ERO

Consultants in Natural Resources and the Environment

Supplemental Source Area Characterization Plan
Thornton Shopping Center
East 88th Avenue and Washington Street
Thornton, Colorado

EPA ID COR000212639
Compliance Order on Consent Number: 24-02-01-01

Prepared for—

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August 5, 2024

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1.0 Introduction

This Supplemental Source Area Characterization Plan (SSACP) is submitted on behalf of the Thornton Development Authority (TDA), consistent with ERO's May 2024 Remedial Investigation and Corrective Measures Work Plan (Work Plan) (ERO 2024), approved by the Colorado Department of Public Health and Environment (CDPHE) through the Hazardous Material and Waste Management Division (Division) on July 3, 2024. The submittal of this SSACP is consistent with Paragraph 23 of the Compliance Order on Consent (Consent Order) Number 24-02-01-01 between the TDA and the Division. The Consent Order outlines the compliance and schedule requirements for the remediation of the 15.86-acre Thornton Shopping Center, located at the northeast corner of East 88th Avenue and Washington Street in Thornton, Colorado. Within this SSACP, "TSC Property" refers to the Thornton Shopping Center real property as shown on the attached figures, whereas "Site" refers to the extent of known impacts to the TSC Property as well as off-site areas associated with the historical release of tetrachloroethene (PCE) on the TSC Property. The TSC Property is shown on Figure 1.

The purpose of this SSACP is to detail the proposed additional source area soil characterization of the primary known PCE release area. The data from this assessment will be used to develop a source-area remedial plan, anticipated to primarily consist of excavation, with additional treatment of deeper soil contamination. Between 2004 and 2022, more than 420 soil samples were collected on the TSC Property as part of characterization activities, all of which were collected with the former building in place. The proposed characterization within this SSACP will be conducted without the building and primarily target areas that were previously inaccessible within and adjacent to the primary source area at 8866 North Washington Street, as well as a suspected secondary PCE release area at the former dry cleaners at 8946 North Washington Street. In addition, areas of the sanitary sewer system on and off the TSC Property will be evaluated for potential release points.

1.1 Location and Physical Setting

The TSC Property is located at the northeast corner of East 88th Avenue and North Washington Street in Thornton, Colorado, generally in the SW 1/4 of Section 23, Township 2 South, Range 68 West of the 6th Principal Meridian. The TSC Property elevation is approximately 5,300 feet above mean sea level (AMSL)

at the former shopping center building location. The land area is generally flat within the on-site areas of the TSC Property, with the off-site areas having a topographic slope downward to the northeast, north of the former shopping center building, and to the southeast, south of the shopping center building.

The TSC Property is zoned for commercial land use. The building demolition was completed by July 2024; the original asphalt parking lot and concrete building foundations remain. The TSC Property is bounded on the north by commercial land development; to the east by Corona Street followed by single and multi-family residential development; to the south by East 88th Avenue and commercial development, with multi-family and single-family development to the southeast – within unincorporated areas of Adams County; and by North Washington Street and commercial development to the west.

Historical records indicate the TSC Property was primarily used for agricultural land use until it was first developed with a commercial shopping center in the early 1960s. The TSC Property buildings were constructed between 1964 and 1979 and were used for retail businesses, including multiple dry cleaners, an automotive parts and repair facility, a laundromat, a gasoline station, restaurants, and other retail stores until vacated in 2023. Historical records indicate three dry cleaners are known to have operated on the TSC Property since the 1960s at the addresses of 8866, 8876, and 8946 North Washington Street (ERO 2022). No dry cleaners currently operate on the TSC Property and all buildings have been removed.

2.0 Supplemental Source Area Characterization

Although previous site characterization has identified areas of significant PCE contaminant mass, all prior investigations occurred with the former building in place and active occupancy, thereby limiting the accessibility and depth of investigation. With the former buildings removed, additional source area assessment can be performed without the restrictions previously imposed by the building and tenants. The anticipated source area remedial strategy is anticipated to be excavation and off-site disposal of highly-contaminated soils within the source area of 8866 North Washington Street. Prior to the design of an excavation, source area characterization must address those areas that were previously limited by the former building. In general, this investigation is intended to:

- Identify the lateral and vertical extents of PCE-contaminated bedrock/soil to be excavated;
- Provide data to pre-characterize wastes for waste treatment and disposal; and
- Identify the volume of uncontaminated overburden that can be used as backfill.

As described below, up to forty shallow soil borings will be drilled to target depths of about 23 feet below ground surface (bgs) on approximate 20-foot centers within and surrounding the source area (Figure 2). Five additional, deep soil borings are described below, the locations of which are pending the results of the shallow investigation.

2.1 Shallow Soil Borings

Shallow soil borings will be drilled using direct-push technology (DPT) to drill to bedrock refusal, anticipated to be 23 feet bgs. During drilling, continuous samplers will be used to obtain a 4- or 5-foot-

long continuous core of the subsurface at each location (actual length of core will be determined by drilling equipment). Upon completion of each 4- or 5-foot interval, the sampler will be removed, leaving the outer drill rods in the boring. The sampler will then be opened, revealing the soil core, which will be logged by a qualified geologist for lithology, staining, and olfactory indications of contamination, and screened with a photoionization detector (PID) with a 10.6-electronvolt lamp capable of detecting VOCs. A new polybutyl sample sleeve will then be inserted into the lead rod and the process repeated until mechanical refusal.

During drilling, soil samples will be collected from specific intervals, depending on the purpose of the boring:

Perimeter Borings – The purpose of these borings is to define the lateral extent of soil contamination to delineate the extent of excavation design. During drilling, discrete soil samples will be collected from the location within each 5-foot core with the highest PID reading and/or any observed staining or olfactory indication of suspected contamination. If no indications of suspected contamination are present, a sample will be collected from the mid-point of the soil core. In addition, one soil sample will be collected from the base of the boring. All samples will be collected directly from the soil core as it is removed from the sampler during drilling, packed into laboratory-provided, glass sample jars, labeled, and placed on ice for transport to the laboratory for analysis of VOCs associated with dry cleaners (tetrachloroethene [PCE], trichloroethene [TCE], cis-1,2-dichloroethene [cis-1,2-DCE], trans-1,2-dichloroethene [trans-1,2-DCE], 1,1-dichloroethene [1,1-DCE], and vinyl chloride [VC]) by EPA Method 8260B. As shown on Figure 2, up to twenty-two perimeter borings are proposed.

Interior Borings – Half of the proposed borings within the perimeter borings described above will be used to characterize soils within the excavation area to understand the current level of site contamination and potential transport pathways, including former sewer lines. Soil sampling will follow the same protocol as the perimeter borings described above. As shown on Figure 2, up to nine interior borings are proposed.

Waste Characterization Borings – The remaining borings within the perimeter will be used to collect waste characterization data from the subsurface soils. At each location, a 5-foot interval will be composited and homogenized and a single sample collected from the composited soils, representing each 5-foot interval. Composite samples will be packed into laboratory-provided, glass sample jars, labeled, and placed on ice for transport to the laboratory for analysis of total VOCs by EPA Method 8260B. Should total PCE concentrations exceed 14 milligrams per kilogram (mg/kg), the sample will also be analyzed for VOCs by the Toxicity Characteristic Leaching Procedure (TCLP). In addition, a single, discrete soil sample will be collected at the base of each boring to be analyzed for dry cleaning VOCs by EPA Method 8260B. As shown on Figure 2, up to nine waste characterization borings are proposed.

2.2 Deep Soil Borings

Additional assessment is needed to fully delineate the deep PCE source mass for evaluation and design of treatment alternatives. Based on the sample results from the shallow assessment described above, areas where PCE likely extends deeper than the estimated 23 feet bgs will be delineated and depicted on a deeper assessment drilling plan. Five borings will be located within these area(s) and drilled using a

hollow-stem auger drill rig. Continuous coring of the subsurface will be used to collect soil samples at 5-foot intervals between 25 to 60 feet bgs. Areas of high PID readings, visual or olfactory indications of suspected contamination will be used to determine sample locations within each 5-foot core. Should continuous coring not be achievable, one sample will be collected from each 2-foot split spoon advanced ahead of the drill augers at 5-foot intervals during drilling. Samples will be logged for lithology and field-screened with a PID in the same manner as the shallow assessment. Three soil samples from across the borings will also be collected and analyzed for fraction of organic carbon.

2.3 Quality Assurance/Quality Control

Quality assurance and quality control (QA/QC) will be conducted in accordance with CDPHE requirements. In general, the following procedures will be included in the monitoring activities:

- Standardized field sheets will be used to track all field activities;
- Trip blanks will be included in each sample shipment container;
- One field duplicate will be collected for the same laboratory analysis as the primary sample at a ratio of 1 field duplicate per 20 primary samples;

QA/QC information will be included within the final SSACP report.

3.0 8946 North Washington Street Assessment

3.1 Background

A dry cleaner operated at 8946 North Washington Street within this unit since at least 1980 (ERO 2022). No interior assessment of the operations as a potential secondary source has been conducted with the exception of exterior groundwater monitoring wells MW-03, MW-04, and MW-08, all of which have reported PCE groundwater concentrations (Figure 3). Without the building in place, this assessment will consist of drilling additional soil borings within the footprint of the building to evaluate subsurface soils for indications of a historical release.

3.2 Proposed Soil Boring Locations

The proposed soil borings will be located on each side of the most recent known location of the former dry cleaning machine (Figure 3). In addition, two additional borings will be drilled in the westerly portion of the former dry cleaning area where several sheared off bolts potentially associated with a previous machine are visible, one in the northeast corner at a location of a drum stain, and one outside the rear door of the facility.

Soil borings will be drilled using DPT to drill to bedrock refusal. During drilling, continuous soil cores will be used to obtain a 5-foot-long continuous core of the subsurface at each location. Upon completion of each 5-foot interval, the sampler will be removed, leaving the outer drill rods in the boring. The sampler will then be opened, revealing the soil core, which will be logged by a qualified geologist for lithology, staining, and olfactory indications of contamination, and screened with a photoionization detector (PID) with a 10.6-electronvolt lamp capable of detecting VOCs. A new polybutyl sample sleeve will then be

inserted into the lead rod and the process repeated until mechanical refusal, anticipated to be encountered about 23 feet bgs.

During drilling, soil samples will be collected from the interval with the highest PID reading and/or location of any observed staining or olfactory indication of suspected contamination. In addition, soil samples will be collected from the approximate water table, if able to be determined in the field, or mid-depth of the boring, as well as at the base of each boring. A total of up to three soil samples may be collected from each boring. Soil samples will be collected directly from the core as it is removed from the sampler during drilling, packed into laboratory-provided, glass sample jars, labeled, and placed on ice for transport to the laboratory for analysis of VOCs associated with dry cleaners by EPA Method 8260B.

Upon reaching the total depth of drilling, a temporary groundwater monitoring well will be installed in the two easterly borings from each former (or suspected) machine areas. The wells will consist of 15 feet of new, factory-slotted (0.010-inch), 1-inch-diameter polyvinyl chloride (PVC) well screen across the water table with plain casing to the surface. Total depth of the wells is anticipated to be 23 feet bgs, with the well screen interval designed to cross the water table. A filter pack consisting of clean silica sand will be placed in the borehole to a depth of 2 feet above the well screen. The annular space in the borehole will be sealed above the sand pack with a hydrated bentonite seal. The wells will be completed with a traffic-rated cover.

Within two weeks of completion, the monitoring wells will be developed by purging the wells with 1-inch polyethylene disposable bailers of at least five well casing volumes from each well. The wells will then be sampled within 2 weeks using the same low-flow method used for site-wide groundwater sampling, as described in the Long Term Groundwater Monitoring Plan (LTGMP; ERO 2024b). Boring and temporary well locations will be surveyed to the project datum to incorporate into the larger project database.

4.0 Deep Groundwater Characterization

The workplan for deep groundwater characterization was outlined in ERO's LTGMP (ERO 2024b). Results from that program will be incorporated into this plan and vice versa.

5.0 Sanitary Sewer Line Assessment

Historical sanitary sewer lines present potential release points for sites with known historical use of hazardous materials with known releases. The sanitary sewer lines for the site are identified on the publicly-available City of Thornton Infrastructure Utility Network Mapping (Thornton 2024), generally summarized below, and illustrated on the referenced figures.

8866 Washington Street – The sanitary sewer line for the source area facility exited out the south of the 8866 North Washington Street unit and intersects with the main line for the entire facility south of the unit (Figure 2). Drainage within the line was to the east, then north under the building, and eventually easterly off the TSC Property down the alley between Oak Place and East 89th Avenue.

8946 Washington Street – The sanitary line for this facility exited out the rear/east door of the facility and connected to the main line southeasterly of the unit building. As noted above, the main line continued easterly down the alley between Oak Place and East 89th Avenue (Figure 4).

Prior to building demolition and after all water to the TSC Property had been turned off, the sanitary sewer line for the TSC property was cut and abandoned west of manhole G06018 within the driveway off Corona Street (Figure 4). No active sewer remains for the TSC Property.

5.1 Sewer Line Scoping and Assessment – On-Site

The City of Thornton Utilities Department has historically scoped accessible portions of the sanitary sewer line as part of utility maintenance activities. Additional scoping was conducted in the fall of 2023, prior to the start of demolition activities. Because of the age of the sewer line, the lack of any future use, lack of on-site water or sewer connection, and high potential for multiple release points along the sewer line, no additional on-site sewer scoping is proposed.

In lieu of on-site sewer scoping/assessment, the sanitary sewer line between manholes G06009 and G06018 is planned for removal as part of site remedial excavation activities (Figure 4). The sewer line will be excavated, sewer utility trenching and surrounding soils will be inspected for indications of release, and representative soil samples along the corridor will be collected to document conditions. Further details of the on-site sewer excavation will be provided in source area excavation workplan(s).

5.2 Sewer Line Scoping and Assessment – Off-Site

The sanitary sewer line easterly of manhole G06018 and Corona Street is currently listed as an 8-inch PVC line with notations that the line was part of the original sanitary sewer line and was replaced in 1987 (City of Thornton 2024).

5.2.1 Off-Site Sewer Line Scoping

Because the current sewer line was constructed in 1987 of PVC, it is unlikely to have been a historical release point for any discharges from the TSC Property. To confirm the integrity of the line, TDA will work with the City of Thornton Public Works, or a private entity, to obtain a recent or conduct a new sewer line scoping of the off-site sanitary line between sections G06018-H06012 and if possible, extend

to manhole H06010 to the east (Figure 5). Any indications of breaches or breaks in the line will be noted, located and assessed to determine if additional investigation is warranted. In addition, an evaluation of the off-site sanitary sewer as a potential release point will be assessed as part of the off-site groundwater plume delineation within the LTGMP (ERO 2024b).

6.0 Investigation-Derived Waste (IDW) Management

6.1.1 Solid IDW Accumulation

Any soils potentially in contact with groundwater or sewer line releases generated during the drilling and installation of soil borings or groundwater monitoring wells will be considered hazardous environmental media for chlorinated solvents and will be managed in accordance with the Colorado Hazardous Waste Regulations (CHWR) until or unless deemed not to contain a hazardous waste in accordance with the CPDHE Contained-Out Determination Procedure (CDPHE 2002). Soils above the sewer line elevation (within sewer line assessments) are not suspected to have been in contact with waste solvents, potentially-contaminated sewer releases, or groundwater and will be presumed to be non-hazardous, unless field evaluation indicates otherwise. During drilling, soils will be containerized at the point of generation, typically within DOT-rated 55-gallon steel drums or suitably lined, covered roll-off containers. In addition to labeling requirements under the CHWR, containers shall be labeled with the well location, soil interval depths, and date of initial generation as well as assigned a container inventory number for the project waste database. Containers will be moved at the end of each day of drilling to the central waste accumulation area and stored in the secured TSC Property.

To characterize waste soils generated during drilling activities, representative soil samples will be collected from sets of waste streams (sewer line assessment; source area borings). Samples from multiple drums representing the same boring/interval will be composited into one sample. Should multiple borings be containerized into one drum, a multi-layered, 3-point composite sample will be collected from each such container for waste characterization. Waste characterization samples will be submitted under chain of custody protocols for VOC analysis by EPA Method 8260B and any additional analysis if required by waste disposal facilities. Prior to management of the soils, should laboratory results permit, a contained-out determination request will be submitted to CDPHE for approval, otherwise solid IDW will be managed as hazardous wastes in accordance with CHWR.

6.2 Liquid IDW Management

6.2.1 Liquid IDW Accumulation

Any groundwater and decontamination water generated during the implementation of this workplan shall be considered hazardous waste and managed in accordance with the CHWR unless the waste is deemed to not contain a hazardous waste and can be managed as a solid waste. Decontamination water without detergents will be collected and containerized as liquid IDW. Decontamination waters that contain detergents will be containerized separately from those without detergents. Decontamination waters will be placed in DOT-rated, new 55-gallon steel drums staged within a secondary containment storage area. The drums shall be in good condition, kept closed following

generation, labeled appropriately, and be stored in accordance with CHWR until management and/or disposal.

6.2.2 Liquid IDW Treatment

Liquid IDW generated during the implementation of this workplan shall be managed in accordance with the CHWR. Specifically, liquid IDW will be managed in accordance with ERO's October 2, 2023 Request for Treatment by Rule for On-site Generator Hazardous Environmental Media IDW Treatment (ERO 2023) approved by CDPHE on October 13, 2023 outlines the treatment protocols for the on-site treatment of liquid IDW.

6.3 Waste Tracking

An inventory of all drums or containers used for IDW storage, management and ultimately shipped for disposal shall be tracked within a database.

Completed waste manifests from all waste disposal events will be included within the SSACP report or addendum, pending timing of any disposal events.

7.0 Reporting

The SSACP results will be submitted to the Division before source area excavation is designed and include a narrative of site activities, all site data generated, maps depicting new and historical soil and bedrock data, sewer line exploratory results, and proposed design of source area removal. Should the SSACP data indicate that additional characterization within or outside the initial scope of the SSCAP is necessary, recommendations and/or proposals for additional assessment will be included.

8.0 References

City of Thornton. 2024. City Infrastructure Utility Mapping Application. https://cityofthornton.maps.arcgis.com/apps/webappviewer/index.html?id=8f914542829f47aab20d89778a4c4284

Colorado Department of Public Health and Environment (CDPHE), Hazardous Materials and Waste Management Division (HMWMD). 2002. Appendix 2 – Contained-Out Determination procedure for Environmental Media Contaminated with RCRA Hazardous Waste. May.

Colorado Department of Public Health and Environment (CDPHE). 2024. Approval – Remedial Investigation and Corrective Measures Work Plan; Thornton Shopping Center, NE Corner East 88th Avenue and Washington Street, Thornton , CO 80229; EPA ID# COR000212639. July 3.

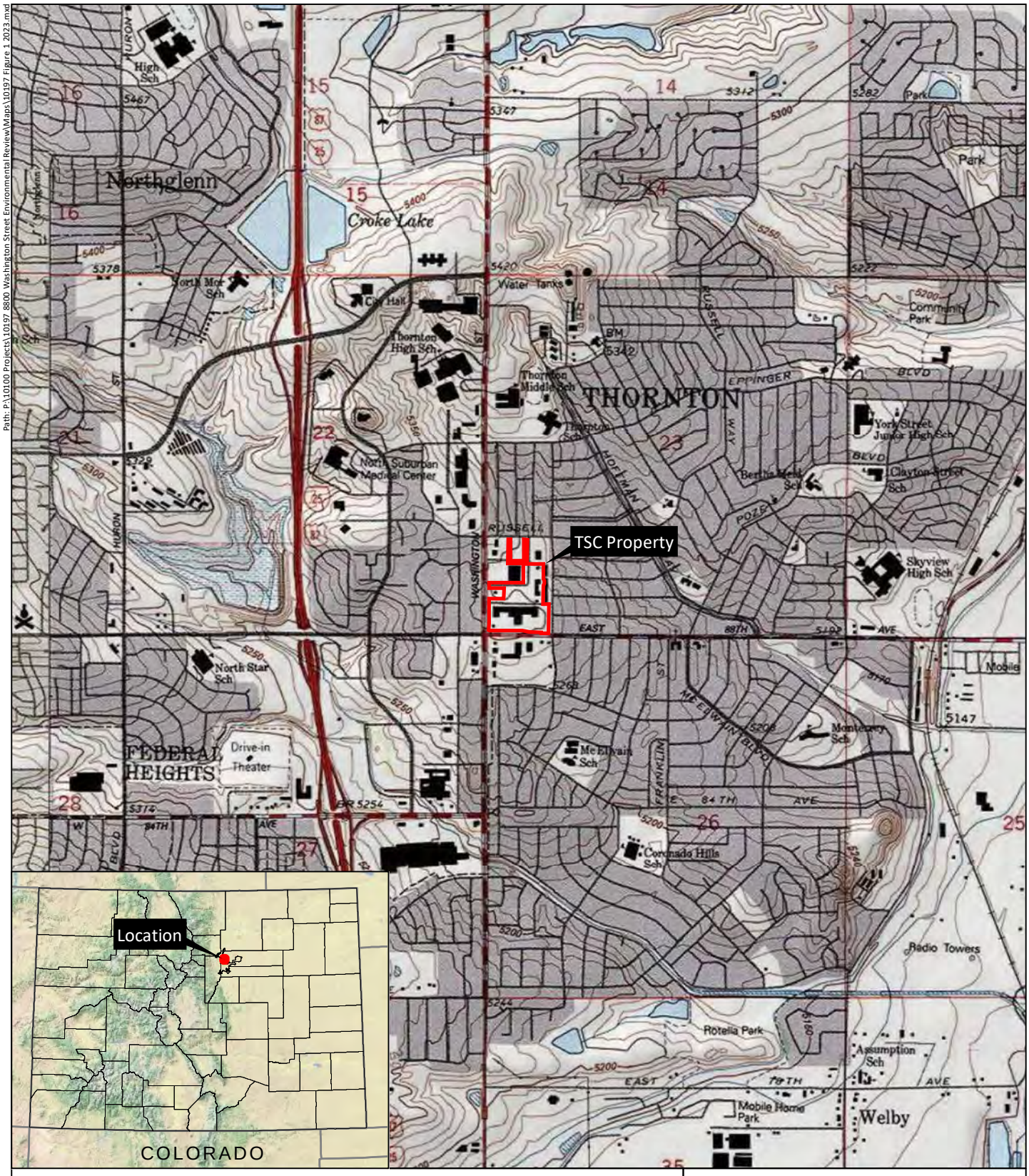
ERO Resources Corporation (ERO). 2022. Phase I Environmental Site Assessment - Thornton Shopping Center, NE of North Washington Street at East 88th Avenue, Thornton, Colorado. November 11.

ERO Resources Corporation (ERO). 2023 Request for Treatment by Rule for On-site Generator Hazardous Environmental Media IDW Treatment, Thornton Shopping Center. October 2.

ERO Resources Corporation (ERO). 2024a. Remedial Investigation and Corrective Measures Work Plan, Compliance Order on Consent Number: 24-02-01-01, Thornton Shopping Center, East 88th Avenue and Washington Street, Thornton, CO 80229. May.

ERO Resources Corporation (ERO). 2024b. Long Term Groundwater Monitoring Plan, Compliance Order on Consent Number: 24-02-01-01, Thornton Shopping Center, East 88th Avenue and Washington Street, Thornton, CO 80229. July 18.

Appendix A Figures



Thornton Shopping Center

Section 23, T2S, R68W; 6th PM

UTM NAD 83: Zone 13N; 502054mE, 4411959mN

Longitude 104.975982°W, Latitude 39.857657°N

USGS Commerce City, CO Quadrangle

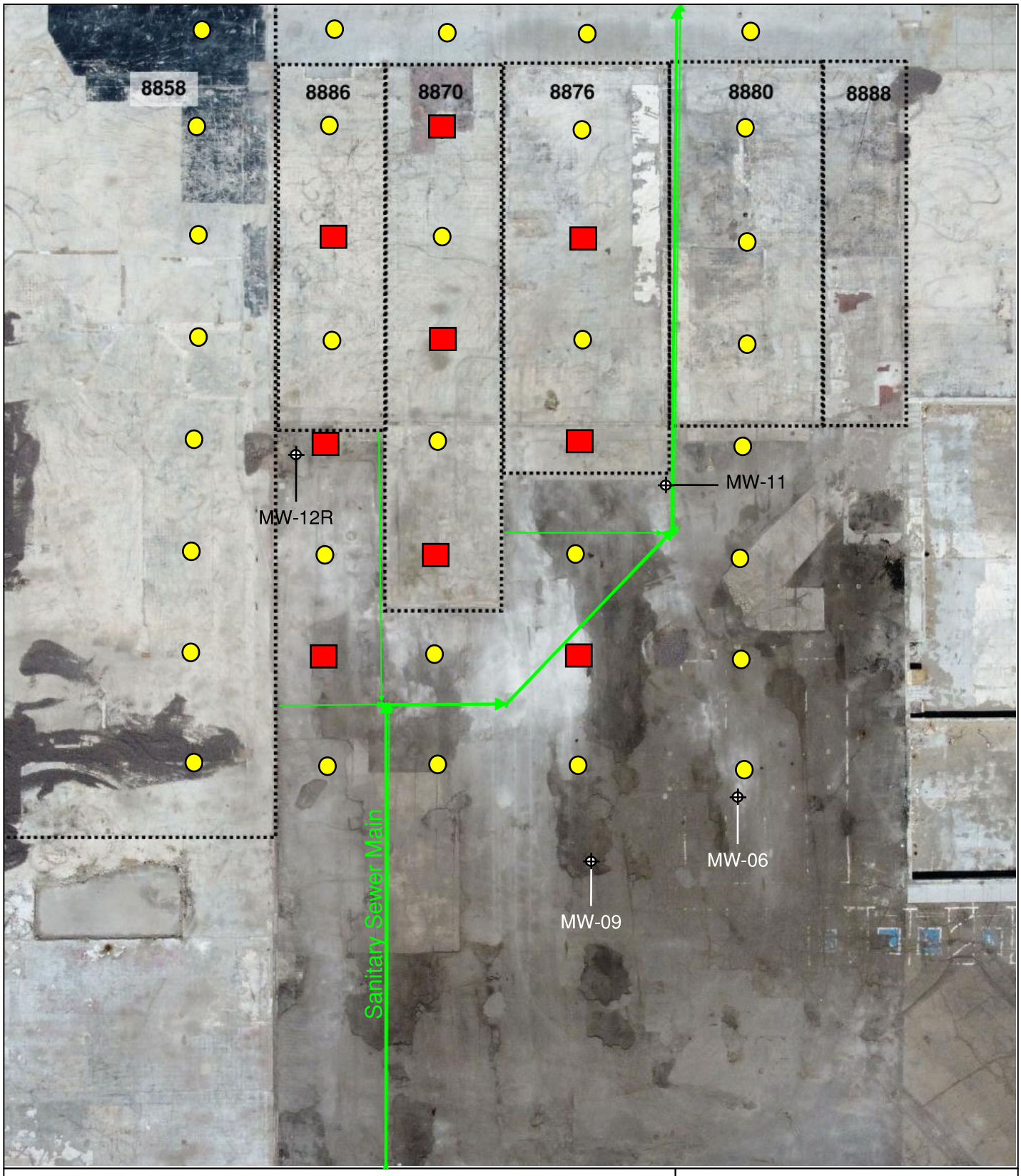
Adams County, Colorado

0 1,000 2,000 feet

N

Attachment 1
Site Map

ERO
ERO Resources Corp.



Thornton Shopping Center - Units 8858 to 8888 North Washington Street

Perimeter and Interior Borings - Discrete samples

Waste Characterization Borings - Composite Samples

Sanitary Sewer Service

Sanitary Main Line

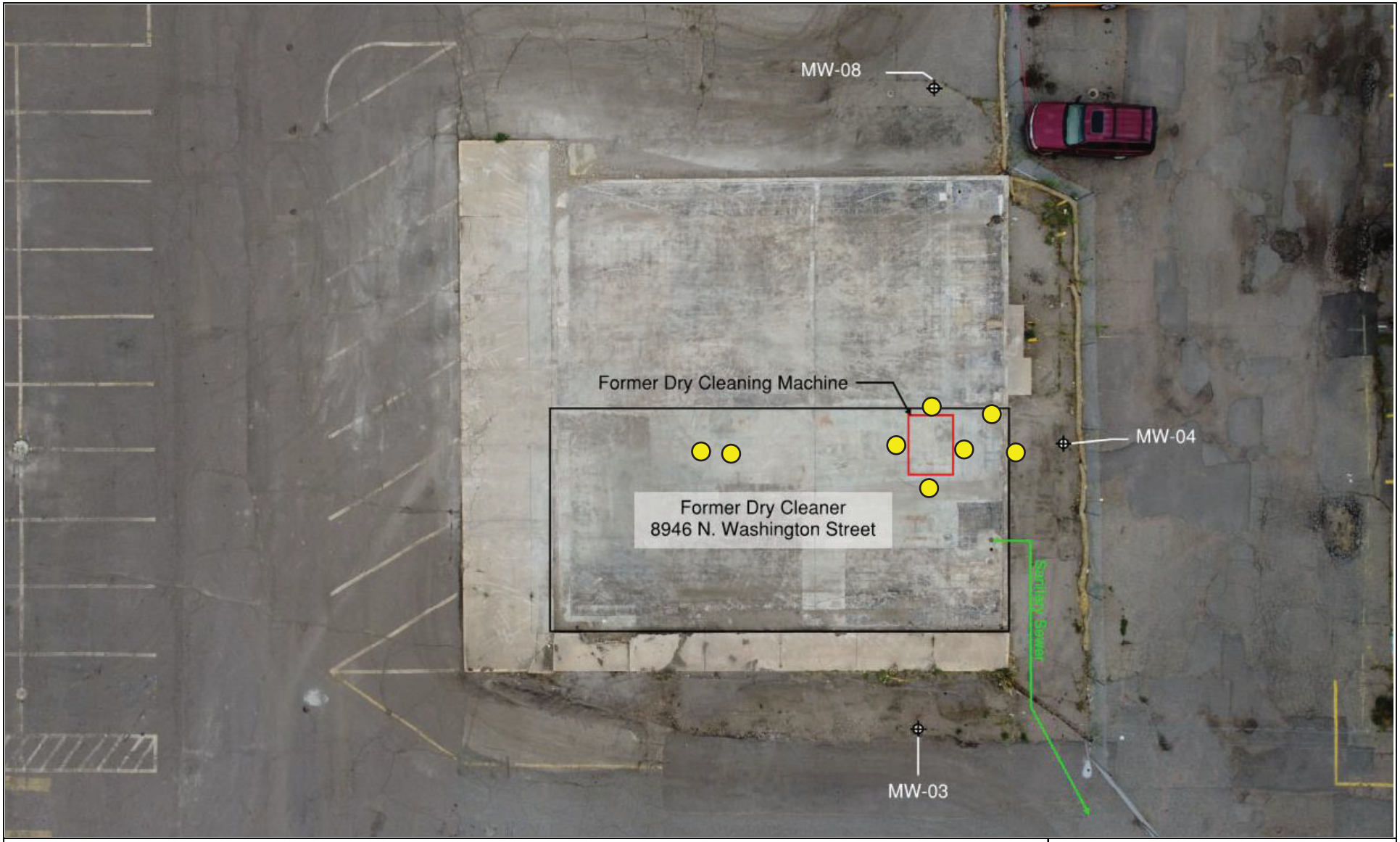
0 15 30 feet

N

Figure 2
Source Area
Characterization Plan

ERO Resources Corp.

Source: Project aerial photography July 2024



8946 North Washington Assessment Area

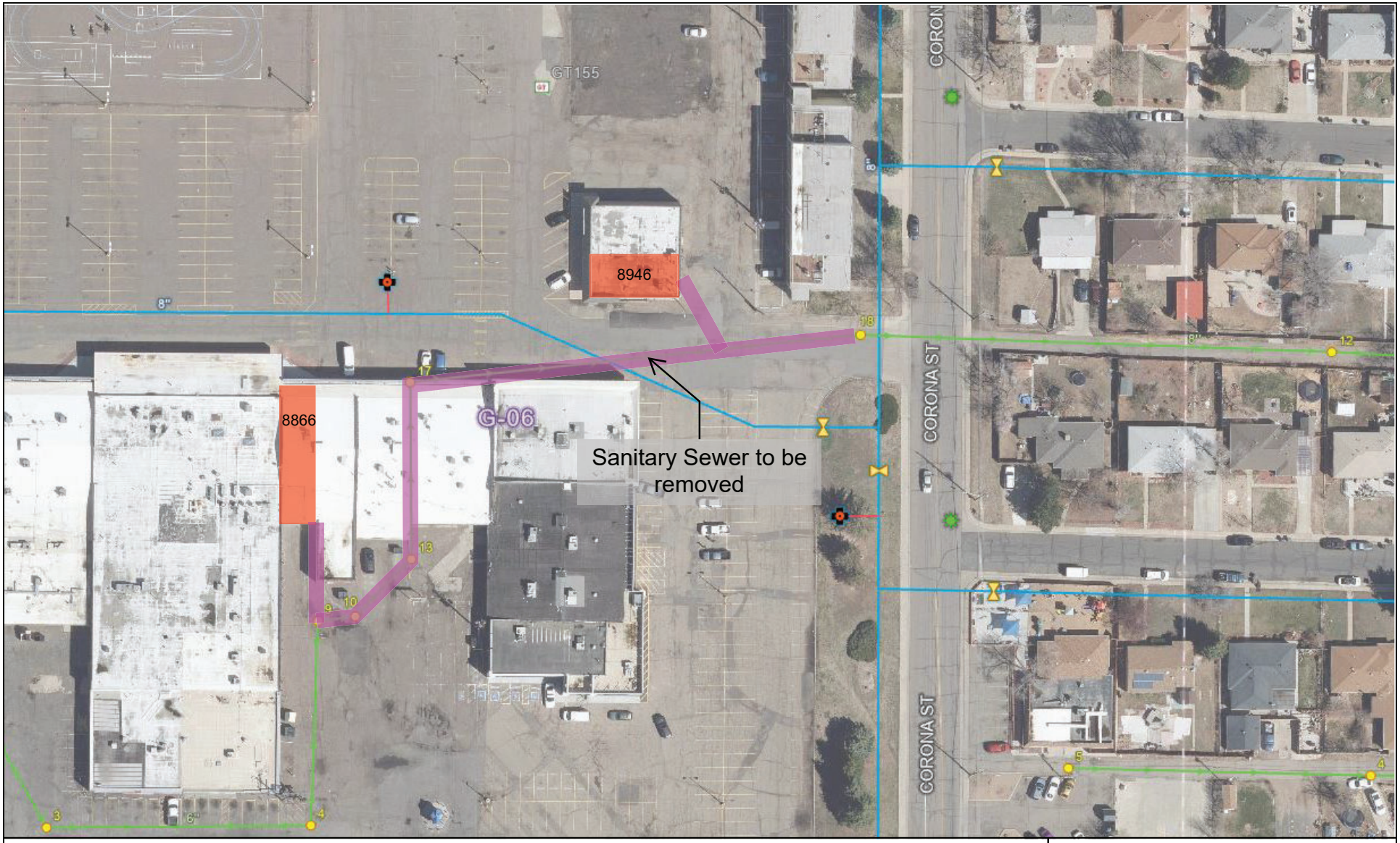
Proposed Soil Boring

0 10 20 feet

N

Figure 3
8946 North Washington
Assessment Detail

ERO
ERO Resources Corp.



On-Site Sanitary Sewer Removals - Thornton Shopping Center

On-site sanitary sewer to be removed during source area excavation

0 50 100 feet

N

Figure 4
Sanitary Sewer Removals

ERO Resources Corp.

Source: City of Thornton Infrastructure Mapping

Thornton Shopping Center - Off-Site Sanitary Sewer Scoping

Figure 5
Off-Site
Sanitary Sewer Scoping

ERO Resources Corp.

Source: City of Thornton Infrastructure Mapping

Appendix B Historical TSC Property Soil Samples

Table B-1. Historical TSC Property soil samples.

Boring ID	Date	Company	Depth (feet bgs)	PCE (ug/Kg)
GSB-1	7/11/2006	FREEDOM	13	18
GSB-10	9/15/2006	FREEDOM	14	<0.5
GSB-11	9/15/2006	FREEDOM	13	<0.5
GSB-12	9/15/2006	FREEDOM	15	<0.5
GSB-13	9/15/2006	FREEDOM	14	<0.5
GSB-2	7/11/2006	FREEDOM	10	30
GSB-3	7/11/2006	FREEDOM	8	11000
GSB-3	7/11/2006	FREEDOM	9	3800
GSB-3	7/11/2006	FREEDOM	13	690
GSB-4	7/11/2006	FREEDOM	9	870
GSB-4	7/11/2006	FREEDOM	12	930
GSB-5	9/14/2006	FREEDOM	9	300
GSB-7	9/14/2006	FREEDOM	11	180
GSB-7	9/14/2006	FREEDOM	17	3700
GSB-8	9/14/2006	FREEDOM	14	0.1
GSB-9	9/14/2006	FREEDOM	9	40000
GSB-9	9/14/2006	FREEDOM	14	2200000
HA-1	6/6/2006	FREEDOM	2.5	<0.5
HA-2	6/6/2006	FREEDOM	3	8.2
MW-11	3/6/2006	FREEDOM	15	460
MW-11	3/6/2006	FREEDOM	17	8000
MW-12	3/7/2006	FREEDOM	15	<0.5
MW-22	10/24/2016	LTE	25.5	22
MW-22	10/24/2016	LTE	31	8.8
MW-22	10/24/2016	LTE	36.5	6.1
MW-22	10/24/2016	LTE	37.5	19
MW-22	10/24/2016	LTE	41	3.1
MW-22	10/24/2016	LTE	45.3	542
MW-22	10/24/2016	LTE	51.5	5320
MW-22	10/24/2016	LTE	53	249
MW-22	10/24/2016	LTE	55	271
MW-22	10/24/2016	LTE	60	39
MW-22	10/24/2016	LTE	66.5	0.6
MW-22	10/24/2016	LTE	68.5	6.9
MW-22	10/24/2016	LTE	73	3.6
MW-23	10/26/2016	LTE	30	6.1
MW-23	10/26/2016	LTE	33.5	42
MW-23	10/26/2016	LTE	40	54
MW-23	10/26/2016	LTE	46	2.1
MW-23	10/26/2016	LTE	52	20
MW-2-4	9/28/2005	FREEDOM	20	9.4
MW-26	3/8/2019	RETTEW	25	1.29
MW-26	3/8/2019	RETTEW	55	2.5
MW-27	3/29/2019	RETTEW	20	2.5
MW-28	3/29/2019	RETTEW	14	2.5
MW-29	3/29/2019	RETTEW	14	2.5
MW-30	3/28/2019	RETTEW	20	2.5
MW-31	3/28/2019	RETTEW	15	2.5
MW-31	3/28/2019	RETTEW	20	2.5
MW-4-0	9/28/2005	FREEDOM	1	2000
MW-4-1	9/28/2005	FREEDOM	5	9.1
MW-6-4	9/29/2005	FREEDOM	20	390
MW-7-1	9/29/2005	FREEDOM	5	<0.5
MW-8-2	9/29/2005	FREEDOM	10	<0.5
PP-1	2008	LTE/FREEDOM	13	740

Table B-1. Historical TSC Property soil samples.

Boring ID	Date	Company	Depth (feet bgs)	PCE (ug/Kg)
PP-2	2008	LTE/FREEDOM	12	210
PP-3	2008	LTE/FREEDOM	12	120
PP-4	2008	LTE/FREEDOM	10	110
PP-5	2008	LTE/FREEDOM	9	16
PP-6	2008	LTE/FREEDOM	11	26
PZ-H	9/1/2016	LTE	3	28
PZ-H	9/1/2016	LTE	4	42
PZ-H	9/1/2016	LTE	6	435
PZ-H	9/1/2016	LTE	7	89
PZ-H	9/1/2016	LTE	8.5	86
PZ-H	9/1/2016	LTE	9	2420
PZ-H	9/1/2016	LTE	11	11700
PZ-H	9/1/2016	LTE	12	125000
PZ-H	9/1/2016	LTE	13	9230
PZ-H	9/1/2016	LTE	14	19500
PZ-H	9/1/2016	LTE	15	1850
PZ-H	9/1/2016	LTE	16.5	16700
PZ-H	9/1/2016	LTE	17.5	93000
PZ-H	9/1/2016	LTE	18.5	772000
PZ-H	9/1/2016	LTE	20	77800
PZ-H	9/1/2016	LTE	21	66500
PZ-H	9/1/2016	LTE	22	9470
PZ-H	9/1/2016	LTE	22.5	2890
PZ-H	9/1/2016	LTE	23.2	6010
PZ-I	9/1/2016	LTE	5	23
PZ-I	9/1/2016	LTE	7	14
PZ-I	9/1/2016	LTE	10	8.3
PZ-I	9/1/2016	LTE	11	1880
PZ-I	9/1/2016	LTE	12	206
PZ-I	9/1/2016	LTE	13	107
PZ-I	9/1/2016	LTE	14	197
PZ-I	9/1/2016	LTE	15	78
PZ-I	9/1/2016	LTE	16	582
PZ-I	9/1/2016	LTE	17	46
PZ-I	9/1/2016	LTE	18	2440
PZ-I	9/1/2016	LTE	19	679
PZ-I	9/1/2016	LTE	20	13
PZ-J	9/1/2016	LTE	5	51
PZ-J	9/1/2016	LTE	7	620
PZ-J	9/1/2016	LTE	9	4100
PZ-J	9/1/2016	LTE	10	31
PZ-J	9/1/2016	LTE	11	19800
PZ-J	9/1/2016	LTE	13	4900
PZ-J	9/1/2016	LTE	14	29700
PZ-J	9/1/2016	LTE	15	13
PZ-J	9/1/2016	LTE	16	54
PZ-J	9/1/2016	LTE	17	829
PZ-J	9/1/2016	LTE	18	3500
PZ-J	9/1/2016	LTE	19	18
PZ-J	9/1/2016	LTE	20	36
PZ-J	9/1/2016	LTE	21	6.2
PZ-J	9/1/2016	LTE	22	193
PZ-J	9/1/2016	LTE	22.5	4540
PZ-J	9/1/2016	LTE	23	156
PZ-J	9/1/2016	LTE	23.5	275

Table B-1. Historical TSC Property soil samples.

Boring ID	Date	Company	Depth (feet bgs)	PCE (ug/Kg)
PZ-J	9/1/2016	LTE	24	41
PZ-K	9/1/2016	LTE	5	1.1
PZ-K	9/1/2016	LTE	7	1.7
PZ-K	9/1/2016	LTE	9	21
PZ-K	9/1/2016	LTE	10	23
PZ-K	9/1/2016	LTE	11	0.61
PZ-K	9/1/2016	LTE	13	1.6
PZ-K	9/1/2016	LTE	14	<0.5
PZ-K	9/1/2016	LTE	15	1.5
PZ-K	9/1/2016	LTE	16	1.7
PZ-K	9/1/2016	LTE	17	<0.5
PZ-K	9/1/2016	LTE	18	<0.5
PZ-K	9/1/2016	LTE	19	3.4
PZ-K	9/1/2016	LTE	20	1.1
PZ-K	9/1/2016	LTE	20.5	0.79
PZ-L	9/1/2016	LTE	3	3.6
PZ-L	9/1/2016	LTE	4	<0.5
PZ-L	9/1/2016	LTE	5	3.4
PZ-L	9/1/2016	LTE	6	1.5
PZ-L	9/1/2016	LTE	7	5.2
PZ-L	9/1/2016	LTE	8	1
PZ-L	9/1/2016	LTE	9	13
PZ-L	9/1/2016	LTE	10	32
PZ-L	9/1/2016	LTE	11	1.1
PZ-L	9/1/2016	LTE	12	12
PZ-L	9/1/2016	LTE	13	18
PZ-L	9/1/2016	LTE	14	9
PZ-L	9/1/2016	LTE	15	5.3
PZ-L	9/1/2016	LTE	16	2.8
PZ-L	9/1/2016	LTE	17	8.3
PZ-L	9/1/2016	LTE	18	1
PZ-L	9/1/2016	LTE	19	1.8
PZ-L	9/1/2016	LTE	20	2.5
PZ-L	9/1/2016	LTE	21	45
PZ-L	9/1/2016	LTE	22	19
PZ-L	9/1/2016	LTE	22.5	40
PZ-L	9/1/2016	LTE	23	76
PZ-L	9/1/2016	LTE	23.5	428
PZ-L	9/1/2016	LTE	24	99
SB-1	3/6/2006	FREEDOM	13	18000
SB-1	3/6/2006	FREEDOM	19	1500
SB-2	3/6/2006	FREEDOM	15	110
SB-2	3/6/2006	FREEDOM	19	1200
SB-3	3/7/2006	FREEDOM	15	<0.5
SB-3	3/7/2006	FREEDOM	19	<0.5
SB-4	3/7/2006	FREEDOM	15	<0.5
SBMP-01	8/31/2016	LTE	1.5	<0.5
SBMP-01	8/31/2016	LTE	7	<0.58
SBMP-01	8/31/2016	LTE	9	<0.5
SBMP-01	8/31/2016	LTE	12.5	1.2
SBMP-01	8/31/2016	LTE	13.5	2.1
SBMP-01	8/31/2016	LTE	14.5	1.4
SBMP-01	8/31/2016	LTE	15.5	<0.5
SBMP-01	8/31/2016	LTE	16.5	<0.5
SBMP-01	8/31/2016	LTE	17.5	1.1

Table B-1. Historical TSC Property soil samples.

Boring ID	Date	Company	Depth (feet bgs)	PCE (ug/Kg)
SBMP-01	8/31/2016	LTE	18.5	2.1
SBMP-01	8/31/2016	LTE	19	5.3
SBMP-01	8/31/2016	LTE	19.5	10
SBMP-04	8/31/2016	LTE	2	<0.5
SBMP-04	8/31/2016	LTE	4	<0.5
SBMP-04	8/31/2016	LTE	6	<0.5
SBMP-04	8/31/2016	LTE	8	<0.5
SBMP-04	8/31/2016	LTE	10	<0.5
SBMP-04	8/31/2016	LTE	12	<0.5
SBMP-04	8/31/2016	LTE	13.5	<0.5
SBMP-04	8/31/2016	LTE	15.5	0.86
SBMP-04	8/31/2016	LTE	17.5	1
SBMP-04	8/31/2016	LTE	19.5	2.1
SBMP-06	8/31/2016	LTE	1.5	<0.59
SBMP-06	8/31/2016	LTE	3	<0.53
SBMP-06	8/31/2016	LTE	5	0.74
SBMP-06	8/31/2016	LTE	6.5	0.88
SBMP-06	8/31/2016	LTE	8	<0.5
SBMP-06	8/31/2016	LTE	9	<0.5
SBMP-06	8/31/2016	LTE	12.5	5.7
SBMP-06	8/31/2016	LTE	13.5	2.1
SBMP-06	8/31/2016	LTE	15	1.3
SBMP-06	8/31/2016	LTE	16.5	2.5
SBMP-06	8/31/2016	LTE	17.5	3.9
SBMP-06	8/31/2016	LTE	18.5	2.6
SBMP-06	8/31/2016	LTE	19.5	2.8
SBMP-06	8/31/2016	LTE	21	34
SBMP-06	8/31/2016	LTE	22	155
SBMP-06	8/31/2016	LTE	22.5	450
SBMP-06	8/31/2016	LTE	23.5	811
SBMP-06	8/31/2016	LTE	24.5	451
SBMP-06	8/31/2016	LTE	25	44
SBMP-08	8/31/2016	LTE	5	4.6
SBMP-08	8/31/2016	LTE	7	2.9
SBMP-08	8/31/2016	LTE	9	18
SBMP-08	8/31/2016	LTE	10	12
SBMP-08	8/31/2016	LTE	12.5	30
SBMP-08	8/31/2016	LTE	14	23
SBMP-08	8/31/2016	LTE	15	36
SBMP-08	8/31/2016	LTE	16	480
SBMP-08	8/31/2016	LTE	17	488000
SBMP-08	8/31/2016	LTE	18	8140
SBMP-08	8/31/2016	LTE	19	604
SBMP-08	8/31/2016	LTE	20	1650
SBMP-08	8/31/2016	LTE	21	7000
SBMP-08	8/31/2016	LTE	21.5	14900
SBMP-08	8/31/2016	LTE	22	2600
SBMP-08	8/31/2016	LTE	23	1140
SBMP-08	8/31/2016	LTE	24	26
SBMP-09	8/31/2016	LTE	2	5.7
SBMP-09	8/31/2016	LTE	5	0.98
SBMP-09	8/31/2016	LTE	7	1.6
SBMP-09	8/31/2016	LTE	10	<0.5
SBMP-09	8/31/2016	LTE	12	<0.5
SBMP-09	8/31/2016	LTE	13	0.67

Table B-1. Historical TSC Property soil samples.

Boring ID	Date	Company	Depth (feet bgs)	PCE (ug/Kg)
SBMP-09	8/31/2016	LTE	15	<0.56
SBMP-09	8/31/2016	LTE	16	2.8
SBMP-09	8/31/2016	LTE	17	<0.56
SBMP-09	8/31/2016	LTE	18	3.7
SBMP-09	8/31/2016	LTE	19	20
SBMP-09	8/31/2016	LTE	20	3.9
SBMP-09	8/31/2016	LTE	21	6390
SBMP-09	8/31/2016	LTE	21.5	24
SBMP-10	8/31/2016	LTE	2.3	<0.5
SBMP-10	8/31/2016	LTE	4	<0.5
SBMP-10	8/31/2016	LTE	4.8	<0.5
SBMP-10	8/31/2016	LTE	6.5	<0.5
SBMP-10	8/31/2016	LTE	7.5	<0.5
SBMP-10	8/31/2016	LTE	8.5	<0.5
SBMP-10	8/31/2016	LTE	10	<0.5
SBMP-10	8/31/2016	LTE	11	<0.5
SBMP-10	8/31/2016	LTE	12.5	<0.5
SBMP-10	8/31/2016	LTE	13.5	<0.5
SBMP-10	8/31/2016	LTE	15	<0.5
SBMP-10	8/31/2016	LTE	16	<0.5
SBMP-10	8/31/2016	LTE	17.5	<0.5
SBMP-10	8/31/2016	LTE	18.5	<0.5
SBMP-10	8/31/2016	LTE	20	<0.5
SBMP-12	8/31/2016	LTE	2.5	1.8
SBMP-12	8/31/2016	LTE	4.5	<0.5
SBMP-12	8/31/2016	LTE	6.5	0.78
SBMP-12	8/31/2016	LTE	8.5	0.63
SBMP-12	8/31/2016	LTE	10	<0.5
SBMP-12	8/31/2016	LTE	11	0.6
SBMP-12	8/31/2016	LTE	12.5	<0.5
SBMP-12	8/31/2016	LTE	13.5	<0.5
SBMP-12	8/31/2016	LTE	15	0.74
SBMP-12	8/31/2016	LTE	16	1.9
SBMP-12	8/31/2016	LTE	17	5.2
SBMP-12	8/31/2016	LTE	18.5	0.67
SBMP-12	8/31/2016	LTE	20	35
SBMP-12	8/31/2016	LTE	21	31
SBMP-12	8/31/2016	LTE	22	434
SBMP-12	8/31/2016	LTE	23	477
SBMP-12	8/31/2016	LTE	23.5	421
SBMP-12	8/31/2016	LTE	24	23
SBMP-12	8/31/2016	LTE	25	51
SBMP-12	8/31/2016	LTE	25.5	21
SBMP-12	8/31/2016	LTE	26.5	181
SBMP-12	8/31/2016	LTE	27	211
SBMP-12	8/31/2016	LTE	27.5	375
SBMP-13	8/25/2016	LTE	5	6.1
SBMP-13	8/25/2016	LTE	7.5	0.89
SBMP-13	8/25/2016	LTE	10	<0.5
SBMP-13	8/25/2016	LTE	12.5	9.9
SBMP-13	8/25/2016	LTE	13	0.76
SBMP-13	8/25/2016	LTE	15	<0.5
SBMP-13	8/25/2016	LTE	16	4.9
SBMP-13	8/25/2016	LTE	17	0.97
SBMP-13	8/25/2016	LTE	17.5	1

Table B-1. Historical TSC Property soil samples.

Boring ID	Date	Company	Depth (feet bgs)	PCE (ug/Kg)
SBMP-13	8/25/2016	LTE	18	15
SBMP-13	8/25/2016	LTE	18.5	<0.5
SBMP-15	8/25/2016	LTE	4	6.8
SBMP-15	8/25/2016	LTE	7	1.3
SBMP-15	8/25/2016	LTE	9	16
SBMP-15	8/25/2016	LTE	11	2.3
SBMP-15	8/25/2016	LTE	12.5	<0.5
SBMP-15	8/25/2016	LTE	14	<0.5
SBMP-15	8/25/2016	LTE	15	0.69
SBMP-15	8/25/2016	LTE	16	5.4
SBMP-15	8/25/2016	LTE	17	3.1
SBMP-15	8/25/2016	LTE	18	15
SBMP-15	8/25/2016	LTE	19	117
SBMP-15	8/25/2016	LTE	20	246
SBMP-15	8/25/2016	LTE	21	82
SBMP-15	8/25/2016	LTE	21.5	721
SBMP-15	8/25/2016	LTE	22	31
SBMP-15	8/25/2016	LTE	23	197
SBMP-15	8/25/2016	LTE	24	11
SBMP-15	8/25/2016	LTE	25	17
SBMP-15	8/25/2016	LTE	26	2
SBMP-15	8/25/2016	LTE	27	16
SBMP-17	8/24/2016	LTE	2	9.5
SBMP-17	8/24/2016	LTE	5	1.9
SBMP-17	8/24/2016	LTE	7	2.6
SBMP-17	8/24/2016	LTE	10	<0.5
SBMP-17	8/24/2016	LTE	12	<0.5
SBMP-17	8/24/2016	LTE	15	<0.5
SBMP-17	8/24/2016	LTE	17	1.9
SBMP-17	8/24/2016	LTE	18	3.1
SBMP-17	8/24/2016	LTE	19	406
SBMP-17	8/24/2016	LTE	20	3.5
SBMP-17	8/24/2016	LTE	21	32
SBMP-17	8/24/2016	LTE	22	91
SBMP-17	8/24/2016	LTE	23	33
SBMP-17	8/24/2016	LTE	24	37
SBMP-19	8/24/2016	LTE	2	0.88
SBMP-19	8/24/2016	LTE	5	<0.5
SBMP-19	8/24/2016	LTE	7.5	1.4
SBMP-19	8/24/2016	LTE	10	<0.5
SBMP-19	8/24/2016	LTE	12.5	<0.5
SBMP-19	8/24/2016	LTE	14	0.73
SBMP-19	8/24/2016	LTE	17.5	1.9
SBMP-19	8/24/2016	LTE	18	<0.5
SBMP-19	8/24/2016	LTE	21	3.5
SBMP-21	8/23/2016	LTE	2	2.7
SBMP-21	8/23/2016	LTE	5	0.88
SBMP-21	8/23/2016	LTE	6	5.9
SBMP-21	8/23/2016	LTE	9	<0.5
SBMP-21	8/23/2016	LTE	11	<0.5
SBMP-21	8/23/2016	LTE	14	<0.5
SBMP-21	8/23/2016	LTE	15	<0.5
SBMP-21	8/23/2016	LTE	17	<0.5
SBMP-23	8/23/2016	LTE	2	<0.5
SBMP-23	8/23/2016	LTE	5	<0.5

Table B-1. Historical TSC Property soil samples.

Boring ID	Date	Company	Depth (feet bgs)	PCE (ug/Kg)
SBMP-23	8/23/2016	LTE	7	<0.5
SBMP-23	8/23/2016	LTE	9	<0.5
SBMP-23	8/23/2016	LTE	10	<0.5
SBMP-23	8/23/2016	LTE	11	<0.5
SBMP-23	8/23/2016	LTE	12	<0.5
SBMP-23	8/23/2016	LTE	14	<0.5
SBMP-23	8/23/2016	LTE	15	<0.5
SBMP-23	8/23/2016	LTE	16	<0.5
SBMP-23	8/23/2016	LTE	17	<0.5
SBMP-23	8/23/2016	LTE	18	<0.5
SBMP-23	8/23/2016	LTE	19	0.6
SBMP-23	8/23/2016	LTE	20	<0.5
SBMP-23	8/23/2016	LTE	21	<0.5
SBMP-2-3	8/31/2016	LTE	3	3.9
SBMP-2-3	8/31/2016	LTE	5	4.3
SBMP-2-3	8/31/2016	LTE	6.5	20
SBMP-2-3	8/31/2016	LTE	7.5	65
SBMP-2-3	8/31/2016	LTE	8.5	27
SBMP-2-3	8/31/2016	LTE	9.5	8.9
SBMP-2-3	8/31/2016	LTE	10.5	59
SBMP-2-3	8/31/2016	LTE	11.5	23
SBMP-2-3	8/31/2016	LTE	12.5	1710
SBMP-2-3	8/31/2016	LTE	13	5650
SBMP-2-3	8/31/2016	LTE	13.5	491
SBMP-2-3	8/31/2016	LTE	14	576
SBMP-2-3	8/31/2016	LTE	14.5	9650
SBMP-2-3	8/31/2016	LTE	15.5	175
SBMP-2-3	8/31/2016	LTE	16	119
SBMP-2-3	8/31/2016	LTE	16.5	6700
SBMP-2-3	8/31/2016	LTE	17	66800
SBMP-2-3	8/31/2016	LTE	18	16
SBMP-2-3	8/31/2016	LTE	19	9
SBMP-2-3	8/31/2016	LTE	19.5	1220
SBMP-2-3	8/31/2016	LTE	20.5	81
SBMP-2-3	8/31/2016	LTE	21.5	862
SBMP-2-3	8/31/2016	LTE	22.5	167
SBMP-25	8/23/2016	LTE	5	1.3
SBMP-25	8/23/2016	LTE	7	<0.5
SBMP-25	8/23/2016	LTE	10	<0.5
SBMP-25	8/23/2016	LTE	12	<0.5
SBMP-25	8/23/2016	LTE	15	<0.5
SBMP-25	8/23/2016	LTE	16.5	<0.5
SBMP-25	8/23/2016	LTE	20	19
SBMP-25	8/23/2016	LTE	21	418
SBMP-25	8/23/2016	LTE	22	26
SBMP-25	8/23/2016	LTE	23	6.4
SBMP-25	8/23/2016	LTE	24	1.2
SBMP-25	8/23/2016	LTE	25	53
SBMP-25	8/23/2016	LTE	26	275
SBMP-25	8/23/2016	LTE	27	0.73
SBMP-25	8/23/2016	LTE	28	193
SBMP-25	8/23/2016	LTE	29	0.68
SBMP-27	8/23/2016	LTE	5	2.1
SBMP-27	8/23/2016	LTE	7.5	5.6
SBMP-27	8/23/2016	LTE	10	4.3

Table B-1. Historical TSC Property soil samples.

Boring ID	Date	Company	Depth (feet bgs)	PCE (ug/Kg)
SBMP-27	8/23/2016	LTE	12	11
SBMP-27	8/23/2016	LTE	13	7.5
SBMP-27	8/23/2016	LTE	14	42
SBMP-27	8/23/2016	LTE	15	20
SBMP-27	8/23/2016	LTE	16	299
SBMP-27	8/23/2016	LTE	17	182
SBMP-27	8/23/2016	LTE	18	11
SBMP-27	8/23/2016	LTE	19	163
SBMP-27	8/23/2016	LTE	20	22
SBMP-27	8/23/2016	LTE	21	146
SBMP-27	8/23/2016	LTE	22	20
SBMP-29	8/22/2016	LTE	5	3.1
SBMP-29	8/22/2016	LTE	7	1.2
SBMP-29	8/22/2016	LTE	10	0.62
SBMP-29	8/22/2016	LTE	12	<0.5
SBMP-29	8/22/2016	LTE	15	<0.5
SBMP-29	8/22/2016	LTE	17	15
SBMP-29	8/22/2016	LTE	18	14
SBMP-29	8/22/2016	LTE	19	19
SBMP-29	8/22/2016	LTE	20	53
SBMP-29	8/22/2016	LTE	21	16
SBMP-29	8/22/2016	LTE	22	16
SBMP-29	8/22/2016	LTE	23	1040
SBMP-29	8/22/2016	LTE	24	1360
SBMP-31	8/22/2016	LTE	5	3.1
SBMP-31	8/22/2016	LTE	8	<0.56
SBMP-31	8/22/2016	LTE	10	<0.5
SBMP-31	8/22/2016	LTE	12	<0.5
SBMP-31	8/22/2016	LTE	15	6.7
SBMP-31	8/22/2016	LTE	16	3.9
SBMP-31	8/22/2016	LTE	18	<0.5
SBMP-31	8/22/2016	LTE	19.5	4.7
SBMP-31	8/22/2016	LTE	20	165
SBMP-31	8/22/2016	LTE	20.5	126
SBMP-31	8/22/2016	LTE	21	338
SBMP-31	8/22/2016	LTE	21.5	176
SBMP-31	8/22/2016	LTE	22	58
SBMP-31	8/22/2016	LTE	23	103

Notes:

Freedom: Freedom Environmental, Inc.

LTE: LT Environmental, Inc.

RETTEW: Rettew Associates, Inc.

"<" = Analyte not detected above reporting limit.

Sources:

Freedom Environmental Consultants, Inc. 2007. Update Report - Thornton Shopping Center Property, Northeast Corner of 88th Avenue and Washington Street, Thornton, Colorado. July 10.

LT Environmental, Inc. 2008. Corrective Action Plan, Thornton Shopping Center, Northeast Corner of 88th Avenue and Washington Street, Thornton, Colorado. May 14.

Quantum Water & Environment. 2022. Revised Corrective Action Plan,Thornton Shopping Center, Northeast Corner of 88th Avenue and Washington Street, Thornton, Colorado. March 28.

RETTEW & Associates, Inc. 2019. Draft Revised Corrective Action Plan for Thornton Shopping Center, Northeast Corner of 88th Avenue and Washington Street, Thornton, Adams County, Colorado. Septemver 11.

UPDATE REPORT

Thornton Shopping Center Property
Northeast Corner of 88th Avenue and Washington Street
Thornton, Colorado

Freedom Project No. 0605-064

Prepared for:

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2530 Crawford Avenue #102
Evanston, IL 60201

Prepared by:

Freedom Environmental Consultants, Inc.
12808 West 56th Place
Arvada, Colorado 80002-1330

July 10, 2007

TABLE 2-2
Thornton Shopping Center
Summary of Soil Sample Laboratory Results

Sample #	Depth, ft.	Date	PID, ppm	PCE, µg/Kg[1]
Proposed Soil Remediation Guidelines			Commercial	8,970
			Residential/Unrestricted Use	2,020
Sample results previously reported (laboratory reports not included)				
SB-1 @ 13'	13	3/6/06	970	**18,000**
SB-1 @ 19'	19	3/6/06	1,357	1,500
SB-2 @ 15'	15	3/6/06	22	110
SB-2 @ 19'	19	3/6/06	181	1,200
MW-11 @ 15'	15	3/6/06	150	460
MW-11 @ 17'	17	3/6/06	1,100	8,000
MW-12 @ 15'	15	3/7/06	6	ND
GSB-1-5A	13	7/11/06	1.1	18
GSB-2-3B	10	7/11/06	106	30
GSB-3-2D	8	7/11/06	516	**11,000**
GSB-3-3A	9	7/11/06	189	3,800
GSB-3-5A	13	7/11/06	980	690
GSB-4-3A	9	7/11/06	23.8	870
GSB-4-4B	12	7/11/06	1,337	930
HA-1	2 ½	6/6/06	0	ND
HA-2	3	6/6/06	0	8.2
Sample results not previously reported (laboratory reports included in Appendix B)				
GSB-5-3B	9	9/14/06	35.5	300
GSB-6-3C	10	9/14/06	534	1,200
GSB-6-4C	14	9/14/06	584	1,200
GSB-7-3D	11	9/14/06	589	180
GSB-7-5B	17	9/14/06	4,000	3,700
GSB-8-4C	14	9/14/06	20	ND
GSB-9-3B	9	9/14/06	>9,999	**40,000**
GSB-9-5C	14	9/14/06	>9,999	**2,200,000**
GSB-10-4C	14	9/15/06	6.3	ND
GSB-11-4B	13	9/15/06	43	ND
GSB-12-4D	15	9/15/06	13.5	ND
GSB-13-4C	14	9/15/06	9	ND
GSB-14-3D	11	9/15/06	2.2	ND
GSB-14-4D	15	9/15/06	8.4	ND

NOTES:
PID Photo-ionization detector
PCE Tetrachloroethene
(1) Other compounds not reported on this table. See laboratory reports for details.

ND Not detected above the reporting limit
µg/Kg Micrograms per kilogram
ppm Parts per million (in air)
>9,999 Maximum PID reading
Bold Indicates that the result exceeds the Commercial Cleanup Level, Colorado Dept. of Public Health & Environment's Proposed Soil Remediation Objectives Policy Document, 12/31/97

CORRECTIVE ACTION PLAN

THORNTON SHOPPING CENTER
NORTHEAST CORNER OF 88TH AVENUE AND
WASHINGTON STREET
THORNTON, COLORADO

MAY 14, 2008

Prepared for:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Prepared by:

LT ENVIRONMENTAL, INC.
4600 West 60th Avenue
Arvada, Colorado 80003
(303) 433-9788

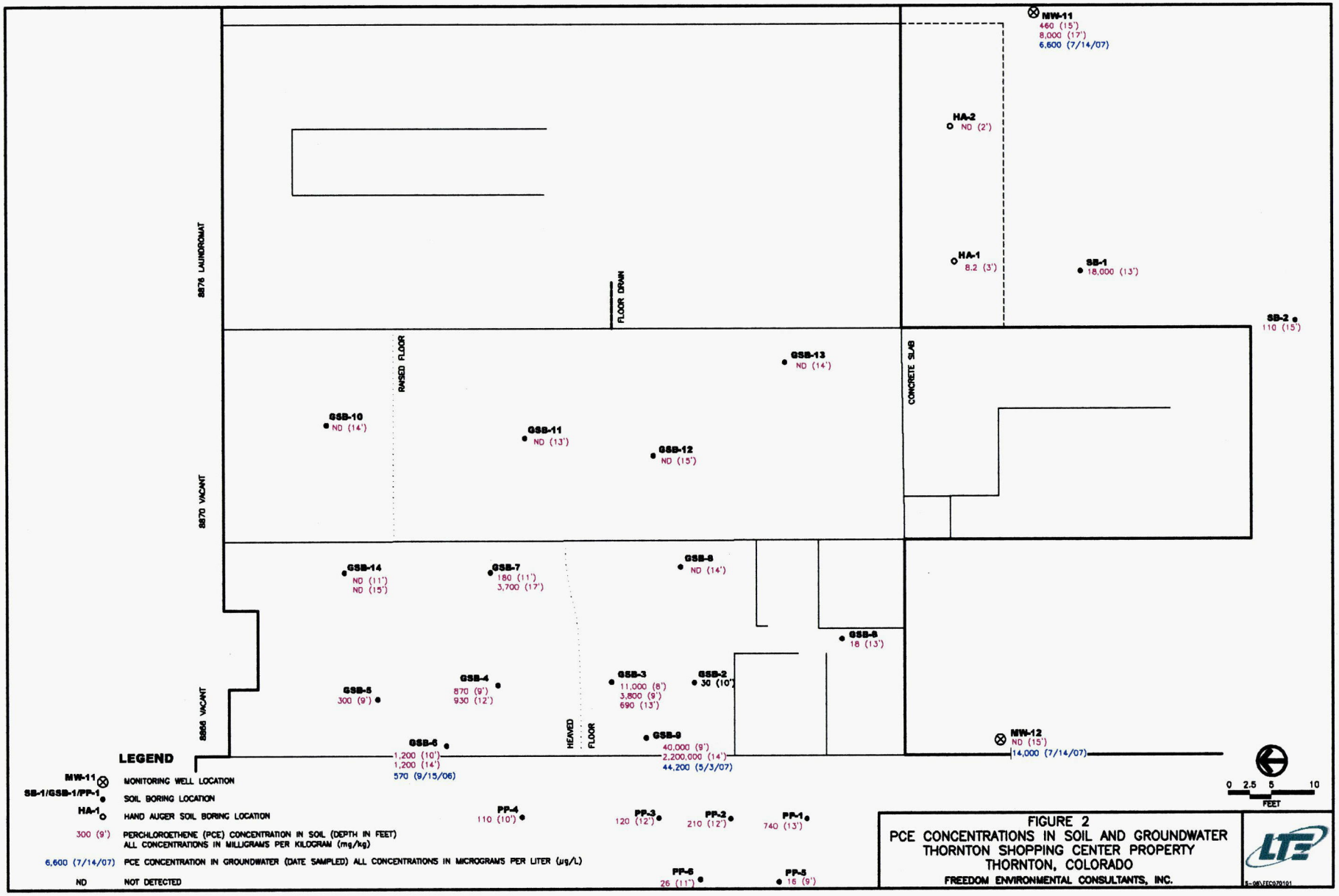

FIGURE 2
PCE CONCENTRATIONS IN SOIL AND GROUNDWATER
THORNTON SHOPPING CENTER PROPERTY
THORNTON, COLORADO
FREEDOM ENVIRONMENTAL CONSULTANTS, INC.

Soil Summary Figures & Tables by RETTEW, LTE, and Freedom (2006-2019)

Table 5 - Soil Sampling Laboratory Analytical Results
Thornton Shopping Center Site, Thornton, Colorado

Source: (RETTEW 2019b)

Client Sample ID			MW-26(20-25)	MW-26(50-55)	MW-27 (15-20)	MW-28 (15-20)	MW-29 (10-14)	MW-30 (15-20)	MW-31 (10-15)	MW-31 (15-20)	
Date Collected			03/08/2019	03/08/2019	03/29/2019	03/29/2019	03/29/2019	03/28/2019	03/28/2019	03/28/2019	
Method	Analyte	Units	Result	Result	Result	Result	Result	Result	Result	Result	CDPHE Groundwater Protection Values Soil Cleanup Table (mg/kg)
8260B	BROMOBENZENE	mg/kg	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	3.0
8260B	BROMODICHLOROMETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	0.007
8260B	BROMOFORM	mg/kg	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	0.048
8260B	BROMOMETHANE	mg/kg	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	0.16
8260B	N-BUTYLBENZENE	mg/kg	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	NS
8260B	SEC-BUTYLBENZENE	mg/kg	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	NS
8260B	TERT-BUTYLBENZENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	NS
8260B	CARBON TETRACHLORIDE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	1.704
8260B	CHLOROBENZENE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	5.3
8260B	CHLORODIBROMOMETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	0.11
8260B	CHLOROETHANE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	NS
8260B	CHLOROFORM	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	0.085
8260B	CHLOROMETHANE	mg/kg	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	NS
8260B	2-CHLOROTOLUENE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	NS
8260B	4-CHLOROTOLUENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	NS
8260B	1,2-DIBROMO-3-CHLOROPROPANE	mg/kg	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	0.002
8260B	1,2-DIBROMOETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	0.00018
8260B	DIBROMOMETHANE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	NS
8260B	1,2-DICHLOROBENZENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	57
8260B	1,3-DICHLOROBENZENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	8.5
8260B	1,4-DICHLOROBENZENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	7.8
8260B	DICHLORODIFLUOROMETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	390
8260B	1,1-DICHLOROETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	1.8
8260B	1,2-DICHLOROETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	0.0036
8260B	1,1-DICHLOROETHENE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	12
8260B	CIS-1,2-DICHLOROETHENE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	0.261
8260B	TRANS-1,2-DICHLOROETHENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	5.4
8260B	1,2-DICHLOROPROPANE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0087
8260B	1,1-DICHLOROPROPENE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	NS
8260B	1,3-DICHLOROPROPANE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	NS
8260B	CIS-1,3-DICHLOROPROPENE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	0.84
8260B	TRANS-1,3-DICHLOROPROPENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.84
8260B	2,2-DICHLOROPROPANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	NS
8260B	DI-ISOPROPYL ETHER	mg/kg	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS
8260B	ETHYLBENZENE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	100
8260B	HEXACHLORO-1,3-BUTADIENE	mg/kg	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	0.17
8260B	ISOPROPYLBENZENE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	NS
8260B	P-ISOPROPYLTOLUENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	NS
8260B	2-BUTANONE (MEK)	mg/kg	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	18

Notes:
Laboratory assigned data qualifiers are presented in the attached laboratory analytical reports
mg/kg = milligrams per kilogram
ND = Less than reporting detection limit.
NS = No Standard
< = not detected above the reporting detection limit
Bold = detection exceeds CDPHE groundwater protection value for soil cleanup
CDPHE Groundwater Protection Values Soil Cleanup Table March 2014

Table 5 (Continued) - Soil Sampling Laboratory Analytical Results
Thornton Shopping Center Site, Thornton, Colorado

Source: (RETTEW 2019b)

Client Sample ID			MW-26(20-25)	MW-26(50-55)	MW-27 (15-20)	MW-28 (15-20)	MW-29 (10-14)	MW-30 (15-20)	MW-31 (10-15)	MW-31 (15-20)	
Date Collected			03/08/2019	03/08/2019	03/29/2019	03/29/2019	03/29/2019	03/28/2019	03/28/2019	03/28/2019	
Method	Analyte	Units	Result	Result	Result	Result	Result	Result	Result	Result	CDPHE Groundwater Protection Values Soil Cleanup Table (mg/kg)
8260B	METHYLENE CHLORIDE	mg/kg	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	0.06
8260B	4-METHYL-2-PENTANONE (MIBK)	mg/kg	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	3.3
8260B	METHYL TERT-BUTYL ETHER	mg/kg	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS
8260B	NAPHTHALENE	mg/kg	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	23
8260B	N-PROPYLBENZENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	77
8260B	STYRENE	mg/kg	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	14
8260B	1,1,1,2-TETRACHLOROETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	0.16
8260B	1,1,2,2-TETRACHLOROETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	0.0024
8260B	1,1,2-TRICHLOROTRIFLUOROETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	NS
8260B	TETRACHLOROETHENE	mg/kg	0.00129	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	1.9
8260B	TOLUENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	50
8260B	1,2,3-TRICHLOROBENZENE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	NS
8260B	1,2,4-TRICHLOROBENZENE	mg/kg	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	13
8260B	1,1,1-TRICHLOROETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	62
8260B	1,1,2-TRICHLOROETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	0.038
8260B	TRICHLOROETHENE	mg/kg	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.68
8260B	TRICHLOROFLUOROMETHANE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	1000
8260B	1,2,3-TRICHLOROPROPANE	mg/kg	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	0.00048
8260B	1,2,4-TRIMETHYLBENZENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	NS
8260B	1,2,3-TRIMETHYLBENZENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	NS
8260B	1,3,5-TRIMETHYLBENZENE	mg/kg	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	23
8260B	VINYL CHLORIDE	mg/kg	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	0.11
8260B	XYLENES, TOTAL	mg/kg	<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	75

Notes:
Laboratory assigned data qualifiers are presented in the attached laboratory analytical reports
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< = not detected above the reporting detection limit
Bold = detection exceeds CDPHE groundwater protection value for soil cleanup
CDPHE Groundwater Protection Values Soil Cleanup Table March 2014

PCE: PERCHLOROETHENE CONCENTRATION IN MICROGRAMS PER KILOGRAM (µg/kg)
< : LESS THAN THE LABORATORY REPORTING LIMIT
BOLD INDICATES CONCENTRATION THAT MAY HAVE THE POTENTIAL TO IMPACT GROUNDWATER TO LEVELS THAT EXCEED THE CDPHE REGULATION 41 GROUNDWATER QUALITY STANDARD

SAMPLE ID SAMPLE DATE	
DEPTH	PCE
DEPTH IN FEET BELOW GROUND SURFACE	PCE CONCENTRATION IN MICROGRAMS PER KILOGRAM (ug/kg)

SOURCE TREATMENT AREA

THORNTON SHOPPING CENTER

UNIT 8866 UNIT 8870 UNIT 8876

PZ-E PZ-PP PZ-D PZ-A PZ-B PZ-C PZ-F

OAK PLACE

CORONA STREET

88TH AVENUE

PZ-I 9/01/2016	
5'	23
7'	14
10'	8
11'	**1,880**
12'	**206**
13'	**107**
14'	**197**
15'	**78**
16'	**582**
17'	**46**
18'	**2,440**
19'	**679**
20'	13

PZ-J 9/01/2016	
5'	**51**
7'	**620**
9'	**4,100**
10'	31
11'	**19,800**
13'	**4,900**
14'	**29,700**
15'	13
16'	**54**
17'	**829**
18'	**3,500**
19'	18
20'	36
21'	6
22'	**193**
22.5'	**4,540**
23'	**156**
23.5'	**275**
24'	41

PZ-L 9/01/2016	
3'	4
4'	<0.5
5'	3
6'	2
7'	5
8'	1
9'	13
10'	32
11'	1
12'	12
13'	18
14'	9
15'	5
16'	3
17'	8
18'	1
19'	2
20'	2
21'	**45**
22'	19
22.5'	**40**
23'	**76**
23.5'	**428**
24'	**99**

SBMP-01 8/31/2016	
1-1.5'	<0.5
6.5-7'	1
8.5-9'	<0.5
12-12.5'	1
13-13.5'	2
14-14.5'	1
15-15.5'	<0.5
16-16.5'	<0.5
17-17.5'	1
18-18.5'	2
18.5-19'	5
19-19.5'	10

PZ-H 9/1/2016	
2.5-3'	28
3.5-4'	42
5.5-6'	**435**
6-5.7'	**89**
8-8.5'	**86**
8.75-9'	**2,420**
10.5-11'	**11,700**
11.5-12'	**125,000**
12.5-13'	**9,230**
13.5-14'	**19,500**
14.5-15'	**1,850**
16-16.5'	**16,700**
17-17.5'	**93,000**
18-18.5'	**772,000**
19.5-20'	**77,800**
20.5-21'	**66,500**
21.5-22'	**9,470**
22-22.5'	**2,890**
23-23.2'	**6,010**

SBMP-2-3 8/31/2016	
2.5-3'	4
4.5-5'	4
6-6.5'	20
7-7.5'	**65**
8-8.5'	27
9-9.5'	9
10-10.5'	**59**
11-11.5'	23
12-12.5'	**1,710**
12.5-13'	**5,650**
13-13.5'	**491**
13.5-14'	**576**
14-14.5'	**9,650**
15-15.5'	**175**
15.5-16'	**119**
16-16.5'	**6,700**
16.5-17'	**66,800**
17.5-18'	16
18.5-19'	9
19-19.5'	**1,220**
20-20.5'	**81**
21-21.5'	**862**
22-22.5'	**167**

SBMP-04 8/31/2016	
1.5-2'	<0.5
3.5-4'	<0.5
5.5-6'	<0.5
7.5-8'	<0.5
9.5-10'	<0.5
11.5-12'	<0.5
13-13.5'	<0.5
15-15.5'	1
17-17.5'	1
19.5'	2

SBMP-08 8/31/2016	
5'	5
7'	3
9'	18
10'	12
12.5'	30
14'	23
15'	36
16'	**480**
17'	**488,000**
18'	**8,140**
19'	**604**
20'	**1,650**
21'	**7,000**
21.5'	**14,900**
22'	**2,600**
23'	**1,140**
24'	26

PZ-K 9/01/2016	
5'	1
7'	2
9'	21
10'	23
11'	1
13'	2
14'	<0.5
15'	1
16'	2
17'	<0.5
18'	<0.5
19'	3
20'	1
20.5'	1

SBMP-09 8/31/2016	
2'	6
5'	1
7'	2
10'	<0.5
12'	<0.5
13'	1
15'	1
16'	3
17'	1
18'	4
19'	20
20'	4
21'	**6,390**
21.5'	24

SBMP-15 8/25/2016	
4'	7
7'	1
9'	16
11'	2
12.5'	<0.5
14'	<0.5
15'	1
16'	5
17'	3
18'	15
19'	**117**
20'	**246**
21'	**82**
21.5'	**721**
22'	31
23'	**197**
24'	11
25'	17
26'	2
27'	16

SBMP-17 8/24/2016	
2'	10
5'	2
7'	3
10'	<0.5
12'	<0.5
15'	<0.5
17'	2
18'	3
19'	**406**
20'	4
21'	32
22'	**91**
23'	33
24'	37

SBMP-21 8/23/2016	
2'	3
5'	1
6'	6
9'	<0.5
11'	<0.5
14'	<0.5
15'	<0.5
17'	<0.5

SBMP-23 8/23/2016	
2'	<0.5
5'	<0.5
7'	<0.5
9'	<0.5
10'	<0.5
11'	<0.5
12'	<0.5
14'	<0.5
15'	<0.5
16'	<0.5
17'	<0.5
18'	<0.5
19'	1
20'	<0.5
21'	<0.5

SBMP-19 8/24/2016	
2'	1
5'	<0.5
7.5'	1
10'	<0.5
12.5'	<0.5
14'	1
17.5'	2
18'	<0.5
21'	3

SBMP-31 8/22/2016	
5'	3
8'	1
10'	<0.5
12'	<0.5
15'	7
16'	4
18'	<0.5
19.5	5
20.0	**165**
20.5'	**126**
21'	**338**
21.5'	**176**
22'	**58**
23'	**103**

SBMP-06 8/31/2016	
1-1.5'	1
2.5-3'	1
4.5-5'	1
6-6.5'	1
7.5-8'	<0.5
8.5-9'	<0.5
12-12.5'	6
13-13.5'	2
14.5-15'	1
16-16.5'	2
17-17.5'	4
18-18.5'	3
19-19.5'	3
20.5-21'	34
21.5-22'	**155**
22-22.5'	**450**
23-23.5'	**811**
24-24.5'	**451**
24.5-25'	**44**

SBMP-13 8/25/2016	
5'	6
7.5'	1
10'	<0.5
12.5'	10
13'	1
15'	<0.5
16'	5
17'	1
17.5'	1
18'	15
18.5'	<0.5

SBMP-12 8/31/2016	
2-2.5'	2
4-4.5'	<0.5
6-6.5'	1
8-8.5'	1
9.5-10'	<0.5
10.5-11'	1
12-12.5'	<0.5
13-13.5'	<0.5
14.5-15'	1
15.5-16'	2
16.5-17'	5
18-18.5'	1
19.5-20'	35
20.5-21'	31
21.5-22'	**434**
22.5-23'	**477**
23-23.5'	**421**
23.5-24'	23
24.5-25'	**51**
25-25.5'	21
26.5'	**181**
27'	**211**
27.5'	**375**

SBMP-10 8/31/2016	
2-2.3'	<0.5
3.5-4'	<0.5
4.5-4.8'	<0.5
6-6.5'	<0.5
7-7.5'	<0.5
8-8.5'	<0.5
9.5-10'	<0.5
10.5-11'	<0.5
12-12.5'	<0.5
13-13.5'	<0.5
14.5-15'	<0.5
15.5-16'	<0.5
17-17.5'	<0.5
18-18.5'	<0.5
19.5-20'	<0.5

SBMP-25 8/23/2016	
5'	1
7'	<0.5
10'	<0.5
12'	<0.5
15'	<0.5
16.5'	<0.5
20'	19
21'	**418**
22'	26
23'	6
24'	1
25'	**53**
26'	**275**
27'	1
28'	**193**
29'	1

SBMP-27 8/23/2016	
5'	2
7.5'	6
10'	4
12'	11
13'	7
14'	42
15'	20
16'	**299**
17'	**182**
18'	11
19'	**163**
20'	22
21'	**146**
22'	20

SBMP-29 8/22/2016	
5'	3
7'	1
10'	1
12'	<0.5
15'	<0.5
17'	15
18'	14
19'	19
20'	**53**
21'	16
22'	16
23'	**1,040**
24'	**1,360**

MW-17 MW-5 MW-12R MW-11 MW-02 MW-03 MW-22 MW-9 MW-6 MW-07 MW-23 MW-13 MW-16 MW-22 MW-15 MW-14

MIP-05 MIP-11 MIP-02 MIP-03 MIP-07 MIP-14 MIP-16 MIP-18 MIP-20 MIP-22 MIP-24 MIP-26 MIP-28 MIP-30 MIP-32

IMAGE COURTESY OF ESRI

LEGEND

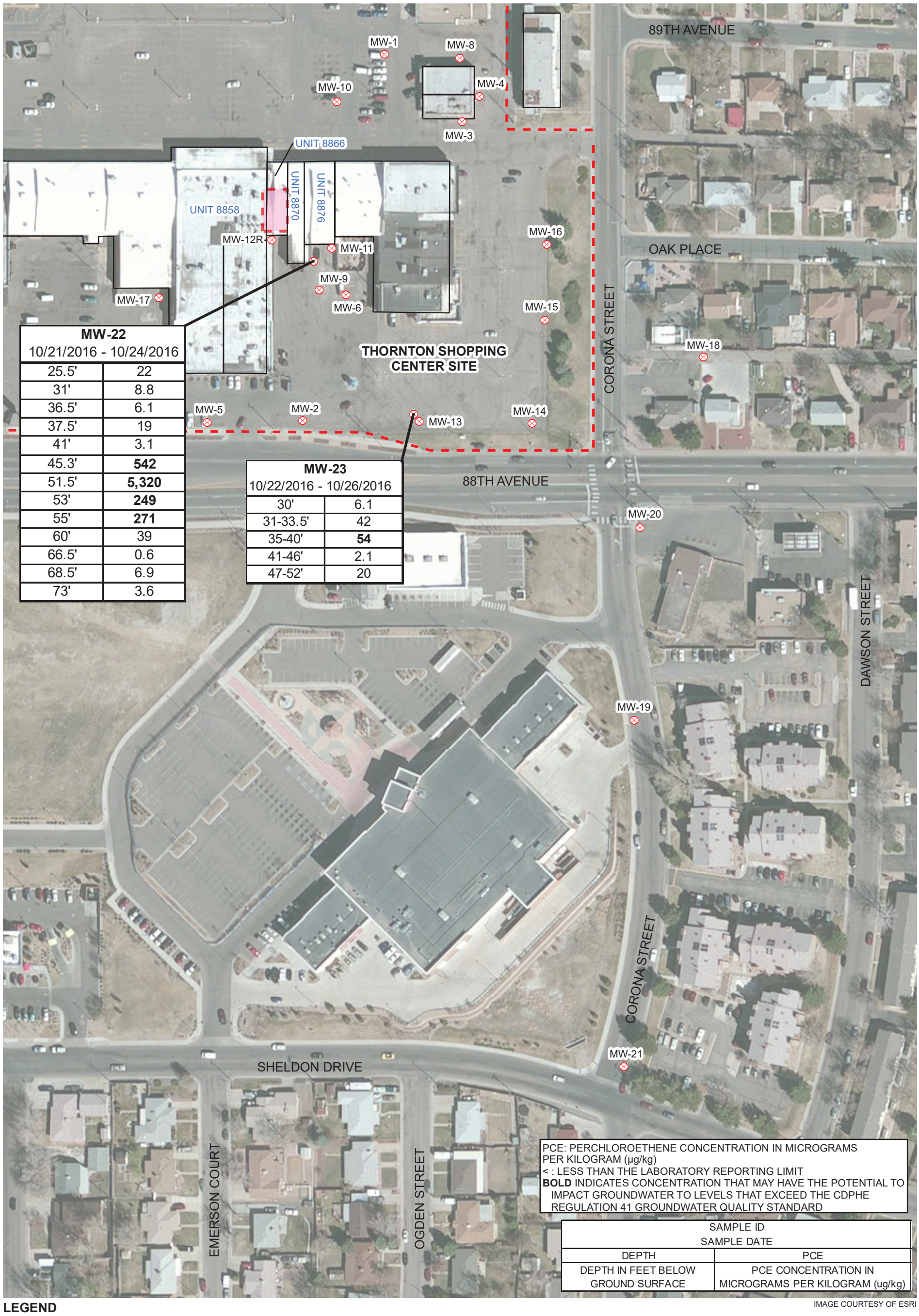
- MEMBRANE INTERFACE PROBE (MIP) SAMPLING LOCATION
- MIP, SOIL BORING, AND TEMPORARY MONITORING WELL LOCATION
- TEMPORARY MONITORING WELL
- MONITORING WELL
- INFRASTRUCTURE
- APPROXIMATE SITE BOUNDARY
- APPROXIMATE SOURCE AREA

0 50 100
Feet

N

FIGURE 10
PCE SOIL ANALYTICAL RESULTS - LIMITED ASSESSMENT ACTIVITIES
THORNTON SHOPPING CENTER
NORTHEAST CORNER OF 88TH AVENUE AND WASHINGTON STREET
THORNTON, COLORADO
JAYLON, INC. - THORNTON, LLC.

P:\Jaylon, Inc\Thornton, LLC\GIS\MXD\0577114002_THORNTON_SHOPPING_CENTER\0577114002_11x17_FIG 06_SOIL_ANALYTICAL_MIP_2016_Q3_LAND.mxd



MW-22 10/21/2016 - 10/24/2016	
25.5'	22
31'	8.8
36.5'	6.1
37.5'	19
41'	3.1
45.3'	**542**
51.5'	**5,320**
53'	**249**
55'	**271**
60'	39
66.5'	0.6
68.5'	6.9
73'	3.6

MW-23 10/22/2016 - 10/26/2016	
30'	6.1
31-33.5'	42
35-40'	**54**
41-46'	2.1
47-52'	20

PCE: PERCHLOROETHENE CONCENTRATION IN MICROGRAMS PER KILOGRAM (µg/kg)
< : LESS THAN THE LABORATORY REPORTING LIMIT
BOLD INDICATES CONCENTRATION THAT MAY HAVE THE POTENTIAL TO IMPACT GROUNDWATER TO LEVELS THAT EXCEED THE CDPHE REGULATION 41 GROUNDWATER QUALITY STANDARD

SAMPLE ID SAMPLE DATE	
DEPTH	PCE
DEPTH IN FEET BELOW GROUND SURFACE	PCE CONCENTRATION IN MICROGRAMS PER KILOGRAM (ug/kg)

IMAGE COURTESY OF ESRI

LEGEND

- MONITORING WELL
- APPROXIMATE SITE BOUNDARY
- INFRASTRUCTURE
- APPROXIMATE SOURCE AREA

0 120 240
Feet

N

FIGURE 12
PCE SOIL ANALYTICAL RESULTS - DEEP ZONE MONITORING WELLS
THORNTON SHOPPING CENTER
NORTHEAST CORNER OF 88TH AVENUE AND WASHINGTON STREET
THORNTON, COLORADO
JAYLON, INC. - THORNTON, LLC.

Path: P:\Jaylon, Inc\Thornton, LLC\GIS\MXD\057714002_THORNTON_SHOPPING_CENTER\057714002_11x17_FIG 12_SOIL_ANALYTICAL_DEEP_ZONE_WELLS.mxd

TABLE 4
SOIL ANALYTICAL RESULTS - SHALLOW ZONE SOIL BORINGS

THORNTON SHOPPING CENTER
THORNTON, COLORADO

Source: (LTE 2017a)

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-1 8/31/2016 1-1.5'	SBMP-1 8/31/2016 6.5-7'	SBMP-1 8/31/2016 8.5-9'	SBMP-1 8/31/2016 12-12.5'	SBMP-1 8/31/2016 13-13.5'	SBMP-1 8/31/2016 14-14.5'	SBMP-1 8/31/2016 15-15.5'	SBMP-1 8/31/2016 16-16.5'	SBMP-1 8/31/2016 17-17.5'	SBMP-1 8/31/2016 18-18.5'	SBMP-1 8/31/2016 18.5-19'	SBMP-1 8/31/2016 19-19.5'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	<0.5	0.58	<0.5	1.2	2.1	1.4	<0.5	<0.5	1.1	2.1	5.3	10

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-2/3 8/31/2016 2.5-3'	SBMP-2/3 8/31/2016 4.5-5'	SBMP-2/3 8/31/2016 6-6.5'	SBMP-2/3 8/31/2016 7-7.5'	SBMP-2/3 8/31/2016 8-8.5'	SBMP-2/3 8/31/2016 9-9.5'	SBMP-2/3 8/31/2016 10-10.5'	SBMP-2/3 8/31/2016 11-11.5'	SBMP-2/3 8/31/2016 12-12.5'	SBMP-2/3 8/31/2016 12.5-13'	SBMP-2/3 8/31/2016 13-13.5'	SBMP-2/3 8/31/2016 13.5-14'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	0.81	0.84	<0.5	<0.5	1.1	<0.5	<0.5	<10	<0.5	0.73
Trichloroethene	940	µg/kg	<0.5	<0.5	0.59	2.3	0.69	<0.5	0.78	<0.5	1.2	<10	<0.5	2.1
Tetrachloroethene	24,000	µg/kg	3.9	4.3	20	65	27	8.9	59	23	1,710	5,650	491	576

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-2/3 8/31/2016 14-14.5'	SBMP-2/3 8/31/2016 15-15.5'	SBMP-2/3 8/31/2016 15.5-16'	SBMP-2/3 8/31/2016 16-16.5'	SBMP-2/3 8/31/2016 16.5-17'	SBMP-2/3 8/31/2016 17.5-18'	SBMP-2/3 8/31/2016 18.5-19'	SBMP-2/3 8/31/2016 19-19.5'	SBMP-2/3 8/31/2016 20-20.5'	SBMP-2/3 8/31/2016 21-21.5'	SBMP-2/3 8/31/2016 22-22.5'
Vinyl Chloride	59	µg/kg	<10	1.2	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<10	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<10	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<10	6.3	<0.5	1.4	<50	<0.5	<0.5	1.1	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<10	2.3	<0.5	0.77	<50	<0.5	<0.5	1.0	<0.5	0.86	<0.5
Tetrachloroethene	24,000	µg/kg	9,650	175	119	6,700	**66,800**	16	9.1	1,220	81	862	167

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-4 8/31/2016 1.5-2'	SBMP-4 8/31/2016 3.5-4'	SBMP-4 8/31/2016 5.5-6'	SBMP-4 8/31/2016 7.5-8'	SBMP-4 8/31/2016 9.5-10'	SBMP-4 8/31/2016 11.5-12'	SBMP-4 8/31/2016 13-13.5'	SBMP-4 8/31/2016 15-15.5'	SBMP-4 8/31/2016 17-17.5'	SBMP-4 8/31/2016 19.5'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.86	1.0	2.1

TABLE 4
SOIL ANALYTICAL RESULTS - SHALLOW ZONE SOIL BORINGS

THORNTON SHOPPING CENTER
THORNTON, COLORADO

Source: (LTE 2017a)

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-6 8/31/2016 1-1.5'	SBMP-6 8/31/2016 2.5-3'	SBMP-6 8/31/2016 4.5-5'	SBMP-6 8/31/2016 6-6.5'	SBMP-6 8/31/2016 7.5-8'	SBMP-6 8/31/2016 8.5-9'	SBMP-6 8/31/2016 12-12.5'	SBMP-6 8/31/2016 13-13.5'	SBMP-6 8/31/2016 14.5-15'	SBMP-6 8/31/2016 16-16.5'	SBMP-6 8/31/2016 17-17.5'	SBMP-6 8/31/2016 18-18.5'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	0.59	0.53	0.74	0.88	<0.5	<0.5	5.7	2.1	1.3	2.5	3.9	2.6

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-6 8/31/2016 19-19.5'	SBMP-6 8/31/2016 20.5-21'	SBMP-6 8/31/2016 21.5-22'	SBMP-6 8/31/2016 22-22.5'	SBMP-6 8/31/2016 23-23.5'	SBMP-6 8/31/2016 24-24.5'	SBMP-6 8/31/2016 24.5-25'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<10	<10	<10	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<10	<10	<10	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<10	<10	<10	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<10	<10	<10	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<10	<10	<10	<0.5
Tetrachloroethene	24,000	µg/kg	2.8	34	155	450	811	451	44

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-8 8/30/2016 5'	SBMP-8 8/30/2016 7'	SBMP-8 8/30/2016 9'	SBMP-8 8/30/2016 10'	SBMP-8 8/30/2016 12.5'	SBMP-8 8/30/2016 14'	SBMP-8 8/30/2016 15'	SBMP-8 8/30/2016 16'	SBMP-8 8/30/2016 17'	SBMP-8 8/30/2016 18'	SBMP-8 8/30/2016 19'	SBMP-8 8/30/2016 20'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<10	<10
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<10	<10
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	69	<10	<10	<10
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	0.89	0.59	9.2	7,070	208	16	11
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	**3,610**	113	<10	<10
Tetrachloroethene	24,000	µg/kg	4.6	2.9	18	12	30	23	36	480	**488,000**	8,140	604	1,650

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-8 8/30/2016 21'	SBMP-8 8/30/2016 21.5'	SBMP-8 8/30/2016 22'	SBMP-8 8/30/2016 23'	SBMP-8 8/30/2016 24'
Vinyl Chloride	59	µg/kg	<10	<10	<10	<10	<0.5
1,1-Dichloroethene	230,000	µg/kg	<10	<10	<10	<10	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<10	<10	<10	<10	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<10	<10	<10	<10	0.69
Trichloroethene	940	µg/kg	<10	<10	<10	<10	<0.5
Tetrachloroethene	24,000	µg/kg	7,000	14,900	2,600	1,140	26

SBMP-9 8/30/2016 2'	SBMP-9 8/30/2016 5'	SBMP-9 8/30/2016 7'	SBMP-9 8/30/2016 10'	SBMP-9 8/30/2016 12'
<0.5	<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5	<0.5
5.7	0.98	1.6	<0.5	<0.5

TABLE 4
SOIL ANALYTICAL RESULTS - SHALLOW ZONE SOIL BORINGS

THORNTON SHOPPING CENTER
THORNTON, COLORADO

Source: (LTE 2017a)

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-9 8/30/2016 13'	SBMP-9 8/30/2016 15'	SBMP-9 8/30/2016 16'	SBMP-9 8/30/2016 17'	SBMP-9 8/30/2016 18'	SBMP-9 8/30/2016 19'	SBMP-9 8/30/2016 20'	SBMP-9 8/30/2016 21'	SBMP-9 8/30/2016 21.5'	SBMP-10 8/30/2016 2-2.3'	SBMP-10 8/30/2016 3.5-4'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	0.67	0.56	2.8	0.56	3.7	20	3.9	6,390	24	<0.5	<0.5

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-10 8/30/2016 4.5-4.8'	SBMP-10 8/30/2016 6-6.5'	SBMP-10 8/30/2016 7-7.5'	SBMP-10 8/30/2016 8-8.5'	SBMP-10 8/30/2016 9.5-10'	SBMP-10 8/30/2016 10.5-11'	SBMP-10 8/30/2016 12-12.5'	SBMP-10 8/30/2016 13-13.5'	SBMP-10 8/30/2016 14.5-15'	SBMP-10 8/30/2016 15.5-16'	SBMP-10 8/30/2016 17-17.5'	SBMP-10 8/30/2016 18-18.5'	SBMP-10 8/30/2016 19.5-20'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-12 8/30/2016 2-2.5'	SBMP-12 8/30/2016 4-4.5'	SBMP-12 8/30/2016 6-6.5'	SBMP-12 8/30/2016 8-8.5'	SBMP-12 8/30/2016 9.5-10'	SBMP-12 8/30/2016 10.5-11'	SBMP-12 8/30/2016 12-12.5'	SBMP-12 8/30/2016 13-13.5'	SBMP-12 8/30/2016 14.5-15'	SBMP-12 8/30/2016 15.5-16'	SBMP-12 8/30/2016 16.5-17'	SBMP-12 8/30/2016 18-18.5'	SBMP-12 8/30/2016 19.5-20'	SBMP-12 8/30/2016 20.5-21'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	1.8	<0.5	0.78	0.63	<0.5	0.60	<0.5	<0.5	0.74	1.9	5.2	0.67	35	31

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-12 8/30/2016 21.5-22'	SBMP-12 8/30/2016 22.5-23'	SBMP-12 8/30/2016 23-23.5'	SBMP-12 8/30/2016 23.5-24'	SBMP-12 8/30/2016 24.5-25'	SBMP-12 8/30/2016 25-25.5'	SBMP-12 8/30/2016 26.5'	SBMP-12 8/30/2016 27'	SBMP-12 8/30/2016 27.5'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	2.5	2.4	1.1	<0.5	<0.5	<0.5	<0.5	1.8	3.0
Trichloroethene	940	µg/kg	1.4	2.4	0.73	<0.5	<0.5	<0.5	<0.5	<0.5	1.4
Tetrachloroethene	24,000	µg/kg	434	477	421	23	51	21	181	211	375

TABLE 4
SOIL ANALYTICAL RESULTS - SHALLOW ZONE SOIL BORINGS

THORNTON SHOPPING CENTER
THORNTON, COLORADO

Source: (LTE 2017a)

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-13 8/25/2016 5'	SBMP-13 8/25/2016 7.5'	SBMP-13 8/25/2016 10'	SBMP-13 8/25/2016 12.5'	SBMP-13 8/25/2016 13'	SBMP-13 8/25/2016 15'	SBMP-13 8/25/2016 16'	SBMP-13 8/25/2016 17'	SBMP-13 8/25/2016 17.5'	SBMP-13 8/25/2016 18'	SBMP-13 8/25/2016 18.5'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	6.1	0.89	<0.5	9.9	0.76	<0.5	4.9	0.97	1.0	15	<0.5

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-15 8/24/2016 4'	SBMP-15 8/24/2016 7'	SBMP-15 8/24/2016 9'	SBMP-15 8/24/2016 11'	SBMP-15 8/24/2016 12.5'	SBMP-15 8/24/2016 14'	SBMP-15 8/24/2016 15'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	6.8	1.3	16	2.3	<0.5	<0.5	0.69

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-15 8/24/2016 16'	SBMP-15 8/24/2016 17'	SBMP-15 8/24/2016 18'	SBMP-15 8/24/2016 19'	SBMP-15 8/24/2016 20'	SBMP-15 8/24/2016 21'	SBMP-15 8/24/2016 21.5'	SBMP-15 8/24/2016 22'	SBMP-15 8/24/2016 23'	SBMP-15 8/24/2016 24'	SBMP-15 8/24/2016 25'	SBMP-15 8/24/2016 26'	SBMP-15 8/24/2016 27'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	5.4	3.1	15	117	246	82	721	31	197	11	17	2.0	16

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-17 8/24/2016 2'	SBMP-17 8/24/2016 5'	SBMP-17 8/24/2016 7'	SBMP-17 8/24/2016 10'	SBMP-17 8/24/2016 12'	SBMP-17 8/24/2016 15'	SBMP-17 8/24/2016 17'	SBMP-17 8/24/2016 18'	SBMP-17 8/24/2016 19'	SBMP-17 8/24/2016 20'	SBMP-17 8/24/2016 21'	SBMP-17 8/24/2016 22'	SBMP-17 8/24/2016 23'	SBMP-17 8/24/2016 24'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	9.5	1.9	2.6	<0.5	<0.5	<0.5	1.9	3.1	406	3.5	32	91	33	37

TABLE 4
SOIL ANALYTICAL RESULTS - SHALLOW ZONE SOIL BORINGS

THORNTON SHOPPING CENTER
THORNTON, COLORADO

Source: (LTE 2017a)

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-19 8/24/2016 2'	SBMP-19 8/24/2016 5'	SBMP-19 8/24/2016 7.5'	SBMP-19 8/24/2016 10'	SBMP-19 8/24/2016 12.5'	SBMP-19 8/24/2016 14'	SBMP-19 8/24/2016 17.5'	SBMP-19 8/24/2016 18'	SBMP-19 8/24/2016 21'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	0.88	<0.5	1.4	<0.5	<0.5	0.73	1.9	<0.5	3.5

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-21 8/23/2016 2'	SBMP-21 8/23/2016 5'	SBMP-21 8/23/2016 6'	SBMP-21 8/23/2016 9'	SBMP-21 8/23/2016 11'	SBMP-21 8/23/2016 14'	SBMP-21 8/23/2016 15'	SBMP-21 8/23/2016 17'	SBMP-23 8/23/2016 2'	SBMP-23 8/23/2016 5'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	2.7	0.88	5.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-23 8/23/2016 7'	SBMP-23 8/23/2016 9'	SBMP-23 8/23/2016 10'	SBMP-23 8/23/2016 11'	SBMP-23 8/23/2016 12'	SBMP-23 8/23/2016 14'	SBMP-23 8/23/2016 15'	SBMP-23 8/23/2016 16'	SBMP-23 8/23/2016 17'	SBMP-23 8/23/2016 18'	SBMP-23 8/23/2016 19'	SBMP-23 8/23/2016 20'	SBMP-23 8/23/2016 21'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-25 8/23/2016 5'	SBMP-25 8/23/2016 7'	SBMP-25 8/23/2016 10'	SBMP-25 8/23/2016 12'	SBMP-25 8/23/2016 15'	SBMP-25 8/23/2016 16.5'	SBMP-25 8/23/2016 20'	SBMP-25 8/23/2016 21'	SBMP-25 8/23/2016 22'	SBMP-25 8/23/2016 23'	SBMP-25 8/23/2016 24'	SBMP-25 8/23/2016 25'	SBMP-25 8/23/2016 26'	SBMP-25 8/23/2016 27'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.88	<0.5	<0.5	<0.5	<0.5	1.7	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.63	<0.5	<0.5	<0.5	<0.5	0.50	<0.5
Tetrachloroethene	24,000	µg/kg	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	19	418	26	6.4	1.2	53	275	0.73

TABLE 4
SOIL ANALYTICAL RESULTS - SHALLOW ZONE SOIL BORINGS

THORNTON SHOPPING CENTER
THORNTON, COLORADO

Source: (LTE 2017a)

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-25 8/23/2016 28'	SBMP-25 8/23/2016 29'
Vinyl Chloride	59	µg/kg	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	193	0.68

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-27 8/23/2016 5'	SBMP-27 8/23/2016 7.5'	SBMP-27 8/23/2016 10'	SBMP-27 8/23/2016 12'	SBMP-27 8/23/2016 13'	SBMP-27 8/23/2016 14'	SBMP-27 8/23/2016 15'	SBMP-27 8/23/2016 16'	SBMP-27 8/23/2016 17'	SBMP-27 8/23/2016 18'	SBMP-27 8/23/2016 19'	SBMP-27 8/23/2016 20'	SBMP-27 8/23/2016 21'	SBMP-27 8/23/2016 22'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	1.8	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.51	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	2.1	5.6	4.3	11	7.5	42	20	299	182	11	163	22	146	20

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-29 8/22/2016 5'	SBMP-29 8/22/2016 7'	SBMP-29 8/22/2016 10'	SBMP-29 8/22/2016 12'	SBMP-29 8/22/2016 15'	SBMP-29 8/22/2016 17'	SBMP-29 8/22/2016 18'	SBMP-29 8/22/2016 19'	SBMP-29 8/22/2016 20'	SBMP-29 8/22/2016 21'	SBMP-29 8/22/2016 22'	SBMP-29 8/22/2016 23'	SBMP-29 8/22/2016 24'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
Tetrachloroethene	24,000	µg/kg	3.1	1.2	0.62	<0.5	<0.5	15	14	19	53	16	16	1,040	1,360

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	SBMP-31 8/22/2016 5'	SBMP-31 8/22/2016 8'	SBMP-31 8/22/2016 10'	SBMP-31 8/22/2016 12'	SBMP-31 8/22/2016 15'	SBMP-31 8/22/2016 16'	SBMP-31 8/22/2016 18'	SBMP-31 8/22/2016 19.5'	SBMP-31 8/22/2016 20'	SBMP-31 8/22/2016 20.5'	SBMP-31 8/22/2016 21'	SBMP-31 8/22/2016 21.5'	SBMP-31 8/22/2016 22'	SBMP-31 8/22/2016 23'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	3.1	0.56	<0.5	<0.5	6.7	3.9	<0.5	4.7	165	126	338	176	58	103

TABLE 4
SOIL ANALYTICAL RESULTS - SHALLOW ZONE SOIL BORINGS

THORNTON SHOPPING CENTER
THORNTON, COLORADO

Source: (LTE 2017a)

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	PZ-H 9/1/2016 2.5-3'	PZ-H 9/1/2016 3.5-4'	PZ-H 9/1/2016 5.5-6'	PZ-H 9/1/2016 6-5.7'	PZ-H 9/1/2016 8-8.5'	PZ-H 9/1/2016 8.75-9'	PZ-H 9/1/2016 10.5-11'	PZ-H 9/1/2016 11.5-12'	PZ-H 9/1/2016 12.5-13'	PZ-H 9/1/2016 13.5-14'	PZ-H 9/1/2016 14.5-15'	PZ-H 9/1/2016 16-16.5'	PZ-H 9/1/2016 17-17.5'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<250	<250
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<250	<250
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<250	<250
cis-1,2-Dichloroethene	160,000	µg/kg	0.8	1.6	1.4	1.5	4.7	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<250	<250
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<250	<250
Tetrachloroethene	24,000	µg/kg	28	42	435	89	86	2,420	11,700	**125,000**	9,230	19,500	1,850	16,700	**93,000**

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	PZ-H 9/1/2016 18-18.5'	PZ-H 9/1/2016 19.5-20'	PZ-H 9/1/2016 20.5-21'	PZ-H 9/1/2016 21.5-22'	PZ-H 9/1/2016 22-22.5'	PZ-H 9/1/2016 23-23.2'
Vinyl Chloride	59	µg/kg	<250	<250	<250	<10	<10	<25
1,1-Dichloroethene	230,000	µg/kg	<250	<250	<250	<10	<10	<25
trans-1,2-Dichloroethene	1,600,000	µg/kg	<250	<250	<250	<10	<10	<25
cis-1,2-Dichloroethene	160,000	µg/kg	<250	<250	<250	<10	<10	<25
Trichloroethene	940	µg/kg	<250	<250	<250	<10	<10	<25
Tetrachloroethene	24,000	µg/kg	**772,000**	**77,800**	**66,500**	9,470	2,890	6,010

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	PZ-I 9/1/2016 5'	PZ-I 9/1/2016 7'	PZ-I 9/1/2016 10'	PZ-I 9/1/2016 11'	PZ-I 9/1/2016 12'	PZ-I 9/1/2016 13'	PZ-I 9/1/2016 14'	PZ-I 9/1/2016 15'	PZ-I 9/1/2016 16'	PZ-I 9/1/2016 17'	PZ-I 9/1/2016 18'	PZ-I 9/1/2016 19'	PZ-I 9/1/2016 20'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5
Tetrachloroethene	24,000	µg/kg	23	14	8.3	1,880	206	107	197	78	582	46	2,440	679	13

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	PZ-J 9/2/2016 5'	PZ-J 9/2/2016 7'	PZ-J 9/2/2016 9'	PZ-J 9/2/2016 10'	PZ-J 9/2/2016 11'	PZ-J 9/2/2016 13'	PZ-J 9/2/2016 14'	PZ-J 9/2/2016 15'	PZ-J 9/2/2016 16'	PZ-J 9/2/2016 17'	PZ-J 9/2/2016 18'	PZ-J 9/2/2016 19'	PZ-J 9/2/2016 20'	PZ-J 9/2/2016 21'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<10	<0.5	<10	<25	<10	<0.5	<0.5	<10	<10	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<10	<0.5	14	<25	<10	<0.5	<0.5	<10	<10	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<10	<0.5	<10	<25	<10	<0.5	<0.5	<10	<10	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<10	<0.5	17	<25	15	<0.5	<0.5	<10	<10	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	8.4	55	<0.5	629	194	221	<0.5	<0.5	<10	14	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	51	620	4,100	31	19,800	4,900	**29,700**	13	54	829	3,500	18	36	6.2

TABLE 4
SOIL ANALYTICAL RESULTS - SHALLOW ZONE SOIL BORINGS

THORNTON SHOPPING CENTER
THORNTON, COLORADO

Source: (LTE 2017a)

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	PZ-J 9/2/2016 22'	PZ-J 9/2/2016 22.5'	PZ-J 9/2/2016 23'	PZ-J 9/2/2016 23.5'	PZ-J 9/2/2016 24'
Vinyl Chloride	59	µg/kg	<0.5	<10	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<10	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<10	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<10	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<10	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	193	4,540	156	275	41

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	PZ-K 9/1/2016 5'	PZ-K 9/1/2016 7'	PZ-K 9/1/2016 9'	PZ-K 9/1/2016 10'	PZ-K 9/1/2016 11'	PZ-K 9/1/2016 13'	PZ-K 9/1/2016 14'	PZ-K 9/1/2016 15'	PZ-K 9/1/2016 16'	PZ-K 9/1/2016 17'	PZ-K 9/1/2016 18'	PZ-K 9/1/2016 19'	PZ-K 9/1/2016 20'	PZ-K 9/1/2016 20.5'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	1.1	1.7	21	23	0.61	1.6	<0.5	1.5	1.7	<0.5	<0.5	3.4	1.1	0.79

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	PZ-L 9/1/2016 3'	PZ-L 9/1/2016 4'	PZ-L 9/1/2016 5'	PZ-L 9/1/2016 6'	PZ-L 9/1/2016 7'	PZ-L 9/1/2016 8'	PZ-L 9/1/2016 9'	PZ-L 9/1/2016 10'	PZ-L 9/1/2016 11'	PZ-L 9/1/2016 12'	PZ-L 9/1/2016 13'	PZ-L 9/1/2016 14'	PZ-L 9/1/2016 15'	PZ-L 9/1/2016 16'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	24,000	µg/kg	3.6	<0.5	3.4	1.5	5.2	1.0	13	32	1.1	12	18	9.0	5.3	2.8

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	PZ-L 9/1/2016 17'	PZ-L 9/1/2016 18'	PZ-L 9/1/2016 19'	PZ-L 9/1/2016 20'	PZ-L 9/1/2016 21'	PZ-L 9/1/2016 22'	PZ-L 9/1/2016 22.5'	PZ-L 9/1/2016 23'	PZ-L 9/1/2016 23.5'	PZ-L 9/1/2016 24'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5
trans-1,2-Dichloroethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5
cis-1,2-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	0.74	<0.5	<0.5	<10	<0.5
Tetrachloroethene	24,000	µg/kg	8.3	1.0	1.8	2.5	45	19	40	76	428	99

Notes:

bgs = below ground surface
µg/kg = micrograms per kilogram
< = less than the indicated laboratory reporting limit
EPA = United States Environmental Protection Agency
RSL = Regional Screening Level
Bold indicates concentration that exceeds the May 2016 EPA RSL

TABLE 6
SOIL ANALYTICAL RESULTS - DEEP ZONE SOIL BORINGS

THORNTON SHOPPING CENTER
THORNTON, COLORADO

Source: (LTE 2017a)

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	MW-22 10/21/2016 25.5'	MW-22 10/21/2016 31'	MW-22 10/21/2016 36.5'	MW-22 10/13/2016 37.5'	MW-22 10/21/2016 41'	MW-22 10/21/2016 45.3'	MW-22 10/21/2016 51.5'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-Dicholorethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetracholorethene	24,000	µg/kg	22	8.8	6.1	19	3.1	542	5,320

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	MW-22 10/14/2016 53'	MW-22 10/21/2016 55'	MW-22 10/21/2016 60'	MW-22 10/24/2016 66.5'	MW-22 10/24/2016 68.5'	MW-22 10/24/2016 73'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-Dicholorethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-Dichloroethene	160,000	µg/kg	3.9	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	3.0	<0.5	<0.5	<0.5	<0.5	<0.5
Tetracholorethene	24,000	µg/kg	249	271	39	0.60	6.9	3.6

Sample Location: Date Sampled: Sample Depth (feet bgs):	EPA Residential Soil RSL (May 2016)	Units	MW-23 10/22/2016 30'	MW-23 10/14/2016 31-33.5'	MW-23 10/22/2016 35-40'	MW-23 10/25/2016 41-46'	MW-23 10/26/2016 47-52'
Vinyl Chloride	59	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	230,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans-Dicholorethene	1,600,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis-Dichloroethene	160,000	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	940	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Tetracholorethene	24,000	µg/kg	6.1	42	54	2.1	20

Notes:

bgs = below ground surface

µg/kg = micrograms per kilogram

< = less than the indicated laboratory reporting limit

EPA = United States Environmental Protection Agency

RSL = Regional Screening Level

Source: (Freedom 2006a)

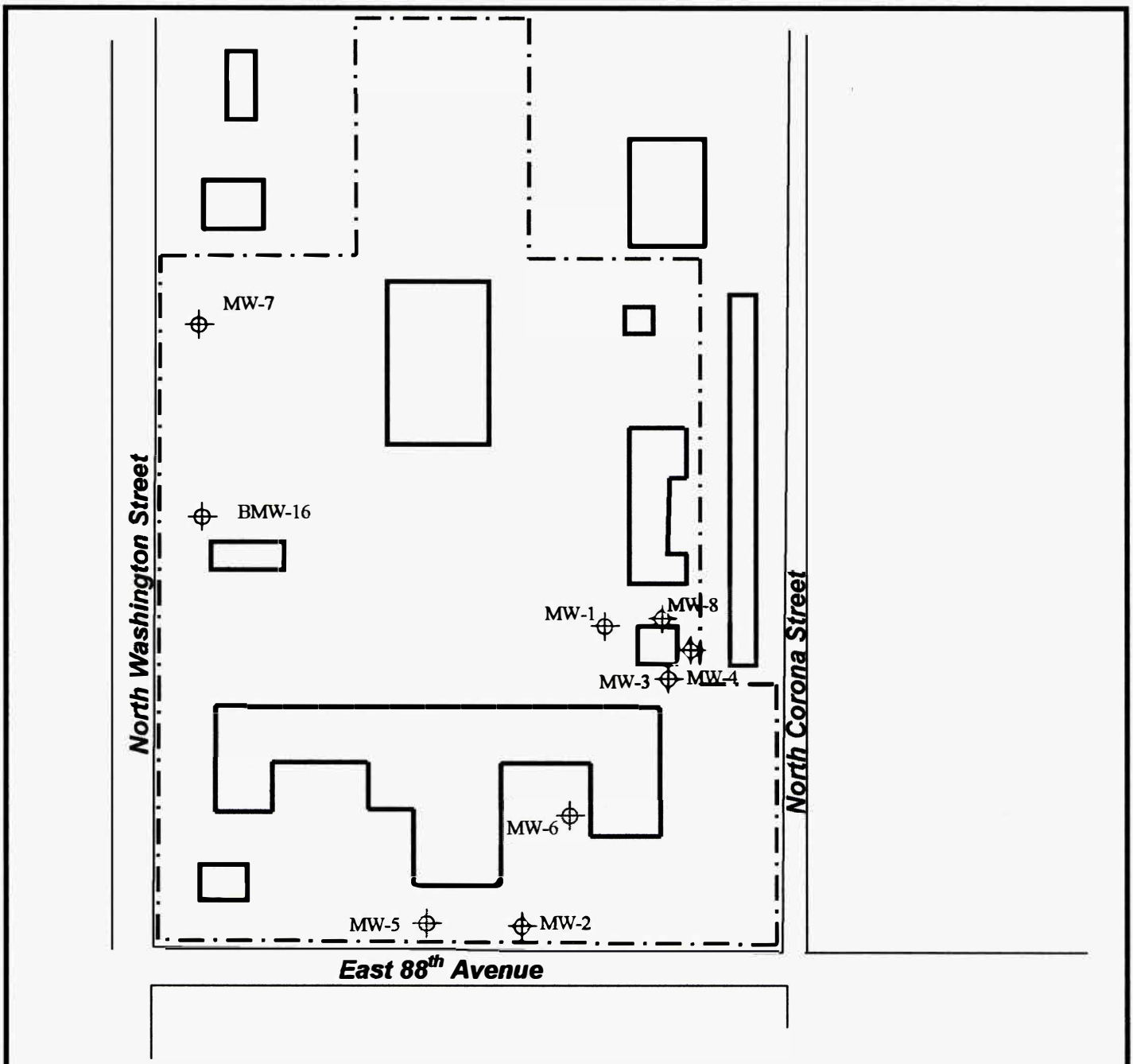
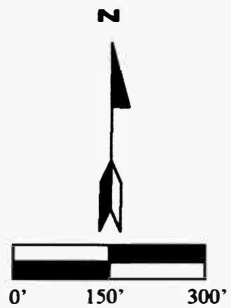


FIGURE 3

INITIAL INVESTIGATION WELL LOCATIONS

THORNTON SHOPPING CENTER PROPERTY
NEC 88TH AVENUE & WASHINGTON STREET
THORNTON, COLORADO

PROJECT NO. 0605-064



FREEDOM ENVIRONMENTAL
CONSULTANTS, INC.

Source: (Freedom 2006a)

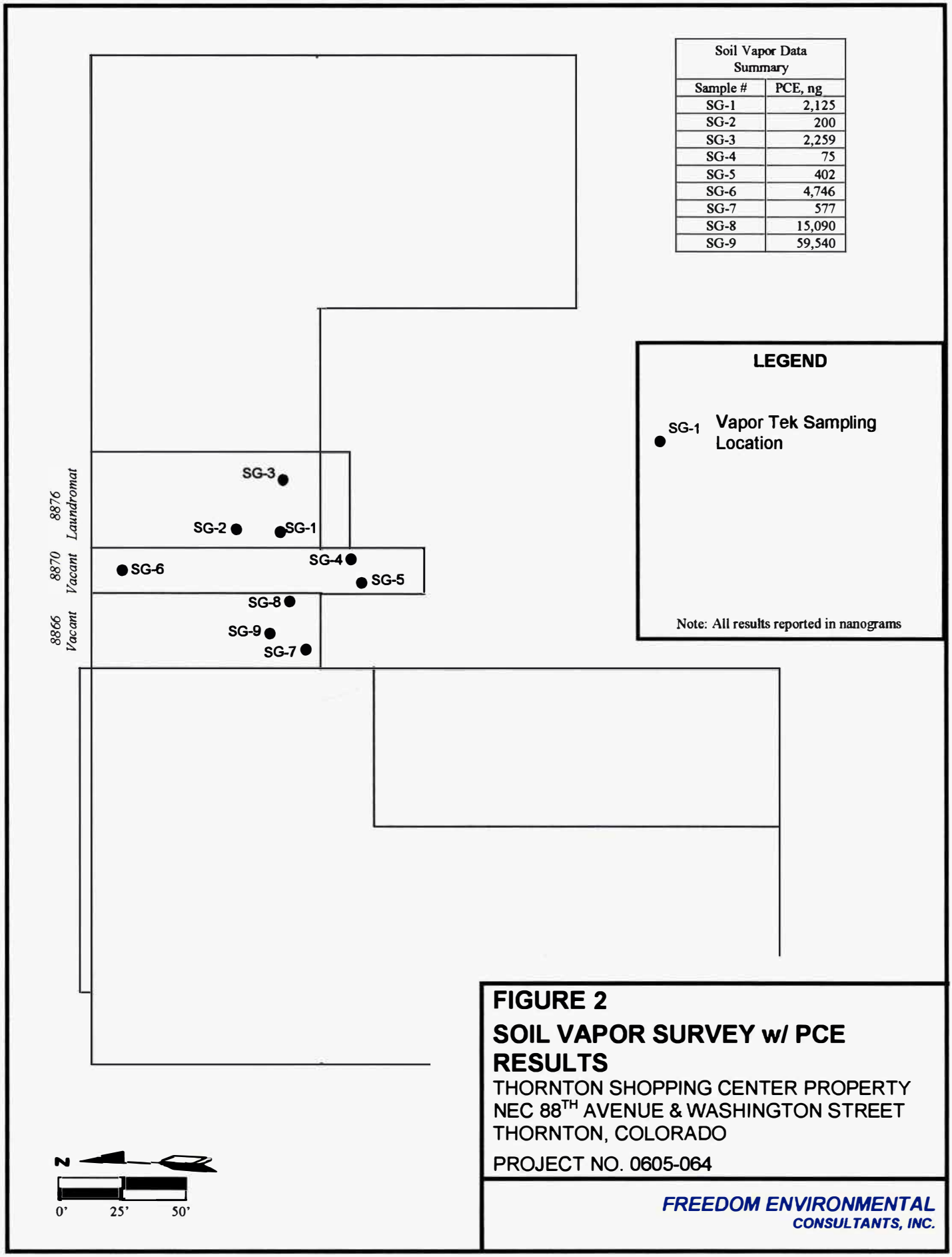
Table 3-2
Thornton Shopping Center
Summary of Soils Laboratory Analytical Data
Results reported in mg/Kg

Sample # (Depth)	Sample Date	PCE	TCE	CB	12DCB	13DCB	14DCB	c12DCE	124TMB	nBuB	X
Initial Investigation											
MW-2-4 (20')*	9/28/2005	0.0094	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-4-0 (1')	9/28/2005	2.0	0.017	ND	ND	ND	ND	ND	ND	ND	ND
MW-4-1 (5')	9/28/2005	0.0091	ND	0.007	ND	ND	ND	ND	ND	ND	ND
MW-6-4 (20')*	9/29/2005	0.39	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-7-1 (5')	9/29/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-8-2 (10')	9/29/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Second Phase Investigation											
MW-11 @ 15' (15')	3/6/2006	0.46	ND	ND	0.0086	ND	ND	ND	0.005	ND	ND
MW-11 @ 17' (17')*	3/6/2006	8.0	0.028	ND	0.31	0.14	0.14	0.046	0.014	0.0052	ND
MW-12 @ 15' (15')	3/7/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-1 @ 13' (13')	3/6/2006	18.0	0.014	ND	ND	ND	ND	ND	0.08	ND	0.005
SB-1 @ 19' (19')*	3/6/2006	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-2 @ 15' (15')	3/6/2006	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-2 @ 19' (19')*	3/6/2006	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-3 @ 15' (15')	3/7/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-3 @ 19' (19')*	3/7/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-4 @ 15' (15')	3/7/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

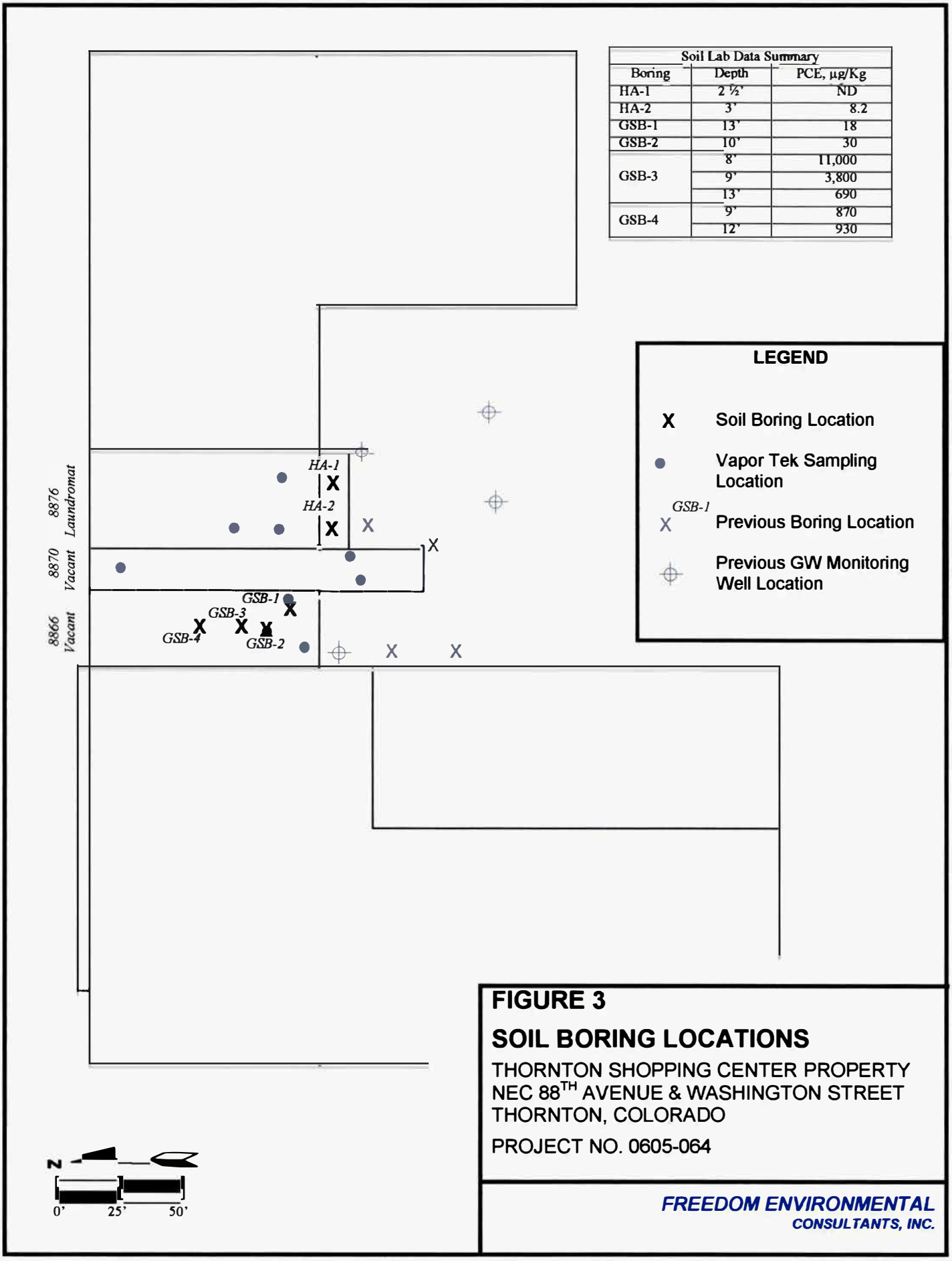
NOTES:
* Indicates the sample was collected from below the free water level
ND Not detected above the reporting limit
mg/Kg Milligrams per kilogram

PCE Tetrachloroethene
TCE Trichloroethene
CB Chlorobenzene
12DCB 1,2-Dichlorobenzene
13DCB 1,3-Dichlorobenzene
14DCB 1,4-Dichlorobenzene
c12DCE cis-1,2-Dichloroethene
124TMB 1,2,4-Trimethylbenzene
nBuB n-Butylbenzene
X Xylenes

Source: (Freedom 2006b)



Source: (Freedom 2006b)



Source: (Freedom 2006b)

TABLE 2-3
Thornton Shopping Center
Summary of Soil Sample Laboratory Results

Sample #	Depth, ft.	Date	PID, ppm	PCE, µg/Kg
GSB-1-5A	13	7/11/06	1.1	18
GSB-2-3B	10	7/11/06	106	30
GSB-3-2D	8	7/11/06	516	11,000
GSB-3-3A	9	7/11/06	189	3,800
GSB-3-5A	13	7/11/06	980	690
GSB-4-3A	9	7/11/06	23.8	870
GSB-4-4B	12	7/11/06	1,337	930
HA-1	2 ½	6/6/2006	0	ND
HA-2	3	6/6/2006	0	8.2

NOTES:
ND Not detected above the reporting limit
µg/Kg Micrograms per kilogram
ppm Parts per million (in air)

PCE Tetrachloroethene