Brownfields Focus Group: Asbestos and Lead Based Paint Cleanup

August 9, 2022

AGENDA

- Introductions
- Format of discussion
- Asbestos
  - Inspections
  - Abatement
- Lead-Based Paint
- Indoor Air Quality

Asbestos – Inspection Process

- **Full Inspection**
  - All encompassing!
  - Roof, exterior, basement, etc.
  - Detailed sample descriptions and locations
  - Destructive sampling methods
  - Full report includes maps, photos, tables, quantities etc.
- **Limited Inspection**
  - Limited to specific areas (renovations/remodels)
  - Letter report often used
  - Discrete sampling methods

Example Inspection Report

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Details Matter!

Algona Research Center
Limited ACM Inspection
Algona, Iowa

Table 3 – Asbestos Containing Material Samples List

Sample #	Material Substance	Material Type (Surf/TSI/Misc)	Friable (Y or N)	Color	Condition (G, F, P)	Floor	Location	Asbestos Content	Est. Quantity
60	Floor Mastic	Misc	N (Cat II)	Brown	F	1st	North Office, Maintenance Room	3% Chrysotile	65 SF

Material Type – Surf=Surfacing, TSI=Thermal System Insulation, Misc=Miscellaneous / **Condition** – G=Good, F=Fair, P=Poor /

Asbestos Containing Material (ACM) is defined as any material containing more than one percent (1%) asbestos. Although building materials containing less than <1% asbestos are not classified ACM by the EPA, they may still be regulated as asbestos by Iowa OSHA and should be treated as such. One (1) bulk material sample was analyzed greater than 1%. None of the remaining building material samples were detected with a concentration of <1%. ACMs include brown floor mastic, if during demolition or renovation activities additional areas of identified ACM are discovered, they should be abated accordingly. Laboratory analytical reports are provided in Appendix C.

It is important to note that these are estimated quantities; therefore, the abatement contractors and the client representative should discern between the estimated quantity above and future exploration of the property at the pre-bid walk-through to determine the final quantity during abatement procedures.

Limited ACM Inspection
Pioneer Hi-Bred, International, Inc. Algona Research Center
Algona, IA

21: Yellow Cove Base Mastic

22: White Drywall
23: White Drywall Joint Compound
24: White Drywall Tape

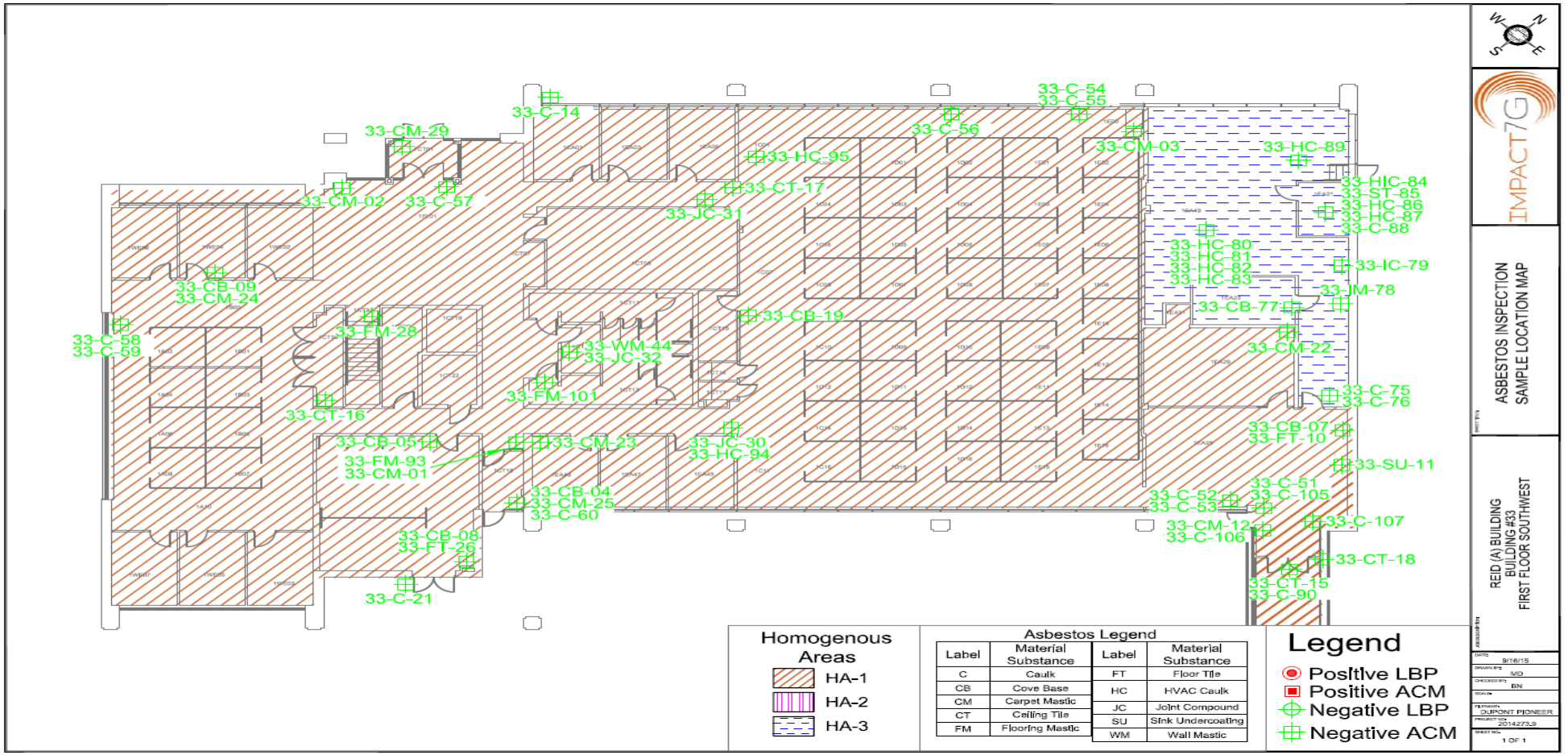
25: Pink Duct Insulation

26: Yellow Ceiling Insulation
27: White/Silver Insulation Paper

28: Pink Insulation

29: Black Window Glazing

Details Matter!



What Could Possibly Go Wrong???

POLARIZED LIGHT MICROSCOPY (PLM) Asbestos Bulk Sample EPA Method 600/R-93/116
Sample taken 01/22/08 Received 02/07/08 Analyzed 02/07/08 First Reported 02/07/08

Bulk number	Description	Presence	Location	Quantity
D01	grout	None detected	Grout to porcelain wall inside NE dock	
D02	tan adhesive	None detected	glue for Styrofoam block to cinder block Inside 1st S. storage room from NE dock	
D03	black mastic	None detected	glue to Styrofoam inside NE dock to E. wall	
D04	cementitious	None detected	cement type wall, interior finish of E corridor An application over substrates-like Transite	
D05	cement/plaster	None detected	over blue Styrofoam in E. corridor finish	
D06	floor sealant	None detected	seam sealant in NE dock floor	
D07	gray tar	21% Chrysotile asbestos	flashing tar seam over N employee break rm to brick 2nd story @ <350Ft; & parapet seams	
D08	gray caulk	None detected	over metal flashing over N employee break Room to brick 2nd story	
D09	built up roof	None detected	built up roofing over N employee break room	
D10	white grout	None detected	grout to N architectural glass window blocks	
D11	glaze-caulk	None detected	to wood windows of N employee break room	
D12	mud joint plstr	None detected	E/NE dock corridor, overhead pipe fittings	
D13	mud joint plstr	18% Chrysotile asbestos	pipe fittings E 1st floor toilet room @ 7LF This was an outside access toilet room	
D14A	linoleum	20% Chrysotile asbestos	flooring in E 1st floor toilet room @12 by 14FT	
D14B	adhesive	None detected	glue in same E 1st floor toilet room (D13)	
D15A	cove base	None detected	cove in same E 1st floor toilet room (D13)	
D15B	adhesive	None detected	glue to cove in E 1st floor toilet room (D13)	
D16	12in clg tile	None detected	E main stairwell entrance by NE dock (nailed	
D17A	linoleum	20% Chrysotile asbestos	2nd floor N room top finish @ 84FT by 70FT	
D17B	adhesive	None detected	2nd floor N room to top finish	
D18A	linoleum	20% Chrysotile asbestos	2nd floor N room middle finish layer @84x70	
D18B	adhesive	None detected	2nd floor N room to middle finish	
D19A	linoleum	20% Chrysotile asbestos	2nd floor N room bottom finish (84x70)	
D20	gypsum debris	None detected	2nd floor N debris piles on linoleum finishes	
D21	plaster debris	None detected	2nd floor N debris mix piles on linoleum floor	
D22	insulation debris	None detected	2nd floor N mix debris, from ductwork	
D23	glaze-caulk	None detected	3rd floor middle & west 17 units, 4FT x 5FT	
D24	flooring	None detected	3rd floor up, stairs, short hall	
D25A	linoleum	4% Chrysotile asbestos	3rd floor south office floor finish <300SF	
D25B	adhesive	None detected	3rd floor south office floor glue on concrete	
D26A	12in floor tile	4% Chrysotile asbestos	3rd floor adjoining locker room @ 10 by 18Ft	
D26B	adhesive	None detected	3rd floor locker room floor glue on concrete	
D27	glaze-caulk	<1% Chrysotile asbestos	2nd floor N room (D17) N/NW 6ft by 4ft unit	
D28	built up roof	None detected	sml rock on roof, over 2nd floor N room	
D29A	9in floor tile	None detected	2nd floor N room (D17) sandwich finish	
D29B	mastic	None detected	2nd floor N room (D17) glue to 9in tile	
D30A	12in floor tile	4% Chrysotile asbestos	1st floor interior room by stairs to N 2nd floor	
D30B	mastic	None detected	1st floor interior room glue @ 28FT by 30Ft	

Notes: This bulk sample survey was performed at the former IBP structure located at or about 1525 O Avenue in Fort Dodge, Iowa. The facility had later seen other storage uses. Page 1 of 2

MARCH 6 2008

MS VICKI REECE
DEPT OF BUSINESS AFFAIRS + COMMUNITY & ECONOMY
CITY OF FORT DODGE
819 1ST AVENUE SOUTH
FORT DODGE IA 50501

SUBJECT FORMER IBP STRUCTURE, 1525 O AVENUE
ASBESTOS REMOVAL DISPOSAL

TO WHOM IT MAY CONCERN:

IT MAY BE PRUDENT TO CONSIDER THE EVENT OF ASBESTOS ABATEMENT AND DISPOSAL IN TERMS OF AN ACTIVITY THAT MAY TAKE UPWARDS OF TEN TO TWELVE WEEKS, WEATHER PERMITTING, AND AN ENGINEERING BUDGET OF ONE HUNDRED THOUSAND DOLLARS, IN REFLECTION OF THE SIZE OF THE FACILITY.

IF YOU HAVE ANY QUESTIONS, PLEASE CALL.

SINCERELY,

515 370-1984 call

515-370-1984
He will fax estimate tomorrow

Message : former IBP 1525 Avenue O

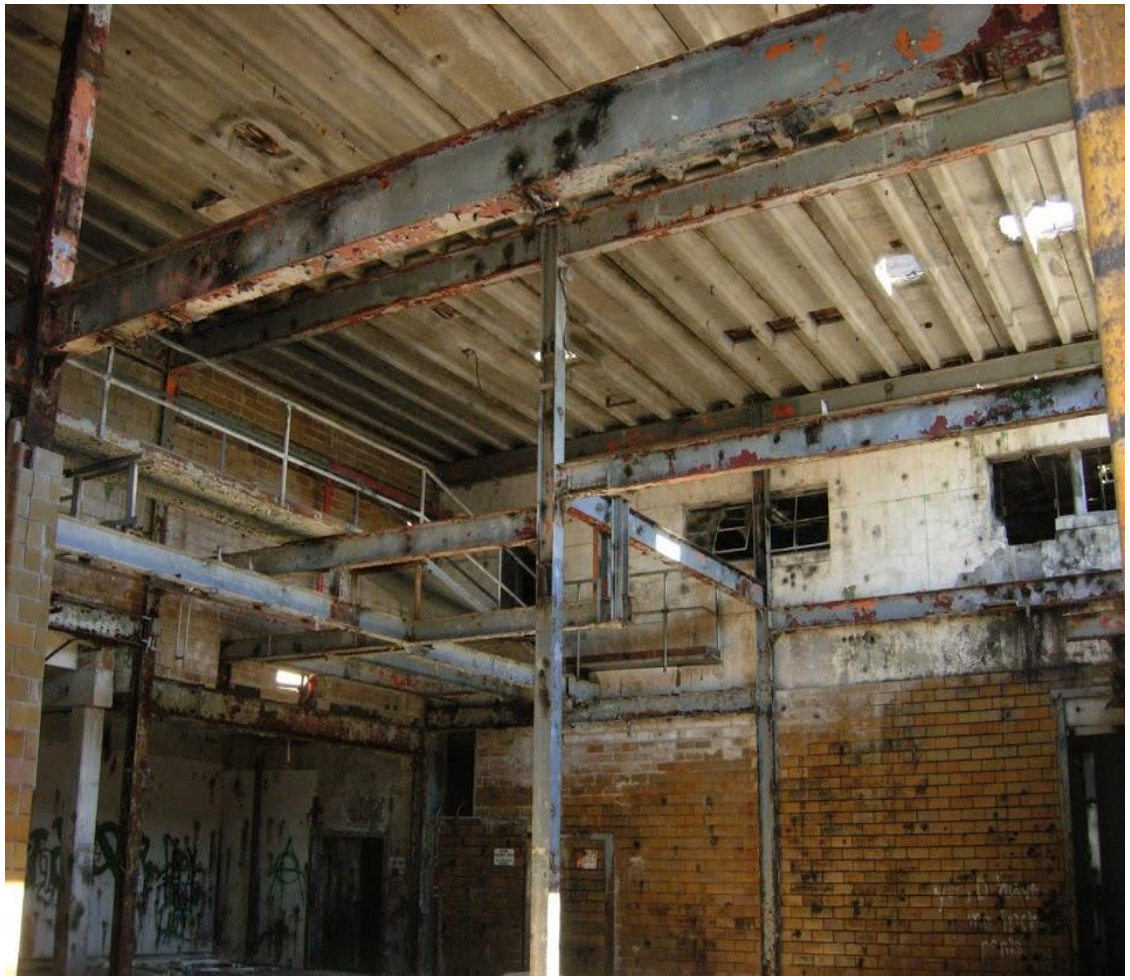
On or about January 22 Dennis Jordison escorted me into the facility at about 900 am. An asbestos bulk sample survey was performed until or about 300 pm when Mr Jordison returned, and we were subsequently requested to leave by an unnamed legal representative.

From the RFP bid walk you were aware of the three detached small building structures, one - a tank type with similar roofing one - an office type with linoleums, gypsum, roofing one - a pump house with similar roofing What do you recommend for completing the ancillary structure sampling assignment?

What Could Possibly Go Wrong???

Asbestos – Project Design

- Part of Formal Bid Documents/SPEC
- Materials, Locations, Quantities
- Removal Procedures
- Deadlines
- Floor Plans
- Entry & Exit Procedures
- Insurance/Bonding Requirements
- Site Conditions
- Special Provisions

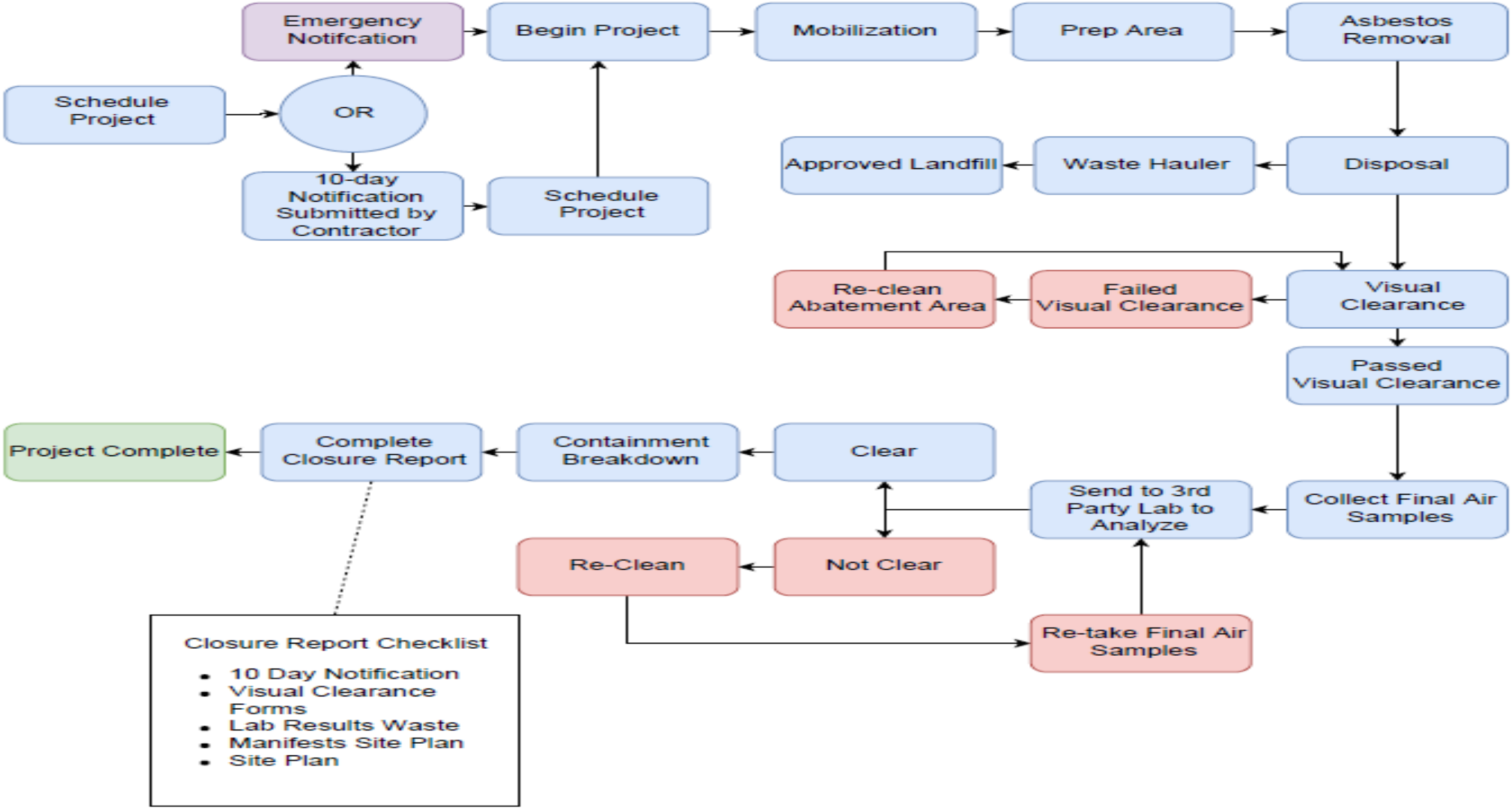


Asbestos – Abatement

- Who is in charge?
- Observation
- Documentation
- Air Monitoring
  - Daily, STEL, Clearances, Personals
- Waste Manifests
- Closeout Documentation
- When the cat's away…

Asbestos Tips

- Have a process!
- Specific requirements for grant funded projects
- Plan early and be cognizant of schedules
- Work with reputable consultants and contractors
- Avoid conflict of interest
- Document EVERYTHING


Emergency Notifcation
Begin Project
Mobilization
Prep Area
Asbestos Removal
Schedule Project
OR
10-day Notification Submitted by Contractor
Schedule Project
Approved Landfill
Waste Hauler
Disposal
Re-clean Abatement Area
Failed Visual Clearance
Visual Clearance
Passed Visual Clearance
Project Complete
Complete Closure Report
Containment Breakdown
Clear
Send to 3rd Party Lab to Analyze
Collect Final Air Samples
Re-Clean
Not Clear
Re-take Final Air Samples
Closure Report Checklist
10 Day Notification
Visual Clearance Forms
Lab Results Waste
Manifests Site Plan
Site Plan

IOWA DEPARTMENT OF NATURAL RESOURCES

IOWA BROWNFIELD REDEVELOPMENT GRANT PROGRAM

REQUIREMENTS FOR GRANT FUNDED ASBESTOS INSPECTIONS

Recipients of reimbursement grants shall ensure that the following requirements herein are met for the completion for asbestos inspection reports funded through this program, or the recipient will be denied reimbursement. Grant recipients shall include this information in any bid specifications, contracts, or other bid notifications or agreements that they may make with asbestos inspectors they choose to employ. Approval of an asbestos inspection budget by the department does not constitute the department's acceptance of the quality of any asbestos inspection report prior to its submission for reimbursement requests.

Minimum requirements for approval of any asbestos inspection services submitted for reimbursement consideration will require certified asbestos inspection reports to include the following:

- **The asbestos inspection shall be conducted by an Iowa licensed asbestos inspector**, with current license issued through Iowa Workforce Development. A copy of the inspector's credentials shall be provided.

- **The asbestos inspection shall be conducted to comply with Federal and State NESHAP regulations** for the significant renovation or demolition of a structure.

- **Previous asbestos surveys or evaluations conducted under the Asbestos Hazard Emergency Response Act (AHERA) at a public school shall not be used** in lieu of any conditions presented herein.

- **The inspector shall verify any suspected asbestos materials through sampling and laboratory analysis; the inspector shall not rely only upon "inspector knowledge"** for quantifying any suspect material as regulated asbestos construction material (RACM).

- **If sampling occurs of a suspect material, the inspector may use that sample to be representative of other materials within the structure** that are of like or similar material, installation, placement, design, or area, subject to that inspector's evaluation and discretion.

- **If the intent of the asbestos inspection is to facilitate demolition of the structure, or large scale removal or destruction of roofs, walls, or flooring, the inspector shall take appropriate destructive samples of suspect materials** to determine the content, thickness, type, and extent of all materials that will be disturbed and the asbestos content therein. The inspector shall

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IOWA BROWNFIELD REDEVELOPMENT GRANT PROGRAM

REQUIREMENTS FOR GRANT FUNDED ASBESTOS INSPECTIONS

discuss the necessity for any post-sampling weatherization measures with the building owner or other parties as appropriate.

- **The inspector shall provide an asbestos inspection report, with the report being completed in a type set fashion, using word processing software, that shall contain, but is not limited to, the following information:**

A) Introductory summary of the intent of the inspection, date of inspection, location and description of the facility, and other pertinent information or observations the inspector may include.

B) A table, chart, or other clear description that identifies the sample number, sample location or area, and description of the material sampled, along with the ACM by content percent.

C) Any material confirmed as RACM shall be noted in a table, chart, or other clear summary and description that identify the location and description of the RACM, along with an estimated amount of the RACM, based upon square footage area, linear feet, or other quantitative estimate or summary of the material.

D) A Chain of Custody shall be provided that denotes appropriate information on the location of the asbestos inspection, date of sampling, individual sample identification and description, and the location and confirmation of receipt of the samples by the analytical laboratory for the analysis. Signatures shall be provided for all parties in custody of samples collected and analyzed.

E) The laboratory used for RACM analysis shall provide a laboratory report for all samples analyzed; the laboratory report must identify the sample identification number, the analysis method used, a description of the sample appearance, proportion, if known, and type of asbestos present, and comment on any other materials or observations detected. The laboratory report shall include any all relevant certifications of the laboratory, and the date, time, and name of the technician conducting the analysis.

Lead-Based Paint

- In 1973, Congress limited the level of lead in paint to 0.5% by weight for residential uses.
- Paint is considered LBP if the lead content is equal to or greater than 1 mg/cm^2 or 0.5% by weight.
- Target Housing
- Child Occupied
- Lead-safe Work Practices
- RRP Rule
- OSHA Standards

Indoor Air Quality

Mold

- Organic substance that requires oxygen & water to grow
- Part of the fungi kingdom
- Typically digest the material they are growing on
- Thousands of known species of molds
- What we know about it:
  - It can grow on ANY surface
  - There are 3 things it needs…moisture, food source and temperature
  - It affects everyone differently

Conclusion

- No two projects are the same
- Different projects may require different approaches
- Utilize economies of scale
- Work with who you know and trust

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Additional Information

Asbestos

- The EPA developed the National Emission Standards for Hazardous Air Pollutants in 1973. Asbestos NESHAPs is one of several regulations governing hazardous air pollutants. [40 CFR Part 61, Subpart M].
- Asbestos NESHAPs is a federal regulation that is administered by the Iowa Department of Natural Resources (IDNR).
- Federal Regulations, such as the Asbestos NESHAPs, govern the usage, maintenance and removal of asbestos containing materials (ACM) for commercial use.

Asbestos

- **<u>Regulated building or structures</u>** - Except for residential, and apartments of four units or less, any commercial building containing regulated asbestos in amounts equal to or exceeding 160 square feet, 260 linear feet, or 35 cubic feet, is subject to the Asbestos NESHAPs regulations.

Asbestos – Typical Activities

- **Asbestos Inspection** - This must be completed on a building or structure (REGARDLESS OF AGE) prior to any demolition and any renovation activity.
- **Asbestos Abatement** - Is notifiable project (if thresholds are triggered) that must be done by a state licensed asbestos abatement contractor.
- **Demolition** - This is a notifiable project *regardless* of the results of the thorough asbestos inspection. A notification must be sent in for this activity.
- **Renovation** - This is a notifiable project *only if* asbestos was present (been abated) or nonfriable asbestos is being left in place.

Lead-Based Paint – Target Housing

- Housing constructed prior to 1978 with some exceptions.
- Housing for the elderly and disabled must be designated as such by a specific federal housing assistance program. (A building is not housing for the elderly just because an elderly person lives there.)
- Also, non-residential buildings built before 1978 that are being converted to residential buildings are considered target housing.

Lead-Based Paint – Child Occupied

- A building or portion of a building constructed prior to 1978 that is visited on a regular basis by the same child less than 6 years of age on at least two different days within any week.
- Each days visit by the child lasts at least three hours and combined annual visits total at least sixty hours.
- This includes in-home daycares, daycare centers, preschools, and kindergarten classrooms, as well as common areas in these buildings where children under the age of 6 years have access.

Lead-Based Paint – Lead Abatement

Lead-safe work practices include:

1. Contained work areas with signage posted
2. No use of Methylene Chloride paint strippers. (Recently banned for retail distribution effective November 22, 2019.)
3. Heat guns <1100 degrees Fahrenheit
4. No open flame burning
5. No uncontained water blasting
6. No abrasive blasting, contained or uncontained
7. Wet Scraping. Dry scraping is prohibited, so the surface must be misted before scraping to reduce lead dust creation. Except around electrical hazards.
8. All mechanical sanding, sawing, cutting, or planing, etc. must be conducted with HEPA recovery devices attached to the tools.

Lead-Based Paint – EPA's Lead Renovation, Repair & Painting (RRP) Rule

Addresses activities that disturb lead-based paint in target housing and child-occupied facilities. It requires:

- Training providers must be approved.
- Renovators must be trained and supervised.
- Renovators and firms must be certified.
- Lead-safe work practices must be used during renovations.

Lead-Based Paint - OSHA

- **<u>Occupational Safety and Health Administration (OSHA):</u>**

- For all other projects outside of target housing and child occupied facilities, OSHA's lead in construction standard applies - 29 CFR 1926.62.

  - Established worker protection standards
  - Established the permissible exposure limit (PEL) of 50 µg/m^3 8-hour TWA
  - Established action level (AL) of 30 µg/m^3 8-hour TWA