



County Environmental Engineering, Inc.

September 19, 2024

Penny Thompson
City of Caribou
25 High Street
Caribou, Maine 04736

Re: Draft Analysis of Brownfields Cleanup Alternatives
Former Maine Frozen Foods Property, 27 Birdseye Avenue, Caribou, Maine

Dear Penny:

This draft analysis of Brownfields cleanup alternatives (ABCA) was prepared for the former Maine Frozen Foods property (Site) located at 27 Birdseye Avenue in Caribou, Maine. The purpose of this ABCA is to evaluate remedial alternatives for PCB-contaminated soils at the Site. Remedial alternatives evaluated for PCB-contaminated soils include No Action, Cover System and Removal.

Site Location and History

As shown on the attached Location Map (Figure 1), the Site is located at the southwest corner of the Access Highway (Route 1) and Fort Street intersection near downtown Caribou. The Site (21.6 acres) was previously developed with an 83,600-square foot food processing plant, 32,500-square foot freezer building and several outbuildings. As shown on the attached Site Map (Figure 2), the concrete slabs for the food processing plant, freezer building and outbuildings remain in place. The surrounding area consists of commercial properties and residential lots.

The former food processing plant was constructed in the 1940s and operated by the Birdseye Division of General Foods Corporation (1943 – 1980), Colby Co-Operative Starch Company (1980 – 1986), A.E. Stanley Manufacturing Co. (1986 – 1992), and Maine Frozen Foods (1992 – 2002). Facility operations ceased in 2002. The City of Caribou acquired the Site in 2016 through automatic lien foreclosure and site buildings were demolished in 2020.

Previous Environmental Investigations and Draft ABCAs

A Phase I Environmental Site Assessment (ESA) was completed by County Environmental Engineering, Inc. on July 30, 2013 for the Northern Maine Brownfields Initiative. Recognized environmental conditions identified at the Site in the Phase I ESA include documented soil contamination, underground storage tanks for fuel oil and gasoline, debris pile, partially buried debris in the boneyard, and potential petroleum contamination from off-site sources.

A Phase II ESA was completed by County Environmental Engineering, Inc. on February 25, 2014 for the Northern Maine Brownfields Initiative. PCB contamination was identified in accessible soils, but below regulatory guidelines for the commercial work exposure scenario. Petroleum contamination was also identified in accessible soils, but below or comparable to rural developed background threshold values. Samples collected from the on-site water supply wells, downgradient monitoring wells and nearest active private water supply wells demonstrate groundwater has not been impacted.

Surface soil near the former transformer pad at the northwest corner of the food processing plant was sampled by CES, Inc. on December 3, 2014 to delineate and quantify PCB contamination exceeding the EPA Toxic Substances Control Act high occupancy Area cleanup standard of 1 milligram per kilogram. As shown on the attached sampling sketch (Drawing C102) and summary table of analytical results (Table 1), the surface area of PCB-contaminated soils is approximately 565 square feet (24 feet by 23½ feet).

Draft ABCAs were prepared by CES, Inc. on January 22, 2015 and November 2, 2017 for the City of Caribou. The draft ABCAs evaluated cleanup alternatives for the PCB-contaminated soils near the former transformer pad at the northwest corner of the food processing plant, a debris pile south of the food processing plant, and partially buried debris in the boneyard. Cleanup alternatives evaluated for PCB-contaminated soils include focused soil excavation and off-site disposal.

A Limited Soil Investigation Report was completed by CES, Inc. on September 4, 2020 for the City of Caribou. Test pits identified demolition and operations debris in the boneyard, including tires, metal, concrete and asphalt. A debris pile south of the former food processing plant and miscellaneous non-hazardous debris from the boneyard were removed for off-site disposal. Benzo(a)pyrene was detected in accessible soils beneath the former debris pile above regulatory guidelines for the residential exposure scenario, but below the rural developed background threshold value.

A Self-Implementing Cleanup Plan for PCB Remediation Waste was prepared by Haley Ward on February 22, 2021 for the City of Caribou. The proposed cleanup plan includes the removal of the concrete transformer pad and PCB-contaminated soils to a depth of 24 inches for disposal at Tri-Community Landfill in Fort Fairfield, Maine. The volume of PCB-contaminated soils is approximately 42 cubic yards.

Evaluation of Cleanup Alternatives for PCB-Contaminated Soils

The cleanup goal for the Site in regards to PCB-contaminated soils is to eliminate the potential for human exposure to PCBs. The primary route of contaminant migration is surface water flow. The potential exposure route is dermal contact, ingestion and inhalation of soil particles. Potential receptors include future site workers and occupants. Remedial alternatives evaluated for PCB-contaminated soils at the Site include No Action, Cover System and Removal.

No Action Alternative

The Site would remain unchanged with the No Action alternative. The No Action alternative is not protective of human health or the environment. The potential for human exposure to PCBs would continue to exist at the Site and the resilience to address potential adverse impacts caused by extreme weather events would remain unchanged. The No Action alternative is not consistent with the cleanup goal for PCB-contaminated soils at the Site.

Cover System Alternative

A cover system consisting of a geotextile marker barrier and approximately 3 inches of clean soil will be installed over the concrete transformer pad and PCB-contaminated soils at the northwest corner of the former food processing plant under the Cover System alternative. The Cover System alternative is protective of human health and the environment, but the potential for human exposure to PCBs would continue to exist at the Site. The resilience to address potential adverse impacts caused by extreme weather events would be moderately improved. The Cover System alternative is not consistent with the cleanup goal for PCB-contaminated soils at the Site. The cost for the Cover System alternative is \$5,000.

Removal Alternative

The concrete transformer pad and PCB-contaminated soils at the northwest corner of the former food processing plant would be removed for off-site disposal under the Removal alternative. On-site oversight and confirmation soil sampling will be provided by a Qualified Environmental Professional. The Removal alternative provides adequate protection of human health and the environment. The resilience to address potential adverse impacts caused by extreme weather events would be greatly improved. The Removal alternative would meet the cleanup goal for PCB-contaminated soils at the Site. The cost for the Removal alternative is \$42,000.

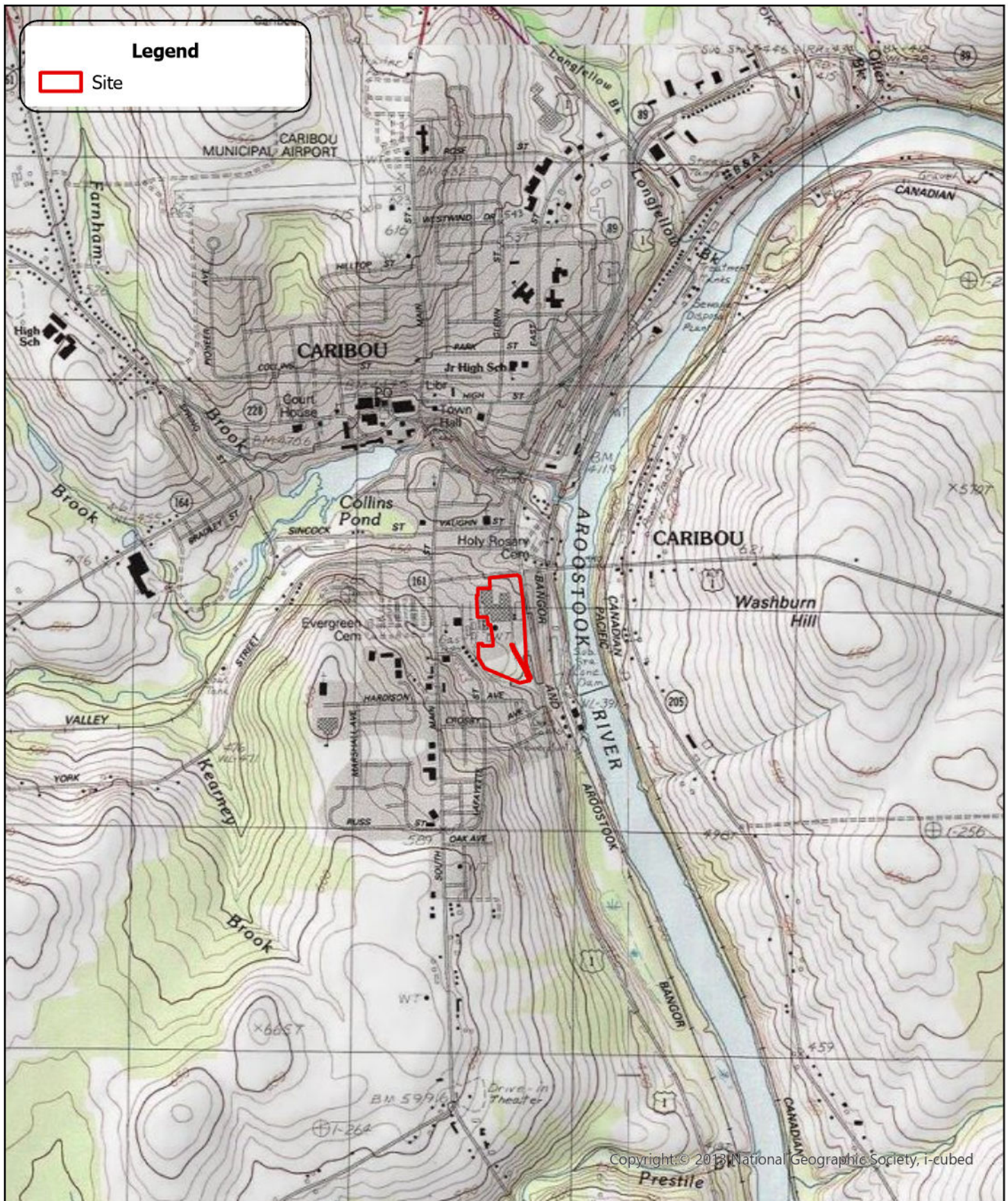
Conclusion and Recommendations

Remedial alternatives evaluated for PCB-contaminated soils at the Site include No Action, Cover System and Removal. The No Action and Cover System alternatives do not meet the cleanup goal for the Site in regards to PCB-contaminated soils. The Removal alternative would eliminate the potential for human exposure to PCBs. We recommend the Removal alternative for PCB-contaminated soils at the Site.

Thank you for the opportunity to offer our services on this project and please don't hesitate to contact us if you have any questions, comments or concerns.

Respectfully Submitted,
County Environmental Engineering, Inc.


Michelle Hersey, PE, LG
President



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Figure 1

Location Map

Analysis of Brownfields Cleanup Alternatives
Former Maine Frozen Foods
27 Birdseye Avenue, Caribou
Aroostook County, Maine

0 1,000 2,000 3,000 4,000 Ft

Project 241-05

Drawn by: MDH
Date: 09/02/2024





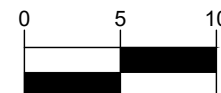
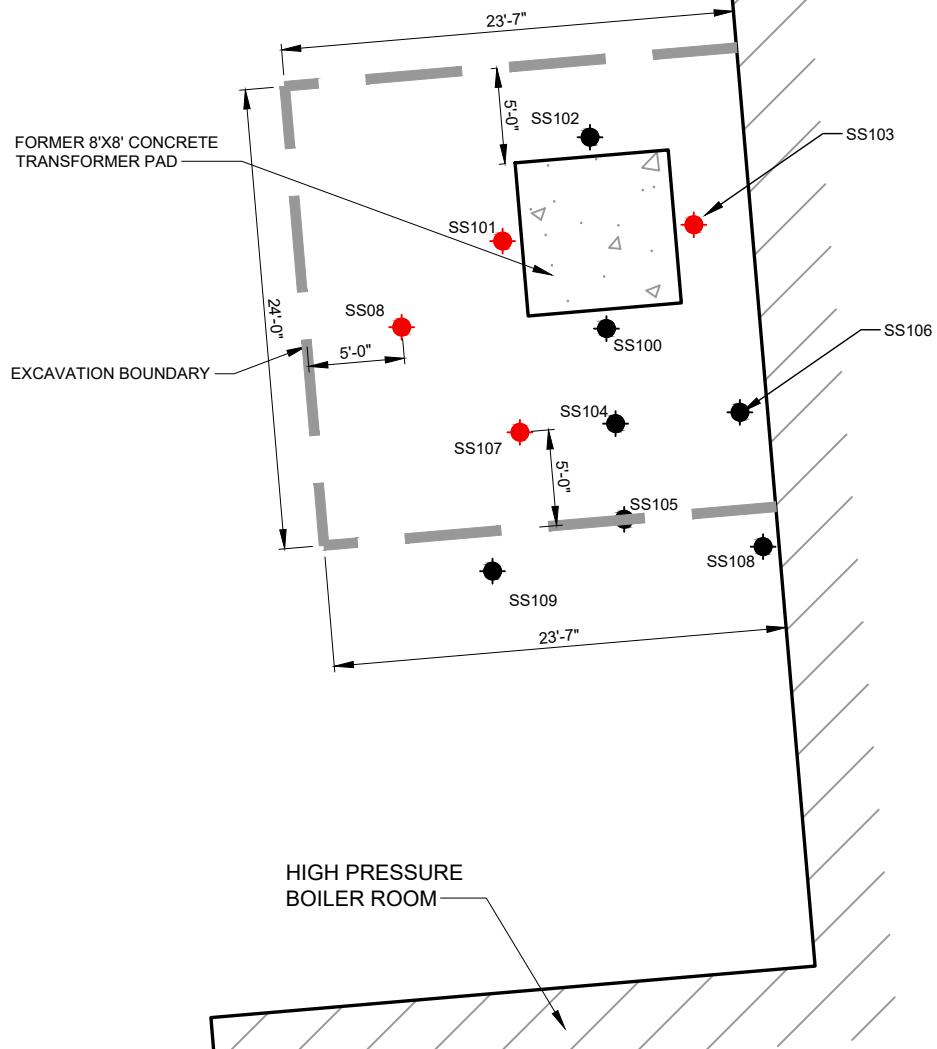
Site

PCB-Contaminated Soils

	Figure 2	Site Map	0100200300400 Ft	
	Analysis of Brownfields Cleanup Alternatives Former Maine Frozen Foods 27 Birdseye Avenue, Caribou Aroostook County, Maine		Project 241-05	
			Drawn by: MDH Date: 09/02/2024	



- SOIL SAMPLE WITH PCBs > 1mg/kg
- SOIL SAMPLE WITH PCBs < 1mg/kg



PROJECT TITLE:

**LIMITED PCB SOIL TESTING
CARIBOU, MAINE**

DWG:

C102

BY:

BTH

DATE:

2021.02.18

SHEET TITLE:

**FORMER BIRDSEYE FACILITY
SAMPLING SKETCH**

JN:

10963.002

SCALE:

1"=10'

REV:

REV DATE:





TABLE 1										
PCB COMPOUND	SAMPLE IDENTIFICATION AND PCB CONCENTRATIONS (mg/kg)									
	SS100	SS101	SS102	SS103	SS104	SS105	SS106	SS107	SS108	SS109
AROCLOR-1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AROCLOR-1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AROCLOR-1236	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AROCLOR-1242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AROCLOR-1248	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AROCLOR-1254	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AROCLOR-1260	0.976	6.51	0.877	1.54	0.0858	0.248	0.0835	1.19	0.0922	0.103

Note: **BOLD** values exceed the USEPA TSCA HOA threshold concentration of 1 mg/kg.

Samples collected on December 3, 2014