



Environmental, Safety, & Engineering

Ohio | New York | New Jersey | Colorado

DRAFT ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES

**Northwest Pipeline Building
315 East 200 South
Salt Lake City, Salt Lake County, Utah**

October 23, 2024

PREPARED FOR:

Ms. Catherine Wyffels
Air Quality & Environmental Program Manager
Department of Sustainability
Salt Lake City Corporation
451 South State Street
Salt Lake City, Utah 84111
Project #: 2373.01

PREPARED BY:

Partners
31100 Solon Road, Suite G
Solon, Ohio 44139
(800) 763-1363 (phone)

This report has been prepared by Partners for the benefit of our Client in accordance with the approved scope of work. Partners assumes no liability for the unauthorized use of information, conclusions or recommendations included in this report by a third party.

31100 Solon Road, Suite G, Solon, Ohio 44139

www.partnersenv.com

phone: (800) 763-1363

TABLE OF CONTENTS

1.0 INTRODUCTION AND BACKGROUND 1

 1.1 Site Location 1

 1.2 Forecasted Climate Conditions..... 1

 1.3 Previous Site Use 1

2.0 PREVIOUS INVESTIGATIONS 1

3.0 APPLICABLE REGULATIONS AND CLEANUP STANDARDS..... 3

5.0 EVALUATION OF CLEANUP ALTERNATIVES AND COSTS FOR ACM 3

6.0 ACM ABATEMENT & REMOVAL RECOMMENDATION 5

7.0 GREEN AND SUSTAINABLE REMEDIATION MEASURES FOR SELECTED ALTERNATIVE... 5

DRAFT

1.0 INTRODUCTION AND BACKGROUND

1.1 Site Location

The vacant Former Northwest Pipeline Building (a.k.a. Former Public Safety Building) is located at 315 East 200 South, Salt Lake City, Salt Lake City, Utah (Property). The Property consists of approximately 0.47 acres and is currently developed with an approximately 112,114-square-foot eight (8)-story commercial building. The Property encompasses one (1) individual tax parcel identified as Assessor Parcel 16-06-205-029-0000 and is currently owned by Salt Lake City Corporation.

Salt Lake City (City), intends to complete a cleanup of asbestos containing materials (ACM) at the Property in preparation for its sale to the Housing Authority of Salt Lake City (HASLC), which intends to redevelop the Property for affordable housing, meeting a critical housing need in the City.

1.2 Forecasted Climate Conditions

According to the US Global Change Research Program (USGCRP), climate trends for the Southwest region of the United States include increased heat, drought, wildfires, and insect outbreaks, all linked to climate change. Declining water supplies, reduced agricultural yields, health impacts in cities due to heat, and flooding are additional concerns. Snowpack and streamflow amounts are projected to decline in parts of the Southwest, decreasing surface water supply reliability for cities, agriculture, and ecosystems.

According to the Federal Emergency Management Agency (FEMA) Flood Zone Map 49035C0144H, the Property is located in a Minimal Flood Hazard Area as determined by FEMA (<https://fema.gov>).

The Property is located in an urbanized area of the City, with little wildfire risk. There is an established fire department within close proximity of the Property.

The Property is developed with a vacant office building. The building can be heated or cooled to accommodate extreme conditions for interior abatement or work hours can be adjusted to avoid extreme heat or cold conditions.

The vacant office building is of substantial construction having remained in good condition since 1958 when it was constructed, demonstrating its structurally sound condition and resiliency. It has been upgraded to meet seismic standards.

Based on the nature of the Property, the changing climate trends are not likely to significantly affect the Property.

1.3 Previous Site Use

The Property was first developed for residential purposes since at least 1889, when at least one (1) dwelling was identified on the site. By 1898, the Property was developed for commercial use with at least six (6) stores. In the early 1900s, apartment complexes were razed on the Property. A prior commercial building was razed by 1958, when the Property was redeveloped as the Northwest Pipeline Building. Subsequent renovations to the building occurred in 1988, when the Property was redeveloped as the Salt Lake City Public Safety Building, which included fire and police department headquarters. The Salt Lake City Public Safety Building closed in approximately 2012, and the Property has remained vacant since.

2.0 PREVIOUS INVESTIGATIONS

The following reports pertaining to the Property were provided by the Client.

- *Asbestos Abatement, Removal and Disposal, 315 East 200 South, Salt Lake City, Utah*, prepared for Pacific Northwest Realty Corp. by Industrial Health Inc. (IHI) and dated June 8, 1987.
- *Hazardous Material Inspection, Salt Lake County Public Safety Building, 315 East 200 South, Salt Lake City, Utah 84111*, prepared for Salt Lake County Housing and Neighborhood Development

Division, Community and Economic Development by Health and Safety Services (HSS) and dated July 23, 2015.

- *Asbestos and Universal Waste Re-Inspection, Public Safety Building and Annex, 315 East 200 South and 327 East 200 South, Salt Lake City, Utah*, prepared for Form Development by Terracon Consultants, Inc. (Terracon) and dated June 2, 2016.

The results of the previous reports are discussed below.

IHI Asbestos Abatement, Removal and Disposal (1987)

This document contains architectural plans of the building showing areas designated for the removal of various ACM including sprayed asbestos acoustical layer, steel lath and plaster ceilings and acoustical asbestos overspray above the ceiling, pipe insulation, and boiler breeching insulation. No documentation is provided (e.g., abatement specifications, photos, disposal documentation) to show that the abatement work had been completed, but site inspections suggest that some abatement occurred.

HSS Hazardous Material Inspection (2015)

The purpose of the inspection was to collect samples of suspect asbestos-containing building materials throughout the Former Public Safety Building and test those samples for asbestos in anticipation of future renovation or demolition activities at the Property. This work supported a failed redevelopment plan.

Based on the laboratory results, greater than 1% asbestos was contained in the following building materials and locations:

- Fireproofing (6th floor, only);
- Floor Tile 9" and mastic;
- Sink Coat;
- Duct Caulk;
- Door Insulation;
- Exterior Caulk Gasket ;
- Roofing;
- Window Glaze;
- Thermal System Insulation; and
- Stair Tread.

The vertical chase behind the elevator bank and between the two (2) restrooms was reported to have thermal systems insulation (TSI) pipe insulation debris. These materials were assumed ACM.

Several building materials were confirmed to contain trace amounts (1% or less) of asbestos. These trace materials include, but are not limited to:

- Fireproofing (on ceiling decks and vertical beams);
- Fireproofing (at seismic tie-ins);
- Lath and Plaster; and
- Sheetrock System.

HSS also conducted an inventory of other hazardous waste. The purpose was to identify other hazardous wastes or materials in the structure that require special handling and disposal prior to renovation/demolition activities. Sampling of these materials was not included in the scope of work. The inventory listed the quantities of fluorescent lamps, fluorescent light ballasts, refrigeration units, mercury thermostats, petroleum products/solvents, cleansers, paints, boiler treatment chemicals and roofing tar.

Terracon Asbestos and Universal Waste Re-Inspection (2016)

The objective of the Terracon re-inspection was to review the prior HSS report in order to develop a plan for resampling materials and assess universal waste that may not have been included in the HSS report. This work supported a failed redevelopment plan.

Terracon collected additional samples of fireproofing and plaster for laboratory analysis. The lab results confirmed those of the HSS inspections, except that the additional samples of fireproofing on the 6th floor did not contain greater than 1% asbestos.

Additional materials tested and found to be ACM included vapor barrier (black tar) and lab countertop.

Recessed light fixtures with assumed asbestos-containing wiring insulation were found within the overhang at the entrance to the 1st floor of the building.

Fluorescent light fixtures were re-evaluated during the inspection, since these were not fully evaluated in the HSS report. Terracon found approximately 2,550 four (4)-foot mercury-containing lamps and 1,275 fluorescent light ballasts in the building. Some of these light ballasts are labeled to contain polychlorinated biphenyls (PCBs).

3.0 APPLICABLE REGULATIONS AND CLEANUP STANDARDS

Asbestos-containing materials are regulated by the Utah Division of Air Quality (DAQ) requirements found in the Utah Air Quality Rule R307-801. Materials with asbestos concentrations greater than 1% are classified as ACM and are a regulated material.

Trace materials (materials containing 1% or less asbestos) are not regulated by the Utah DAQ or the United States Environmental Protection Agency (US EPA) and, therefore, may remain during demolition/renovation activities. However, the Occupational Safety and Health Administration (OSHA) protocol must be followed when disturbing materials containing any amount of asbestos. Therefore, if the removal of trace materials is deemed appropriate, it is recommended that trace materials be removed by an OSHA trained contractor under criteria outlined in *OSHA Standard 29 CFR.1926.1101*.

The removal of asbestos will be conducted following a Specification prepared by a Utah certified Asbestos Project Designer.

All ACM abatement work will be performed by a licensed General Abatement Contractor (GAC) in accordance with Utah Air Quality Rule R307-801.

Oversight of the asbestos contractor will be conducted by a qualified Project Designer or Contractor/Supervisor, in accordance with qualifications stated in Utah Air Quality Rule R307-801. The qualified Project Designer or Contractor/Supervisor will act to ensure all applicable regulations are being followed and to conduct full visual inspections of asbestos abatement work areas. Following visual inspection, clearance testing will be conducted so that work areas can be deemed clean. Clearance samples must be analyzed under methods required by the National Institute for Occupational Safety and Health (NIOSH) #7400 and must show less than 0.01 fiber per cubic centimeter (fibers/cc) of asbestos in work area air.

5.0 EVALUATION OF CLEANUP ALTERNATIVES AND COSTS FOR ACM

To address contamination at the Property, three (3) different alternatives were considered, including Alternative #1: No Action, Alternative #2: Partial ACM Abatement and partial removal of OSHA regulated materials, and Alternative #3: Complete ACM Abatement and complete removal of OSHA regulated materials.

The Alternatives were developed based on the anticipated renovation plans prepared by the architect working with HASLC. The Property is to be redeveloped into affordable housing on floors 2-8, with retail on the first floor, street level.

Alternative #1 – No Action

With this alternative, the Owner would take no action to remediate the Property, leaving all ACM in-place. Two (2) possible approaches could be considered, 1) sealing off the building and restriction on entry, or 2) management of asbestos in-place with reuse of the buildings. However, in either case, an Operation and Maintenance (O&M) Plan will be required, and annual costs will be incurred to implement the O&M Plan

over the useful life of the building. The costs of abatement will be deferred into the future when ACM abatement will be needed, and a significant increase for inflation should be anticipated.

1. Effectiveness – The No Action alternative would not facilitate the planned re-use of the Property because renovation is needed, and the No Action alternative would rely on keeping all materials undisturbed.
2. Implementability – This alternative is implementable but not practical since the planned re-use of the Property includes the renovation of the building for residential use. If the ACM remains, it will require OSHA notifications to workers and occupants, and development of an Operations and Maintenance (O&M) Plan to manage asbestos in-place, and significantly limit the use of the building.
3. Cost – There would be a long term, deferred cost for the No Action alternative. Notifications to occupants and workers would require constant updating. Any time asbestos would be disturbed, it would require a response following the O&M Plan, and proper abatement/disposal. Eventually, at the end of the useful life of the building, the asbestos would need to be removed and properly disposed at a cost that, with inflation, will likely be greater than the cost of Alternative # 1 and Alternative # 3 combined.

Alternative #2 – Partial ACM Abatement

With this alternative, the Owner would contract to have portions of the ACM removed from the building. Some of the Utah DEQ-regulated and OSHA-regulated ACM would remain, and an Operation and Maintenance (O&M) Plan will be required as discussed in Alternative #1.

1. Effectiveness – This alternative would be effective in eliminating those materials that would be disturbed by renovation activities in the building. This alternative would facilitate the planned re-use of the Property. This alternative would rely on keeping any remaining ACM undisturbed and managing it under an O&M Plan.
2. Implementability – This alternative is implementable and practical since the planned re-use of the Property includes the renovation of building for residential use. It will require OSHA notifications to workers and occupants and development of an O&M Plan, which will not significantly limit the use of the building since the majority of ACM in areas with high potential for disturbance will have been removed. Remaining ACM will remain in areas where planned renovations will not disturb it.
3. Cost – The cost includes preparing a Quality Assurance Project Plan (QAPP), Sampling and Analysis Plan (SAP), Health and Safety Plan (HASP), ACM Abatement Specifications for partial abatement, bid documents, bid review, abatement oversight, clearance sampling, project coordination, and preparing a Completion Report and an O&M Plan. The costs do not include the eventual cost of ACM abatement at the end of the useful life of the building.

Alternative #3 – Abatement and Removal of All ACM

With this alternative, the Owner would contract to have all Utah DAQ and OSHA regulated ACM removed from the building prior to renovation. This alternative would allow for future planned use of the Property.

1. Effectiveness – This alternative would be effective in removing all regulated ACM from the building.
2. Implementability – This alternative is implementable since the planned re-use of the Property includes the renovation of the building for residential use.
3. Cost – The cost includes preparing a Quality Assurance Project Plan (QAPP), Sampling and Analysis Plan (SAP), Health and Safety Plan (HASP), ACM Abatement Specifications for complete abatement, bid documents, bid review, abatement oversight, clearance sampling, project coordination, and preparing a Completion Report. The cost far exceeds existing funding for the reuse of the Property.

Cleanup Alternatives Cost Table – ACM Abatement

| Cleanup Alt. | ACM Abatement Specifications, and Bid Coordination (1) | Project Coordination | Oversight and Clearance Sampling | ACM Abatement Contractor (4) | Completion Report | Asbestos O&M Plan and Monitoring | Total |
|----------------|--|----------------------|----------------------------------|------------------------------|-------------------|----------------------------------|---------------|
| Alternative #1 | \$0 | \$0 | \$0 | \$0 | \$0 | \$215,000 (5) | \$215,000 (7) |
| Alternative #2 | \$45,000 | \$50,000 | \$350,000 (2) | \$3,139,304 | \$20,000 | \$15,000 (6) | \$3,619,304 |
| Alternative #3 | \$65,000 | \$40,000 | \$525,000 (3) | \$8,106,663 | \$20,000 | \$0 | \$8,756,663 |

- (1) Preparation of QAPP (\$15,000), ACM Abatement Specifications, preparation of bid documents, review of bids and recommendations.
- (2) The cost for project oversight and clearance is based on a total of 100 work shifts at \$3,500 per shift.
- (3) The cost for project oversight and clearance is based on a total of 150 work shifts at \$3,500 per shift.
- (4) Price includes the estimated cost of cleaning and abating the TSI debris and pipe insulation located in the vertical chase between the restrooms. Materials were not quantified and costs may vary based on actual quantities and conditions.
- (5) Includes the preparation of an O&M Plan (\$15,000) and annual costs to implement the O&M Plan and minor asbestos removals over the useful life of the building (assume \$10,000/year for 20 years = \$200,000).
- (6) Includes the preparation of an O&M Plan (\$15,000).
- (7) The cost of the eventual full ACM abatement at the Property is not included here and, with inflation added in, will likely total well above the Total shown for Alternative #3.

6.0 ACM ABATEMENT & REMOVAL RECOMMENDATION

Based on intended future Property use and planned construction/end use requirements, Alternative #1 was deemed infeasible because it does not allow for the complete renovation of the structure, which would thwart the intended re-use of the Property and defer the costs to be even more in the future.

Based on project size, time, and cost, Alternative #3 was deemed infeasible because of the high costs of removing all regulated ACM, some of which is not required to reuse the site.

Based on the evaluation criteria, Alternative #2 – Partial Removal of ACM was deemed appropriate because it would be the most cost effective and code compliant of the listed alternatives to facilitate the planned reuse of the Property.

7.0 GREEN AND SUSTAINABLE REMEDIATION MEASURES FOR SELECTED ALTERNATIVE

To make the selected alternative greener, or more sustainable, several techniques are planned. The most recent Best Management Practices (BMPs) issued under ASTM Standard E-2893: Standard Guide for Greener Cleanups will be used as a reference in this effort. The City will require the cleanup contractor to follow an idle-reduction policy and use heavy equipment with advanced emissions controls operated on ultra-low sulfur diesel. The cleanup will be conducted in one (1) mobilization to the Property allowing for the most efficient use of resources and equipment. Where possible building materials will be recycled. Electricity use to power equipment will be given a preference over fossil fuels, as local utilities utilize renewable energy to offset a portion of their power generation in this area. In addition, the City plans to require bidding contractors to propose additional green remediation techniques in their response to the Request for Proposals for the abatement contract.