

FINAL
BUILDING 413 AND 420
HAZARDOUS MATERIALS ABATEMENT AND DEMOLITION ESTIMATE
BETHEL BIA 27-ACRE PARCEL
YUKON DELTA NATIONAL WILDLIFE REFUGE
BETHEL, ALASKA

Contract No. 701818-C-850
Bethel Services, Inc. Project No. 2008105
May 2011
Prepared for:
U.S. Fish and Wildlife Service



OWNER:
US Fish & Wildlife Service - R7
Contracting & General Services
1011 East Tudor Road, Mail Stop 171
Anchorage, Alaska 99503-6199

Prepared By:
GENERAL CONTRACTOR:
Bethel Services Inc.
2605 Denali Street, Suite 100
Anchorage, Alaska 99503-2749



Bethel Services, Inc.

A subsidiary of Bethel Native Corporation

Dear Mr. Charles Grant:

We are pleased to present the US Fish and Wildlife Service (USFWS) with our finalized cost estimate for the Hazardous Materials Abatement and Demolition of Buildings 413 and 420 at the Bethel Bureau of Indian Affairs (BIA), 27-acre parcel, near Bethel, Alaska. Production of this cost estimate is the final phase of Contract Number 701818-C-850, awarded to Bethel Services, Inc. (BSI) by USFWS.

It is anticipated that the work will be completed in two phases, or summer field seasons, and thus has been separated into two cost estimates. The first phase will remove all identified and known hazardous materials from the structures in addition to other non-hazardous building components that cannot be buried on site. These materials will primarily consist of lead-based paint (LBP) chips and dust and asbestos-containing materials (ACM) such as roofing and pipe insulation. These materials, in addition to building generators and miscellaneous non-wood/concrete debris will be shipped to a non-Alaskan landfill permitted to accept such materials. The pipes wrapped in the ACM insulation are also known to contain sediments contaminated with polychlorinated biphenyls (PCBs), but at concentrations less than the Toxic Substance Control Act (TSCA) threshold value.

The second phase of the project will be to demolish the remaining portion of Buildings 413 and 420, with the exceptions of floor and firewalls of Building 413, and disposing the demolition debris in an on-site monofill constructed by the contractor. The Yukon-Kuskokwim Heath Corporation (YKHC), which will acquire the land after demolition is complete, has authorized USFWS to construct a monofill up to one acre in area for burial of non-hazardous debris between the Building 413 and the former sewage lagoon. The Alaska Department of Environmental Conservation (ADEC) (and possibly the Alaska Coastal Management Program and the city/borough of Bethel) requires a permit prior to monofill construction, and estimated costs associated with permitting are included in the cost estimate.

Both phases of the project include a Technical Approach, briefly describing what work is anticipated for the project and a Table showing estimated costs. Costs are based on 2010 labor and equipment rates, and should be updated at the time actual work is to be performed.

Several assumptions are made for both phases of the project in order to account for unknown conditions. These assumptions include:

- Hazardous debris will be transported to a disposal facility outside of Alaska.
- Building materials have been sufficiently characterized for hazardous material.
- Other than LBP and ACM, hazardous substances are not present in building debris. Additional sampling may be necessary to determine whether dioxins and/or furans have contaminated debris as a result of burned polychlorinated biphenyl (PCB)- containing paint.

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- Large non-hazardous debris may be buried in an on-site monofill.
- National Environmental Policy Act (NEPA) review is not part of project scope.

Additional assumptions are noted on Tables 1 and 2 along with itemized project costs.

BSI submitted a draft of the cost estimate to USFWS for their review in January 2011 and received direction to finalize the cost estimate without revisions. Please contact the undersigned at BSI if you would like discuss this cost estimate. We appreciate the opportunity to be of continued service.

Sincerely,

Bethel Services, Inc.

Joe Thomas

BSI Project Manager



Bethel Services, Inc.

A subsidiary of Bethel Native Corporation

TECHNICAL APPROACH

BIA Building 413 Hazardous Materials Abatement 27-Acre Parcel Bethel, Alaska

Bethel Services, Inc. (BSI) is pleased to submit our Cost Estimate for the hazardous materials abatement portion of Phase 7 of Solicitation No. 70181-8-R065, issued by the U.S. Fish and Wildlife Service (USFWS) for Contaminant Investigation, Bethel Bureau of Indian Affairs (BIA) Site, Yukon Delta National Wildlife Refuge. The Cost Estimate for the hazardous materials abatement primarily addresses removal of lead-based paint (LBP) and asbestos associated with Building 413 prior to demolition. Building 413 is a two-story, approximately 60,000-square-foot structure that is located at the former BIA 27-Acre parcel site, in Bethel, Alaska. BSI has reviewed the scope of work for the project and prepared the attached estimate based on the stated assumptions and this preliminary Technical Approach. Representatives from BSI accompanied by Mr. Charles Grant (USFWS Regional Environmental Compliance Coordinator) and Mr. Patrick Snow (USFWS Assistant Refuge Manager) conducted a site visit of structures on the 27-Acre parcel on November 30, 2010.

The organization of this technical approach is divided into six general project components (tasks):

- Project management
 - Overall project management
 - Project scheduling and updating
 - Progress reports
- Contract deliverables
 - Work Plans
 - Site Safety and Health Plan
 - Abatement Report
- Mobilization
 - Pre mobilization preparations
 - Mobilization to Bethel
 - Site preparations
- Building 413 hazardous materials abatement
 - Utility locates and site control
 - Miscellaneous debris removal
 - Hazmat removal

- Loose LBP removal
- Asbestos removal
- Transport and disposal of waste streams (Generally included in demobilization)
- Sample collection and analytical testing
 - Characterization of the building waste stream to ensure compliance with disposal requirements
 - Toxic Characterization Leaching Procedure (TCLP) sampling and testing for waste determination
- Demobilization
 - Demobilization from the site
 - Transportation of waste to disposal facility
 - Transportation and manifesting of hazardous materials

Task 1 – Project Management

This project is assumed to be managed from an Anchorage-based office that will jointly correspond with Anchorage- and Bethel-based USFWS representatives throughout the project period of performance. Upon award of contract, the contractor shall develop a work schedule that should plan to take place between the months of April and October to avoid challenges associated with winter field work. Review conferences are to take place in Anchorage, although the contractor understands communication with stake holders in the community of Bethel may be required and will be done so by telephone or teleconference until personnel and materials are mobilized to the site. No costs have been allocated in the estimate for formal USFWS sponsored meetings in Bethel that may potentially be required.

Task 2- Contract Deliverables

Contract Deliverables will be generated out of an Anchorage office. The deliverables shall include a Work Plan (WP), site-specific safety and health plan, and the hazardous materials abatement report.

The WP will include at a minimum:

- approval signature page,
- organizational chart,
- contact information for service providers and subcontractors,
- project schedule,
- Job Hazard Analysis,
- detailed description of abatement activities,
- waste characterization sampling plan, and
- hazardous waste handling and disposal plan.

Following the completion of the field activities and receipt of analytical test results, a hazardous materials abatement report will be prepared to summarize the field activities, site conditions, analytical test results, disposal manifests, and remedial actions.

Task 3 – Mobilization

It is noted that some equipment, personnel, and local resources are available in Bethel. Personnel for the 27-acre Bethel BIA project will generally be based out of Anchorage, however, local hires will be obtained if qualified and possess the required environmental labor certifications. For the purpose of this estimate, we estimate that seven employees will be mobilized to Bethel to perform the (LBP) and asbestos-containing materials (ACM) removal. One employee will be designated to oversee compliance to the contract documents.

Tools, equipment, and supplies will initially be staged in Anchorage and prepared for subsequent transport to Bethel. It is estimated that approximately 10,000 pounds of supplies and support equipment will be required to support the on-site field activities. Alaska Air Cargo will provide transportation of freight and supplies to Bethel. Bulk storage containers and 55-gallon drums used to store/transport waste materials will be shipped from Seattle, Washington.

Task 4 – Building 413 Hazardous Materials Abatement

The following is a summary of activities to be performed, which will be further detailed in the project WP.

- Coordination with local utility companies to mark buried utility lines.
- Identification of hazardous materials noted in previous hazardous materials surveys as LBP and ACM.
- Removal of LBP and the ACM to the extent practicable.

The following is a general description of abatement procedures in accordance with applicable Federal and State regulations. These procedures may be modified, as appropriate, if site conditions prevent the execution of the plan in a reasonable time frame.

Upon arrival in Bethel, abatement workers will transport all equipment and materials to the 27-acre Bethel BIA work site. Areas for abatement will be demarcated and prepared for abatement activities. Areas where asbestos abatement is required will be properly set up as regulated areas with critical barriers constructed around the perimeter(s). Non-certified workers and site visitors will be restricted from entering these areas.

The three primary work areas for asbestos abatement will be the crawlspace beneath the entire building, along the elevated sewer line leading to the former sewage lagoon, and the built-up ACM roofing. One point of entry will be established for the entire crawlspace. This point of entry will have a decontamination station set up consisting of a “clean room” for donning Personal Protective Equipment (PPE), a “dirty room” for doffing PPE, and a shower room. A designated “load out” station will be established where all ACM will exit the regulated area. All piping will be removed using cut and wrap methods and piping cut-points will be abated, as required. All abated pipe sections will be staged at the load out station where they will be placed in lined “Mega boxes”. Mega boxes will be securely stored in bulk storage containers for transportation to an ACM-permitted disposal facility.

ACM roofing removal will be performed within a second regulated area using wet methods. Roofing will be cut into sections suitable for placement into bulk storage containers and secured for disposal. All asbestos abatement will be performed by 40-Hour State of Alaska certified asbestos workers.

Other miscellaneous ACM components planned to be abated include: boiler gaskets, fir doors, asbestos-contaminated ash and other components. These materials will be handled on a case-by-case basis in accordance with standard practices.

Additional hazardous materials removal includes loose LBP from various surfaces throughout the facility. These LBP will be removed using manual scraping methods. Poly vinyl chloride (PVC)-backed drop clothes (or drop cloths) will be placed below all areas to be scraped. Effected surfaces will be scraped or brushed and chips will be collected in Department of Transportation (DOT)-approved 55-gallon, open-top drums. Drums will be secured in bulk storage containers for transport and disposal. Ground areas in the vicinity of LBP abatement will be High-Efficiency Particulate Air (filter) (HEPA) vacuumed in a final cleaning efforts.

Upon completion of hazardous materials abatement, all bulk storage containers with hazardous materials will be transported and staged for barging via the Kuskokwim River and Pacific marine route to Seattle for disposal.

Task 5 - Sample collection and analytical testing

Prior to disposal of LBP drums, Toxic Characteristic Leaching Procedure (TCLP) lead samples will be collected and analyzed to determine if they are characterized as toxic waste. An appropriate number of composite samples will be collected to characterize LPB chips contained in each container, analyzed by Environmental Protection Agency (EPA) Method 1311/6010. A sampling and analysis plan will be further outlined in the project WP.

Task 6 – Demobilization

The approximately 930 cubic yards (CY) of ACM are anticipated to be transported to and disposed of in Seattle, Washington, pending barge schedule. The approximate 40 CY of LBP will be disposed of in Seattle, Washington based on TCLP results.

SCHEDULE

Draft Project Work Plans shall be provided to the USFWS within 30 days of Notice of Award. Following the USFWS and agency review of approximately 15 days, the contractor will finalize the Project Work Plans within 30 days. Field activities for abatement of hazardous materials are anticipated to require two months time on a 7 days per week work schedule. As earlier stated, field activities shall occur between the months of April and October to allow for execution of planned work within the budgeted schedule.

ESTIMATED COST

This cost estimate was prepared for USFWS for planning purposes for site remediation necessary prior to transferring land to the Yukon-Kuskokwim Health Corporation. The cost estimate is based on historical investigation results, observations made during a site visit, estimated volumes of potentially hazardous materials and assumptions noted in cost estimate table. Our best estimate to complete the building demolition is **\$1,598,191** based on 2010 rates. This cost estimate cannot be assumed as BSI's bid in the event that this project is offered for contract bidding.

Please contact the undersigned at BSI if you would like discuss this cost estimate and we appreciate the opportunity to be of service.

Sincerely,

Bethel Services, Inc.

A handwritten signature in blue ink, appearing to read "Sean P. Thomas", followed by a horizontal line.

Sean P. Thomas, RES
Environmental Manager

Encl: Table 1
Summary Cost Estimate

Table 1a BIA hazardous materials removal

Item #	Rate /Hr Burdened No Profit, OH, GL, or Bonding ACTIVITY	Program Manager		PM/Engineer		Site Super		Operator		Iron Worker		Administrator		MATERIAL		Total Cost	
		MH Total	Total (\$)	MH Total	Total (\$)	MH Total	Total (\$)	MH Total	Total (\$)	MH Total	Total (\$)	MH Total	Total (\$)	Unit/Pc	Qty		
1 PRE- PLANNING DOCUMENTS/SUBMITTALS																	
1	Corporate Licenses	16,162															
2	Insurance																
3	Pre-Site Visit																
4	Submittal Preparation	1				40	3600	0									
5	Site Specific Health and Safety Plan	1				20	1800	0									
6	Work Plan	1				20	1800	0									
7	Pre-Construction Conference	1				2	180	0									
	Project management					80	7200										
2 MOB UP																	
1	Gear Up in Anchorage	1				20	1800	32	1159								
2	Purchase matls., deliver to airport	1															
3	Travel							16	1,474	8	732.43						
4 SET-UP																	
1	Site and safety meeting	2						4	368								
2	Mob Eq in Bethel	4				0	12	1105									
3	Site Control - Containment	6				0	24	2211									
5 HAZARDOUS MATERIALS REMOVAL/PACKAGING																	
	Crawler piping removal	3000 +/-						168	15,475								
1	LEP scrape entire building	82 sqms						168	15,475								
2	ACM built up roofing	20k-sqft +/-						336	30,951								
3	Misc. ACM/asbestos/firedoors/mastics...etc.	6x20'con						84	7,738								
	Non Haz removal for shipment off site							36	3,316								
6 DE-MOB																	
1	De-mob tools and supplies	6,186															
2	De-mob tools and supplies							24	2,211								
7 POST- PLANNING DOCUMENTS/SUBMITTALS																	
1	Final Acceptance Inspection							2	184								
2	Project Close-Out (Internal)					24	2,160	16	1474								
Total																	
		533,762		0	0	206	18540	922	83142	8	732	0	0	97	374	5168	427960

Chek

Work Crew and Work Week

Hours Per day	12
Days per week	7
Crew Size	7
DAYS ON SITE	65

Assumptions:
-Current Federal Wage Rates Apply
-Fuel and Tax surcharges will not exceed 2010 values
-All necessary equipment is available in Bethel AK
-All work is conducted during summer months
-All quantities are assumed. Pricing will need to be adjusted once firm quantities are known.
-Pricing does not include an estimator contingency.
-All work is priced at 2010 values. There has been no adjustment made for escalation.
- Allowance of 6 containers for off site disposal of non hazardous materials, i.e generators.

TOTAL DIRECT COST					\$1,164,348
OVERHEAD PRIME CONTRACTOR	15.00%				\$174,682
PRIME CONTRACTOR DIRECT COST PLUS OVERHEAD					\$1,339,230
FEE PRIME CONTRACTOR	10.00%				\$133,923
SUBTOTAL PRIME CONTRACTOR					\$1,473,153
TOTAL SUBCONTRACTOR COST					\$40,950
OVERHEAD ON SUBCONTRACTOR	15.00%				\$6,143
SUBCONTRACTOR COSTS PLUS OVERHEAD					\$47,093
PROFIT ON SUBCONTRACTOR	10%				\$4,709
SUBTOTAL SUBCONTRACTOR					\$51,802
GRAND SUBTOTAL					\$1,524,955
GENERAL LIABILITY		1.75%			\$26,687
BONDING	3.0%				\$46,549
PROJECT COST					\$1,598,191

TABLE 1b EQUIPMENT

Item #	ITEM	QTY	UNIT	Rate	DAYS	TOTAL
	Fuel	50	gal	150	65	\$9,750
	crew truck	1	day	100	65	\$6,500
	loader/squirt boom	1	day	280	65	\$18,200
	EX 200 excavator	1	wk	2,500	9	\$22,500
	H20 truck	1	day	150	65	\$9,750
	Decon-Hogs, misc abatement equip	1.0	day	300	65	\$19,500
	misc. equipment and small tools 5% labor					\$26,688
	TOTAL					\$112,888

Table 1c OTHER

Item #	ITEM	Vendor	Unit Type	Unit Cost	Units	Subtotal
	ACM/non haz disposal/disposal	rebanco	20'con	\$6,500	36	\$234,000
	per diem (includes housing and food)	BSI	day	\$200	526	\$105,200
	air fare	AA	ea	\$8,000	12	\$96,000
	LBP transport for disposal	local	20'con	\$6,500	2	\$13,000
	transport connexes	local	hr	145	115	\$16,675
	Mega boxes	AK packaging	ea	\$45	220.0	\$9,900
	Misc. RCRA disposal	ls	\$500	82.0	\$41,000	
	Air freight for equip/materials	ls	\$1,200	10,000	\$12,000	
	backfill	local	cy	\$12	466	\$5,592
	Skid Steer with forks		day	\$200	63	\$12,600
	DOT open top drums(LBP)	Unitech	ea	100	82	\$8,200
	Safety Supplies and consumables % of Labor			5%		\$26,688
	NON Haz disposal		20' con	\$2,000	6	\$12,000
	TOTAL					\$506,455

Table 1d SUBCONTRACTORS

Item #	ITEM	Vendor	Unit Type	Unit Cost	Units	Subtotal
	WEC		Day	650	63	\$40,950
						\$0
	TOTAL					\$40,950



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TECHNICAL APPROACH

BIA Building 413 and 420 Demolition 27-Acre Parcel Bethel, Alaska

Bethel Services, Inc. (BSI) is pleased to submit our Cost Estimate for the demolition portion of Phase 7 of Solicitation No. 70181-8-R065, issued by the U.S. Fish and Wildlife Service (USFWS) for Contaminant Investigation, Bethel Bureau of Indian Affairs (BIA) Site, Yukon Delta National Wildlife Refuge. The Cost Estimate for the building demolition primarily addresses removal of building materials, with the exception of lower level floor and support pilings and concrete fire walls. It is our understanding that the floor will be left in place as an institutional control measure for contaminated soil beneath the building footprint. Building 420 will be entirely demolished.

This technical approach and associated cost estimate assumes work will take place after a hazardous materials abatement effort is completed, which is separately addressed as an independent technical approach and cost estimate as part of this contract. Both buildings have been abated of lead-based paint (LBP) and asbestos, and Building 413 requires additional abatement prior to demolition. Building 413 is a two-story, approximately 60,000-square-foot structure that is located at the former BIA 27-Acre parcel site, in Bethel, Alaska. BSI has reviewed the scope of work for the project and prepared the attached estimate based on the stated assumptions and this preliminary Technical Approach. Representatives from BSI accompanied by Mr. Charles Grant (USFWS Regional Environmental Compliance Coordinator) and Mr. Patrick Snow (USFWS Assistant Refuge Manager) conducted a site visit of structures on the 27-Acre parcel on November 30, 2010.

The organization of this technical approach is divided into five general project components (tasks):

- Project management
 - Overall project management
 - Project scheduling and updating
 - Progress reports
- Contract deliverables
 - Work Plans
 - Site Safety and Health Plan
 - Abatement Report
- Monofill Permitting

- Mobilization
 - Pre mobilization preparations
 - Mobilization to Bethel
 - Site preparations
- Building 413 and 420 demolition
 - Utility locates and site control
 - Mechanical demolition
 - On-site burial of non-hazardous large debris.
- Demobilization
 - Demobilization from the site
 - Transportation of waste to disposal facility
 - Transportation and manifesting of hazardous materials

Task 1 – Project Management

This project is assumed to be managed from an Anchorage-based office that will jointly correspond with Anchorage- and Bethel-based USFWS representatives throughout the project period of performance. Upon award of contract, the contractor shall develop a work schedule that should take place between the months of April and October to avoid challenges associated with winter field work.

Task 2- Contract Deliverables

Contract Deliverables will be generated out of an Anchorage office. The deliverables shall include a site-specific safety and health plan, and removal action report. The removal action report will included a detailed description of demolition activities, technical drawings of monofill, safety meeting logs, photographs of site work, quantities of materials generated, and disposal receipts of all materials transported for off-site disposal.

Task 3 – Monofill Design and Permitting

To minimize costs associated with shipping demolition debris, Yukon-Kuskokwim Health Corporation (YKHC) has agreed to allow USFWS to bury all large non-hazardous debris in an on-site monofill. It is anticipated that the majority of material that will be placed in monofill will be comprised of construction lumber, concrete, utility pipes and wiring, and metal debris. Prior to construction of a monofill, the Alaska Department of Environmental Conservation (ADEC) will need to review and approve the design of the monofill, which must be completed by a licensed Professional Engineer. It may also be necessary to obtain design approval from the Alaska Coastal Management Program and the City and/or Borough of Bethel. Although the exact location has not been determined, YKHC has approved construction of a monofill between Building 413 and the former sewage lagoon. The chosen location will be an area that has not been impacted by past fuel releases.

Copies of permit(s) will be maintained at the site and updated as permit information changes. On-site work will not proceed until applicable permits are received.

Task 3 – Mobilization

It is noted that some equipment, personnel, and local resources are available in Bethel. Personnel for the 27-acre Bethel BIA demolition project will generally be based out of Anchorage. For the purpose of this estimate, we estimate that seven employees will be mobilized to Bethel to perform the demolition activities. One employee will be designated to oversee compliance to the contract documents.

Tools, equipment, and supplies will initially be staged in Anchorage and prepared for subsequent transport to Bethel. Alaska Air Cargo will provide transportation of freight and supplies to Bethel.

Task 4 – Buildings 413 and 420 Demolition

The following is a summary of activities to be performed, which will be further detailed in the project WP.

- Coordination with local utility companies to mark buried utility lines.
- Construct a monofill within the 27-acre parcel boundaries in accordance with the yet to be approved monofill design.
- Mechanically demolish buildings using an EX200 excavator and Bobcat, while taking care to minimize damage to existing floor and firewalls.
- Compaction and burial of debris placed in monofill; fill material will come from stockpiled soil generated during monofill construction. Off site borrow sources are not expected to be utilized as part of project.

The following is a general description of demolition activities planned at the 27-acre parcel site. These procedures may be modified, as appropriate, if other methods are found to be more effective in accomplishing project goals. All work will be conducted in accordance with applicable federal, state, and local regulations.

Upon arrival in Bethel, demolition workers will transport all equipment and materials to the 27-acre Bethel BIA work site. Land surrounding Buildings 413 and 420 will be cleared and grubbed as appropriate to allow access from buildings to monofill site.

A monofill will be constructed at an area approved by YKHC, and permitted by ADEC. It is estimated that approximately 10,000 cubic yards of non-hazardous debris will be generated during building demolition, which will be buried in the constructed monofill. The monofill will likely be trench-like for ease of filling and compaction.

Due to the requirement of leaving the floor intact, the buildings will be demolished using light-weight equipment. This will limit expediency and significantly adds to the total labor and equipment rental costs for the project. Several fire walls will be left standing, as requested by USFWS.

The monofill is anticipated to be approximately 15 feet deep and cover less than one acre in area. Total monofill depth cannot extend to within four feet of the water table, which is approximately 20 feet

below ground surface in this area. The Monofill will be lined and capped with a HDPE liner, and capped with native soil. Cost for restoration of vegetative cover, annual monitoring, and reporting is not included in this cost estimate.

It is assumed that demolition activities will be underway for 12 hours a day, 7 days a week until project completion. Accordingly, the project is estimated to require around 2 months to complete.

ESTIMATED COST

This cost estimate was prepared for USFWS for planning purposes for site remediation necessary prior to transferring land to the Yukon-Kuskokwim Health Corporation. The cost estimate is based on historical investigation results, observations made during a site visit, estimated volumes of building materials, and assumptions noted in cost estimate table. Our best estimate to complete the building demolition is **\$1,119,280** based on 2010 rates. This cost estimate cannot be assumed as BSI's bid in the event that this project is offered for contract bidding.

Please contact the undersigned at BSI if you would like discuss this cost estimate and we appreciate the opportunity to be of service.

Sincerely,

Bethel Services, Inc.

A handwritten signature in blue ink, appearing to read "Sean P. Thomas", followed by a horizontal line.

Sean P. Thomas, RES
Environmental Manager

Encl: Table 1
Summary Cost Estimate

