites on the United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jan 25, 2022

National Priority List - Proposed: PROPOSED NPL

Sites proposed - by the EPA, the state agency, or concerned citizens - for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jan 25, 2022

Deleted NPL: DELETED NPL

Sites deleted from the United States Environmental Protection Agency (EPA)'s National Priorities List. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jan 25, 2022

SEMS List 8R Active Site Inventory: SEMS

The Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted.

Government Publication Date: Dec 30, 2021

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: SEMS ARCHIVE

The Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Government Publication Date: Dec 30, 2021

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Jan 31, 2022

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Jan 31, 2022

RCRA Generator List: RCRA LQG

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Jan 31, 2022

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Jan 31, 2022

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Jan 31, 2022

RCRA Non-Generators: RCRA NON GEN

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Jan 31, 2022

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Jan 31, 2022

Federal Engineering Controls-ECs: FED ENG

Engineering controls (ECs) encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Dec 30, 2021

Federal Institutional Controls- ICs: FED INST

Institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's (United States Environmental Protection Agency) expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Government Publication Date: Dec 30, 2021

Land Use Control Information System: LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Dec 31, 2021

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Aug 20, 2021

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

List of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Dec 2, 2020

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Jul 10, 2020

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Apr 28, 2020

LIEN on Property: SEMS LIEN

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Dec 30, 2021

Superfund Decision Documents: SUPERFUND ROD

This database contains a listing of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Nov 16, 2021

State

Methane Gas Study Sites: LANDFILL METHANE

This Investigation of Methane Gas Hazards report was prepared by the Denver Office of Emergency Preparedness in 1981. The purpose of this study was to assess the actual and potential generation, migration, explosive and related problems associated with specified landfills, and to identify existing and potential problems, suggested strategies to prevent, abate, and control such problems and recommend investigative and monitoring functions as may be deemed necessary. The Colorado Department of Health selected eight landfills as priorities due to population density and potential hazards to population and property.

Government Publication Date: Jan 2, 1981

Environmental Covenants and Use Restrictions: COVENANTS

Boundaries of environmental covenant/environmental use restriction sites made available by the Colorado Deparment of Public Health & Environment (CDPHE). CPDHE has the authority to approve requests to restrict the future use of a property using an enforceable agreement called an environmental covenant. Land use restrictions may be used to ensure the cleanup remedy adequately protects human health and the environment when a contaminated site isn't cleaned up completely.

Government Publication Date: Jul 2, 2021

Superfund National Priorities List and Natural Resource Damages sites: SUPERFUND NRD

Boundaries of Superfund National Priorities List sites and Natural Resource Damages sites in Colorado made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Jun 16, 2021

Superfund Sites: SHWS

A list of Superfund sites in Colorado made available by the Colorado Department of Public Health and Environment (CDPHE). In Colorado, the cleanup of Superfund sites is overseen by the CDPHE or the Environmental Protection Agency (EPA). This list includes active Superfund sites, deleted sites, proposed sites, and natural resource damage sites.

Government Publication Date: Jun 2, 2021

Delisted Superfund Sites: DELISTED SHWS

Sites which once appeared on - but have since been removed from - the list of Superfund sites in Colorado made available by the Colorado Department of Public Health and Environment (CDPHE). In Colorado, the cleanup of Superfund sites is overseen by the CDPHE or the Environmental Protection Agency (EPA).

Government Publication Date: Jun 2, 2021

Solid Waste Facilities and Landfills: SWF/LF

The Colorado Department of Public Health and Environment (CDPHE) regulates the management and disposal of solid waste and landfill facilities.

Government Publication Date: Nov 1, 2021

Historical Solid Waste (Closed or Abandoned Landfills): HIST LF

In the early 1980s the Hazardous Materials Waste Management Division of the Colorado Department of Public Health and Environment (CDPHE) conducted a survey of staff members and local agencies. The information gathered was compiled in 1984 for sites that were known or thought to have waste issues. The information is not complete and generally not very definitive or verifiable. This data became the Solid Waste Historical Data. The data is not maintained and has not been since the late 1980s.

Government Publication Date: 1984

Tri-County Historic Landfills: HIST LANDFILLS

A list of historical landfills made available by the Tri-County Health Department (TCHD). The TCHD serves Adams, Arapahoe, and Douglas Counties.

Government Publication Date: Oct 1, 2015

Registered Recycling Facilities: RECYCLING

This list of registered recycling facilities in Colorado is maintained by the Colorado Department of Public Health & Environment (CDPHE). This list includes primarily processing facilities for recyclable materials, such as material recovery facilities, industrial recycling operations, and recyclable material end user sites. Collection centers/drop-off locations are not included unless the site is also processing recyclable materials (separating, sorting, dismantling, grinding, baling, etc.).

Government Publication Date: Sep 1, 2019

Leaking Storage Tanks: LST

A list of leaking storage tank locations from the Colorado Storage Tank Information System (COSTIS) database, including those which have applied for reimbursement from the Petroleum Storage Tank Fund. This list has been made available by the Colorado Department of Labor and Employment (CDLE).

Government Publication Date: Feb 8, 2022

LUST Trust Sites: LUST TRUST

The Division of Oil and Public Safety of the Colorado Department of Labor and Employment (CDLE) manages a Petroleum Storage Tank Fund (The Fund) that receives and processes applications to the Fund for reimbursement of costs related to assessment and cleanup of petroleum contaminated sites.

Government Publication Date: Feb 8, 2022

Delisted Leaking Storage Tanks: DELISTED LST

This database contains a list of leaking storage tank sites and their Funds for reimbursement of costs related to assessment and cleanup that were removed from the Colorado Department of Labor and Employment (CDLE) database.

Government Publication Date: Feb 8, 2022

Underground Storage Tanks: UST

A list of underground storage tanks from the Colorado Storage Tank Information System (COSTIS) database. This database is made available by the Division of Oil and Public Safety of the Colorado Department of Labor and Employment (CDLE).

Government Publication Date: Feb 8, 2022

Aboveground Storage Tanks: AST

A list of aboveground storage tanks from the Colorado Storage Tank Information System (COSTIS) database. This list is made available by the Division of Oil and Public Safety of the Colorado Department of Labor and Employment (CDLE).

Government Publication Date: Feb 8, 2022

Storage Tank Information System (COSTIS): TANKS

The Department of Labor and Employment/Division of Oil and Public Safety manages the Colorado Storage Tank Information System (COSTIS) database that stores information on facilities with storage tanks. This database contains facilities with liquified petroleum gas, liquefied natual gas, and compressed natural gas tanks which are not classified as either USTs or ASTs.

Government Publication Date: Feb 8, 2022

Delisted Storage Tanks: DTNK

This database contains a list of closed storage tank sites that were removed from the Division of Oil and Public Safety of the Colorado Department of Labor and Employment (CDLE) Tank Information System.

Government Publication Date: Feb 8, 2022

Environmental Covenants and Environmental Use Restrictions List: AUL

The Colorado Department of Public Health and Environment (CDPHE) maintains a list of sites that have environmental covenants and use restrictions in place. Land use restrictions may be used to ensure the cleanup remedy adequately protects human health and the environment when a contaminated site is not cleaned up completely.
Government Publication Date: Oct 31, 2021

The Voluntary Cleanup and Redevelopment Program: VCP
The Voluntary Cleanup and Redevelopment program of the Colorado Department of Public Health and Environment (CDPHE) was created in 1994 with the objective to facilitate the redevelopment and transfer of contaminated properties.
Government Publication Date: Feb 14, 2022

Brownfield Sites: BROWNFIELDS
Brownfields Program sites found in the Colorado Environmental Records Search Interactive Map made available by the Colorado Department of Public Health and Environment (CDPHE). Sites which go untouched because of their real or perceived contamination can be rehabilitated using the CDPHE Brownfields Program.
Government Publication Date: Mar 14, 2022

Tribal

Leaking Underground Storage Tanks (LUSTs) on Indian Lands: INDIAN LUST
LUSTs on Tribal/Indian Lands in Region 8, which includes Colorado.
Government Publication Date: Oct 12, 2021

Underground Storage Tanks (USTs) on Indian Lands: INDIAN UST
USTs on Tribal/Indian Lands in Region 8, which includes Colorado.
Government Publication Date: Oct 12, 2021

Delisted Tribal Leaking Storage Tanks: DELISTED ILST
Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.
Government Publication Date: Oct 12, 2021

Delisted Tribal Underground Storage Tanks: DELISTED IUST
Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.
Government Publication Date: Oct 13, 2021

County

No County databases were selected to be included in the search.

Additional Environmental Record Sources

Federal

Facility Registry Service/Facility Index: FINDS/FRS
The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the Environmental Protection Agency (US EPA).
Government Publication Date: Nov 2, 2020

Toxics Release Inventory (TRI) Program: TRIS
The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U. S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.
Government Publication Date: Aug 24, 2021

Perfluorinated Alkyl Substances (PFAS) Releases: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a Per- or polyfluorinated alkyl substance (PFAS) included in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances. The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Aug 24, 2021

PFOA/PFOS Contaminated Sites: PFAS NPL

List of sites where PFOA or PFOS contaminants have been found in drinking water or soil. Made available by the Federal Environmental Protection Agency (EPA).

Government Publication Date: Jan 11, 2022

Perfluorinated Alkyl Substances (PFAS) Water Quality: PFAS WATER

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances.

Government Publication Date: Jul 20, 2020

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents, and this is cited in the tracker. Disclaimer: The source conveys this database undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Limited location details are available with this data. Access the following for the most current informations https://pfasproject.com/pfas-contamination-site-tr acker/

Government Publication Date: Dec 12, 2019

Hazardous Materials Information Reporting System: HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Sep 1, 2020

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department") provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Nov 22, 2021

Toxic Substances Control Act: TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Apr 11, 2019

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.

Government Publication Date: Oct 20, 2021

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.

Government Publication Date: Oct 14, 2021

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) online search. The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: May 5, 2021

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: May 5, 2021

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. This list is published by the U.S. Army Corps of Engineers.

Government Publication Date: May 26, 2021

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

A list of flagged pipeline incidents made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types.

Government Publication Date: Jul 7, 2020

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: Nov 2, 2021

Surface Mining Control and Reclamation Act Sites: SMCRA

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of Abandoned Mine Land (AML) impacts, as well as information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Government Publication Date: Dec 18, 2020

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

Uranium Mill Tailings Radiation Control Act Sites: URANIUM

The Legacy Management Office of the Department of Energy (DOE) manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The L.M. Office manages this database of sites registered under the Uranium Mill Tailings Control Act (UMTRCA).

Government Publication Date: Mar 4, 2017

Alternative Fueling Stations: ALT FUELS

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Dec 21, 2021

Registered Pesticide Establishments: SSTS

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: Apr 13, 2021

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Jan 20, 2022

State

Spills: SPILLS

A list of hazardous material spills and releases (including Meth Labs) that were reported to the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Jan 31, 2022

Colorado Oil and Gas Conservation Commission Spills: OG SPILLS

A list of spills made available by the Colorado Oil and Gas Conservation Commission (COGCC).

Government Publication Date: Feb 6, 2022

Dry Cleaning Facilities: DRYCLEANERS

A list of drycleaning facilities in Colorado that have submitted an Air Pollutant Emission Notice (APEN). This list was provided by the Department of Public Health & Environment.

Government Publication Date: Jan 27, 2022

Delisted Dry Cleaning Facilities: DELISTED DRYCLEANERS

List of sites removed from the drycleaners database made available by the Department of Public Health & Environment.

Government Publication Date: Jan 27, 2022

Air Pollution Control Division Permitted Facilities: AIR PERMITS

This list of Air Pollution Control Division Permitted Facilities is maintained by the Colorado Department of Public Health and Environment. The Stationary Sources Program evaluates and develops air permits for stationary sources in Colorado. The program inspects sources to determine compliance with air regulations and permit conditions and maintains an inventory of air pollution emissions throughout the state.

Government Publication Date: Jun 29, 2020

Per- and Polyfluoroalkyl Substances (PFAS): PFAS

A list of incidents that were reported to the Colorado Department of Public Health and Environment (CDPHE) where the release material is in the PFAS Master List of PFAS Substances made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Jan 31, 2022

Asbestos Abatement and Demolition Projects: ASBESTOS

A list of Asbestos Abatement and Demolition Projects made available by the Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division.

Government Publication Date: Dec 28, 2017

Hazardous Waste Sites- Generator: HAZ GEN

A list of hazardous waste generators.This list is made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Jun 30, 2003

Permitted Facilities Listing: NPDES

A list of permitted facilities tracked by the Water Quality Control Division of the Department of Public Health & Environment (DPHE). This list is the state version of the NPDES (National Pollution Discharge Elimination System).

Government Publication Date: Mar 1, 2022

Hazardous Waste Sites- Treatment, Storage & Disposal: HAZ TSD

A list of facilities that treat, store, dispose, or recycle hazardous waste on-site. This list is made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Jun 30, 2003

Hazardous Waste Sites- Corrective Action: HAZ CORRACT

A list of hazardous waste generators with corrective actions. This list is made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Jun 30, 2003

Uranium Mill Tailings Sites: UMTRA

There were nine uranium mill tailings sites in Colorado designated for cleanup under the Federal Uranium Mill Tailings Radiation Control Act (UMTRA). These nine sites, know commonly as UMTRA sites, were remediated jointly by the State of Colorado and the U.S. Department of Energy during the late 1980's and early 1990's. Mill tailings were removed from 8 of the mill sites and relocated in engineered disposal cells. A disposal cell is designed to encapsulate the material, reduce radon emanation, and prevent the movement of water through the material. At one site, Maybell, CO, the tailings were stabilized in-place at the mill site. After remediation of the tailings was completed, the State and DOE began to investigate the residual impacts to groundwater at the mill sites. The groundwater phase of the UMTRA program is on-going. This database was provided by the Colorado Department of Public Health and Environment in 2008.

Government Publication Date: Feb 12, 2019

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental databases were selected to be included in the search.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX G

RESUMES

Resume

DANA HARRIS
Environmental Department Manager

EDUCATION

B.A. Environmental Science
University of Virginia, 1992

TRAINING & CERTIFICATIONS

Certified Asbestos Inspector
Certified Asbestos Air Monitoring Specialist
Certified Asbestos Project Designer
NIOSH 582E Accreditation
CDOT Certified Erosion Control Supervisor

PROFESSIONAL SUMMARY

Mr. Harris joined CTL|Thompson in 2012 with 20 years of experience in environmental consulting. As the Environmental Department Manager in our Fort Collins office, his responsibilities include project management and consultation on all environmental-related issues. He comes with an extensive experience background, including experience in Phase I and Phase II Environmental Site Assessments, Brownfield redevelopments and voluntary cleanup programs, asbestos, mold, and environmental regulatory compliance and permitting.

He manages environmental projects including inspections, planning, design, and remediation oversight. He is also experienced in environmental assessments, indoor air quality, risk assessments, underground storage tank investigations, spill assessments, and soil and groundwater remediation. He provides technical training to clients for compliance with USEPA, OSHA, DOT, and State regulations.

PROJECT EXPERIENCE

309-Acre Redevelopment Project, Hudson, Colorado
Project manager and senior technical staff member for Phase I Environmental Assessment (ESA) of former agricultural dump site. Developed and implemented scope of work for Phase II ESA of dump locations. Managed cleanup of dump areas and provided oversite for remediation of asbestos in soils in conformance with Colorado regulations.

Boulder County Justice Center, Boulder, Colorado
Severed as asbestos project manager for asbestos abatement project at Boulder County Justice Center. Also, provided air monitoring specialist (AMS) services, including daily perimeter air monitoring and clearances, and managed team of five certified AMSs. Prepared Operations & Maintenance (O&M) Plan for building. Provided 2-hour asbestos awareness training and 16-hour asbestos O&M training to Boulder County maintenance and custodial staff.

Loveland High School, Loveland, Colorado
Provided AMS services during asbestos abatement of high school undergoing renovation. Performed daily perimeter air monitoring, analyzed PCM air samples on-site by NIOSH Method 7400. Performed clearances.

Resume

DANA HARRIS
Environmental Department Manager

Phase I ESAs, Worldwide

Performed and managed more than 1,000 Phase I ESAs using ASTM Standard E1527 in Colorado, in various locations throughout the United States, and in Europe. Experienced with various industrial processes, including auto repair and body shops, dry cleaners, industrial degreasing, metal plating, and numerous other processes.

Phase II ESAs, Throughout U.S.

Designed, managed, and/or performed more than 100 Phase II ESAs, typically as a follow-up from a Phase I ESA. Familiar with auger, rotary, and direct-push drilling technologies; soil sampling from cores, split spoons, and cuttings; volatile soil sampling using Encore samplers; groundwater sampling using bladder pumps (for minimal volatile loss), submersible pumps, and disposable bailing devices in open-boreholes, temporary monitoring wells, and permanent monitoring wells; well development and elevation surveying; rising/falling head testing; surface water sampling; sludge and sediment sampling; surface wipe sampling; hazardous waste characterization sampling; geophysical survey methods, including ground penetrating radar (GPR), magnetometry, and MASW seismic; test excavations; and various laboratory methodology, including, but not limited to, EPA Methods 8260, 8270, 8080, 8081, 8151, 9071, 1664, and 6010/7000. Familiar with Colorado Department of Public Health & Environment (CDPHE) and Colorado Division of Oil and Public Safety (OPS) regulations and standards for petroleum hydrocarbon and other types of environmental contamination, as well as EPA Regional Screening Levels (RSLs) for various contaminants.

Asbestos Services

Managed and performed more than 100 asbestos surveys of K-12 schools, higher education facilities, residential properties, and commercial and industrial buildings. Prepared asbestos abatement bid documents, assisted with pre-bid meetings, answering technical questions for bidding purposes, and assisted clients in evaluating bids and selecting abatement contractors. Provided asbestos abatement project management for large abatement projects. Performed contractor observations during abatement, collected and analyzed ambient air samples, and provided final clearance services. Performed 3-year asbestos re-inspections of K-12 schools. Prepared O&M Plans. Provided 2-hour asbestos awareness training and 16-hour asbestos O&M training to school and non-school personnel. Additional major projects completed include Laramie High School (comprehensive pre-demo abatement project); several schools for Boulder Valley School District; abatement projects at Platte Valley Elementary and Revere School, Sedgwick County, Colorado; surveys, design, and abatement services for various school facilities for Aurora Public Schools, Eagle Schools, Grand County Schools, Walden Schools, Weldon Valley Schools, Wray Schools, and the Northeast Colorado Boards of Cooperative Educational Services (BOCES) in Colorado; abatement projects at various higher education facilities at Colorado State University, University of Colorado, Colorado State University at Pueblo, and AIMS Community College; 3-year re-inspections of all Thompson School District facilities; pre-demolition abatement at JC Penney at the Fort Collins Foothills Mall; and abatement during major renovations at Washington Dulles International Airport.

Stormwater

Managed and performed industrial and construction stormwater compliance projects, including permitting, preparation of stormwater pollution prevention plans, and field inspections of erosion control and sedimentation control best management practices (BMPs). Experience with large and small construction sites, industrial sites, and oil and gas facilities.

Spill Prevention Control and Countermeasures (SPCC)

Managed and performed SPCCs for storage yards, data companies, oil and gas facilities, dairy facilities, and general non-production facilities with regulated oil storage. Prepared contingency plans and substantial harm/facility response plan evaluations for special facilities (operations over water and/or greater than 1,000,000 gallons of storage).