



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

Division of Facilities Construction and Management

DFCM

STANDARD LOW BID PROJECT

March 26, 2007

HAZARDOUS MATERIAL ABATEMENT BUILDINGS #1 AND #2

WEBER STATE UNIVERSITY OGDEN, UTAH

DFCM Project Number 05027810

Rowland Consulting, Inc
7301 South Paddington Road
West Jordan, Utah 84084

TABLE OF CONTENTS

	<u>Page Numbers</u>
Title Page	1
Table of Contents	2
Notice to Contractors	3
Project Description	4
Project Schedule	5
Bid Form	6
Instructions to Bidders	8
Bid Bond	12
Contractors Sublist Form	13
Fugitive Dust Plan	16
Contractor's Agreement	23
Performance Bond	28
Payment Bond	29
Change Order Form	30
Certificate of Substantial Completion	31
Fairpark Map	

Current copies of the following documents are hereby made part of these contract documents by reference. These documents are available on the DFCM web site at <http://dfcm.utah.gov> or are available upon request from DFCM.

DFCM General Conditions dated May 25, 2005.

DFCM Application and Certification for Payment dated May 25, 2005.

Technical Specifications:

1. Asbestos Abatement Specifications as prepared by Rowland Consulting dated March 9, 2007
2. Building #1 Survey as prepared by Rowland Consulting dated March 22, 2006
3. Building #2 Survey as prepared by Rowland Consulting dated March 22, 2006

Drawings: As prepared by Rowland Consulting, Inc., dated March 22, 2006

The Agreement and General Conditions dated May 25, 2005 have been updated from versions that were formally adopted and in use prior to this date. The changes made to the General Conditions are identified in a document entitled Revisions to General Conditions that is available on DFCM's web site at <http://dfcm.utah.gov>

NOTICE TO CONTRACTORS

Sealed bids will be received by the Division of Facilities Construction and Management (DFCM) for:

HAZARDOUS MATERIAL ABATEMENT - BUILDINGS #1 AND #2
WEBER STATE UNIVERSITY – OGDEN, UTAH
DFCM PROJECT NO: 05027810

Bids will be in accordance with the Contract Documents that will be available at 12:00 Noon on Monday, March 26, 2007, and distributed in electronic format only on CDs from DFCM at the Wasatch Building at the Utah State Fairpark, approximately 155 North 1000 West, Salt Lake City, Utah and on the DFCM web page at <http://dfcm.utah.gov>. For questions regarding this project, please contact Bill Bowen, DFCM, at 801-538-3271. No others are to be contacted regarding this bidding process. The abatement budget for this project is \$414,000.00.

A **mandatory** pre-bid meeting will be held at 10:00 AM on Thursday, April 5, 2007 in the Conference Room of the Facilities Management Building Conference Room, Weber State University, Ogden, Utah (<http://www.weber.edu/WeberStateMap/OgdenCampusMap.html>). All bidders wishing to bid on this project are required to attend this meeting.

Bids will be received until the hour of 1:30 PM on Wednesday, April 18, 2007 at the Wasatch Building at the Utah State Fairpark, approximately 155 North 1000 West, Salt Lake City, Utah. Refer to the map on the DFCM website for directions (http://dfcm.utah.gov/downloads/fairpark_map.pdf). Bids will be opened and read aloud in the Wasatch Building at the Utah State Fairpark. NOTE: Bids must be received at the Wasatch Building at the Utah State Fairpark by the specified time.

A bid bond in the amount of five percent (5%) of the bid amount, made payable to the Division of Facilities Construction and Management on DFCM's bid bond form, shall accompany the bid.

The Division of Facilities Construction and Management reserves the right to reject any or all bids or to waive any formality or technicality in any bid in the interest of DFCM.

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

Marla Workman, Contract Coordinator

4110 State Office Building, Salt Lake City, Utah 84114

PROJECT DESCRIPTION

This project involves the hazardous material abatement of Buildings #1 and #2 in order to prepare them for demolition.

The abatement contractor must provide adequate forces to abate both buildings simultaneously.

All work must be completed between May 21, 2007 and June 30, 2007.



PROJECT SCHEDULE

PROJECT NAME: HAZARDOUS MATERIAL ABATEMENT - BUILDINGS #1 AND #2 WEBER STATE UNIVERSITY - OGDEN, UTAH				
DFCM PROJECT NO. 05027810				
Event	Day	Date	Time	Place
Bidding Documents Available	Monday	March 26, 2007	12:00 NOON	Wasatch Building Utah State Fairpark Approx 155 North 1000 West Salt Lake City, UT or DFCM web site *
Mandatory Pre-bid Site Meeting	Thursday	April 5, 2007	10:00 AM	Conference Room Facilities Management Bldg Weber State University Ogden, UT ***
Last Day to Submit Questions	Tuesday	April 10, 2007	4:00 PM	Bill Bowen - DFCM billbowen@utah.gov
Addendum Issued Responding to Questions (if needed)	Thursday	April 12, 2007	2:00 PM	DFCM web site *
Prime Contractors Turn In Bid and Bid Bond	Wednesday	April 18, 2007	1:30 PM	Wasatch Building Utah State Fairpark Approx 155 North 1000 West Salt Lake City, UT **
Sub-contractor List Due	Thursday	April 19, 2007	1:30 PM	DFCM 4110 State Office Bldg SLC, UT Fax 801-538-3677
Substantial Completion Date	Friday	June 15, 2007		

* **NOTE:** DFCM's web site address is <http://dfcm.utah.gov>

** **Due to the ongoing construction on Capitol Hill and the anticipated shortage of parking during 2007, all bids will be received and opened at the Wasatch Building at the Utah State Fairpark. Refer to map on the DFCM web site for directions (http://dfcm.utah.gov/downloads/fairpark_map.pdf)**

*** **Refer to map for directions to WSU Facilities Management Bldg.**
<http://www.weber.edu/WeberStateMap/OgdenCampusMap.html>



BID FORM

NAME OF BIDDER _____ DATE _____

To the Division of Facilities Construction and Management
4110 State Office Building
Salt Lake City, Utah 84114

The undersigned, responsive to the "Notice to Contractors" and in accordance with the "Instructions to Bidders", in compliance with your invitation for bids for the **HAZARDOUS MATERIAL ABATEMENT - BUILDINGS #1 AND #2 -WEBER STATE UNIVERSITY – OREM, UTAH - DFCM PROJECT NO: 05027810** and having examined the Contract Documents and the site of the proposed Work and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of labor, hereby proposes to furnish all labor, materials and supplies as required for the Work in accordance with the Contract Documents as specified and within the time set forth and at the price stated below. This price is to cover all expenses incurred in performing the Work required under the Contract Documents of which this bid is a part:

I/We acknowledge receipt of the following Addenda: _____

For all work shown on the Drawings and described in the Specifications and Contract Documents, I/we agree to perform for the sum of:

_____ DOLLARS (\$ _____)
(In case of discrepancy, written amount shall govern)

I/We guarantee that the Work will be Substantially Complete by **June 30, 2007**, should I/we be the successful bidder, and agree to pay liquidated damages in the amount of **\$250.00** per day for each day after expiration of the Contract Time as stated in Article 3 of the Contractor's Agreement.

This bid shall be good for 45 days after bid opening.

Enclosed is a 5% bid bond, as required, in the sum of _____

The undersigned Contractor's License Number for Utah is _____

Upon receipt of notice of award of this bid, the undersigned agrees to execute the contract within ten (10) days, unless a shorter time is specified in the Contract Documents, and deliver acceptable Performance and Payment bonds in the prescribed form in the amount of 100% of the Contract Sum for faithful performance of the contract.

The Bid Bond attached, in the amount not less than five percent (5%) of the above bid sum, shall become the property of the Division of Facilities Construction and Management as liquidated damages for delay and additional expense caused thereby in the event that the contract is not executed and/or acceptable 100% Performance and Payment bonds are not delivered within the time set forth.

Type of Organization:

(Corporation, Partnership, Individual, etc.)

Any request and information related to Utah Preference Laws:

Respectfully submitted,

Name of Bidder

ADDRESS:

Authorized Signature

INSTRUCTIONS TO BIDDERS

1. Drawings and Specifications, Other Contract Documents

Drawings and Specifications, as well as other available Contract Documents, may be obtained as stated in the Invitation to Bid.

2. Bids

Before submitting a bid, each contractor shall carefully examine the Contract Documents, shall visit the site of the Work; shall fully inform themselves as to all existing conditions and limitations; and shall include in the bid the cost of all items required by the Contract Documents. If the bidder observes that portions of the Contract Documents are at variance with applicable laws, building codes, rules, regulations or contain obvious erroneous or uncoordinated information, the bidder shall promptly notify the DFCM Representative and the necessary changes shall be accomplished by Addendum.

The bid, bearing original signatures, must be typed or handwritten in ink on the Bid Form provided in the procurement documents and submitted in a sealed envelope at the location specified by the Invitation to Bid prior to the deadline for submission of bids.

Bid bond security, in the amount of five percent (5%) of the bid, made payable to the Division of Facilities Construction and Management, shall accompany bid. **THE BID BOND MUST BE ON THE BID BOND FORM PROVIDED IN THE PROCUREMENT DOCUMENTS IN ORDER TO BE CONSIDERED AN ACCEPTABLE BID.**

If the bid bond security is submitted on a bid bond form other than DFCM's required bid bond form, and the bid security meets all other legal requirements, the bidder will be allowed to provide an acceptable bid bond by the close of business on the next business day following notification by DFCM of submission of a defective bid bond security. **NOTE: A cashier's check cannot be used as a substitute for a bid bond.**

3. Contract and Bond

The Contractor's Agreement will be in the form found in the specifications. The Contract Time will be as indicated in the bid. The successful bidder, simultaneously with the execution of the Contract Agreement, will be required to furnish a performance bond and a payment bond, both bearing original signatures, upon the forms provided in the procurement documents. The performance and payment bonds shall be for an amount equal to one hundred percent (100%) of the contract sum and secured from a company that meets the requirements specified in the requisite forms. Any bonding requirements for subcontractors will be specified in the Supplementary General Conditions.

4. Listing of Subcontractors

Listing of Subcontractors shall be as summarized in the “Instructions and Subcontractor’s List Form”, which are included as part of these Contract Documents. The Subcontractors List shall be delivered to DFCM or faxed to DFCM at (801)538-3677 within 24 hours of the bid opening. Requirements for listing additional subcontractors will be listed in the Contract Documents.

DFCM retains the right to audit or take other steps necessary to confirm compliance with requirements for the listing and changing of subcontractors. Any contractor who is found to not be in compliance with these requirements is subject to a debarment hearing and may be debarred from consideration for award of contracts for a period of up to three years.

5. Interpretation of Drawings and Specifications

If any person or entity contemplating submitting a bid is in doubt as to the meaning of any part of the drawings, specifications or other Contract Documents, such person shall submit to the DFCM Project Manager a request for an interpretation thereof. The person or entity submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by addenda posted on DFCM’s web site at <http://dfcm.utah.gov>. Neither the DFCM nor A/E will be responsible for any other explanations or interpretations of the proposed documents. A/E shall be deemed to refer to the architect or engineer hired by DFCM as the A/E or Consultant for the Project.

6. Addenda

Addenda will be posted on DFCM’s web site at <http://dfcm.utah.gov>. Contractors are responsible for obtaining information contained in each addendum from the web site. Addenda issued prior to the submittal deadline shall become part of the bidding process and must be acknowledged on the bid form. Failure to acknowledge addenda may result in disqualification from bidding.

7. Award of Contract

The Contract will be awarded as soon as possible to the lowest, responsive and responsible bidder, based on the lowest combination of base bid and acceptable prioritized alternates, provided the bid is reasonable, is in the interests of the State of Utah to accept and after applying the Utah Preference Laws in U.C.A. Title 63, Chapter 56. DFCM reserves the right to waive any technicalities or formalities in any bid or in the bidding. Alternates will be accepted on a prioritized basis with Alternate 1 being highest priority, Alternate 2 having second priority, etc.

8. DFCM Contractor Performance Rating

As a contractor completes each DFCM project, DFCM, the architect/engineer and the using agency will evaluate project performance based on the enclosed “DFCM Contractor Performance Rating” form. The ratings issued on this project will not affect this project but may affect the award on future projects.

9. Licensure

The Contractor shall comply with and require all of its subcontractors to comply with the license laws as required by the State of Utah.

10. Right to Reject Bids

DFCM reserves the right to reject any or all Bids.

11. Time is of the Essence

Time is of the essence in regard to all the requirements of the Contract Documents.

12. Withdrawal of Bids

Bids may be withdrawn on written request received from bidder prior to the time fixed for opening. Negligence on the part of the bidder in preparing the bid confers no right for the withdrawal of the bid after it has been opened.

13. Product Approvals

Where reference is made to one or more proprietary products in the Contract Documents, but restrictive descriptive materials of one or more manufacturer(s) is referred to in the Contract Documents, the products of other manufacturers will be accepted, provided they equal or exceed the standards set forth in the drawings and specifications and are compatible with the intent and purpose of the design, subject to the written approval of the A/E. Such written approval must occur prior to the deadline established for the last scheduled addenda to be issued. The A/E’s written approval will be in an issued addendum. If the descriptive material is not restrictive, the products of other manufacturers specified will be accepted without prior approval provided they are compatible with the intent and purpose of the design as determined by the A/E.

14. Financial Responsibility of Contractors, Subcontractors and Sub-subcontractors

Contractors shall respond promptly to any inquiry in writing by DFCM to any concern of financial responsibility of the contractor, subcontractor or sub-subcontractor.

15. Debarment

By submitting a bid, the Contractor certifies that neither it nor its principals, including project and site managers, have been, or are under consideration for, debarment or suspension, or any action that would exclude such from participation in a construction contract by any governmental department or agency. If the Contractor cannot certify this statement, attach to the bid a detailed written explanation which must be reviewed and approved by DFCM as part of the requirements for award of the Project.

BID BOND

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

KNOW ALL PERSONS BY THESE PRESENTS:

That _____ hereinafter referred to as the "Principal," and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ and authorized to transact business in this State and U. S. Department of the Treasury Listed, (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); hereinafter referred to as the "Surety," are held and firmly bound unto the STATE OF UTAH, hereinafter referred to as the "Obligee," in the amount of \$ _____ (5% of the accompanying bid), being the sum of this Bond to which payment the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted to Obligee the accompanying bid incorporated by reference herein, dated as shown, to enter into a contract in writing for the _____ Project.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the said principal does not execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the principal, then the sum of the amount stated above will be forfeited to the State of Utah as liquidated damages and not as a penalty; if the said principal shall execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the Principal, then this obligation shall be null and void. It is expressly understood and agreed that the liability of the Surety for any and all defaults of the Principal hereunder shall be the full penal sum of this Bond. The Surety, for value received, hereby stipulates and agrees that obligations of the Surety under this Bond shall be for a term of sixty (60) days from actual date of the bid opening.

PROVIDED, HOWEVER, that this Bond is executed pursuant to provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their several seals on the date indicated below, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

DATED this _____ day of _____, 20_____.

Principal's name and address (if other than a corporation):

By: _____

Title: _____

Principal's name and address (if a corporation):

By: _____

Title: _____
(Affix Corporate Seal)

Surety's name and address:

By: _____
Attorney-in-Fact (Affix Corporate Seal)

STATE OF _____)
COUNTY OF _____) ss.

On this ___ day of _____, 20_____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20_____.
My Commission Expires: _____
Resides at: _____

NOTARY PUBLIC

Agency: _____
Agent: _____
Address: _____
Phone: _____

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General



INSTRUCTIONS AND SUBCONTRACTORS LIST FORM

The three low bidders, as well as all other bidders that desire to be considered, are required by law to submit to DFCM within 24 hours of bid opening a list of **ALL** first-tier subcontractors, including the subcontractor's name, bid amount and other information required by Building Board Rule and as stated in these Contract Documents, on the following basis:

PROJECTS UNDER \$500,000 - ALL SUBS \$20,000 OR OVER MUST BE LISTED
PROJECTS \$500,000 OR MORE - ALL SUBS \$35,000 OR OVER MUST BE LISTED

- Any additional subcontractors identified in the bid documents shall also be listed.
- The DFCM Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law.
- List subcontractors for base bid as well as the impact on the list that the selection of any alternate may have.
- Bidder may not list more than one subcontractor to perform the same work.
- Bidder must list "Self" if performing work itself.

LICENSURE:

The subcontractor's name, the type of work, the subcontractor's bid amount, and the subcontractor's license number as issued by DOPL, if such license is required under Utah Law, shall be listed. Bidder shall certify that all subcontractors, required to be licensed, are licensed as required by State law. A subcontractor includes a trade contractor or specialty contractor and does not include suppliers who provide only materials, equipment, or supplies to a contractor or subcontractor.

BIDDER LISTING 'SELF' AS PERFORMING THE WORK:

Any bidder that is properly licensed for the particular work and intends to perform that work itself in lieu of a subcontractor that would otherwise be required to be on the subcontractor list, must insert the term 'Self' for that category on the subcontractor list form. Any listing of 'Self' on the sublist form shall also include the amount allocated for that work.

'SPECIAL EXCEPTION':

A bidder may list 'Special Exception' in place of a subcontractor when the bidder intends to obtain a subcontractor to perform the work at a later date because the bidder was unable to obtain a qualified or reasonable bid under the provisions of U.C.A. Section 63A-5-208(4). The bidder shall insert the term 'Special Exception' for that category of work, and shall provide documentation with the subcontractor list describing the bidder's efforts to obtain a bid of a qualified subcontractor at a reasonable cost and why the bidder was unable to obtain a qualified subcontractor bid. The Director must find that the bidder complied in good faith with State law requirements for any 'Special Exception' designation, in order for the bid to be considered. If awarded the contract, the Director shall supervise the bidder's efforts to obtain a qualified subcontractor bid. The amount of the awarded contract may not be adjusted to reflect the actual amount of the subcontractor's bid. Any listing of 'Special Exception' on the sublist form shall also include amount allocated for that work.

INSTRUCTIONS AND SUBCONTRACTORS LIST FORM
Page No. 2

GROUND FOR DISQUALIFICATION:

The Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law. Director may withhold awarding the contract to a particular bidder if one or more of the proposed subcontractors are considered by the Director to be unqualified to do the Work or for such other reason in the best interest of the State of Utah. Notwithstanding any other provision in these instructions, if there is a good faith error on the sublist form, at the sole discretion of the Director, the Director may provide notice to the contractor and the contractor shall have 24 hours to submit the correction to the Director. If such correction is submitted timely, then the sublist requirements shall be considered met.

CHANGES OF SUBCONTRACTORS SPECIFICALLY IDENTIFIED ON SUBLIST FORM:

Subsequent to twenty-four hours after the bid opening, the contractor may change its listed subcontractors only after receiving written permission from the Director based on complying with all of the following criteria.

- (1) The contractor has established in writing that the change is in the best interest of the State and that the contractor establishes an appropriate reason for the change, which may include, but not is not limited to, the following reasons: the original subcontractor has failed to perform, or is not qualified or capable of performing, and/or the subcontractor has requested in writing to be released.
- (2) The circumstances related to the request for the change do not indicate any bad faith in the original listing of the subcontractors.
- (3) Any requirement set forth by the Director to ensure that the process used to select a new subcontractor does not give rise to bid shopping.
- (4) Any increase in the cost of the subject subcontractor work is borne by the contractor.
- (5) Any decrease in the cost of the subject subcontractor work shall result in a deductive change order being issued for the contract for such decreased amount.
- (6) The Director will give substantial weight to whether the subcontractor has consented in writing to being removed unless the Contractor establishes that the subcontractor is not qualified for the work.

EXAMPLE:

Example of a list where there are only four subcontractors:

TYPE OF WORK	SUBCONTRACTOR, "SELF" OR "SPECIAL EXCEPTION"	SUBCONTRACTOR BID AMOUNT	CONT. LICENSE #
ELECTRICAL	ABCD Electric Inc.	\$350,000.00	123456789000
LANDSCAPING	"Self"	300,000.00	123456789000
CONCRETE (ALTERNATE #1)	XYZ Concrete Inc	298,000.00	987654321000
MECHANICAL	"Special Exception" (attach documentation)	Fixed at: 350,000.00	(TO BE PROVIDED AFTER OBTAINING SUBCONTRACTOR)

PURSUANT TO STATE LAW - SUBCONTRACTOR BID AMOUNTS CONTAINED IN THIS SUBCONTRACTOR LIST SHALL NOT BE DISCLOSED UNTIL THE CONTRACT HAS BEEN AWARDED.



Division of Facilities Construction and

SUBCONTRACTORS LIST
FAX TO 801-538-3677

PROJECT TITLE: _____

Caution: You must read and comply fully with instructions.

Table with 4 columns: TYPE OF WORK, SUBCONTRACTOR, "SELF" OR "SPECIAL EXCEPTION", SUBCONTRACTOR BID AMOUNT, CONT. LICENSE #

We certify that:

- 1. This list includes all subcontractors as required by the instructions, including those related to the base bid as well as any alternates.
2. We have listed "Self" or "Special Exception" in accordance with the instructions.
3. All subcontractors are appropriately licensed as required by State law.

FIRM: _____

DATE: _____

SIGNED BY: _____

NOTICE: FAILURE TO SUBMIT THIS FORM, PROPERLY COMPLETED AND SIGNED, AS REQUIRED IN THESE CONTRACT DOCUMENTS, SHALL BE GROUNDS FOR DFCMS REFUSAL TO ENTER INTO A WRITTEN CONTRACT WITH BIDDER. ACTION MAY BE TAKEN AGAINST BIDDERS BID BOND AS DEEMED APPROPRIATE BY DFCM. ATTACH A SECOND PAGE IF NECESSARY.

FUGITIVE DUST PLAN

The Contractor will fill out the form and file the original with the Division of Air Quality and a copy of the form with the Division of Facilities Construction & Management, prior to the issuance of any notice to proceed.

The Contractor will be fully responsible for compliance with the Fugitive Dust Control Plan, including the adequacy of the plan, any damages, fines, liability, and penalty or other action that results from noncompliance.

Utah Division of Air Quality

April 20, 1999

**GUIDANCE THAT MUST BE CONSIDERED IN DEVELOPING AND SUBMITTING A
DUST CONTROL PLAN FOR COMPLIANCE WITH R307-309-3, 4, 5, 6, 7**

Source Information:

1. Name of your operation (source): provide a name if the source is a construction site.
2. Address or location of your operation or construction site.
3. UTM coordinates or Longitude/Latitude of stationary emission points at your operation.
4. Lengths of the project, if temporary (time period).
5. Description of process (include all sources of dust and fugitive dust). Please, if necessary, use additional sheets of paper for this description. Be sure to mark it as an attachment.
6. Type of material processed or disturbed.
7. Amount of material processed (tons per year, tons per month, lbs./hr., and applicable units).

Description of Fugitive Dust Emission Activities
(Things to consider in addressing fugitive dust control strategies.)

1. Type of activities (drilling and blasting, road construction, development construction, earth moving and excavation, handling and hauling materials, cleaning and leveling, etc).
2. List type of equipment generating the fugitive dust.
3. Diagram the location of each activity or piece of equipment on site. Please attach the diagram.
4. Provide pictures or drawings of each activity. Include a drawing of the unpaved/paved road network used to move loads “on” and “off” property.
5. Vehicle miles travels on unpaved roads associated with the activity (average speed).
6. Type of dust emitted at each source (coal, cement, sand, soil, clay, dust, etc.)
7. Estimate the size of the release area at which the activity occurs (square miles). For haul or dirt roads include total miles of road in use during the activity.

Fugitive Dust Control Plan Violation Report

When a source is found in violation of R307-309-3 or in violation of the Fugitive Dust Control Plan, the source must submit a report to the Executive Secretary within 15 days after receiving a Notice of Violation. The report must include the following information:

1. Name and address of dust source.
2. Time and duration of dust episode.
3. Meteorological conditions during the dust episode.
4. Total number and type of fugitive dust activities and dust producing equipment within each operation boundary. If no change has occurred from the existing dust control plan, the source should state that the activity/equipment is the same.
5. Fugitive dust activities or dust producing equipment that caused a violation of R-307-309-3 or the sources dust control plan.
6. Reasons for failing to control dust from the dust generating activity or equipment.
7. New and/or additional fugitive dust control strategies necessary to achieve compliance with R307-309-3, 4, 5, 6, or 7.
8. If it can not be demonstrated that the current approved Dust Control Plan can result in compliance with R307-309-3 through 7, the Dust Control Plan must be revised so as to demonstrate compliance with 307-309-3 through 7. Within 30 days of receiving a fugitive dust Notice of Violation, the source must submit the revised Plan to the Executive Secretary for review and approval.

Submit the Dust Control Plan to:

Executive Secretary	Phone: (801) 536-4000
Utah Air Quality Board	FAX: (801) 536-4099
POB 144820	
15 North 1950 West	
Salt Lake City, Utah 84114-4820	

Attachments: DFCM Form FDR R-307-309, Rule 307-309

CONTRACTOR'S AGREEMENT

FOR:

THIS CONTRACTOR'S AGREEMENT, made and entered into this ____ day of _____, 20__, by and between the DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT, hereinafter referred to as "DFCM", and _____, incorporated in the State of _____ and authorized to do business in the State of Utah, hereinafter referred to as "Contractor", whose address is _____.

WITNESSETH: WHEREAS, DFCM intends to have Work performed at _____.

WHEREAS, Contractor agrees to perform the Work for the sum stated herein.

NOW, THEREFORE, DFCM and Contractor for the consideration provided in this Contractor's Agreement, agree as follows:

ARTICLE 1. SCOPE OF WORK. The Work to be performed shall be in accordance with the Contract Documents prepared by _____ and entitled "_____"

The DFCM General Conditions ("General Conditions") dated May 25, 2005 on file at the office of DFCM and available on the DFCM website, are hereby incorporated by reference as part of this Agreement and are included in the specifications for this Project. All terms used in this Contractor's Agreement shall be as defined in the Contract Documents, and in particular, the General Conditions.

The Contractor Agrees to furnish labor, materials and equipment to complete the Work as required in the Contract Documents which are hereby incorporated by reference. It is understood and agreed by the parties hereto that all Work shall be performed as required in the Contract Documents and shall be subject to inspection and approval of DFCM or its authorized representative. The relationship of the Contractor to the DFCM hereunder is that of an independent Contractor.

ARTICLE 2. CONTRACT SUM. The DFCM agrees to pay and the Contractor agrees to accept in full performance of this Contractor's Agreement, the sum of _____ DOLLARS AND NO CENTS (\$_____.00), which is the base bid, and which sum also includes the cost of a 100% Performance Bond and a 100%

Payment Bond as well as all insurance requirements of the Contractor. Said bonds have already been posted by the Contractor pursuant to State law. The required proof of insurance certificates have been delivered to DFCM in accordance with the General Conditions before the execution of this Contractor's Agreement.

ARTICLE 3. TIME OF COMPLETION AND DELAY REMEDY. The Work shall be Substantially Complete by _____. Contractor agrees to pay liquidated damages in the amount of \$ _____ per day for each day after expiration of the Contract Time until the Contractor achieves Substantial Completion in accordance with the Contract Documents, if Contractor's delay makes the damages applicable. The provision for liquidated damages is: (a) to compensate the DFCM for delay only; (b) is provided for herein because actual damages can not be readily ascertained at the time of execution of this Contractor's Agreement; (c) is not a penalty; and (d) shall not prevent the DFCM from maintaining Claims for other non-delay damages, such as costs to complete or remedy defective Work.

No action shall be maintained by the Contractor, including its or Subcontractor or suppliers at any tier, against the DFCM or State of Utah for damages or other claims due to losses attributable to hindrances or delays from any cause whatsoever, including acts and omissions of the DFCM or its officers, employees or agents, except as expressly provided in the General Conditions. The Contractor may receive a written extension of time, signed by the DFCM, in which to complete the Work under this Contractor's Agreement in accordance with the General Conditions.

ARTICLE 4. CONTRACT DOCUMENTS. The Contract Documents consist of this Contractor's Agreement, the Conditions of the Contract (DFCM General Conditions, Supplementary and other Conditions), the Drawings, Specifications, Addenda and Modifications. The Contract Documents shall also include the bidding documents, including the Invitation to Bid, Instructions to Bidders/ Proposers and the Bid/Proposal, to the extent not in conflict therewith and other documents and oral presentations that are documented as an attachment to the contract.

All such documents are hereby incorporated by reference herein. Any reference in this Contractor's Agreement to certain provisions of the Contract Documents shall in no way be construed as to lessen the importance or applicability of any other provisions of the Contract Documents.

ARTICLE 5. PAYMENT. The DFCM agrees to pay the Contractor from time to time as the Work progresses, but not more than once each month after the date of Notice to Proceed, and only upon Certificate of the A/E for Work performed during the preceding calendar month, ninety-five percent (95%) of the value of the labor performed and ninety-five percent (95%) of the value of materials furnished in place or on the site. The Contractor agrees to furnish to the DFCM invoices for materials purchased and on the site but not installed, for which the Contractor requests payment and agrees to

safeguard and protect such equipment or materials and is responsible for safekeeping thereof and if such be stolen, lost or destroyed, to replace same.

Such evidence of labor performed and materials furnished as the DFCM may reasonably require shall be supplied by the Contractor at the time of request for Certificate of Payment on account. Materials for which payment has been made cannot be removed from the job site without DFCM's written approval. Five percent (5%) of the earned amount shall be retained from each monthly payment. The retainage, including any additional retainage imposed and the release of any retainage, shall be in accordance with UCA 13-8-5 as amended. Contractor shall also comply with the requirements of UCA 13-8-5, including restrictions of retainage regarding subcontractors and the distribution of interest earned on the retention proceeds. The DFCM shall not be responsible for enforcing the Contractor's obligations under State law in fulfilling the retention law requirements with subcontractors at any tier.

ARTICLE 6. INDEBTEDNESS. Before final payment is made, the Contractor must submit evidence satisfactory to the DFCM that all payrolls, materials bills, subcontracts at any tier and outstanding indebtedness in connection with the Work have been properly paid. Final Payment will be made after receipt of said evidence, final acceptance of the Work by the DFCM as well as compliance with the applicable provisions of the General Conditions.

Contractor shall respond immediately to any inquiry in writing by DFCM as to any concern of financial responsibility and DFCM reserves the right to request any waivers, releases or bonds from Contractor in regard to any rights of Subcontractors (including suppliers) at any tier or any third parties prior to any payment by DFCM to Contractor.

ARTICLE 7. ADDITIONAL WORK. It is understood and agreed by the parties hereto that no money will be paid to the Contractor for additional labor or materials furnished unless a new contract in writing or a Modification hereof in accordance with the General Conditions and the Contract Documents for such additional labor or materials has been executed. The DFCM specifically reserves the right to modify or amend this Contractor's Agreement and the total sum due hereunder either by enlarging or restricting the scope of the Work.

ARTICLE 8. INSPECTIONS. The Work shall be inspected for acceptance in accordance with the General Conditions.

ARTICLE 9. DISPUTES. Any dispute, PRE or Claim between the parties shall be subject to the provisions of Article 7 of the General Conditions. DFCM reserves all rights to pursue its rights and remedies as provided in the General Conditions.

ARTICLE 10. TERMINATION, SUSPENSION OR ABANDONMENT. This Contractor's Agreement may be terminated, suspended or abandoned in accordance with the General Conditions.

ARTICLE 11. DFCM'S RIGHT TO WITHHOLD CERTAIN AMOUNT AND MAKE USE THEREOF. The DFCM may withhold from payment to the Contractor such amount as, in DFCM's judgment, may be necessary to pay just claims against the Contractor or Subcontractor at any tier for labor and services rendered and materials furnished in and about the Work. The DFCM may apply such withheld amounts for the payment of such claims in DFCM's discretion. In so doing, the DFCM shall be deemed the agent of Contractor and payment so made by the DFCM shall be considered as payment made under this Contractor's Agreement by the DFCM to the Contractor. DFCM shall not be liable to the Contractor for any such payment made in good faith. Such withholdings and payments may be made without prior approval of the Contractor and may be also be prior to any determination as a result of any dispute, PRE, Claim or litigation.

ARTICLE 12. INDEMNIFICATION. The Contractor shall comply with the indemnification provisions of the General Conditions.

ARTICLE 13. SUCCESSORS AND ASSIGNMENT OF CONTRACT. The DFCM and Contractor, respectively bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement, and to partners, successors, assigns and legal representatives of such other party with respect to all covenants, provisions, rights and responsibilities of this Contractor's Agreement. The Contractor shall not assign this Contractor's Agreement without the prior written consent of the DFCM, nor shall the Contractor assign any moneys due or to become due as well as any rights under this Contractor's Agreement, without prior written consent of the DFCM.

ARTICLE 14. RELATIONSHIP OF THE PARTIES. The Contractor accepts the relationship of trust and confidence established by this Contractor's Agreement and covenants with the DFCM to cooperate with the DFCM and A/E and use the Contractor's best skill, efforts and judgment in furthering the interest of the DFCM; to furnish efficient business administration and supervision; to make best efforts to furnish at all times an adequate supply of workers and materials; and to perform the Work in the best and most expeditious and economic manner consistent with the interests of the DFCM.

ARTICLE 15. AUTHORITY TO EXECUTE AND PERFORM AGREEMENT. Contractor and DFCM each represent that the execution of this Contractor's Agreement and the performance thereunder is within their respective duly authorized powers.

ARTICLE 16. ATTORNEY FEES AND COSTS. Except as otherwise provided in the dispute resolution provisions of the General Conditions, the prevailing party shall be entitled to reasonable attorney fees and costs incurred in any action in the District Court and/or appellate body to enforce this Contractor's Agreement or recover damages or any other action as a result of a breach thereof.

PERFORMANCE BOND
(Title 63, Chapter 56, U. C. A. 1953, as Amended)

That _____ hereinafter referred to as the "Principal" and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ and authorized to transact business in this State and U. S. Department of the Treasury Listed (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); hereinafter referred to as the "Surety," are held and firmly bound unto the State of Utah, hereinafter referred to as the "Obligee," in the amount of _____ DOLLARS (\$ _____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the Obligee, dated the _____ day of _____, 20____, to construct _____ in the County of _____, State of Utah, Project No. _____, for the approximate sum of _____ Dollars (\$ _____), which Contract is hereby incorporated by reference herein.

NOW, THEREFORE, the condition of this obligation is such that if the said Principal shall faithfully perform the Contract in accordance with the Contract Documents including, but not limited to, the Plans, Specifications and conditions thereof, the one year performance warranty, and the terms of the Contract as said Contract may be subject to Modifications or changes, then this obligation shall be void; otherwise it shall remain in full force and effect.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the state named herein or the heirs, executors, administrators or successors of the Owner.

The parties agree that the dispute provisions provided in the Contract Documents apply and shall constitute the sole dispute procedures of the parties.

PROVIDED, HOWEVER, that this Bond is executed pursuant to the Provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20____.

WITNESS OR ATTESTATION:

PRINCIPAL:

By: _____
(Seal)

Title: _____

WITNESS OR ATTESTATION:

SURETY:

By: _____
Attorney-in-Fact (Seal)

STATE OF _____)
) ss.
COUNTY OF _____)

On this _____ day of _____, 20____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney in-fact of the above-named Surety Company and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires: _____

Resides at: _____

NOTARY PUBLIC

Agency: _____
Agent: _____
Address: _____
Phone: _____

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General

PAYMENT BOND

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

KNOW ALL PERSONS BY THESE PRESENTS:

That _____ hereinafter referred to as the "Principal," and _____, a corporation organized and existing under the laws of the State of _____ authorized to do business in this State and U. S. Department of the Treasury Listed (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); with its principal office in the City of _____, hereinafter referred to as the "Surety," are held and firmly bound unto the State of Utah hereinafter referred to as the "Obligee," in the amount of _____ Dollars (\$ _____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the Obligee, dated the _____ day of _____, 20____, to construct _____ in the County of _____, State of Utah, Project No. _____ for the approximate sum of _____ Dollars (\$ _____), which contract is hereby incorporated by reference herein.

NOW, THEREFORE, the condition of this obligation is such that if the said Principal shall pay all claimants supplying labor or materials to Principal or Principal's Subcontractors in compliance with the provisions of Title 63, Chapter 56, of Utah Code Annotated, 1953, as amended, and in the prosecution of the Work provided for in said Contract, then, this obligation shall be void; otherwise it shall remain in full force and effect.

That said Surety to this Bond, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the Contract or to the Work to be performed thereunder, or the specifications or drawings accompanying same shall in any way affect its obligation on this Bond, and does hereby waive notice of any such changes, extensions of time, alterations or additions to the terms of the Contract or to the Work or to the specifications or drawings and agrees that they shall become part of the Contract Documents.

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20____.

WITNESS OR ATTESTATION:

PRINCIPAL:

By: _____ (Seal)

Title: _____

WITNESS OR ATTESTATION:

SURETY:

By: _____ Attorney-in-Fact (Seal)

STATE OF _____)
) ss.
COUNTY OF _____)

On this _____ day of _____, 20____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires: _____

Resides at: _____

NOTARY PUBLIC

Agency: _____
Agent: _____
Address: _____
Phone: _____

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General



CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT _____ PROJECT NO: _____
AGENCY/INSTITUTION _____

AREA ACCEPTED _____

The Work performed under the subject Contract has been reviewed on this date and found to be Substantially Completed as defined in the General Conditions; including that the construction is sufficiently completed in accordance with the Contract Documents, as modified by any change orders agreed to by the parties, so that the State of Utah can occupy the Project or specified area of the Project for the use for which it is intended.

The DFCM - (Owner) accepts the Project or specified area of the Project as Substantially Complete and will assume full possession of the Project or specified area of the Project at _____ (time) on _____ (date).

The DFCM accepts the Project for occupancy and agrees to assume full responsibility for maintenance and operation, including utilities and insurance, of the Project subject to the itemized responsibilities and/or exceptions noted below:

The Owner acknowledges receipt of the following closeout and transition materials:

- As-built Drawings O & M Manuals Warranty Documents Completion of Training Requirements

A list of items to be completed or corrected (Punch List) is attached hereto. The failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents, including authorized changes thereof. The amount of _____(Twice the value of the punch list work) shall be retained to assure the completion of the punch list work.

The Contractor shall complete or correct the Work on the list of (Punch List) items appended hereto within _____ calendar days from the above date of issuance of this Certificate. The amount withheld pending completion of the list of items noted and agreed to shall be: \$_____. If the list of items is not completed within the time allotted the Owner has the right to be compensated for the delays and/or complete the work with the help of independent contractor at the expense of the retained project funds. If the retained project funds are insufficient to cover the delay/completion damages, the Owner shall be promptly reimbursed for the balance of the funds needed to compensate the Owner.

CONTRACTOR (include name of firm) by: (Signature) DATE

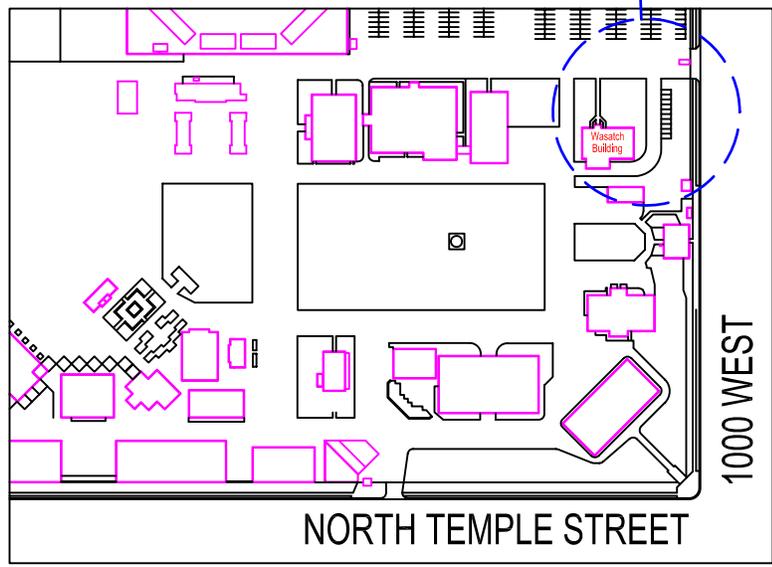
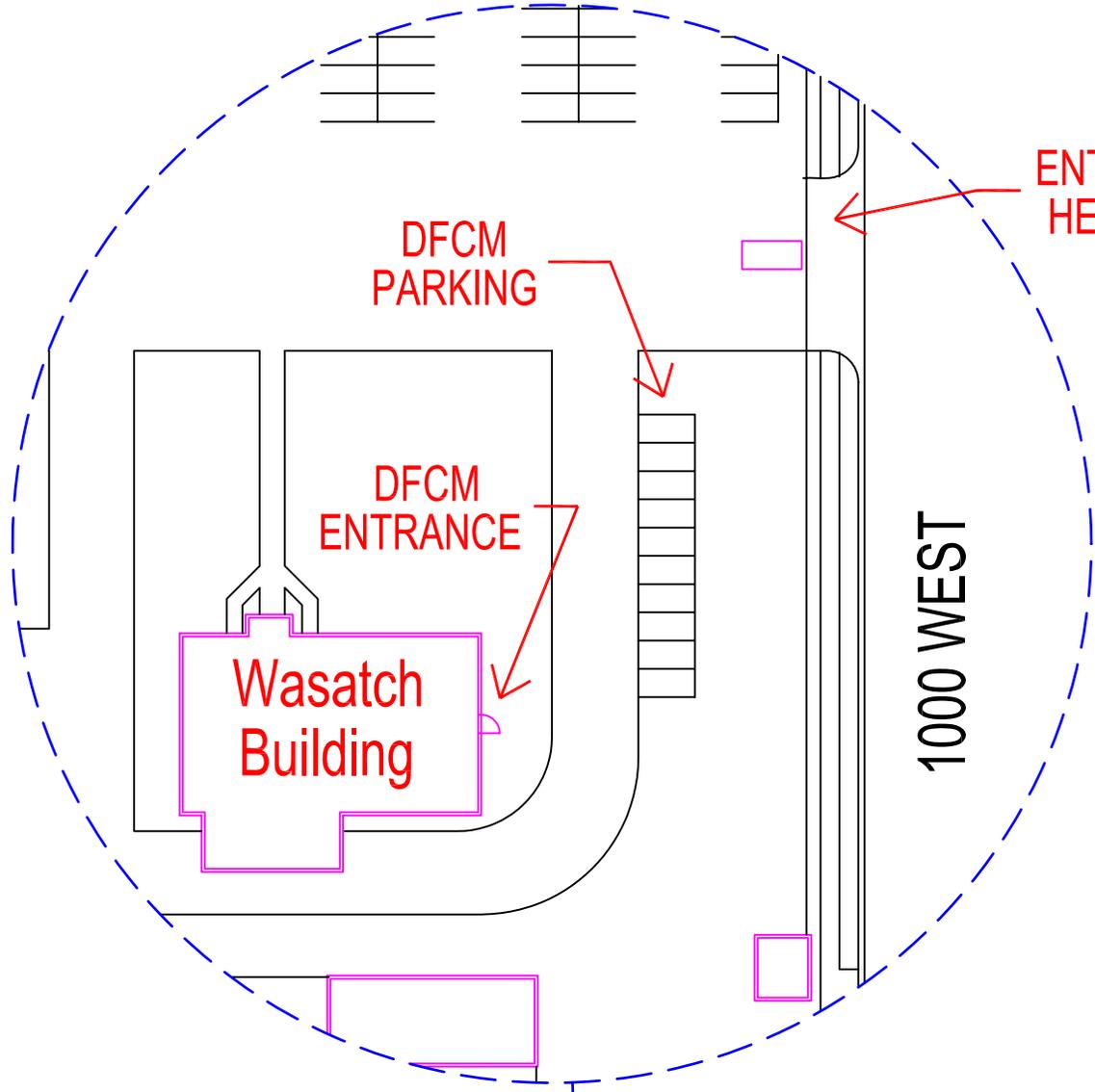
A/E (include name of firm) by: (Signature) DATE

USING INSTITUTION OR AGENCY by: (Signature) DATE

DFCM (Owner) by: (Signature) DATE

4110 State Office Building, Salt Lake City, Utah 84114 cc:
telephone 801-538-3018 • facsimile 801-538-3267 • http://dfcm.utah.gov

Parties Noted
DFCM, Director



UTAH STATE
FAIR PARK



DFCM Temporary Location

ASBESTOS SURVEY AND ASSESSMENT

**WEBER STATE UNIVERSITY
BUILDING 1
(Foreign Languages, Geography, Air Force ROTC)
Ogden, Utah**

March 22, 2006

Prepared for:

Mr. Robert Anderson
HAZMAT Manager
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114

Prepared by:

ROWLAND CONSULTING, INC.
7301 South Paddington Road
West Jordan, Utah 84084
801.541.6915 FAX 801.569.2501

ASBESTOS SURVEY AND ASSESSMENT
WEBER STATE UNIVERSITY
BUILDING 1
(Foreign Languages, Geography, Air Force ROTC)
Ogden, Utah

TABLE OF CONTENTS

Title

- 1.0 Executive Summary
- 2.0 Introduction
- 3.0 Building Description
- 4.0 Survey Procedures
 - 4.1 Building Survey
 - 4.2 Bulk Sample Collection
 - 4.3 Bulk Sample Analysis
- 5.0 Survey Results
 - 5.1 Asbestos-Containing Materials
 - 5.2 Non-Asbestos-Containing Materials
 - 5.3 Bulk Sample Analytical Results
 - 5.4 Damage and Hazard Assessment
 - 5.5 Homogeneous Areas with Special Considerations
 - 5.6 Presumed Asbestos-Containing Materials
 - 5.7 Inaccessible Areas
 - 5.8 Materials(s) assumed to contain 1.0% asbestos
- 6.0 Response Action Comments
 - 6.1 EPA Requirements
 - 6.2 Renovation Options
- 7.0 Cost Estimates
- 8.0 Limitations and Exclusion of Warranty

Appendices

- A Data Tables
 - Table 1 – Asbestos-Containing Materials
 - Table 2 – Non-Asbestos-Containing Materials
 - Table 3 – Bulk Sample Analytical Results Sorted by Sample Number

Table 4 – Bulk Sample Analytical Results Sorted by Homogeneous Area Number

Table 5 – Damage Assessment of Asbestos-Containing Materials

Table 6 – Estimated Abatement Cost by Homogeneous Area

Table 7 – Mat Description, Room Number, Homogeneous Area, Amount, Asbestos Content, Total Cost, Condition, Disturbance Potential and Hazardous Ranking

- B Building Floor Plan(s)
- C Photograph Log
- D Laboratory Analytical Reports(s)
- E Lead-Based Paint (LBP) Inspection and Other Hazardous Materials (universal waste)
- F ***PREVIOUSLY SAMPLED MATERIALS***

1.0 EXECUTIVE SUMMARY

Asbestos Survey and Assessment
WEBER STATE UNIVERSITY
BUILDING 1
(Foreign Languages, Geography, Air Force ROTC)
Ogden, Utah

A survey of this facility was performed on March 16-22, 2006, by **ROWLAND CONSULTING, INC.**

The building was visually inspected to identify building materials that might contain asbestos. Bulk samples were collected from suspect materials and analyzed to determine if they contained asbestos. All ACMs were assessed for damage and the potential for exposure. This survey was requested by Mr. Robert J. Anderson, HAZMAT Manager, State of Utah, Division of Facilities Construction and Management.

The following table lists all ACMs that were identified in the building. Information specific to the building concerning inaccessible areas / materials and recommended response actions can be found in this report. There is important information in these sections that is not included in this executive summary. This report should be read in its entirety, including detailed information that is contained in other sections and appendices of this report.

Asbestos-Containing Materials by Homogeneous Area
WEBER STATE UNIVERSITY
BUILDING 1
(Foreign Languages, Geography, Air Force ROTC)

Material (1) ID #	Material Description	Location	Asbestos Content (2)	Amount	Cost Estimate (3)
M002	9" floor tile (tan, red) & mastic	Custodial closet	15% C tile >1% mastic	~89 sq. ft.	\$500.00 @\$2/sq. ft.
M005	2x2 ceiling tile (@Transite)	Corridors, rms 108 109, 110, 112-114, 117, 119-125A, 133 134, 136, 139-142, 145, 146	10-25% C	~8,770 sq. ft.	\$87,700.00 @\$10/sq. ft.
M006	Sheet Vinyl Flooring	Kitchen	30% C	~226 sq. ft.	\$565.00 @\$2.50/sq. ft.
M008	Exterior Window Caulking	All exterior windows	3% C	~3,750 sq. ft. (150 each)	\$7,500.00 @\$50/window
M009	Roof tar sealant	Roof penetrations	10% C	~50 sq. ft.	\$1,250.00 @\$25/sq. ft.

(continued)
Asbestos-Containing Materials by Homogeneous Area
WEBER STATE UNIVERSITY
BUILDING 1
(Foreign Languages, Geography, Air Force ROTC)

Material (1) ID #	Material Description	Location	Asbestos Content (2)	Amount	Cost Estimate (3)
M010	Sink Undercoating	Kitchen	18% C	1 each	\$150.00
T001	Thermal System Insulation (TSI) Pipe Lagging (straight runs)	Crawlspaces, basement Mechanical Room	20% C 25% A	~2,118 ln. ft.	\$52,950.00 @\$25/ln. ft.
T002	TSI joints/fittings (mudded)	Crawlspaces, basement Mechanical Room	15-20% C	~400 each	\$6,000.00 @\$15/joint
TOTAL					\$163,365.00

NOTE: Homogeneous Areas M006, M009, M010, T001, and T002 are previously sampled materials and are included in this report.

NOTE: A clean-up and soil removal project in the crawlspaces was performed from November 2002 through January 2003. Approximately 2 inches of crawlspace soil and ACM debris was removed by Utah Correctional Industries (UCI) Asbestos Abatement crews. In addition, UCI crews removed asbestos pipe lagging that was significantly damaged and or hanging, encapsulated the remaining sections of pipe lagging, and encapsulated the remaining soil upon completion. The quantities indicated above have been visually inspected and identified on-site and from original as-built drawings (see floor plans).

Footnotes:

1. Homogeneous Area Number (not related to building room numbers).
2. C = Chrysotile Asbestos. A = Amosite Asbestos.
3. Cost Estimates include asbestos removal costs only; abatement design and management fees and replacement costs are not included. For projects with small quantities, ask Contractors for their mobilization fee. Please refer to Section 7.0 for more details. All previous sampling and survey information has been included in this report. Please see the identified tabs for this information.

Asbestos Survey and Assessment
WEBER STATE UNIVERSITY
BUILDING 1
(Foreign Languages, Geography, Air Force ROTC)
Ogden, Utah

2.0 INTRODUCTION

On March 16-22, 2006, **ROWLAND CONSULTING, INC.** performed an asbestos survey and assessment at WEBER STATE UNIVERSITY, BUILDING 1, Ogden, Utah.

The purpose of this survey was to identify the existence, extent, and condition of both friable and non-friable asbestos-containing materials (ACM) within and on the facility. Bulk samples were collected from suspect materials *not* sampled during previous surveys, submitted to a laboratory, and analyzed for asbestos content. Each occurrence of ACM was assessed for damage and friability.

The following accredited and certified inspectors performed the inspection, collected the samples and made assessment:

Jeffrey B. Rowland

Name

April 6, 2006

Signature

Date

Utah

State of Accreditation

ASB-1377

State of Utah

Division of Air Quality

Asbestos Certification Number

Joshua B. Rowland

Name

April 6, 2006

Signature

Date

Utah

State of Accreditation

ASB-2533

State of Utah

Division of Air Quality

Asbestos Certification Number

Frank D. DeRosso, CIH MSPH
Senior Scientist
RMEC Environmental, Inc.

3.0 BUILDING DESCRIPTION

Building Identification **WEBER STATE UNIVERSITY BUILDING 1**

Building Name.....Foreign Languages, Geography, AFROTC

Building Address.....Ogden, Utah

Building Construction

Building Construction Date....1951

Building Type.....Classrooms, administrative

Building Total Sq. Ft..... ~14,300

Structural System..... Reinforced concrete and brick

Exterior Wall Construction.... Brick/block

Floor Deck Construction..... Reinforced concrete

Roof Construction.....Built-up roof w/red rock ballast

Floors Above Grade.....1

Floors Below Grade.....1

Interior Finishes

Floors..... Concrete, ceramic tile, **asbestos vinyl floor tile**, glued-down carpet

Ceilings.....**Asbestos ceiling tiles (2x2)**

Walls..... Concrete, brick, wallboard, plaster

Attic..... None

Crawl space..... 5 each sections, with **asbestos pipe lagging and mudded joints**

Building Mechanical

Heating Plant..... Central Heating Plant

Main Heating Distribution.... Low pressure steam and hot water distributed through wall heaters

Mechanical Piping.....**Asbestos containing pipe lagging and mudded joints mixed in with fiberglass pipe lagging**

4.0 SURVEY PROCEDURES

4.1 Building Surveys

All accessible areas of the facility were visually inspected to identify suspect asbestos containing materials (ACM.) All accessible surfaces, structures, and mechanical systems within these areas were examined and all suspected ACM was touched to determine friability.

Suspect ACM was identified and assessed in homogeneous areas. A homogeneous area is defined as a single material, uniform in texture and appearance, installed at one time, and unlikely to consist of more than one type, or formulation, of material. In cases where joint compound and/or tape has been applied to wallboard (gypsum board) and cannot be visually distinguished from the wallboard, it is considered an integral part of the wallboard and in effect becomes one material forming a wall or ceiling "system."

Each homogeneous area was given a unique material identification number. Each ID number begins with a letter: "S" for surfacing materials, "T" for thermal system insulation, or "M" for miscellaneous materials. This letter is followed by a three-digit number, assigned in consecutive order. This number is used to identify the homogeneous area throughout the inspection report.

4.2 Bulk Sample Collection

Bulk samples were collected from all accessible homogeneous areas of suspect ACM for subsequent laboratory analysis to determine actual asbestos content. Sampling was conducted in a manner that minimized damage to the building, did not leave any unsightly marks, and did not create a health hazard for the inspectors.

The number of samples collected from each homogeneous area generally followed the EPA AHERA regulations (40 CFR 763.86). Friable surfacing materials were sampled using the random sampling scheme given in the EPA publication 560 / 5-85-30a, titled "Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials." Between three and seven samples were collected from friable surfacing materials, depending on the size of the homogeneous area.

4.3 Bulk Sample Analysis

Bulk samples were analyzed using polarized light microscopy (PLM) and visual estimation in accordance with the EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples, EPA-600 / M4-82-020. Samples were analyzed by **DIXON INFORMATION INC.**

The laboratory is accredited under the National Institute of Standards and Technology – National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk-asbestos sample analysis and is also accredited by the American Industrial Hygiene Association (AIHA).

Federal EPA's NESHAP and AHERA regulations define ACM as material containing greater than 1% asbestos by weight; materials containing less than 1% asbestos are not considered regulated ACM.

Further, the NESHAP regulations state that any sample found to contain less than 10% asbestos but greater than "none detected," by visual estimation, must be assumed to contain greater than 1% asbestos unless confirmed to be less than 1.0% asbestos by point counting analysis. Any samples found to contain asbestos in this concentration range were assumed to contain greater than 1.0% asbestos and are listed in Section 5.8 of this report. All samples that have been point counted are identified as such in the sample result tables.

The laboratories reports can be found in Appendix D of this report.

5.0 SURVEY RESULTS

5.1 Asbestos-Containing Materials

Homogeneous areas of suspect ACM are identified as being ACM if the laboratory analysis shows the material to contain any detectable asbestos, unless subsequent Point Counting analysis resulted in less than 1% asbestos being detected. Table 1 of the Executive Summary and in Appendix A lists all homogeneous areas that were found to be ACM. Each material is described by type of material, friability and visual appearance.

Friability is defined in accordance with EPA's NESHAP regulations.

"Friable ACM" is any material containing more than 1% asbestos (as determined by PLM) that, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure and also includes non-friable ACM that may become friable during building demolition.

"Non-friable ACM" is any material containing more than 1% asbestos (as determined by PLM) that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

"Category I non-friable ACM" are asbestos-containing resilient floor coverings (commonly known as vinyl asbestos tile (VAT), asphalt roofing products, packings, and gaskets.

"Category II non-friable ACM" encompasses all other non-friable ACM.

“Non-friable RACM” is used to denote thermal system insulation that is in good condition but would become friable during renovation or demolition and therefore is “regulated asbestos containing material” (RACM).

5.2 Non-Asbestos-Containing Materials

Homogeneous areas of suspect ACM are identified as *non-ACM* if the laboratory analysis shows the material to contain no detectable asbestos. Table 2, located in Appendix A of this report, lists all homogeneous areas that were found to be non-ACM.

5.3 Bulk Sample Analytical Results

Table 3, located in Appendix A of this report, lists all of the bulk samples in order by sample number, that were collected from homogeneous areas of suspect ACM, along with the laboratory analytical results. Each sample was given a unique sample number. There may be more than one sample number for the same homogeneous area of suspect ACM. The homogeneous areas of suspect ACM are identified on this table by their material identification numbers. The sample location listed on this table provides a brief, but specific, description of the location where the sample was collected. This is different than the homogeneous area location provided on Tables 1 and 2. Table 4 is the same as Table 3 except the entries have been sorted by homogeneous area number.

5.3 Damage and Hazard Assessment

Each homogeneous area of ACM has been assessed for existing damage, accessibility, and potential for future damage, and this information is presented in Table 5, located in Appendix A of this report. This table also lists the substrate present beneath each homogeneous area of ACM.

Each homogeneous area of friable ACM and asbestos-containing building material (ACBM) was classified into one of the following seven categories, as specified in EPA’s AHERA regulations (40 CFR 763.88):

- (1) Damaged or significantly damaged thermal system insulation ACM.
- (2) Damaged friable surfacing ACM.
- (3) Significantly damaged friable surfacing ACM.
- (4) Damaged or significantly damaged friable miscellaneous ACM.
- (5) ACBM with potential for damage.
- (6) ACBM with potential for significant damage.
- (7) Any remaining friable ACBM or friable suspected ACBM.

The damage categories are defined as follows:

“Undamaged” means the material had no visible damage, or extremely minor damage or surface marring (i.e., a room full of floor tile with only two or three small corners chipped off on the tile).

“Damaged” means the material had visible damage evenly distributed over less than 10% of its surface, or localized over less than 25% of its surface.

“Significantly Damaged” means the material had visible damage that is evenly distributed over 10% or more of its surface, or localized over 25% or more of its surface.

Each homogeneous area of ACM was evaluated for accessibility to the building occupants and the general public, assuming the building was fully occupied, using the following assessment categories.

“Inaccessible” means the material was located in an area that people had no reason to enter and could not access without special measures. One example would be the area above a solid ceiling.

“Rarely Accessed” identifies a material that was in a location that could be accessed but wasn’t unless there was a specific need. An example would be a pipe tunnel. Another example would be a high ceiling that is out of reach and not subject to any specific disturbance.

“Periodic Access” identifies a material that was in a location that was accessible, was not occupied full time, but was accessed on a routine basis. An example would be a mechanical room or boiler room.

“Continuous Access” identifies a material that was in a location that was occupied full time and was within reach of the occupants, or was frequently subject to direct disturbance. Examples would be exposed floor tile or a normal height ceiling.

5.4 Homogeneous Areas with Special Considerations

NONE

5.6 Suspect Materials Presumed to be Asbestos-Containing Materials without Laboratory Analysis

NONE

5.7 Inaccessible Areas

NONE

5.8 Material(s) assumed to contain >1.0% asbestos without subsequent TEM or Point Count Analysis

NONE

6.0 RESPONSE ACTION COMMENTS

6.1 EPA Requirements

Asbestos is regulated as a hazardous air pollutant by the Environmental Protection Agency (EPA) under the authority of the Clean Air Act. The asbestos regulations are included in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) and referenced as 40 CFR 61, Subpart M. ACMs identified in this report are subject to those regulations. Those regulations, and state and local regulations, should be carefully examined prior to renovation, demolition, cleanup, or any other activity which could disturb the ACMs, to ensure that all activities are in compliance with applicable requirements.

ACM is defined by the EPA, as any material containing greater than one percent of asbestos. ACMs are categorized as being either friable or non-friable. Friable ACMs are those materials that can be easily crumbled, pulverized, or otherwise broken up using hand or finger pressure when dry, and are materials considered more likely to produce airborne asbestos fibers. Non-friable ACMs are materials that do not meet the above test, and are considered less likely to produce airborne asbestos fibers. Not all ACMs are regulated under NESHAP. Regulated ACM (RACM) means (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of regulated demolition or renovation operations. Regulated demolition and renovation operations are those where the quantity of ACM affected is 260 linear feet or more on pipes, 160 square feet or more on other components, or 35 cubic feet or more in volume. There are certain notification requirements for demolition projects involving less than the above quantities.

Briefly, EPA requires that RACM be removed from facilities scheduled for demolition or renovation before any activity begins that would break up, dislodge, or similarly disturb the materials or preclude access to the materials for subsequent removal. Category I non-friable ACM that is not in poor condition and is not friable does not have to be removed prior to demolition of a facility. **However, these materials are exempt from mandatory removal only during demolition, not renovation. Removal is mandated when renovation activities are expected to disturb these ACMs and render them friable.** Category II non-friable ACM also does not have to be removed prior to demolition if the probability is low that the material will become crumbled, pulverized, or reduced to powder (made friable) during demolition. However, state regulations may require the removal of these materials. Additionally, Category I non-friable

ACM that has not become crumbled, pulverized, or reduced to powder during demolition activities may be disposed of as ordinary construction waste. In any situation where ACM remains in a building, it should be managed under a comprehensive operations and maintenance program (O&M). The procedures and guidelines described in an O&M program should be followed whenever building maintenance activities may disturb any ACMs present in the building.

6.2 Renovation Options

Some ACMs may remain in place during building renovations, as long as they are not disturbed and or damaged.

7.0 COST ESTIMATES

A breakdown of the estimated removal costs by homogeneous area can be found in Table 6, Appendix A. These cost estimates are provided for use in long-term budgeting and planning only, and do not have a level of accuracy sufficient to be used as a construction design cost estimate. The actual cost of asbestos removal is highly dependent on a number of factors such as size of the project, the required time frame for removal, the time of year the job is conducted, the regulatory climate at the time, etc., therefore, actual abatement costs could vary significantly from these estimates. Replacement costs have **not** been included in these figures.

The cost for abatement design and management services is **not** included in these figures. These additional fees can range from 15% of the estimated abatement costs for large projects to greater than 50% for very small projects. The design and management fees cover the cost of preparing plans and specifications, conducting the bidding process as well as third-party oversight during abatement.

8.0 LIMITATIONS AND EXCLUSIONS OF WARRANTY

This asbestos survey and assessment was performed using procedures and a level of diligence typically exercised by professional consultants performing similar services. However, asbestos-containing material (ACM) can be present in a structure, but not identified using ordinary investigative procedures.

No asbestos survey can completely eliminate uncertainty regarding the presence of ACM. **ROWLAND CONSULTING, INC. and RMEC ENVIRONMENTAL, INC.** level of diligence and investigative procedures are intended to reduce, but not eliminate, potential uncertainty regarding the presence of ACM. The procedures used for this survey attempt to establish a balance between the competing goals of limiting investigative costs, time, and building damage, and reducing the uncertainty about unknown conditions. Therefore, the determinations in this

report should not be construed as a guarantee that all ACM present in the subject property has been included in this report.

This report presents professional determinations, which are dependent upon information obtained during performance of consulting services. **ROWLAND CONSULTING, INC. and RMEC ENVIRONMENTAL, INC.** assumes no responsibility for omissions or errors resulting from inaccurate information provided by sources outside of **ROWLAND CONSULTING, INC. and RMEC ENVIRONMENTAL, INC.**

No warranty or guarantee, expressed or implied, is made regarding the findings, conclusions, or recommendations contained in this report. The limitations presented above supersede the requirements or provisions of all other contracts or scopes of work, implied or otherwise, except those stated or acknowledged herein.

Table 1
ACMs by Homogeneous Area
WEBER STATE UNIVERSITY
BUILDING 1
(Foreign Languages, Geography, Air Force ROTC)
Ogden, Utah

Homogeneous Area Number	Material Description/Location	Friability	Asbestos Content	Amount
M002	9" floor tile (tan/red) & mastic/ Custodial closet	Non-friable >1% mastic	15% C tile	~89 sq. ft.
M005	2x2 ceiling tile (®Transite)/ corridors, Rms 108, 109, 110, 112-114, 117, 119-125A, 133, 134, 136, 139-142, 145, 146	Non-friable	10-25% C	~8,770 sq. ft.
M006	Sheet Vinyl Flooring/Kitchen	Non-friable	30% C	~226 sq. ft.
M008	Window Caulking/exterior windows	Non-friable	3% C	~150 each
M009	Tar Sealant/roof penetrations	Non-friable	10% C	~50 sq. ft.
M010	Sink Undercoating/kitchen	Non-friable	18% C	1 each
T001	TSI pipe lagging/crawlspaces, Basement mechanical room	Friable	20% C 25% A	~2,118 ln. ft.
T002	TSI joints-fittings (mudded)/ crawlspaces, basement mechanical room	Friable	15-20% C	~400 each

Table 2
Homogeneous Areas That Do Not Contain Asbestos
WEBER STATE UNIVERSITY
BUILDING 1

Homogeneous Area Number	Material Description	Material Location
*	Sheet Vinyl Flooring	Telephone booth
M003	Plaster	Throughout
M004	2x4 ceiling tile (wormhole pattern)	West offices
M007	Roof (core)	Roof (built up w/red rock ballast)
*	Wallboard w/joint compound	Throughout

* = PREVIOUSLY SAMPLED MATERIALS

Table 3
Bulk Sample Analytical Results by Sample Number
WEBER STATE UNIVERSITY
BUILDING 1
Ogden, Utah

Sample Number	Homogeneous Area Number	Material Sampled	Sample Location	Analytical Results
01	M001	Sheet Vinyl Flooring	Phone booth	ND
02				ND
03	M002	9" floor tile (tan)w/mastic	Custodial closet	15% C
04				>1% C mastic
05				NA
06	M003	Plaster	Room 103	ND
07			Room 131	ND
08			Room 132	ND
09			Room 104	ND
10			Room 146	ND
11	M004	2x4 ceiling tile (wormhole pattern)	Rooms 132-138	ND
12				ND
13				ND
14				ND
15				ND
16	M005	2x2 ceiling tile (@Transite)	Corridors, Classrooms	10% C
17				NA
18				NA
19				NA
20				NA
21	M007	Roof (core)	North	ND
22			East	ND
23			West	ND
01	M008	Window Caulking	Exterior, north	3% C
02			Exterior, east	NA
03			Exterior, west	NA

Table 4
Bulk Sample Analytical Results by Homogeneous Area Number
WEBER STATE UNIVERSITY
BUILDING 1
Ogden, Utah

Homogeneous Area Number	Sample Number	Material Sampled	Sample Location	Analytical Results
M001	01	Sheet Vinyl Flooring	Phone booth	ND
	02			ND
M002	03	9" floor tile (tan)w/mastic	Custodial closet	15% C
	04			>1% C mastic
	05			NA
M003	06	Plaster	Room 103	ND
	07		Room 131	ND
	08		Room 132	ND
	09		Room 104	ND
	10		Room 146	ND
M004	11	2x4 ceiling tile (wormhole pattern)	Rooms 132-138	ND
	12			ND
	13			ND
	14			ND
	15			ND
M005	16	2x2 ceiling tile (@Transite)	Corridors, Classrooms	10% C
	17			NA
	18			NA
	19			NA
	20			NA
M007	21	Roof (core)	North	ND
	22		East	ND
	23		West	ND
M008	01	Window Caulking	Exterior, north	3% C
	02		Exterior, east	NA
	03		Exterior, west	NA

ND = NONE DETECTED

NA = NOT ANALYZED (sample from this group tested positive)

Table 5
Damage and Hazard Assessment by Homogeneous Area
WEBER STATE UNIVERSITY
BUILDING 1
Ogden, Utah

Area Number	Material Type	Substrate	Assessment Category	Damage	Accessibility	Disturbance Potential
M002	9" floor tile (tan & red)	Concrete	NA	Undamaged	Continuous	High
M005	2x2 ceiling tile (©Transite type)	Metal	6	Undamaged	Periodic	High
M006	Sheet Vinyl Flooring (kitchen)	Concrete	NA	Undamaged	Continuous	High
M008	Exterior Window Caulking	Metal	NA	Undamaged	Periodic	Low
M009	Roof tar sealant	Metal	NA	Undamaged	Periodic	Low
M010	Sink Undercoating	Metal	NA	Undamaged	Periodic	Low
T001	TSI (pipe lagging)	Metal	1	Damaged	Periodic	High
T002	TSI (joints/fittings (mudded))	Metal	1	Undamaged	Periodic	High

Note: Assessment Categories:

- 1-Damaged or significantly damaged thermal system insulation ACM
- 2-Damaged friable surfacing ACM
- 3-Significantly damaged friable surfacing ACM
- 4-Damaged or significantly damaged friable miscellaneous ACM
- 5-ACM with potential for damage
- 6-ACM with potential for significant damage
- 7-Any remaining friable ACM or friable suspect ACM
- NA-Not applicable (non-friable material)

Table 6
Estimated Abatement Costs by Homogeneous Area
WEBER STATE UNIVERSITY
BUILDING 1
Ogden, Utah

Homogeneous Area Number	Material	Amount	Unit Cost	Extended Cost
M002	9" floor tile (tan/red) & mastic	~89 sq. ft.	\$2/sq. ft.	\$500.00
M005	2x2 ceiling tile (®Transite Type)	~8,770 sq. ft.	\$10/sq. ft.	\$87,700.00
M006	Sheet Vinyl Flooring	~226 sq. ft.	\$2.50/sq. ft.	\$565.00
M008	Exterior Window Caulking	~3,750 sq. ft. (~150 each)	\$50/window	\$7,500.00
M009	Roof tar sealant	~50 sq. ft.	\$25/sq. ft.	\$1,250.00
M010	Sink Undercoating	1 each	\$150.00	\$150.00
T001	TSI (pipe lagging)	~2,118 ln. ft.	\$25/ln. ft.	\$52,950.00
T002	TSI (joints/fittings-mudded)	~400 each	\$15/joint	\$6,000.00

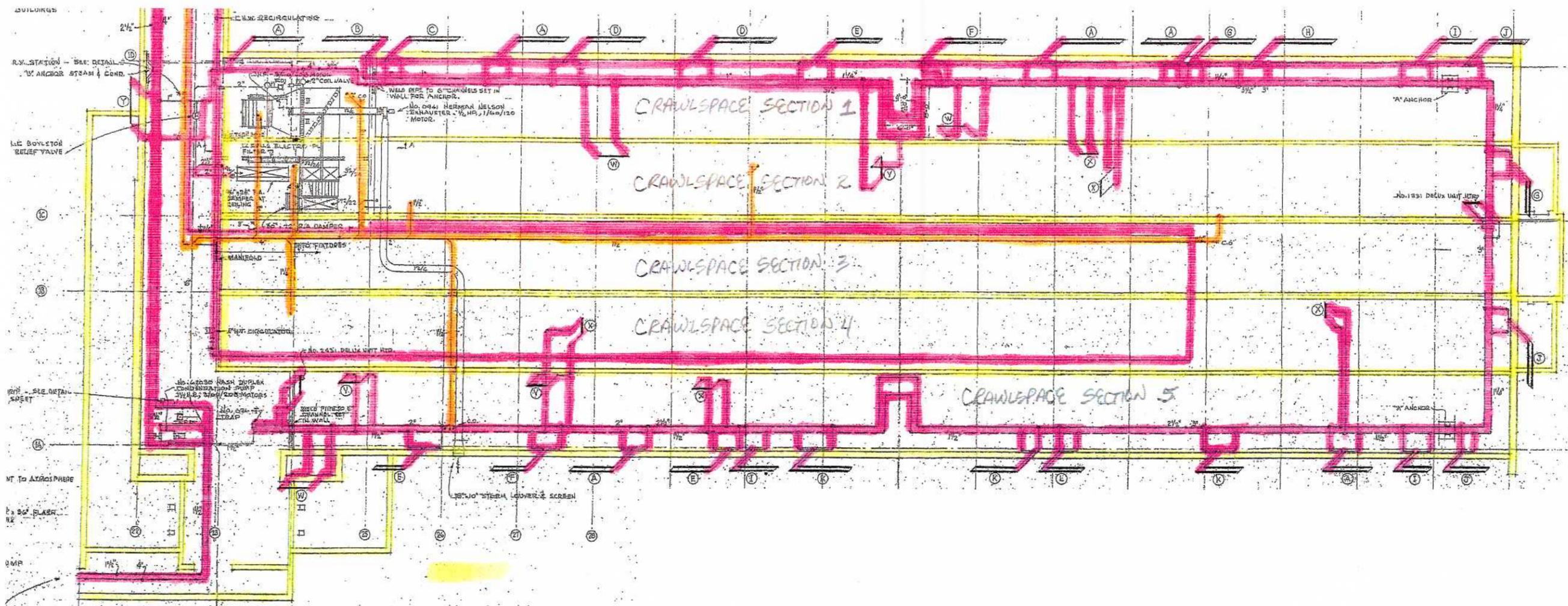
Table 7**Material Description, Abatement Cost, Amount, Location by Functional Space, Hazardous Rank****WEBER STATE UNIVERSITY
BUILDING 1
Ogden, Utah**

Homogeneous Area	Material Description	Amount	%Asbestos	Cost	Condition	Disturbance Potential	Hazardous Rank
M002	9" floor tile (tan/red) w/mastic	~89 sq. ft.	15% C tile >1% C mastic	\$500	Good	Low	NA
M005	2x2 ceiling tile (@Transite type)	~8,770 sq. ft.	10-25% C	\$87,700	Good	Low	5
M008	Window Caulking	~3,750 sq. ft.	3% C	\$7,500	Good	Low	NA
M009	Roof tar sealant	~50 sq. ft.	10% C	\$1,250	Good	Low	NA
M010	Sink Undercoating	1 each	18% C	\$150	Good	Low	NA
T001	TSI (pipe lagging)	~2,118 In. ft.	20% C 25% A	\$52,950	Fair	High	1
T002	TSI (joints/fittings-mudded)	~400 each	15-20% C	\$6,000	Fair	High	1

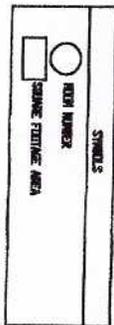
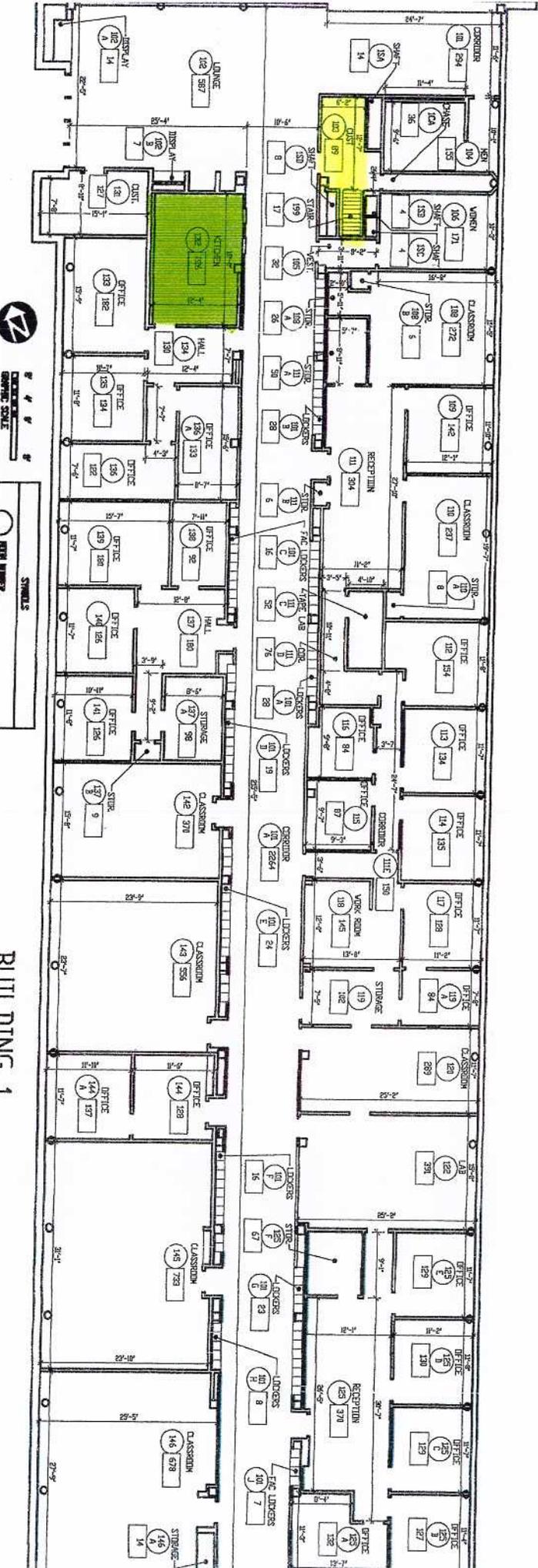
- Asbestos TSI pipe lagging ~2,118 ln. ft.
- Asbestos TSI Joints/fittings (mudded) ~400 each
- Crawlspace section dividers

WEBER STATE UNIVERSITY
BUILDING 1
 (Foreign Languages, Geography, Air Force ROTC)
 Ogden, Utah

Asbestos Survey
 March 2006



ROWLAND CONSULTING, INC.
 7301 South Paddington Road
 West Jordan, Utah 84084
 TEL 801.541.6915 FAX 801.569.2501



BUILDING 1
FIRST FLOOR PLAN

ASBESTOS CONTAINING MATERIALS

M006

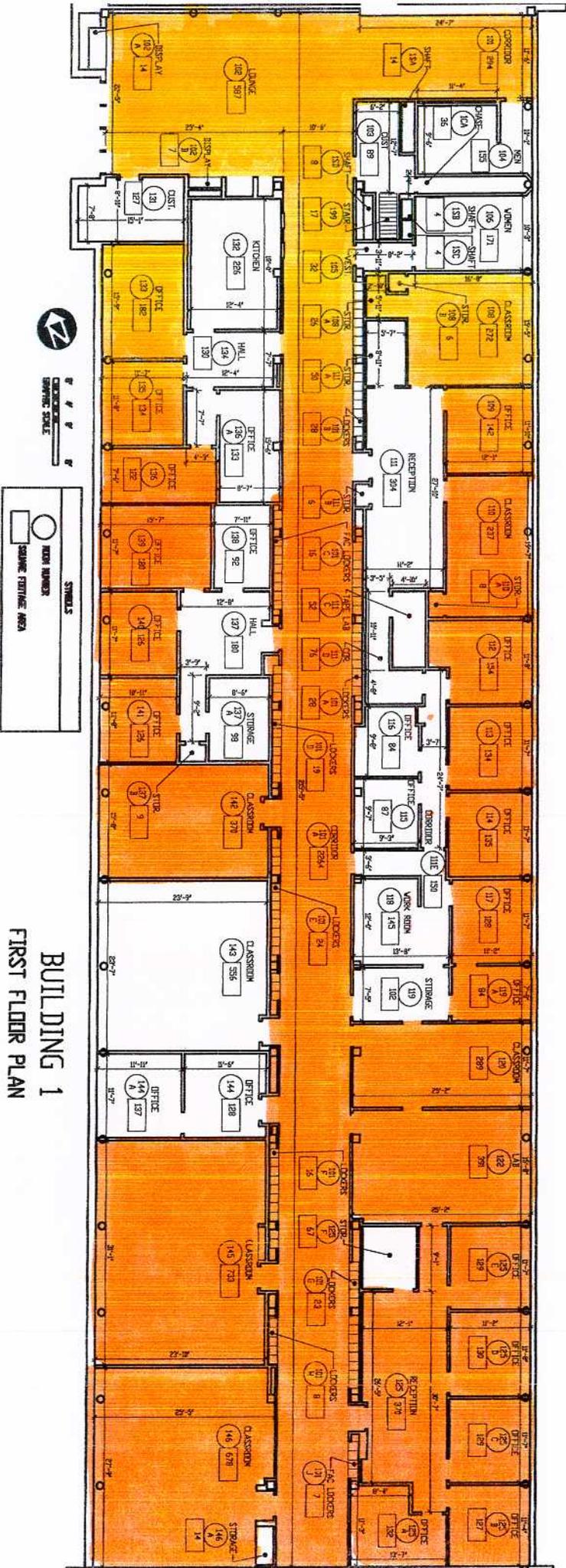
SHEET VINYL FLOORING

M002

9" FLOOR TILE W/MASTIC
(tan/red)



ASBESTOS SURVEY MARCH 2006
ROWLAND CONSULTING, INC.
801.541.6915



ASBESTOS CONTAINING MATERIALS

M005

2X2 CEILING TILES (®Transite type)



ASBESTOS SURVEY MARCH 2006

ROWLAND AND CONSULTING, INC.
801.541.6915

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS
RMD LPA-1B XRF SERIAL # 2311 (re-source test date 6/20/05)

PROJECT: *WEBER STATE UNIVERSITY
BUILDING 1 (Foreign Languages, Geography, Air Force ROTC)
Ogden, Utah*

DATE INSPECTED: *March 22, 2006*

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
CALIBRATION 74				0.9	
CALIBRATION 75				1.0	
CALIBRATION 76				0.9	
CALIBRATION 77				-0.2	
CALIBRATION 78				-0.2	
CALIBRATION 79				-0.2	
80	<i>Men's room</i>	<i>Wall tile/plaster</i>	<i>white-green/good</i>	9.9	POSITIVE
81	<i>Men's room</i>	<i>Wall tile/plaster</i>	<i>white-green/good</i>	9.9	POSITIVE
82	<i>North drinking fountain</i>	<i>Wall tile/plaster</i>	<i>light green/good</i>	9.9	POSITIVE
83	<i>North drinking fountain</i>	<i>Wall tile/plaster</i>	<i>dark green/good</i>	6.4	POSITIVE
84	West entry	Door/metal	tan/good	-0.1	NEGATIVE
85		Door frame/metal	tan/good	-0.2	NEGATIVE
86		Door jamb/metal	tan/good	0.0	NEGATIVE
87	Above hall lockers	Trim/metal	tan/good	0.3	NEGATIVE
88				0.3	NEGATIVE
89				0.4	NEGATIVE
90				-0.1	NEGATIVE
91				0.3	NEGATIVE
92				0.3	NEGATIVE
93	Corridor	Wall/block	light brown/good	-0.1	NEGATIVE
94				-0.1	NEGATIVE

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (re-source test date 6/20/05)

PROJECT: *WEBER STATE UNIVERSITY*
BUILDING 1 (Foreign Languages, Geography, Air Force ROTC)
Ogden, Utah

DATE INSPECTED: March 22, 2006

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
95	Corridor	Wall/block	light brown/good	-0.2	NEGATIVE
96				-0.4	NEGATIVE
97				-0.4	NEGATIVE
98				-0.3	NEGATIVE
99	Corridor	Wall/plaster	white/good	0.0	NEGATIVE
100				-0.1	NEGATIVE
101				0.2	NEGATIVE
102				-0.0	NEGATIVE
103				0.3	NEGATIVE
104				-0.1	NEGATIVE
105	Room 108, north	Wall/plaster	white/good	-0.2	NEGATIVE
106	Room 108, east	Wall/plaster	white/good	-0.2	NEGATIVE
107	Room 108, west	Wall/plaster	white/good	-0.3	NEGATIVE
108	Room 108, south	Wall/plaster	white/good	-0.1	NEGATIVE
109	Room 108, south	Wall/plaster	white/good	-0.1	NEGATIVE
110	Room 108, west	Wall/plaster	white/good	-0.1	NEGATIVE
111	Corridor, lockers	Lockers/metal	brown/good	-0.2	NEGATIVE
112				-0.1	NEGATIVE
113				-0.2	NEGATIVE
114				-0.3	NEGATIVE

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (re-source test date 6/20/05)

PROJECT: *WEBER STATE UNIVERSITY
BUILDING 1 (Foreign Languages, Geography, Air Force ROTC)
Ogden, Utah*

DATE INSPECTED: **March 22, 2006**

<u>Sample ID#</u>	<u>Area/Bldg.</u>	<u>Component/Substrate</u>	<u>Color/Condition</u>	<u>K SHELL mg/cm²</u>	<u>Result</u>
115	Exterior, east	Window sill/metal	silver/good	-0.1	NEGATIVE
116				-0.1	NEGATIVE
117				-0.3	NEGATIVE
118	Exterior, west	Window sill/metal	silver/good	-0.1	NEGATIVE
119				-0.1	NEGATIVE

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (source test date 9/13/03)

PROJECT: *CA-6398A*
ALMANSOR
430 Garfield
Alhambra, CA

DATE INSPECTED: **January 7, 2005**

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
1	Ground floor, telco room	Wall/brick	Clear/good	-0.0	NEGATIVE

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (source test date 9/13/03)

PROJECT:

DATE INSPECTED:

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
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**LEAD-BASED PAINT INSPECTION
WEBER STATE UNIVERSITY
BUILDING 1**

Introduction

On **March 22, 2006**, a lead-based paint (LBP) survey was conducted at **WEBER STATE UNIVERSITY, BUILDING 1, Ogden, Utah**. The purpose of the survey was to identify lead in paint on interior and exterior surfaces of the building. Measurements for lead in paint were made using a Radiation Monitoring Devices, Inc. (RMD) LPA-1 X-ray Fluorescence (XRF) Spectrum Analyzer. Chip sampling and laboratory analysis was not performed for confirmation of XRF measurements.

The survey was conducted by **Josh Rowland** with **ROWLAND CONSULTING, INC.** in **West Jordan, Utah**. **Josh Rowland** has completed Lead Inspector Training through the **University of Utah, Rocky Mountain Center for Occupational and Environmental Health-Lead Training Facility**, an EPA-sponsored Regional Lead Training Center, and is certified by the State of Utah, Division of Air Quality, as a Lead Inspector.

The U.S. Department of housing and Urban Development (HUD) *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in housing* (HUD Guidelines), Chapter 7: Lead-Based Paint Inspection, 1997 Revision, were generally followed for this survey, with modifications appropriate for a non-residential building.

Lead-Based Paint Definitions

HUD defines "lead-based paint" as any coating that has a lead concentration of 1.0 milligram of lead per square centimeter (1.0 mg/cm²) or greater, or if the lead concentration is greater than 0.5% by weight. The Consumer Product Safety Commission (CPSC) currently considers paint to be lead-containing if the concentration of lead exceeds 600 ppm (0.06% by weight). In 1978, the CPSC banned the sale of lead-based paint to consumers, and banned its application in areas where consumers have direct access to painted surfaces. Both the CPSC and HUD definitions of lead-containing paint are aimed at protecting the general population from exposure to lead in the residential setting. By contrast, the mission of the Occupational Safety and Health Administration (OSHA) with respect to lead-containing paint, is to protect workers during construction activities that may generate elevated airborne lead concentrations. OSHA states that construction work (including renovation, maintenance, and demolition) carried-out on structures coated with paint have lead concentrations lower than the HUD or CPSC can still result in airborne lead concentrations in excess of regulatory limits. For this reason, OSHA has not defined lead-containing paint,

but states that paint having any measurable level of lead may pose a substantial exposure hazard during construction work, depending upon the work performed.

Paint Sampling Methodologies

Direct measurements of lead in paint were made using a Radiation Monitoring Devices, Inc. (RMD) LPA-1 X-ray Fluorescence (XRF) Spectrum Analyzer (serial number (2311)). The LPA-1 Lead Paint Analyzer non-destructively measures lead concentrations of painted surfaces, regardless of the number of layers present. These instruments were developed specifically for addressing lead-based paint issues in housing and their use in identifying potential exposure hazards for renovation or construction work must be augmented by selective collection and analysis of physical paint chip samples.

The newer XRF instruments are capable of identifying lead in paint at concentrations of about 0.3 milligram per square centimeter (mg/cm^2) or greater. When lead concentrations are lower than this, the instruments are not capable of making accurate, reliable measurements, and the reported lead concentration may underestimate or overestimate the actual lead concentration in the paint. Therefore, an XRF readings of $0.4 \text{ mg}/\text{cm}^2$ or greater may be considered lead-containing from an OSHA perspective, and any readings of $0.3 \text{ mg}/\text{cm}^2$ or less should be confirmed by the collection and laboratory analysis of paint chip samples, or assumed to be positive for lead.

Where paint chip samples are necessary, samples are collected according to the protocol specified in the HUD Guidelines. The samples are then submitted to a laboratory recognized under the EPA's National Lead Laboratory Accreditation Program (NLLAP) for analysis by flame atomic absorption spectrophotometry according to American Society of Testing and Materials (ASTM) method ASTM E 1645.

XRF Calibration

Before beginning the testing and after the testing was completed, the internal calibration of the LPA-1 was checked by taking three consecutive measurements on a National Institute for Standards and Technology (NIST) standard with a known concentration of lead. Three more readings were taken on a lead-free wood block. These calibration checks are reported within the XRF data tables found in Appendix A of this report and are maintained in a file at **ROWLAND CONSULTING, INC.** to detect changes in instrument performance over time.

Lead Paint Inspection Data Tables

The XRF instrument generates a unique set of data tables for each inspection. The Sequential Report lists the measurements made throughout the property in

sequential order, from the first measurement to the last. The Data table is located in Appendix A to this report.

Results and Conclusions

The XRF instrument indicated that **lead is present** on the following interior surfaces:

<u>AREA</u>	<u>COMPONENT/SUBSTRATE</u>	<u>COLOR/CONDITION</u>	<u>SHELL mg/cm²</u>	<u>RESULT</u>
<i>Rest rooms</i>	<i>Ceramic tile/wall</i>	<i>white/good light green/good dark green/good</i>	<i>9.9</i>	<i>POSITIVE</i>

NOTE: This component is attached to the walls of both rest rooms in Building 1. Although the ceramic tiles are not painted, the lead is contained in the glazing of the ceramic tiles.

Because lead has been detected in some of the building's painted surfaces, the OSHA Lead in Construction Standard (29 CFR 1926.62) would apply to any construction work (including renovation and demolition) that may disturb those surfaces. The standard requires, among other things, the following:

- Initial training on the hazards of lead exposure, proper work practices, respiratory protection, and other topics;
- An initial exposure assessment, by air monitoring, to determine worker lead exposures. The measured exposures will then dictate if additional requirements of 29 CFR 1926.62 will apply.
- Hand washing facilities, designated clean change areas, and designated eating areas.

In addition to the above considerations, the presence of lead in demolition debris has the potential to impose limitations on where and how the debris may be disposed. The Resource Conservation and Recovery Act (RCRA), Subtitles C and D, require that the waste must be analyzed to determine the amount of leachable lead present. The type of test to be performed on the waste is the Toxicity Characteristic Leaching Procedure (TCLP) for lead, and the results of this test will determine whether the material must be handled and disposed of as hazardous waste. For structures containing large amounts of lead-containing paint, significant potential for failing the TCLP exists.

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS
RMD LPA-1B XRF SERIAL # 2311 (re-source test date 6/20/05)

PROJECT: *WEBER STATE UNIVERSITY
BUILDING 1 (Foreign Languages, Geography, Air Force ROTC)
Ogden, Utah*

DATE INSPECTED: *March 22, 2006*

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
CALIBRATION 74				0.9	
CALIBRATION 75				1.0	
CALIBRATION 76				0.9	
CALIBRATION 77				-0.2	
CALIBRATION 78				-0.2	
CALIBRATION 79				-0.2	
<i>80</i>	<i>Men's room</i>	<i>Wall tile/plaster</i>	<i>white-green/good</i>	<i>9.9</i>	<i>POSITIVE</i>
<i>81</i>	<i>Men's room</i>	<i>Wall tile/plaster</i>	<i>white-green/good</i>	<i>9.9</i>	<i>POSITIVE</i>
<i>82</i>	<i>North drinking fountain</i>	<i>Wall tile/plaster</i>	<i>light green/good</i>	<i>9.9</i>	<i>POSITIVE</i>
<i>83</i>	<i>North drinking fountain</i>	<i>Wall tile/plaster</i>	<i>dark green/good</i>	<i>6.4</i>	<i>POSITIVE</i>
84	West entry	Door/metal	tan/good	-0.1	NEGATIVE
85		Door frame/metal	tan/good	-0.2	NEGATIVE
86		Door jamb/metal	tan/good	0.0	NEGATIVE
87	Above hall lockers	Trim/metal	tan/good	0.3	NEGATIVE
88				0.3	NEGATIVE
89				0.4	NEGATIVE
90				-0.1	NEGATIVE
91				0.3	NEGATIVE
92				0.3	NEGATIVE
93	Corridor	Wall/block	light brown/good	-0.1	NEGATIVE
94				-0.1	NEGATIVE

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (re-source test date 6/20/05)

PROJECT: *WEBER STATE UNIVERSITY*
BUILDING 1 (Foreign Languages, Geography, Air Force ROTC)
Ogden, Utah

DATE INSPECTED: **March 22, 2006**

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
95	Corridor	Wall/block	light brown/good	-0.2	NEGATIVE
96				-0.4	NEGATIVE
97				-0.4	NEGATIVE
98				-0.3	NEGATIVE
99	Corridor	Wall/plaster	white/good	0.0	NEGATIVE
100				-0.1	NEGATIVE
101				0.2	NEGATIVE
102				-0.0	NEGATIVE
103				0.3	NEGATIVE
104				-0.1	NEGATIVE
105	Room 108, north	Wall/plaster	white/good	-0.2	NEGATIVE
106	Room 108, east	Wall/plaster	white/good	-0.2	NEGATIVE
107	Room 108, west	Wall/plaster	white/good	-0.3	NEGATIVE
108	Room 108, south	Wall/plaster	white/good	-0.1	NEGATIVE
109	Room 108, south	Wall/plaster	white/good	-0.1	NEGATIVE
110	Room 108, west	Wall/plaster	white/good	-0.1	NEGATIVE
111	Corridor, lockers	Lockers/metal	brown/good	-0.2	NEGATIVE
112				-0.1	NEGATIVE
113				-0.2	NEGATIVE
114				-0.3	NEGATIVE

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (re-source test date 6/20/05)

PROJECT: *WEBER STATE UNIVERSITY
BUILDING 1 (Foreign Languages, Geography, Air Force ROTC)
Ogden, Utah*

DATE INSPECTED: **March 22, 2006**

<u>Sample ID#</u>	<u>Area/Bldg.</u>	<u>Component/Substrate</u>	<u>Color/Condition</u>	<u>K SHELL mg/cm²</u>	<u>Result</u>
115	Exterior, east	Window sill/metal	silver/good	-0.1	NEGATIVE
116				-0.1	NEGATIVE
117				-0.3	NEGATIVE
118	Exterior, west	Window sill/metal	silver/good	-0.1	NEGATIVE
119				-0.1	NEGATIVE

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (source test date 9/13/03)

PROJECT: *CA-6398A*
ALMANSOR
430 Garfield
Alhambra, CA

DATE INSPECTED: **January 7, 2005**

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
1	Ground floor, telco room	Wall/brick	Clear/good	-0.0	NEGATIVE

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (source test date 9/13/03)

PROJECT:

DATE INSPECTED:

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
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**Other Hazardous Materials
WEBER STATE UNIVERSITY
BUILDING 1
Ogden, Utah**

Hazardous materials requiring proper removal and disposal identified at Weber State University Building 1 facility are as follows:

Material	Location	Quantity
<i>Fluorescent light tubes (newer type tubes- non hazardous)</i>	<i>Throughout</i>	<i>~350 each</i>

This facility contains non-hazardous household chemicals and non-pcb containing light ballasts.

The Weber County Health Department requires hazardous items to be removed and disposed of at a facility approved to accept such waste prior to demolition.

The cost estimate to remove and dispose of these hazardous materials is approximately **\$ 750**.

ASBESTOS SURVEY AND ASSESSMENT

**WEBER STATE UNIVERSITY
BUILDING 2**

*(Printing Services, Telecommunications, Business Education)
Ogden, Utah*

March 22, 2006

Prepared for:

Mr. Robert Anderson
HAZMAT Manager
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114

Prepared by:

ROWLAND CONSULTING, INC.

7301 South Paddington Road
West Jordan, Utah 84084
801.541.6915 FAX 801.569.2501

1.0 EXECUTIVE SUMMARY

Asbestos Survey and Assessment
WEBER STATE UNIVERSITY
BUILDING 2
(Printing Services, Telecommunications, Business Education)
Ogden, Utah

A survey of this facility was performed on March 16-22, 2006, by **ROWLAND CONSULTING, INC.**

The building was visually inspected to identify building materials that might contain asbestos. Bulk samples were collected from suspect materials and analyzed to determine if they contained asbestos. All ACMs were assessed for damage and the potential for exposure. This survey was requested by Mr. Robert J. Anderson, HAZMAT Manager, State of Utah, Division of Facilities Construction and Management.

The following table lists all ACMs that were identified in the building. Information specific to the building concerning inaccessible areas / materials and recommended response actions can be found in this report. There is important information in these sections that is not included in this executive summary. This report should be read in its entirety, including detailed information that is contained in other sections and appendices of this report.

ACMs by Homogeneous Area
WEBER STATE UNIVERSITY
BUILDING 2
(Printing Services, Telecommunications, Business Education)

Material (1) ID #	Material Description	Location	Asbestos Content (2)	Amount	Cost Estimate (3)
M002	9" floor tile (green, tan) & mastic	Corridors, custodial closet	12% C tile >1% mastic	~3,251 sq. ft.	\$6,502.00 @\$2/sq. ft.
M004	2x2 ceiling tile (@Transite)	Throughout	10-25% C	~11,720 sq. ft.	\$117,200.00 @\$10/sq. ft.
M008	Sheet Vinyl Flooring	Printing room, 208, 209, 225, 227	25% C	~4,651 sq. ft.	\$11,627.00 @\$2.50/sq. ft.
M009	Exterior Window Caulking	All exterior windows	3% C	~3,750 sq. ft. (150 each)	\$7,500.00 @\$50/window
M010	Roof tar sealant	Roof penetrations	10% C	~50 sq. ft.	\$1,250.00 @\$25/sq. ft.

(continued)
 ACMs by Homogeneous Area
WEBER STATE UNIVERSITY
BUILDING 2
 (Printing Services, Telecommunications, Business Education)

Material ID # (1)	Material Description	Location	Asbestos Content (2)	Amount	Cost Estimate (3)
M011	Sink Undercoating	Room 224	1.2% C	1 each	\$150.00
T001	Thermal System Insulation (TSI) Pipe Lagging (straight runs)	Crawlspaces, basement Mechanical Room	20% C 25% A	~2,059 ln. ft.	\$51,475.00 @\$25/ln. ft.
T002	TSI joints/fittings (mudded)	Crawlspaces, basement Mechanical Room	15-20% C	~350 each	\$5,250.00 @\$15/joint
				TOTAL	\$200,954.00

NOTE: Homogeneous Areas M008, M010, M011, T001, and T002 are previously sampled materials and are included in this report.

NOTE: A clean-up and soil removal project in the crawlspaces was performed from November 2002 through January 2003. Approximately 2 inches of crawlspace soil and ACM debris was removed by Utah Correctional Industries (UCI) Asbestos Abatement crews. In addition, UCI crews removed asbestos pipe lagging that was significantly damaged and or hanging, encapsulated the remaining sections of pipe lagging, and encapsulated the remaining soil upon completion. The quantities indicated above have been visually inspected and identified on-site and from original as-built drawings (see floor plans).

Footnotes:

1. Homogeneous Area Number (not related to building room numbers).
2. C = Chrysotile Asbestos. A = Amosite Asbestos.
3. Cost Estimates include asbestos removal costs only; abatement design and management fees and replacement costs are not included. For projects with small quantities, ask Contractors for their mobilization fee. Please refer to Section 7.0 for more details. All previous sampling and survey information has been included in this report. Please see the identified tabs for this information.

Asbestos Survey and Assessment
WEBER STATE UNIVERSITY
BUILDING 2
(Printing Services, Telecommunications, Business Education)
Ogden, Utah

2.0 INTRODUCTION

On March 16-22, 2006, **ROWLAND CONSULTING, INC.** performed an asbestos survey and assessment at WEBER STATE UNIVERSITY, BUILDING 2, Ogden, Utah.

The purpose of this survey was to identify the existence, extent, and condition of both friable and non-friable asbestos-containing materials (ACM) within and on the facility. Bulk samples were collected from suspect materials *not* sampled during previous surveys, submitted to a laboratory, and analyzed for asbestos content. Each occurrence of ACM was assessed for damage and friability.

The following accredited and certified inspectors performed the inspection, collected the samples and made assessment:

Jeffrey B. Rowland

Name

April 6, 2006

Signature

Date

Utah

State of Accreditation

ASB-1377

State of Utah

Division of Air Quality

Asbestos Certification Number

Joshua B. Rowland

Name

April 6, 2006

Signature

Date

Utah

State of Accreditation

ASB-2533

State of Utah

Division of Air Quality

Asbestos Certification Number

Frank D. DeRosso, CIH MSPH
Senior Scientist
RMEC Environmental, Inc.

Signature

3.0 BUILDING DESCRIPTION

Building Identification **WEBER STATE UNIVERSITY BUILDING 2**

Building Name.....Printing Services, Telecommunications,
Business Education

Building Address.....Ogden, Utah

Building Construction

Building Construction Date....1951
Building Type.....Classrooms, administrative
Building Total Sq. Ft..... ~15,000
Structural System..... Reinforced concrete and brick
Exterior Wall Construction.... Brick/block
Floor Deck Construction..... Reinforced concrete
Roof Construction.....Built-up roof w/red rock ballast
Floors Above Grade.....1
Floors Below Grade.....1

Interior Finishes

Floors..... Concrete, ceramic tile, **asbestos vinyl floor tile**, glued-down carpet
Ceilings.....**Asbestos ceiling tiles (2x2)**
Walls..... Concrete, brick, wallboard, plaster
Attic..... None
Crawl space..... 10 each sections, with **asbestos pipe lagging and mudded joints**

Building Mechanical

Heating Plant..... Central Heating Plant
Main Heating Distribution.... Low pressure steam and hot water distributed through wall heaters
Mechanical Piping.....**Asbestos containing pipe lagging and mudded joints mixed in with fiberglass pipe lagging**

4.0 SURVEY PROCEDURES

4.1 Building Surveys

All accessible areas of the facility were visually inspected to identify suspect asbestos containing materials (ACM.) All accessible surfaces, structures, and mechanical systems within these areas were examined and all suspected ACM was touched to determine friability.

Suspect ACM was identified and assessed in homogeneous areas. A homogeneous area is defined as a single material, uniform in texture and appearance, installed at one time, and unlikely to consist of more than one type, or formulation, of material. In cases where joint compound and/or tape has been applied to wallboard (gypsum board) and cannot be visually distinguished from the wallboard, it is considered an integral part of the wallboard and in effect becomes one material forming a wall or ceiling "system."

Each homogeneous area was given a unique material identification number. Each ID number begins with a letter: "S" for surfacing materials, "T" for thermal system insulation, or "M" for miscellaneous materials. This letter is followed by a three-digit number, assigned in consecutive order. This number is used to identify the homogeneous area throughout the inspection report.

4.2 Bulk Sample Collection

Bulk samples were collected from all accessible homogeneous areas of suspect ACM for subsequent laboratory analysis to determine actual asbestos content. Sampling was conducted in a manner that minimized damage to the building, did not leave any unsightly marks, and did not create a health hazard for the inspectors.

The number of samples collected from each homogeneous area generally followed the EPA AHERA regulations (40 CFR 763.86). Friable surfacing materials were sampled using the random sampling scheme given in the EPA publication 560 / 5-85-30a, titled "Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials." Between three and seven samples were collected from friable surfacing materials, depending on the size of the homogeneous area.

4.3 Bulk Sample Analysis

Bulk samples were analyzed using polarized light microscopy (PLM) and visual estimation in accordance with the EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples, EPA-600 / M4-82-020. Samples were analyzed by **DIXON INFORMATION INC.**

The laboratory is accredited under the National Institute of Standards and Technology – National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk-asbestos sample analysis and is also accredited by the American Industrial Hygiene Association (AIHA).

Federal EPA's NESHAP and AHERA regulations define ACM as material containing greater than 1% asbestos by weight; materials containing less than 1% asbestos are not considered regulated ACM.

Further, the NESHAP regulations state that any sample found to contain less than 10% asbestos but greater than "none detected," by visual estimation, must be assumed to contain greater than 1% asbestos unless confirmed to be less than 1.0% asbestos by point counting analysis. Any samples found to contain asbestos in this concentration range were assumed to contain greater than 1.0% asbestos and are listed in Section 5.8 of this report. All samples that have been point counted are identified as such in the sample result tables.

The laboratories reports can be found in Appendix D of this report.

5.0 SURVEY RESULTS

5.1 Asbestos-Containing Materials

Homogeneous areas of suspect ACM are identified as being ACM if the laboratory analysis shows the material to contain any detectable asbestos, unless subsequent Point Counting analysis resulted in less than 1% asbestos being detected. Table 1 of the Executive Summary and in Appendix A lists all homogeneous areas that were found to be ACM. Each material is described by type of material, friability and visual appearance.

Friability is defined in accordance with EPA's NESHAP regulations.

"Friable ACM" is any material containing more than 1% asbestos (as determined by PLM) that, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure and also includes non-friable ACM that may become friable during building demolition.

"Non-friable ACM" is any material containing more than 1% asbestos (as determined by PLM) that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

"Category I non-friable ACM" are asbestos-containing resilient floor coverings (commonly known as vinyl asbestos tile (VAT), asphalt roofing products, packings, and gaskets.

"Category II non-friable ACM" encompasses all other non-friable ACM.

“Non-friable RACM” is used to denote thermal system insulation that is in good condition but would become friable during renovation or demolition and therefore is “regulated asbestos containing material” (RACM).

5.2 Non-Asbestos-Containing Materials

Homogeneous areas of suspect ACM are identified as *non-ACM* if the laboratory analysis shows the material to contain no detectable asbestos. Table 2, located in Appendix A of this report, lists all homogeneous areas that were found to be non-ACM.

5.3 Bulk Sample Analytical Results

Table 3, located in Appendix A of this report, lists all of the bulk samples in order by sample number, that were collected from homogeneous areas of suspect ACM, along with the laboratory analytical results. Each sample was given a unique sample number. There may be more than one sample number for the same homogeneous area of suspect ACM. The homogeneous areas of suspect ACM are identified on this table by their material identification numbers. The sample location listed on this table provides a brief, but specific, description of the location where the sample was collected. This is different than the homogeneous area location provided on Tables 1 and 2. Table 4 is the same as Table 3 except the entries have been sorted by homogeneous area number.

5.3 Damage and Hazard Assessment

Each homogeneous area of ACM has been assessed for existing damage, accessibility, and potential for future damage, and this information is presented in Table 5, located in Appendix A of this report. This table also lists the substrate present beneath each homogeneous area of ACM.

Each homogeneous area of friable ACM and asbestos-containing building material (ACBM) was classified into one of the following seven categories, as specified in EPA’s AHERA regulations (40 CFR 763.88):

- (1) Damaged or significantly damaged thermal system insulation ACM.
- (2) Damaged friable surfacing ACM.
- (3) Significantly damaged friable surfacing ACM.
- (4) Damaged or significantly damaged friable miscellaneous ACM.
- (5) ACBM with potential for damage.
- (6) ACBM with potential for significant damage.
- (7) Any remaining friable ACBM or friable suspected ACBM.

The damage categories are defined as follows:

“Undamaged” means the material had no visible damage, or extremely minor damage or surface marring (i.e., a room full of floor tile with only two or three small corners chipped off on the tile).

“Damaged” means the material had visible damage evenly distributed over less than 10% of its surface, or localized over less than 25% of its surface.

“Significantly Damaged” means the material had visible damage that is evenly distributed over 10% or more of its surface, or localized over 25% or more of its surface.

Each homogeneous area of ACM was evaluated for accessibility to the building occupants and the general public, assuming the building was fully occupied, using the following assessment categories.

“Inaccessible” means the material was located in an area that people had no reason to enter and could not access without special measures. One example would be the area above a solid ceiling.

“Rarely Accessed” identifies a material that was in a location that could be accessed but wasn’t unless there was a specific need. An example would be a pipe tunnel. Another example would be a high ceiling that is out of reach and not subject to any specific disturbance.

“Periodic Access” identifies a material that was in a location that was accessible, was not occupied full time, but was accessed on a routine basis. An example would be a mechanical room or boiler room.

“Continuous Access” identifies a material that was in a location that was occupied full time and was within reach of the occupants, or was frequently subject to direct disturbance. Examples would be exposed floor tile or a normal height ceiling.

5.4 Homogeneous Areas with Special Considerations

NONE

5.6 Suspect Materials Presumed to be Asbestos-Containing Materials without Laboratory Analysis

NONE

5.7 Inaccessible Areas

NONE

5.8 Material(s) assumed to contain >1.0% asbestos without subsequent TEM or Point Count Analysis

NONE

6.0 RESPONSE ACTION COMMENTS

6.1 EPA Requirements

Asbestos is regulated as a hazardous air pollutant by the Environmental Protection Agency (EPA) under the authority of the Clean Air Act. The asbestos regulations are included in the National Emissions Standards for Hazardous Air Pollutants (NESHAP) and referenced as 40 CFR 61, Subpart M. ACMs identified in this report are subject to those regulations. Those regulations, and state and local regulations, should be carefully examined prior to renovation, demolition, cleanup, or any other activity which could disturb the ACMs, to ensure that all activities are in compliance with applicable requirements.

ACM is defined by the EPA, as any material containing greater than one percent of asbestos. ACMs are categorized as being either friable or non-friable. Friable ACMs are those materials that can be easily crumbled, pulverized, or otherwise broken up using hand or finger pressure when dry, and are materials considered more likely to produce airborne asbestos fibers. Non-friable ACMs are materials that do not meet the above test, and are considered less likely to produce airborne asbestos fibers. Not all ACMs are regulated under NESHAP. Regulated ACM (RACM) means (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of regulated demolition or renovation operations. Regulated demolition and renovation operations are those where the quantity of ACM affected is 260 linear feet or more on pipes, 160 square feet or more on other components, or 35 cubic feet or more in volume. There are certain notification requirements for demolition projects involving less than the above quantities.

Briefly, EPA requires that RACM be removed from facilities scheduled for demolition or renovation before any activity begins that would break up, dislodge, or similarly disturb the materials or preclude access to the materials for subsequent removal. Category I non-friable ACM that is not in poor condition and is not friable does not have to be removed prior to demolition of a facility. **However, these materials are exempt from mandatory removal only during demolition, not renovation. Removal is mandated when renovation activities are expected to disturb these ACMs and render them friable.** Category II non-friable ACM also does not have to be removed prior to demolition if the probability is low that the material will become crumbled, pulverized, or reduced to powder (made friable) during demolition. However, state regulations may require the removal of these materials. Additionally, Category I non-friable

ACM that has not become crumbled, pulverized, or reduced to powder during demolition activities may be disposed of as ordinary construction waste. In any situation where ACM remains in a building, it should be managed under a comprehensive operations and maintenance program (O&M). The procedures and guidelines described in an O&M program should be followed whenever building maintenance activities may disturb any ACMs present in the building.

6.2 Renovation Options

Some ACMs may remain in place during building renovations, as long as they are not disturbed and or damaged.

7.0 COST ESTIMATES

A breakdown of the estimated removal costs by homogeneous area can be found in Table 6, Appendix A. These cost estimates are provided for use in long-term budgeting and planning only, and do not have a level of accuracy sufficient to be used as a construction design cost estimate. The actual cost of asbestos removal is highly dependent on a number of factors such as size of the project, the required time frame for removal, the time of year the job is conducted, the regulatory climate at the time, etc., therefore, actual abatement costs could vary significantly from these estimates. Replacement costs have **not** been included in these figures.

The cost for abatement design and management services is **not** included in these figures. These additional fees can range from 15% of the estimated abatement costs for large projects to greater than 50% for very small projects. The design and management fees cover the cost of preparing plans and specifications, conducting the bidding process as well as third-party oversight during abatement.

8.0 LIMITATIONS AND EXCLUSIONS OF WARRANTY

This asbestos survey and assessment was performed using procedures and a level of diligence typically exercised by professional consultants performing similar services. However, asbestos-containing material (ACM) can be present in a structure, but not identified using ordinary investigative procedures.

No asbestos survey can completely eliminate uncertainty regarding the presence of ACM. **ROWLAND CONSULTING, INC. and RMEC ENVIRONMENTAL, INC.** level of diligence and investigative procedures are intended to reduce, but not eliminate, potential uncertainty regarding the presence of ACM. The procedures used for this survey attempt to establish a balance between the competing goals of limiting investigative costs, time, and building damage, and reducing the uncertainty about unknown conditions. Therefore, the determinations in this

report should not be construed as a guarantee that all ACM present in the subject property has been included in this report.

This report presents professional determinations, which are dependent upon information obtained during performance of consulting services. **ROWLAND CONSULTING, INC. and RMEC ENVIRONMENTAL, INC.** assumes no responsibility for omissions or errors resulting from inaccurate information provided by sources outside of **ROWLAND CONSULTING, INC. and RMEC ENVIRONMENTAL, INC.**

No warranty or guarantee, expressed or implied, is made regarding the findings, conclusions, or recommendations contained in this report. The limitations presented above supersede the requirements or provisions of all other contracts or scopes of work, implied or otherwise, except those stated or acknowledged herein.

Table 1
ACMs by Homogeneous Area
WEBER STATE UNIVERSITY
BUILDING 2
Ogden, Utah

Homogeneous Area Number	Material Description/Location	Friability	Asbestos Content	Amount
M002	9" floor tile (green/tan) & mastic/ Corridors, room 207	Non-friable	15% C tile >1% mastic	~3,251 sq. ft.
M004	2x2 ceiling tile (®Transite)/ throughout	Non-friable	10-25% C	~11,720 sq. ft.
M008	Sheet Vinyl Flooring/Printing rms, Rooms 208-209, 225, 227-228	Non-friable	25% C	~4,651 sq. ft.
M009	Window Caulking/exterior windows	Non-friable	3% C	~3,750 sq. ft. (150 each)
M010	Tar Sealant/roof penetrations	Non-friable	10% C	~50 sq. ft.
M011	Sink Undercoating/rm 224	Non-friable	1.2% C	1 each
T001	TSI pipe lagging/crawlspaces, Basement mechanical room	Friable	20% C 25% A	~2,059 ln. ft.
T002	TSI joints-fittings (mudded)/ crawlspaces, basement mechanical room	Friable	15-20% C	~350 each

Table 2
Homogeneous Areas That Do Not Contain Asbestos
WEBER STATE UNIVERSITY
BUILDING 2

Homogeneous Area Number	Material Description	Material Location
M001	Plaster	Throughout
*M003	Sheet Vinyl Flooring (beige)	Room 228, 227, 225, 208
M005	Black mastic	Room 224
M006	2x4 ceiling tile (wormhole pattern)	Rooms 216-223
M007	Roof (core, built-up w/rock ballast)	Roof
	*12" floor tile (beige) w/ mastic	Room 224
	*Sheet Vinyl Flooring (pink)	Room 200, 203

* = PREVIOUSLY SAMPLED MATERIALS

Table 3
Bulk Sample Analytical Results by Sample Number
WEBER STATE UNIVERSITY
BUILDING 2
Ogden, Utah

Sample Number	Homogeneous Area Number	Material Sampled	Sample Location	Analytical Results
01	M001	Plaster	Room 213	NONE DETECTED
02			Room 224	NONE DETECTED
03			Custodial closet	NONE DETECTED
04			Room 227	NONE DETECTED
05			Room 228	NONE DETECTED
06	M002	9" floor tile (green/tan) w/black mastic	North corridor	12% C tile
07				>1% C mastic
08				NOT ANALYZED
09				NOT ANALYZED
10				NOT ANALYZED
11	M003	Sheet Vinyl Flooring (brown/tan)	Room 228	NONE DETECTED
12			Room 227	NONE DETECTED
13			Room 225	NONE DETECTED
14			Room 208	NONE DETECTED
15			Room 208	NONE DETECTED
16	M004	2X2 ceiling tile (®Transite type)	North corridor	10% C
17				NOT ANALYZED
18				NOT ANALYZED
19				NOT ANALYZED
20				NOT ANALYZED
21	M005	Floor tile mastic (black)	Room 224	NONE DETECTED
22				NONE DETECTED
23				NONE DETECTED
24				NONE DETECTED
25				NONE DETECTED
26	M006	2x4 ceiling tile (wormhole pattern)	Rooms 216-223	NONE DETECTED
27				NONE DETECTED
28				NONE DETECTED
29				NONE DETECTED
30				NONE DETECTED
31	M007	Roof (core)	East, center	NONE DETECTED
32			West, end	NONE DETECTED
33			North, center	NONE DETECTED
01	M009	Window Caulking	Exterior windows	<1% C
02				<1% C
03				3% C

Table 4
Bulk Sample Analytical Results by Homogeneous Area Number
WEBER STATE UNIVERSITY
BUILDING 2
Ogden, Utah

Homogeneous Area Number	Sample Number	Material Sampled	Sample Location	Analytical Results
M001	01	Plaster	Room 213	NONE DETECTED
	02		Room 224	NONE DETECTED
	03		Custodial closet	NONE DETECTED
	04		Room 227	NONE DETECTED
	05		Room 228	NONE DETECTED
M002	06	9" floor tile (green/tan) w/black mastic	North corridor	12% C tile
	07			>1% C mastic
	08			NOT ANALYZED
	09			NOT ANALYZED
	10			NOT ANALYZED
M003	11	Sheet Vinyl Flooring (brown/tan)	Room 228	NONE DETECTED
	12		Room 227	NONE DETECTED
	13		Room 225	NONE DETECTED
	14		Room 208	NONE DETECTED
	15		Room 208	NONE DETECTED
M004	16	2X2 ceiling tile (®Transite type)	North corridor	10% C
	17			NOT ANALYZED
	18			NOT ANALYZED
	19			NOT ANALYZED
	20			NOT ANALYZED
M005	21	Floor tile mastic (black)	Room 224	NONE DETECTED
	22			NONE DETECTED
	23			NONE DETECTED
	24			NONE DETECTED
	25			NONE DETECTED
M006	26	2x4 ceiling tile (wormhole pattern)	Rooms 216-223	NONE DETECTED
	27			NONE DETECTED
	28			NONE DETECTED
	29			NONE DETECTED
	30			NONE DETECTED
M007	31	Roof (core)	East, center	NONE DETECTED
	32		West, end	NONE DETECTED
	33		North, center	NONE DETECTED
M009	01	Window Caulking	Exterior windows	<1% C
	02			<1% C
	03			3% C

Table 5
Damage and Hazard Assessment by Homogeneous Area
WEBER STATE UNIVERSITY
BUILDING 2
Ogden, Utah

Area Number	Material Type	Substrate	Assessment Category	Damage	Accessibility	Disturbance Potential
M002	9" floor tile (green /tan)	Concrete	NA	Undamaged	Continuous	High
M004	2x2 ceiling tile (©Transite type)	Metal	6	Undamaged	Periodic	High
M008	Sheet Vinyl Flooring (Printing room)	Concrete	NA	Undamaged	Continuous	High
M009	Exterior Window Caulking	Metal	NA	Undamaged	Periodic	Low
M010	Roof tar sealant	Metal	NA	Undamaged	Periodic	Low
M011	Sink Undercoating	Metal	NA	Undamaged	Periodic	Low
T001	TSI (pipe lagging)	Metal	1	Damaged	Periodic	High
T002	TSI (joints/fittings (mudded))	Metal	1	Undamaged	Periodic	High

Note: Assessment Categories:

- 1-Damaged or significantly damaged thermal system insulation ACM
- 2-Damaged friable surfacing ACM
- 3-Significantly damaged friable surfacing ACM
- 4-Damaged or significantly damaged friable miscellaneous ACM
- 5-ACM with potential for damage
- 6-ACM with potential for significant damage
- 7-Any remaining friable ACM or friable suspect ACM
- NA-Not applicable (non-friable material)

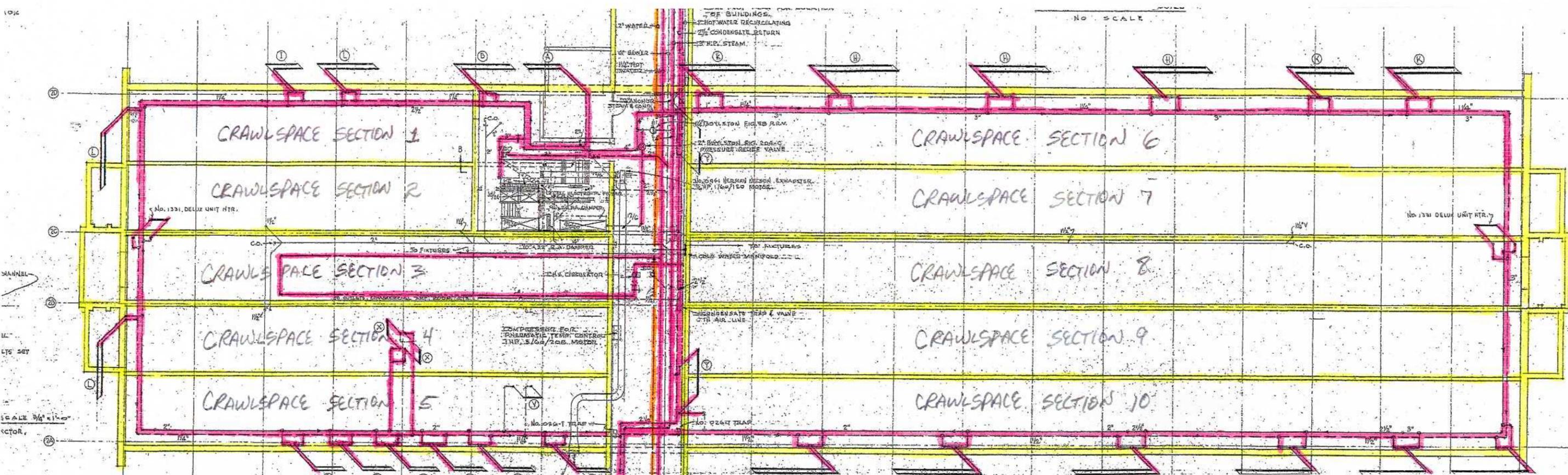
Table 6
Estimated Abatement Costs by Homogeneous Area
WEBER STATE UNIVERSITY
BUILDING 2
Ogden, Utah

Homogeneous Area Number	Material	Amount	Unit Cost	Extended Cost
M002	9" floor tile (green/tan) & mastic	~3,251 sq. ft.	\$2/sq. ft.	\$6,502.00
M004	2x2 ceiling tile (®Transite Type)	~11,720 sq. ft.	\$10/sq. ft.	\$117,200.00
M008	Sheet Vinyl Flooring	~4,651 sq. ft.	\$2.50/sq. ft.	\$11,627.00
M009	Exterior Window Caulking	~3,750 sq. ft. (~150 each)	\$50/window	\$7,500.00
M010	Roof tar sealant	~50 sq. ft.	\$25/sq. ft.	\$1,250.00
M010	Sink Undercoating	1 each	\$150.00	\$150.00
T001	TSI (pipe lagging)	~2,059 ln. ft.	\$25/ln. ft.	\$51,475.00
T002	TSI (joints/fittings-mudded)	~350 each	\$15/joint	\$5,250.00

Table 7**Material Description, Abatement Cost, Amount, Location by Functional Space, Hazardous Rank****WEBER STATE UNIVERSITY
BUILDING 2
Ogden, Utah**

Homogeneous Area	Material Description	Amount	%Asbestos	Cost	Condition	Disturbance Potential	Hazardous Rank
M002	9" floor tile (green/tan) w/mastic	~3,251 sq. ft.	12% C tile >1% C mastic	\$6,502	Good	High	NA
M004	2x2 ceiling tile (@Transite type)	~11,720 sq. ft.	10-25% C	\$117,200	Good	High	5
M008	Sheet Vinyl Flooring	~4,651 sq. ft.	25% C	\$11,627	Good	High	NA
M009	Window Caulking	~3,750 sq. ft.	3% C	\$7,500	Good	Low	NA
M010	Roof tar sealant	~50 sq. ft.	10% C	\$1,250	Good	Low	NA
M011	Sink Undercoating	1 each	18% C	\$150	Good	Low	NA
T001	TSI (pipe lagging)	~2,059 ln. ft.	20% C 25% A	\$51,475	Fair	High	1
T002	TSI (joints/fittings-mudded)	~350 each	15-20% C	\$5,250	Fair	High	1

Asbestos Survey
 March 2006

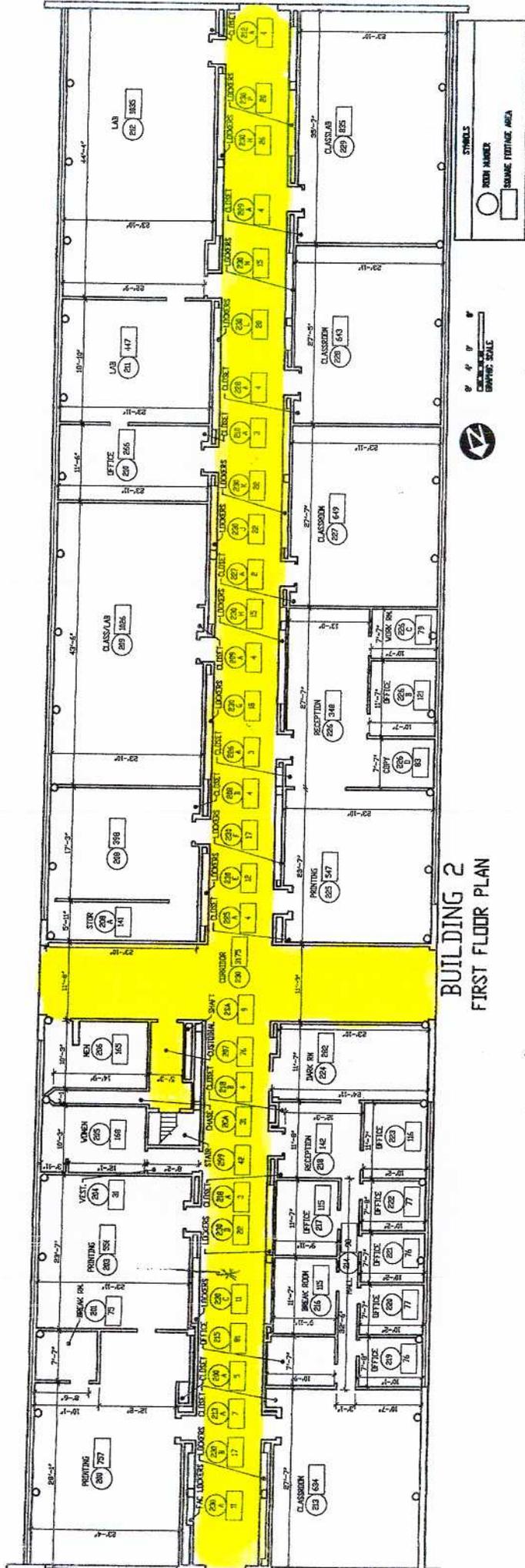


ASBESTOS TSI (Pipe lagging & joints/fittings-mudded)
 ~2,059 ln. ft. 
 ~350 each

CRAWLSPACE SECTION DIVIDERS 



ROWLAND CONSULTING, INC.
 7301 South Paddington Road
 West Jordan, Utah 84084
 TEL 801.541.6915 FAX 801.569.2501



M002
9" FLOOR TILE W/MASTIC
(green/tan)





BUILDING 2
FIRST FLOOR PLAN

M010
SHEET VINYL FLOORING
(tan)



LEAD-BASED PAINT INSPECTION

***WEBER STATE UNIVERSITY
BUILDING 2
(Printing Services, Telecommunications, Business Education)
Ogden, Utah***

March 22, 2006

Submitted to:

Mr. Robert Anderson
HAZMAT Manager
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114

Prepared by:

ROWLAND CONSULTING, INC.
7301 South Paddington Road
West Jordan, Utah 84084
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LEAD-BASED PAINT INSPECTION
WEBER STATE UNIVERSITY
BUILDING 2
Ogden, Utah

Introduction

On **March 22, 2006**, a lead-based paint (LBP) survey was conducted at **WEBER STATE UNIVERSITY, BUILDING 2, Ogden, Utah**. The purpose of the survey was to identify lead in paint on interior and exterior surfaces of the building. Measurements for lead in paint were made using a Radiation Monitoring Devices, Inc. (RMD) LPA-1 X-ray Fluorescence (XRF) Spectrum Analyzer. Chip sampling and laboratory analysis was not performed for confirmation of XRF measurements.

The survey was conducted by **Josh Rowland** with **ROWLAND CONSULTING, INC.** in **West Jordan, Utah**. **Josh Rowland** has completed Lead Inspector Training through the **University of Utah, Rocky Mountain Center for Occupational and Environmental Health-Lead Training Facility**, an EPA-sponsored Regional Lead Training Center, and is certified by the State of Utah, Division of Air Quality, as a Lead Inspector.

The U.S. Department of housing and Urban Development (HUD) *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in housing* (HUD Guidelines), Chapter7: Lead-Based Paint Inspection, 1997 Revision, were generally followed for this survey, with modifications appropriate for a non-residential building.

Lead-Based Paint Definitions

HUD defines "lead-based paint" as any coating that has a lead concentration of 1.0 milligram of lead per square centimeter (1.0 mg/cm²) or greater, or if the lead concentration is greater than 0.5% by weight. The Consumer Product Safety Commission (CPSC) currently considers paint to be lead-containing if the concentration of lead exceeds 600 ppm (0.06% by weight). In 1978, the CPSC banned the sale of lead-based paint to consumers, and banned its application in areas where consumers have direct access to painted surfaces. Both the CPSC and HUD definitions of lead-containing paint are aimed at protecting the general population from exposure to lead in the residential setting. By contrast, the mission of the Occupational Safety and Health Administration (OSHA) with respect to lead-containing paint, is to protect workers during construction activities that may generate elevated airborne lead concentrations. OSHA states that construction work (including renovation, maintenance, and demolition) carried-out on structures coated with paint have lead concentrations lower than the HUD or CPSC can still result in airborne lead concentrations in excess of regulatory limits. For this reason, OSHA has not defined lead-containing paint,

but states that paint having any measurable level of lead may pose a substantial exposure hazard during construction work, depending upon the work performed.

Paint Sampling Methodologies

Direct measurements of lead in paint were made using a Radiation Monitoring Devices, Inc. (RMD) LPA-1 X-ray Fluorescence (XRF) Spectrum Analyzer (serial number (2311)). The LPA-1 Lead Paint Analyzer non-destructively measures lead concentrations of painted surfaces, regardless of the number of layers present. These instruments were developed specifically for addressing lead-based paint issues in housing and their use in identifying potential exposure hazards for renovation or construction work must be augmented by selective collection and analysis of physical paint chip samples.

The newer XRF instruments are capable of identifying lead in paint at concentrations of about 0.3 milligram per square centimeter (mg/cm^2) or greater. When lead concentrations are lower than this, the instruments are not capable of making accurate, reliable measurements, and the reported lead concentration may underestimate or overestimate the actual lead concentration in the paint. Therefore, an XRF readings of $0.4 \text{ mg}/\text{cm}^2$ or greater may be considered lead-containing from an OSHA perspective, and any readings of $0.3 \text{ mg}/\text{cm}^2$ or less should be confirmed by the collection and laboratory analysis of paint chip samples, or assumed to be positive for lead.

Where paint chip samples are necessary, samples are collected according to the protocol specified in the HUD Guidelines. The samples are then submitted to a laboratory recognized under the EPA's National Lead Laboratory Accreditation Program (NLLAP) for analysis by flame atomic absorption spectrophotometry according to American Society of Testing and Materials (ASTM) method ASTM E 1645.

XRF Calibration

Before beginning the testing and after the testing was completed, the internal calibration of the LPA-1 was checked by taking three consecutive measurements on a National Institute for Standards and Technology (NIST) standard with a known concentration of lead. Three more readings were taken on a lead-free wood block. These calibration checks are reported within the XRF data tables found in Appendix A of this report and are maintained in a file at **ROWLAND CONSULTING, INC.** to detect changes in instrument performance over time.

Lead Paint Inspection Data Tables

The XRF instrument generates a unique set of data tables for each inspection. The Sequential Report lists the measurements made throughout the property in

sequential order, from the first measurement to the last. The Data table is located in Appendix A to this report.

Results and Conclusions

The XRF instrument indicated that **lead is present** on the following interior surfaces:

AREA	COMPONENT/SUBSTRATE	COLOR/CONDITION	K SHELL mg/cm ²	RESULT
<i>Rest rooms</i>	<i>Ceramic tile/wall</i>	<i>white/good</i>	<i>9.9</i>	<i>POSITIVE</i>

NOTE: This component is attached to the walls of both rest rooms in Building 2. Although the ceramic tiles are not painted, the lead is contained in the glazing of the ceramic tiles.

Because lead has been detected in the areas mentioned above, the OSHA Lead in Construction Standard (29 CFR 1926.62) would apply to any construction work (including renovation and demolition) that may disturb those surfaces. The standard requires, among other things, the following:

- Initial training on the hazards of lead exposure, proper work practices, respiratory protection, and other topics;
- An initial exposure assessment, by air monitoring, to determine worker lead exposures. The measured exposures will then dictate if additional requirements of 29 CFR 1926.62 will apply.
- Hand washing facilities, designated clean change areas, and designated eating areas.

In addition to the above considerations, the presence of lead in demolition debris has the potential to impose limitations on where and how the debris may be disposed. The Resource Conservation and Recovery Act (RCRA), Subtitles C and D, require that the waste must be analyzed to determine the amount of leachable lead present. The type of test to be performed on the waste is the Toxicity Characteristic Leaching Procedure (TCLP) for lead, and the results of this test will determine whether the material must be handled and disposed of as hazardous waste. For structures containing large amounts of lead-containing paint, significant potential for failing the TCLP exists.

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (source test date 9/13/03)

PROJECT:

*CA-6398A
ALMANSOR
430 Garfield
Alhambra, CA*

DATE INSPECTED: January 7, 2005

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
1	Ground floor, telco room	Wall/brick	Clear/good	-0.0	NEGATIVE

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (source test date 9/13/03)

PROJECT:
DATE INSPECTED:

K SHELL

**Other Hazardous Materials
WEBER STATE UNIVERSITY
BUILDING 2
Ogden, Utah**

Hazardous materials requiring proper removal and disposal identified at Weber State University Building 2 facility are as follows:

Material	Location	Quantity
<i>Fluorescent light tubes (newer type tubes- non hazardous)</i>	<i>Throughout</i>	<i>~420 each</i>

This facility contains non-hazardous household chemicals and non-pcb containing light ballasts.

The Weber County Health Department requires hazardous items to be removed and disposed of at a facility approved to accept such waste prior to demolition.

The cost estimate to remove and dispose of these hazardous materials is approximately **\$ 750.00**.

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS
RMD LPA-1B XRF SERIAL # 2311 (re-source test date 6/20/05)

PROJECT: *WEBER STATE UNIVERSITY*
BUILDING 2 (Printing Services, Telecommunications, Business Education)
Ogden, Utah

DATE INSPECTED: *March 22, 2006*

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
CALIBRATION 23				0.9	
CALIBRATION 24				1.0	
CALIBRATION 25				0.9	
CALIBRATION 26				-0.2	
CALIBRATION 27				-0.2	
CALIBRATION 28				-0.2	
29	North entry door	Door frame/metal	tan/good	-0.1	NEGATIVE
30		Door casing/metal	tan/good	-0.1	NEGATIVE
31		Door jamb/metal	tan/good	-0.1	NEGATIVE
32		Door/metal	tan/good	0.0	NEGATIVE
33	North corridor	Wall/plaster	white/good	0.2	NEGATIVE
34				-0.0	NEGATIVE
35		Trim/metal	tan/good	0.3	NEGATIVE
36		Trim/metal	tan/good	0.4	NEGATIVE
37	Print room, north	Wall/plaster	white/good	-0.1	NEGATIVE
38				-0.1	NEGATIVE
39		Window sill/metal	tan/good	-0.1	NEGATIVE
40				-0.1	NEGATIVE
41	Corridor	Locker/metal	brown/good	-0.1	NEGATIVE
42				-0.1	NEGATIVE

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (re-source test date 6/20/05)

PROJECT: *WEBER STATE UNIVERSITY
BUILDING 2 (Printing Services, Telecommunications, Business Education)
Ogden, Utah*

DATE INSPECTED: **March 22, 2006**

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
43	Corridor	Wall/brick	light brown/good	-0.1	NEGATIVE
44				-0.4	NEGATIVE
45				-0.4	NEGATIVE
46	Corridor, west	Wall/plaster	white/good	-0.1	NEGATIVE
47				-0.4	NEGATIVE
48				0.0	NEGATIVE
49				-0.1	NEGATIVE
50				-0.2	NEGATIVE
51				-0.0	NEGATIVE
52	Corridor, east	Wall/plaster	white/good	0.1	NEGATIVE
53				-0.2	NEGATIVE
54				-0.2	NEGATIVE
55				-0.4	NEGATIVE
56				0.1	NEGATIVE
57				-0.1	NEGATIVE
58	Corridor	Lockers/metal	brown/good	-0.2	NEGATIVE
59				-0.2	NEGATIVE
60				-0.1	NEGATIVE
61	Corridor	Trim/metal	tan/good	0.4	NEGATIVE
62				0.0	NEGATIVE
63				-0.0	NEGATIVE
64				-0.1	NEGATIVE
65				0.1	NEGATIVE

LEAD-BASED PAINT X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER RESULTS

RMD LPA-1B XRF SERIAL # 2311 (re-source test date 6/20/05)

PROJECT: *WEBER STATE UNIVERSITY*
BUILDING 2 (Printing Services, Telecommunications, Business Education)
Ogden, Utah

DATE INSPECTED: **March 22, 2006**

Sample ID#	Area/Bldg.	Component/Substrate	Color/Condition	K SHELL mg/cm²	Result
66	Corridor	Wall/brick	light brown/good	-0.2	NEGATIVE
67				-0.4	NEGATIVE
68	West entry	Door/metal	tan/good	-0.2	NEGATIVE
69				Door frame/metal	tan/good
70	Break room	Wall/plaster	white/good	-0.3	NEGATIVE
71				0.1	NEGATIVE
72	Exterior, northeast	Window sill/metal	silver/good	-0.1	NEGATIVE
73	Exterior, northwest	Window sill/metal	silver/good	-0.2	NEGATIVE
74	Exterior, southeast	Window sill/metal	silver/good	-0.3	NEGATIVE
75	Exterior, southwest	Window sill/metal	silver/good	-0.2	NEGATIVE
76				-0.3	NEGATIVE
77				-0.1	NEGATIVE
78	<i>Mens rest room</i>	<i>Wall/ceramic tile</i>	<i>white/good</i>	9.9	POSITIVE
79	<i>Mens rest room</i>	<i>Wall/ceramic tile</i>	<i>white/good</i>	9.9	POSITIVE

**ASBESTOS
ABATEMENT SPECIFICATIONS**

WEBER STATE UNIVERSITY
BUILDING 1
(Foreign Languages, Geography, Air Force ROTC)
BUILDING 2
(Printing Services, Telecommunications, Business Education)
OGDEN, UTAH

March 9, 2007

State of Utah
Division of Facilities Construction and Management

Prepared by:

State of Utah
Division of Facilities and Construction Management
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**ASBESTOS ABATEMENT SPECIFICATIONS
TABLE OF CONTENTS**

PART 1	ASBESTOS ABATEMENT GENERAL	1
1.01	GENERAL REQUIREMENTS	1
1.02	SCOPE OF WORK	3
1.03	APPLICABLE PUBLICATIONS	6
1.04	DEFINITIONS	8
1.05	ADDITIONAL ASBESTOS MATERIALS	9
1.06	ADDITIONAL SAFETY AND HEALTH CONSIDERATIONS	9
1.07	AUTHORITY TO STOP WORK	10
1.08	QUALIFICATIONS	10
1.09	AVAILABILITY OF TRAINED PERSONNEL	11
1.10	PRE-CONSTRUCTION MEETING	12
1.11	PRE-ABATEMENT SUBMITTALS	12
1.12	STANDARD OPERATING PROCEDURES	14
1.13	NOTIFICATIONS, PERMITS, WARNING SIGNS, LABELS, AND POSTERS	15
1.14	EMERGENCY PRECAUTIONS	16
1.15	RESPIRATORY PROTECTION SYSTEMS	16
1.16	PROTECTIVE CLOTHING	18
1.17	DECONTAMINATION AND BAG TRANSFER FACILITIES	18
1.18	EMISSION CONTROLS	19
1.19	PERSONNEL PROTECTION AND DECONTAMINATION	20
1.20	DISPOSAL ACTIVITIES	21
1.21	TIME OF COMPLETION AND LIQUIDATED DAMAGES	21
PART 2	ASBESTOS ABATEMENT - PRODUCTS	22
2.01	TOOLS AND EQUIPMENT	22
PART 3	ASBESTOS ABATEMENT - EXECUTION	23
3.01	ASBESTOS ABATEMENT PREPARATIONS	23
3.02	UTILITIES	25
3.03	ASBESTOS REMOVAL	26
3.04	SUBMITTALS DURING & AFTER ABATEMENT	27
3.06	MONITORING, TESTING & INSPECTION	27
3.06	CLEANING AND FINAL DECONTAMINATION	28
3.07	FINAL INSPECTION AND TESTING	29
3.08	RESPONSIBILITY FOR DAMAGES	30
PART 4	FLOOR PLANS	

ASBESTOS ABATEMENT SPECIFICATIONS
WEBER STATE UNIVERSITY

BUILDING 1
(Foreign Languages, Geography, Air Force ROTC)

BUILDING 2
(Printing Services, Telecommunications, Business Education)

OGDEN, UTAH

.c1.PART 1 ASBESTOS ABATEMENT - GENERAL

.c2.1.01 GENERAL REQUIREMENTS

- A. The specific materials that are to be removed are identified on the following pages and will be discussed at the Pre-Bid meeting. **Attendance at the Pre-Bid meeting is mandatory for all bidders.**

- B. **Note that all quantities and sizes discussed herein are only approximations and are not intended to be considered exact for bid purposes. It is the responsibility of all Bidders to determine the exact quantities and sizes of materials involved and associated removal costs by inspecting the work site.**

- C. The Contractor must provide a copy of a detailed work plan at least 5 five working days before any work will be allowed to start. Deviations from the work plan must be approved by the Contractor Industrial Hygiene Consultant (CIHC), and/or Building Owner's Representative prior to the proposed change.

- D. The Contractor must conduct a Pre-Abatement meeting with building owner's representatives, building users and occupants, and consultants in attendance. The meeting will be held to inform all parties about the project, the various precautions, which are to be taken by the Contractor, what areas the occupants should avoid, and to answer any questions which may be raised by Owner and occupants.

- E. The Contractor shall provide sufficient numbers of trained and certified personnel to complete the project in an efficient and timely manner. The Contractor must maintain consistent supervision of his work force for the duration of the project. The Owner must approve any changes in the Contractor's on-site supervisory staff.

- F. Storage of equipment supplies, waste containers, and vehicles outside the building must be conducted in such a manner as to cause a minimum of inconvenience to

related campus functions and activities. Arrangements for Contractor employee parking must be resolved with the building Owner prior to starting the project.

- G. Bidders should anticipate unforeseen instances where outside work may be required. This may include electricians, carpenters, sheetmetal fabricators, masons, etc. It is the Bidder's responsibility to determine where and when these subcontractors may be necessary and to include their costs in the overall bid. Efforts will be made at the bidwalk to identify such situations.
- H. All electricity to the abatement areas must be turned off, isolated, and OSHA lock-out/tag-out procedures followed. Lighting and electrical power must be drawn through GFCI breakers from other parts of the building. A state-licensed electrical contractor must be employed for all electrical tie-ins and should be consulted before isolating any breakers. All electrical power cords must be kept dry and off the floor. **In addition, the temporary lighting required for interior work, Contractor will be required to verify adequate lighting for all areas as per OSHA Illumination Standard.**
- I. A Substantial Completion walk-through per area of the building will be held at the completion of the asbestos abatement portion of the project. This walk-through will be conducted by the Building Owner and/or his Representative with representation by the Contractor and his CIHC. At this time, the Contractor will be given a punch-list of items, which will need to be fixed or corrected before each floor of the building is passed-off and/or the abatement portion of the project declared complete. The Building Owner and/or his representative, will conduct a Final Inspection to determine completion of items deemed for correction. **After the Final Inspection, if any of the items are found to be inadequately addressed, the Contractor will be responsible for all additional expenses incurred by the Building Owner and/or his representative for additional inspections and remedial actions necessary to resolve the item(s) in question.**
- J. The Contractor will be responsible for the procurement of an insurance certificate that is project specific. Certificate shall denote that the Owner be listed as the "Certificate Holder" and as an "Additional Insured" to the policy.

SCOPE OF WORK

WEBER STATE UNIVERSITY BUILDING 1

- A. I. BASE BID:** The Contractor shall remove all the Asbestos Containing Material (ACM) from the following areas:

9" floor tile (tan, red) & mastic

- a. Remove ~**89 square feet of floor tile and mastic** from the following areas:
Custodial closet

2'x2' Ceiling Tiles (@Transite type)

- b. Remove ~**8,770 square feet** of 2'x2' ceiling tiles from the following areas:
Corridors, rooms 108-110, 112-114, 117, 119-125A, 133, 134, 136, 139-142, 145, 146

Sheet Vinyl Flooring

- c. Remove ~**226 square feet** of Sheet Vinyl Flooring from the following areas:
Kitchen

Window Caulking

- d. Remove ~**3,750 square feet (150 each)** of the caulking from the following areas:
Exterior windows

Tar Sealant

- e. Remove ~**50 square feet** of tar sealant from the following areas:
Roof penetrations

Sink Undercoating

- f. Remove ~**1 each** from the following areas:
Kitchen

Thermal System Insulation (TSI) pipe lagging (straight runs)

- g. Remove ~**2,600 linear feet** of TSI pipe lagging from the following areas:
Crawlspaces, Basement Mechanical Room, floor penetrations, pipe chases

WEBER STATE UNIVERSITY
BUILDING 1 continued

Thermal System Insulation (TSI) joint/fittings-mudded

- h.** Remove ~**450 each** TSI joints/fittings-mudded from the following areas:
Crawlspaces, Basement Mechanical Room, floor penetrations, pipe chases

WEBER STATE UNIVERSITY
BUILDING 2

A. II. BASE BID: The Contractor shall remove all the ACM from the following areas:

9" floor tile (green, tan) & mastic

- a.** Remove ~**3,251 square feet** of floor tile and mastic from the following areas:
Corridors, custodial closet

2'x2' Ceiling Tiles (@Transite type)

- d.** Remove ~**11,720 square feet** of 2'x2' ceiling tiles from the following areas:
Throughout

Sheet Vinyl Flooring

- e.** Remove ~**4,651 square feet** of Sheet Vinyl Flooring from the following areas:
Printing room, 208, 209, 225, 227

Window Caulking

- d.** Remove ~**3,750 square feet (150 each)** of the caulking from the following areas:
Exterior windows

Tar Sealant

- e.** Remove ~**50 square feet** of tar sealant from the following areas:
Roof penetrations

Sink Undercoating

- f.** Remove ~**1 each** from the following areas:
Room 224

Thermal System Insulation (TSI) pipe lagging (straight runs)

- g.** Remove ~**2,600 linear feet** of TSI pipe lagging from the following areas:
Crawlspaces, Basement Mechanical Room, floor penetrations, pipe chases
- h.** Contractor shall provide a unit price for any *ACM hard inserts at each strap hanger location.*

WEBER STATE UNIVERSITY
BUILDING 2 continued

Thermal System Insulation (TSI) joint/fittings-mudded

- i.** Remove ~450 each TSI joints/fittings-mudded from the following areas:
Crawlspaces, Basement Mechanical Room, floor penetrations, pipe chases

- j.** Contractor shall provide a unit price for any *ACM hard inserts at each strap hanger location.*

B. OTHER CONDITIONS

- 1. Contractor shall have a total of **45 calendar days** to complete the entire asbestos abatement in the area listed in paragraph A.I., A.II., A.III., A.IV., and A.V.

- 2. The Contractor shall furnish all labor, materials, facilities, equipment, services, employee training and testing, permits and agreements required to safely remove asbestos in the areas identified under Base Bid of this Section. **The Contractor shall provide sufficient labor to ensure that all work is completed in a timely manner.** Work shall be performed in accordance with these specifications, applicable EPA, OSHA, Utah State Division of Air Quality, and Utah OSHA (UOSH) regulations, and any other applicable state or local regulations. Whenever there is a conflict or overlap, the most stringent regulation applies.

- 3. All dimensions, quantities or areas provided in the scope of work and in the associated plans are approximate and are only included to assist the Contractor in determining the amount of ACM designated for removal. Contractor is responsible for accurately determining the amount of ACM included in the scope of work.

- 4. Contractor shall provide manifests and a certificates of weight and measure or other certification satisfactory to the Contractor Industrial Hygiene Consultant (CIHC)/(listing gross, tare and net weight for each load), of the total weight of asbestos-containing waste material disposed of for this project. Waste generated on this project shall be kept separate from waste generated on other projects and shall be disposed of immediately upon completion of this project.

- 5. Contractor shall restrict access to the controlled area to employees of the Contractor, the CIHC, or other persons authorized by the Owner. The method used shall not impede emergency egress.

- 6. Contractor shall use scaffolding and other equipment which, in the determination of the CIHC, is clean and free of suspect ACM. Contractor shall allow inspection of all equipment by the CIHC before it is brought into the facility. As a

minimum, general scaffolding set-up and erection shall comply with OSHA regulations and the following requirements:

- i) A safety ladder with rungs spaced on 12-inch centers (positioned so the first rung is 12 inches from the floor) shall be securely attached to the scaffold frame, with a pass-through safety gate provided at the platform level (so workers do not climb over top rails to access the platform);
- ii) Toe boards shall be firmly attached on all open sides of the platform;
- iii) Scaffold planking/decking shall be scaffold grade and clearly marked with the manufacturer's name;
- iv) Contractor shall maintain relevant manufacturer's documentation on site showing maximum loads, proper installation and operating techniques, etc.;
- v) Scaffold components shall all be fully operable and in good repair.

Extension ladders shall be used for access only and shall not be used as a work platform. Stepladders shall be used only in the open and locked position.

- 7. Contractor shall install where feasible in each containment a clear **plexi-glass window** no smaller than two feet square and strategically located to facilitate outside viewing and communication.
- 8. Smoking will only be allowed in designated off-site areas. These areas will be defined at the Pre-construction Conference.
- 9. Where applicable regulations are more stringent than specifications contained herein, the most stringent regulations apply. It is the Contractor's responsibility to determine if city, county, regional, State or other regulations apply and to perform work in accordance with these regulations. Contractor shall perform all work under this contract in strict compliance with all Federal (OSHA, EPA, etc.), State and local regulations.
- 10. Contractor shall encapsulate all abated surfaces. Contractor's abatement encapsulant(s) shall be approved, prior to use, by the CIHC. Contractor's biocide encapsulant for mold removal shall be approved, prior to use, by the CIHC.
- 11. Contractor shall provide an English-speaking interpreter at any time that non-English speaking workers are present on the site.
- 12. Contractor shall provide a detailed written work plan to the appropriate notification agencies and to the CIHC at least 5 days prior to the beginning of the

project. The work plan provided to the CIHC shall show suggested locations for decontamination units. In addition to asbestos, the contractor shall indicate in the work plan his chronological steps for abating and cleaning of mold contaminated surfaces. Shower facilities will not be allowed on or immediately adjacent to wood floors.

13. Notification shall be made in writing to the appropriate fire department, police agency and health response organizations prior to the start of the project.
14. Contractor shall seal (critical barrier) all necessary areas on ducts, vents, diffuser lights or any pertinent structure of the HVAC system inside containment in order to assure no asbestos contamination to the vents and ducts inside or outside the containment during removal.
15. Contractor shall provide a minimum of four workable electrical receptacles (or plugs) for clearance sampling. Contractor's electrical system shall be approved, prior to any removal, by a licensed electrical contractor hired by Contractor. All lighting and equipment, including extension cords, shall be approved for use in wet environments. Extension cords shall be suspended off the floor of the work area. Contractor shall not use existing electrical receptacles from any room contained in the work area.

.c2.1.03 APPLICABLE PUBLICATIONS

The publications listed below form a part of this specification to the extent referenced. The publications are referenced in text by basic designation only.

- A. Environmental Protection Agency (EPA): Asbestos-containing Materials in Schools; Final Rule and Notice (Code of Federal Regulations Title 40, Part 763) (the AHERA regulations).
- B. Environmental Protection Agency (EPA): Model Accreditation Plan; Rule (Code of Federal Regulations Title 40, Part 763).
- C. Environmental Protection Agency (EPA): Regulations for Asbestos (Code of Federal Regulations Title 40, Part 61) (the NESHAP regulations).
- D. U.S. Department of Labor Occupational Safety and Health Regulations:
29 CFR 1926; Construction Industry Standards
29 CFR 1926.1101; Asbestos
29 CFR 1910; General Industry Standards
- E. U.S. Department of Transportation Regulations; Title 49 CFR Part 173

- F. Utah Air Conservation Rules R307-1-8: Asbestos Certification, Asbestos Work Practices and AHERA Implementation, Latest Version
- G. Utah Administrative Code (UAC) Occupational Safety and Health Regulations, with special attention to the following:
 - UAC R574-100 Series (General Industry Standards)
 - UAC R574-104 Sect. 1910.1001 (Asbestos General Industry Standard)
 - UAC R574-104 Sect. 1910.134 (Respiratory Protection Standard)
 - UAC R574-200 Series (Construction Safety Standards)
 - UAC R574-200 Sect. 1926.1101 (Asbestos Construction Standard)
- H. National Institute for Occupational Safety and Health (NIOSH): "Respiratory Protection . . . A Guide for the Employee."
- I. American National Standards Institute/Compressed Gas Association: ANSI/CGA G-7.1-1989, Commodity Specification for Air.
- J. National Electrical Code, National Fire Protection Association, NFPA 70.
- K. Standard for Electrical Safety Requirements for Employee Work Places, NFPA 70E.
- L. National Plumbing Code, American National Standards Institute, ANSI A40.8.
- M. Salt Lake City-County Health Department Health Regulations #24, Asbestos
- N. Safeguarding Construction, Alteration and Demolition Operations, NFPA 241
- O. Any other ordinance or code having jurisdiction over this work.

.c2.1.04 DEFINITIONS

- A. Abatement Coordinator: The authorized representative of the Owner who has been designated to coordinate asbestos abatement activities.
- B. Airlock: A system for allowing access to an area with minimum air movement through the system. The airlock consists of two curtained doorways separated by a distance of at least 3 feet so personnel pass through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through of contaminated air.

- C. Air Monitoring: The process of measuring the asbestos fiber count of a volume of air using NIOSH Analytical Method 7400, the AHERA Transmission Electron Microscopy (TEM) method, The OSHA Reference Method (ORM), or other methods approved by the Contractor Industrial Hygiene Consultant (CIHC). Flow rate and sample volume shall be in accordance with the method chosen. All air samples shall be analyzed by a laboratory accredited by the American Industrial Hygiene Association (AIHA) for the analysis of airborne asbestos.
- D. Air Monitoring Technician: A person qualified by training or experience to collect air samples for asbestos determination. The individual must be familiar with sampling techniques, sampling equipment, calibration techniques and work practices useful for controlling air contamination.
- E. Amended Water: Water to which an approved surfactant has been added.
- F. Asbestos-containing Waste (including asbestos-contaminated materials): Materials containing more than 1% asbestos or contaminated with asbestos to a degree that handling the materials may reasonably be expected to produce airborne asbestos fibers.
- G. Authorized Visitors: Any visitor authorized by the Owner, the Contractor, or the CIHC or any representative of a regulatory agency or other agency having jurisdiction over this project.
- H. Building Owners representative: A representative contracted by the building Owner to oversee and relay all facets of the abatement project.
- I. Clean Room: An uncontaminated room which is part of the worker decontamination enclosure system and adjoins uncontaminated areas of the building, with provisions for storage of workers' street clothes and clean protective equipment.
- J. Contaminated Area: The work area or any other area of the building with either an airborne asbestos level equal to or above 0.010 fibers/cc as measured by PCM or visible uncontained deposits of ACM.
- K. Contractor: The asbestos abatement contractor or any sub-contractor hired under this contract.
- L. Contractor Industrial Hygiene Consultant (CIHC): An individual under contract with the Contractor, who is certified in the comprehensive practice or a specialty aspect of industrial hygiene by the American Board of Industrial Hygiene or who is otherwise qualified, by virtue of experience, in managing asbestos abatement work.

- M. Differential Pressure: A minimum pressure differential of minus 0.02 inches of water column relative to areas adjacent to the Regulated work space. Equipment used to maintain this pressure shall be HEPA filtered, and shall permit discharge of no more than 0.010 fibers/cc in the exhaust stream.
- N. Disposal Site: Asbestos area of a landfill which is approved for asbestos waste.
- O. HEPA Filter: A High Efficiency Particulate Air filter capable of trapping and retaining 99.97% of particles with aerodynamic equivalent diameters greater than or equivalent to 0.3 micrometers.
- P. HEPA Vacuum Unit: Vacuuming equipment equipped with a HEPA filter in the exhaust outlet, and so designed and maintained that 99.97% of all asbestos fibers (greater than or equal to 0.3 micrometers diameter) in the inlet air are collected and retained. In no case shall HEPA vacuum equipment discharge air containing more than 0.010 fibers/cc.
- Q. Pressure Differential Recording Device: An automatic recording instrument which will monitor the pressure differential between the contained asbestos abatement work area and the adjoining areas. The instrument shall continuously generate a permanent record.
- R. Wet-Cleaning: The process of eliminating asbestos contamination from building surfaces by using cloths or mops or other cleaning tools that have been dampened with clean water.
- S. All terms not defined here shall have the meaning given in the applicable publications and regulations.

.c2.1.05 ADDITIONAL ASBESTOS MATERIALS

The Contractor shall always be mindful of the possible presence of asbestos (in addition to the asbestos materials to be abated under this contract) and shall carry out the work with due diligence in light of this possibility. If the Contractor discovers asbestos, other than asbestos materials to be abated under this contract, Contractor shall take such action as reasonably necessary and feasible to provide an interim safe and secure environment for its employees and third parties until the determination can be made of how next to proceed. In so far as possible under applicable laws, rules, regulations, and requirements, Contractor shall keep confidential all information obtained respecting asbestos relative to this project, howsoever obtained, unless disclosure is otherwise required by safety considerations of any person.

.c2.1.06 ADDITIONAL SAFETY AND HEALTH CONSIDERATIONS

Asbestos abatement is, by its very nature, a hazardous activity. In addition to potential exposure to asbestos fibers, there are other safety and health hazards that are often present on the work site. The Contractor shall ensure that all UOSH Safety and Health Standards are complied with at all times.

The Contractor shall be, and remain at all times, solely responsible for the safety of its employees and all others in the performance of the work and shall take all precautions necessary to ensure such safety.

.c2.1.07 AUTHORITY TO STOP WORK

The Owner or the WSU designated representative and/or the CIHC have authority to stop work at any time if it is determined that abatement is not being performed according to these specifications or applicable regulations. The stoppage of work shall continue until conditions have been corrected and corrective steps have been taken to the satisfaction of the Owner's representative/CIHC. Standby time required to resolve violations shall be at the Contractor's expense.

.c2.1.08 QUALIFICATIONS

- A. **CERTIFICATIONS:** Contractors performing work under this contract must be certified as an asbestos project operator by the State of Utah Department of Environmental Quality as described in Section 8 of the Utah Air Quality Regulations. Asbestos workers must have received the training described in Section 8 of the Utah Air Quality Regulations and possess a valid and current certification card issued by the state. Certification requirements for asbestos operators and workers may be obtained by contacting the State of Utah Department of Environmental Quality, Division of Air Quality.
- B. **ACCREDITATION:** Supervisors performing work under this contract must be accredited as Asbestos Abatement Contractors and Supervisors in accordance with the EPA Model Accreditation Plan, 40 CFR Part 763. At least one accredited supervisor shall be on-site at all times while work is in progress. Asbestos workers must be accredited as Asbestos Abatement Workers in accordance with the EPA Model Accreditation Plan, 40 CFR Part 763.
- C. **INSURANCE:** Contractor shall obtain and maintain in force during the entire work period of the Contract, at its expense, the following insurance from insurance companies that are rated "A" or better with a size category of Class VII where the contract amount is **less than \$1,000,000**. Contractor's insurance ACCORD certificate shall show the following types of insurance required for this project and associated liability limits:

Commercial General Liability Insurance and/or Comprehensive General Liability Insurance

General Aggregate - **\$2,000,000**
Products/Completed Operations Aggregate - **\$2,000,000**
Personal & Advertising Injury - **\$1,000,000 per occurrence**
Fire Damage - **\$50,000**
Medical Expense (any one person) - **\$5,000**

Automobile Liability Insurance

For all vehicles to be used both owned or hired - **\$1,000,000**

Excess Liability Insurance

Other than umbrella - **\$2,000,000**

Worker's Compensation Insurance

To match State of Utah statutory limits.

NOTE: The Owner shall be listed on the policy as both the "Certificate Holder" and as the "Additional Insured".

- D. **BONDING:** Contractor shall submit and maintain in full force and effect, as required by law and the Contract Documents, at its own expense, all bonds as detailed in the request for proposal. Bonds shall be from surety companies that are listed in the U.S. Department of Treasury Circular 570, Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies, and acting within the limitation listed therein.
- E. **EXPERIENCE:** Bidders must have performed at least three asbestos abatement projects of similar size and nature in the past calendar year. As proof of this experience, the Contractor shall provide the names and telephone numbers of the purchasers of the abatement services with their bids.
- F. **LICENSES:** The Contractor shall indemnify and hold harmless the Owner from all claims and liabilities resulting from infringement of the air-filtration systems patent, either directly or indirectly, by such system.
- G. The Owner representative reserves the right to ask for the Contractor certified payroll reports associated with this project.

.c2.1.09 AVAILABILITY OF TRAINED PERSONNEL

There shall be a sufficient number of trained and qualified workers, foremen, and supervisors to accomplish abatement within the required schedule. Since general work cannot start prior to successful removal of all ACM and final decontamination has been finished, it is imperative that a sufficient number of trained personnel be engaged throughout the abatement process. **No uncertified persons, or persons not fully qualified, shall be employed during any phase of the abatement work, including preparation.** All personnel shall be pre-approved by the CIHC.

.c2.1.10 PRE-CONSTRUCTION MEETING

Before beginning actual removal activities, a Pre-construction Meeting will be held between the DFCM representative, the building Owner and/or his representative, the CIHC and the Contractor. The Contractor's superintendent and the job-site Foremen must attend this meeting. At this conference, **the DFCM representative, the CIHC, and the Contractor shall systematically review every section of these Technical Specifications.** The Contractor shall present a written work plan and present a general overview covering:

- A. Abatement plans that include drawings of the decontamination facilities and their location; work area isolation plan with layout of engineering controls (e.g., HEPA filters, etc.); security program; emergency plans; routing plan for removal of contaminated material from the building; and a listing of all tools, equipment and supplies proposed for use in the abatement program. In order to expedite approval of these documents, Contractor is encouraged to confer with the CIHC during their preparation. No abatement work shall be performed without approval of the abatement plans by the Owner's representative.
- B. Description of protective clothing and approved respirators to be used.
- C. Explanation of decontamination sequence to be used.
- D. Description of stripping, removal, and disposal methods to be used.
- E. Description of final encapsulation procedures and materials to be used.
- F. Description of the final cleanup procedures to be used.
- G. Proposed landfill for disposal of waste materials.
- H. Written Standard Operating Procedures described in Section 1.12.

.c2.1.11 PRE-ABATEMENT SUBMITTALS

The Contractor and CIHC shall furnish the following to the Owner's representative at least five (5) working days before abatement preparations are to commence:

- A. Layout of project execution showing the abatement work in stages, and the configuration of the workspace.
- B. Plans for engineering systems for controlling exposure and emissions, showing the number, location, and capacity of supply and exhaust systems, the expected directions of air flow, and maximum and minimum pressures in each room.
- C. Plans for isolation enclosures including location and construction methods.
- D. Detailed plans for decontamination facilities, toilets, and systems allowing intra-room communication and communication between the work area and the outside.
- E. Security system, warning signs, and labels for bags and drums.
- F. Standard Operating Procedures (Section 1.12) describing how workmen, visitors, and employees will be protected from exposure and how spaces outside the work areas will be protected from contamination until completion of abatement.
- G. Respiratory system plan, including a written respiratory protection program, sample respirators, hoses, and certificate from the manufacturer with system literature for the air supply system stating that air supply system meets this specification on quality, quantity and escape time.
- H. Fire and emergency evacuation plan.
- I. Manufacturer's specifications for wetting agents and low-pressure wetting system.
- J. Manufacturer's specifications for final encapsulation materials.
- K. Manufacturer's specifications for plastic sheeting to be used for the sealing of walls, floors, and openings and sealing tapes.
- L. Manufacturer's specifications for disposable protective clothing.
- M. Certification of medical examinations, including physician's approval to wear respiratory protection, covering each employee performing work on this project.
- N. Proof of existence of records that the Contractor is complying with UOSH medical surveillance requirements.
- O. Certification of completion of worker training for each employee performing work on this project and a photocopy of each worker's State of Utah Worker Certification Card.

- P. Description of scaffold erection procedures and the name of the designated "Competent Person" responsible for the scaffold erection.
- Q. A copy of the Contractor's safety program.

.c2.1.12 STANDARD OPERATING PROCEDURES

The Contractor shall develop and implement a standard operating procedure to ensure maximum protection of workers, facility employees, visitors and the environment from asbestos exposure. Operating procedures shall be based on applicable sections of the standards listed in Section 1.03. The procedure shall ensure that:

- A. Security is provided on a 24-hour basis to prevent unauthorized entry into the workspace.
- B. Proper protective clothing and respiratory protection are worn prior to entering the workspace from the outside.
- C. Asbestos is removed in a manner that minimizes release of fibers.
- D. Packing, labeling, loading, transporting, and disposing of contaminated material is performed in a manner that minimizes exposure and contamination.
- E. Emergency evacuation for medical or safety (fire and smoke) reasons is performed in a manner so that exposure will be minimized.
- F. Accidents in the workspace, especially from electrical shocks, slippery surfaces, and entanglements in loose hoses and equipment are minimized.
- G. Provisions for effective supervision, air monitoring, and personal monitoring for exposure during the work are implemented.
- H. Engineering systems minimizing exposure to fibers in the workspace are used.
- I. Safe work practices in the workplace, including provisions for inter-room communications, exclusion of eating, drinking, smoking, or in any way compromising the integrity of the respiratory protection.
- J. **Scaffolding and fall protection systems are effective, state of the art, and in compliance with all applicable regulations.**
- K. The successful bidder will receive an orientation from the Owner's representative and/or the CIHC regarding the specific safety and health hazards that may be encountered during the course of their work under this contract. The Contractor shall devise a plan to ensure all of its employees have either received the training

or are otherwise completely informed of the potential safety and health hazards that may be encountered.

.c2.1.13 NOTIFICATIONS, PERMITS, WARNING SIGNS, LABELS AND POSTERS

The Contractor shall:

A. Provide required notification to the Utah Department of Environmental Quality, Division of Air Quality at least ten (10) working days prior to asbestos abatement. Secure all required permits, including a permit to dispose of asbestos at an approved site.

B. Erect UOSH-required warning signs around the workspace and at every point of potential entry to the worksite. The warning signs shall be a bright color so that they can be easily seen. The size of the lettering shall be large enough to be easily read. The warning signs shall bear the following information:

**DANGER ASBESTOS CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY RESPIRATORS AND PROTECTIVE
CLOTHING ARE REQUIRED IN THIS AREA**

C. Place UOSH-required labels on all plastic bags and all drums utilized to transport contaminated material to the approved disposal site. The warning labels shall contain the following information:

**DANGER CONTAINS ASBESTOS FIBERS AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD**

D. The waste containers must also be labeled with the waste generator's name and the address of the location at which the waste was generated as required by EPA 40 CFR Part 61.150 and placarded according to DOT 49 CFR Part 173.

E. Provide other signs, labels, warnings and posted instructions that are required and necessary to protect, inform, and warn of the hazard of asbestos exposure.

F. The latest applicable UOSH and Utah DAQ regulations shall be posted on the job-site in a prominent and convenient place for workers to read.

G. EPA required warning signs shall be posted on waste transport vehicles during all waste loading and unloading operations.

1.14 EMERGENCY PRECAUTIONS

- A. The Contractor shall establish and mark emergency and fire exits from the work area. The exterior of all emergency exits shall be equipped with two (2) full sets of protective clothing and respirators at all times.
- B. At least two (2) multi-purpose dry chemical fire extinguishers (e.g. 2-A: 10BC, 5 lb.) shall be placed within each containment area in well marked, readily accessible locations. The fire extinguishers shall have current inspection cards, i.e., have been inspected/serviced within the previous 12 months.
- C. Local medical emergency personnel, fire departments, ambulance crews and hospital emergency room staff, shall be notified prior to commencement of abatement operations about the possibility of having to handle contaminated or injured workmen, and they shall be advised regarding appropriate decontamination procedures.
- D. The Contractor shall be prepared to administer first aid to injured personnel. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury occurs, the Contractor shall stop work and implement fiber reduction techniques (e.g., water spraying) until the injured person has been removed from the work area.

.c2.1.15 RESPIRATORY PROTECTION SYSTEMS

The removal of Surfacing ACM *and* Thermal System Insulation is a Class 1 asbestos removal project as defined by OSHA. The minimum acceptable respiratory protection shall be powered air-purifying respirators. This restriction shall remain in place until Contractor's air sample results are below the OSHA PEL.

The Contractor shall:

- A. Provide all workers, foremen, superintendents, authorized visitors, and inspectors with personally issued and marked respiratory equipment, approved by NIOSH, that is deemed proper and reasonable for the type of work being performed and anticipated exposure levels. When respirators with disposable filters are employed, sufficient filters for replacement as necessary by the worker shall be provided. The respirators selected for use must provide a protection factor for the contaminant level expected. In addition to the general statement above, Table 1 will be used in the selection of respirators. Respirators shall be provided to authorized building employees entering the contaminated workplace while the removal is in process.

TABLE I.

Asbestos Concentration	Minimum Acceptable Respirator
*1. Up to 1 fiber/cc	Half-mask air purifying respirator with cartridges approved for asbestos.
2. Up to 5 fibers/cc	Powered air-purifying respirator (half- or full-face)
3. Over 5 fibers/cc	Full face piece, Type "C" supplied air respirator, operated in the pressure-demand mode.

* Greater respiratory protection is always acceptable regardless of asbestos concentrations.

- B. When Type "C" respirators are employed, the air supply system shall provide Grade "D" breathing air in accordance with UAC R574-104 Sect. 1910.134 and ANSI/CGA G-7.1-1989, Commodity Specification for Air.
- C. The compressed air system for Type "C" respirators shall be high pressure, with a compressor capacity to satisfy the respirator manufacturer's recommendations. The receiver shall have sufficient capacity to allow a 15-minute escape time for the respirator wearers in the event of compressor failure or malfunction. The compressed air system shall have a compressor failure alarm, high temperature alarm, carbon monoxide alarm, and suitable inline air purifying sorbent beds and filters to assure Grade "D" breathing air.
- D. Provide a minimum of two spare hoses to be available at any time to authorized visitors and inspectors to connect to their assigned Type "C" respirator without having to wait for removal of workers from the working area to obtain a connection.
- E. Type "C" respirators shall be worn with a belt to minimize the possibility of dislodging the face mask in the event of the hose becoming snagged in the work area.

.c2.1.16 PROTECTIVE CLOTHING

The Contractor shall:

- A. Provide to all workers, foremen, superintendents and authorized visitors and inspectors protective disposable clothing consisting of full-body coveralls, head covers, gloves, and 18-inch-high boot covers or reusable footwear. No street clothes other than undergarments shall be worn under the coveralls.

- B. Provide eye protection and hard hats as required by job conditions and safety regulations.
- C. Require that reusable footwear, hard hats, and eye protection devices be kept in the "contaminated equipment room" until the end of the asbestos abatement work at which time they shall be decontaminated or discarded as asbestos waste.
- D. Discard and dispose of all disposable protective clothing and gear as asbestos waste every time a wearer exits from the workspace to the outside through the decontamination facilities.

.c2.1.17 DECONTAMINATION AND WASTE TRANSFER FACILITIES

- A. When working with friable ACM, or non-friable ACM that is likely to become friable during the project, as determined by the CIHC, the Contractor shall:
 1. For each abatement area, provide decontamination facilities located in an area agreed upon with the CIHC. The decontamination facilities shall include one decontamination enclosure system for personnel and one decontamination enclosure system for removing asbestos-containing waste materials.
 2. The decontamination enclosure system for removing asbestos-containing waste materials shall consist of an airlock from the work area leading into the waste transfer room, and another airlock leading into the clean outside area.
 3. All asbestos-containing waste materials inside the abatement area shall be placed in plastic waste bags for disposal. Bags of asbestos-containing waste materials shall be packed and sealed in plastic-lined drums or a second waste bag before being removed from the work site. Waste removal shall be performed using a minimum of three workers in the following manner: one worker located inside the contaminated work area shall pass sealed bags of waste into the waste transfer room. There, they will be washed and placed directly inside a clean drum, or clean, unused bags being held by a second worker who is standing inside the clean area. The bags will be "goose-necked" and sealed in the clean area and then passed to a third worker located in the outside area, who transfers the container to a vehicle properly equipped for transporting the ACM to a disposal site.

4. The decontamination enclosure system for personnel shall consist of three rooms as follows: clean room at the entrance followed by the shower room followed by an equipment room leading to the work area.
5. Provide lockers for storage of street clothes of workers in the clean room. Provide in the same room uncontaminated disposable protective clothing and equipment. This room shall be used by workers and visitors to change from street clothes into disposable protective clothing and gear prior to entering the contaminated area and to change back into street clothes after they have showered and dried in the shower room as they exit from the contaminated area.
6. Provide the equipment room with storage for contaminated clothing and equipment. In this room, workers and visitors dispose of their disposable protective clothing, except the respirator, as they prepare to enter the shower room.
7. Install showering facilities with hot and cold water so arranged as to provide complete showering of workers and visitors as they exit from the contaminated area. Make provisions to prevent any contaminated runoff from the shower room. The contractor shall filter all waste water to 5-microns before discharge into a sanitary sewer.

c2.1.18 **EMISSION CONTROLS**

There shall be no asbestos emissions from the work area. To this end, the Contractor shall:

- A. Provide supply air to, and exhaust air from, the work area to maintain a differential pressure of minus 0.02 inches of water relative to the atmosphere outside of the containment, while also insuring that there are at least four (4) air changes per hour within the containment. The ventilation system shall operate on a 24-hour basis throughout the abatement process until the area passes final clearance testing, in accordance with Section 3.07 of this specification. The ventilation design shall be in accordance with EPA recommendations included in the "Guidance for Controlling Friable Asbestos-Containing Materials in Buildings," Appendix F. *Exhaust from the Air Filtration devices shall be vented to the exterior of the building.*
- B. Provide an automatic recording instrument to monitor the pressure differential in a representative location. The instrument shall continuously generate a permanent record.

- C. In a multi-room abatement project, provide a sufficient number of supply and exhaust units to create a stream of air away from the breathing zone of workers in each room and in such a way so as not to damage or compromise the integrity of the containment barriers.
- D. All waste water generated within the work area shall either be drummed and disposed of as asbestos containing waste or filtered through a 5-micron filtering system prior to discharge into a sanitary sewer.

c2.1.19 PERSONNEL PROTECTION AND DECONTAMINATION

The Contractor shall provide all personnel with specified protective clothing and gear throughout the abatement process. The Contractor shall also ensure that all personnel entering and leaving the workspace adhere to the following procedures.

- A. When working with friable ACM, or non-friable ACM that is likely to become friable during the project, as determined by the CIHC, the Contractor shall:
 - 1. When entering from the outside: change from street clothes into protective clothing and wear clean protective gear. Go through shower room into dirty equipment room, pick up equipment and tools, and enter the work area.
 - 2. When exiting from the work area: Dispose of all protective clothing into labeled plastic bags for asbestos waste. Do **not** take off the respirator, but, still wearing the respirator, enter the shower and wash off thoroughly. Remove respirator and wash and wipe thoroughly to decontaminate. Remove filter cartridges and dispose of as asbestos-containing waste. After drying, enter the clean room, store the decontaminated respirator in the assigned space, and put on street clothes.
- B. The Contractor shall post written emergency procedures in workplace and train all personnel on the procedures for the evacuation of injured persons and the handling of fires. Aid shall be given to a seriously injured worker without delay for decontamination. Provisions shall be made to minimize exposure of rescue workers and to minimize spreading of contamination during evacuations and fire procedures.
- C. The Contractor shall instruct all employees and workers in the proper care of their personally issued respiratory equipment, including daily maintenance, sanitizing procedures, etc., as described in the Contractor’s written Respiratory Protection Program.

- D. The respiratory equipment shall be inspected by the Contractor's project supervisory personnel at the beginning of each work period, including those following breaks and lunch, or other meals.

1.20 DISPOSAL ACTIVITIES

- A. It is the responsibility of the Contractor to determine current waste-handling, transportation, and disposal regulations for the work site and for each waste-disposal site. The Contractor must comply fully with these regulations and all U.S. Department of Transportation and EPA regulations.
- B. If a dumpster is brought on site and used, it must be covered and lockable. Waste generated on this project shall be kept separate from waste generated on other projects that the Contractor may be engaged in, and shall be disposed of immediately at the end of this project at an in-state approved asbestos disposal facility.
- C. Contractor will document actual disposal of the waste at the designated site by completing a Disposal Certificate and obtaining a receipt at the disposal site.

1.21 TIME OF COMPLETION AND LIQUIDATED DAMAGES

- A. This project shall be completed in **45 calendar days** of the starting date stipulated in the notice to proceed.

PART 2 - ASBESTOS ABATEMENT PRODUCTS

.c2.2.01 TOOLS AND EQUIPMENT

The Contractor shall provide the following:

- A. Asbestos Filtration Device: Asbestos filtration devices shall utilize High Efficiency Particulate Air (HEPA) filtration systems.
- B. Scaffolding: Provide all scaffolding, ladders and/or staging, etc. as necessary to accomplish the work specified. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. The type, erection and use of all scaffolding shall comply with all applicable OSHA provisions.
- C. Transportation Equipment: Transportation equipment, as required, shall be suitable for loading, temporary storage, transmission, and unloading of contaminated waste without exposure to persons or property. Any dumpsters utilized on-site by the Contractor must be covered and lockable.
- D. Vacuum Equipment: All vacuum equipment utilized in the work area shall utilize HEPA filtration systems.
- E. Water Sprayer: The water sprayer shall be an airless or other low-pressure sprayer for amended water application.
- F. Polyethylene Sheeting: All polyethylene plastic sheeting shall be classified by its manufacturer as being fire-resistant.
- G. Encapsulant: Spray encapsulant shall meet the fireproofing requirements of ASTM E 119 and ASTM P-189, and shall meet the U.S. EPA Battelle standards for encapsulants. All abatement encapsulants shall be approved, prior to use, by the Owner (some encapsulants, due to color or content, may not be suitable for use in this facility). At the Pre-construction (Pre-abatement) Conference, Contractor shall supply the Industrial Hygiene Consultant with Material Safety Data Sheets (MSDS's) and other information necessary to determine compatibility with current and future needs of the Owner.
- H. Pressure Differential Recording Device: An automatic recording instrument to monitor the pressure differential between the contained asbestos abatement work area and the adjoining areas. The instrument shall continuously generate a permanent record.

- I. Other Tools and Equipment: The Contractor shall provide other suitable tools for the stripping, removal, and disposal activities, including, but not limited to, hand-held scrapers, wire brushes, sponges, round-edged shovels, brooms, and carts.

PART 3 - ASBESTOS ABATEMENT EXECUTION

.c2.3.01 ASBESTOS ABATEMENT PREPARATIONS

- A. The area(s) of asbestos removal shall be totally isolated from portions of the building not included in the work. Prior to any abatement work in an area, seal off the entire area to persons other than trained personnel and authorized visitors. Erect signs around the perimeter in accordance with EPA, UOSH, and these specifications. Provide 24-hour security against unauthorized entry during abatement. Maintain a log of all people entering and exiting the work space.
- B. With the assistance of the Owner's representative and the CIHC, the Contractor will deactivate, lock-out and seal all air-conditioning and building ventilation systems to the abatement area and disconnect electrical service as required.
- C. In all areas where friable ACM is to be disturbed, or where non-friable ACM is likely to become friable, as determined by the CIHC, the work area shall be prepared as described below.
- D. The Contractor shall completely isolate the work area for the duration of the asbestos removal.
- E. The Contractor shall completely isolate the work area for the duration of the asbestos removal. Rigid barriers are required to partition work areas from public access and actively occupied office and work spaces of the building. Such barriers in other areas may be requested at the discretion of the on-site hygienist or building Owner's representative.
- F. Where fireproofing and/or textured ceiling material is to be removed, Contractor shall seal the open tops of all non-solid walls with at least one layer of 6-mil polyethylene plastic sheeting.
- G. Critical barriers shall be constructed between the work area and any clean area. This barrier shall consist of first closing any doors not being used for access during the abatement, and duct taping all seams, both sides. Two (2) layers of 6-mil polyethylene sheeting shall then be applied over the entire door structure on the work area side, as well as two (2) layers (6-mil) on the clean side. Warning signs shall be displayed on the clean side of the door.
- H. The Contractor shall seal all windows, skylights, duct openings, fan-coil units, radiators, electrical outlets and switches, non-movable cabinetry and equipment,

etc., with a minimum of one layer of 6-mil polyethylene sheeting. The Contractor shall also pay particular attention to any pipe chases, utility access openings and common air plenums between work areas and adjacent floors, etc. Ensure that barriers are effectively sealed and taped. All penetrations must be sealed airtight. Once critical barriers are installed, the entire work area shall then be protected with polyethylene sheeting.

- I. Install sufficient Air Filtration Devices to provide a minimum of four (4) air changes per hour and maintain a differential pressure of minus 0.02 inches of water relative to the outside of the containment, per section 1.18.
- J. Wall sheeting and, where appropriate, ceiling sheeting, shall consist of two (2) layers of 6-mil polyethylene plastic sheeting. It shall be installed to minimize joints and shall overlap floor sheeting by at least 18 inches. No seams shall be located at the corners. **The Contractor shall install (where feasible) a clear acrylic plastic window with minimum dimensions of 24" x 24" in at least one wall of the containment structure in an area which provides the greatest visibility of the work area designated by the CIHC.** This window is to be used for observation of the work area by the on-site CIHC, Contractor's foreman, Owner's representative and other Owner personnel.
- K. Contractor shall ensure that barriers are effectively sealed and taped. Contractor shall employ the use of smoke methods to test effectiveness of barriers. Visually inspect enclosures prior to each work day; repair damaged barriers and remedy defects immediately.
- L. Contractor shall construct and utilize scaffolding where necessary to gain access to asbestos.
- M. Detach and clean removable electrical, heating and ventilating equipment and other items connected to asbestos surfaces. The Contractor shall also dismantle and clean duct work to gain access to asbestos-containing materials above the duct work. These items shall be removed from the work area using decontamination procedures and returned to their proper place when the work area has been decontaminated.
- N. Prior to removal of any asbestos, the CIHC, accompanied by the Contractor shall inspect the following: enclosures, showers and toilets, personnel protection and decontamination procedures, exposure control systems, notifications and permits, standard operation procedures, personnel training certificates and testing, removal, decontamination and storage of materials, securing of the work area and equipment for communications. If any inadequacies are found during the inspection, the Contractor shall make the changes required by the CIHC.

- O. Where work is to be performed within an area with carpeted floors, all carpets shall be covered with a minimum of three (3) layers of 6 mil. fire-retardant polyethylene sheeting. If scaffolding must be used in an area with carpeted floors, the floor shall be covered with one layer of 10 mil fire retardant polyethylene sheeting, followed by a layer of a minimum one-half inch underlayment followed by two (2) layers of 6 mil. fire retardant polyethylene sheeting. At the completion of the asbestos removal, all carpets shall be cleaned with a HEPA vacuum and steam cleaned.
- P. Light fixtures and other items mounted to suspended ceilings which are to be removed shall be removed under asbestos-control conditions by the Contractor, decontaminated using HEPA vacuum and wet-wiping techniques and stored in a location designated by the Owner and CIHC.
- Q. In all areas where only non-friable ACM, such as floor tile, is to be disturbed without becoming friable, install critical barriers as described in paragraph F, and emission controls described in paragraph G, above. A three-foot-high splash guard of 6-mil polyethylene sheeting shall be placed along all walls and around all other floor-mounted fixtures where asbestos-containing flooring is to be removed. Ensure that barriers are effectively sealed and taped. Use smoke methods to test effectiveness of barriers. Visually inspect enclosures prior to each work day; repair damaged barriers and remedy defects immediately.

.c2.3.02 UTILITIES

- A. All utility connections necessary for abatement will be made available to the contractor. The Contractor shall specify in his/her Bid Package what utilities will be required. Where feasible, the Contractor, with cooperation and guidance from the Owner and the CIHC, shall shut down, disconnect and lock-out all electric power to the work area so there is no possibility of reactivation and electrical shock during the entire abatement process. Temporary electrical power shall be in accordance with UOSH regulations and the Electrical Code for Wet Environments. All electrical power within the containment and decontamination facilities shall be GFCI protected. All temporary electrical connections, such as the connection of a temporary construction circuit from a breaker box, shall be performed by a state licensed electrician. Evidence of the installation and the electrician's name shall be provided to the CIHC.
- B. In case some cables or conduits within the containment area cannot be deactivated, they shall be completely protected from any and all water and humid conditions by the use of polyethylene sheeting or other appropriate methods approved by the CIHC.
- C. Temporary lighting must be provided by the Contractor. All electrical power cords must be kept dry and off the floor.

.c2.3.03 ASBESTOS REMOVAL

- A. All asbestos removal shall be conducted in accordance with the applicable paragraphs of 29 CFR 1926.1101 (g) Methods of Compliance.
- B. Except as noted herein and/or in drawings, all asbestos that is to be removed shall be wetted with "amended water" using an approved sprayer. The amended water shall contain a wetting agent such as 50 percent polyoxyethylene ether and 50 percent polyoxyethylene ester or equivalent, mixed with one ounce to five gallons of water. An approved equivalent may be used. To minimize fiber release the amended water shall be applied using a fine spray. The material to be removed shall be saturated sufficiently throughout so there will be no fiber release from dry asbestos. In many areas, it may be necessary to pre-saturate asbestos materials the day before removal.
- C. Immediately following removal, wet ACM shall be packed into labeled 6-mil plastic bags to prevent the material from drying. All bagged material shall be packed and sealed in labeled drums or double bags. The exterior of the sealed drums or bags shall be thoroughly cleaned prior to loading for transport to the disposal site.
- D. Where all asbestos within an area can be removed from pipes, pipe elbows, pipe tees, and pipe hangers by the use of containment bags, the bags can be considered the primary barrier. A secondary barrier must still be constructed to prevent contamination of the area should a bag break. Glove-bag removal must be conducted under negative pressure. Cleaning and final decontamination requirements shall be in accordance with Section 3.06 of this specification.
- E. In some cases, because of electrical hazards or expensive equipment that could be damaged by water, it may not be feasible to wet the asbestos. Extreme care must be exercised to remove the asbestos so that airborne fibers will be minimized. Supplemental notification of and subsequent approval from the EPA designated regulators is required where asbestos is removed dry.
- F. All used plastic, tape, cleaning material, and clothing shall be treated as asbestos-containing waste material.
- G. Waste disposal shall be in a landfill approved for asbestos waste. The bags shall not be thrown into landfills in a way that may cause the bags to burst open. If bags cannot be taken out of the drums undamaged, then include the disposal of the drums with the bags. Ensure that bags are not broken open in the process.

.c2.3.04 SUBMITTALS DURING & AFTER ABATEMENT

The Contractor shall submit copies of the following items to the CIHC, upon request and at the completion of the project:

- A. Security and safety logs showing names of persons entering the worksite, date and time of entry and exit, record of any accident, emergency evacuation, and any other safety and/or health-related incident.
- B. Disposal certificates and/or receipts.
- C. Hazardous Waste Manifests
- D. Required permits, clearances, licenses, etc.
- E. Safety plan conformance and meeting reports including all injury reports.
- F. Contractor Daily Logs and Reports.
- G. Contractor air sampling data and laboratory reports.

c2.3.05 MONITORING, TESTING & INSPECTION

- A. The performance and execution of the work will be closely and continuously monitored by the CIHC and his technicians. The CIHC shall not be an employee of the Contractor performing asbestos abatement work. The role of the CIHC is to protect the Owner's interests. The Contractor shall provide full cooperation and support to the CIHC and his technicians throughout the abatement process. Removal monitoring by the CIHC will include air samples in the areas surrounding the containment area, checking the containment area separation, work practices, engineering control system, HEPA vacuum system, respiratory protection system, packing material, packaging, transporting and disposal of asbestos, decontamination facilities and procedures and any other aspects of the abatement process that may impact the health and safety of the general public and the pollution of the environment. Monitoring frequency will be determined by the CIHC and Owner's Representative.
- B. Contractor shall conduct all air monitoring as required by the UOSH Asbestos Construction Standard, UAC R574-200 Section 1926.1101, and federal OSHA construction regulations for asbestos, 29 CFR 1926.1101. All employee exposure monitoring shall be conducted in accordance with the OSHA Reference Method (ORM) located in Appendix A of the federal OSHA Construction Regulations for Asbestos, 29 CFR 1926.1101.
Contractor shall conduct daily full-shift monitoring that is representative of the exposure of each employee on the worksite. Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour time-weighted average (TWA) and 30-minute short-term exposure of

each employee. Daily monitoring shall begin when any work activity may disturb ACM, or when employees may otherwise be exposed to airborne asbestos fibers. Air monitoring that is representative of the exposure of each employee on the worksite can be provided by sampling all employees or by sampling one or more employees reasonably expected to have the highest exposure and applying the sampling results to the appropriate remaining exposed employees.

- C. **All air samples collected as part of this project must be analyzed by Dixon Information, Incorporated, located at 78 West 2400 South, South Salt Lake, Utah 84115.** Dixon is an A.I.H.A. accredited laboratory for analysing air and bulk samples for asbestos. All air sampling shall be performed by a qualified air sampling technician. A qualified air sampling technician is a person qualified by training or experience to collect air samples for asbestos determination. This technician shall be familiar with sampling techniques, equipment, calibration techniques and work practices useful for controlling air contamination. Contractor shall bear all of the costs associated with his sampling and analysis.

NOTE: All Contractor air samples shall be analyzed by Dixon Information, on a rush basis, and the results shall be posted on the job site within 24 hours from the termination of each day's sampling.

- D. The performance and execution of the air sampling will be closely monitored by the CIHC and Owner's Representative. Written copies of Contractor's air sample results and supporting daily logs shall be provided to the CIHC within 24 hours of the completion of sample collection. Additional air sampling may be conducted by the CIHC to confirm results obtained by the Contractor.

3.06 CLEANING AND FINAL DECONTAMINATION

- A. After the removal of asbestos has been completed and before the containment barriers are dismantled, the entire area shall be thoroughly wet cleaned and/or vacuumed with HEPA-filtered vacuum cleaners. All loose dust and debris shall be removed from walls and floors of the containment and from all equipment within the containment area. (There shall be no residual ACM remaining on equipment at this time.) Following a 24-hour waiting period to allow dust to settle, a second thorough cleaning shall be performed. The second cleaning shall also use wet wiping and/or HEPA-vacuuming techniques. After the second cleaning has been performed, the final visual inspection described in Section 3.07 of this specification will be performed. After the visual inspection has been completed and successfully passed, the Contractor shall apply an approved "lock-down" encapsulant to the entire interior of the contained work area. The encapsulant must be completely dry, typically 12-24 hours after application, before the final clearance air sampling described in paragraph 3.07 B can be started.

- B. Where glove bags have been used and no bags have broken, or there is no other reason to believe that the area inside the secondary barrier has been contaminated, no cleaning of the area will be required prior to final inspection and testing in accordance with Section 3.07 of this specification. If the results of the final testing are not satisfactory, then the cleaning requirements of Section 3.06 A of this specification shall apply.
- C. After the decontamination levels specified have been confirmed through the final testing specified herein, the containment enclosure and critical barriers shall be removed, and the plastic, tape, disposable equipment and material from equipment room and shower room bagged and disposed as asbestos waste. All reusable contaminated equipment, such as masks, hard hats, etc., shall be thoroughly decontaminated through wet-cleaning or properly packaged prior to transport off the site.
- D. The Contractor shall perform a final cleaning using HEPA vacuums and wet-wiping of the entire work area after removal of the containment enclosure.
- E. A final inspection of the work area after the removal of the containment will be conducted by the CIHC and/or Owner's representative to ensure no dust or debris remain anywhere as the result of the abatement operations. If necessary, the Contractor will again clean the area to the satisfaction of the CIHC.

.c2.3.07 FINAL INSPECTION AND TESTING

- A. After a thorough cleaning of the workspace, and a high degree of cleanliness has been achieved and the area has been verified to be clean by the project supervisor, the CIHC shall be notified that the workspace is ready for inspection and final testing. The CIHC will visually inspect the workspace for the detection of any visible asbestos dust or contamination. If the results of the visual inspection are not satisfactory, a thorough wet-cleaning and/or HEPA-vacuuming shall be repeated until the required cleanliness is achieved. If the visual inspection does not detect dust or other signs of contamination, the final clearance testing will commence.
- B. Final testing shall be conducted by the CIHC and shall consist of aggressive air sampling in the workspace. Fans shall be run in the area and/or sweeping conducted while representative air samples are taken. A large enough air sample shall be taken to allow detection of airborne fibers to a concentration of 0.005 fibers/cc of air. The work area shall be certified as clean when the total airborne fiber concentrations are less than 0.01 fibers/cc using phase contrast microscopy (NIOSH Method 7400). At the option of the CIHC, dust samples may be taken to be analyzed for asbestos content to confirm the results of the air sampling. At the

option of the CIHC, electron microscopy may be employed to confirm the results of the final testing. If the results of the final testing are not satisfactory, a thorough wet-cleaning and/or HEPA- vacuuming shall be repeated until the required decontamination levels are achieved.

- C. In the event that the results of the final testing are not satisfactory, and that recleaning and/or additional final sampling are necessary, the CIHC will coordinate with the Owner's representative about any further costs of recleaning, sample collection and sample analyses.
- D. The decision of the Contractor Industrial Hygiene Consultant and Building Owner's Representative is final as to whether work areas pass visual inspection and clearance air sampling.

.c2.3.08 RESPONSIBILITY FOR DAMAGES

Any damages to windows, doors, etc., that may compromise the security of the building during the abatement shall be the Contractor's responsibility to reinstate.