COUNTY OF BIG HORN, WYOMING
BOARD OF COMMISSIONERS
SOUTH BIG HORN COUNTY SENIOR CITIZENS SERVICE DISTRICT
SOUTH BIG HORN COUNTY SENIOR CENTER

REQUEST FOR PROPOSALS

ENGINEERING/DESIGN OF HVAC SYSTEM FOR THE BIG HORN COUNTY SR. CENTER, GREYBULL WYOMING

Responses Due:
No later than 2:00pm, April 29, 2016

Send To:
Lori Smallwood, Clerk
ATTN: BHC SR. CENTER HVAC
Big Horn County
P.O. Box 31
Basin, WY 82410

Funding assistance for this project is provided by the awards from Wyoming Association of Municipalities and Wyoming Business Council Energy Office

ADMINISTRATIVE INFORMATION AND CONDITIONS FOR SUBMITTAL

A. Issuing Office

Big Horn County, Board of County Commissioners, 420 W. C St, Basin, WY 82410.

B. Purpose

Proposals are being solicited from qualified engineers, trade professionals with the expertise needed to design a high efficiency HVAC system for the 6,240 square foot South Big Horn County Senior Citizens Center located 417 South 2nd Street, Greybull WY 82426. Upon design and equipment specification completion, Big Horn County will solicit proposals from qualified contractors for the removal of the old system and installation of the new system specified by this design.

Proposal Conditions

1. Primary Contact

Any questions relating to this RFP and specifically the work required as part of this request may be directed to Fred Werner, Big Horn County Maintenance Manager maintenance@bighorncountywy.gov or via phone at 307-568-2358. No submitting Consultant shall contact any County representative other than Fred Werner for purposes related to this proposal, on or after the date of publication of this RFP.

2. MANDATORY Bidders Site Meeting/Proposal Submittal Deadline and Procedure

A mandatory bidders meeting will be held at the project site 417 South 2nd Street, Greybull WY 82426 on Wednesday April 20th, 2016 at 3:30 PM. This meeting will provide bidders the opportunity to view, photograph and measure all necessary areas of the building required for the efficient and accurate design of the HVAC system. In order to ensure accurate design and specs, bids will only be accepted from firms that attend this meeting.

The packaged proposal (including all hard and electronic copies) shall be submitted to the Big Horn County Clerk by 2:00pm on April 29, 2016 in a sealed envelope clearly marked as follows:

Lori Smallwood, Clerk
ATTN: Response to BHC Sr. Center HVAC
Big Horn County
P.O. Box 31
Basin, WY 82410

Proposals received after the deadline for any reason shall remain unopened and will not be considered.

3. Exclusion

No oral, fax, email, or telephone proposals shall be considered.

4. Proposal Construction

Each proposal shall contain no more than twenty (20) 8.5”x 11” pages with printing on one side only, including cover letters, tables of contents, resumes or any pre-printed or other promotional material included with the proposal, whether bound or unbound. Any pages left blank, front and back decorative cover and section dividers shall not be included in the page count.

5. Proposal Contents

Each proposal shall include, at a minimum, the following:

a. Cover letter

- Limited to one (1) page, create a cover letter that succinctly explains the Consultant’s interest and qualifications for the project and contains the name, address, phone number and email address of the principal contact person.

b. Qualifications of the Consultant

- Describe the Consultant’s qualifications and relevant or related experience. One overall team should be proposed even when separate subcontractors are proposed. Include the location of the Consultant’s home office and the location(s) where services would likely be performed.
- Include a list of related projects that the consultant has started and completed in the last six (6) years. Identify the year range of each project, the owner’s contact person and telephone number. Projects which are referred to as having been accomplished by your firm shall be projects which were managed by personnel who are currently on your staff.

c. Names and Qualifications of Project Team

- A current resume for professional persons who would be working on the design which includes a description of qualifications, skills and current workload/availability. Identify each person’s role on the design effort. At a minimum, resumes for the project manager, primary technical and mechanical designers must be included.
- List any outside consultants who may perform services for this project. Describe what services each outside consultant would provide.

d. Strategy and Implementation Plan

- Describe your interpretation of the objectives with regard to this RFP.
- Describe your proposed strategy and/or plan for achieving the objectives of this RFP.
- Proposer may utilize a written narrative or any other printed technique to demonstrate the ability to satisfy the scope of services. The narrative should describe a logical progression of tasks and efforts starting with the initial steps or

tasks to be accomplished and continuing until all proposed tasks are fully described and the RFP objectives and deliverables are accomplished. Include a detailed time schedule for completion of the project.

e. References

- A list of at least (3) references for projects of similar size and scope, including at least two (2) references for projects completed during the past six (6) years. Include the name of the organization, a brief summary of the work, the cost of the project and the name and telephone number and/or email address of a responsible contact person.

f. Cost Breakdown

- Provide a breakdown of all costs estimated for completion of the project. Refer to Section II.D. for specifics on the proposed budget.

6. Copies of Proposal

Interested Consultants must submit four (4) complete hardcopies of their proposal.

7. Altering Proposals

Proposals cannot be altered or amended after they are received by BHC.

8. Confidential Information

All materials submitted in response to this RFP shall ultimately become public record. Any material to be treated as confidential or proprietary in nature must be clearly identified with the words “Confidential Disclosure,” placed in a separate envelope, and shall include a justification for the request. Note that confidential materials shall be included in the page count. Neither cost nor pricing information nor the total proposal shall be considered confidential or proprietary.

9. Material Ownership

All proposals and related materials become the property of BHC Board of Commissioners upon receipt and shall not be returned to the proposer. BHC shall have the right to use all ideas or adaptations of the ideas contained in any proposal received in response to this RFP, subject to the limitations outlined in the section titled “Confidential Material.”

10. Right to Cancel

The Board reserves the right to cancel the RFP at any time when it is in the best interest of BHC. The Board also reserves the right to accept or reject any and all submitted responses to the RFP. State statute and funder guidelines do not require Big Horn County to accept the lowest bid.

11. Authorization to Begin Work

Notice to proceed will be given to the Consultant as soon as the contract is approved and signed by all parties and returned to BHC.

II. SCOPE OF SERVICES

A. Background

The South Big Horn County Senior Citizens Center (SBHCSCC) was built in 1978 and currently uses the original 470,000 BTU Valliant boiler for heat with air condition for the building being handled utilizing two 10-ton AC units and a continuous power six foot air handling unit. In November of 2015 the Big Horn County Commissioner's requested an energy audit be conducted for this and two other County owned buildings with the intent to determine energy efficient alternatives to upgrade aging systems. (Trident Energy Services Study attachment A) In February of 2016 Big Horn County contracted with Safetech Inc. to have an asbestos analysis done on this facility. (Attachment B) This analysis determined the current HVAC systems has no asbestos present.

B. Project Goals

The desired outcome of this project will be a construction ready design including all necessary equipment specification, quantities, locations and project diagrams needed to solicit proposals from qualified HVAC installation contractors and direct the removal and installation of the new system from beginning through completion and satisfactory operation

C. Project Budget

Various funding sources including grants, loans, in-kind and cash matches have been combined to establish a total budget for all design, equipment purchase, demolition and installation of this HVAC system of $177,000. The selected Consultant must deliver all design requirements outlined in this request for no more than the negotiated and contracted amount.

BHC assumes no liability for any costs incurred by Consultants related to the Consultant selection process.

D. Project Tasks and Deliverables

It is expected that the Consultant will meet the following deliverables. The proposal must clearly articulate how the project's goals, tasks and deliverables will be met within the time and budget allotted. All materials collected or created by the selected Consultant become the property of BHC.

1. Deliverables

Project deliverables include the following:

a. Three complete copies of Construction ready design plans, specs, diagrams to enable an HVAC contractor to remove all old HVAC system components and install the new HVAC system specified in this design.

b. Be available in a timely fashion to the selected construction/installation contractor and Big Horn County to assist with any questions, concerns or items needing

clarification or modification throughout the complete installation of the new HVAC system.

E. Project Timeline and Deadlines

The effort is anticipated to begin on or soon after May 18, 2016.

An approximate timeline for project completion follows.

- **April 29, 2016: Deadline for Submission of Proposals** by no later than 2:00pm Mountain Time)
- **May 1 – May 13, 2016: Proposal Review and Selection Process**
- **May 18, 2016: Contract Award**
- **May 18 – June 30, 2016: Development of Design Plan**.
- **July 5th, 2016**: Due date for completed plan. Presentation of the Plan to the Big Horn County Commissioner's in an open public County Commissioner's meeting. Time to be determined
- **July 5, 2016 – December 31, 2016**: Available for consultation with construction/installation contractor and Big Horn County to answer any questions or provide any modification necessary for successful completion of the HVAC project.

III. CONSULTANT SELECTION

A. Selection Committee

A Selection Committee consisting of three (3) to five (5) members will be appointed by the Board to evaluate the proposals received. The Selection Committee members will independently review and score all proposals based upon selection criteria. The Selection Committee will then meet to discuss the proposals and comments from each member. The final score for each proposal will be determined by taking the average of all Selection Committee member scores. If necessary, the Selection Committee will prepare a consultant short list of the top-ranked proposers. The Selection Committee may conduct either phone or oral on-site interviews to complete the consultant selection process; however, the Selection Committee reserves the right to make a selection based solely upon the proposal received.

The members of the Selection Committee shall not be disclosed to submitting consultants. No submitting consultants shall contact any County representative other than Fred Werner for purposes related to this proposal, on or after the date of publication of the notice.

B. Contract Award

After the selection of a consultant, a contract will be awarded.

WYLite
Energy Feasibility Study

For

Big Horn County

Developed by:

Wyoming Business Council, Wyoming State Energy Office,

And

Trident Energy Services

November 2015

Under the directive of the Wyoming Business Council (WBC) the Wyoming State Energy Office promotes energy efficiency and conservation throughout Wyoming. For more information or continued assistance please feel free to contact us.

Sherry Hughes

Energy Efficiency Program
Manager

Wyoming State Energy Office

214 W. 15th Street

Cheyenne, WY 82001

307-777-2824

sherry.hughes@wyo.gov

For this project, Trident Energy Services is providing services under contract to WBC.

John Canfield, President

Trident Energy Services, Inc.

1430 Nelson Rd, Ste 204, Longmont, CO 80503

(303) 247-0193 (303) 247-0194 (fax)

jfcanfield@tridentenergy.com

www.tridentenergy.com

Andrea Massey, Technical Assistant

Trident Energy Services, Inc.

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amassey@tridentenergy.com

www.tridentenergy.com

Disclaimer

This report is preliminary and general in nature. Results are intended to identify potential, cost-effective, energy-saving measures and the potential for proceeding with a large-scale, comprehensive project to upgrade your facilities through energy efficiency.

Table of Contents

Executive Summary

Big Horn County has expressed interest in wanting to improve the energy efficiency and overall environment for the following facilities: Courthouse, Fair Building (Office/Shop/Hall), and the South Big Horn County Senior Center. To obtain funding for this effort, the County wishes to apply for the Wyoming Association of Municipalities/Wyoming County Commissioners Association Energy Lease Program (ELP). This is a zero-interest loan program that can be paid back up to 20 years. Once the County has applied for the ELP, Sherry Hughes, the Wyoming Energy Office's Energy Efficiency Program Manager, will notify the County once they become eligible to apply for the energy office's Local Government Energy Improvement Grant Program. This program offers up to $20 thousand to qualified and approved municipalities and counties.

The County requested the assistance of the WBC/State Energy Office. Through the energy office's WYLite program, Trident Energy Services, Inc., an independent energy engineering and consulting company providing energy consulting services to the Wyoming State Energy Office, conducted a preliminary energy study of three buildings. The information contained in this report may be used in the County's application for the ELP and the SEO's grant.

With the expert and knowledgeable guidance of Lori Smallwood and Fred Werner, we identified cost-effective, energy-saving and capital improvement opportunities.

As requested by the County, this report considers only the South Senior Center. A future report will be developed for the Courthouse and the Fair building.

The existing HVAC system is original to the building and is in a state of serious disrepair, with both water and air leaks throughout the system resulting in not only significant energy loss, but high maintenance costs and uncomfortable conditions in several areas of the building.

The following table summarizes the estimated costs and savings associated with the recommended upgrades.

Proposed Retrofit/s		Estimated Cost to Implement	Estimated Annual Dollar Savings (Required)	Estimated Simple Payback (yrs.)	Estimated Annual Energy Usage of OLD System (in: kWh, Ccf)	Saved Units	Estimated Annual Usage Savings for NEW System (in: kWh, Ccf)
South BHC Sr. Center							
1	Replace HVAC System	$177,000	$5,132	34.5	40,860	kWh	14,204
					8,024	Ccf	4,012
	Grand Total	**$177,000**	**$5,132**	**34.5**			

Cost and savings shown are estimates only, and may differ with those developed through a more thorough evaluation. Installation cost estimates are based on typical costs from similar projects with installation by outside contractors. If labor is provided in-house, installed costs will be reduced. Energy savings are based on engineering estimates and calculations and use the electricity and fuel costs shown in Appendix A and B. Savings estimates do not include maintenance cost savings.

Detail descriptions for each measure begin on following page.

Energy and Cost Saving Improvements

South Big Horn County Senior Center

Facility Description

The Big Horn County Senior Center is a 6,240 square foot building originally built in 1978. Over the last several years, upgrades, including window replacements, roof replacement, new siding, low-flow water fixtures, and a full lighting upgrade were performed, all of which resulted in noticeable energy use and cost reductions. However, the building's original HVAC equipment remains.

Utility Use

Electricity and natural gas are provided for the building by Rocky Mountain Power and Wyoming Gas, respectively. According to the billing period between July 2014 and June 2015, the building energy costs for electricity and natural gas were $18,857 and $7,016, respectively. Based on the year's utility rates, this resulted in a cost of $4.14 per square foot.

Recommendations for Existing Energy Systems

The following provides brief descriptions of the existing energy systems and recommendations for improving their operation and energy efficiency.

Heating, Ventilation, and Cooling and Controls

Despite the comprehensive work done previously, the original building-wide HVAC system continues in use. The system consist of a central constant volume air handler with a 5 horsepower blower that distributes conditioned air throughout the building via a system of ducts. Each of 9 zones served by the AHU is further controlled by a re-heat system, that is, heated air distribution vents controlled by their individual zone pneumatic thermostats. Heating energy is provided by a single natural gas-fired hot water boiler, rated at 390,000 Btu output that provides heating water to a coil in the AHU as well as distributed to each of the terminal re-heat boxes located in each zone via two 2 horsepower distribution pumps.

The central system also provides refrigerated cooling, via a split DX system rated at about 10 tons capacity, that serves a single cooling coil located in the AHU.

According to county personnel, the HVAC system is in a severe state of disrepair having numerous hot water and air leaks throughout the system, including the boiler, the hot water distribution pumps and valves, and air leaks in the ductwork. The AHU itself has been the cause of continuous maintenance issues and costs. Additionally, the air distribution system is often too loud for comfort is some areas.

The system is controlled by an old, degraded pneumatic system, including the 9 zone thermostats.

Overall maintenance and controllability of the system is managed by an off-site company which, when needed, costs significant service dollars to the county.

The kitchen tries to stay cool in the summer with a window mounted air conditioner.

Recommendations

- Replace the entire current HVAC system. It is too old and beyond adequate repair to continue trying to maintain it. It is recommended to replace the entire system, all current duct work, and the entire pneumatic controls system with four (4) new, high efficiency condensing natural gas-fired forced air furnaces, each with the capability to provide and control outside ventilation air and refrigerated cooling, and serve separate sections of the building. New ductwork, zoned to better serve the building should be installed and new, electronic programmable thermostats installed for each zone. Not only will the new system save significant HVAC energy use and cost, it will significantly reduce the maintenance costs associated with the existing system. Overall comfort in the building will also be improved. (See preliminary cost estimate in Appendix C.)
    - *It is VERY important that prior to purchase and installation of any new HVAC equipment, that the services of an experienced HVAC design engineer be employed to ensure the new system is properly specified, sized, designed, installed and commissioned.*

Next Steps

The County will apply for the WAM/WCCA Energy Lease Program (Application deadline is December 11, 2015) and is currently working with the Wyoming State Energy Office's WYLite program, making the County eligible to apply to the State Energy Office for its Local Government Energy Improvement Grant Program. The following are the basic steps to follow to successfully apply for both funding programs:

Step 1: Agency must have a signed contract with either program (WYECIP or WyLite).

Step 2: Energy Assessment completed.

Step 3: Apply for the WAM-WCCA Energy Lease Program (deadline 5:00 pm December 11, 2015) http://www.wyomuni.org/vertical/sites/%7BAA188EFF-AB49-49A3-ACFE-6BC586C039AD%7D/uploads/RFP_2016.pdf. The Joint Oversight Board will meet in January 2016, to review applications. Awardees will have 90 days to accept, or deny, the lease award. Funds will be available to the Awardees on or about July 1, 2016 and must be requested by June 30, 2017. Cities and counties are encouraged

to apply for leases to increase energy efficiency. Zero interest leases between $2,500 and $100,000 will be awarded for projects that will increase the energy efficiency.

Step 4: Applications for the State Energy Office Local Government Energy Improvement Grant Program deadline is February 29, 2016. Maximum grant amount is $20,000. There is no minimum grant request. Project costs may exceed $20,000; however, the amount in excess of $20,000 must be funded from local or other sources. Eligible applicants are required to provide a minimum 10% cash match to leverage the available Federal funds. http://wyomingbusiness.org/DocumentLibrary/Energy/2015/Application15-16_form.pdf

The County should choose the measures it wishes to include in its application and revise the table found in this report accordingly. (The application deadline for the grant is February 29, 2016.)

If the County wishes to receive technical support for selecting specific equipment for installation, Trident, through the state energy office, can provide limited consulting at no further cost.

For questions on this report, please contact Sherry Hughes in the State Energy Office or John Canfield, Trident Energy Services. (Contact information found on page 3.)

Appendix A - Utility Bill Information

July 2014 Through June 2015

Building Name	Blended Electricity Cost ($/kWh)	Natural Gas Cost ($/Ccf)
South Big Horn County Senior Center	$0.139	$ 0.79

Annual Energy Usage **July 2014 Through June 2015**

Building Name	Area (sf)	Electricity Usage (kWh)	Natural Gas Usage (Ccf)
South Big Horn County Senior Center	6,240	135,980	8,902

July 2014 Through June 2015

Building Name	Electricity (kBtu/SF/yr)	Electricity ($/SF/yr)	Fuel (kBtu/SF/yr)	Fuel ($/SF/yr)	Total (kBtu/SF/yr)	Total ($/SF/yr)
South Big Horn County Senior Center	74.4	$ 3.02	142.7	$ 1.12	217.0	$ 4.15

Building Name	Electricity Cost ($/yr)	Fuel Cost ($/yr)	Total Energy Cost ($/yr)	Total Energy Cost per SF
South Big Horn County Senior Center	$18,857	$7,016	$25,873	$4.15

Appendix B - Savings and Cost Summary

		Measure Est. Cost		Measure Est. Savings								
Replace HVAC System					Estimate will save this % of Clg elec: 50%			Simple Payback				
	No. of Units	Avg Unit Cost	Total Est. Cost	Est $ Svgs.	Estimate will save this % of heating fuel: 50%			(yr)	kWh Svgs.	Elec. $ Svgs.	Fuel. Svgs.	Fuel$ Svgs.
South Big Horn County Senior Center	1	$ 177,000	$ 177,000	$ 5,132	est. annual savings	21%	90%	34.5	14,204	$ 1,970	4,012	$ 3,162

Appendix C – South Sr. Center HVAC Replacement Pre-Design Information

Pre-design, brief analysis of replacement HVAC system.

General

A qualified design engineer is needed to closely observe the site, including above ceilings, and to take needed measurements, gather all data and owner requirements, and make detailed calculations and equipment selection as required to design an energy efficient system in coordination with the code authority.

Criteria

The owner has emphasized comfort, energy efficiency, and operation/maintenance that is relatively simple, as key criteria.

Options

The owner has requested efficient, conventional condensing gas furnaces, and minimum controls complexity. There are options that may provide better comfort and energy efficiency, but controls are more complex. These have not been investigated.

Existing System

Boiler plant with building piping, indoor AHU/HW/DX with building ductwork and reheat coils, outdoor condensing unit, baseboard heating, kitchen hood exhaust/fan and rooftop make-up air unit, entry heaters, pneumatic controls, and misc. exhaust.

New System

Given the limited observations and absence of a design engineer for research and design, the following is a preliminary system that uses the owner-requested conventional condensing furnaces:

After removing the existing system except for the kitchen hood/exhaust and its rooftop make-up air unit, provide 4 (see below) conventional high efficiency condensing gas furnaces with AC via DX coils at the furnaces and outdoor condensing units, new building ductwork, new entry heaters (electric), and non-complex electric/electronic controls. The Dining room system must be capable of high OA quantity for code ventilation. An assumption here is that an energy recovery ventilation unit can provide tempered OA to the dining room furnace which has little capacity for freezing cold OA.

Note that operable windows with required opening area may be acceptable to the code authority for code ventilation for occupied perimeter rooms with windows. Also note that occupants are not inclined to open windows in the winter.

The design engineer must determine how many furnaces, their size and the duct layout to achieve acceptable comfort, the acceptable controls, and the code ventilation requirements confirmed with the code authority.

PRELIMINARY

COST OPINION, REPLACE HVAC, OPTION 1

Big Horn County South Sr. Center
November 2015

Existing HVAC

Boiler plant with building piping, indoor AHU/HW/DX with building ductwork, outdoor condensing unit, baseboard heating, kitchen hood exhaust/fan and rooftop make-up air unit, entry heaters, misc. exhaust.

New HVAC

Per owner request, conventional high efficiency condensing gas furnaces with AC via outdoor condensing units, new building ductwork. Code ventilation (OA) direct to all furnaces except dining room system shall have high OA via energy recovery ventilator. Design engineer must confirm code ventilation requirements, coordinated with code official. New entry heaters, electric. Minimum controls complexity.

Assumptions

1. Exclude Kitchen Coolers
2. No code violations or asbestos
3. Mechanical contractor is the lead contractor. No add for a GC or owner PM
4. Excludes kitchen hood exh/rooftop MUA system, misc exhaust/fans, DHW heater and all plumbing
5. Rebates, incentives, grants, etc., if any, not included.
6. Assume ceiling space is code acceptable for use as return air plenum
7. Assume existing rooftop-MUA unit is gas-fired.

COST*		**$/SF**
Architectural/structural		
~10% of mech (patch/paint, clg tile & grid R&R, etc)	$	2.00
Electrical		
~10% of mechanical	$	2.00
Mechanical		
Demo all existing HVAC except Kitchen hood exh/MUA-RTU	$	2.50
Gas piping, mech rm	$	0.25
Controls, new, non DDC/BAS	$	0.50
Furnaces, 4, High eff condensing type	$	4.00
Energy Recovery Ventilator for Dining Rm furnace	$	1.00
DX coils & Condensing units, high efficiency	$	3.50
Ductwork, plenum return	$	4.00
Piping, DX, insulated, from CUs to furnaces	$	0.50
Balancing, air	$	0.75
Warranty, bond, Gen'l Conditions	$	1.00

pre-design contingency ~15%	$	3.00
subtotal mech	$	21.00
Total, all contractors	$	25.00
MC mark-up on subs (20% x $5/sf)	$	1.00
Construction cost, $/SF	$	26.00
Construction cost, $ =$26 x 6240	$	162,000.00
Design by Wyo licensed prof engr, retrofit	$	15,000.00
Project total		**$177,000.00**

*Cost is for material, labor, contractor OH&P, warranty. MC mark-up on subs shown separate.

Pace Analytical Services, Inc.
1800 Elm St. SE - Suite 1830
Minneapolis, MN 55414
(612) 607-6457

Leonard Cranford
Safetech Inc
5735 Interstate Avenue
Billings, MT 59101

February 26, 2016
Work Order #: 1600418

RE: So Big Horn Cnty. Senior Center

Dear Leonard Cranford:

Bulk Asbestos Analysis Report

The microscopy department of Pace Analytical Services, Inc. received your analytical request on February 22, 2016. The sample(s) were analyzed in the Pace Industrial Hygiene laboratory unless otherwise noted. The objective of this analysis was to determine the presence of asbestos using polarized light microscopy (PLM) and to determine the percent of asbestos and non-asbestos fibrous components by calibrated visual area estimation. Analytical results are summarized on the following laboratory report.

Methodology

Bulk asbestos analysis is conducted in accordance with the Environmental Protection Agency's (EPA) methods 40 CFR, Part 763, Ch. 1, Subpart F, Appendix A (7-1-87 Edition) and EPA/600/R-93/116. All analyses are in compliance with the quality control procedures specified by the methods. All samples are examined for homogeneity. If a sample contains more than one layer, each layer is analyzed individually. Total fibrous content is calculated for joint compound/wallboard systems by combining layer results according to their percentages of the total sample. All routine quality assurance procedures were followed, unless otherwise noted.

Remarks

This test report relates only to the items submitted for analysis.

Samples are retained at our laboratory for a period of 30 days and will be disposed of unless otherwise instructed by the client.

We appreciate your decision to use Pace Analytical Services, Inc. for this project. We are committed to being your vendor of choice to meet your analytical needs.

If you have any questions please contact me at 612-607-6457.

Sincerely,

Michelle Pivec For Steven D. Felton
Project Manager

Steven D. Felton
Microscopist

Sample No: 1600418-01 **Client ID: T2-101**

Macroscopic Description	No. of Layers and Layer Designator	Percent of Total Sample	Non-Fibrous Components*	Other Fibrous Non-Asbestos Content Total or Layer %	Asbestos Content Total or Layer %	Analytical Date
Gray fibrous powdery	1	100	1,3	Cellulose <1 Glass Fibers 25	None Detected	02/26/16

Sample No: 1600418-02 **Client ID: T2-102**

Macroscopic Description	No. of Layers and Layer Designator	Percent of Total Sample	Non-Fibrous Components*	Other Fibrous Non-Asbestos Content Total or Layer %	Asbestos Content Total or Layer %	Analytical Date
Insulation	2	100	-	-	-	02/26/16
Tan fibrous	(A)	10	3	Cellulose 95	None Detected	
Gray fibrous powdery	(B)	90	1,3	Cellulose <1 Glass Fibers 25	None Detected	

Sample No: 1600418-03 **Client ID: T2-103**

Macroscopic Description	No. of Layers and Layer Designator	Percent of Total Sample	Non-Fibrous Components*	Other Fibrous Non-Asbestos Content Total or Layer %	Asbestos Content Total or Layer %	Analytical Date
Gray fibrous powdery	1	100	1,3	Glass Fibers 25	None Detected	02/26/16

Footnotes and Definitions

< Less Than

> Greater Than

*** Key to Non-Fibrous Components**

1 = Rock/Mineral fragments	5 = Diatoms	9 = Vinyl	13 = Spores/Pollen
2 = Mica/Vermiculite	6 = Perlite	10 = Foam/Rubber	14 = Foil
3 = Binders	7 = Adhesive/Mastic	11 = Paint	
4 = Opaques	8 = Tar	12 = Other	

16000418

Asbestos Bulk Sample Record

Chain of Custody

Safetech, Inc

P.O. Box 80565, 5735 Interstate Ave
Billings, Montana 59108
Phone: 406-651-0011
Fax: 406-651-0271
Email: leonard@safetechmontana.com

Project Name:	So Big Horn Cnty. Senior Center
Project Number:	
Date Samples Taken:	2-17-2016
Type of Analysis:	PLM

Inspector/Contact:

For lab use only	
Sample(s) size: Accept / Reject **Non-Conformance Memo: Y / N**	
Package Condition: Good / Damaged / Severe Damage	

Turnaround Time Request: (check One)	
2 Hours	
Same Day	
24 Hour	
5 Day	

Page:____ of ____

Safetech Lab ID	Sample Number	Sample Description	Sample Location
TR-101	-01	Pipe Joint Insulation	Boiler Room
102	-02	" " "	"
103	-03	" " "	"

Number of Samples Shipped this Page			
Total number of samples shipped			
Special Instruction:	**Analyse group method - Stop at first positive in each group**		
Date:	Time:	Relinquished by:	Firm: Safetech, Inc
Date: 2/18/16	Time: 1655	Received by:	Firm: Pace
Date: 2/22/16	Time: 1120	Received by: MPivec	Firm: Pace

Revised 3/15/2012 LC