Colorado Department of Public Health and Environment

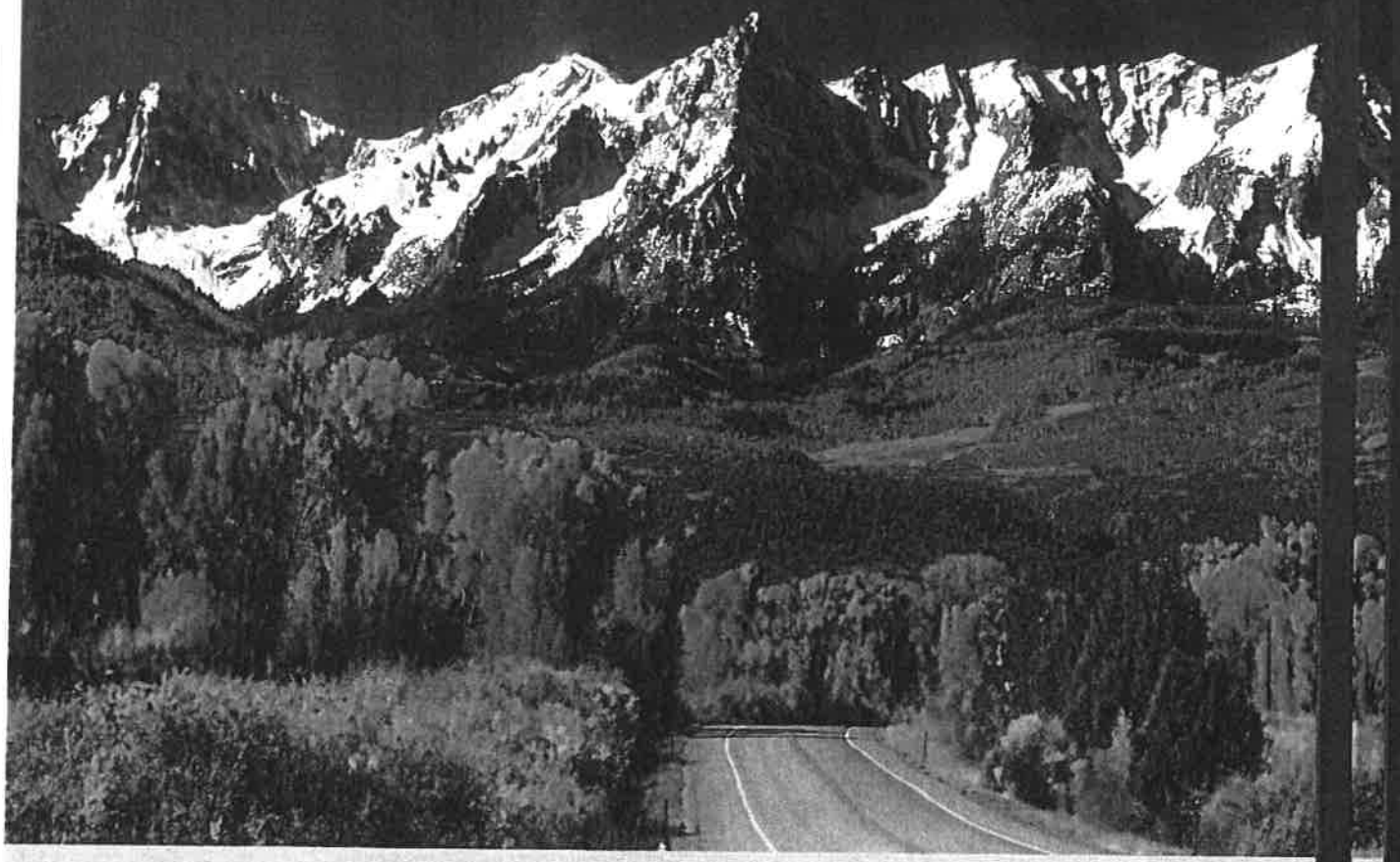
Hazardous Materials and Waste Management Division

Targeted Brownfields Assessment - Analytical Results Report

222 West Bridge Street Site

Hotchkiss, Delta County, Colorado

COLORADO
Hazardous Materials
& Waste Management Division
Department of Public Health & Environment



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TARGETED BROWNFIELDS ASSESSMENT - ANALYTICAL RESULTS REPORT
PHASE II ENVIRONMENTAL SITE ASSESSMENT
222 BRIDGE STREET SITE
HOTCHISS, COLORADO

1.0 INTRODUCTION

The Hazardous Materials and Waste Management Division (HMWMD) of the Colorado Department of Public Health and Environment (CDPHE) has prepared a Targeted Brownfields Assessment (TBA) Analytical Results Report (ARR) following a Phase II assessment of 222 Bridge Street located in Hotchkiss, Delta County, Colorado (the "Site"). This TBA was conducted consistent with all requirements set forth under ASTM E1903-19 *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

This TBA ARR is the result of a Phase II assessment conducted between 2/9/2022 and 2/10/2022, as well as, a Lead Based Paint (LBP) and Asbestos Containing Material (ACM) assessment conducted on 6/22/2021. The assessments were conducted at the request of the Town of Hotchkiss in anticipation of sale and eventual redevelopment of the onsite building (TBA Application, 2021). This ARR evaluated Site indoor air quality, as well as, the presence of LBP and ACM. A total of four indoor air, one outdoor ambient air, and 17 ACM samples were collected. Additionally, 38 X-ray fluorescence readings for LBP were taken.

2.0 OBJECTIVES

The primary objective of this TBA is to characterize and quantify the level of contaminants associated with the onsite building indoor air and building materials. This TBA called for the collection of samples and non-sampling data to characterize and determine potential impacts to human health. The objectives of this TBA are to:

- Identify, compile and inventory all Recognized Environmental Conditions (RECs) as per 40 CFR Part 312, *Standards and Practices for All Appropriate Inquiries*;

- Collect indoor air and building material samples to characterize the potential for volatile organic compounds (VOCs), LBP, and ACM contamination and compare to EPA Regional Screening Levels (RSLs) and CDPHE guidance. If the concentration is below the guidance for the particular use, then no cleanup is required. If it is above the guidance, then abatement/remediation may be necessary prior to sale and/or redevelopment of the Site.

3.0 BACKGROUND INFORMATION

3.1 LOCATION AND SITE DESCRIPTION

The town of Hotchkiss has a population of 890 persons and is located in eastern Delta County on the north side of the North Fork Gunnison River. The subject property is located in downtown Hotchkiss, Colorado at 222 West Bridge Street. The site coordinates are 38.79930 North latitude and -107.72286 West longitude, Figure 1. The site is comprised of a vacant 6,100 square foot structure and associated asphalt parking area which surrounds this structure. The entire site is approximately 0.5 acres in size.

3.2 SITE HISTORY AND PREVIOUS WORK

The on-site structure was built in the 1940's and expanded upon in the 1960s to its current configuration. Delta County used the Site as a shop for their Road and Bridge Department from the 1950s through the mid-1980s (Hotchkiss 2021). In February 1989 the Town of Hotchkiss started the process of removing two underground fuel storage tanks at the old Public Works Building. The Colorado Department of Health Waste Management Division assigned ID# 0008439 to the project. On January 4, 1990 a letter was sent to Kenneth Mesch, Section Chief, Colorado Department of Health Waste Management Division containing soil test results, and confirm completion of the excavation and cleanup of contaminated soil. It was noted in that letter that a portion of hydrocarbon contaminated soil was left in place as removal would compromise the structural integrity of the building (Hotchkiss 2021).

Table 1 - RACM Results

Homogenous Area(s)/ACM Description	Condition	Friable/Non-Friable	Analytical Result	Approx. Quantity	Material Location
TS101 - White boiler insulation	Significantly damaged	Friable	85% Chrysotile	100 ft^2	Basement
WG01 - White window glazing	Good	Non-friable	9-12% Chrysotile	26 ft^2	All windows (13)
FT01 - 9"X9" gray/green floor tile	Good	Friable	2% Chrysotile	182 ft^2	Main Office

Table 2 - Non-RACM Results

Homogenous Area(s)/ACM Description	Condition	Friable/Non-Friable	Analytical Result	Approx. Quantity	Material Location
TAR01 - Gray roof tar	Significantly damaged	Non-friable	20% Chrysotile	2 ft^2	Roof by chimney

Table 3 - Presumed ACMs Results

Homogenous Area(s)/ACM Description	Condition	Friable/Non-Friable	Analytical Result	Approx. Quantity	Material Location
*West roof - polyurethane orange roof	Good	Non-friable	Not Applicable	2,400 ft^2	West roof

*The orange polyurethane roof is typically no considered suspect ACM. It has been reported that the original roof may be below the polyurethane roof and for this reason is identified as a Presumed ACM.

5.2 LBP

The U.S. Department of Housing and Urban Development (HUD) defines lead-based paint a lead equal to or greater than 1.0 mg/cm^2. All XRF readings below the HUD regulatory definition are considered negative and all reading above this level are considered positive. A total of 38 locations were analyzed for lead in paint. Two positive XRF readings from the interior and exterior inspection are highlighted in Table 4.

Common renovation activities like sanding, cutting, and manual component demolition can create hazardous lead dust and chips by disturbing LBP, which can be harmful to adults and children. CDPHE or EPA certified firms should be used in the abatement/removal of LBP prior to renovation activities occurring.

Table 4 - Lead Based Paint Positive Results

Reading #	Sample Location	mg/cm^2	Result	Date	Condition
12	Back door - white wood door	2.4	Positive	6/22/2021	Fair
13	Back door - white wood jamb	1.5	Positive	6/22/2021	Fair

5.3 VOCs

In cases where VOCs have been released into the environment, the primary risk to area targets is commonly through vapor intrusion (VI). VI can occur when contaminants in the soil or groundwater volatilize, then migrate and accumulate in enclosed structures. When vapor intrusion impacts buildings, typically basements or low-levels are predominantly affected, although that is not always the case.

The EPA has developed Regional Screening Levels (RSLs) that are chemical-specific concentrations for individual contaminants in air, drinking water and soil that may warrant investigation or site cleanup. While the RSLs are not considered to be cleanup levels, it is appropriate to use them to evaluate the environmental conditions present at a site.

The results of the of the indoor and outdoor ambient air samples have been compared to the Residential and Work Remediation Goals (RGs) for benzene, toluene, ethylbenzene and total xylenes (BTEX) in Tables 5 and 6, respectively. BTEX are the most commonly associated VOCs with hydrocarbon contamination. The RGs represent a cancer risk of 10^{-6} for benzene and ethylbenzene, and a non-cancer risk of 10^{-6} for toluene and total xylenes and are the most conservative RSL values.

7.0 SUMMARY

Due to the age of construction of the 222 West Bridge St. on-site building and the hydrocarbon contamination that was reported to be left in place near the building foundation, the town of Hotchkiss requested CDPHE perform a Targeted Brownfields Assessment on the property.

The primary objectives of this TBA were to determine if LBP or ACM was present in the building construction materials and if VOCs from the hydrocarbon contamination were entering the building via vapor intrusion. CDPHE contracted with Foothills Environmental Inc. to conduct an ACM and LBP investigation which was completed on 6/22/2021. CDPHE staff conducted an indoor air VOC sampling event between 2/9 and 2/10/2022.

Foothills collected 17 ACM samples as part of their investigation. Their sampling efforts resulted in the identification of 308 ft^2 RACM, 2 ft^2 of Non-RACM, and 2,400 ft^2 of presumed ACM. Based on the ACM sampling results both CDPHE and Foothills recommends the development of an ACM abatement Work Plan by a certified asbestos consulting firm prior to removal/abatement of any ACM. Additionally, the use of certified asbestos abatement firms is recommend for the removal of ACM prior to renovation of the on-site building.

Additionally, Foothills took 38 interior and exterior XRF readings for the identification of LBP in the on-site buildings. A total of 2 of the 38 readings were positive for LBP in one homogenous area. The paint is located on a door and door jamb in the north-central area of the building. CDPHE recommends that LBP abatement be conducted by state-certified firms and individuals. State requirements include training, certification, accreditation and work practice standards. The requirements apply to buildings constructed prior to 1978 and be found in Colorado Air Quality Control Regulation No. 19.

CDPHE staff collected four indoor air, one outdoor ambient air, and one duplicate sample that were analyzed for VOCs. The reported concentrations of BTEX were

compared to EPA RSLs for both Residential and Worker RGs. All sample detections were below the Worker RGs for all BTEX. All sample detections were also below the Residential RGs for all BTEX with the exception of benzene. Sample concentrations for benzene ranged from 0.80 $\mu g/m^3$ to 0.95 $\mu g/m^3$. While this is an exceedance of the 0.36 $\mu g/m^3$ Residential RG, none of the samples exceed the Residential Action Level of 3.6 $\mu g/m^3$. It should also be noted that during the 12 hour sampling timeframe, CDPHE staff noted that a CAT 416C excavator was moved into the on-site building for storage. Despite the operation of heavy machinery in proximity to Hotch-IA-3 and Hotch-AA-1, it does not appear to have impacted the BTEX concentrations evaluated by this TBA.

The Town of Hotchkiss has stated the planned reuse of the onsite building will be for commercial purposes so comparison the worker RSLs are likely the more accurate comparison values. The indoor air sampling results indicate that there is not an impact from UST previously located on the property. CDPHE does not recommend further action with regards to VOCs associated with the former UST.

This TBA was conducted consistent with all requirements set forth under ASTM E1903-19 *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

10.0 REFERENCES

Colorado Geological Survey (CGS). *Surficial Geology Hotchkiss-Poania Reservoir Area Delta and Gunnison Counties, Colorado*. 1978

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