

US DEPARTMENT OF INTERIOR



**U.S. FISH AND WILDLIFE SERVICE REGION 7-ALASKA
Yukon Delta National Wildlife Refuge (NWR)**



**Bureau of Indian Affairs Bethel Headquarters
Final Demolition Work Plan**

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prepared by



500 W 27th Avenue, Suite A
Anchorage, AK 99503
Phone: (907) 272-5264

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Appendix C – BIA Site Map, Buildings, Drawings And Tables

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PROJECT DESCRIPTION

The U.S. Fish and Wildlife Service (USFWS) retained Bratslavsky Consulting Engineers team (BCE Team) to develop a Demolition Work Plan of the Bureau of Indian Affairs (BIA) Bethel Headquarters, formerly known as the Bethel U.S. Air Force (USAF) Aircraft Control & Warning Station. The Demolition Plan relates to 11 buildings on two sites—10 buildings on the initial 27-acre site mentioned in the Scope of Work plus one building on an additional 18-acre site for a total of 45 acres. For the purposes of this report, we will refer to the work site as 45 acres. These work sites are located approximately 3 miles west of Bethel, Alaska. The plan includes characterization, engineering, removal of hazardous contaminated materials and recommendations on decontamination. The work includes demolition of sewer lines and foundations, all existing structures and associated aboveground piping and equipment.

HISTORY AND SITE DESCRIPTION

The Bethel Air Force Station was built in 1958 as part of the USAF's White Alice Control System and originally encompassed a larger area and housed several more buildings and structures related to radar and communication equipment. In 1963, the Air Force considered this air base excess and issued a permit to the Bureau of Indian Affairs (BIA) granting them use of the site as administrative offices, which became known as the BIA Bethel Headquarters.

The 45-acre site consists of 11 buildings that were abandoned by the BIA circa 1992. The land was turned over to the Bureau of Land Management and the U.S. Fish and Wildlife Service (USFWS) now manages the site. Due to the condition of the property, the facility has become an attractive nuisance for the local community. It has been damaged by fire, and no longer retains a viable use for the USFWS. Therefore, the Department proposes to demolish and remove all buildings and foundations on the former BIA Bethel Headquarters site.

Prior to turning over the complex to the BIA, the USAF abated all the asbestos containing materials (ACM), but the USFWS still suspects there may be some ACM present today. The project site has hazardous and solid waste remaining onsite that could now be creating health and safety concerns. These 11 buildings, foundations, and surrounding land contain some level of contaminants including lead base paint (LBP), petroleum products, polychlorinated biphenyls (PCB), and asbestos.

For a history of this site, its uses and previous owners and occupants, refer to Appendix A - BIA Chronology Summary.

ALASKA STATE HISTORIC PRESERVATION OFFICE (SHPO) SITE STATUS

A cultural resource study was completed by the BCE Team. It is attached as Appendix B for reference. The cultural resources study has been submitted to SHPO to obtain authorization to perform demolition work and structures removal.

Previous Study Reports

- *Site Investigation Report* by Bethel Services Inc. October 2010
- *Building 413 Soil And Debris Characterization Report* by Bethel Environmental Solutions LLC, January 2012
- *Bethel Site Restoration Study* by Nortech, May 2016

GENERAL WORK ACTIVITY

The objective of the project is to identify the required abatement of all hazardous materials that exceed allowable limits, including but not limited to asbestos, LBP, PCBs, mercury, sludge (sewer line), etc. and to demolish all existing buildings, sewer lines and foundations within the 45-acre site. The 11 buildings identified as being present at the site and their locations and details are shown on drawings G-001 thru G-013 in Appendix C.

Below is a list and brief description of all the buildings and structures scoped for removal:

Buildings Description

- a. Building #413 Administration Building: Total of 57,000 square feet.
33,500 sq. ft. building was utilized as the two-story sleeping A, B and C wings. The rest of the building is single story made up of: mechanical room, 6 bay garage/transformer, mechanical room, and kitchen/dining room. Drawings G-004 and G-005 depict detailed information. The building has concrete fire break walls and a concrete foundation. Wings A, B, and C have wood piling supporting the 5" concrete foundation. Most of the western portion and wing C of the building was burned to the ground. The wall, ceiling and floor finishes have been removed, leaving only the wood framing and floor underlayment.
- b. Building #414 Water Utility Building: Total of 2,100 square feet.
This is a split-level wood framed rectangular building with a wood piling supported concrete foundation. The wall, ceiling and floor finishes have been removed, leaving only the wood framing and floor underlayment. The building housed a former pump room and two water treatment/storage tanks. Drawing G-006 depicts detailed information.

c. Building #416 Warehouse: Total of 3,200 square feet.

This is a three-story rectangular concrete building on a steel piling. The roof has concrete eight-sided overhanging eaves five feet wide. Walls, ceiling and floor finishes have been removed, leaving only the concrete and interior wood framing furring. Drawing G-007 depicts detailed information.

d. Building #419 Shop: Total of 3,500 square feet.

This is a two-story 12-sided steel building with steel pilings supporting a concrete foundation with insulated exterior walls constructed of corrugated exterior skin and interior flat sheet metal skin. Interior perimeter walls are furred in with 2"x4" studs. The walls, ceiling and floor finishes have been removed, leaving only the concrete structure and interior wood framing firing. Drawing G-008 depicts detailed information.

e. Building #420 Warehouse: Total of 900 square feet.

This is a 21-foot-tall hexagon shaped building with wood piling supported concrete foundation and fiberglass insulated exterior walls with interior and exterior sheet metal skin. The concrete foundation is an unconventional design consisting of external circular ring and interior square, both 3 foot thick. Walls, ceiling and floor finishes have been removed, leaving only the piling/concrete foundation, steel structure, walls and decking. Drawing G-009 depicts detailed information.

f. Building #421 Education Building: Total of 1,000 square feet.

This is a one-story wood framed building with wooden piling supported concrete perimeter foundation. Walls are finished with gypsum wall board and wood paneling. Floor finishing has been removed. Survey data indicates this building is a part of the 18-acre parcel. Drawing G-010 detail A depicts detailed information.

g. Building #422 Shop: Total of 3,200 square feet.

This is a two-story rectangular concrete building on a steel piling with a crawlspace. The roof has eight-sided concrete eaves with a five-foot overhang. Wall, ceiling and floor finishes have been removed, leaving only the concrete and interior wood framing furring. Interior spaces are furred in with 3"x3" studs. Drawing G-011 depicts detailed information.

h. Building #423 Warehouse: Total of 1,500 square feet.

This is a two-story 12-sided steel building with a wood piling supported concrete foundation and fiberglass insulated exterior walls with interior and exterior sheet metal skin. The concrete foundation is an unconventional design consisting of external circular ring and interior square, both 3 feet thick. Walls, ceiling and floor finishes have been removed, leaving only the piling/concrete foundation, steel structure, walls and decking. Drawing G-012 depicts detailed information.

- i. Building #424 Pump House: Total of 200 square feet.
This is a one-story building framed with 2"x4" wood; with a metal roof on wooden cribbing. The building has been completely stripped of equipment and finishes. Drawing G-010 depicts detailed information.
- j. Building #425 Sewage Lift House: Total of 170 square feet.
This is a one-story wood framed with 2"x4" with a wooden piling supported concrete foundation. There are two floor mounted pumps associated with two 40-gallon wastewater tanks. Drawing G-013 detail A depicts detailed information.
- k. Drinking Water Supply Flowline: Total of 250 feet.
The flowline is enclosed by a 2 foot by 2 foot insulated above ground utilidor that runs from Building #414 into Building #413.
- l. Wastewater Line: Total of 1,040 feet.
This is a 6" diameter steel pipe that runs from east of Building #413 through Building #425 into the sewage lagoon. The pipe is supported at about 6 feet in the air by 6-inch diameter steel pilings every 20 feet of pipe. The sewer pipe contains asbestos, in addition to the potentially hazardous sludge within the pipe. Previous testing of two samples of the sludge in 2010 determined that one sample contained PCBs in excess of 1 ppm, and one sample contained PCBs at a concentration less than 1 ppm. The State of Alaska says concentrations over 1 ppm are not allowed to be disposed of in-state. Although one result is above the allowed limit and one is below, it is best to be conservative and abide by the higher number.
- m. Electrical Poles: Total of 14 utility poles with wiring remain on site.
- n. Refrigeration Trailer: Total of 240 square feet.
This is a one-story wooden trailer with insulation and metal skin still attached and minor remains of freezing units at the back. Drawing G-013 depicts detailed information.

The work covered under this Work Plan is to be conducted in a sequential manner. Demolition work shall be performed in accordance with OSHA, ADEC, USFWS and City of Bethel requirements. Contractor's general sequence of demolition activities may require alteration at any given time, depending on the site conditions. A summary of the general sequence of work is outlined below:

- Pre-demolition survey of each building
- Pre-construction activities and site mobilization
- Verification of utility disconnects and isolations
- Removal of remaining chemicals and hazardous materials
- Removal of asbestos (ACM) and PCB containing materials
- Demolition of existing buildings and structures

- Removal of demolished debris and material to the appropriate offsite disposal/recycling facilities
- Equipment Decontamination
- Demobilization

CONTRACTOR QUALIFICATION, CERTIFICATION, AND TRAINING

Certification

The Hazmat Abatement Contractor and/or supervisor shall have EPA/AHERA-Asbestos Abatement Certification for Contractors and Supervisors (in compliance with Alaska Asbestos Abatement Certification Statutes 8 AAC 61.600-790, and EPA/AHERA Regulation 40 CFR Part 763 Subpart E for Supervisors and Contractors).

Licensure

The Contractor shall be a full service licensed and certified environmental consulting and contracting firm in the state of Alaska.

Verification of Experience

The Contractor shall clearly demonstrate expertise in the identification, assessment, management, and abatement of industrial and environmental hazards, and state full commitment to the safe control, removal and disposal of all hazardous physical agents found in the working environment on this project. Areas of specific expertise shall include:

- Asbestos abatement
- PCB/Lead abatement
- Mold abatement
- Containment and disposal of PCB's and other hazardous materials
- Demolition

The Contractor shall present the combined expertise of qualified professionals that possess commercial/industrial experience, training, and certifications in asbestos and hazardous materials handling and disposal. The Contractor shall demonstrate at least five (5) years of experience in completing state, federal, and commercial demolition, asbestos, and hazardous waste contracts in the State of Alaska.

Identification of Personnel

The Contractor shall identify and provide resumes or information for all inspectors, managers, designers, and supervisory or specialty contractors (particularly those specializing in asbestos/hazardous materials abatement), including their accreditation through EPA-approved

institutions to provide services required under the federal Asbestos Hazardous Emergency Response ACT (AHERA).

Training

The Hazmat Abatement Contractor shall provide training prior to the beginning of work at the site. No site workers will be allowed to begin work on site until the site-specific training is completed and documented by the supervisor. Training will address all safety and health issues and procedures pertinent to site operations.

Upon arrival at the site, employees will receive additional training in the following areas:

- Project introduction and orientation
- Requirements and responsibilities for accident prevention and maintaining a safe and healthful work environment
- Chemical and physical hazards on the site
- Hazard communication training for all hazardous materials brought on site
- Job hazards and the means to control and/or eliminate those hazards including applicable activity hazard analysis
- Selection and use of personal protection equipment (PPE)
- Employee and supervisor responsibilities for reporting all accidents and incidents
- Decontamination procedures
- Procedures for reporting and correcting unsafe conditions or practices

Specific hazard training as it pertains to asbestos will include:

- The hazards and health effects of specific types of Asbestos Containing Material (ACM) to be abated
- The contents and requirements of the asbestos hazard abatement plan
- Air monitoring program procedures enter specific work practice controls and engineering controls required for each class of work in accordance with 29 CFR 1926, Section 1101.

HEALTH AND SAFETY

The Contractor shall consider safety and the prevention of accidents an integral part of its operation. Under Federal, State and local laws, Contractor is responsible to provide a safe working environment, and to protect life, health and safety of its employees and subcontractor's personnel. Although providing safe working conditions is primarily a management responsibility, safety and accident prevention can be accomplished only through coordinated efforts of all employees and subcontractor personnel. If the task or service being undertaken cannot be done safely, the Contractor shall discontinue work until proper controls can be established.

The Contractor will hold daily meetings for its employees prior to work commencement. Additionally, the Contractor shall require that subcontractors hold similar daily meetings covering their respective portion of the work. These meetings are designed to discuss the projected work schedule and prepare each worker for any potential hazards associated with the work activities. A copy of the daily or weekly safety meetings logs will be maintained onsite at all times. All personnel attending the safety meeting will be required to sign the safety-meeting log upon completion of the safety meeting. During the safety meetings, personnel will be reminded of site conditions and are encouraged to participate with health and safety concerns.

At the conclusion of the project, copies of all daily activities will be presented in a final report to the USFWS.

Daily Housekeeping

Good daily housekeeping is the foundation for a safe work environment. Proper daily housekeeping prevents accidents and fires, as well as, creates organized and secure workplace atmosphere.

- All materials shall be stored in a stable manner so that they will not be subject to falling, shifting, or spilling. Rubbish, scraps, and debris will be removed from the work area on a daily basis to jobsite dumpsters, trucks, or stockpiled, as required.
- Materials and supplies will not be in left walkways or outside the work area. Work area shall be inspected by a designee of the contractor at the end of each work shift.

Minimum Personal Protective Equipment (PPE)

- Personal protective equipment will be worn as necessary to safely complete this project.
- Employees must check with their supervisor regarding any portion of their job and/or PPE that they are not familiar with.
- Goggles, face shields, helmets and other comparable equipment are required to fit the eye and face protection needs of each individual employee.
- Hard hats shall be ANSI approved. Hard hats, steel toe shoes, eyewear and high visibility vests (HSVS) are required gear on the job site.
- Long-sleeved shirts and jackets will be worn as required.
- Gloves as necessary.
- ANSI Approved Steel Toed Boots are required on the project.
- Respiratory protection will be used as a safeguard against hazardous fumes. When respiratory protection is utilized, Fit Test Records will be supplied.
- Material Safety Data Sheets (MSDS) present on job site at all time. MSDS binders are assembled based on the materials stored in job trailers and site trucks. If at any time new materials are delivered MSDS forms will be inserted.

- The use of full body harnesses is required when working on elevated work where there is no guard rail protection.
- Ear protection must be worn during operation of heavy equipment.

PROJECT SETUP

Project setup will include conducting a pre-construction meeting and preparation of project plans and permits.

Pre-Construction Meeting

The contractor will hold a pre-construction meeting via teleconference and/or in person to discuss the following:

- Introduction of project team field representatives and their respected roles
- Discussion of demolition schedule
- Relation and coordination of subcontractors
- Distribution of contract documents
- Clarification of specific questions
- Field communication plan
- Procedures for maintaining record documents
- Use of project premises and materials
- Submission and processing of monthly application for payment forms and associated requirements

Meeting notes will be documented and issued to the attending parties.

Project Plans and Permits

The contractor will develop and submit for review the following plans and permits:

- Final Demolition Work Plan – Updates and comments will be incorporated into this Plan as necessary.
- Health and Safety Plan (HASP) – A comprehensive Site-specific HASP will be prepared and enforced for the duration of the abatement and demolition activities. Health and safety are of the utmost importance and therefore the contractor will take every precaution appropriate in accordance with the HASP to ensure safe conditions during demolition activities. Due to the nature of the work, various critical potential risks will require consideration and definition in the HASP. The HASP will include a summary of principal hazards, Site-specific and activity-specific training to be provided, and methods used in the field to project workers and equipment. Some of the principal elements to be addressed as modules in the HASP will include the following, among others:

- Asbestos and PCB abatement operations
 - Proposed communications system
 - Requisite employee training
 - Chemical hazards
 - Site traffic
 - Emergency evacuation
 - Accident investigation
 - Visitor requirements and orientation
 - Personal Protective Equipment (PPE)
-
- Stormwater Pollution Prevention Plan (SWPPP) – A SWPPP will be developed to address and define the location and type of best management practices (BMP's) in construction areas as well as management of dust suppression waters generated during demolition activities.
 - Traffic Control Plan – A Traffic Control Plan will be prepared to establish protocols, signage and patterns to be implemented during construction to ensure for the safe flow of traffic through and/or around project work areas.
 - Quality Assurance/Quality Control (QA/QC) Plan – A QA/QC plan will be developed to identify site controls/authority, general procedures such as document/date control, and activity-specific controls and verification procedures.
 - Hazardous Material Project Design – A hazardous abatement project design for the ACM and PCB containing materials for interior and exterior portions of the structures to be demolished will be prepared and provided to the client prior to initiation of abatement activities. The design will include, but not be limited to, the evaluation and selection of appropriate friable and non-friable ACM removal methods; PPE to be utilized by personnel conducting hazardous material abatement; and ACM/PCB waste transport and disposal procedures.
 - Material Safety Data Sheets (MSDSs) – MSDSs will be provided to the client for products that will be used at the site.
 - Demolition Engineering Plan – A demolition engineering plan will be developed detailing the procedures and steps associated with demolition of each specific structure to be demolished.
 - Dust Control Plan – A dust control plan will be developed with specific monitoring, record keeping, abatement, and stop work protocols.

- Hazard Communication Plan – A hazard communication plan will be developed that establishes communication requirements for work activities at the site that may involve hazardous materials, ACM, PCB, structurally unstable structures, demolition and areas not to be disturbed among other daily activities at the site.

PROJECT KICK-OFF AND SITE PREPARATION

Once the project setup activities are underway, mobilization to the site will be performed. The activities performed as part of these preparatory efforts will include, at a minimum, the following:

- Field office and site security setup
- Electrical Supply Source
- Prepare and equip site lay down areas
- On-site kick-off meeting
- Utilities locating and verification
- Structural survey
- Wind monitoring

A summary of the key activities performed as part of these efforts is provided in the following sections.

Field office and site security setup

The contractor will set up a field office trailer to allow for onsite management to complete paperwork and to coordinate the project needs and activities. The field office will handle all administrative and operational functions required to ensure the smooth execution of the project. Portable restrooms will be available to site workers as needed.

Access to the site will be restricted to authorized personnel only and patrolled by a contracted security guard after hours. Fencing will be installed around the perimeter of the site. After hours and on weekends, access points to the site will be locked with a key and key log will be maintained by the contractor field manager.

Electrical Supply Source

The existing live overhead electrical line runs along the west side of Sidney Street up to the intersection with BIA road (see drawings G-002 Site Map and G-003 Lay down Area in Appendix C). The Contractor can establish an electrical supply source for the project needs via service drop. However, the electrical poles are not on refuge lands and the drop service will need to be coordinated with the landowner.

Prepare and equip site lay down Areas

Upon arrival at the site, the contractor will establish a field office, decontamination wash station, lay down areas, material storage areas, and the primary decontamination area for use as needed throughout the project. An office trailer will be used to maintain project plans/specifications, and daily field documentation. Copies of all project plans and permits will be kept at the site including, but not limited to, the HASP, SWPPP, Traffic Control Plan, Demolition Plans, and MSDS.

The contractor will perform any required brush and wood debris removal, minor site access improvements, and/or hand-picking of small debris, as applicable. Wood debris will be chipped. Brush and or surface debris may be hauled to the local wood lot or may be hauled to the Bethel landfill, as necessary.

See drawing G-003 in Appendix C, for the proposed lay down areas.

On-site Project Kick-off meeting

An initial on-site project kick-off meeting with the project team and the USFWS will be held to fully inform personnel of project protocols, health and safety requirements and chain of command. Topics of discussion will include, but are not limited to:

- Introduction of field representatives and their respective roles
- Discussion of demolition schedule
- Coordination of subcontractors, as applicable
- Clarification of specification questions
- Use of project premises, and
- Requirements for PPE, emergency response, and health and safety requirements.

Structural Survey

The contractor will complete a survey of all structures for structural integrity prior to hazardous material removal and demolition activities. The contents of each structures will also be inspected for potential hazards that may impact demolition. If required, temporary bracing may be installed to make structures safe for pre-demolition work. A log of each survey will be maintained at the office trailer. The results of the survey will be discussed with the site personnel.

Wind Monitoring

An aviation wind stock and wind meter will be installed prior to commencement of abatement and demolition activities. The wind direction and speed will be recorded by the designated project personnel at the start of each day and at 4-hour intervals during active ACM and PCB abatement, hazardous waste removal, and building demolition activities. If the wind speed exceeds

established parameters, then all activities which have the potential to create dust will cease. Refer to Appendix D Dust Control Plan for details.

HAZARDOUS MATERIALS SURVEY AND ABATEMENT

The scope of the demolition project includes removing and properly disposing of hazardous materials (e.g., oils, grease, asbestos-containing material, PCB; refer to Appendix E for details). The majority of ACM and other hazardous materials have been abated from the buildings with the exception of a few large pieces of equipment listed in Table 1

TABLE 1 – List of Equipment Containing Hazardous Material

Building	Generators & Turbines	Mercury Switches & Gauges	PCB Light Ballasts	Trans-formers	Drums	Fridges (CFCs)	Tanks	Misc. HVAC Equip.
Bldg 413	4	0	0	0	0	4	0	0
Bldg 414	1	0	0	0	0	0	3	0
Bldg 421	0	0	0	0	0	0	0	1
Bldg 422	0	0	0	0	0	0	0	1

Once the structures have been identified as safe to enter, and prior to beginning work activities, hazardous materials will be located. Hazardous/toxic materials and universal waste present in the buildings are shown in Table 2. The contractor will inspect the structures, locate and clearly mark items identified on the contract documents and identify any additional items that will need to be addressed prior to demolition. The contractor will be looking for fluorescent light ballasts and bulbs, mercury vapor lamps, refrigerants, paint cans, and other items that require removal prior to demolition. In the event that suspected asbestos containing material are encountered, which were not previously identified, the licensed ACM contractor will inspect and remove materials. Any suspected ACM will be sampled, and the results will be forwarded to USFWS.

Preparation, abatement, or demolition work will not occur in or around any structures until it has been verified and documented in writing that the Hazardous Material/Universal Waste Identification and removal is complete.

TABLE 2 – Amount of Lead/PCB's in Paint

Sample ID #	Sampling Location	Color	Lead Result (mg/kg)	Lead RL (mg/kg)	PCBs Result (µg/kg)	PCBs RL (µg/kg)	Approximate Quantity (square feet, unless otherwise noted)
BUILDING 413							
P001	Service garage	White	1230	45	18500	2500	160

TABLE 2 – Amount of Lead/PCB's in Paint

Sample ID #	Sampling Location	Color	Lead Result (mg/kg)	Lead RL (mg/kg)	PCBs Result (µg/kg)	PCBs RL (µg/kg)	Approximate Quantity (square feet, unless otherwise noted)
P002	Service garage wall	Yellow, blue, green, red	10300	36	19300	2500	184
P003	Pipe- Wing A	White, green, yellow	19000	81	90200	13000	800
P004	Door jamb- Wing A	Yellow	25200	78	60400 J	63000	108 in. ²
P005	Wing A- Wall	Yellow	11800	50	5570	2500	200
P006	Wing A- Wall	Yellow	206	35	23.6 J	56	360
P007	Wing A- Floor	Yellow	33.7	0.84	ND	81	912
P008	Hall by generator	Blue,	4690	32	7270	1400	2080
P009	Closet with air unit	Gray	1440	50	1000	310	1020
P010	Wing B- Center door jamb	Green, white,	2080	34	67700	11000	110 in. ²
P011	Cold storage	Not Noted	819	37	50200	9600	1200
P012	Generator room-	Gray	705	43	4930	1900	3860
P013	Concrete generator support	Red	3810	41	^a 12600 ^b 10600	2300 2300	48 ft. ² per generator
P014	Radiator by	Gray,	2970	42	^b 25900	8300	160
P016	Exterior wing A	Yellow	23700	48	157000	630000	18,280 (entire bldg.)
P017	Exterior service	Red	11300	40	ND	280000	1000
BUILDING 414							
P001	Exterior siding	Tan	25.5	1.9	1290 J	2500	1880
P002	Small tank by	Red,	194	32	29800	2500	600
P003	Large tank	Red,	44700	200	172000	170000	9820
P004	Floor by small tank	Red, tan,	937	32	103000	25000	500
P005	Elevated tank	Red, gray	40600	240	136000	210000	50
P006	Elevated tank	Green,	48200	240	506000	630000	50
P007	Interior siding	Green,	1270	34	179000	45000	190
P008	Generator	Green,	3280	40	63000	23000	12
P009	Generator	Gray, red	3390	50	63400	28000	12
P010	Wall by electrical	Light	13100	100	34200	13000	200
P011	Electrical panel	Gray	1720	50	90800	25000	100
BUILDING 416							
P001	Steel "I" Beam	Red, white, green	48100	190	ND	2000	1920
P002	Exterior siding	Yellow	89.1	50	Not enough material for lab to analyze		3000
P003	Exterior stairs	Yellow, red	57900	240	ND	9400	1000

TABLE 2 – Amount of Lead/PCB's in Paint

Sample ID #	Sampling Location	Color	Lead Result (mg/kg)	Lead RL (mg/kg)	PCBs Result (µg/kg)	PCBs RL (µg/kg)	Approximate Quantity (square feet, unless otherwise noted)
BUILDING 419							
P001	“I” Beam support	White, red	49800	220	ND	12000	500
P002	Interior stairs 1 st Floor	Green, white, pink	7230	49	Not enough material for lab to analyze		1800
P003	Metal column-interior	White, pink	11000	48	Not enough material for lab to analyze		500
P004	Exterior stairs	Red, gray	35700	180	^b 488	150	240
P005	Exterior siding	Gray, tan	52500	250	ND	290	3400
BUILDING 420							
P002	Interior wall	Not Noted	Not enough material for lab to analyze		8830	1900	1500
BUILDING 421							
P001	Concrete floor	Red	Not enough material for lab to analyze		1520	560	1020
BUILDING 422							
P001	Stairs	Blue,	39400	180	19500 J	25000	1000
P002	Column- center	White, orange,	35700	160	^a 4980 ^b 5110	1900 1900	500
P003	Air handling unit	White,	2800	48	12000	2500	800
P004	I Beam support by loading dock	Not Noted	42600	180	ND	2300	500
BUILDING 423							
P001	Exterior siding	White	1270	50	Not enough material for lab to analyze		2700
P002	Interior siding	White	3050	49	5570	530	2700
P003	Exterior trim	Red	1540	50	Not enough material for lab to analyze		40
P004	Exterior stairs	Yellow/orange	47400	200	Not enough material for lab to analyze		300
P005	Interior air handling unit	Yellow, red, green	Not enough material for lab to analyze		13600	5000	800
TRAILER (SOUTHEAST OF BUILDING 414)							
P001	Exterior siding	Silver	163	4.9	1530	780	600

* All quantities in Table 2 are estimates only. Abatement contractor will need to verify actual quantities during site visit.

Notes for chart above:

a = Aroclor 1254

b = Aroclor 1260

J = Laboratory's estimated value

ND = Not Detected

RL = Reporting Limit

< = below RL

BOLD = Contained lead above the RL or contained $\geq 1,000$ µg/kg for PCBs

Additionally, to the items listed in Table #2, the 6" sewer pipe in the crawlspace of Building 413 and then runs from east of Building #413 through Building #425 into the sewage lagoon, contains potentially hazardous sludge within the pipe. Previous testing of two samples of the sludge in 2010 determined that one sample contained PCBs in excess of 1 ppm, and one sample contained PCBs at a concentration less than 1 ppm.

The State of Alaska says concentrations over 1 ppm are not allowed to be disposed of in-state. Although one result is above the allowed limit and one is below, it is best to be conservative and abide by the higher number.

Asbestos Abatement

The ACM contractor will provide a comprehensive work plan prior to mobilizing to project site. The comprehensive plan will provide detailed daily activities including, but not limited, to:

- ACM removal and packaging;
- ACM transportation and disposal;
- completion of waste manifests;
- PPE; and
- decontamination procedures.

Asbestos removal and disposal will be in compliance with 40 CFR #61, Subpart M. The work will be completed in accordance with all state, federal and local regulations listed in Appendix F.

ACM is identified in the following Table 3:

TABLE 3 - Asbestos

Sample ID#	Material	Location	Asbestos Content	Approx. Amount of Material in Bldg.
BUILDING 413				
006	Door insulation	Wing A	45%	1 door
007	Joint Compound	Wing A	3%	400 ft ²
008	Concrete Skim Coat	Wing A- wall	3%	500 ft ²
013	Gypsum Wall Board	Cold storage	10%	1000 ft ²
015	Joint compound	Wing B	4%	400 ft ²
019	Pipe insulation	Sewage pipe- crawl space	10%	Unknown-assume all
023	Cement Asbestos	Wing C- Front entrance	20%	320 ft ²
BUILDING 414				
003	Window glaze	Window by small tank	4%	Assume all windows
004	Flange valve gasket	Generator	40%	All gaskets
BUILDING 416				
002	Seam sealant	Roof	8%	Unknown- Not intact
BUILDING 419				

002	Seam sealant	Roof	6%	Unknown- Not intact
003	Vapor barrier	Roof	30%	Unknown- Not intact
BUILDING 420				
001	Window glaze	1 st Fl. window by generator	3%	Assume all windows
204-01	Seam sealant	Interior Wall	6%	60 linear feet
BUILDING 423				
002	Window glaze	Far side of stairs	3%	Assume all windows
TRAILER (SOUTHEAST OF BUILDING 414)				
001	Silver Sealant	Exterior Seam	6%	600 ft ²
002	Wire insulation	Cooler unit	15%	Unknown – inside unit
003	Glazing	By cooler- back corner	5%	1 linear foot

The intent of the following action plan is to provide a framework for the means and methods by which the ACM abatement contractor will execute the asbestos abatement work.

ACM is identified in the *Former Bethel BIA Facility Hazardous Building Materials Survey & Sampling* report dated October 21, 2019. These materials include friable ACM in the form of joint compound, door and sewer pipe insulation. Non-friable ACM has been identified in roof vapor barrier, sealant, widows, gaskets, gypsum board.

All windows and doors will be removed from the interior of the buildings. Removal work activities included the use of glovebags and a wrap-and-cut technique where possible, and then by using the mechanical means such as excavator and shear attachments.

The ACM material will be removed under “wet” demolition methods and kept wet until loaded for disposal. The ACM material will be immediately covered when placed into the intermodal container for disposal. Contractor needs to establish asbestos monitoring in support of asbestos-removal activities. An asbestos clearance sampling and inspection program is to be implemented to release each area from asbestos concerns following asbestos abatement in each area.

All ACM wastes, listed in the Table 3 above, from all abatement activities will be placed and sealed with double six-millimeter polyethylene plastic, duct-taped and placed in a fully poly lined storage container for disposal at Bethel landfill (if DEC approves, see permitting section above) or transported for disposal at Anchorage landfill (See Appendix G for Anchorage Landfill policies). The ACM will be manifested from the site to the landfill. Throughout the project, a waste manifest log will be maintained and located in the field office. All waste manifests will be made available for review by the client throughout the duration of the project. At the completion of the project, all waste manifests will be added to the final close-out documentation. Close out documentation will include waste shipment and tracking manifests and disposal receipts for all asbestos and hazardous material and/or components.

PCB Abatement

The contractor will identify all PCB and Lead containing materials prior to the start of abatement. The removal of all Lead and PCB containing material will be completed prior to demolition activity where possible. All workers will have hazard awareness training including lead and PCB safety, hygiene issues, PPE, controls, and procedures training for loose and flaking paint/coating removal techniques that minimize airborne dust generation.

The demolished PCB contained steel generated during the demolition will be cut into sections, sealed with a double six-millimeter polyethylene plastic, duct-taped and placed in a fully poly lined storage container. The waste will then be barged out of state. The following are three facilities permitted to take PCB waste in EPA's Region 10:

- PermaFix Northwest Inc.
2025 Battelle Blvd.
Richland, WA 98354
(509) 375-5160
- Kurion, Inc.
1355 Columbia Park Trail
Richland, WA 98352
(509) 737-1377
- U.S. Ecology
20400 Lemley Rd.
Grand View, ID 83624
(208) 834-2275

Structurally Unsound Building

Most of the Building 413 is structurally unsound. The contractor will conduct ACM and PCB contaminated material removal in structurally unsound areas at the time of building demolition activities as needed to safely access the ACM removal such as sewer pipe in crawl space. Sufficient water will be applied to the active demolition zone to prevent fugitive emissions of dust and ACM.

ACM and PCB contaminated concrete will be dismantled utilizing a combination of man lifts, rigging, and heavy equipment in a strategic and cautious manner to provide for controlled movement of the material from the structure. Once the material is safely removed and the general area is stabilized and safe to work in, ground crews will begin mitigation measures. During and following the removal activities, the crews will containerize and place the removed ACM into temporary staging area(s) separate from any other waste material. The staging area(s) will be constructed to shelter the asbestos-containing waste from the elements including wind,

precipitation, and surface water runoff. All hazmat containing materials will be sealed within six-millimeter polyethylene plastic, duct-taped and placed in a fully poly lined storage container.

DEMOLITION ACTIVITIES/METHODS

The most important aspect in the development of the demolition procedure will be the safe conduct of work. Contractor's procedures will limit the use of labor to the most controlled and safe conditions and rely upon mechanized means of removal wherever possible. Excavators equipped with concrete breakers, concrete munchers, grapples, and other modern hydraulic demolition tools and attachments will be utilized. Wherever possible, large structures will be removed to ground level using mechanized means. Subsequent sizing of scrap materials such as steel and rebar and other material processing activities will take place at grade level, hauled offsite and recycled accordingly.

Demolition Guideline

- Traffic control signage and barriers during demolition shall be installed
- Pre-demolition meeting to be held onsite
- All demolition activities shall be conducted with minimal disruption to the community. Dust shall be controlled by wet demo methods.
- Structural demolition will be performed systematically from top of building to bottom. All demolition shall be conducted with properly sized heavy equipment. All hand work shall be conducted from the ground such as separation of wood debris from metal or concrete.
- All concrete will be shredded and staged at BIA laydown area.
- All construction debris will be hauled offsite using roll offs and/or demo lined containers.
- Construction debris that is not contaminated with hazardous material shall be taken to a local landfill.
- Construction debris containing hazardous material shall be properly packaged and shipped off to appropriate landfill. All ACM shall be shipped to Anchorage Landfill (Refer to Appendix G for Anchorage Landfill Policy). All PCB contained material shall be shipped outside of state as depicted in the hazmat report.
- The site shall be cleaned and cleared before departing each day to the approval of the Site Manager. If at any time materials cannot be hauled off site before departing for the day materials shall be neatly stored and secured.
- The contractor shall provide traffic controls to conduct demolition activities. Traffic controls shall be conducted during loading and unloading of equipment and haul trucks or at times when traffic shall be impacted due to demolition activities. The traffic flaggers shall be required to wear Class III high visible vest.

Demolition of Structures

After the removal hazardous materials, the above-grade structures will be ready for demolition. Demolition will be performed based on the reach of the excavator and processing capability.

The building structures will be demolished using excavator-mounted hydraulic shears, bucket-and-thumb and hydraulic breaker attachment for hammering and breaking up the concrete portions of the structures. All foundation piles will be cut at the ground level.

Concrete – after removal by heavy machinery, concrete will be shredded and thereafter staged at BIA laydown area for further shredding and recycling.

General construction debris - after removal by heavy machinery, debris will be placed in temporary staging areas. General debris will then be loaded into dump trucks, such as end dump and/or side dump trucks, transported and disposed of at the Bethel landfill or loaded into lined containers and disposed of offsite along with all construction waste.

Construction debris and waste - all construction debris and waste will be hauled offsite using roll off dumpsters and/or demo lined containers.

Demolished steel - the demolished steel generated during the demolition will be cut into sections and staged within a specific laydown area prior to loading for shipping as PCB remediation waste. All metal construction debris will be barged offsite to either Anchorage or out-of-state for metal recycling.

Dust Control Measures

Dust control will be considered an important part of the overall project. Contractor will utilize a water truck and/or fire hose during demolition operations. Contractor will direct a localized fine water spray to the source of demolition activities, as required, thereby reducing airborne dust particles. To minimize the run-off of water, the water supply will be used only when necessary. Refer to Appendix D Dust Control Plan for details.

Field Documentation

Field documentation will include photographs showing the demolition activities. The contractor will maintain a permanently bound field logbook that will contain a detailed description of all field activities and log of photographs. Pages will not be removed from any data logbook for any reason. Any corrections will be made by drawing a single line through the original entry, so that the original entry still can be read. The corrections will be written alongside the crossed-out entry. The corrections will be initialed and dated. The contractor will collect copies of all landfill receipts for inclusion in the project report.

Reporting

The contractor will prepare and submit a draft and final Demolition and Removal Report detailing the completion of all field tasks. The report will include information related to and generated by field activities:

- A description of the field activities, including site drawings, figures, and tables as appropriate.
- Deviations from the established Work Plan and the reasons for the deviations.
- A listing of material and items disposed during the removal action, including transportation and disposal documentation.
- Field notes and photographs documenting site activities.
- Review comments and responses to comments to the final version of the reporting document.
- Include three bound and electronic copies of reporting document for both draft and final submittals.

DISPOSAL AND RECYCLE MATERIAL

Demolition Debris will be separated in five (5) waste streams. They are:

1. Hazardous Material (ACM and PCB)
2. Construction Debris (i.e. wood, trash)
3. Masonry materials (i.e. brick, concrete block)
4. Metals (including pumps, generators in Table 1)
5. General Construction Waste

The disposal methods of the different types of waste material are outlined in Table 4.

TABLE 4 – Waste Disposal

Description	Type	Volume	Notes
Hazardous Material	ACM	20 CY	To be disposed at Anchorage Landfill
Concrete	PCB	93 CY	To be disposed out of State
Wood and Dust	PCB	95 CY	To be disposed out of State
Structural Steel	w/ PCB paint	185 CY	To be recycled at Anchorage Scrap & Recycle
Concrete	Non-Hazmat	1973 CY	To be staged at BIA Laydown Area
General Waste	Non-Hazmat	1243 CY	To be disposed at Bethel Landfill

MATERIAL HANDLING

Characterization and tracking of hazardous material shipped offsite for disposal will be an important task. The Contractor will develop a material tracking system prior to beginning site activities. This system will be implemented during the project and the Contractor will have oversight. The Contractor will be responsible for characterization and inventorying materials inside the structures or area onsite and recording data in the computer tracking system. A detailed spreadsheet will be constructed showing the expected material classifications (i.e. ACM, universal waste, steel, construction debris, etc.) associated with the project. This spreadsheet will be distributed to the demolition superintendent and demolition foreman prior to the commencement of demolition of that structure. The Contractor will also be responsible for profiling, manifesting, inspecting, and recording loads of material leaving the site.

Containers will be labeled with waterproof print and permanent adhesive in accordance with OSHA, DOT and EPA regulations. Containers will consist of fiber drums, poly drums, over pack drums, bags, and roll-off boxes. DOT-approved containers will be used for any waste destined for on-site and off-site disposal. The following best management practices will be implemented for on-site containers:

- Containers will be in good condition and will be compatible with the waste;
- Containers will remain closed and covered except when adding or removing waste;
- Containers will be placed on pallets to prevent damage to underlying liners and to assist in loading/unloading operations;
- Aisles will be configured to allow for inspection;
- Storage area will be clearly marked;
- All containers with a remediation waste require a remediation waste label; and
- DOT-approved containers will be used for on-site and off-site disposal.

The contractor will set up and operate a certified scale on the project site. The scale is used to capture the emptied and filled weights of the containers prior to loading on the barge.

Material quantities will be tracked by the contractor using spreadsheet which will be updated daily. All loads going offsite will be received, weighted, and numbered. Back up documentation will include weight tickets, manifests, and bills of lading. A copy of all waste disposal documentation will be filled with the contractor, transporter, the disposal facility, and then given to USFWS.

The use of burning at the project site for the disposal of refuse and debris will not be permitted.

EQUIPMNET AND PERSONNEL DECONTAMINATION

Equipment Decontamination Procedures

Most equipment, at the completion of its utilization, is dry decontaminated (vacuuming, hand shoveling, scraping, broom sweeping) in its work area and then transferred to a designated equipment decontamination pad for a final pressure wash. If mobile pads are required, they will be constructed with wooden frames and plastic liners. Decontaminated equipment is then inspected, tested and approved for removal in accordance with EPA standards.

Worker Decontamination Procedures

The Contractor will construct a remote decontamination wash station, which will be demarcated in accordance with OSHA regulations. The decontamination unit will be set up prior to any ACM removal and will always be available. In the event that a worker is grossly contaminated, the decontamination procedures are as follows:

- The employee shall keep their respirator on until noted below.
- While still in the work area, all contaminated protective clothing will be removed (and subsequently placed into 6 mil pre-labeled bags, which shall be immediately disposed of thereafter) and personnel will then vacuum their entire body and/or clothing using a HEPA filtered vacuum cleaner. (Subsequently, the HEPA filters shall either be wetted and disposed of, as ACM waste, or shall be covered with tape for reuse.)
- The worker will then proceed immediately to the two-stage decontamination unit (i.e. wash station) where the worker will thoroughly wash all exposed skin, including the entire head and face, especially around the face seal of the respirator.
- The worker can then remove their respirator.
- Workers will then dry off, disinfect their respirators and dress in street clothing.

SITE RESTORATION

Site restoration following the removal of all demolished construction waste is anticipated to be limited to grading of the removal areas depressions and to match adjacent ground contours. Minor grading may be performed in order to mitigate tripping and/or falling hazards. Additional fill material may be required. However, any required backfilling effort will be performed at a later date following any subsequent site investigation efforts.

DEMOBILIZATION

Equipment decontamination will be completed as described above. Once the equipment is considered clean, in accordance with the EPA, the decontamination equipment will be removed from the project site. The contractor will remove all temporary facilities.