ADDENDUM NO. 1

January 03, 2014

RE: **CATA's East Lansing Transportation Gateway**
Capital Area Transportation Authority
East Lansing, Michigan

TO: All Bidders and others to whom Plans and Specifications for the above referenced Project have been issued.

The items included in this Addendum are to become a part of the original Drawings and Project Manual as if included therein. Only these items are to be altered. The remainder of the original Drawings and Project Manual remain valid in their entirety.

The bidder shall furnish a signed copy of this cover page with the submission of a bid.

_____ _____

Bidder's Signature of Addendum Acknowledgement Date

PROJECT MANUAL

Section	Article	Action
Table of Contents		Add the following: 23 08 00 Commissioning of HVAC Appendix A: Asbestos & Hazardous Material Survey Report Appendix B: Asbestos Building Inspection Report Appendix C: Soil Contamination Maps Appendix D: Ingham County Health Dept. Guidelines
Division 00 – Bidding Requirements		
00 21 13	K – Withdrawal of Bids	Revise "one hundred eight (180) calendar days" to read "ninety (90) calendar days".
00 22 13	B – Construction Schedule	Revise "Anticipated Construction Schedule" as follows: Revise Milestone 1 duration to be 74 calendar days from Notice to Proceed. Revise Milestone 2 duration to be 95 calendar days from Notice to Proceed. Revise Milestone 3 duration to be 116 calendar days from Notice to Proceed.
00 54 00	Article 5, Payments	Revise 5.1.8 to read as follows: "The Owner will pay ninety percent (90%) of the amount due to the contractor on account of progress payments. A ten percent (10%) retainage amount shall remain in effect until final completion of the project. The retainage amount may not be reduced without written authorization from the Owner."
Division 23 – HVAC		
Section	Article	Action
23 08 00	Full	Add specification section in its entirety.
23 82 39	2.1.A	Add: "8. Modine."

APPENDICES

Add the following documents in their entirety:

Appendix A	Asbestos and Hazardous Material Survey Report, dated May 9, 2013
Appendix B	Asbestos Building Inspection Report, dated May 2, 2008
Appendix C	Soil Contamination Maps

Appendix D Ingham County Health Department Guidelines for *Sanitary Sewage Disposal Facilities Utilizing On-Site Storage, Hauling and Final Disposal at an Off-Site Receiving Facility (Pump and Haul Facilities)*

DRAWINGS

Drawing Sheet No.	Detail/Item	Action
S0.1	1.A	Revise: Referenced Code shall read 2009 instead of 2008 as noted.
S0.1	3.A	Revise: Referenced ACI shall read ACI 318-08 instead of ACI 318-05.
S0.1	ABBREV	ADD: SER and Description: STRUCTURAL ENGINEER OF RECORD.
S6.1	5, 7 - 12	REVISE: Typical brace callout shall read 15/S6.1 (TYP.) instead of 1/S6.1(TYP.).
S1.0	1/S1.0	Revise callout for "Note 1" pointing to the building plan footprint to read "Note 2". Revise callout for "Note 2" pointing to the canopy plan footprint to read "Note 3".
	Note 3	Delete the word "Alternate". The canopy and all associated foundations and overexcavation shall be included in the Base Bid.
P1.0	Note P11	Revise: 4" NATURAL GAS MAIN CONNECTED TO GAS METER PROVIDED BY UTILITY COMPANY. AFTER METER, ROUTE 3" PIPE BELOW GRADE TO NATURAL GAS GENERATOR (ALTERNATE). OMIT 3" NATURAL GAS PIPE IF GENERATOR ALTERNATE NOT ACCEPTED.

QUESTIONS

Q1: Is it the intent that the General Contractor will select and hire the Commissioning Agent or is there a Cx agent already under contract?
A1: The Contractor shall engage a qualified, independent, commissioning authority to perform commissioning services for this project. There is not currently a commissioning authority under contract.

Q2: Section 00 2213, Supplemental ITB – Article B.4 (page 1) indicates that Liquidated Damages shall apply to each milestone date. Please indicate amount of Liquidated Damages as they are not stipulated in the A201 Contract Agreement or A201 General Conditions Documents.
A2: Refer to Exhibit 00 72 13-A "AIA Document A201-2007 General Conditions of the Contract for Construction", Article 9.13 "Owner's Cost Incurred Due to Incomplete Work".

Q3: Section 00 4113, Bid Form – Indicates the bidders must hold bid pricing for 180 calendar days. Please clarify if this is in CATA's best interest.
A3: This is revised to be 90 days, per Addendum No. 1.

Q4: Section 01 5000, Temporary Facilities – Article 3.8 (page 10) indicates GC to pay for (1) water tap fees, (2) Sewer permit fees, (4) electric utility connection fees, and (5) Tele/Data utility fees. This is in conflict with Section 01 2100, Allowances that indicates Allowance #2 is to include referenced fees & costs. Please clarify.
A4: Allowance No. 2 is to be used to pay the water tap fees, sewer permit fees, electric utility connection fees, and tele/data utility connection fees. This applies to tapping and connection fees charged by the utility companies. Contractor shall coordinate with and make all necessary arrangements with the utility companies.

Q5: Section 00 5400, Agreement Form Supplements – Article B.1 indicates payment terms will be 60 days. Please clarify if this is in CATA's best interest.
A5: 60 days is correct.

Q6: Section 00 5400, Agreement Form Supplements – Article B.4: Please clarify intent of retainer language at 50% complete. Are payments after 50% subject to 0% retainer?
A6: No; the project is subject to a 10% retainage throughout the duration of the project. This language is revised in Addendum No. 1.

Q7: Section 00 72 13-A, A201 General Conditions - Article 11.3.1.6 – The Owner provided Builder's Risk Insurance indicates no coverage for materials delivered and stored on site but not yet incorporated into construction. Please clarify if it is the intent to not cover stored materials on site.
A7: This is correct. Contractor is responsible to secure materials being stored on site.

Q8: Sheet D1.0 – Site Removal Key Notes 1 & 2. Please stipulate schedule duration that MSU separate contractor will be performing foundation removals and soil remediation.
A8: Michigan State University representatives have indicated that the anticipated duration for the soil remediation activities is approximately 4 weeks.

Q9: Sheet D1.0 – Site Removal Key Notes 1 & 2. Will MSU separate contractor replace remediated soils with engineered fill? To what elevation grades?
A9: Yes; it is anticipated that remediated soils will be replaced with engineered fill to existing grades, by MSU's contractor, and that new fill will be adequately compacted to suitable density. Exact quantities, depths and locations of remediated soils are not known at this time.

Q10: Sheet C2.0 – Construction Sequence indicates 3rd week of March 2014 to receive Notice to Proceed. This is in conflict with Project Manual Section 00 2213 indicating February 26, 2014. Please Clarify.
A10: The anticipated Notice to Proceed date is February 26, 2014. The schedule on Sheet C2.0 is an approximate timeline only as required for the SESC permit; this schedule is not binding.

Q11: Sheet S1.0 – Please indicate duration required for CN RR permits and written approvals.
A11: Anticipate a minimum of 60-90 days for approval from the date the delegated design is submitted to CN for review.

ADDITIONAL INFORMATION AND CLARIFICATIONS

1. All existing environmental monitoring wells located on the site must remain and shall be protected throughout construction. If they are located in areas that are being disturbed and/or within areas of earthwork or new pavement, they must be protected, restored, and must align with the new grade elevation, and new well covers shall be provided. If they are in the way of new construction activities and must be relocated, this shall be the contractor's responsibility; new location to be coordinated with MSU representatives.

2. The following contact information is provided to coordinate regarding matters of contractor's insurance requirements for work within the railroad right-of-ways:

   CSX Railroad
   Jonathan Macarthur
   Insurance Department
   CSX Corporation
   500 Water Street - C907
   Jacksonville, FL 32202
   904.359.3394 (Phone)
   904.306.5325 (Fax)
   Jonathan_Macarthur@csx.com

   CN Railroad
   Jim Gasiecki
   Manager of Public Works – CN
   Grand Trunk Western Railroad
   24002 Vreeland Road
   Flat Rock, Mi, 48134
   Off 734 783 4582
   Cell 248 431 0649
   jim.gasiecki@cn.ca

Additional information for CN requirements can be found online at:
http://www.cn.ca/en/delivering-responsibly/safety/erailsafe/cn-right-of-way-insurance-requirements

END OF ADDENDUM No.1

Attachments:

Pre-Bid Meeting Minutes, dated December 20, 2013
Pre-Bid Meeting Sign-In Sheet, dated December 20, 2013

Section 23 08 00 Commissioning of HVAC

Appendix A	Asbestos and Hazardous Material Survey Report, dated May 9, 2013
Appendix B	Asbestos Building Inspection Report, dated May 2, 2008
Appendix C	Soil Contamination Maps
Appendix D	Ingham County Health Department Guidelines for *Sanitary Sewage Disposal Facilities Utilizing On-Site Storage, Hauling and Final Disposal at an Off-Site Receiving Facility (Pump and Haul Facilities)*

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PRE-BID MEETING MINUTES

(FOR INFORMATION ONLY)

Meeting Date:	December 20, 2013 at 1:30 PM
Written By:	Eric T. Beaulieu, AIA, CxA, LEED AP Project Manager
Project No.:	CATA ITB #2014-007 DLZ #1341-6517-70
Owner:	Capital Area Transportation Authority (CATA) 4615 Tranter Street Lansing, Michigan 48910
Project:	East Lansing Transportation Gateway 1240 South Harrison Road East Lansing, Michigan 48823

Meeting Location:	Room 102 of the Angell Building on the campus of Michigan State University, 166 Service Road, East Lansing, Michigan 48823

Purpose of Meeting:	Pre-Bid Conference and Tour of Project Site

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Attended By:	Refer to attached Sign-In Sheet

ITEMS DISCUSSED:

A. Introductions

1. Owner:

Capital Area Transportation Authority (CATA)
4615 Tranter Street
Lansing, Michigan 48910

Project Site:

East Lansing Transportation Gateway
1240 South Harrison Road
East Lansing, Michigan 48823

CATA Representatives:

- Fred Sible; General Manager of Facilities & Grounds
- Jonathan Bromberg; System Planner

2. Architect/Engineer:
   DLZ
   1425 Keystone Ave.
   Lansing, MI 48911
   Telephone: 517-393-6800

   A/E Point of Contact:
   - Eric Beaulieu, Project Manager; ebeaulieu@dlz.com
     Office: 517-393-6800
     Mobile: 517-420-4278

   A/E Project Representatives:
   - Paul Weber, Architect; pweber@dlz.com

B. Instruction to Bidders (Section 00 21 13)
   1. Contract type: Single Prime Contract, Lump Sum
   2. Bid's due: **Friday, January 24, 2014 at 2:00 PM**
   3. Location: CATA; Attn: Mr. Fred Sible
      4615 Tranter Street, Lansing, MI 48910
   4. Bid Form Refer to Section 00 41 13
   5. Bid Security: 5% of bid amount
   6. Bid Documents (Drawing Sets and Project Manual)
      i. Available for purchase at Commercial Blueprint
         a. Address: 3125 Pinetree Road, Lansing, Michigan 48911
         b. Phone: (517) 372-8360
         c. Website: www.commblue.com
         d. Cost: Non-refundable; actual cost of reproduction (approx. $200)

   7. Federal Contract Clauses:
      i. Project is funded through an FTA grants. Refer to Section 00 21 13 – Exhibit A for Federal Contract Clauses which are applicable to this contract. Contractor shall comply with all FTA Contract Clauses included in the specifications.

   8. Disadvantaged and Small Business Enterprises
      i. Though there is no specific goal, CATA strongly encourages the use Disadvantaged Business Enterprises ("DBE") and Small Business Enterprises (SBE's) to participate on this project. Any applicable DBE firm's certifications must be included in the proposal. Cost Proposals must list all DBE & SBE Firm Names, Amount and Activity of service provided by the firm, as applicable.

      ii. Bidders are encouraged to contact Jeanne Day-Labo from MDOT if assistance is needed to identify potential participants.
         a. Website: http://mdotjboss.state.mi.us/UCP/
         b. Email: Day-LaboJ@michigan.gov

C. Communication
   1. Bidder's questions: written requests only.
   2. Submit questions to CATA, Attn: Mr. Fred Sible.

3. All questions shall be submitted no later than **Tuesday, January 7, 2014 at 4:00 PM**
4. Questions shall be submitted via email.
    i. Subject Line: "CATA East Lansing Transportation Gateway – ITB #2014-007"
5. If applicable, Architect will respond with the issuance of an Addendum.
6. Items which are already identified in the Documents will not be reiterated in the Addendum.

D. Supplemental Instructions to Bidders (Section 00 22 13)
1. Davis-Bacon Wage Rates apply
    i. Davis-Bacon wage rates that are contained within the ITB.

2. Anticipated Bidding and Construction Schedule (Section 00 22 13):
    i. Note that the Milestone dates will be reviewed and may be adjusted by Addendum.

E. Project Bid Form (Section 00 41 13)
1. Single lump sum amount for all labor and materials for a completed project as described within Project Manual and drawings.
2. Complete Bid Form in its entirety.
3. Acknowledge all Addenda.
4. Complete Alternate Bid Items.
5. Complete Unit Prices.
6. Refer to "Bidder Reminder List"
7. Bid shall remain in effect for 180 days.
8. Complete the following and submit with Bid:
    i. Experience Questionnaire
    ii. Plan and Equipment Questionnaire
    iii. Non-Collusion Affidavit
    iv. Financial Statement
    v. Buy America Affidavit
    vi. Certification Regarding Lobbying
    vii. Certification Regarding Debarment and Suspension
    viii. DBE Certification for Each Qualifying Firm
    ix. Proposal Signature Certification Page
    x. Proposed List of Subcontractors, Suppliers, and Manufacturers
    xi. Proposed Schedule of Values
    xii. Certified Check or Bid Bond (signed by Surety and Principal)
    xiii. Iran Economic Sanctions Act Certificate
    xiv. CATA Small Business Determination Form
    xv. Letter certification acknowledging Davis-Bacon Requirements

F. Project Substitution Request Form.
1. Exhibit 01 62 00A.
2. If accepted, the item will be identified in an Addendum.
3. Product Substitution Request Forms to be submitted by Tuesday, January 7, 2014 at 4:00 PM
4. Include all applicable backup data required for evaluation.

G. Contractor-Owner Agreement (Section 00 52 13)
1. AIA Document A101-2007 "Standard Form of Agreement between Owner and Contractor" with revisions (Section 00 54 00)

2. Bonds and Certificates (Section 00 61 13, 00 62 16)
    i. Performance and Payment Bond: 100% of total contract amount
    ii. Certificate of Insurance is required. (Section 00 62 16)
        a. Refer to CATA Construction Standard Terms and Conditions of Procurement for applicable insurance requirements.

3. General Conditions (00 72 13)
    i. AIA Document A201-2007 "General Conditions of the Construction Contract" with noted revisions.
    ii. CATA Construction Standard Terms and Conditions of Procurement.

H. Summary of Work (Section 01 10 00)

Work includes the phased demolition of four (4) buildings and site clearing as identified in the Contract Drawings including slabs, foundations and all subsurface systems. Work includes proper abatement and disposal of Asbestos Containing Materials and Hazardous Materials in the buildings prior to any demolition activities occurring.

a. Under a separate contract, Michigan State University will remove the floor slab, foundations/footings of Amtrak building, pavement within the soil excavation area, remove and dispose contaminated soils, and backfill. Work includes coordinating site access with MSU's contractor as identified in the Contract Drawings.

Work also includes the construction of temporary parking, temporary ADA-compliant pedestrian access, driveways, utility yard, temporary lighting, and building pad on the site.

The existing station shall remain in full and operation until the temporary station is installed and fully operational. Likewise, the temporary parking and station shall remain in full operation until the new permanent station is complete and fully operational. Work sequence shall allow for continuous operation of the bus and train services at the site.

Access shall be maintained for all public, private and fleet vehicles throughout construction including access to the remaining Storage Building B at the west end of the site.

An ADA-compliant accessible route(s) for pedestrians shall be maintained at all times for public use, to and from the temporary/permanent station, temporary parking, and the Amtrak platform.

2. The existing site is approximately 7.76 acres of land. Existing site improvements include, but are not limited to pavement, landscaping, site amenities and utilities. It is the intent of this project is to remove all site improvements within the specified area of work.

3. Installation of temporary driveways, parking surfaces, utilities and a building platform to house a temporary 24'x60' structure as specified in the Contract Documents including the Drawings and Project Manual.

4. Construction of a new (approx.) 8,000 SF station to replace the existing station. This will include a 150 space public parking lot, site circulation, a drop-off area, a bus drop-off and parking area, site utilities and site surface improvements. The new station will include an approximately 3,600 SF canopy.

5. Coordination with the CN and CSX railroads, including obtaining approvals and all necessary permits for work within and nearby the railroad right-of-way(s).

6. Mechanical and electrical system commissioning, start-up, testing and balancing, test and inspection reports, spare parts, and associated documentation.

7. Closeout activities including demonstration and training, preparation of operation and maintenance manuals, warranties, record documents, and associated documentation.

8. All other associated work indicated in the Contract Documents including the Drawings and Project Manual.

I. Temporary Facilities and Controls (Section 01 50 00)
   1. Contractor shall provide and pay for all necessary temporary utilities and temporary site improvements required during construction.
   2. Temporary provisions include, but not limited to:
      i. Building pad for temporary Amtrak Station
      ii. Temporary utilities for the Amtrak Station
      iii. Temporary public parking area
      iv. Temporary lighting for public parking area
      v. Temporary continuous accessible route to and from all public accommodations
      vi. Temporary wayfinding signage
      vii. Job identification signage
      viii. Temporary construction fencing
      ix. Temporary contractor facilities, as required to accomplish the Work

J. Miscellaneous Discussion:
   1. Comments from Michigan State University:
      i. The site is owned by Michigan State University.
      ii. Michigan State University will perform inspections for connections and disconnections to and from their utilities.
      iii. MSU's archeology department will be involved to monitor excavation activities.
      iv. Existing environmental monitoring wells located throughout the site must remain active; they shall be protected and maintained throughout construction activities. New well covers will be required where the earthwork and/or pavement is being performed at these locations.
      v. Access must be maintained to existing Rental Storage Facility B, located at the west end of the site.
      vi. MSU will complete the switchover of electrical gear located within the Print Building. This will occur over Spring Break.
      vii. MSU will provide a new power supply to existing Rental Storage Facility B.
      viii. There are existing electrical items within the Print Building that MSU will remove and salvage.

2. The building is not going to be LEED certified.
3. The contractor will be responsible to engage an independent commissioning authority to perform commissioning for the mechanical systems.

K. Tour of Existing Site:

Existing Site Tour located at:
1240 South Harrison Road
East Lansing, Michigan 48823

L. This Pre-Bid Meeting Agenda is for information only and is not part of the Contract Documents.

M. Questions:

Note that all answers will be provided by Addendum.

Q1: Is the contractor responsible for the excavation work on the site?
A1: Yes; contractor is responsible for all excavation except that associated with soil remediation being performed by MSU.

Q2: Is the contractor responsible to remove the temporary station building?
A2: No; the temporary station building will be installed and removed by others. The Contractor will be responsible to install and subsequently remove the temporary building pad, temporary utilities, backflow preventer, and other specified temporary provisions.

Q3: What is the anticipated duration of MSU's excavation and soil remediation work?
A3: Unknown at this time; MSU will clarify an approximate duration to be provided by addendum.

Q4: Are the limits of Base Bid overexcavation indicated on the drawings?
A4: Yes; the horizontal and vertical limits of Base Bid overexcavation for the building and the canopy are indicated on S1.0.

Q5: Have the utilities to the existing southeast building (Rental Storage Facility A) been disconnected yet?
A5: No; the contractor will be responsible to coordinate with all utility companies for disconnection of existing utilities.

Q6: Is asbestos abatement required on any of these buildings? If so, is it part of this contract?
A6: Yes; Yes

Q7: Is there an asbestos survey available?
A7: Yes; it will be included in the next addendum.

Q8: Can we get a Notice to Proceed prior to February 26? Otherwise some of the milestone dates will need to be adjusted to allow the sequence of temporary asphalt pavement to accommodate the frost law dates.
A8: CATA to review. The anticipated NTP date is tied to a CATA board meeting date and may not be flexible. Other milestone dates will be reviewed and may be adjusted by addendum.

Q9: Please clarify how temporary provisions are to be bid; specifically the temporary asphalt.
A9: All temporary provisions are to be provided to meet the minimum criteria specified and indicated on the drawings. General parameters are provided as a guide and to establish minimum requirements. The General Contractor will have some flexibility with regard to means, methods, and sequencing as long as the minimum criteria are satisfied and are coordinated and pre-approved with the Owner and the Architect.

As discussed, minimum criteria include providing for continuous operation for public use of a transit station, approximately 40 parking spaces, lighting, public vehicular and pedestrian access, bus access and turnaround, MSU access to Rental Storage Facility B, and a continuous accessible route connecting the temporary station, ADA parking, and Amtrak platform.

The temporary site improvements plan on D3.0 graphically depicts a plan that will accommodate temporary provisions for the majority of the construction period, however it is understood that at some point during construction the temporary provisions in the locations indicated will need to be removed in order to complete construction. At that time, alternate provisions shall be provided elsewhere on the site in order to maintain continuous accommodations for public use.

The General Contractor will be responsible to coordinate specific requirements and expectations of their subcontractors. For example, the asphalt pavement subs should confirm expectations with each general prime bidder.

Q10: Is the temporary lighting system designed?
A10: The minimum performance design criteria for the temporary lighting are specified. Contractor is responsible to provide and pay the operating cost for a temporary lighting system the meets the specified criteria. We understand that there are multiple ways to accomplish this requirement; specific means and methods for this provision are up to the contractor; subject to approval of the Owner and Architect.

Q11: Will the lowest qualified bid be accepted?
A11: The lowest responsive and responsible bid will be selected.

Q12: Can you share the budget?
A12: No

Q13: Is special insurance required for working within the railroad right-of-way(s)?
A13: There is limited scope of work to be performed within the CN and CSX right-of-ways. It is anticipated that CN and CSX will require a permit to complete this work. Each railroad may have special requirements to obtain a permit, which may include special insurance requirements. The contractor shall comply with all applicable requirements to complete the limited scope of work within their respective right-of-ways.

Q14: Are permits required for working next within the railroad right-of-way(s)?
A14: Refer to the answer for Q13.

1425 Keystone Ave. Lansing, MI 48911 | OFFICE 517.393.6800 | ONLINE WWW.DLZ.COM

PUBLIC BID OPENING
December 20, 2013 AT 1:30 PM
SIGN-IN SHEET

Project Description:	Meeting Place	Date
CATA's East Lansing Transportation Gateway– IFB #2014-007	CATA 4615 Tranter Street, Lansing, MI	December 20, 2013
DLZ Number 1341-6517-70	Client Capital Area Transportation Authority (CATA)	Time 1:30 PM

NAME (PLEASE PRINT)	COMPANY YOU REPRESENT	E-MAIL	TELEPHONE NUMBER	FAX NUMBER	ADDRESS
ERIC BEAULIEU	DLZ	ebeaulieu@dlz.com	517-393-6800		1425 KEYSTONE LANSING, MI
FRED Sible	CATA	FSible@CATA.org	366 367-7241		LANSING
PAUL WEBER	DLZ	pweber@dlz.com	517.393.6800	517.272.7390	1425 KEYSTONE LANSING, MI
JONATHAN BROMBERG	CATA	JBROMBERG@CATA.ORG	517 394 1100		4615 TRANTER ST LANSING MI 48910
Nathan Thelen	Pleune Service	NThelen@pleuneservice.com	517 853 0393		
MATT BERG	SPENCE	MATTBERG@SPENCEBROTHERS.COM	734-213-6033	734-213-6023	4343 CONCORSE DR ANN ARBOR
Ben Ochoa	Miller-Davis	BOchoa@miller-davis.com	269 345 3561	269-345 1372	1029 Portage Street Kalamazoo, 49001
Chuck Mabe	Christman Construction	cmabe@christmanconstruction.com	517-482 0554	517-482-2882	324 E South St Lansing, MI
CHAD NEWTON	PUMFORD CONSTR.	CHADN@PUMFORD.COM	989 928 4944		
PATRICK GROOM	LAUX CONST.	estimating@lauxconstruction.com	517 694 0117	517 694 0359	4218 CHARLEVOIX DR HOLT MI 48842

PUBLIC BID OPENING
December 20, 2013 AT 1:30 PM
SIGN-IN SHEET

Project Description:	Meeting Place	Date
CATA's East Lansing Transportation Gateway– IFB #2014-007	**CATA** **4615 Tranter Street, Lansing, MI**	**December 20, 2013**
DLZ Number	Client	Time
1341-6517-70	**Capital Area Transportation Authority (CATA)**	**1:30 PM**

NAME (PLEASE PRINT)	COMPANY YOU REPRESENT	E-MAIL	TELEPHONE NUMBER	FAX NUMBER	ADDRESS
Tom Stark	Lewitt and Stark Exc	tom@lewittandstark.com	517-202-5068	517-338-0767	2440 Herman Rd Ovid, MI 48866
JAMES BECKERING	BECKERING CONSTRUCTION	JEB@BECKERING.com	616-532-8191	616-532-8193	650 44TH ST SE GRAND RAPIDS MI 49548
PAvid McAlvey	GRANGER Construction	dmcalvey@grangerconstruction.com	517-882-4165	617 393-1382	6267 AURELIUS LANSING MI
Rob Train	GRANGER Construction	rtrain@grangerconstruction.com			
Mike Hull	Superior Elec	m.hull@superiorelectricinc.com	517 485 7125		
Steve Troost	MSU				
CHRIS BARNES	MSU	cbarnes@ipf.msu.edu		517 23[illegible]8224	

PUBLIC BID OPENING
December 20, 2013 AT 1:30 PM
SIGN-IN SHEET

Project Description:	Meeting Place	Date
CATA's East Lansing Transportation Gateway– IFB #2014-007	**CATA** **4615 Tranter Street, Lansing, MI**	**December 20, 2013**
DLZ Number	Client	Time
1341-6517-70	**Capital Area Transportation Authority (CATA)**	**1:30 PM**

NAME (PLEASE PRINT)	COMPANY YOU REPRESENT	E-MAIL	TELEPHONE NUMBER	FAX NUMBER	ADDRESS
Steve Berry	E.T. Mackenzie	sberry@mackenzieco.com	517-627-4408	517-627-4470	4448 W. Saginaw Hwy Grand Ledge 48837
BRUCE CARY	C & R ELECTRIC	bruce@candrelec.com	989 828-4020	(4086 FX)	6966 E. BLANCHARD SHEPHERD, MI 48883
Dennis Anderson	Wieland-Davco	dennis.anderson@wieland-davco.com	517 346 [illegible]		462 English Oak Lansing
Michael P. Tackett	Quality Asphalt Paving	Mike@qualityasphalt.com	517-917 2036	517-568-5894	5990 M-99 North Homer, MI 49245
Richard Darr	Moore Trosper Const.	RDARR@MOORETROSPER.com	517-694-6310	517-694-1173	4224 Keller Rd. Holt 48842

SECTION 230800 - COMMISSIONING OF HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes commissioning process requirements for HVAC&R systems, assemblies, and equipment.

B. Related Sections:

1. Section 019113 "General Commissioning Requirements" for general commissioning process requirements.

1.3 DEFINITIONS

A. Commissioning Plan: A document that outlines the organization, schedule, allocation of resources, and documentation requirements of the commissioning process.

B. CxA: Commissioning Authority.

C. HVAC&R: Heating, Ventilating, Air Conditioning, and Refrigeration.

D. Systems, Subsystems, Equipment, and Components: Where these terms are used together or separately, they shall mean "as-built" systems, subsystems, equipment, and components.

1.4 INFORMATIONAL SUBMITTALS

A. Certificates of readiness.

B. Certificates of completion of installation, prestart, and startup activities.

1.5 ALLOWANCES

A. Labor, instrumentation, tools, and equipment costs for technicians for the performance of commissioning testing are covered by the "Schedule of Allowances" Article in Section 012100 "Allowances."

1.6 UNIT PRICES

A. Commissioning testing allowance may be adjusted up or down by the "List of Unit Prices" Article in Section 012200 "Unit Prices" when actual man-hours are computed at the end of commissioning testing.

1.7 CONTRACTOR'S RESPONSIBILITIES

A. Perform commissioning tests at the direction of the CxA.

B. Attend construction phase controls coordination meeting.

C. Attend testing, adjusting, and balancing review and coordination meeting.

D. Participate in HVAC&R systems, assemblies, equipment, and component maintenance orientation and inspection as directed by the CxA.

E. Provide information requested by the CxA for final commissioning documentation.

F. Provide measuring instruments and logging devices to record test data, and provide data acquisition equipment to record data for the complete range of testing for the required test period.

1.8 CxA'S RESPONSIBILITIES

A. Provide Project-specific construction checklists and commissioning process test procedures for actual HVAC&R systems, assemblies, equipment, and components to be furnished and installed as part of the construction contract.

B. Direct commissioning testing.

C. Verify testing, adjusting, and balancing of Work are complete.

D. Provide test data, inspection reports, and certificates in Systems Manual.

1.9 COMMISSIONING DOCUMENTATION

A. Provide the following information to the CxA for inclusion in the commissioning plan:

1. Plan for delivery and review of submittals, systems manuals, and other documents and reports.
2. Identification of installed systems, assemblies, equipment, and components including design changes that occurred during the construction phase.
3. Process and schedule for completing construction checklists and manufacturer's prestart and startup checklists for HVAC&R systems, assemblies, equipment, and components to be verified and tested.
4. Certificate of completion certifying that installation, prestart checks, and startup procedures have been completed.

5. Certificate of readiness certifying that HVAC&R systems, subsystems, equipment, and associated controls are ready for testing.
6. Test and inspection reports and certificates.
7. Corrective action documents.
8. Verification of testing, adjusting, and balancing reports.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TESTING PREPARATION

A. Certify that HVAC&R systems, subsystems, and equipment have been installed, calibrated, and started and are operating according to the Contract Documents.

B. Certify that HVAC&R instrumentation and control systems have been completed and calibrated, that they are operating according to the Contract Documents, and that pretest set points have been recorded.

C. Certify that testing, adjusting, and balancing procedures have been completed and that testing, adjusting, and balancing reports have been submitted, discrepancies corrected, and corrective work approved.

D. Set systems, subsystems, and equipment into operating mode to be tested (e.g., normal shutdown, normal auto position, normal manual position, unoccupied cycle, emergency power, and alarm conditions).

E. Inspect and verify the position of each device and interlock identified on checklists.

F. Check safety cutouts, alarms, and interlocks with smoke control and life-safety systems during each mode of operation.

G. Testing Instrumentation: Install measuring instruments and logging devices to record test data as directed by the CxA.

3.2 Testing AND BALANCING VERIFICATION

A. Prior to performance of testing and balancing Work, provide copies of reports, sample forms, checklists, and certificates to the CxA.

B. Notify the CxA at least **10** days in advance of testing and balancing Work, and provide access for the CxA to witness testing and balancing Work.

C. Provide technicians, instrumentation, and tools to verify testing and balancing of HVAC&R systems at the direction of the CxA.

1. The CxA will notify testing and balancing **Contractor 10** days in advance of the date of field verification. Notice will not include data points to be verified.

2. The testing and balancing **Contractor** shall use the same instruments (by model and serial number) that were used when original data were collected.
3. Failure of an item includes, other than sound, a deviation of more than 10 percent. Failure of more than 10 percent of selected items shall result in rejection of final testing, adjusting, and balancing report. For sound pressure readings, a deviation of 3 dB shall result in rejection of final testing. Variations in background noise must be considered.
4. Remedy the deficiency and notify the CxA so verification of failed portions can be performed.

3.3 GENERAL TESTING REQUIREMENTS

A. Provide technicians, instrumentation, and tools to perform commissioning test at the direction of the CxA.

B. Scope of HVAC&R testing shall include entire HVAC&R installation, from central equipment for heat generation and refrigeration through distribution systems to each conditioned space. Testing shall include measuring capacities and effectiveness of operational and control functions.

C. Test all operating modes, interlocks, control responses, and responses to abnormal or emergency conditions, and verify proper response of building automation system controllers and sensors.

D. The CxA along with the HVAC&R **Contractor**, testing and balancing **Subcontractor**, and HVAC&R Instrumentation and Control **Subcontractor** shall prepare detailed testing plans, procedures, and checklists for HVAC&R systems, subsystems, and equipment.

E. Tests will be performed using design conditions whenever possible.

F. Simulated conditions may need to be imposed using an artificial load when it is not practical to test under design conditions. Before simulating conditions, calibrate testing instruments. Provide equipment to simulate loads. Set simulated conditions as directed by the CxA and document simulated conditions and methods of simulation. After tests, return settings to normal operating conditions.

G. The CxA may direct that set points be altered when simulating conditions is not practical.

H. The CxA may direct that sensor values be altered with a signal generator when design or simulating conditions and altering set points are not practical.

I. If tests cannot be completed because of a deficiency outside the scope of the HVAC&R system, document the deficiency and report it to the Owner. After deficiencies are resolved, reschedule tests.

J. If the testing plan indicates specific seasonal testing, complete appropriate initial performance tests and documentation and schedule seasonal tests.

3.4 HVAC&R SYSTEMS, SUBSYSTEMS, AND EQUIPMENT TESTING PROCEDURES

A. Boiler Testing and Acceptance Procedures: Testing requirements are specified in HVAC boiler Sections. Provide submittals, test data, inspector record, and boiler certification to the CxA.

B. HVAC&R Instrumentation and Control System Testing: Field testing plans and testing requirements are specified in Section 230900 "Instrumentation and Control for HVAC." Assist the CxA with preparation of testing plans.

C. Pipe system cleaning, flushing, hydrostatic tests, and chemical treatment requirements are specified in HVAC piping Sections. HVAC&R **Contractor** shall prepare a pipe system cleaning, flushing, and hydrostatic testing plan. Provide cleaning, flushing, testing, and treating plan and final reports to the CxA. Plan shall include the following:

1. Sequence of testing and testing procedures for each section of pipe to be tested, identified by pipe zone or sector identification marker. Markers shall be keyed to Drawings for each pipe sector, showing the physical location of each designated pipe test section. Drawings keyed to pipe zones or sectors shall be formatted to allow each section of piping to be physically located and identified when referred to in pipe system cleaning, flushing, hydrostatic testing, and chemical treatment plan.
2. Description of equipment for flushing operations.
3. Minimum flushing water velocity.
4. Tracking checklist for managing and ensuring that all pipe sections have been cleaned, flushed, hydrostatically tested, and chemically treated.

D. Refrigeration System Testing: Provide technicians, instrumentation, tools, and equipment to test performance of chillers, cooling towers, refrigerant compressors and condensers, heat pumps, and other refrigeration systems. The CxA shall determine the sequence of testing and testing procedures for each equipment item and pipe section to be tested.

E. HVAC&R Distribution System Testing: Provide technicians, instrumentation, tools, and equipment to test performance of air, steam, and hydronic distribution systems; special exhaust; and other distribution systems, including HVAC&R terminal equipment and unitary equipment.

END OF SECTION 230800

DLZ
ENGINEERS • ARCHITECTS • SCIENTISTS
PLANNERS • SURVEYORS

May 9, 2013

Ms. Debbie Alexander
Capital Area Transportation Authority
4615 Tranter Street
Lansing, MI 48910

RE: Asbestos and Hazardous Material Survey Report
Amtrak Station & Storage Building A
East Lansing Multi Modal Satation
East Lansing, Michigan

Dear Ms. Alexander:

DLZ Michigan, Inc. is pleased to present this Report of Asbestos and Hazardous Materials Survey for the above referenced site.

INTRODUCTION

DLZ was retained by Capital Area Transit Authority (CATA) to perform an asbestos and hazardous material survey at two of the four buildings at the East Lansing Multi Modal facility that are slated for demolition as part of the renovations occurring at the site. The Amtrak Station and Storage Building A were inspected on April 26, 2013. The Printing Shop and Surplus Storage Building were previously inspected for the owner of the property, Michigan State University (MSU). The results are contained in the April 23, 2008 Asbestos Building Inspection Report by Fibertec Industrial Hygiene Services, Inc. for the Stores Building #1, Building #161 (Printing Shop), and the October 17, 2006 Asbestos Inspection Report for the Surplus Building by Nova Environmental Inc .

PURPOSE

The structures located at the site are subject to the requirements of the federal National Emission Standard for Hazardous Air Pollutants (NESHAP) for asbestos regulations contained in the Code of Federal Regulations, Title 40, Part 61, Subpart M, (40 CFR 61, Subpart M). The NESHAP regulations require the Owner/Operator to use an accredited asbestos inspector to thoroughly inspect the affected facility, or part of the facility, where the demolition or renovation will occur for the presence of asbestos including Category I Non-Friable and Category II Non-Friable asbestos containing material. The Owner/Operator is then required to have all Regulated Asbestos Containing Materials (RACM) removed prior to any demolition activities that may result in the disturbance of these materials.

The purpose of this report is to document the location, quantity, and condition of the Asbestos Containing Materials (ACM) and to document any hazardous materials and/or universal waste identified

during the pre-demolition asbestos and hazardous materials survey so these materials can be properly handled and removed prior to and during the demolition.

METHODOLOGY

DLZ conducted the asbestos and hazardous materials survey on April 26, 2013, using State of Michigan Department of Consumer and Industry Services Accredited Asbestos Inspector. Mr. Dirk Anderson (State of Michigan Accreditation Number A11605, expiring June 27, 2013) performed the asbestos inspection and sample collection.

The inspection methodology included the following:

- Inspection of the building for potentially friable and non-friable ACM, delineation of the homogenous areas (materials which are uniform in color and texture), and the procurement of bulk samples from the suspect materials. Samples were collected from visible, suspect friable ACM and non-friable ACM. Based on the nature of the suspect material and its accessibility, some suspect friable ACM and non-friable ACM materials were presumed to be an asbestos containing material and were not sampled.

- Sample procurement was performed according to the standards of the Asbestos Hazard Emergency Response Act (AHERA) as set forth in 40 CFR 763, Subpart E and the NESHAP regulations contained in 40 CFR 61, Subpart M).

- The asbestos inspection notes, included in Attachment A, shows the sample identification number, sample location, sample description, and other comments regarding the suspect ACM bulk samples that were used to document the inspection process.

- The samples were submitted under proper Chain-of-Custody protocol to Fibertec Environmental Services in Holt, Michigan for asbestos analysis.

- Analysis of potential ACM containing bulk samples was performed by Fibertec Environmental Services a National Voluntary Laboratory Accreditation Program (NVLAP) approved laboratory with NVLAP Accreditation number 101510. Bulk sample analysis was conducted by the Polarized Light Microscopy (PLM) methodology in accordance with the U.S. EPA Method 600/R-93/116.

- If the PLM analysis reveals a marginal positive or negative result or the results are inconsistent with other samples within the same HA-group, the PLM results may be verified using an alternative method known as Point Counting. Point Counting is more accurate then PLM for determining the asbestos content of a material that is initially reported to contain a small percentage of asbestos fibers. This procedure allows the laboratory to more accurately determine

the amount of asbestos in a material by removing some of the non-asbestos components (i.e. binder, carbonate minerals, etc.) that can potentially interfere with the analysis of the material.

- The bulk sample results are compared to the NESHAP criteria as defined in 40 CFR 61, Subpart M. NESHAP defines an asbestos containing material as any material that contains greater that 1% asbestos.

- During the asbestos inspection, potential hazardous materials and universal waster were noted.

RESULTS

DLZ performed an AHERA inspection that resulted in the identification of 9 suspect asbestos containing homogeneous areas (HA-1 through HA-9) within the Amtrak building, and 17 samples were collected for laboratory analysis. The following 2 vinyl floor tile samples were positive for asbestos.

Sample	Homogeneous Area	Description	General Location of Sample Collection	Approximate Size	Asbestos	% Asbestos
ASB-2	HA-2	9"X9" Green with White Streak Vinyl Floor Tile	Amtrak Waiting Area	825 sqft	**Chrysotile**	**3**
		9"X9" Green Floor Tile Brown Mastic			NAD	
ASB-16	HA-8	9"X9" Gray, Gary with White & Gray Blotches Vinyl Floor Tile	Greyhound Office	400 sqft*	**Chrysotile**	**3**
		9"X9" Gray Floor Tile Brown Rubbery Mastic			NAD	

*Includes Gray floor tile in Amtrak Office and underneath carpet.

No suspect asbestos materials were identified in Storage Building A. Copies of the laboratory analytical data is enclosed in Attachment B.

UNIVERSAL WASTE AND ENVIRONMENTAL HAZARD IDENTIFICATION

In the course of the asbestos inspection, DLZ personnel were to identify and note any building contents or conditions, which may, in the professional opinion of the site inspectors, require special consideration or handling prior to, during, or after demolition of the building. The following items were observed:

- Mercury Switch Thermostats
  - 3rd east bay Storage Building A
  - Amtrak Building Shop

- Fluorescent lights
  - 2 in East Bays Storage Building A
  - 1 in Amtrak Building Shop possible PCB ballast
  - 3 in Amtrak Office possible PCB ballast
  - 1 Compact Fluorescent light Amtrak Building lean to
  - 1 Compact Fluorescent light Amtrak Building Shop

- Lead Based Paint (LBP) – Based on the age of the buildings, it will be assumed that any paint on the buildings contains lead. It is not anticipated that the presence of LBP will require special handling or disposal techniques. However, reasonable health and safety precautions must be implemented during any planned demolition activities to minimize dust generated that may contain LBP.

During the survey minor staining of the concrete floor was observed in several locations in Storage Building A. Also, the Amtrak Building Shop contained several containers of roofing material, premixed plaster, paint spray cans, various less than 1 gallon containers of miscellaneous liquids, and miscellaneous equipment. It is DLZ's understanding that MSU will empty the buildings prior to demolition activities.

RECOMMENDATIONS

Based on the results of the asbestos and hazardous materials survey, DLZ recommends the following:

- As required by NESHAP, 40 CFR 61, Subpart M, the Notice of Intent to Renovate/Demolish form must be submitted to the Michigan Department of Environmental Quality (MDEQ), 10 working days prior to the asbestos abatement and/or any demolition activities occurring at this site. The form must also be submitted to the Michigan Department of Labor and Economic Growth 10 working days prior to the commencement of the asbestos abatement.

- The drywall on the walls and ceilings, ceiling tiles, and flooring that are non-asbestos containing material does not require abatement before demolition of the building. However, dust control measures should be used during the demolition to minimize exposure of workers to particulates.

- The 9"X9" Green and 9"X9" Gray vinyl floor tile throughout the building contains **Chrysotile asbestos** and must be properly abated prior to any demolition activities at the site. The Gray vinyl floor tile extends beneath carpeted areas.

- The mercury thermostats, florescent light bulbs and ballasts require proper handling and disposal during demolition activities.

- The asbestos, and universal wastes identified during the inspection, and potential unknowns will be properly addressed in the bid specification package.

- Prior to building demolition, MSU removes all equipment, roofing supplies, premixed plaster, spray paint cans and other items in the Amtrak Building.

- Based on the age of the structure, it is likely that painted surfaces contain lead. Caution must be exercised during any planned demolition activities to minimize the amount of airborne dust created. This may include using water to control dust produced during demolition, and will be addressed in the specifications.

LIMITATIONS

The asbestos inspection included only the sampling and quantification of all visible suspect ACM. The asbestos inspection did not include the removal of any permanent structures (i.e. walls, floors, and ceilings) to identify potential hidden ACM. As a result, the potential exists for unforeseen additional quantities of ACM to be present in these structures due to these materials not being readily observable or accessible.

The results of this inspection are based on the condition of the building and potential ACM on the date of the inspection. Any change in these conditions may result in different recommendations.

DLZ appreciates this opportunity to provide environmental services to CATA and looks forward to developing the specifications.

If you have any questions, or require additional information, please contact our office.

Very truly yours,

DLZ MICHIGAN, INC.

Curtis G. Roebuck, C.P.G
Environmental Department Manager

CGR/DA

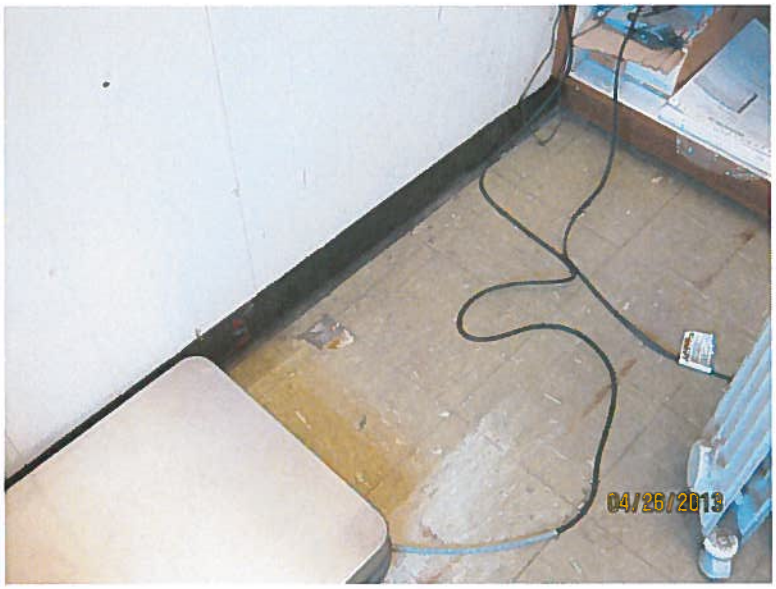
Attachments

\\lan1\proj\PROJ\1341\6517 CATA Multi Modal Facility\Enviro\Asbestos Inspection\CATA ELMMF ACM Report.docx

PHOTOGRAPH LOG

ACM Investigation & Hazardous Materials Survey

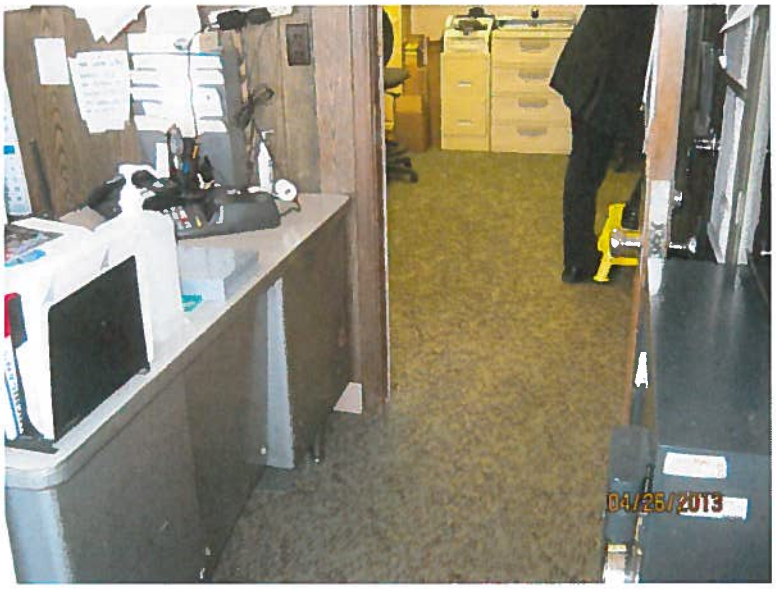
Photograph No. 1
HA-2 Amtrak Building Waiting Area 9"X9" Green Floor Tile 3% **Chrysotile asbestos**



Photograph No. 2
HA-8 Amtrak Building Greyhound Office 9"X9" Gray Floor Tile 3% **Chrysotile asbestos**

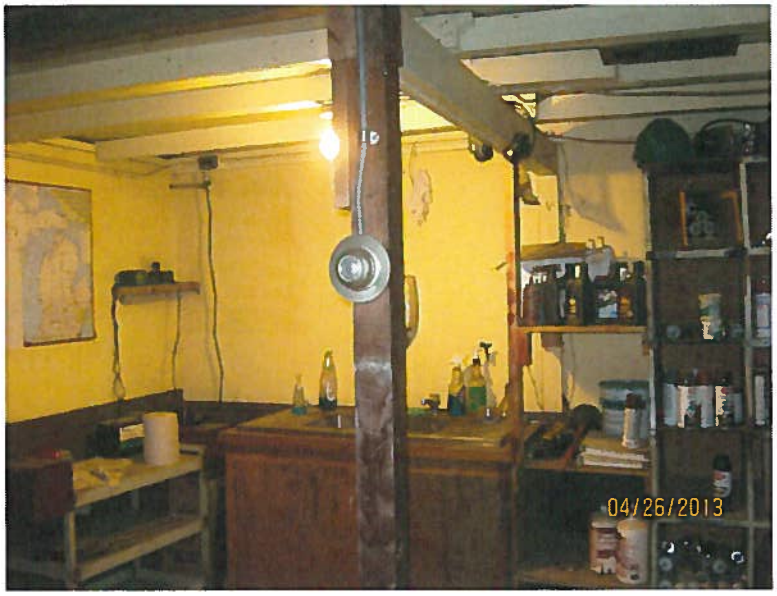
ACM Investigation & Hazardous Materials Survey

Photograph No. 3
9"X9" Green Floor Tile



Photograph No. 4
9"X9" Gray Floor Tile Underneath Carpet

ACM Investigation & Hazardous Materials Survey



Photograph No. 5
Mercury Thermostat Amtrak Building Shop

Photograph No. 6
Mercury Thermostat Storage Building A 3rd East Bay and Floor Staining

ACM Investigation & Hazardous Materials Survey

Photograph No. 7
Amtrak shop area

Photograph No. 8
Miscellaneous containers Amtrak shop/storage area

ACM Investigation & Hazardous Materials Survey

Photograph No. 9
Fluorescent Light Amtrak Station

Photograph No. 10
Compact Fluorescent Light Bulbs Storage Building A

ATTACHMENT A

DLZ
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CLIENT CATA
PROJECT Amtrak + Storage bldg
SUBJECT ACM survey

PROJECT NO.
SHEET NO. 1 OF
COMP. BY DDLA DATE 4-26-13
CHECKED BY DATE

Lean-to & concrete floor, wood truss roof w/ shingles North wall concrete other 3 wood stud
Incandes. Light 1 CFL Bulb No Heat, various maint Chemical to be moved when bldg cleaned out
Door closed + locked

Storage BARN concrete floor, concrete walls wood wall on EAST + west conc N+S

Shop AREA 1-mercury switch thermostat, 1 CFL Bulb 1-Flourescent LAMP Possible PCB BALLAST MANY Roofing chemicals in shop should be moved ~~when~~ before Demo

AMTRK BLDG

Entry way - Dot Dot worm pattern 2x4 15x8, Dry wall walls
ASB-1 - 12x12 VFT TAN Brown + white Blotches

ASB-2 9x9 VFT GREEN w white streaks 26x28 + 5x5 + 5x8 + 4x8

ASB 3 - 9x9 GRAY w/ white Dark Gray blotches 2x3, 2x3 Rear Exit
ASB-4 - DCT 2x4' Dot worm pattern same As ASB-2 Quantity - 28x32 AREA for Lights waiting AREA

men's + womens Bathroom - ceramic tile on floor, Dry wall walls
Fiberglass DCT 2x4

Entry way Drywall 15 9x16

51 x 5265 - 3154

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CLIENT CATA
PROJECT Bldg Demo
SUBJECT ACM survey Amtrak Bldg

PROJECT NO.
SHEET NO. 2 OF
COMP. BY DCA DATE 4-26-13
CHECKED BY DATE

Waiting area
9x9 Green VFT 9x9" Gray VFT,
ASB-5 drywall 10x10 + 10x5 + 10x33 16x20 10x16 9' x 18' in Rear EXIT Above ceiling At mens Bathroom

ASB-6 plaster Above ceiling in Rear/EXIT

ASB-7 Plaster Above ceiling at womens Restroom

ASB-8 Plaster at N-E corner Above ceiling

ASB-9- DCT 2'x4' Dot worm pattern N-E corner of waiting AREA

ASB-10 - Dct 2'x4' Dot worm pattern ADJ womens Bathroom

ASB-11 - Drywall at womens Bathroom Above the Drop ceiling

ASB-12 Drywall ceiling tiles women BATHROOM

ASB-13 Drywall ceiling tiles womens Bathroom 7x10

ASB-14 - Drywall ceiling tiles mens BATHROOM 10x12

ASB-15 Drywall in mens BATHROOM ABove Ceiling in Back entry 14x8' 7'x8'

ASB-16 9"x9" VFT GRAY/ GRAY w/ White + Gray Blotches GREY Hound office

ASD-17 12"x12" VFT GRAY in Gray + white blotches 7'x14' Entry way at back EXIT

GREY Hound office
9x9 VFT GRAY 11.5x10 plaster 11.5x10
Drywall 10x10 10x7 10x7

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CLIENT CAAA
PROJECT CAAA Amtrak bldg
SUBJECT ACM survey

PROJECT NO.
SHEET NO. 3 OF
COMP. BY DDLA DATE 4-26-13
CHECKED BY DATE

Amtrak office

9x9" VFT Gray SAME AS GREY Hound office 10'X12'
Paneling on walls Dry wall behind 10x8 10x8 10x6, 10x10
Plaster ceiling 10x17
Flourscent Lights possible PCB BALLAST
NO Thermostat

ticket office Amtrak

Plaster Ceiling 10x15
Paneling w/ possible Dry wall behind 12x10 10x10 10x7 3x10
Floor Tile VFT 9x9 GRAY 10x15 SAME AS greyhound office
NO Thermostat

Unable to Access janitors closet

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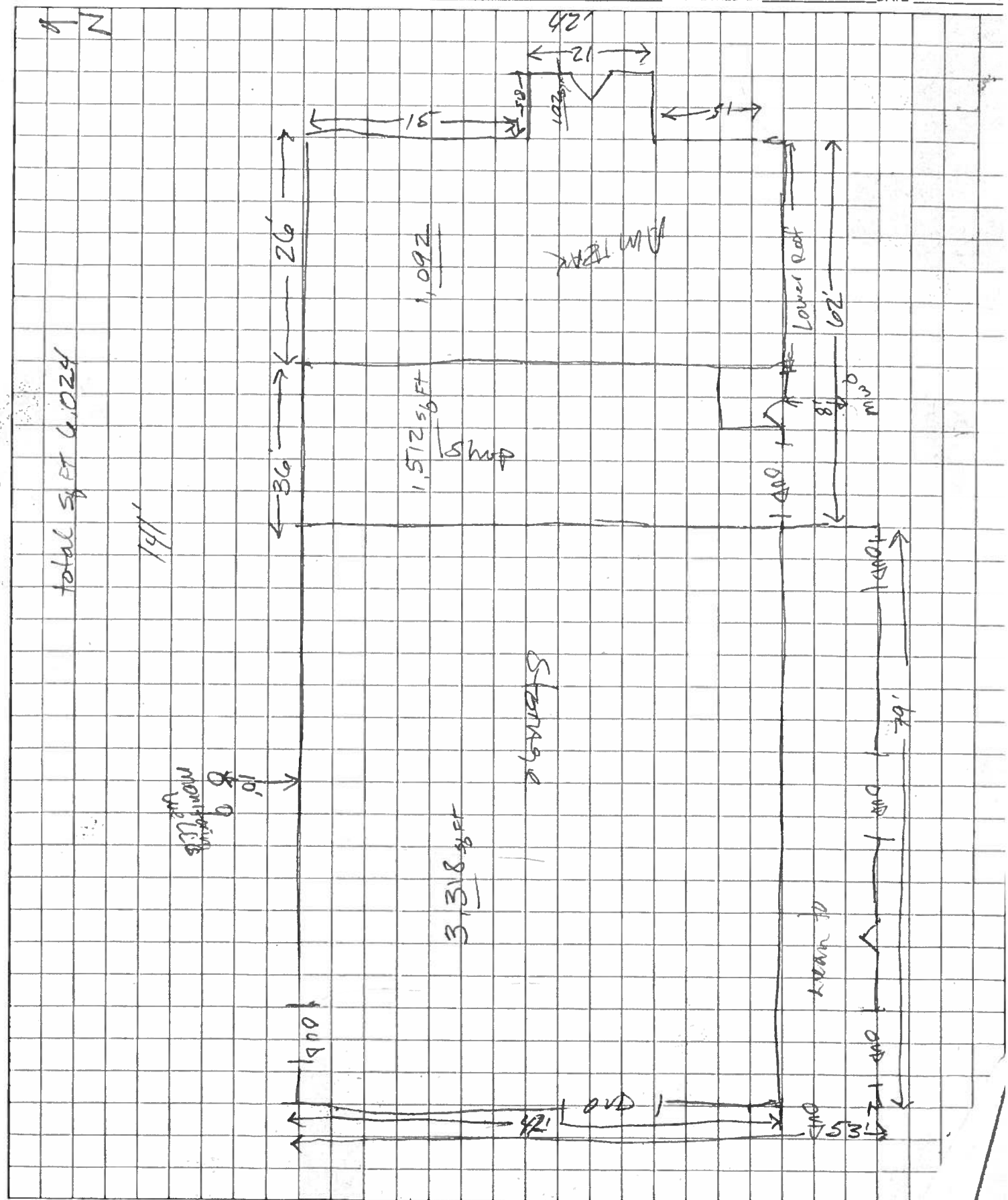
CLIENT CAAA
PROJECT AMTRAK bldg
SUBJECT ACM survey

PROJECT NO.
SHEET NO. 4 OF
COMP. BY DDLA DATE 4-26-13
CHECKED BY DATE



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CLIENT MSU- CATA
PROJECT Storage bldg "A"
SUBJECT Asbestos Survey

PROJECT NO.
SHEET NO. 5 OF
COMP. BY DDCA DATE 4-26-1
CHECKED BY DATE

Concrete block Bldg, concrete floor, with

No Heat EAST 2 bays - 2 flourescent fixtures
No possible NO PCB BALLAST + Green bulbs Now mercury
Light staining on concrete floors (locked door out)
NO paint

3rd EAST bay 1 mercury thermostat, staining on concrete floor N-W corner from man door to North partial wall 2 incandescant lights + bulbs no paint

Man Door to Rear storage AREA No Heat, incandes. Lights & bulbs Concrete floor block walls NO PAINT
5 empty steel tanks Lgt off door locked

Locker #1 Block wall conc. floor, small oil stain
No paint or Heat incandes lights + bulbs

Locker #2 Locked

Locker #3 Block walls bare conc floor, No paint No Heat

Locker #4 Block walls bare conc floor No paint No Heat
Incandes. Light & bulb Closed but No lock for door
EARLIER TRUCK came & Removed Hyd Pallet Truck (ELE)
1 Floor drain

Exterior paint Assumed to be lead based on age of bldg.

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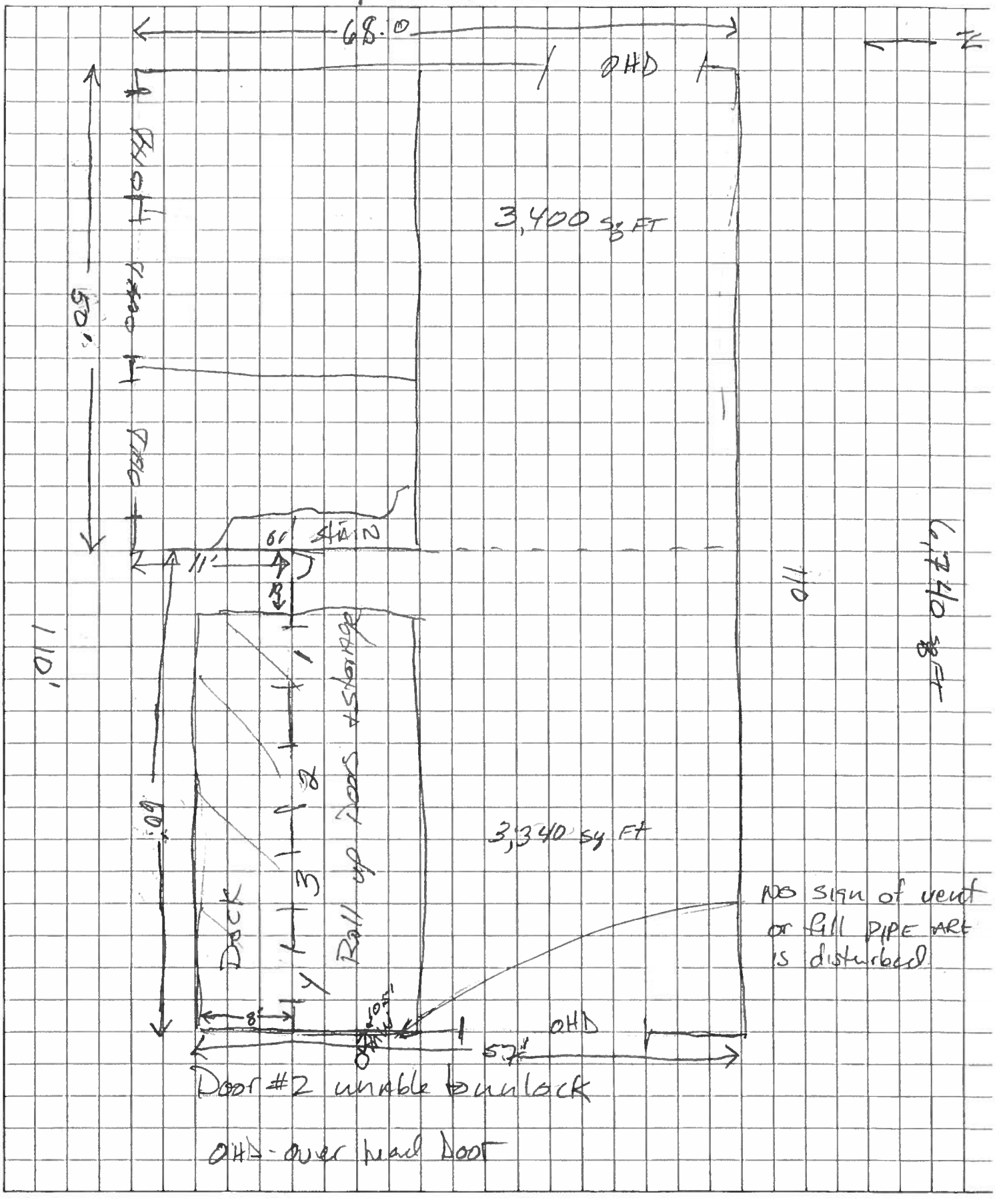
CLIENT CAAA
PROJECT
SUBJECT Acm Survey
Drawing storage 'A'

PROJECT NO.
SHEET NO. 6 OF
COMP. BY DATE 4-26-12
CHECKED BY DATE



ATTACHMENT B

Fibertec
industrial hygiene
services, inc.

BULK SAMPLE ANALYTICAL REPORT

Fibertec IHS Project #33314-1
NVLAP Accreditation #101510-0

Client Name: DLZ MI
Project Name: CATA, Amtrak Building
Summary: 17 Submitted Bulk Samples, 30 Sample Layers Analyzed.

Date Sampled: 4/26/2013
Date Submitted: 4/16/2013
Date Analyzed: 5/2/13, 5/3/13

Client P.O. #: N/A
C.O.C. #: 92332, 92333

Fibertec Sample No.	Client I.D. No.	Description / Location	Asbestos Type	Non-Asbestos Containing Portion	Analyst
1-1	1-1	Tan tabular material, tan 12" x 12" vinyl floor tile, front entry.	NAD	Non-fibrous material 98% Cellulose fibers 2%	JAW
2-1	2-1	Green tabular material, green 9" x 9" vinyl floor tile, waiting area. Layer 1 of 2.	Chrysotile 3%	Non-fibrous material 93% Cellulose fibers 4%	JAW
2-1	2-1	Brown rubbery material, green 9" x 9" vinyl floor tile mastic, waiting area. Layer 2 of 2.	NAD	Non-fibrous material 92% Cellulose fibers 8%	JAW
3-1	3-1	White tabular material, green 9" x 9" vinyl floor tile, waiting area. Layer 1 of 2.	NAD	Non-fibrous material 98% Cellulose fibers 2%	JAW
3-1	3-1	Brown rubbery material, green 9" x 9" vinyl floor tile mastic, waiting area. Layer 2 of 2.	NAD	Non-fibrous material 96% Cellulose fibers 4%	JAW
4-1	4-1	White fibrous material, 2' x 4' drop ceiling tile, waiting area.	NAD	Non-fibrous material 50% Cellulose fibers 30% Fibrous glass 20%	JAW
5-1	5-1	White tabular material, drywall, waiting area. Layer 1 of 2.	NAD	Non-fibrous material 92% Cellulose fibers 8%	JAW

1914 Holloway Drive, Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0382

Fibertec
industrial hygiene
services, inc.

BULK SAMPLE ANALYTICAL REPORT

Fibertec IHS Project #33314-1
NVLAP Accreditation #101510-0

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Client P.O. #: N/A
C.O.C. #: 92332, 92333

Fibertec Sample No.	Client I.D. No.	Description / Location	Asbestos Type	Non-Asbestos-Containing Portion	Analyst
5-1	5-1	Brown fibrous material, drywall, waiting area. Layer 2 of 2.	NAD	Cellulose fibers 93% Non-fibrous material 7%	JAW
6-1	6-1	White tabular material, plaster, Men's Restroom. Layer 1 of 2.	NAD	Non-fibrous material >99% Cellulose fibers <1%	JAW
6-1	6-1	Gray cementitious material, plaster, Men's Restroom. Layer 2 of 2.	NAD	Non-fibrous material >99% Cellulose fibers <1%	JAW
7-1	7-1	White tabular material, plaster, waiting area. Layer 1 of 2.	NAD	Non-fibrous material >99% Cellulose fibers <1%	JAW
7-1	7-1	Gray cementitious material, plaster, waiting area. Layer 2 of 2.	NAD	Non-fibrous material >99% Cellulose fibers <1%	JAW
8-1	8-1	White tabular material, plaster, northeast waiting area. Layer 1 of 2.	NAD	Non-fibrous material >99% Cellulose fibers <1%	JAW
8-1	8-1	Gray cementitious material, plaster, northeast waiting area. Layer 2 of 2.	NAD	Non-fibrous material >99% Cellulose fibers <1%	JAW

Fibertec
industrial hygiene
services, inc.

BULK SAMPLE ANALYTICAL REPORT

Fibertec IHS Project #33314-1
NVLAP Accreditation #101510-0

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Date Analyzed: 5/2/13, 5/3/13

Client P.O. #: N/A
C.O.C. #: 92332, 92333

Fibertec Sample No.	Client I.D. No.	Description / Location	Asbestos Type	Non-Asbestos-Containing Portion	Analyst
9-1	9-1	White fibrous material, 2' x 4' drop ceiling tile, waiting area.	NAD	Non-fibrous material 40% Cellulose fibers 40% Fibrous glass 20%	JAW
10-1	10-1	White fibrous material, 2' x 4' drop ceiling tile, Women's Restroom.	NAD	Non-fibrous material 55% Cellulose fibers 30% Fibrous glass 15%	JAW
11-1	11-1	White tabular material, drywall, above Women's Restroom Layer 1 of 2.	NAD	Non-fibrous material 93% Cellulose fibers 7%	JAW
11-1	11-1	Brown fibrous material, drywall, above Women's Restroom Layer 2 of 2.	NAD	Cellulose fibers 90% Non-fibrous material 10%	JAW
12-1	12-1	White tabular material, drywall ceiling tile, Women's Restroom. Layer 1 of 2.	NAD	Non-fibrous material 90% Cellulose fibers 10%	JAW
12-1	12-1	Brown fibrous material, drywall ceiling tile, Women's Restroom. Layer 2 of 2.	NAD	Cellulose fibers 86% Non-fibrous material 14%	JAW
13-1	13-1	White tabular material, drywall ceiling tile, Women's Restroom. Layer 1 of 2.	NAD	Non-fibrous material 92% Cellulose fibers 8%	JAW

Fibertec
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services, inc.

BULK SAMPLE ANALYTICAL REPORT

Fibertec IHS Project #33314-1
NVLAP Accreditation #101510-0

Client Name: DLZ MI
Project Name: CATA, Amtrak Building
Summary: 17 Submitted Bulk Samples, 30 Sample Layers Analyzed.

Date Sampled: 4/26/2013
Date Submitted: 4/16/2013
Date Analyzed: 5/2/13, 5/3/13

Client P.O. #: N/A
C.O.C. #: 92332, 92333

Fibertec Sample No.	Client I.D. No.	Description / Location	Asbestos Type	Non-Asbestos-Containing Portion	Analyst
13-1	13-1	Brown fibrous material, drywall ceiling tile, Women's Restroom. Layer 2 of 2.	NAD	Cellulose fibers 80% Non-fibrous material 20%	JAW
14-1	14-1	White tabular material, drywall ceiling tile, Men's Restroom. Layer 1 of 2.	NAD	Non-fibrous material 88% Cellulose fibers 12%	JAW
14-1	14-1	Brown fibrous material, drywall ceiling tile, Men's Restroom. Layer 2 of 2.	NAD	Cellulose fibers 93% Non-fibrous material 7%	JAW
15-1	15-1	White tabular material, drywall, Men's Restroom. Layer 1 of 2.	NAD	Non-fibrous material 95% Cellulose fibers 5%	JAW
15-1	15-1	Brown fibrous material, drywall, Men's Restroom. Layer 2 of 2.	NAD	Cellulose fibers 88% Non-fibrous material 12%	JAW
16-1	16-1	Gray tabular material, gray 9" x 9" vinyl floor tile, Office. Layer 1 of 2.	Chrysotile 3%	Non-fibrous material 95% Cellulose fibers 2%	JAW
16-1	16-1	Brown rubbery material, gray 9" x 9" vinyl floor tile mastic, Office. Layer 2 of 2.	NAD	Non-fibrous material 96% Cellulose fibers 4%	JAW

1914 Holloway Drive, Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0382

Fibertec
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services, inc.

BULK SAMPLE ANALYTICAL REPORT

Fibertec IHS Project #33314-1
NVLAP Accreditation #101510-0

Client Name: DLZ MI
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Date Sampled: 4/26/2013
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Date Analyzed: 5/2/13, 5/3/13

Client P.O. #: N/A
C.O.C. #: 92332, 92333

Fibertec Sample No.	Client I.D. No.	Description / Location	Asbestos Type	Non-Asbestos-Containing Portion	Analyst
17-1	17-1	Gray tabular material, gray 9" x 9" vinyl floor tile, rear entry. Layer 1 of 2.	NAD	Non-fibrous material 97% Cellulose fibers 3%	JAW
17-1	17-1	Brown rubbery material, gray 9" x 9" vinyl floor tile mastic, rear entry. Layer 2 of 2.	NAD	Non-fibrous material 92% Cellulose fibers 8%	JAW

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industrial hygiene
services, inc.

Comments

Bulk samples are analyzed using the USEPA Test Method EPA/600/R-93/116. The constituent percent reported represents an estimate of the area percent of the component. The test report relates only to items tested. This report is not intended to be used as a product endorsement by NVLAP or any agency of the U.S. Government. Fine fibers like those in floor tile may not be discernible by this method. This report shall not be reproduced, except in full, without the written approval of the laboratory. Individual sample layers are homogeneous, unless otherwise noted. Test items were received in acceptable condition. Revision 4.0 dated 12/8/2010.

If no asbestos was/were detected in the sample/samples the acronym NAD (no asbestos detected) will appear in the Asbestos Type column of the report.

Approved Signatory: _____

Date: 5/3/2013

1914 Holloway Drive, Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0382

Fibertec environmental services

Analytical Laboratory
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
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email: lab@fibertec.us

8660 S. Mackinaw Trail
Cadillac, MI 49601
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Industrial Hygiene Services, Inc.
1914 Holloway Drive
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Fax: 517 699 0382
email: asbestos@fibertec.us

Geoprobe
11766 E. Grand River
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody # 92333

Client Name: DLZ MI
Contact Person: Curt Roebuck
Project Name/ Number: CATA Amtrak Bldg Asm Survey
Purchase Order#

Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PRESERVED (Y/N)	PARAMETERS: RUSH
	4-24-13	1300	ASB-11	DRYWALL Above Womens Rm	X	1	N	✓
			ASB-12	DRYWALL Ceiling tile Womens Rm	X	1	N	✓
			ASB-13	DRYWALL Ceiling tile Womens Room	X	1	N	✓
			ASB-14	DRYWALL Ceiling tile mens Room	X	1	N	✓
			ASB-15	DRYWALL Mens Room	X	1	N	✓
			ASB-16	9"X9" VET GRAY [redacted]	X	1	N	✓
	↓	↓	ASB-17	12"X12" VET GRAY REAR ENTRY	X	1	N	✓

Turnaround
- 24 hour RUSH (surcharge applies)
- 48 hour RUSH (surcharge applies)
- 72 hour RUSH (surcharge applies)
- Standard (5-7 bus. days) ✓
- Other: Specify

Matrix Code
- S Soil
- W Water
- A Air
- O Oil
- P Wipe
- GW Ground Water
- SW Surface Water
- WW Waste Water
- X Other: Specify

Remarks:

Comments:
Stop AFTER 1st positive of Similar materials

Relinquished By: [signature]	Date/ Time 4-26-13 1633	Received By: [signature]
Relinquished By:	Date/ Time	Received By:
Relinquished By:	Date/ Time	Received By Laboratory:

LAB USE ONLY:
Fibertec project number:
Laboratory Tracking:
Temperature at Receipt:

COC Revision: April, 2006

TERMS & CONDITIONS ON BACK

Fibertec environmental services

Analytical Laboratory
1914 Holloway Drive, Holt, MI 48842, Phone: 517 699 0345, Fax: 517 699 0388, email: lab@fibertec.us
8660 S. Mackinaw Trail, Cadillac, MI 49601, Phone: 231 775 8368, Fax: 231 775 8584

Industrial Hygiene Services, Inc.
1914 Holloway Drive, Holt, MI 48842, Phone: 517 699 0345, Fax: 517 699 0382, email: asbestos@fibertec.us

Geoprobe
11766 E. Grand River, Brighton, MI 48116, Phone: 810 220 3300, Fax: 810 220 3311

Chain of Custody # 92332
PAGE 1 of 2

Client Name: DLZ MI
Contact Person: Curt Roedbeck
Project Name/ Number: MATA Amitrak bldg ACM Survey
Purchase Order#

Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PRESERVED (Y/N)	PARAMETERS: PLM
	4-26-13	1200	ASB-1	12x12 VFT ~~tan~~ Front entry	X	1		✓
	↓	↓	ASB-2	9x9 GREEN VFT waiting AREA	X	1		✓
			ASB-3	9x9 GRAY VFT waiting AREA	X	1		✓
			ASB-4	2'x4' Drop ceiling tile waiting	X	1		✓
			ASB-5	Drywall waiting AREA	X	1		✓
			ASB-6	Plaster adj mens Room	X	1		✓
			ASB-7	Plaster waiting AREA	X	1		✓
			ASB-8	Plaster NE waiting AREA	X	1		✓
			ASB-9	2'x4' Dct waiting AREA	X	1		✓
	↓	↓	ASB-10	2'x4' Dct adj womens Room	X	1		✓

Turnaround: 24 hour RUSH (surcharge applies); 48 hour RUSH (surcharge applies); 72 hour RUSH (surcharge applies); ✓ Standard (5-7 bus. days); Other: Specify

Matrix Code: S Soil; GW Ground Water; W Water; SW Surface Water; A Air; WW Waste Water; O Oil; X Other: Specify; P Wipe

Remarks:

Comments: stop after 1st Positive sample of similar materials

Relinquished By:	Date/ Time	Received By:
[illegible signature]	4-26-13/1633	[illegible signature]
Relinquished By:	Date/ Time	Received By:
Relinquished By:	Date/ Time	Received By Laboratory:

LAB USE ONLY:
Fibertec project number:
Laboratory Tracking:
Temperature at Receipt:

COC Revision: April, 2006

TERMS & CONDITIONS ON BACK

ASBESTOS BUILDING INSPECTION REPORT

for

Michigan State University
Office of Environmental Health and Safety
East Lansing, Michigan 48824-1101

at

Michigan State University
Stores Building Number 1
Building #161
East Lansing, Michigan 48824

Investigation conducted by

Fibertec Industrial Hygiene Services, Inc.
1914 Holloway Drive
Holt, Michigan 48842

Project #25229-1

Project Date: April 23-24, 2008

Final Report Date: May 2, 2008

Contents

ASBESTOS BUILDING INSPECTION REPORT
for
Michigan State University
Stores Building #1
Project #25229-1

INTRODUCTION

Fibertec Industrial Hygiene Services, Inc. (Fibertec IHS) was retained by Michigan State University to perform an inspection for asbestos containing materials at Michigan State University, Stores Building #1, East Lansing, Michigan. The project was discussed with Mr. Zach Hansmann of the Michigan State University Office of Environmental Health and Safety prior to beginning the fieldwork. The inspection was designed to identify asbestos-containing materials within the building. The inspection was conducted pursuant to the inspection requirements of the Occupational Safety and Health Administration (OSHA), General Industry Standard for Asbestos, 29 CFR 1910.1001 and the Environmental Protection Agency (EPA) Asbestos Sampling Bulletin, dated September 30, 1994.

The asbestos building inspection took place on April 23-24, 2008. During the inspection, bulk samples of suspect asbestos-containing material (ACM) were collected. Collected asbestos bulk samples were submitted to the Fibertec IHS Polarized Light Microscopy (PLM) laboratory for analysis using EPA Method EPA/600/R-93/116.

CERTIFICATION

Mr. John Luna, a State of Michigan accredited asbestos building inspector, conducted the building inspection. Mr. Luna also maintains accreditation as an Asbestos Contractor/Supervisor. A copy of his asbestos inspector credential appears in Appendix A.

Trained polarized light microscopists analyzed all bulk asbestos samples in the Fibertec IHS Polarized Light Microscopy (PLM) laboratory. This laboratory maintains current National Voluntary Laboratory Accreditation Program (NVLAP) accreditation (Lab Code 101510-0). A copy of the Fibertec IHS NVLAP accreditation certificate appears in Appendix B.

GENERAL INSPECTION PROCEDURES

In an effort to identify asbestos-containing material (ACM) in all areas of the building, an extensive inspection procedure was followed. A visual inspection of all rooms in the Stores Building #1 was combined with the collection of an appropriate number and distribution of bulk samples. The following areas were not accessible during the inspection: Room 111K, 111R and the roof.

Determination of suspect asbestos-containing material was based on visual examination, bulk sample analysis, material age and professional experience. Specifically, materials similar in color and texture were classified into homogenous areas (*e.g.*, smooth plaster over drywall). An appropriate number and distribution of samples were collected from material in each homogenous area. All samples were analyzed by polarized light microscopy. When the results of analysis of all samples from a homogenous area indicate no asbestos present (less than or equal to one percent) the homogenous area is considered to be a non-asbestos containing material. When the results of analysis indicate asbestos present (in a quantity greater than one percent) in just one sample of those collected from a single homogenous area, the material in the entire homogenous area must be considered asbestos containing.

Destructive testing (*i.e.*, demolition) was not conducted as part of this asbestos building inspection. As such, quantities of ACM believed to exist in inaccessible areas (like pipe joint and hanger insulation in wall cavities) have not been accounted for in this inspection. Additionally, some asbestos-containing material hidden from view may be present and may not have been accounted for as part of this inspection (e.g. floor leveling compound beneath floor tile, vermiculite in cinder block walls).

RESULTS OF VISUAL INSPECTION

Based on the inspection, 24 distinct suspect asbestos-containing materials were identified in the inspection of the Stores Building #1, East Lansing, Michigan. Some suspect asbestos-containing materials were sampled a number of times in different locations, smooth plaster over drywall, being an example. All suspect asbestos-containing materials observed at the time of the inspection are listed in the Room by Room Asbestos Building Inspection Forms. Information from lab analysis of collected samples is incorporated into the Room by Room Asbestos Building Inspection Forms to facilitate interpretation of the data.

BULK SAMPLE RESULTS

The information gathered from the inspection is included in Appendices C (Bulk Sample Log), D (Bulk Sample Analytical Report), E (Room by Room Asbestos Building Inspection Forms), F (Floor Plan Drawing with Sample Locations), G (Photograph Log) and H (Significantly Damaged ACM). The lab analysis reports give a description of each sample, location where each sample was collected, and the results of analysis.

SUMMARY OF ASBESTOS-CONTAINING MATERIALS

The following material was found to contain asbestos at the Stores Building #1:

9" x 9" gray floor tile with white and black streaks and associated mastic
9" x 9" tan floor tile with cream and rust streaks
12" x 12" tan floor tile with rust streaks
Window glazing compound
Brown ventilation duct caulk compound
Domestic water supply pipe joint insulation on fiberglass pipe straight insulation
Glue pods associated with 12" x 12" white ceiling tile with uniform holes

The following materials were assumed to contain asbestos at the Stores Building #1:

Fire door and frame
Roofing materials and products
Window and door frame caulk compound
Flat transite panels
Corrugated transite panels

The following materials were found not to contain asbestos at the Stores Building #1:

Mastic associated with 9" x 9" tan floor tile mastic
Mastic associated with 12" x 12" tan floor tile mastic
2'x 2' white lay-in ceiling tile with pin holes
2' x 4' white lay-in ceiling tile with pin holes and fissures
12" x 12" white spline ceiling tile with fissures
12" x 12" white ceiling tile with pin holes and fissures and associated glue pods
4" dark brown cove molding and associated mastic
4" black cove molding and associated mastic
3" black cove molding
Fire rated drywall panels
Smooth plaster over drywall
Ceiling tectum board
Ceiling fiberboard
Gray building caulk compound
12" x 12" white ceiling tile with uniform holes (NOTE: glue pods associated with these tile are ACM)

CONCLUSION

Undamaged, non-friable (cannot be crumbled, pulverized or reduced to powder by hand pressure when dry) known or assumed asbestos-containing materials (*e.g.*, fire doors, floor tile mastic) and damaged and undamaged friable (can be crumbled, pulverized or reduced to powder by hand pressure when dry) known or assumed asbestos-containing materials (e.g., pipe joint insulation) were identified at the Stores Building #1. No significantly damaged ACM were observed during the course of this inspection. However, approximately 3 s.f. of 9" x 9" VAT in the Mechanical Room 111JA, appear to be delaminating from the floor.

RECOMMENDATIONS

Based on the information collected during this asbestos building inspection, the following recommendations are offered. These recommendations are based on plans to maintain the building in its current configuration and use and may have to be adjusted if change of ownership, emergency, or other factors alter the condition, use or planned use of the building.

Perform the following in this case:

1. Notify the owner, building maintenance staff, and contractors of the presence of ACM within the building. Ensure that contractors who work in the vicinity of or who may encounter asbestos-containing materials during the course of their work have successfully completed appropriate training. Ensure that contractors who work in the vicinity of or who may disturb asbestos-containing materials do so pursuant to the requirements of the Asbestos in Construction Standard, 29 CFR 1926.1101.

2. Provide two-hour asbestos hazard awareness training including specific information regarding the quantity, condition and location of ACM for those individuals in the building who may encounter asbestos during the course of their work. Ensure that contractors performing work in or on the building have equivalent training (at a minimum) and provide appropriate documentation of said training.

3. Label ACM in routine maintenance areas, Mechanical Rooms and Custodial Closets, as required by 29 CFR 1910.1200(7)(vii).

4. Plan for the proper removal of any ACM that might be impacted by renovation or demolition prior to any renovation or demolition.

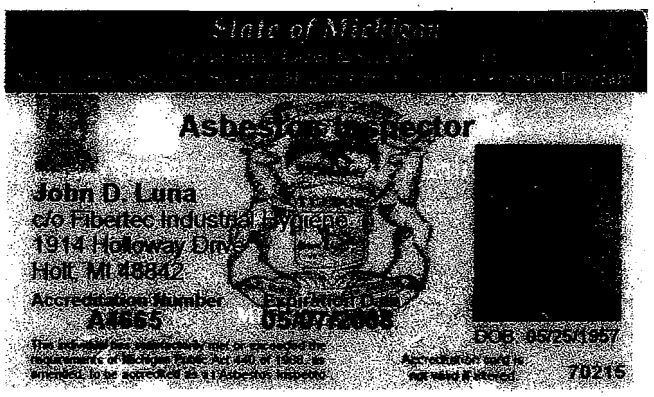
5. Approximately 3 s.f. of 9" x 9" vinyl asbestos floor tile in the Mechanical Room 111JA that have become delaminated should be either disposed of properly by trained personnel or re-glued to the concrete floor.

John Luna
Michigan Accredited Asbestos Inspector #A4665

Phillip A. Peterson
Vice President

Appendix A

Asbestos Inspector Credential



John D. Luna

Cardholder's signature

Your accreditation card is valid for a period of one year, as indicated by the expiration date on the card. Your card must be present on any project site where you are conducting asbestos-related work. If a replacement card is needed, the replacement fee will be $25.00.

All questions regarding your accreditation should be directed to 517.322.5806.

Please visit our website at: *www.michigan.gov/asbestos*

4665-70215

Information contained in the bar code is limited to ID# and control#

If found please return to:
MIOSHA - CSHD - Asbestos Program
7150 Harris Drive
P.O. Box 30671
Lansing, MI 48909-8171

MIOSHA-CSH-269 (12/03)
Authority: Michigan Public Act 440 of 1988, as amended

18000

Appendix B

Fibertec IHS NVLAP Certification

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101510-0

Fibertec Industrial Hygiene Services, Inc.

Holt, MI

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated 18 June 2005).

2008-01-01 through 2008-12-31

Effective dates

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

Sally S. Bruce

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2006-09-13)

Appendix C

Bulk Sample Log

Bulk Sample Log
Explanation Page

HA – Homogenous Area is a material like in color and texture. (*e.g.*, tan, fluffy, spray-applied structural fireproofing). Homogenous areas are given a unique number (*e.g.* HA #1) which represents a single suspect asbestos-containing material.

Total Footage – The quantity of asbestos-containing material estimated to be present in the structure(s). Quantities are reported in square feet (s.f.), linear feet (l.f.), or count (ct.) – the actual number counted.

Material Type – Materials were classified as one of three types: 1) Surfacing Material (SM) represents material spray or trowel applied to a surface (e.g., plaster or structural fireproofing), 2) Thermal System Insulation (TSI) keeps heat in a system or prevents condensation (*e.g.*, hot water tank or pipe insulation), or 3) Miscellaneous Material (MM) represents material not in the previous two categories. Examples include drywall, floor tile, ceiling tile and mastic.

Material Condition – Material condition is classified into one of three categories: 1) Undamaged material (U) has no damage, 2) Damaged material (D) has >0-10% damage or less than 25% damage locally, or 3) Significantly damaged material (SD) has more than 10% damage overall or >25% damage locally.

F/NF – Friable (F) material can be crumbled or pulverized by hand pressure when dry. Non-friable (NF) material cannot be crumbled or pulverized by hand pressure when dry.

N/A – Not analyzed

BULK SAMPLE LOG

Fibertec IHS Project #25229-1

DATE: 4/23/2008 BUILDING: MSU, Stores Building No. 1 INSPECTOR: John Luna

HA #	TOTAL FOOTAGE	MATERIAL TYPE	MATERIAL CONDITION	F/NF	MATERIAL ACM (Y/N)	ASBESTOS DETECTED* (Y/N)	SAMPLE #	SAMPLE LOCATION
1	4,136 s.f.	MM	U	NF	Y	Y	1	Beneath sink in Room 112C (Women's Restroom).
						N/A	2	Room 111 JA, south center beneath toilet.
HA DESCRIPTION: 9" x 9" gray floor tile with white and black streaks and associated mastic.					NOTES: Mastic is also asbestos containing			
2	150 s.f.	MM	U	F	Y	Y	3	Room 111J, 5' west of center of east wall.
						N/A	4	Room 111JA, at entrance.
HA DESCRIPTION: 9" x 9" tan floor tile with cream and rust streaks and associated mastic.					NOTES: Mastic is non asbestos containing			
3	538 s.f.	MM	U	NF	Y	Y	5	Room 111C, west side of northeast entrance.
						N/A	6	Room 111C, west side of south entrance.
HA DESCRIPTION: 12" x 12" tan floor tile with rust streaks and associated mastic.					NOTES: Mastic is non asbestos containing			
4	5,041 s.f.	MM	U	F	N	N	7	Room 112, southeast corner near Reception Area.
						N	8	Room 112B, above entrance.
HA DESCRIPTION: 2' x 2' white lay-in ceiling tile with pin holes and fissures.					NOTES:			
5	4,585 s.f.	MM	U	F	N	N	9	Room 111T, 16' south of north wall and 6' west of east wall.
HA DESCRIPTION: 2' x 4' white lay-in ceiling tile with pin holes and fissures.					NOTES:	N	10	Room 111S, northwest corner.
6	733 s.f.	MM	U	F	N	N	11	Room 112C, Women's Restroom, southwest corner.
						N	12	Room 111DA, above entrance.
HA DESCRIPTION: 12" x 12" white spline ceiling tile with fissures.					NOTES:			

N/A = Not Analyzed.

BULK SAMPLE LOG

Fibertec IHS Project #25229-1

DATE: 4/23/2008 BUILDING: MSU, Stores Building No. 1 INSPECTOR: John Luna

HA #	TOTAL FOOTAGE	MATERIAL TYPE	MATERIAL CONDITION	F/NF	MATERIAL ACM (Y/N)	ASBESTOS DETECTED* (Y/N)	SAMPLE #	SAMPLE LOCATION
7	120 s.f.	MM	U	F	N	N	13	Room 110D, center, north side.
						N	14	Room 110D, southwest corner.
HA DESCRIPTION: 12" x 12" white ceiling tile with pin holes and fissures and associated glue pods.					NOTES:			
8	1,300 l.f.	MM	U	NF	Assumed	Assumed	Unsampled	
HA DESCRIPTION: White window and door frame caulk compound.					NOTES:			
9	6,266 l.f.	MM	U/SD	F	Y	Y	15	Room 112, 2nd window, north of east main entrance.
						N/A	16	Room 112A, lower west corner of north window.
HA DESCRIPTION: Gray window glazing compound.					NOTES:			
10	180 l.f.	MM	U	NF	Y	Y	17	Room 112, above suspended ceiling, southeast corner near Reception Area.
HA DESCRIPTION: Brown ventilation duct caulk compound.					NOTES:	N/A	18	Room 111N, northeast corner of fan blower unit.
11	120 s.f.	MM	U	NF	Assumed	Assumed	Unsampled	
HA DESCRIPTION: Flat transite exterior panels.					NOTES:			
12	550 s.f.	MM	U	NF	Assumed	Assumed	Unsampled	
HA DESCRIPTION: Corrugated transite exterior panels.					NOTES:			

N/A = Not Analyzed.

BULK SAMPLE LOG

Fibertec IHS Project #25229-1

DATE: 4/23/2008 BUILDING: MSU, Stores Building No. 1 INSPECTOR: John Luna

HA #	TOTAL FOOTAGE	MATERIAL TYPE	MATERIAL CONDITION	F/NF	MATERIAL ACM (Y/N)	ASBESTOS DETECTED* (Y/N)	SAMPLE #	SAMPLE LOCATION
13	423 l.f.	MM	U	NF	N	N	19	Hallway, east wall between entrance to Room 112 and 111E.
						N	20	Room 111J, entrance, southwest corner.
HA DESCRIPTION: 4" dark brown cove molding and associated mastic.					NOTES:			
14	936 l.f.	MM	U	NF	N	N	21	Room 112C, beneath sink.
						N	22	Room 111DA, south side of entrance.
HA DESCRIPTION: 4" black cove molding and associated mastic.					NOTES:			
15	12 ct.	MM	U	NF	Assumed	Assumed	Unsampled	
HA DESCRIPTION: Fire door and frame.					NOTES:			
16	45,000 s.f.	MM	U	NF	Assumed	Assumed	Unsampled	
HA DESCRIPTION: Roofing materials and products.					NOTES:			
17	30 s.f.	MM	U	NF	N	N	23	Room 111JA, upper south end, northwest corner.
						N	24	Room 111JA, center, northwest corner.
HA DESCRIPTION: Fire rated drywall wall panels.					NOTES:	N	25	Room 111JA, upper north end, northwest corner.
18	10,621 s.f.	MM	U	NF	N	N	26	Room 112B, above entrance.
						N	27	Room 111H, 4' west of north entrance, above suspended ceiling.
HA DESCRIPTION: Smooth plaster over drywall.					NOTES:	N	28	Hallway outside of Room 111E, behind water fountain.

N/A = Not Analyzed.

BULK SAMPLE LOG

Fibertec IHS Project #25229-1

DATE: 4/23/2008 BUILDING: MSU, Stores Building No. 1 INSPECTOR: John Luna

HA #	TOTAL FOOTAGE	MATERIAL TYPE	MATERIAL CONDITION	F/NF	MATERIAL ACM (Y/N)	ASBESTOS DETECTED* (Y/N)	SAMPLE #	SAMPLE LOCATION
19	450 s.f.	MM	U	NF	N	N	29	Room 111B, northeast corner.
						N	30	Room 111B, southeast corner.
HA DESCRIPTION: Ceiling tectum board.					NOTES:			
20	22,364 s.f.	MM	U	F	N	N	31	Area above Room 111C, center, east side.
						N	32	Area above Room 111C, southeast corner near roof drain.
HA DESCRIPTION: Ceiling fiberboard.					NOTES:			
21	20 ct.	MM	U	NF	Y	Y	37	Northwest corner of attic area above Room 111C.
						N/A	38	Southeast of entrance to attic area above Room 111C.
HA DESCRIPTION: Domestic water supply pipe joint insulation on fiberglass pipe straight insulation.					NOTES:	N/A	39	Southwest corner of attic area above Room 111C.
22	200 l.f.	MM	U	NF	N	N	40	Southeast corner of building, south side, 30' west of southeast corner.
HA DESCRIPTION: Gray building caulk compound.					NOTES:	N	41	Center of east side of building, east of loading dock #3.
23	551 l.f.	MM	U	NF	N	N	33	Room 111T, south side of east entrance.
						N	34	Room 111S, southwest corner, south wall.
HA DESCRIPTION: 3" black cove molding.					NOTES:			
24	67 s.f.	MM	U	F	Y*	Y*	35	Room 112C, northwest corner of Women's Restroom, Lobby Area.
HA DESCRIPTION: 12" x 12" white ceiling tile with uniform holes and associated glue pods.					NOTES: *Ceiling tile is non asbestos containing glue pods are asbestos containing	N/A	36	Room 112C, northeast corner of Women's Restroom, Lobby Area.

N/A = Not Analyzed.

Appendix D

Bulk Sample Analytical Report

Fibertec
industrial hygiene
services, inc.

BULK SAMPLE ANALYTICAL REPORT

CLIENT: MICHIGAN STATE UNIVERSITY
FIBERTEC PROJECT NO.: 25229-1
NVLAP ACCREDITATION #101510-0

DATE SAMPLED: 4/23/08
DATE SUBMITTED: 4/23/08
DATE ANALYZED: 4/28, 29 & 30/2008

PROJECT:
MICHIGAN STATE UNIVERSITY, STORES PRINTING AND SALVAGE BUILDING, 1330 SOUTH HARRISON, EAST LANSING, 41 COLLECTED BULK SAMPLES, 56 SAMPLE LAYERS ANALYZED.

CLIENT P.O.#: N/A
C.O.C. NO.: 79764

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FIBERTEC SAMPLE NO.	CLIENT I.D. NO.	DESCRIPTION/ LOCATION	*ASBESTOS PRESENT Y/N	ASBESTOS TYPE	PERCENT ASBESTOS	TECH. INIT.	NON-ASBESTOS-CONTAINING PORTION
1	1	GRAY TABULAR FIBROUS MATERIAL, 9" X 9" GRAY FLOOR TILE WITH WHITE AND BLACK STREAKS, BENEATH SINK IN ROOM 112C (WOMEN'S RESTROOM), LAYER 1 OF 2.	Y	CHRYSOTILE	8%	AJK	92% NON FIBROUS MATTER
1	1	BLACK ASPHALTIC MATERIAL, 9" X 9" GRAY FLOOR TILE MASTIC, BENEATH SINK IN ROOM 112C (WOMEN'S RESTROOM), LAYER 2 OF 2.	Y	CHRYSOTILE	6%	AJK	94% NON FIBROUS MATTER
3	3	TAN TABULAR MATERIAL, 9" X 9" TAN FLOOR TILE WITH CREAM AND RUST STREAKS, ROOM 111J, 5' WEST OF CENTER OF EAST WALL, LAYER 1 OF 2.	Y	CHRYSOTILE	3%	DLL	97% NON FIBROUS MATTER
3	3	BLACK ASPHALTIC MATERIAL, 9" X 9" TAN FLOOR TILE MASTIC, ROOM 111J, 5' WEST OF CENTER OF EAST WALL, LAYER 2 OF 2.	N			DLL	98% NON FIBROUS MATTER 2% CELLULOSE

COMMENTS:

1914 Holloway Drive Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0382

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1	5	WHITE TABULAR MATERIAL, 12" X 12" TAN FLOOR TILE WITH RUST STREAKS, ROOM 111C, WEST SIDE OF NORTHEAST ENTRANCE, LAYER 1 OF 2.	Y	CHRYSOTILE	2%	AJK	98% NON FIBROUS MATTER
5	5	BLACK ASPHALTIC MATERIAL, 12" X 12" TAN FLOOR TILE MASTIC, ROOM 111C, WEST SIDE OF NORTHEAST ENTRANCE, LAYER 2 OF 2.	N			AJK	>99% NON FIBROUS MATTER <1% CELLULOSE
7	7	TAN FIBROUS MATERIAL, 2' X 2' WHITE LAY-IN CEILING TILE WITH PIN HOLES AND FISSURES, ROOM 112, SOUTHEAST CORNER NEAR RECEPTION AREA.	N			AJK	45% NON FIBROUS MATTER 35% CELLULOSE 20% FIBROUS GLASS
8	8	TAN FIBROUS MATERIAL, 2' X 2' WHITE LAY-IN CEILING TILE WITH PIN HOLES AND FISSURES, ROOM 112B, ABOVE ENTRANCE.	N			AJK	35% NON FIBROUS MATTER 35% CELLULOSE 30% FIBROUS GLASS

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	9	TAN FIBROUS MATERIAL, 2' X 4' WHITE LAY-IN CEILING TILE WITH PIN HOLES AND FISSURES, ROOM 111T, 16' SOUTH OF NORTH WALL AND 6' WEST OF EAST WALL.	N			AJK	50% CELLULOSE 45% NON FIBROUS MATTER 5% FIBROUS GLASS
10	10	TAN FIBROUS MATERIAL, 2' X 4' WHITE LAY-IN CEILING TILE WITH PIN HOLES AND FISSURES, ROOM 111S, NORTHWEST CORNER.	N			AJK	60% CELLULOSE 39% NON FIBROUS MATTER 1% FIBROUS GLASS
11	11	LIGHT TAN FIBROUS MATERIAL, 12" X 12" WHITE SPLINE CEILING TILE WITH FISSURES, ROOM 112C, WOMEN'S RESTROOM, SOUTHWEST CORNER, LAYER 1 OF 3.	N			AJK	80% FIBROUS GLASS 10% MINERAL WOOL 10% NON FIBROUS MATTER
11	11	BROWN FIBROUS MATERIAL, 12" X 12" WHITE SPLINE CEILING TILE WITH FISSURES, ROOM 112C, WOMEN'S RESTROOM, SOUTHWEST CORNER, LAYER 2 OF 3.	N			AJK	100% CELLULOSE

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1	11	WHITE GRANULAR MATERIAL, 12" X 12" WHITE SPLINE CEILING TILE WITH FISSURES, ROOM 112C, WOMEN'S RESTROOM SOUTHWEST CORNER, LAYER 3 OF 3.	N			AJK	98% NON FIBROUS MATTER 2% CELLULOSE
12	12	LIGHT TAN FIBROUS MATERIAL, 12" X 12" WHITE SPLINE CEILING TILE WITH FISSURES, ROOM 111DA, ABOVE ENTRANCE, LAYER 1 OF 3.	N			AJK	78% FIBROUS GLASS 12% MINERAL WOOL 10% NON FIBROUS MATTER
12	12	BROWN FIBROUS MATERIAL, 12" X 12" WHITE SPLINE CEILING TILE WITH FISSURES, ROOM 111DA, ABOVE ENTRANCE, LAYER 2 OF 3.	N			AJK	100% CELLULOSE
12	12	WHITE GRANULAR FIBROUS MATERIAL, 12" X 12" WHITE SPLINE CEILING TILE WITH FISSURES, ROOM 111DA, ABOVE ENTRANCE, LAYER 3 OF 3.	N			AJK	98% NON FIBROUS MATTER 2% CELLULOSE

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3	13	TAN FIBROUS MATERIAL, 12" X 12" WHITE CEILING TILE WITH PIN HOLES AND FISSURES, ROOM 110D, CENTER, NORTH SIDE, LAYER 1 OF 2.	N			DLL	80% FIBROUS GLASS 15% CELLULOSE 5% NON FIBROUS MATTER
13	13	ORANGE ASPHALTIC MATERIAL, 12" X 12" WHITE CEILING TILE GLUE PODS, ROOM 110D, CENTER, NORTH SIDE, LAYER 2 OF 2.	N			DLL	100% NON FIBROUS MATTER
14	14	TAN FIBROUS MATERIAL, 12" X 12" WHITE CEILING TILE WITH PIN HOLES AND FISSURES, ROOM 110D, SOUTHWEST CORNER.	N			DLL	80% CELLULOSE 15% FIBROUS GLASS 5% NON FIBROUS MATTER
15	15	TAN GRANULAR MATERIAL, GRAY WINDOW GLAZING COMPOUND, ROOM 112, 2ND WINDOW, NORTH OF EAST MAIN ENTRANCE.	Y	CHRYSOTILE	3%	AJK	97% NON FIBROUS MATTER

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	17	BROWN RUBBERY MATERIAL, BROWN VENTILATION DUCT CAULK COMPOUND, ROOM 112, ABOVE SUSPENDED CEILING, SOUTHEAST CORNER NEAR RECEPTION AREA.	Y	CHRYSOTILE	2%	AJK	98% NON FIBROUS MATTER
19	19	BROWN TABULAR MATERIAL, 4" DARK BROWN COVE MOLDING, HALLWAY, EAST WALL BETWEEN ENTRANCE TO ROOM 112 AND 111E, LAYER 1 OF 2.	N			DLL	100% NON FIBROUS MATTER
19	19	WHITE ASPHALTIC MATERIAL, 4" DARK BROWN COVE MOLDING MASTIC, HALLWAY, EAST WALL BETWEEN ENTRANCE TO ROOM 112 AND 111E, LAYER 2 OF 2.	N			DLL	98% NON FIBROUS MATTER 2% CELLULOSE
20	20	BROWN TABULAR MATERIAL, 4" DARK BROWN COVE MOLDING, ROOM 111J, ENTRANCE, SOUTHWEST CORNER, LAYER 1 OF 2.	N			DLL	98% NON FIBROUS MATTER 2% CELLULOSE

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20	20	WHITE ASPHALTIC MATERIAL, 4" DARK BROWN COVE MOLDING MASTIC, ROOM 111J, ENTRANCE, SOUTHWEST CORNER, LAYER 2 OF 2.	N			DLL	97% NON FIBROUS MATTER 3% CELLULOSE
21	21	BLACK TABULAR MATERIAL, 4" BLACK COVE MOLDING, ROOM 112C, BENEATH SINK, LAYER 1 OF 2.	N			AJK	100% NON FIBROUS MATTER
21	21	BROWN ASPHALTIC MATERIAL, 4" BLACK COVE MOLDING MASTIC, ROOM 112C, BENEATH SINK, LAYER 2 OF 2.	N			AJK	>99% NON FIBROUS MATTER <1% CELLULOSE
22	22	BLACK TABULAR MATERIAL, 4" BLACK COVE MOLDING, ROOM 111DA, SOUTH SIDE OF ENTRANCE, LAYER 1 OF 2.	N			AJK	100% NON FIBROUS MATTER
22	22	BROWN BRITTLE MATERIAL, 4" BLACK COVE MOLDING MASTIC, ROOM 111DA, SOUTH SIDE OF ENTRANCE, LAYER 2 OF 2.	N			AJK	100% NON FIBROUS MATTER

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3	23	BROWN FIBROUS MATERIAL, FIRE RATED DRYWALL WALL PANELS, ROOM 111JA, UPPER SOUTH END, NORTHWEST CORNER, LAYER 1 OF 2.	N			AJK	100% CELLULOSE
23	23	WHITE GRANULAR FIBROUS MATERIAL, FIRE RATED DRYWALL WALL PANELS, ROOM 111JA, UPPER SOUTH END, NORTHWEST CORNER, LAYER 2 OF 2.	N			AJK	98% NON FIBROUS MATTER 2% CELLULOSE
24	24	BROWN FIBROUS MATERIAL, FIRE RATED DRYWALL WALL PANELS, ROOM 111JA, CENTER, NORTHWEST CORNER, LAYER 1 OF 2.	N			AJK	100% CELLULOSE
24	24	WHITE GRANULAR FIBROUS MATERIAL, FIRE RATED DRYWALL WALL PANELS, ROOM 111JA, CENTER, NORTHWEST CORNER, LAYER 2 OF 2.	N			AJK	97% NON FIBROUS MATTER 3% CELLULOSE

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5	25	BROWN FIBROUS MATERIAL, FIRE RATED DRYWALL WALL PANELS, ROOM 111JA, UPPER NORTH END, NORTHWEST CORNER, LAYER 1 OF 2.	N			AJK	100% CELLULOSE
25	25	WHITE GRANULAR MATERIAL, FIRE RATED DRYWALL WALL PANELS, ROOM 111JA, UPPER NORTH END, NORTHWEST CORNER, LAYER 2 OF 2.	N			AJK	98% NON FIBROUS MATTER 2% CELLULOSE
26	26	OFF-WHITE GRANULAR MATERIAL, SMOOTH PLASTER OVER DRYWALL, ROOM 112B, ABOVE ENTRANCE, LAYER 1 OF 3.	N			DLL	93% NON FIBROUS MATTER 7% CELLULOSE
26	26	BROWN FIBROUS MATERIAL, SMOOTH PLASTER OVER DRYWALL, ROOM 112B, ABOVE ENTRANCE, LAYER 2 OF 3.	N			DLL	85% CELLULOSE 15% NON FIBROUS MATTER

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6	26	WHITE GRANULAR MATERIAL, SMOOTH PLASTER OVER DRYWALL, ROOM 112B, ABOVE ENTRANCE, LAYER 3 OF 3.	N			DLL	96% NON FIBROUS MATTER 2% CELLULOSE 2% FIBROUS GLASS
27	27	OFF-WHITE GRANULAR MATERIAL, SMOOTH PLASTER OVER DRYWALL, ROOM 111H, 4' WEST OF NORTH ENTRANCE, ABOVE SUSPENDED CEILING, LAYER 1 OF 3.	N			DLL	98% NON FIBROUS MATTER 2% CELLULOSE
27	27	BROWN FIBROUS MATERIAL, SMOOTH PLASTER OVER DRYWALL, ROOM 111H, 4' WEST OF NORTH ENTRANCE, ABOVE SUSPENDED CEILING, LAYER 2 OF 3.	N			DLL	90% CELLULOSE 10% NON FIBROUS MATTER
27	27	WHITE GRANULAR MATERIAL, SMOOTH PLASTER OVER DRYWALL, ROOM 111H, 4' WEST OF NORTH ENTRANCE, ABOVE SUSPENDED CEILING, LAYER 3 OF 3.	N			DLL	96% NON FIBROUS MATTER 2% CELLULOSE 2% FIBROUS GLASS

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FIBERTEC SAMPLE NO.	CLIENT I.D. NO.	DESCRIPTION/ LOCATION	*ASBESTOS PRESENT Y/N	ASBESTOS TYPE	PERCENT ASBESTOS	TECH. INIT.	NON-ASBESTOS-CONTAINING PORTION
	28	OFF-WHITE GRANULAR MATERIAL, SMOOTH PLASTER OVER DRYWALL, HALLWAY OUTSIDE OF ROOM 111E, BEHIND WATER FOUNTAIN, LAYER 1 OF 3.	N			DLL	96% NON FIBROUS MATTER 4% CELLULOSE
28	28	BROWN FIBROUS MATERIAL, SMOOTH PLASTER OVER DRYWALL, HALLWAY OUTSIDE OF ROOM 111E, BEHIND WATER FOUNTAIN, LAYER 2 OF 3.	N			DLL	90% CELLULOSE 10% NON FIBROUS MATTER
28	28	WHITE POWDERY MATERIAL, SMOOTH PLASTER OVER DRYWALL, HALLWAY OUTSIDE OF ROOM 111E, BEHIND WATER FOUNTAIN, LAYER 3 OF 3.	N			DLL	95% NON FIBROUS MATTER 3% CELLULOSE 2% FIBROUS GLASS
29	29	YELLOW FIBROUS GRANULAR MATERIAL, CEILING TECTUM BOARD, ROOM 111B, NORTHEAST CORNER.	N			AJK	55% CELLULOSE 45% NON FIBROUS MATTER

COMMENTS:

1914 Holloway Drive Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0382

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BULK SAMPLE ANALYTICAL REPORT

CLIENT: MICHIGAN STATE UNIVERSITY
FIBERTEC PROJECT NO.: 25229-1
NVLAP ACCREDITATION #101510-0

DATE SAMPLED: 4/23/08
DATE SUBMITTED: 4/23/08
DATE ANALYZED: 4/28, 29 & 30/2008

PROJECT:
MICHIGAN STATE UNIVERSITY, STORES PRINTING AND SALVAGE BUILDING, 1330 SOUTH HARRISON, EAST LANSING, 41 COLLECTED BULK SAMPLES, 56 SAMPLE LAYERS ANALYZED.

CLIENT P.O.#: N/A
C.O.C. NO.: 79764

Bulk samples are analyzed utilizing the USEPA Test Method EPA/600/R-93/116. The constituent percent reported represents an estimate of the area percent of the component. The test report relates only to items tested. This report is not intended to be used as a product endorsement by NVLAP or any agency of the U.S. Government. Fine fibers like those in floor tile may not be discernible by this method. This report shall not be reproduced, except in full, without written approval of the laboratory. Form Revision 2.0 dated 3/1/08
*No asbestos present indicates less than or equal to 1% asbestos present. Test items were received in an acceptable condition.

FIBERTEC SAMPLE NO.	CLIENT I.D. NO.	DESCRIPTION/ LOCATION	*ASBESTOS PRESENT Y/N	ASBESTOS TYPE	PERCENT ASBESTOS	TECH. INIT.	NON-ASBESTOS-CONTAINING PORTION
30	30	YELLOW FIBROUS GRANULAR MATERIAL, CEILING TECTUM BOARD, ROOM 111B, SOUTHEAST CORNER.	N			AJK	55% NON FIBROUS MATTER 45% CELLULOSE
31	31	BROWN FIBROUS MATERIAL, CEILING FIBERBOARD, AREA ABOVE ROOM 111C, CENTER, EAST SIDE.	N			AJK	95% CELLULOSE 5% NON FIBROUS MATTER
32	32	BROWN FIBROUS MATERIAL, CEILING FIBERBOARD, AREA ABOVE ROOM 111C, SOUTHEAST CORNER NEAR ROOF DRAIN.	N			AJK	97% CELLULOSE 3% NON FIBROUS MATTER
33	33	BLACK TABULAR MATERIAL, 3" BLACK COVE MOLDING, ROOM 111T, SOUTH SIDE OF EAST ENTRANCE.	N			AJK	100% NON FIBROUS MATTER
34	34	BLACK TABULAR MATERIAL, 3" BLACK COVE MOLDING, ROOM 111S, SOUTHWEST CORNER, SOUTH WALL.	N			AJK	100% NON FIBROUS MATTER

COMMENTS:

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BULK SAMPLE ANALYTICAL REPORT

CLIENT: MICHIGAN STATE UNIVERSITY
FIBERTEC PROJECT NO.: 25229-1
NVLAP ACCREDITATION #101510-0

DATE SAMPLED: 4/23/08
DATE SUBMITTED: 4/23/08
DATE ANALYZED: 4/28, 29 & 30/2008

PROJECT:
MICHIGAN STATE UNIVERSITY, STORES PRINTING AND SALVAGE BUILDING, 1330 SOUTH HARRISON, EAST LANSING, 41 COLLECTED BULK SAMPLES, 56 SAMPLE LAYERS ANALYZED.

CLIENT P.O.#: N/A
C.O.C. NO.: 79764

Bulk samples are analyzed utilizing the USEPA Test Method EPA/600/R-93/116. The constituent percent reported represents an estimate of the area percent of the component. The test report relates only to items tested. This report is not intended to be used as a product endorsement by NVLAP or any agency of the U.S. Government. Fine fibers like those in floor tile may not be discernible by this method. This report shall not be reproduced, except in full, without written approval of the laboratory. Form Revision 2.0 dated 3/1/08
*No asbestos present indicates less than or equal to 1% asbestos present. Test items were received in an acceptable condition.

FIBERTEC SAMPLE NO.	CLIENT I.D. NO.	DESCRIPTION/ LOCATION	*ASBESTOS PRESENT Y/N	ASBESTOS TYPE	PERCENT ASBESTOS	TECH. INIT.	NON-ASBESTOS-CONTAINING PORTION
1	35	WHITE FIBROUS MATERIAL, 12" X 12" WHITE CEILING TILE WITH UNIFORM HOLES, ROOM 112, NORTHWEST CORNER OF WOMEN'S RESTROOM, LOBBY AREA, LAYER 1 OF 2.	N			AJK	80% FIBROUS GLASS 15% MINERAL WOOL 5% NON FIBROUS MATTER
35	35	BROWN BRITTLE MATERIAL, 12" X 12" WHITE CEILING TILE GLUE PODS, ROOM 112, NORTHWEST CORNER OF WOMEN'S RESTROOM, LOBBY AREA, LAYER 2 OF 2.	Y	CHRYSOTILE	2%	AJK	98% NON FIBROUS MATTER
37	37	GRAY FIBROUS MATERIAL, DOMESTIC WATER SUPPLY PIPE JOINT INSULATION ON FIBERGLASS PIPE STRAIGHT INSULATION, NORTHWEST CORNER OF ATTIC AREA ABOVE ROOM 111C.	Y	CHRYSOTILE	20%	AJK	50% MINERAL WOOL 25% NON FIBROUS MATTER 5% CELLULOSE
40	40	GRAY ASPHALTIC MATERIAL, GRAY BUILDING CAULK COMPOUND, SOUTHEAST CORNER OF BUILDING, SOUTH SIDE, 30' WEST OF SOUTHEAST CORNER.	N			DLL	97% NON FIBROUS MATTER 3% CELLULOSE

COMMENTS:

1914 Holloway Drive Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0382

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services, inc.

BULK SAMPLE ANALYTICAL REPORT

CLIENT: MICHIGAN STATE UNIVERSITY
FIBERTEC PROJECT NO.: 25229-1
NVLAP ACCREDITATION #101510-0

DATE SAMPLED: 4/23/08
DATE SUBMITTED: 4/23/08
DATE ANALYZED: 4/28, 29 & 30/2008

PROJECT:
MICHIGAN STATE UNIVERSITY, STORES PRINTING AND SALVAGE BUILDING, 1330 SOUTH HARRISON, EAST LANSING, 41 COLLECTED BULK SAMPLES, 56 SAMPLE LAYERS ANALYZED.

CLIENT P.O.#: N/A
C.O.C. NO.: 79764

Bulk samples are analyzed utilizing the USEPA Test Method EPA/600/R-93/116. The constituent percent reported represents an estimate of the area percent of the component. The test report relates only to items tested. This report is not intended to be used as a product endorsement by NVLAP or any agency of the U.S. Government. Fine fibers like those in floor tile may not be discernible by this method. This report shall not be reproduced, except in full, without written approval of the laboratory. Form Revision 2.0 dated 3/1/08
*No asbestos present indicates less than or equal to 1% asbestos present. Test items were received in an acceptable condition.

FIBERTEC SAMPLE NO.	CLIENT I.D. NO.	DESCRIPTION/ LOCATION	*ASBESTOS PRESENT Y/N	ASBESTOS TYPE	PERCENT ASBESTOS	TECH. INIT.	NON-ASBESTOS-CONTAINING PORTION
1	41	GRAY ASPHALTIC MATERIAL, GRAY BUILDING CAULK COMPOUND, CENTER OF EAST SIDE OF BUILDING, EAST OF LOADING DOCK #3, LAYER 1 OF 2.	N			DLL	96% NON FIBROUS MATTER 4% CELLULOSE
41	41	WHITE ASPHALTIC MATERIAL, GRAY BUILDING CAULK COMPOUND, CENTER OF EAST SIDE OF BUILDING, EAST OF LOADING DOCK #3, LAYER 2 OF 2.	N			DLL	>99% NON FIBROUS MATTER <1% CELLULOSE

COMMENTS:

DATE: 05/02/08

APPROVED SIGNATORY

1914 Holloway Drive Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0382

Appendix E

Room by Room Asbestos Building Inspection Forms

Room by Room Asbestos Building Inspection Form
Explanation Page

Location – Each room or area within the structure is identified by a unique room number or area designation.

Floor – Describes the level on which the room or area was located.

Material Description – Each identified material is described including the major color, size and pattern observed in the material. The condition of each material is also described. Material with no damage is considered undamaged. Material with more than zero but less than 10 percent damage by area overall or less than 25 percent damage locally is considered damaged. Material with more than 10 percent damage overall or more than 25 percent damage by area locally is considered significantly damaged. Material whose condition could not be determined is reported as unknown.

Quantity – The estimated quantity of material in each space or room number is reported in units of linear feet (l.f.), square feet (s.f.) or count (ct.). In the case of pipe joint insulation, the actual number of observed joints (the count) is reported.

Homogenous Area (HA) Number – The number given the specific homogenous area which represents a given material.

Asbestos-Containing – Those materials found to contain more than one percent asbestos are considered asbestos-containing and are marked Y for yes. Those materials found to contain equal to or less than one percent asbestos are considered non-asbestos containing and are marked N for no.

Material Condition – Material condition is classified into one of three categories: 1) Undamaged material (U) has no damage, 2) Damaged material (D) has >0-10% damage or less than 25% damage locally, or 3) Significantly damaged material (SD) has more than 10% damage overall or >25% damage locally.

Michigan State University
Stores Building Number 1
Building #161
Fibertec IHS Project #25229-1
Room by Room Asbestos Building Inspection Form

Location	Floor	Material Description	Quantity	Units	HA #	ACM	Condition
Attic Area above Room 111CA	1st	Domestic water supply pipe joint insulation on fiberglass pipe straight insulation	20	ct.	21	Yes	Undamaged
Room 109	1st	Gray window glazing compound	825	l.f.	9	Yes	Undamaged
Room 110	1st	Gray window glazing compound	940	l.f.	9	Yes	Undamaged
Room 110	1st	4" dark brown cove molding and associated mastic	100	l.f.	13	No	Undamaged
Room 110	1st	Fire door and frame	2	ct.	15	Assumed	Undamaged
Room 110	1st	Smooth plaster over drywall	2500	s.f.	18	No	Undamaged
Room 110	1st	Ceiling fiberboard	4479	s.f.	20	No	Undamaged
Room 110 C & D	1st	2' x 4' white lay-in ceiling tile with pin holes and fissures	300	s.f.	5	No	Undamaged
Room 110 C & D	1st	Gray window glazing compound	180	l.f.	9	Yes	Undamaged
Room 110 C & D	1st	4" black cove molding and associated mastic	45	l.f.	14	No	Undamaged
Room 110 C & D	1st	3" black cove molding and associated mastic	90	l.f.	23	No	Undamaged
Room 110A	1st	2' x 4' white lay-in ceiling tile with pin holes and fissures	1913	s.f.	5	No	Undamaged
Room 110A	1st	3" black cove molding and associated mastic	195	l.f.	23	No	Undamaged
Room 110B	1st	2' x 4' white lay-in ceiling tile with pin holes and fissures	106	s.f.	5	No	Undamaged
Room 110B	1st	4" black cove molding and associated mastic	11	l.f.	14	No	Undamaged
Room 110B	1st	3" black cove molding and associated mastic	73	l.f.	23	No	Undamaged
Room 111	1st	Gray window glazing compound	2145	l.f.	9	Yes	Undamaged
Room 111	1st	Smooth plaster over drywall	10	s.f.	18	No	Sig Damaged
Room 111	1st	Smooth plaster over drywall	2500	s.f.	18	No	Undamaged
Room 111	1st	Ceiling fiberboard	13056	s.f.	20	No	Undamaged
Room 111A (Chemical Storage)	1st	Fire door and frame	1	ct.	15	Assumed	Undamaged
Room 111B	1st	Gray window glazing compound	745	l.f.	9	Yes	Undamaged
Room 111B	1st	Ceiling tectum board	1606	s.f.	19	No	Undamaged
Room 111C	1st	12" x 12" tan floor tile with rust streaks and associated mastic	538	s.f.	3	Yes	Undamaged
Room 111C	1st	12" x 12" white ceiling tile with fissures and associated glue pods	538	s.f.	6	No	Undamaged
Room 111C	1st	4" black cove molding and associated mastic	94	l.f.	14	No	Undamaged
Room 111D	1st	12" x 12" white ceiling tile with pin holes and fissures and associated glue pods	120	s.f.	7	No	Undamaged

Michigan State University
Stores Building Number 1
Building #161
Fibertec IHS Project #25229-1
Room by Room Asbestos Building Inspection Form

Location	Floor	Material Description	Quantity	Units	HA #	ACM	Condition
Room 111DA	1st	9" x 9" gray floor tile with white and black streaks and associated mastic	5	s.f.	1	Yes	Sig Damaged
Room 111DA	1st	9" x 9" gray floor tile with white and black streaks and associated mastic	90	s.f.	1	Yes	Undamaged
Room 111DA	1st	12" x 12" white spline ceiling tile with fissures	95	s.f.	6	No	Undamaged
Room 111DA	1st	4" black cove molding and associated mastic	40	l.f.	14	No	Undamaged
Room 111E	1st	Fire door and frame	1	ct.	15	Assumed	Undamaged
Room 111E	1st	Smooth plaster over drywall	150	s.f.	18	No	Undamaged
Room 111F	1st	2' x 2' white lay-in ceiling tile with pin holes and fissures	64	s.f.	4	No	Undamaged
Room 111F	1st	4" dark brown cove molding and associated mastic	40	l.f.	13	No	Undamaged
Room 111F	1st	Fire door and frame	1	ct.	15	Assumed	Undamaged
Room 111F	1st	Smooth plaster over drywall	110	s.f.	18	No	Undamaged
Room 111F and G	1st	2' x 4' white lay-in ceiling tile with pin holes and fissures	225	s.f.	5	No	Undamaged
Room 111G	1st	2' x 2' white lay-in ceiling tile with pin holes and fissures	814	s.f.	4	No	Undamaged
Room 111G	1st	4" dark brown cove molding and associated mastic	120	l.f.	13	No	Undamaged
Room 111G	1st	Smooth plaster over drywall	940	s.f.	18	No	Undamaged
Room 111GA	1st	2' x 2' white lay-in ceiling tile with pin holes and fissures	304	s.f.	4	No	Undamaged
Room 111GA	1st	4" dark brown cove molding and associated mastic	65	l.f.	13	No	Undamaged
Room 111GA	1st	Smooth plaster over drywall	586	s.f.	18	No	Undamaged
Room 111H	1st	2' x 2' white lay-in ceiling tile with pin holes and fissures	395	s.f.	4	No	Undamaged
Room 111H	1st	4" black cove molding and associated mastic	85	l.f.	14	No	Undamaged
Room 111H	1st	Smooth plaster over drywall	430	s.f.	18	No	Undamaged
Room 111J	1st	9" x 9" tan floor tile with cream and rust streaks and associated mastic	139	s.f.	2	Yes	Undamaged
Room 111J	1st	9" x 9" tan floor tile with cream and rust streaks and associated mastic	1	s.f.	2	Yes	Sig Damaged
Room 111J	1st	4" dark brown cove molding and associated mastic	10	l.f.	13	No	Undamaged
Room 111J	1st	Fire door and frame	1	ct.	15	Assumed	Undamaged
Room 111J	1st	Smooth plaster over drywall	500	s.f.	18	No	Undamaged
Room 111J	1st	Ceiling fiberboard	250	s.f.	20	No	Undamaged
Room 111JA	1st	9" x 9" tan floor tile with cream and rust streaks and associated mastic	10	s.f.	2	Yes	Sig Damaged
Room 111JA	1st	Fire door and frame	1	ct.	15	Assumed	Undamaged
Room 111JA	1st	Fire rated drywall wall panels	30	s.f.	17	No	Undamaged

2/25/09 rm111D abatement of 210sf of floor tile & mastic ITP #C10628

Michigan State University
Stores Building Number 1
Building #161
Fibertec IHS Project #25229-1
Room by Room Asbestos Building Inspection Form

Location	Floor	Material Description	Quantity	Units	HA #	ACM	Condition
Room 111K	1st	No access provided					
Room 111L	1st	4" dark brown cove molding and associated mastic	40	l.f.	13	No	Undamaged
Room 111L	1st	Fire door and frame	1	ct.	15	Assumed	Undamaged
Room 111L	1st	Smooth plaster over drywall	1200	s.f.	18	No	Undamaged
Room 111L	1st	Ceiling fiberboard	160	s.f.	20	No	Undamaged
Room 111N	1st	Brown ventilation duct caulk compound	15	l.f.	10	Yes	Undamaged
Room 111N	1st	Ceiling fiberboard	160	s.f.	20	No	Undamaged
Room 111R	1st	No access provided					
Room 111S	1st	2' x 4' white lay-in ceiling tile with pin holes and fissures	759	s.f.	5	No	Undamaged
Room 111S	1st	4" black cove molding and associated mastic	25	l.f.	14	No	Undamaged
Room 111S	1st	3" black cove molding and associated mastic	85	l.f.	23	No	Undamaged
Room 111T	1st	2' x 4' white lay-in ceiling tile with pin holes and fissures	1388	s.f.	5	No	Undamaged
Room 111T	1st	4" dark brown cove molding and associated mastic	48	l.f.	13	No	Undamaged
Room 111T	1st	Fire door and frame	2	ct.	15	Assumed	Undamaged
Room 111T	1st	Smooth plaster over drywall	400	s.f.	18	No	Undamaged
Room 111T	1st	3" black cove molding and associated mastic	108	l.f.	23	No	Undamaged
Room 111U	1st	No suspect ACM observed					
Room 112	1st	9" x 9" gray floor tile with white and black streaks and associated mastic	2208	s.f.	1	Yes	Undamaged
Room 112	1st	2' x 2' white lay-in ceiling tile with pin holes and fissures	2208	s.f.	4	No	Undamaged
Room 112	1st	Gray window glazing compound	115	l.f.	9	Yes	Undamaged
Room 112	1st	Brown ventilation duct caulk compound	100	l.f.	10	Yes	Undamaged
Room 112	1st	4" black cove molding and associated mastic	270	l.f.	14	No	Undamaged
Room 112	1st	Smooth plaster over drywall	760	s.f.	18	No	Undamaged
Room 112	1st	Ceiling fiberboard	2208	s.f.	20	No	Undamaged
Room 112A	1st	9" x 9" gray floor tile with white and black streaks and associated mastic	340	s.f.	1	Yes	Undamaged
Room 112A	1st	2' x 2' white lay-in ceiling tile with pin holes and fissures	340	s.f.	4	No	Undamaged
Room 112A	1st	Gray window glazing compound	90	l.f.	9	Yes	Undamaged
Room 112A	1st	4" black cove molding and associated mastic	76	l.f.	14	No	Undamaged
Room 112A	1st	Smooth plaster over drywall	175	s.f.	18	No	Undamaged
Room 112A	1st	Ceiling fiberboard	340	s.f.	20	No	Undamaged

Michigan State University
Stores Building Number 1
Building #161
Fibertec IHS Project #25229-1
Room by Room Asbestos Building Inspection Form

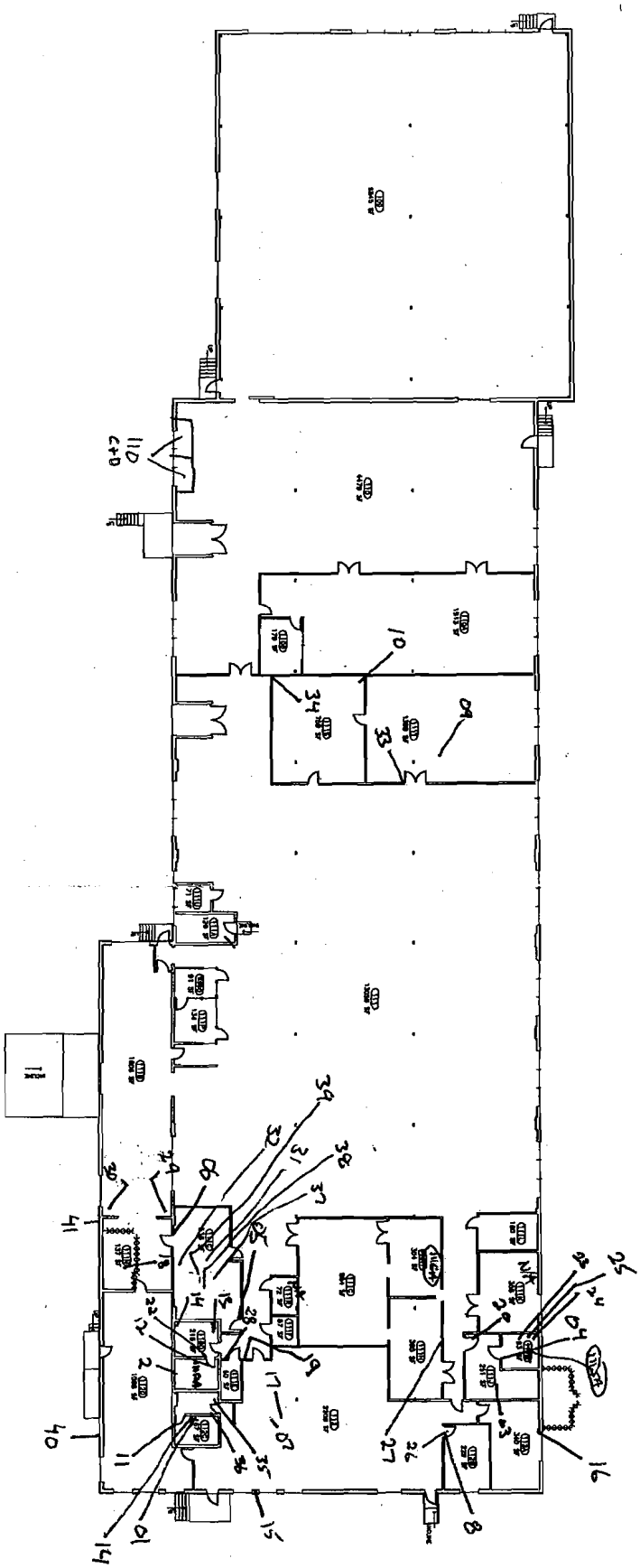
Location	Floor	Material Description	Quantity	Units	HA #	ACM	Condition
Room 112B	1st	9" x 9" gray floor tile with white and black streaks and associated mastic	222	s.f.	1	Yes	Undamaged
Room 112B	1st	2' x 2' white lay-in ceiling tile with pin holes and fissures	222	s.f.	4	No	Undamaged
Room 112B	1st	Gray window glazing compound	60	l.f.	9	Yes	Undamaged
Room 112B	1st	Brown ventilation duct caulk compound	25	l.f.	10	Yes	Undamaged
Room 112B	1st	4" black cove molding and associated mastic	60	l.f.	14	No	Undamaged
Room 112B	1st	Smooth plaster over drywall	280	s.f.	18	No	Undamaged
Room 112B	1st	Ceiling fiberboard	222	s.f.	20	No	Undamaged
Room 112C	1st	9" x 9" gray floor tile with white and black streaks and associated mastic	167	s.f.	1	Yes	Undamaged
Room 112C	1st	12" x 12" white spline ceiling tile with fissures	100	s.f.	6	No	Undamaged
Room 112C	1st	4" black cove molding and associated mastic	30	l.f.	14	No	Undamaged
Room 112C	1st	12" x 12" white ceiling tile with uniform holes and associated glue pods	67	s.f.	24	Yes	Undamaged
Room 112D	1st	9" x 9" gray floor tile with white and black streaks and associated mastic	1089	s.f.	1	Yes	Undamaged
Room 112D	1st	2' x 2' white lay-in ceiling tile with pin holes and fissures	1089	s.f.	4	No	Undamaged
Room 112D	1st	Gray window glazing compound	26	l.f.	9	Yes	Undamaged
Room 112D	1st	Brown ventilation duct caulk compound	40	l.f.	10	Yes	Undamaged
Room 112D	1st	4" black cove molding and associated mastic	200	l.f.	14	No	Undamaged
Room 112D	1st	Fire door and frame	1	ct.	15	Assumed	Undamaged
Room 112D	1st	Smooth plaster over drywall	80	s.f.	18	No	Undamaged
Room 112D	1st	Ceiling fiberboard	1089	s.f.	20	No	Undamaged
Exterior	Exterior	White window and door frame caulk compound	1300	l.f.	8	Assumed	Undamaged
Exterior	Exterior	Gray window glazing compound	1140	l.f.	9	Yes	Undamaged
Exterior	Exterior	Flat transite exterior panels	120	s.f.	11	Assumed	Undamaged
Exterior	Exterior	Corrugated transite exterior panels	550	s.f.	12	Assumed	Undamaged
Exterior	Exterior	Roofing materials and products	45000	s.f.	16	Assumed	Undamaged
Exterior	Exterior	Ceiling tectum board	450	s.f.	19	No	Undamaged
Exterior	Exterior	Ceiling fiberboard	400	s.f.	20	No	Undamaged
Exterior	Exterior	Gray building caulk compound	200	l.f.	22	No	Undamaged

3/4/09 rm 112C abatement of floor tile & mastic (1167 sf) ITPH 070

Appendix F

Floor Plan Drawing with Sample Locations

FIRST FLOOR PLAN



YSW		MICHIGAN STATE UNIVERSITY PHYSICAL PLANT DIVISION ENGINEERING AND ARCHITECTURAL SERVICES	BUILDING NUMBER: 161
06-03-99			
1" = 30'		TITLE: STORES BUILDING NO. 1 FIRST FLOOR PLAN	
2 of 3			
2111			

06-03-99 BLDGS\80161\80161_1.DWG

MICHIGAN STATE UNIVERSITY

ASBESTOS INSPECTION REPORT
FOR
SURPLUS BUILDING

OCTOBER 2006

NOVA ENVIRONMENTAL, INC.
5340 Plymouth Rd., Suite 210
Ann Arbor, MI 48105
(734) 930-0995

ENVIRONMENTAL, INC.
5340 PLYMOUTH RD. SUITE 210
ANN ARBOR, MICHIGAN 48105
734-930-0995

October 17, 2006

Mr. Andrew D. Smith
Environmental Technician
Office of Environmental & Occupational Safety
Michigan State University
150 Giltner Hall
East Lansing, MI 48824-1101

Dear Mr. Smith:

The following is the asbestos-containing material (ACM) Survey Report for Michigan State University's Surplus Building, Building #190.

This ACM Survey Report, prepared by Nova Environmental, Inc., is separated into the following sections:

Section I	Background/Survey Information
Section II	Inspection Results
Section III	Laboratory Results
Section IV	Facility Information/Diagrams
Section V	Qualifications/Certifications & General Disclaimer Statement
Section VI	Photo Documentation

If you have any questions or concerns regarding the information presented within this report, please feel free to contact me at (734) 390-0995.

Thank you for choosing Nova Environmental, Inc.

Sincerely,

NOVA ENVIRONMENTAL, INC.

Kary S. Amin
Vice President

KSA/ij

ENVIRONMENTAL, INC.

Michigan State University

Surplus Building
Building #190

Section I
Background/Inspection Information

Background:

On Wednesday, October 11, 2006, representatives of Nova Environmental, Inc. conducted an Asbestos-Containing Materials (ACM) Building Survey within the Surplus Building. The intent of this Survey was to determine potential asbestos content within interior accessible building materials/components.

During the on-site inspection phase, Nova collected a total of 15 bulk samples. Each of these samples was analyzed under Polarizing Light Microscopy (PLM) by EMSL Analytical, Inc., an accredited laboratory, utilizing EPA 600/R-93/116 Method. All laboratory result sheets are located in Section III of this report.

It should be noted that the following factors were realized during the inspection phase:

- Nova Environmental, Inc. only collected bulk samples of accessible suspect ACM building components. Nova conducted no destructive sampling, therefore, no inaccessible materials are included as part of this report.
- In accordance with the Request for Quotation (RFQ) 73316, no roofing materials were bulk sampled or included as part of this report.
- In accordance with instruction provided during the bidding process, no exterior materials, concrete, cinderblock, brick, mortar, ceramic or non-building components were bulk sampled or included as part of this report. Further inspection of these materials and inaccessible areas may be necessary prior to any renovation or demolition in order to comply with the EPA NESHAP and OSHA Asbestos Construction Industry Standards.
- All quantities listing within this report are approximates only.

A General Disclaimer Statement regarding this ACM Survey is located in Section V of this report.

Inspection Information:

All bulk samples were collected by Michigan Accredited Asbestos Inspectors in accordance with 40 CFR Part 763 of the EPA's AHERA regulation. This sampling strategy is required according to 29 CFR Part 1910.1001 and 1926.1101 of the OSHA Asbestos General Industry and Construction Standards for public and commercial buildings.

There are several terms/phrases that are identified in the various EPA and OSHA asbestos regulations, which are used within this ACM Survey report. They are as follows:

- ***Asbestos-Containing Material (ACM)***:
  Refers to a material, which contains more than 1% asbestos. If a given material contains over 1% asbestos, it is considered asbestos by all federal and state government agencies. If the material contains less than or equal to 1 % asbestos, it is legally non-asbestos.

- ***Friable:***
  Refers to the ability of the material to crumple or pulverize under hand pressure when dry.

- ***Functional Space (FS):***
  Means a room, group of rooms or separate independent area, such as hallways, restrooms, etc.

- ***Functional Space Number:***
  A number, assigned to each functional space by either the building owner or Nova.

- ***Homogeneous Area (HA):***
  Refers to a material that is uniform in color and texture.

- ***Homogeneous Area Number:***
  A number, assigned to each homogeneous area by the Nova Inspector(s).

- ***Miscellaneous Material:***
  Any material, which is not classified as thermal system insulation or surfacing material.

- ***Surfacing Material:***
  Means material that is sprayed trowelled-on or otherwise applied to surfaces, (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).

- ***Thermal System Insulation (TSI):***
  Means ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

- ***Units:***
  Units of measurement in either square feet, linear feet or totals, such as a total count of a given material or component.

ENVIRONMENTAL, INC.

Michigan State University

Surplus Building
Building #190

Section II
Inspection Results

This section is delineated into three separate sub-sections. Included in each sub-section are FS# or functional space numbers, FS Description, Material Description, amount of material present, whether the material is positive, negative or assumed asbestos and its present status. Please note that within the sub-sections all materials tested **positive** or **assumed** to be asbestos are in bold, while all materials tested negative for asbestos are in regular type.

A listing and description of each sub-section follows:

- ***Homogeneous Area Listing***
  This listing provides a complete material listing with total building quantities as well as whether the material contains asbestos, is assumed or is negative for asbestos-containing material.

- ***List by Functional Space Number***
  This listing provides all inspection information organized by functional space.

- ***List by Positive, Assumed, Negative Homogeneous Areas***
  This listing provides all homogeneous areas, or material description, that are positive for asbestos or assumed to be asbestos first, organized by functional space. The homogeneous areas that were tested negative for asbestos and corresponding functional spaces follow.

- ***List by Homogeneous Areas***
  This listing provides all inspection information organized by homogeneous area, or material description.

The laboratory results are located in Section III of this Report.

Michigan State University
Surplus Building #190
Homogeneous Area Listing

ACM Description	HA#	Total Quantities	Units	Asbestos
Drywall Ceiling	1	144	Sq. Ft.	Negative
Window Frame Caulk	2	61	Ln. Ft.	Negative
Window Glazing	3	105	Ln. Ft.	Negative
Wall Joint Caulk	4	60	Ln. Ft.	Negative
4" Black Covebase	5	45	Ln. Ft.	Negative
Mastic 4" Black Covebase	6	45	Ln. Ft.	Negative
Tagged Metal Door	**7**	**1**	**Total**	**Assumed**
Tagged Metal Frame	**7.1**	**1**	**Total**	**Assumed**
Tagged Metal Door Frame Caulk	8	20	Ln. Ft.	Negative
Floor Joint Caulk	9	570	Ln. Ft.	Negative
Drywall Wall	10	51000	Sq. Ft.	Negative
Non Tagged Door Frame Caulk	11	40	Ln. Ft.	Negative
Door Window Glazing	12	10	Ln. Ft.	Negative
9" x 9" Floor Tile Brown	**13**	**2**	**Sq. Ft.**	**Positive**
Mastic of 9" x 9" Floor Tile Brown	**14**	**2**	**Sq. Ft.**	**Positive**
4" Brown Covebase	15	48	Ln. Ft.	Negative
Mastic of 4" Brown Covebase	16	48	Ln. Ft.	Negative
Black Foam Insulation	17	15	Ln. Ft.	Negative
Fiberglass Deck	18	13776	Sq. Ft.	Negative

Michigan State University
Surplus Building #190
List by Functional Space

FS#	FS Description	Floor	ACM Description	HA#	Quantity	Units	Asbestos	Material Condition
101	Main Storage 101	1	Window Frame Caulk	2	10	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Window Glazing	3	10	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Wall Joint Caulk	4	20	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Floor Joint Caulk	9	450	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Drywall Wall	10	50000	Sq. Ft.	Negative	Non ACM
101	Main Storage 101	1	Non Tagged Door Frame Caulk	11	40	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Door Window Glazing	12	10	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Fiberglass Deck	18	13776	Sq. Ft.	Negative	Non ACM
102	**Manager's Office 102**	**1**	**9" x 9" Floor Tile Brown**	**13**	**2**	**Sq. Ft.**	**Positive**	**Intact**
102	**Manager's Office 102**	**1**	**Mastic of 9" x 9" Floor Tile Brown**	**14**	**2**	**Sq. Ft.**	**Positive**	**Intact**
102	**Manager's Office 102**	**1**	**Tagged Metal Door**	**7**	**1**	**Total**	**Assumed**	**Intact**
102	Manager's Office 102	1	Drywall Ceiling	1	144	Sq. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Window Frame Caulk	2	15	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Window Glazing	3	20	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Wall Joint Caulk	4	10	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	4" Black Covebase	5	45	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Mastic 4" Black Covebase	6	45	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Tagged Metal Door Frame Caulk	8	20	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	4" Brown Covebase	15	48	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Mastic of 4" Brown Covebase	16	48	Ln. Ft.	Negative	Non ACM
103	**Main Office 103**	**1**	**Tagged Metal Frame**	**7.1**	**1**	**Total**	**Assumed**	**Intact**
103	Main Office 103	1	Window Frame Caulk	2	36	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Window Glazing	3	75	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Wall Joint Caulk	4	20	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Floor Joint Caulk	9	110	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Drywall Wall	10	1000	Sq. Ft.	Negative	Non ACM
103	Main Office 103	1	Black Foam Insulation	17	15	Ln. Ft.	Negative	Non ACM
103A	Assistant's Office 103A	1	Wall Joint Caulk	4	10	Ln. Ft.	Negative	Non ACM
103A	Assistant's Office 103A	1	Floor Joint Caulk	9	10	Ln. Ft.	Negative	Non ACM

Michigan State University
Surplus Building #190
List by Positive, Assumed, Negative Homogeneous Areas

FS#	FS Description	Floor	ACM Description	HA#	Quantity	Units	Asbestos	Material Condition
102	**Manager's Office 102**	**1**	**9" x 9" Floor Tile Brown**	**13**	**2**	**Sq. Ft.**	**Positive**	**Intact**
102	**Manager's Office 102**	**1**	**Mastic of 9" x 9" Floor Tile Brown**	**14**	**2**	**Sq. Ft.**	**Positive**	**Intact**
102	**Manager's Office 102**	**1**	**Tagged Metal Door**	**7**	**1**	**Total**	**Assumed**	**Intact**
103	**Main Office 103**	**1**	**Tagged Metal Frame**	**7.1**	**1**	**Total**	**Assumed**	**Intact**
101	Main Storage 101	1	Window Frame Caulk	2	10	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Window Glazing	3	10	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Wall Joint Caulk	4	20	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Floor Joint Caulk	9	450	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Drywall Wall	10	50000	Sq. Ft.	Negative	Non ACM
101	Main Storage 101	1	Non Tagged Door Frame Caulk	11	40	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Door Window Glazing	12	10	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Fiberglass Deck	18	13776	Sq. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Drywall Ceiling	1	144	Sq. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Window Frame Caulk	2	15	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Window Glazing	3	20	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Wall Joint Caulk	4	10	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	4" Black Covebase	5	45	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Mastic 4" Black Covebase	6	45	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Tagged Metal Door Frame Caulk	8	20	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	4" Brown Covebase	15	48	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Mastic of 4" Brown Covebase	16	48	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Window Frame Caulk	2	36	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Window Glazing	3	75	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Wall Joint Caulk	4	20	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Floor Joint Caulk	9	110	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Drywall Wall	10	1000	Sq. Ft.	Negative	Non ACM
103	Main Office 103	1	Black Foam Insulation	17	15	Ln. Ft.	Negative	Non ACM
103A	Assistant's Office 103A	1	Wall Joint Caulk	4	10	Ln. Ft.	Negative	Non ACM
103A	Assistant's Office 103A	1	Floor Joint Caulk	9	10	Ln. Ft.	Negative	Non ACM

Michigan State University
Surplus Building #190
List by Homogeneous Area

FS#	FS Description	Floor	ACM Description	HA#	Quantity	Units	Asbestos	Material Condition
102	Manager's Office 102	1	Drywall Ceiling	1	144	Sq. Ft.	Negative	Non ACM
101	Main Storage 101	1	Window Frame Caulk	2	10	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Window Frame Caulk	2	15	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Window Frame Caulk	2	36	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Window Glazing	3	10	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Window Glazing	3	20	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Window Glazing	3	75	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Wall Joint Caulk	4	20	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Wall Joint Caulk	4	10	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Wall Joint Caulk	4	20	Ln. Ft.	Negative	Non ACM
103A	Assistant's Office 103A	1	Wall Joint Caulk	4	10	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	4" Black Covebase	5	45	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Mastic 4" Black Covebase	6	45	Ln. Ft.	Negative	Non ACM
102	**Manager's Office 102**	**1**	**Tagged Metal Door**	**7**	**1**	**Total**	**Assumed**	**Intact**
103	**Main Office 103**	**1**	**Tagged Metal Frame**	**7.1**	**1**	**Total**	**Assumed**	**Intact**
102	Manager's Office 102	1	Tagged Metal Door Frame Caulk	8	20	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Floor Joint Caulk	9	450	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Floor Joint Caulk	9	110	Ln. Ft.	Negative	Non ACM
103A	Assistant's Office 103A	1	Floor Joint Caulk	9	10	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Drywall Wall	10	50000	Sq. Ft.	Negative	Non ACM
103	Main Office 103	1	Drywall Wall	10	1000	Sq. Ft.	Negative	Non ACM
101	Main Storage 101	1	Non Tagged Door Frame Caulk	11	40	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Door Window Glazing	12	10	Ln. Ft.	Negative	Non ACM
102	**Manager's Office 102**	**1**	**9" x 9" Floor Tile Brown**	**13**	**2**	**Sq. Ft.**	**Positive**	**Intact**
102	**Manager's Office 102**	**1**	**Mastic of 9" x 9" Floor Tile Brown**	**14**	**2**	**Sq. Ft.**	**Positive**	**Intact**
102	Manager's Office 102	1	4" Brown Covebase	15	48	Ln. Ft.	Negative	Non ACM
102	Manager's Office 102	1	Mastic of 4" Brown Covebase	16	48	Ln. Ft.	Negative	Non ACM
103	Main Office 103	1	Black Foam Insulation	17	15	Ln. Ft.	Negative	Non ACM
101	Main Storage 101	1	Fiberglass Deck	18	13776	Sq. Ft.	Negative	Non ACM

ENVIRONMENTAL, INC.

Michigan State University

Surplus Building
Building #190

Section III
Laboratory Results

This section provides the bulk sample collection information and laboratory results for all samples analyzed.

The Bulk Sample Results forms identify sample ID, Material Description, Material Class, Location of Sample, Sample Condition, Asbestos Detected, % Type of Asbestos and Non-Asbestos Material. Subsequent to these forms are the EMSL Analytical, Inc. Laboratory Results forms.

NOVA ENVIRONMENTAL, INC.

BULK SAMPLE RESULTS

CLIENT: Michigan State University BUILDING: Surplus Building PROJECT #: CI0539/SB101 TYPE OF ANALYSIS: PLM

SAMPLE I.D.	MATERIAL DESCRIPTION	CLASS	LOCATION OF SAMPLE	SAMPLE CONDITION	ASBESTOS DETECTED	%/TYPE	NON-ASBESTOS MATERIAL
CI0539/SB101-001	Drywall Ceiling	Misc.	Southwest Corner of Manager's Office at Ceiling	Friable	None Detected	---	10% Cellulose 90% Other Nonfibrous
CI0539/SB101-002	Window Frame Caulk	Misc.	Center of East Wall in Office Area	Non-Friable	None Detected	---	100% Other Nonfibrous
CI0539/SB101-003	Window Glazing	Misc.	Center of East Wall in Office Area	Non-Friable	None Detected	---	100% Other Nonfibrous
CI0539/SB101-004	Wall Joint Caulk	Misc.	Northwest Corner of Main Office Area	Non-Friable	None Detected	---	<1% Cellulose 100% Other Nonfibrous
CI0539/SB101-005A	4" Black Covebase	Misc.	Southwest Corner of Manager's Office	Non-Friable	None Detected	---	100% Other Nonfibrous
CI0539/SB101-005B	4" Black Covebase Mastic	Misc.	Southwest Corner of Manager's Office	Non-Friable	None Detected	---	1% Cellulose 99% Other Nonfibrous
CI0539/SB101-006	Tagged Metal Door Frame Caulk	Misc.	East Doorway of Manager's Office	Non-Friable	None Detected	---	100% Other Nonfibrous
CI0539/SB101-007	Floor Joint Caulk	Misc.	Center of Office Area	Non-Friable	None Detected	---	80% Cellulose 20% Other Nonfibrous
CI0539/SB101-008	Drywall Wall	Misc.	Southwest Corner of Manager's Office	Friable	None Detected	---	5% Cellulose 95% Other Nonfibrous
CI0539/SB101-009	Non-Tagged Door Frame Caulk	Misc.	Southwest Entrance to Main Storage Area	Non-Friable	None Detected	---	100% Other Nonfibrous
CI0539/SB101-010	Door Window Glazing	Misc.	Main Entrance Southeast	Non-Friable	None Detected	---	2% Cellulose 98% Other Nonfibrous
CI0539/SB101-011A	9" x 9" Brown Floor Tile	Misc.	Southwest Corner of Manager's Office	Non-Friable	Yes	2% Chrysotile	98% Other Nonfibrous
CI0539/SB101-011B	9" x 9" Brown Floor Tile Mastic	Misc.	Southwest Corner of Manager's Office	Non-Friable	Yes	3% Chrysotile	97% Other Nonfibrous
CI0539/SB101-012A	4" Brown Covebase	Misc.	Southwest Corner of Manager's Office	Non-Friable	None Detected	---	100% Other Nonfibrous
CI0539/SB101-012B	4" Brown Covebase Mastic	Misc.	Southwest Corner of Manager's Office	Non-Friable	None Detected	---	100% Other Nonfibrous

EMSL Analytical, Inc.
212 South Wagner Road, Ann Arbor, MI 48103
Phone: (734) 668-6810 Fax: (734) 668-8532 Email: annarborlab@emsl.com

Attn: **Joel Lamb**
Nova Environmental, Inc
5340 Plymouth Rd
Suite 210
Ann Arbor, MI 48105

Fax: (734) 930-2969 Phone: (734) 930-0995

Project: **CI0539/SB101, Michigan State University, Surplus Building #190, Throughout**

Customer ID: NOVA53
Customer PO:
Received: 10/11/06 7:45 PM
EMSL Order: 080603814

EMSL Proj:
Analysis Date: 10/12/2006
Report Date: 10/12/2006

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	Location	Appearance	%	Fibrous	%	Non-Fibrous	% Type
CI0539/SB101-001 *080603814-0001*		White Non-Fibrous Heterogeneous	10%	Cellulose	90%	Non-fibrous (other)	None Detected
CI0539/SB101-002 *080603814-0002*		White Non-Fibrous Heterogeneous			100%	Non-fibrous (other)	None Detected
539/SB101-003 *080603814-0003*		Black Non-Fibrous Heterogeneous			100%	Non-fibrous (other)	None Detected
CI0539/SB101-004 *080603814-0004*		White Non-Fibrous Heterogeneous	<1%	Cellulose	100%	Non-fibrous (other)	None Detected
CI0539/SB101-005A *080603814-0005*		Black Non-Fibrous Heterogeneous			100%	Non-fibrous (other)	None Detected
CI0539/SB101-005B *080603814-0006*		Yellow Non-Fibrous Heterogeneous	1%	Cellulose	99%	Non-fibrous (other)	None Detected
CI0539/SB101-006 *080603814-0007*		White Non-Fibrous Heterogeneous			100%	Non-fibrous (other)	None Detected

Analyst(s) Justin Bolton

Justin Bolton (15)

Paul W. Senne

Paul Senne,
Laboratory Manager
or other approved signatory

EMSL Analytical, Inc.
212 South Wagner Road, Ann Arbor, MI 48103
Phone: (734) 668-6810 Fax: (734) 668-8532 Email: annarborlab@emsl.com

Attn: **Joel Lamb**
Nova Environmental, Inc
5340 Plymouth Rd
Suite 210
Ann Arbor, MI 48105

Fax: (734) 930-2969 Phone: (734) 930-0995

Project: **CI0539/SB101, Michigan State University, Surplus Building #190, Throughout**

Customer ID: NOVA53
Customer PO:
Received: 10/11/06 7:45 PM
EMSL Order: 080603814

EMSL Proj:
Analysis Date: 10/12/2006
Report Date: 10/12/2006

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	Location	Appearance	% Fibrous		% Non-Fibrous	% Type
CI0539/SB101-007 *080603814-0008*		Brown Fibrous Heterogeneous	80%	Cellulose	20% Non-fibrous (other)	None Detected
CI0539/SB101-008 *080603814-0009*		White Non-Fibrous Heterogeneous	5%	Cellulose	95% Non-fibrous (other)	None Detected
539/SB101-009 *603814-0010*		White Non-Fibrous Heterogeneous			100% Non-fibrous (other)	None Detected
CI0539/SB101-010 *080603814-0011*		Black Non-Fibrous Heterogeneous	2%	Cellulose	98% Non-fibrous (other)	None Detected
CI0539/SB101-011A *080603814-0012*		Pink Non-Fibrous Heterogeneous			98% Non-fibrous (other)	2% Chrysotile
CI0539/SB101-011B *080603814-0013*		Black Non-Fibrous Heterogeneous			97% Non-fibrous (other)	3% Chrysotile
CI0539/SB101-012A *080603814-0014*		Brown Non-Fibrous Heterogeneous			100% Non-fibrous (other)	None Detected

Analyst(s)
Justin Bolton (15)

Paul Senne,
Laboratory Manager
or other approved signatory

EMSL Analytical, Inc.
212 South Wagner Road, Ann Arbor, MI 48103
Phone: (734) 668-6810 Fax: (734) 668-8532 Email: annarborlab@emsl.com

Attn: **Joel Lamb**
Nova Environmental, Inc
5340 Plymouth Rd
Suite 210
Ann Arbor, MI 48105

Fax: (734) 930-2969 Phone: (734) 930-0995

Project: **CI0539/SB101, Michigan State University, Surplus Building #190, Throughout**

Customer ID: NOVA53
Customer PO:
Received: 10/11/06 7:45 PM
EMSL Order: 080603814

EMSL Proj:
Analysis Date: 10/12/2006
Report Date: 10/12/2006

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	Location	Appearance	% Fibrous	% Non-Fibrous	% Type
CI0539/SB101-012B *080603814-0015*		Brown Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)
Justin Bolton (15)

Paul Senne,
Laboratory Manager
or other approved signatory

THIS IS THE LAST PAGE OF THE REPORT.

Fibertec
industrial hygiene
services, inc.

BULK SAMPLE ANALYTICAL REPORT

Fibertec IHS Project #32373-1
NVLAP Accreditation #101510-0

Client Name: Michigan State University
Project Name: BPS - Storage (Surplus)
Summary: 1 Submitted Bulk Sample, 1 Sample Layer Analyzed.

Date Sampled: 11/1/2012
Date Submitted: 11/1/2012
Date Analyzed: 11/5/2012

Client P.O. #: N/A
C.O.C. #: 115187

Fibertec Sample No.	Client I.D. No.	Description / Location	Asbestos Type	Non-Asbestos Containing Portion	Analyst
1	1	Gray tabular material, light gray table top.	Chrysotile 8%	Non-fibrous material 92%	CBD

1914 Holloway Drive, Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0382

Fibertec
industrial hygiene
services, inc.

BULK SAMPLE ANALYTICAL REPORT

Fibertec IHS Project #32223-1
NVLAP Accreditation #101510-0

Client Name: Michigan State University
Project Name: Surplus
Summary: 1 Submitted Bulk Sample, 1 Sample Layer Analyzed.

Date Sampled: 9/27/2012
Date Submitted: 9/27/2012
Date Analyzed: 9/27/2012

Client P.O. #: N/A
C.O.C. #: 115178

Fibertec Sample No.	Client I.D. No.	Description / Location	Asbestos Type	Non-Asbestos Containing Portion	Analyst
1	1	White fibrous material, oven with brown insulation.	Chrysotile 15%	Non-fibrous material 85%	JAW

1914 Holloway Drive, Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0382

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BULK SAMPLE ANALYTICAL REPORT

Fibertec IHS Project #31130
NVLAP Accreditation #101510-0

Client Name: Michigan State University
Project Name: Various, Int. Center, Chittenden
Summary: 5 Submitted Bulk Samples, 5 Sample Layers Analyzed.

Date Sampled: 3/13/2012
Date Submitted: 3/13/2012
Date Analyzed: 3/14/2012

Client P.O. #: N/A
C.O.C. #: 111638

Fibertec Sample No.	Client I.D. No.	Description / Location	Asbestos Type	Non-Asbestos Containing Portion	Analyst
1	1	White fibrous material, packing, Surplus.	Chrysotile 50%	Cellulose fibers 45% Non-fibrous material 5%	CBD
2	2	Gray granular material, spray-on, Int. Center.	NAD	Non-fibrous material 75% Cellulose fibers 25%	CBD
3	3	Black fibrous material, chalkboard, Chittenden.	NAD	Non-fibrous material 95% Fibrous glass 5%	CBD
4	4	Black tabular material, red battleship linol..	NAD	Non-fibrous material 85% Cellulose fibers 15%	CBD
6	6	White granular material, white packing, Giltner.	Chrysotile 7%	Non-fibrous material 93%	CBD

1914 Holloway Drive, Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0382

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industrial hygiene
services, inc.

BULK SAMPLE ANALYTICAL REPORT

Fibertec IHS Project #30237-1
NVLAP Accreditation #101510-0

Client Name: Michigan State University
Project Name: MSU Surplus
Summary: 2 Submitted Bulk Samples, 2 Sample Layers Analyzed.

Date Sampled: 8/22/2011
Date Submitted: 8/22/2011
Date Analyzed: 8/23/2011

Client P.O. #: N/A
C.O.C. #: 105972

Fibertec Sample No.	Client I.D. No.	Description / Location	Asbestos Type	Non-Asbestos Containing Portion	Analyst
1	1	Brown tabular material, brown surplus tile.	NAD	Non-fibrous material 92% Cellulose fibers 8%	CBD
2	2	Green tabular material, green surplus tile.	NAD	Non-fibrous material 92% Cellulose fibers 8%	CBD

1914 Holloway Drive, Holt, Michigan 48842 Telephone: (517) 699-0345 Facsimile: (517) 699-0382

Fibertec
industrial hygiene
services, inc.

BULK SAMPLE ANALYTICAL REPORT

Fibertec IHS Project #30098-1

NVLAP Accreditation #101510-0

Client Name: Michigan State University

Project Name: MSU Clinical Center

Summary: 1 Submitted Bulk Sample, 1 Sample Layer Analyzed.

Date Sampled: 7/26/2011

Date Submitted: 7/26/2011

Date Analyzed: 7/26/2011

Client P.O. #: N/A

C.O.C. #: 106523

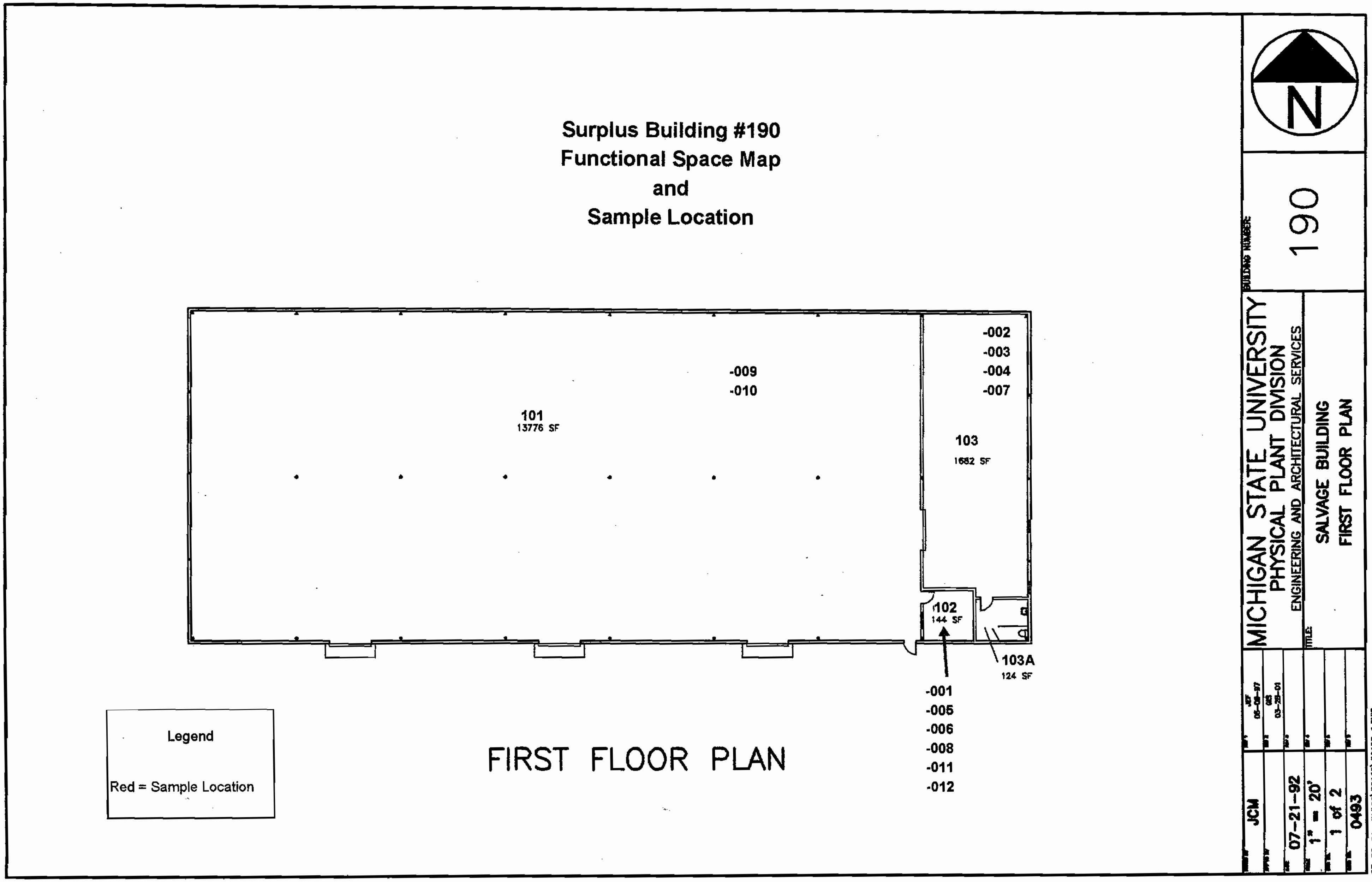
Fibertec Sample No.	Client I.D. No.	Description / Location	Asbestos Type	Non-Asbestos Containing Portion	Analyst
1	1	Black granular material, Room A219A	NAD	Non-fibrous material 100%	CBD

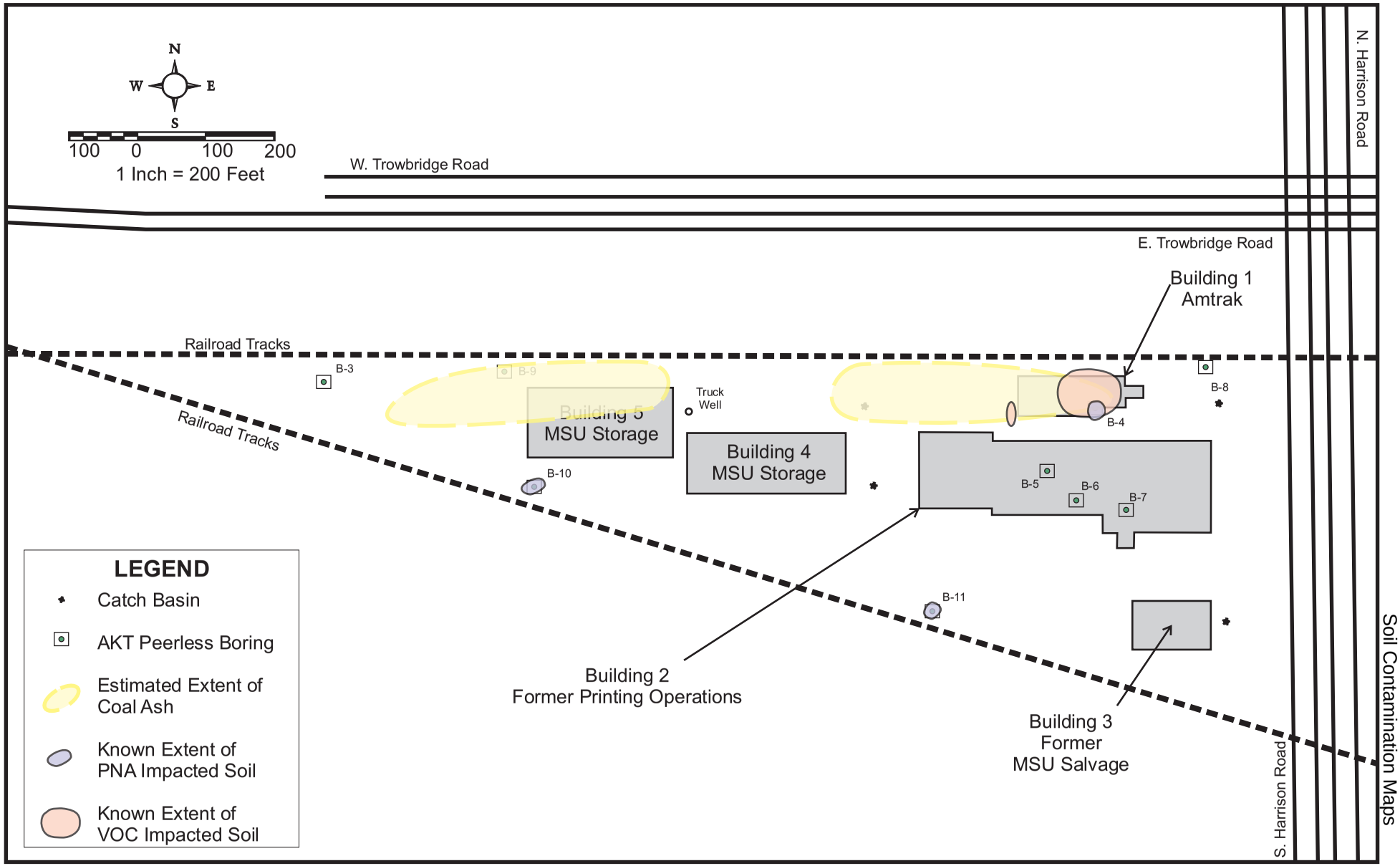
file w/ Surplus Samples

1914 Holloway Drive, Holt, Michigan 48842

Telephone: (517) 699-0345 Facsimile: (517) 699-0382

Surplus Building #190
Functional Space Map
and
Sample Location





SOIL AND GROUND-WATER INVESTIGATION
Amtrak Triangle
Michigan State University
East Lansing, Michigan

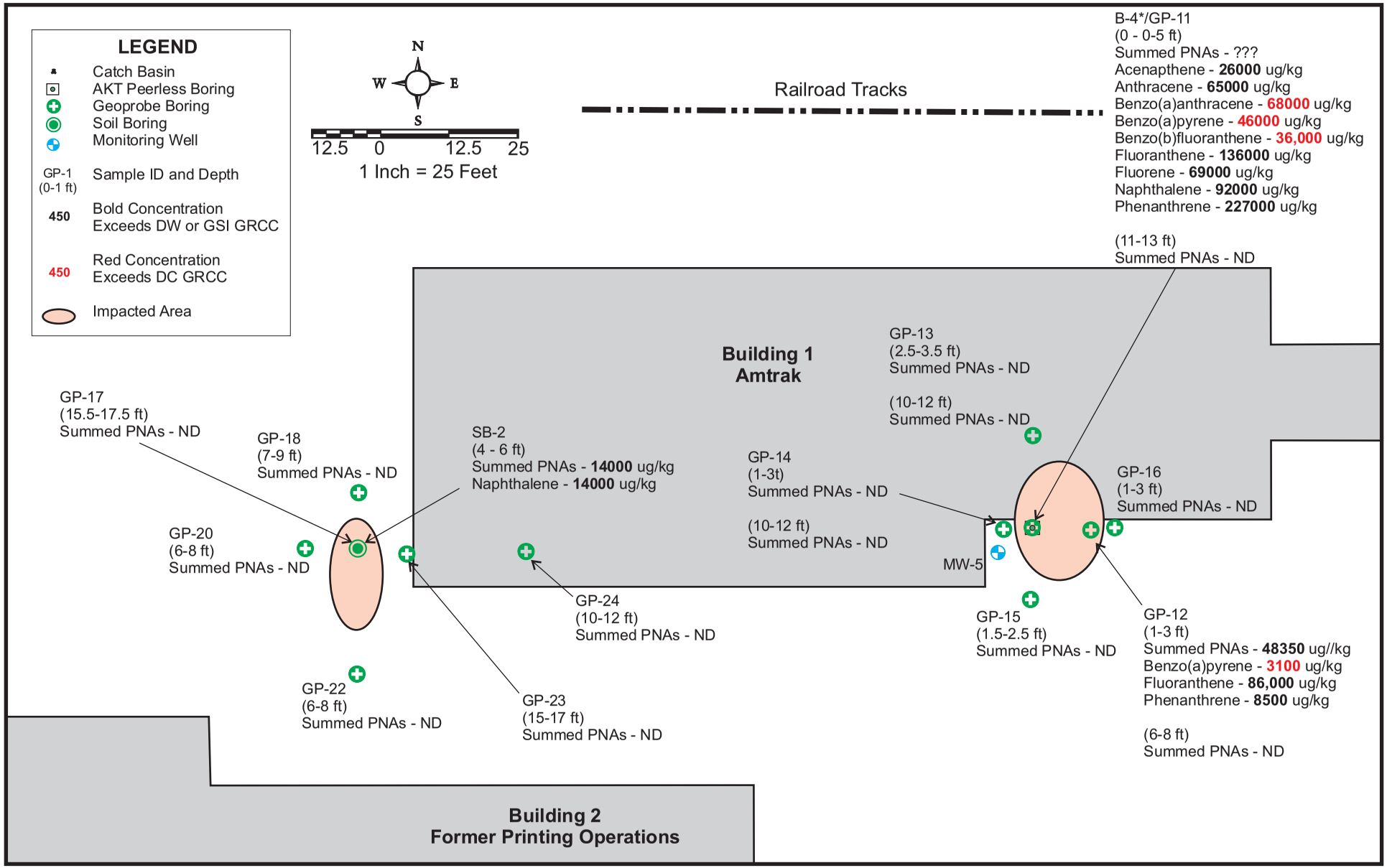
STRATA ENVIRONMENTAL SERVICES, INC.

FIGURE 1

Known Extent of Impacted Soil

876-1603

APPENDIX C
Soil Contamination Maps



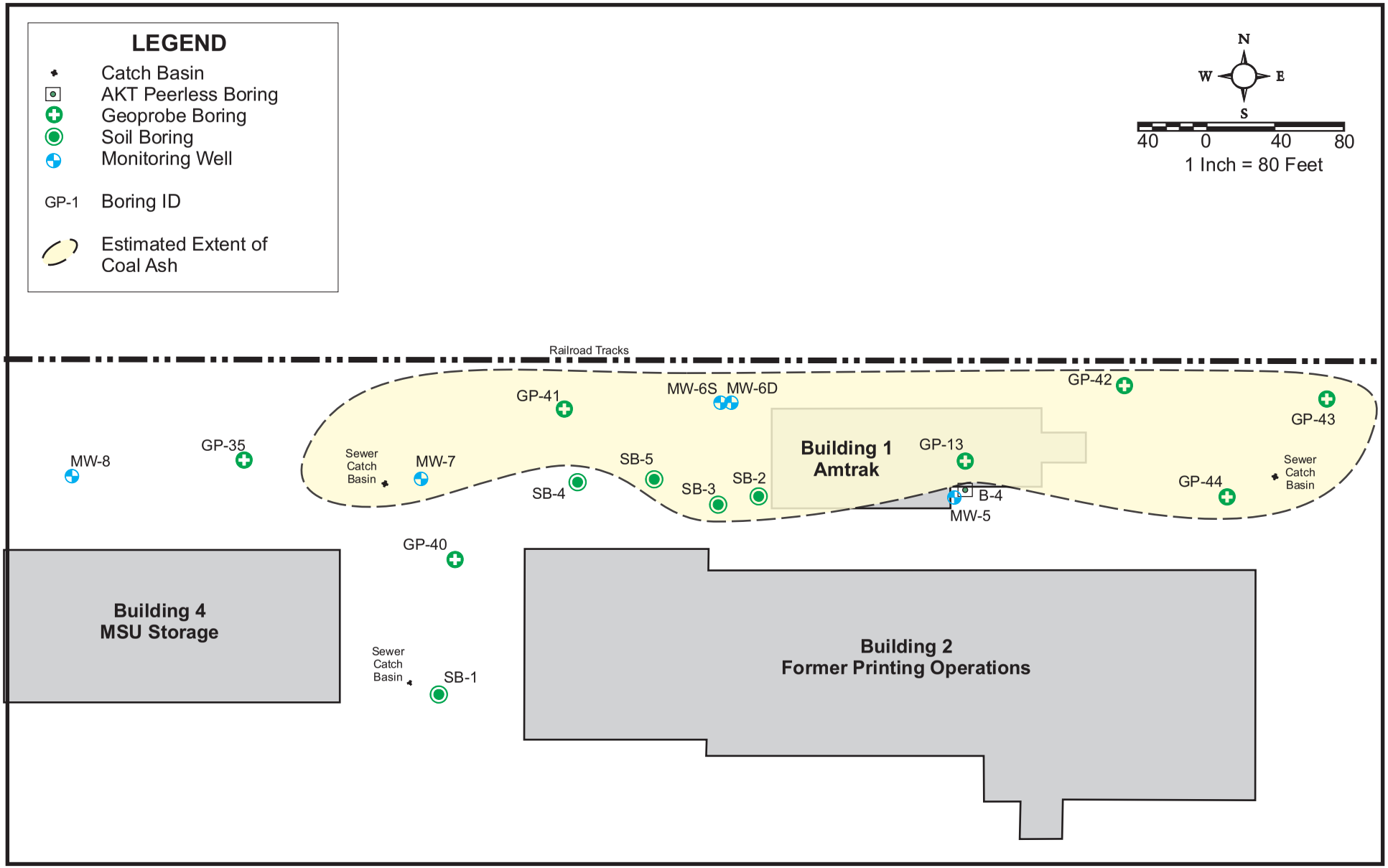
SOIL AND GROUND-WATER INVESTIGATION
Amtrak Triangle
Michigan State University
East Lansing, Michigan

STRATA ENVIRONMENTAL SERVICES, INC.

FIGURE

PNA Impacted Soi in Area of Soi Borings B-4 and SB-2

876-1603



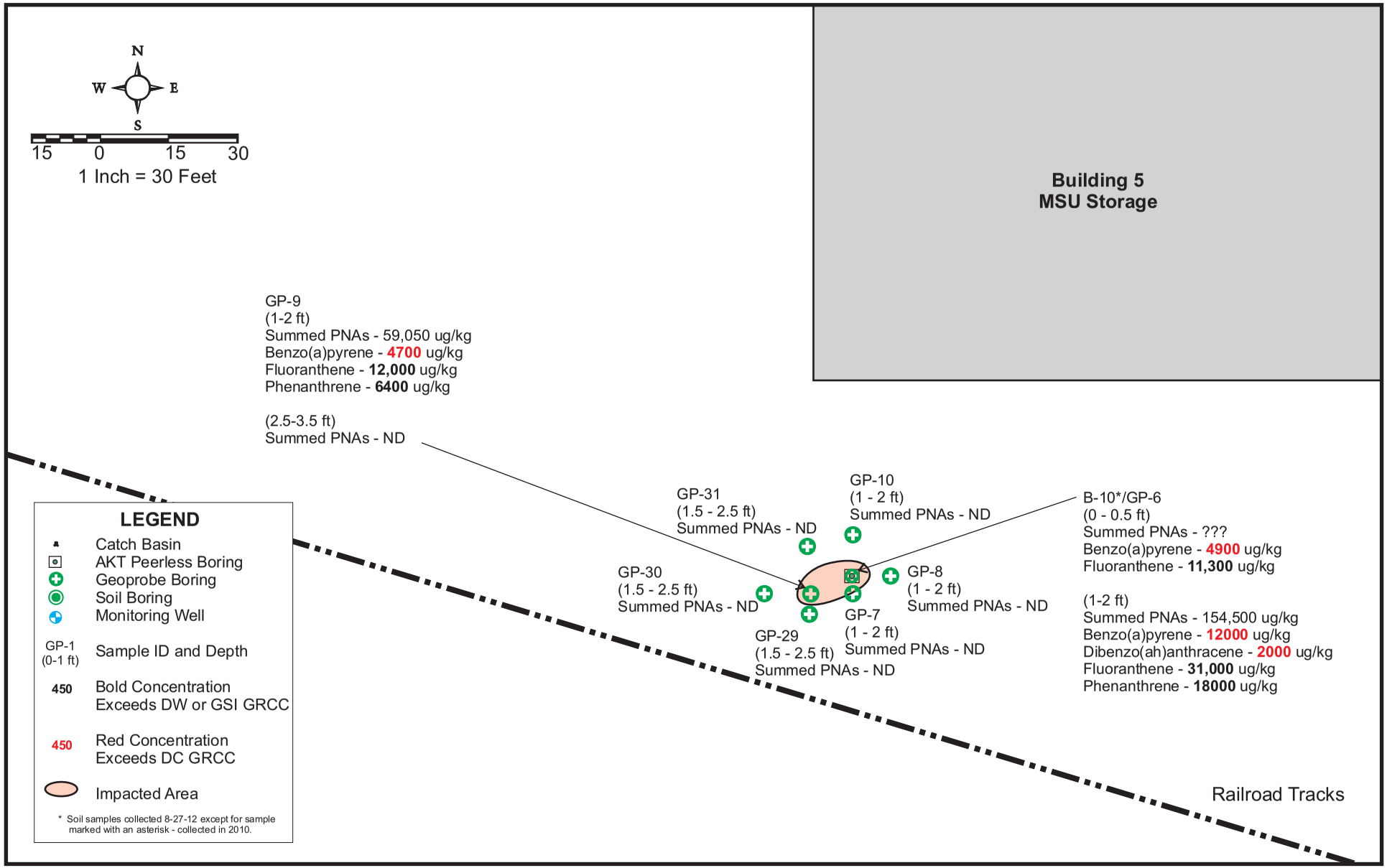
SOIL AND GROUND-WATER INVESTIGATION
Amtrak Triangle
Michigan State University
East Lansing, Michigan

STRATA ENVIRONMENTAL SERVICES, INC.

FIGURE

Coal Ash Delineation Soil Borings

876-1603



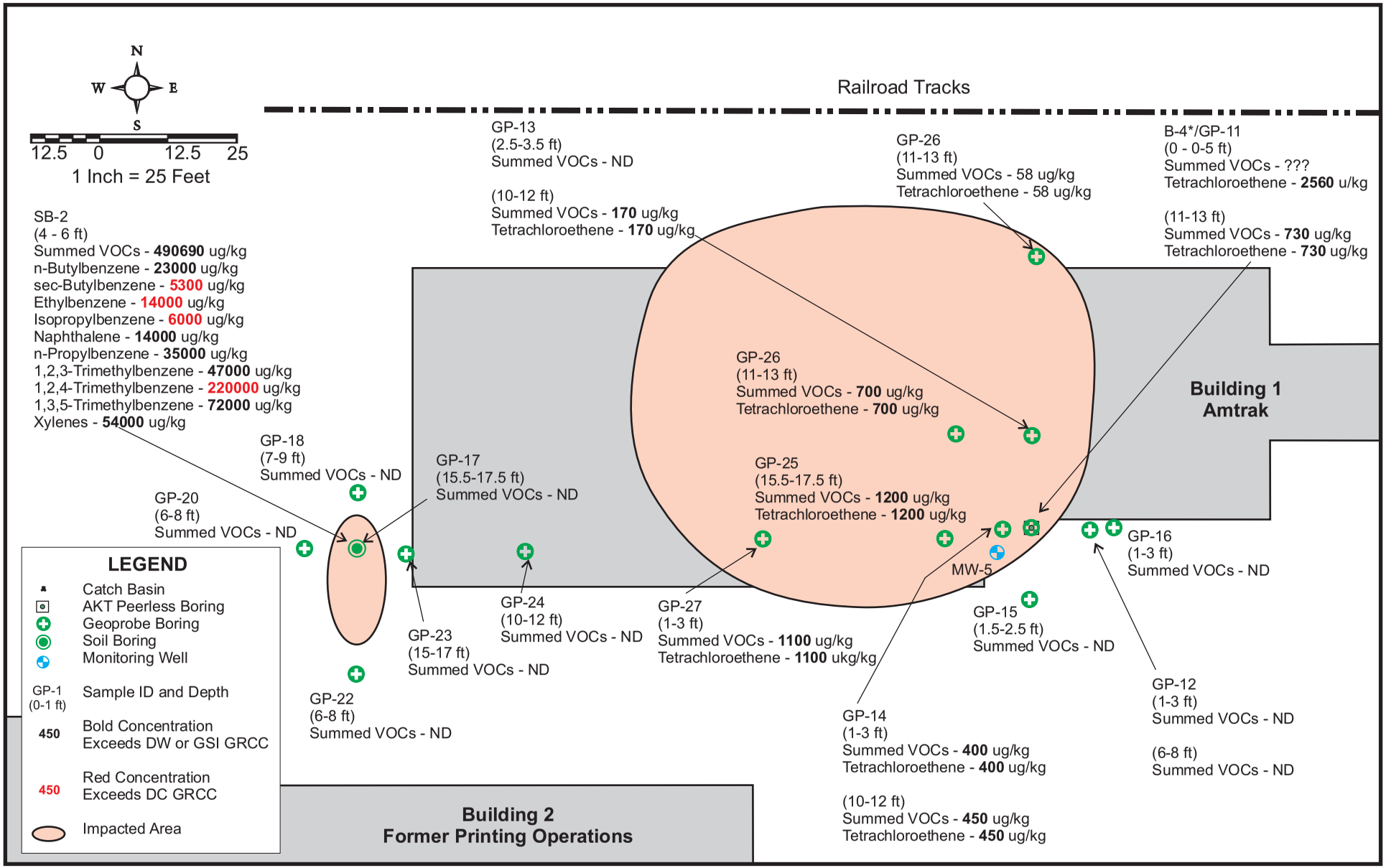
SOIL AND GROUND-WATER INVESTIGATION
Amtrak Triangle
Michigan State University
East Lansing, Michigan

STRATA ENVIRONMENTAL SERVICES, INC.

FIGURE

Impacted Soil in Area of AKT Soil Boring B-10

876-1603



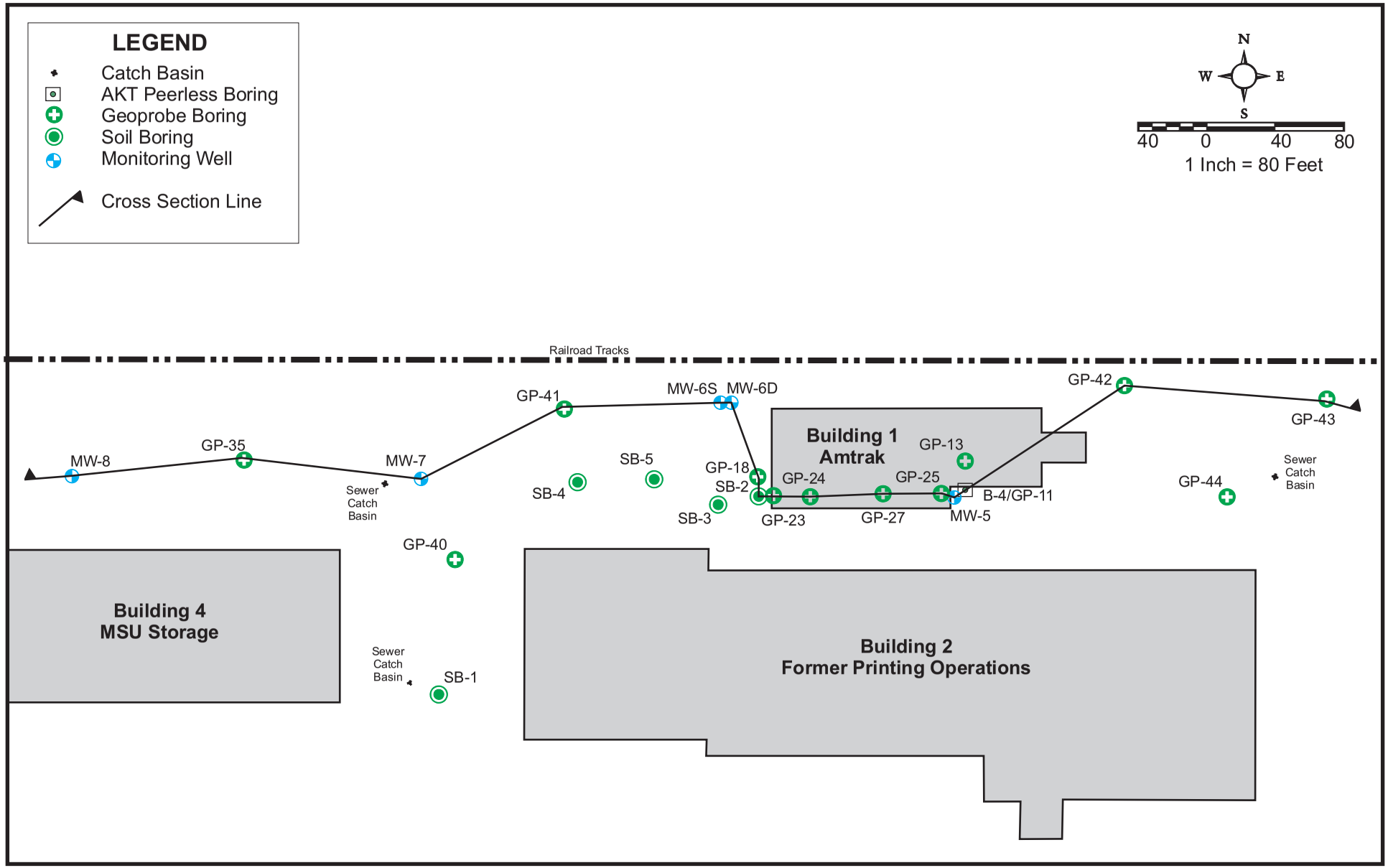
SOIL AND GROUND-WATER INVESTIGATION
Amtrak Triangle
Michigan State University
East Lansing, Michigan

STRATA ENVIRONMENTAL SERVICES, INC.

FIGURE

VOC Impacted Soil in Area of AKT Soil Boring B-4

876-1603



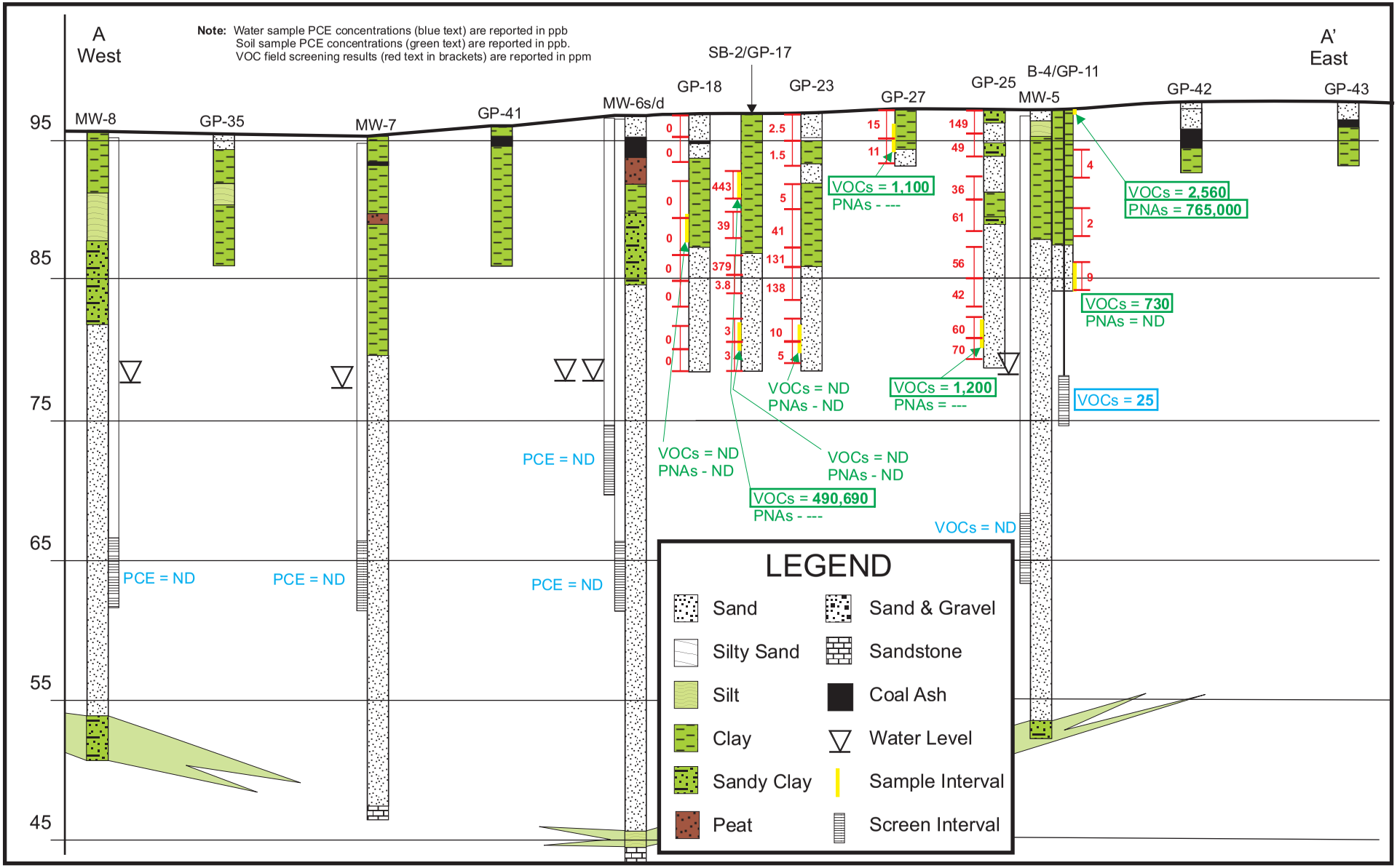
SOIL AND GROUND-WATER INVESTIGATION
Amtrak Triangle
Michigan State University
East Lansing, Michigan

STRATA ENVIRONMENTAL SERVICES, INC.

FIGURE

Location of Cross Sections

876-1603



SOIL AND GROUND-WATER INVESTIGATION
Amtrak Triangle
Michigan State University
East Lansing, Michigan

Horizontal Scale: 1 inch = 100 feet
Vertical Scale: 1 inch = 10 feet

STRATA ENVIRONMENTAL SERVICES, INC.

FIGURE

Geologic Cross-Section
A - A'

875-1603

APPENDIX D

for

Sanitary Sewage Disposal Facilities Utilizing On-Site Storage,

Hauling and Final Disposal at an Off-Site Receiving Facility.

(Pump and Haul Facilities)

I. Introduction

These guidelines have been developed for use by agencies responsible for the review and approval of sanitary sewage disposal facilities utilizing on-site storage, hauling, and final disposal at an off-site receiving facility.

II. Determination of Sewage Quantities

The determination of sewage quantities shall be based on measurement of actual flows. When this information is not available or obtainable, the Manual of Septic Tank Practice, Public Health Service Publication No. 526, revised in 1967, should be used as a guide in estimating quantities of sewage flow.

III. Applications

A. Applications for Permits.

The permit applications shall be made to the Water Resources Commission.

B. Information required for review of application.

The information needed for review of a specific application will vary in accord with the type of building development, the estimated flow rate, and other conditions. The review of an application will require the following:

1. The design of the on-site storage and receiving facility.

2. A written description of how the storing, transporting, and disposing of sewage will be accomplished.

3. A contingency plan to be followed should a breakdown occur.

4. Contracts or agreements necessary to assure the continuity of a satisfactory operation.

IV. Design Factors

A. On-site storage facility.

1. The holding tank shall be designed to be structurally sound, watertight, not subject to decay or corrosion and with provisions for odor control.

2. The holding tank shall be equipped with a high-level warning device and in certain installations equipped with a mechanism to cut off the water supply when the high-level warning device is activated.

3. The holding tank shall have sufficient openings to allow access for inspection and maintenance.

4. The holding tank must be sized with consideration given to the estimated flow rate, pumping schedule, the operation schedule and the limitations of the receiving facility, and with a minimum of two days storage.

5. The holding tank shall be located in an area that is readily accessible for pumping, and located so as to prevent the contamination of surface or groundwaters or the creation of a public health hazard or nuisance.

6. Consideration shall be given to the need for wash down facilities, curbing and fencing.

B. Receiving facility.

1. A municipal sewage treatment facility meeting the requirements of Act 98, Public Acts of 1913, is the preferred method for the final disposal of wastes generated at a pump and haul facility. When such a facility is not available or accessible, it may be possible to dispose of the waste at some other off-site disposal facility approved for this use.

2. The facility at the receiving site shall be designed in a manner that will protect the public health and that will prevent the inadvertent discharge of the waste to the ground surface, surface waters, or groundwaters of the state.

3. The location shall be such as to allow ready access during the periods deemed necessary to assure continuity of operation. Also, the location must be such as to prevent the creation of a public health hazard or nuisance.

4. Consideration shall be given to the need for wash down facilities, fencing, and curbing.

V. Factors for Evaluating the Transport...

1. The vehicle must be licensed under Act 243, Public Acts of 1951, as amended.

2. A prime vehicle and a backup vehicle must be available to haul as required to meet the pumping schedule.

3. It is recommended that the applicant own the vehicle where large flows of sewage are involved.

4. The vehicle must be of sufficient size and suitable design to handle the expected daily flows while meeting the operation schedule and hydraulic limitations of the final disposal site.

5. Consideration shall be given to suitability of roads, climatic conditions, and load restrictions when evaluating the transportation route(s) from the storage facility to the disposal site.

VI. Contracts, Conditions and Restrictions

1. When the applicant does not own the hauling vehicles, a contract or written agreement between the applicant and hauler is needed to assure continuity of operation.

2. Where final disposal at a municipal sewage system is planned, a contract is needed between the applicant and governmental agency, stating that the governmental agency will accept the expected quantities of sewage at their treatment facility. Also, a letter of approval from the Municipal Wastewater Division will be needed, stating that the treatment facility is capable of receiving and treating the waste.

3. An appropriate deed restriction is needed to inform prospective future owners of the facility about the provisions, conditions, and restrictions concerning the pump and haul arrangements.

4. Approval of local units of government is necessary where pump and haul is under consideration.

5. The applicant shall designate a person to be in responsible charge of the total pump and haul operation. The name, address, and phone number of this person shall be provided to the reviewing agency.