This document contains the plans and protocols regarding the public information and monitoring plan for a wildfire in or around the vermiculite mine site. Should an actual event occur, the response may vary depending on the type and complexity of the situation. This plan will be reviewed an updated annually or as necessary. This version supersedes all previous versions of this document.

Libby Asbestos Response Plan

May 2024

APPROVAL AND IMPLEMENTATION

Libby Asbestos Response Plan

This document is hereby approved for implementation and supersedes all previous editions.

Boyd W White 6/18/24

Signature Date

Boyd White, Director

Lincoln County Emergency Management Agency

6/18/24

Signature Date

Brent Teske, District 1 Commissioner

Board of County Commissioners

Record of Changes			
Date	Revisions Made	Approved by:	Distribution Date
4/2019	Update to Lincoln County Asbestos Resource Program roles		
8/2019	Update to Contact List		
5/2020	Updated messaging for USFS and EPA		
3/2021	Update to Contact List		
2/2023	Added additional EPA messaging, DPHHS messaging and updated Concept of Operations		
5/2024	Update contact list, added additional EPA messages		

Table of contents

Introduction:

Purpose: The purpose of the Libby Asbestos Public Information Plan is to plan for a unified source of public information during a wildfire within the area impacted from asbestos contamination near the vermiculite mine site and surrounding areas (site). Lincoln County, in collaboration with multiple state and federal agencies including, US Forest Service (USFS), US Environmental Protection Agency (EPA), Montana Department of Environmental Quality (MT DEQ) and Montana Department of Natural Resources and Conservation (DNRC), has developed this comprehensive plan for emergency response to wildfire incidents. The plan identifies the roles and responsibilities of the multiple agencies and key stakeholders and provide for the implementation of a joint information system/center.

Scope: The plan is focused on public information for Libby amphibole asbestos (LA) in response to wildland fire within the site. Agencies having jurisdiction are the USFS, DNRC and Lincoln County. Cooperating agencies are the EPA, Corps of Engineers, MT DEQ and Lincoln Rural Fire. In the event of an emergency declaration by the County, the Montana Disaster and Emergency Services (MT DES) will be a coordinating agency in support of the county declaration.

Situation: Wildland fire within the boundaries of the site creates a level of complexity and uniqueness over that of traditional wildland fire fighting. Studies show that LA contained in the tree bark and duff are released when burned. Burn chamber tests show that when released through burning, the vast majority of LA fibers remain in the ash with very little release in the smoke. The result is a much higher concentration of LA fibers in the ash. The high concentrations in ash will put fire fighters at potential risk of exposure. In the event of a plume dominated fire, the possibility of additional depositing of LA fibers into the surrounding area becomes a realistic outcome.

The history, heightened political sensitivities and national exposure that surrounds the Libby Asbestos Superfund Site will pose significant complexities not seen in other fire incidents. These complexities may exceed those of the fire itself. Local response agency coordination and robust communications planning will be essential to successful management of the incident. Providing information to federal, state, and local elected officials, agency leadership, the press and more importantly the public is paramount.

Assumptions:

1. The USFS is jurisdictionally responsible and will develop response plans and fire tactics to suppress the wildland fire. Those plans and tactics are not part of this plan.
2. The unknown potential exposure to LA will be a major concern and will require an aggressive coordinated response from the County and support agencies to ensure the safety and education of the public.
3. Due to the complexity, history and political sensitivities surrounding the Libby Asbestos Superfund Site, the incident will receive high level exposure and scrutiny from our congressional

delegation, Governor, state and local elected officials, senior executive agency representation and significant press coverage.

4. The social and political complexity of this incident will require a comprehensive communication and coordination effort between the response agencies and elected officials around public information.
5. Public information will play a critical role in maximizing public health, safety and successful management of the entire incident.
6. The public in Lincoln County will require safety information and real-time status reports on risks, threats and emergency operations.
7. Data from LA ambient air monitoring may not be available for several days.
8. Public information needs will change as the wildfire develops.
9. Lincoln County, collaborating agencies and the media share an interest in giving the public timely and accurate information.
10. In the absence of real time updates, rumors and misinformation about air quality and the incident operations may spread.
11. The media will want regularly scheduled updates of the ongoing fire and asbestos situation.
12. Subject-matter experts (SMEs) may be needed to provide additional information to the media during and after the fire.
13. Media interest will extend beyond fire response; therefore, coordination of post-fire messages is critical.

Roles and Responsibilities:

Lincoln County:

- Agency having jurisdiction over public safety and public health
- Agency having authority to activate this plan

L**incoln County Emergency Management Agency**:

- Analyze the impacted community to identify diverse groups with access and functional needs, which may require additional planning to ensure the information about the crisis is received and understood
- Activate and ensure function Emergency Operations Center (EOC)
- Responsible for assigning the Lincoln County Public Information Officer (PIO)
- Responsible for establishment of the Joint Information Center (JIC), incident complexity driven
- Update elected officials

Lincoln County Public Information Officer:

- Coordinate and disseminate pre-fire season messages, with cooperating agencies, to educate the public before fire season
- Coordinate emergency public information activities for Lincoln County.

- Establish and maintain communications with on-scene (USFS or Incident Management Team [IMT]) PIO.
- Attend (USFS or IMT) briefings and stakeholder meetings regularly
- Coordinates messages with County SMEs (Health Officer, County Commissioner, Lincoln County Health Department (LCHD) and Lincoln County Asbestos Resource Program [LCARP]).
- Develop communication and outreach products (i.e. talking points, briefings, fact sheets, news releases and public service announcements)
- Read and approve all media advisories before release, update or consult commissioners on the release
- Act as spokesperson for Lincoln County or designate duties
- Ensure preparation for media briefings and prepare other speakers before interviews
- Schedule media briefings
- Analyze public perception of ongoing events and adjust messages as necessary
- Maintain such logs or other records as necessary

Lincoln County Health Department:

- Responsible for public information regarding health concerns from smoke and possible LA exposure from smoke
- Make recommendations for public health to target populations based on analytical results
- Approve messages regarding public health
- Consult with LCEMA/PIO to develop messages around public health and air quality
- Provide real-time data associated with PM 2.5 levels

Lincoln County Asbestos Resource Program:

- Conduct air monitoring for LA during specific wildfires events
- Consult with LCEMA/PIO to develop messages regarding LA sample results

Lincoln County Sheriff's Office:

- Provide for orderly evacuation of affected residences
- Direct traffic flow and maintain evacuation routes
- Provide for the security of evacuated properties and closed areas
- Appoint a representative to the JIC
- Communicate regularly with the JIC about evacuation changes

United States Forest Service:

- Agency having jurisdiction over wildland fire activities on USFS lands
- Wildland fire protection responsibilities on state and private land holdings through offset agreement with Montana DNRC
- Initiate call down through Kootenai Interagency Dispatch Center

- Identify potential Values at Risk

Lincoln Rural Fire:

- Agency having jurisdiction over structure protection within their district boundaries

Montana Department of Natural Resources and Conservation:

- Agency having jurisdiction over wildland fire on state and private land holdings. Protection responsibility is delegated to the USFS through the statewide offset agreement.

US Environmental Protection Agency:

- Coordinating agency responsible for management of the Libby Asbestos Superfund Site
- Subject matter experts in evaluation of LA exposures pertaining to human health for the Libby Asbestos Superfund Site.
- Coordinate with Lincoln County and JIC for public information regarding health concerns from LA, status of the National Priority List site and potential LA exposure.
- Provide assistance to the incident management team, if needed, with information about decontamination of fire suppression resources
- Inform the EPA regional emergency operation center upon notification of a fire.

Montana Department of Environmental Quality:

- Cooperating agency providing technical support, State of Montana representation
- Support LCEMA, PIO and LCHD as needed
- Provide information back to state and county agencies outside of Lincoln County
- Provide additional air monitoring (including asbestos) and information, as needed, outside of Lincoln County to assess down-wind smoke and particulate situation per standard DEQ air monitoring protocols

Montana Department of Emergency Services:

- Coordinating agency between county and state in the event of an emergency declaration by the county

Other Major stakeholders:

- WR Grace: Owner of the original mine site. Responsible for rehabilitation of the mine site.
- Stimpson Lumber: Owner of several sections of timber lands near the site.
- Montana Department of Transportation: MT Highway 37 is the major highway corridor closest to the site.
- Burlington Northern Santa Fe Railway: Responsible for the railroad next to Kootenai River. This railroad may be affected by wildfire in or near the site.
- Flathead Electric: May lose access to areas of service.

- Frontier: May lose access to areas of service.
- Bonneville Power Administration: BPA has a transmission line near the site.
- US Army Corps of Engineers: Responsible for nearby campgrounds and employees

Concept of Operations:

Notification and Activation:

Dispatch Notification: Kootenai Interagency Dispatch Center (KIDC) will receive notice of a fire in or around the site. KIDC will notify LCEMA of all fire activity in Lincoln County.

Based on the wildfire location and if deemed necessary by LCEMA, the initial huddle (see Appendix A: Contact List) or activation of the plan may be initiated. Each participating agency has its own responsibility to follow its policy and procedure for which other agencies it must contact. Other contacts including supporting agencies and stakeholders are also listed in Appendix A.

Initial Huddle: Any agency can call an 'initial huddle' for the LARP team if there are any reasons to convene the cooperating partners to discuss events, messaging or the need to activate this plan. This huddle can be a simple email or conference call with the entire team. The team must decide on the level of messaging and communication at each meeting, for example: What level of communication is going up into agencies or out to the public? Meeting minutes will be kept for documentation.

Plan Activation: LCEMA can activate this plan when a wildfire is encroaching on or within the area impacted by asbestos contamination near the site.

Joint Information System:

The Joint Information System (JIS) integrates incident information and public affairs into a cohesive organization designed to provide consistent, coordinated, accurate, accessible, timely, and complete information during crisis or incident operations. This plan defines a collaborative effort between multiple agencies for events and incidents within or threatening the site.

This plan will ensure public notification, education and interagency cooperation during an event to protect public safety. The main purpose of this plan is to provide complete, accurate, timely, consistent and credible information to the media and public. This plan will achieve this purpose by:

- **Gathering and disseminating incident data:** Obtain verified, up-to-date information from appropriate sources, including subject-matter experts, Incident Command staff and EOC staff.
- **Informing the public:** Provide accurate and comprehensive information about the wildfire including potential public health risks, taking into account the unique needs of special audiences, such as the elderly, people with disabilities, minorities, schools, and individuals who cannot normally be reached by mass communication. It is critical to provide emergency information in a timely manner.
- **Analyzing public perceptions of the response:**

    - Monitor television, print, radio and social media and address rumors to correct misinformation in a timely manner. Adapt messages as necessary.
    - Provide response agencies with insight into community information needs and expectations.
- **Sharing information with partners and stakeholders:** Communicate with designated public information counterparts, state and local officials and medical stakeholders.

Joint Information Center Activation: LCEMA will activate a formal JIC when the situation's complexity requires one. LCEMA will appoint a qualified JIC Manager. The JIC Manager will be separate from other agency functions during the response, and if possible, have a trainee or deputy manager. The JIC will be wrapped up and closed as the situational complexity allows. LCEMA in coordination with the LARP group, will determine the wrap up.

Messaging: Each agency may release its own incident information but will coordinate with the JIS/JIC to ensure conflicts are resolved and messaging is consistent. JIS/JIC functions will not supersede individual agency limitations on messaging and disseminating information. The incident complexity will determine the types of collaborative products that will be needed: JIC summary, fact sheets, key messages, talking points, and other related storylines for the media will be considered. For pre-written messages see Appendix B: Messaging.

Air Monitoring:

Ambient air monitoring for LA will be conducted to inform messaging to the public and assist the Lincoln County Health Officer in making any necessary public health recommendations. Air monitoring will be conducted at the start of an event as described in the LCARP's plan.

Wrap-Up:

The activities of this plan will be wrapped up by LCEMA based on the complexity of the situation. Documentation will be reviewed, and an after-action review will be conducted.

Maintenance:

Lincoln County EMA, in coordination with all partners, will review this plan annually to ensure accuracy. The goals of this review are to:

- Ensure overall plan accuracy and readiness
- Address and resolve policy, methodology, and technological issues
- Ensure this guide coordinates with related plans, procedures, and protocols
- Make necessary corrections, edits, updates, or procedural adjustments
- Schedule and plan exercises
- Host a pre fire season meeting to exchange and update contact information

Changes are tracked in a versioning method and in the Record of Change log.

Appendix B: Messaging

Pre-Incident Messages:

Lincoln County Messages

1. **Message on Planning Efforts**: Lincoln County is working with other organizations including, USFS, EPA, MTDEQ, DNRC to develop strategies for any incidents within the site. Planning efforts have been extensive for potential emergencies, including wildland fire incidents and dam breech incidents.

2. **Messaging on Sampling Plan**: In the event of an incident at [site], Lincoln County Asbestos Resource Program will be collecting air samples every 24 hours to assess for Libby amphibole (LA) asbestos in the ambient air. Samples will generally be collected near the incident, around the perimeter of the wildfire and within the Libby area. Sample results will not be available until several days after the incident. ARP will advise the Health Officer and Health Department on LA asbestos levels in the ambient air and make recommendations based on public health decisions.

United States Forest Service Messages

1. Libby Amphibole (LA) exists in the forested area within and around the former vermiculite mine site (also known as Operable Unit 3 or OU3 of the Libby Asbestos Superfund site) to an extent that poses a health risk to firefighters during certain firefighting activities such as mop-up.
2. Currently, a limited number of firefighters are trained and equipped to perform wildfire suppression activities within OU3 of the Libby Asbestos Superfund site.
3. Any firefighter who is assigned to an OU3 fire receives specialized training and equipment to help ensure their safety.
4. Aircraft is heavily relied upon during initial responses to help improve initial attack success and to reduce potential LA exposure to firefighters.
5. The Forest Service provides dedicated equipment specific to OU3 for fire preparedness during high fire danger and prioritize the use of a helicopter located in Libby for reconnaissance and quick response to fire starts.
6. Firefighters working within and around OU3 wear respiratory protection for employee health and safety.
7. The Forest Service is working with workplace health and safety specialists to perform employee personal air monitoring sampling during controlled burns and wildland fires, when it is safe. This information will be used to inform decisions on employee health and safety.
8. USFS, EPA and W.R. Grace are working together to identify initial fuel treatments to help fight fire more effectively and reduce the rate at which fire might spread. This is a multiyear effort that takes a landscape approach to treating fuels. W.R. Grace has begun incorporating fuel treatments to improve access for firefighters and reduce fuels on their property.

9. Should a fire escape initial attack and become large or long-lasting, fire response ground resources will focus on point source protection. Aerial response will be maximized to the extent resources are available and weather permits.

US Environmental Protection Agency Messages

1. This plan, known as the Libby Amphibole Response Plan (LARP), is implemented by Lincoln County, USFS and Montana DEQ. EPA has been asked to provide informational assistance during the wildfire response.
2. Libby Amphibole asbestos (LA) has been detected in bark, duff, and soil collected from locations throughout the Libby Asbestos Superfund Site.
3. Controlled test burn results show that when burned, the majority of Libby Amphibole asbestos fibers stay in the ash rather than becoming airborne. However, it is difficult to predict possible where ash could be distributed or exposure during a larger wildfire.
4. It is difficult to predict potential exposures and health risks to Libby residents during a larger wildfire event.
5. Lincoln County's Asbestos Resource Program (ARP) will conduct air monitoring to sample for asbestos and smoke particulate matter. While this data will be helpful for the Lincoln County Health Officer to make short term public health decisions, it is important to understand that it takes about 72 hours to get sampling results.
6. Stationary air monitors from Lincoln County's Asbestos Resource Program (ARP) are located in Libby as well as outlying areas along Hwy 37 and Hwy 2. Mobile air monitors will be placed in the surrounding area depending upon fire movement. Data from these monitors will assist local decision-making regarding asbestos exposures throughout the Libby Valley.
7. General Risk Assessment Concepts
    - The potential for risk depends upon both exposure concentration and exposure frequency/duration. Even if the exposure concentration is high, provided that the exposure frequency and duration is short, the likelihood for unacceptable exposure is small.
    - While LA can cause both non-cancer effects (e.g., asbestosis, pleural abnormalities) and cancer effects (i.e., mesothelioma, lung cancer), the non-cancer effects are the more sensitive endpoint.
    - Non-cancer effects are evaluated using a hazard quotient (HQ), which is calculated by dividing the exposure concentration by the reference concentration (i.e., the risk-based threshold below which unacceptable exposures are not expected to occur). If the HQ is greater than 1, exposures have the potential to be unacceptable, but if the HQ is less than 1, exposures would not result in unacceptable risks. For OU3, the target HQ is 0.6. This target HQ is set lower than 1 to be conservative and account for potential cumulative exposures to LA across multiple OUs and exposure scenarios.
8. Site-wide HHRA (see Table 8-6)
    - Perimeter air monitoring conducted during two controlled burn efforts showed that, even if residents were located 200-feet from the edge of the fire, the non-cancer HQ

(based on reasonable maximum exposure [RME] parameters) for a long-term exposure scenario was below 0.1.

- Monitoring conducted during the Souse Gulch wildfire in 2013 showed no LA fibers were detected on the collected air filters for samples collected for on-ground monitors located downwind of the fire or for samples collected from inside the responding helicopter. Air samples collected near responding ground-based firefighter showed air concentrations several orders of magnitude below OSHA standards and the estimated non-cancer RME HQ was below 0.1.

9. Burn Chamber Study (see Section 4.6.5 and Section 5.2.5 of the OU3 RI)
    - A burn chamber study, in which LA-contaminated duff collected from near the mine was burned under controlled conditions inside a chamber, showed that the majority (>90%) of the LA fibers present in the duff are not released in the smoke generated during burning but remain behind in the ash.
10. Wildfire Modeling Memos
    - August 30, 2012 memo, "*Simulation of Forest Fire Combustion of Amphibole Contaminated Biomass with Resultant Health Risk Assessment for Residents of Libby, Montana*":
        - Burn chamber study measurements of PM2.5 and LA fiber concentrations in smoke emitted from the chamber were used in AirFire/BlueSky air dispersion models to simulate air conditions in downtown Libby during a wildfire for two worst-case meteorological conditions up to that time. The wildfire was assumed to burn 5,000 acres per day for each of 3 days. Estimated cancer risks and non-cancer hazards to residents in Libby were below EPA's acceptable risk thresholds for both worst-case conditions, even if 2 fires were to occur at the mine site within a resident's lifetime. Note: OU3 comprises 10,000 acres so it would be unlikely that the entirety of OU3 would burn down more than twice in a lifetime.
    - July 9, 2013, "*EPA Evaluation of Impacts of Forest Fires That Occur In Operable Unit 3 on Air and Soil in Libby*":
        - Burn chamber study measurements of PM2.5 and LA fiber concentrations in smoke emitted from the chamber were used in AirFire/BlueSky air dispersion models to further evaluate potential residential exposures during a wildfire in OU3. The wildfire was assumed to burn 5,000 acres per day for each of 3 days. These calculations showed conservatively that, even if there were 10 fires within OU3 in a resident's lifetime, the resulting health risks from inhalation of LA fibers in air impacted by smoke would be below EPA's acceptable risk thresholds. Note: OU3 comprises 10,000 acres so it would be unlikely that the entirety of OU3 would burn down more than twice in a lifetime.
        - This calculation effort also showed that aerial deposition of LA resulting from a wildfire would not be expected to be an exposure source of significant concern.

Indeed, the increase in the concentration of LA in soil would not be discernable by conventional analytical methods for soil.

11. Highway 37 USFS Firefighter Personal Air Monitoring
    - The majority of "fibers" observed on personal air monitoring filters for firefighters responding to the Highway 37 fire in 2018 were not asbestos. On average, only 6% of the "fibers" counted during the phase contrast microscopy (PCM) analyses were determined to be LA based on transmission electron microscopy (TEM) analysis, meaning the majority of what was released to air was simply airborne dust particles.
    - Personal air samples collected for ground-based firefighters showed LA air concentrations from TEM analysis were well below OSHA standards.
12. Surface Water Use Memo
    - March 8, 2013, "*Effect of using surface water for construction application and irrigation*":
        - If water containing LA up to 1 million fibers per liter (MFL) (based on structures longer than 10) were to be used for downstream irrigation, even if applied 3 times per week for 6 months of the year for 50 years, the increase in the concentration of LA in soil would not be discernable by conventional analytical methods for soil.
13. Ambient air monitoring
    - EPA performed ambient air monitoring in Libby and Troy from 2006 to 2013. A limited evaluation was performed of temporal patterns in ambient air relative to fire starts (both wildfire and prescribed burns) in 2007/2008. While slight increases in LA levels in ambient air were noted for monitoring stations closest to the fire, potential exposures in residential/commercial areas did not result in unacceptable risks.
    - Section 5 of the Site-wide Human Health Risk Assessment (HHRA) presents the exposure and risks for residents in Libby and Troy from inhalation of ambient air. Estimated non-cancer reasonable maximum exposure (RME) Hazard Quotients (HQs) for ambient air exposures were well below a level of concern.

Montana Department of Environmental Quality Messages

1. DEQ is the support agency for the Libby Asbestos Superfund Site.
    a. OU3 is a potentially responsible party (PRP) led site. W.R. Grace is the lead with EPA oversight for the long-term cleanup.
2. DEQ is working closely with the Libby OU3 Superfund team (USFS, EPA, DEQ, DNRC, W.R. Grace), technical groups, local officials, and interested parties to develop an emergency response plan in the event of a fire on OU3.
3. **Messaging on Sampling Plan**: In the event of a fire in OU3 that creates air quality concerns downwind of the fire and beyond Lincoln County, DEQ will collect air samples every 24 hours for LA analysis. Samples will be collected outside of Lincoln County in a downwind representative area. Sample results will not be available until several days after the sample is taken. For

communities downwind and outside of Lincoln County, DEQ will advise on asbestos levels in the ambient air and make recommendations based on public health decisions.

Pre-Incident: Questions from the Public

Lincoln County:

What is the county doing to protect people?

The Lincoln County Asbestos Resource Program is monitoring outdoor ambient air during a wildfire in and near the site. Air samples during a wildfire will be taken every 24 hours. The Lincoln County Health Department will keep you informed of the sample results and the Health Officer will make any necessary recommendations for you and your health based on those results.

Is there any danger now?

At this time, LA asbestos levels in the outdoor ambient air are low and consistent with asbestos levels found in the outdoor ambient air of other towns in the area. [Plug current PM 2.5] We will keep updating you on the status of air quality and provide recommendations for you to take.

US Environmental Protection Agency:

Could asbestos fibers be distributed by wildfires in the vicinity of the Libby Asbestos Superfund Site?

Yes, but our laboratory tests have shown most LA fibers stay in the ash.

Might there be health concerns associated with smoke or ash that could result from wildfires near the Operable Unit 3?

This is a possibility. Controlled test burn results show that when burned, the majority of Libby Amphibole asbestos fibers stay in the ash rather than becoming airborne. However, it is difficult to predict possible exposure during a larger wildfire.

Where is asbestos still present in the area?

LA can be found in tree bark, duff, soil and surface water throughout the Libby Asbestos Superfund Ste; however, concentrations are generally highest in areas near the former mine (within OU3).

What is the status of cleanup at the former mine site?

EPA is working with its partners and WR Grace to explore options to clean up OU3. WR Grace with EPA oversight completed a remedial investigation for the former mine site in 2016. WR Grace and the agencies are in the beginning stages of a feasibility study for this area and are exploring cleanup options.

What is the status of cleanup at the entire Libby site?

EPA has nearly completed cleanup of LA in and around Libby and Troy. The agency has removed more than one million cubic yards of impacted soil and more than 30,000 cubic yards of contaminated building material. The cleanup work has reduced the chance of contact with LA, which is known to cause lung disease and other breathing problems. Today, Amphibole asbestos concentrations in Libby are nearly 100,000 times lower than when the mine and milling plants were in operation.

Incident Messages:

Lincoln County Messages

1. **Sampling Plan**: The Lincoln County Asbestos Resource Program is collecting air samples every 24 hours to monitor the ambient air for LA asbestos levels. In addition, Lincoln County Environmental Health continually monitors outdoor air quality in the Libby area for particulate matter ($PM_{2.5}$ and PM_{10}) levels.

2. **Public Health Recommendation Plan**: The County Health Officer is continually monitoring the air sample results to make recommendations to the public about their safety. In addition, Lincoln County Environmental Health continually monitors outdoor air quality in the Libby area for particulate matter ($PM_{2.5}$ and PM_{10}) levels and will make recommendations for public health based on the guidelines provided by MT DEQ.

3. **Potential Public Health Risks**: Given uncertainties with air sampling during this time, you may make your own decisions about keeping you and your family safe. You may want to take precautions by staying indoors and by avoiding prolonged or heavy activity.

4. **Recommendations for 'unhealthy for sensitive groups' for PM 2.5**: Sensitive Groups include people with heart or lung disease, older adults and children. Reduce prolonged or heavy exertion. It's OK to be active outside but take more breaks and do less intense activities. Watch for symptoms such as coughing or shortness of breath. People with asthma should follow their asthma action plans and keep quick relief medicine handy. If you have heart disease, symptoms such as palpitations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact your health care provider.

5. **Recommendations for reduced or eliminated activity based on PM 2.5**: Avoid all physical activity outdoors. Move activities indoors or reschedule to a time when air quality is better. Sensitive groups should remain indoors and keep activity levels low.

6. **Recommendations for Shelter in Place based on ambient air results:** The Libby amphiblole asbestos levels in the ambient air have reached a point at which the Lincoln County Health Officer is recommending that people consider sheltering in place, especially people living in [neighborhoods], sensitive groups and people over the age of 60.

7. **Recommendations for Evacuation based on ambient air results:** The Libby amphibole asbestos levels in the ambient air have reached a point at which the Lincoln County Health Officer is recommending that people consider evacuation, especially people living in [neighborhoods], sensitive groups and people over the age of 60.

United States Forest Service Messages

1. The USFS is responsible for fire suppression in and around OU3.
2. Fire Suppression strategy/tactics will be developed based on firefighter and public health protection.
3. A fire within and around OU3 will be responded to quickly and aggressively in areas with the highest probability of success. Firefighter and public safety are our highest priority.
4. USFS fire management teams are working closely with Lincoln County and other emergency management agencies to relay current fire status information. This information is important to inform decisions for evacuations or other responses needed due to fire behavior and anticipated weather conditions.

US Environmental Protection Agency Messages

1. A wildfire has started within Operable Unit 3 of the Libby Asbestos Superfund site. U.S. Forest Service Lincoln County, the State of Montana and other local emergency management agencies are working together to respond to a wildfire located near the site.
2. ARP will monitor air continuously during the fire; EPA will provide technical information about LA to assist Lincoln County in making short term public health decisions as they relate to the wildfire.
3. Lincoln County Health Officer will make recommendations about short term air quality. EPA will provide informational assistance during the wildfire response.
4. In the event of a large-scale wildfire (>1,000 acres), EPA's emergency response contractors will collect 5-day ambient air samples for asbestos. This data on asbestos concentrations in Libby community will allow us to compare to historic ambient air results for asbestos.

Montana Department of Environmental Quality Messages

1. DEQ supports the Unified Command and will provide necessary appropriate resources.

2. DEQ provides air quality information, including smoke forecasts on TodaysAir.mt.gov.
    a. This information is measured by monitoring equipment located throughout the state.
    b. DEQ works closely with county air quality programs during incidents to provide accurate and timely information concerning smoke impacts on communities.

Incident: Questions from the Public:

Lincoln County:

Is the air safe?

Keeping data in mind that has been collected around wildfire, at this time; we do not believe there is a significant risk associated with Libby amphibole asbestos. However, conditions of the incident may change at any time. We will keep you updated of any changes and make any recommendations to the community for public health and safety.

When will we know the quality of the air?

The Lincoln County Asbestos Resource Program will distribute the new air quality data to the Health Officer when the results are received.

Why does it take so long to get results?

The air samples are collected for 24 hours in order to get a good sample. The samples must then be documented and shipped to a certified laboratory for analysis, which takes time. Finally, the samples will be analyzed and the results distributed to the team for evaluation.

Where can I find more information?

New and updated information will go out at least [twice] [per day] or as important updates become available. Check back by going to [Facebook] page, [website], by calling the health department hotline at [406-293-6295] or signing up for CodeRED to get immediate emergency updates.

US Environmental Protection Agency:

What is EPA's role?

EPA is serving as a support agency based on the depth of knowledge the EPA has developed around Libby Amphibole Asbestos (LA) during the superfund cleanup. EPA's remedial program has jurisdiction within the site boundaries for the Libby Asbestos Superfund site in Libby, MT. In the event of a large fire which has impacts beyond Libby, EPA's air and emergency response programs are available to provide assistance outside of the superfund boundary.

Does air monitoring provide instant results? How quickly will citizens be notified if there are health concerns?

Citizens will be notified as quickly as possible by local officials regarding the status of the wildfire and potential for LA exposures. Smoke particulate matter will also be monitored in real time by Lincoln County.

What are citizens supposed to do while waiting for information?

EPA is deferring all public health determinations to the Lincoln County Health Officer.

What is the short term (acute) exposure threshold for asbestos?

The risk assessment paradigms used by EPA are not designed to evaluate risks from short-term, acute exposures. The toxicity factors utilized in the risk assessment evaluations are developed for chronic, long-term exposures to estimate lifetime cancer risk and hazard and are not applicable to short-term exposures. The data on acute asbestos exposure have not suggested sufficient health concerns to establish an acute minimum risk level. Based on this information, our understanding of the cumulative risk of a wildfire in OU3 is that asbestos may only be a minor component of the wildfire smoke, and the particulates and other substances generated from the fire would likely be more of a risk driver than asbestos.

Wildfire exposures are considered short-term exposures (even considering the worst-case scenario with multiple large wildfires in a person's lifetime that last days at a time) do not constitute a lifetime cancer risk from asbestos. Decisions about evacuation and shelter in place will be made by the county health department based on particulate matter levels; $PM_{2.5}$ and PM_{10}.

What does EPA know about how asbestos behaves during a wildfire?

EPA's burn chamber studies took duff (layer of partly decayed organic material collecting on the forest floor) and burned it in a test chamber at varying intensities to mimic various wildfire scenarios. Monitors detected how much asbestos was emitted into the air and how much asbestos remained in the ash. The burn study results showed that when the forest duff (the most contaminated material in the forest) is burned, the majority of asbestos mineral fibers [92 to 98 %] remained in the ash and were not carried in the air.

Risk modeling indicates that even if 10 large wildfires (burning 5,000 acres per day for three days straight) occurred in a resident's lifetime, the potential exposure to asbestos fibers are below EPA's lifetime exposure risk levels.

LA asbestos air concentrations within the Libby community during a 1-day wildfire would need to be more than 280,000 times higher than typical ambient conditions before they would affect the long-term average to a level that would warrant mitigation under Superfund. [So for a 7-day fire, LA ambient air concentrations would have to be 40,000 times higher than typical ambient conditions and so on].

EPA does not have onsite data for asbestos behavior during a large intense wildfire. EPA continues to engage with local responders as more information becomes available. Based on

burn chamber studies, EPA anticipates that managing for particulate matter health concerns will also manage acute asbestos exposure risks.

Does asbestos degrade/break down?

Concentration of asbestos in the air has decreased significantly since emissions from mineral processing ceased in 1990. Over time, leaves with entrained asbestos fibers fall to the ground and become duff and duff becomes soil. A soil scientist estimated that 1 cm of soil is developed in 7 years in the Kootenai National Forest. Based on this information, EPA believes the concentration of asbestos particles in the forest is - lower than when the mine was operational due to duff breaking down into soil over time.

Montana Department of Environmental Quality:

Who is the lead agency for the incident?

For wildfire incidents, the US Forest Service manages fire suppression activities and Lincoln County is responsible for public information, public health messaging and shelter-in-place/evacuation determinations as needed. Along with EPA, MDEQ and MDPHHS are support agencies to lend their expertise during a wildfire, providing technical support and assistance with public health messaging.

EPA is responsible for the overall Superfund cleanup, including cleaning Operable Unit 3 with the potentially responsible party, W.R. Grace. W.R. Grace is the lead with EPA oversight. DEQ is the support agency for the Libby Asbestos Superfund Site.

General air quality questions not involving asbestos

DEQ provides air quality information, including smoke forecasts on TodaysAir.mt.gov. This information is measured by monitoring equipment located throughout the state. DEQ works closely with county air quality programs during incidents to provide accurate and timely information concerning smoke impacts on communities.

Montana Department of Public Health and Human Services

Q: What is the health threat from wildfire smoke?
A: Smoke from wildfires is a mixture of gases and fine particle dust from burning trees and other plant materials known as particulate matter (PM). Smoke and the PM it contains can irritate your eyes or your respiratory system and worsen existing health conditions, such as chronic heart and lung diseases. How much and how long you are exposed to the smoke, as well as your age and health status, play a role in determining whether you are likely to experience smoke-related health problems. If you are experiencing serious medical problems for any reason, seek medical treatment immediately.

Q: Can the asbestos in OU3 become airborne during a wildfire and blow into our community?
A: Libby amphibole asbestos (LAA) has been found in the soil, duff, and tree bark in the forest surrounding the former Libby mine site (OU3). To date, there have been no largescale wildfire events in

the OU3 area and data about the potential for community exposures during such an event are limited. Onsite controlled and laboratory simulated burn studies show that the majority of the LAA in the duff and tree bark are not released in the smoke but remain in the ash on the ground. However, it is difficult to predict potential asbestos exposures to residents during an actual largescale wildfire event in the OU3 area.

Q: Can the presence of LAA in wildfire smoke increase my chances of developing asbestos-related disease?

A: The presence of LAA in wildfire smoke does not necessarily mean exposures would be at levels that can cause disease. Asbestos research has shown that the most important factors for whether asbestos exposure can cause disease include the amount and size of asbestos fibers in the air that is breathed (magnitude of exposure), how often a person has been exposed (exposure frequency), how long a person has been exposed (exposure duration), and a person's health status. Asbestos-related disease most often occurs with frequent, long-term exposures to high levels of asbestos in the air. Short-term exposure (days or a few weeks) to low levels of asbestos has not been shown to cause long-term health effects.

Risk assessment findings during and directly after a wildfire event can provide information on the potential for post-wildfire LAA exposures or longer-term health impacts. This assessment would incorporate exposure data from multiple sources (e.g., air and soil sampling data, building wipe samples) that could be analyzed by state and federal partners for communication back to the Libby community. In the absence of detailed data about the pollutants present in wildfire smoke from OU3, standard precautions and recommendations on how to protect yourself during a wildfire in OU3 are important to follow.

Q: Does smoking increase the risk of asbestos-related disease?

A: Smokers exposed to asbestos have a much higher likelihood of developing lung cancer and mesothelioma than non-smokers. Tobacco smoke and asbestos have an additive effect to a smoker's risk of developing these diseases because long-term smoking reduces the ability of the lungs to clear foreign material such as asbestos fibers.

Q: How can I protect myself and my family from the harmful effects of smoke?

A: The best thing to do is to limit your exposure to the smoke. Strategies to decrease exposure to smoke include:

- staying indoors whenever possible,
- using air conditioners if you have one (and regularly change your air filter),
- using mechanical air cleaners, and
- keeping windows closed while driving in a vehicle.

Indoor sources of PM, such as tobacco smoke, wood burning stoves, burning candles or incense, and vacuuming should be minimized as much as possible during wildfires to reduce your overall exposure to PM. Drinking lots of water can help keep your airways moist, which may reduce symptoms of scratchy throat and coughing.

Q: How can I tell if the smoke is affecting me or my family?

A: The following are symptoms people may experience if they are exposed to smoke:

- The general population may experience coughing, scratchy throat, irritated sinuses, shortness of breath, chest pain, headaches, stinging eyes, and runny nose.

- People who have heart disease might also experience chest pain, rapid heartbeat, shortness of breath, or fatigue.
- People with pre-existing respiratory conditions such as heart or lung disease, respiratory allergies, asthma, and chronic obstructive pulmonary disease (COPD) may experience:
    - An inability to breathe normally
    - Coughing with or without mucus
    - Chest discomfort
    - Wheezing and shortness of breath
- Contact your healthcare provider if you have trouble breathing, shortness of breath, a cough that won't stop, or other symptoms that do not go away.
- You should call 9-1-1 or go to an emergency department for medical emergencies like severe trouble breathing, chest pain, or if you think you are having a heart attack or a stroke.

Q: What should I do about closing up my house when it is so hot in there?
A: If it is too warm to stay inside with the windows closed and you do not have an air conditioner, spend time away from home or seek alternative shelter by visiting an air-conditioned location such as a mall, movie theater, or library or visiting family members, neighbors, or public buildings that have air conditioning.

Q: Our community has an outdoor game scheduled this evening. Should we cancel it? Should children play outside during a wildfire?
A: All persons in areas affected by heavy wildfire smoke should consider limiting outdoor activity and staying indoors whenever possible to minimize exposure to the smoke. In settings of prolonged, heavy exposure to wildfire smoke, public health departments and local air quality authorities may recommend canceling such activities. Stay tuned to your local news for the latest information. Use the recommendations for when to cancel outdoor activities.

How to Protect Yourself and Your Family During a Wildfire

In the event of a wildfire in or around Libby Asbestos OU3 Site, here are seven tips to help you protect your health and limit your exposure to smoke:

1. **Pay attention to local** air quality reports. Watch for news or health warnings about smoke. Pay attention to public health messages and take extra safety measures such as avoiding spending time outdoors. Go to dphhs.mt.gov for public health messages on wildfire smoke.
2. **Pay attention to** visibility guide **if they are available**. Although not every community measures the amount of particles in the air, there are guidelines to help people estimate air quality based on how far they can see. Other wildfire and air quality information is available at DEQ's Air Quality and Smoke webpage.
3. **If you are told to stay indoors, stay indoors and keep your indoor air as clean as possible**. Keep windows and doors closed unless it is very hot outside. Run an air conditioner if you have one, but keep the fresh-air intake closed and the filter clean to prevent outdoor smoke from getting inside. Seek shelter elsewhere if you do not have an air conditioner and it is too warm to stay inside with the windows closed.
4. **Do not add to indoor pollution**. When smoke levels are high, do not use anything that burns, such as candles and fireplaces. Do not vacuum, because vacuuming stirs up particles already inside your home. Do not smoke tobacco or other products, because smoking puts even more pollution into the air.

5. **Follow your doctor's advice about medicines and about your respiratory management plan if you have asthma or another lung disease**. Call your doctor if your symptoms worsen.
6. **Do not rely on cloth or dust masks for protection**. Surgical masks or dust masks commonly found at hardware stores trap large particles. These masks will not protect your lungs from smoke. An "N95" mask, properly worn, will offer some protection. If you decide to keep a mask on hand, see the **Respirator Fact Sheet** provided by CDC's National Institute for Occupational Safety and Health. Filtering face-piece respirators and masks can make the work of breathing more difficult and can lead to increased breathing rates and heart rates. They can also contribute to heat stress. Because of this, respirator use by those with heart and respiratory diseases should only be done under a doctor's supervision. A wet towel or bandana is not recommended. While they may stop large particles, fine ones can still get into the lungs.
7. **Avoid smoke exposure during outdoor recreation**. Before you travel to a park, forest, or outdoor event, check air quality reports for the areas you are traveling to and confirm the event has not been cancelled. You can find outdoor activity guidelines based on air quality here.

Consider using a true HEPA air purifier to remove ultra-fine particles like dust, dander, pollen, mold, smoke and asbestos. Commonly abbreviated as HEPA, the high efficiency particulate arresting (or absorbing) air filter is a specialized mechanical filter designed to improve the indoor air quality by efficiently eliminating airborne allergens and particles 0.3-microns or larger. If you're considering purchasing a HEPA air filter, check out the DPHHS Guide to Buying a HEPA Air Purifier on the DPHHS air quality webpage.

Post Incident Messages:

US Environmental Protection Agency

- EPA's data indicates that most asbestos (92 - 98%) will remain in the ash during a fire event. Approximately 10% of asbestos may become airborne via smoke. In the event of a large fire and certain weather conditions, ash may settle over the Libby area. Based on data collected and rigorous risk assessment, this ash is not anticipated to pose an unacceptable risk to human health or the environment; however, residents may wish to take preemptive measures to reduce potential exposure.
- While deposited ash from a wildfire may not contain significant amounts of asbestos, using best management practices can reduce your potential exposure risk if there are significant amounts of asbestos fibers in the ash. Best management practices for fire-related ash are to:
    - wet down the material,
    - dispose of it properly,
    - and avoid placing the material in your garden bed or other common areas.
- To properly dispose of LA-contaminated material, bag the material and take it to the asbestos cell at the Lincoln County landfill.
- **Large Wildfire modeling:**
    - EPA calculates risk based on a potential lifetime exposure to the most extreme concentrations of contamination; EPA's risk assessment is conservative and considers potential affects to the most sensitive populations.

- Risks to residents from a fire on OU3 depends on the number of such fires that occur during a person's lifetime. Even 10 worst case fires per lifetime would not pose an unacceptable risk according to EPA's human health risk assessment for the site.
- Smaller fires that occur in OU3 are likely to contribute very little cumulative exposure, both because they occur in areas where contamination is lower (eg the forest rather than the actual mine site), and because wind in OU3 generally blows smoke from OU3 to the northeast (away from Libby) rather than toward Libby (per NOAA wind-rose data). EPA made a number of conservative assumptions that are cumulative and have the net effect of over-estimating the potential for human exposures.
- The following assumptions contributed to this conservative estimate:
  - 1) the fire events were composed of multiple ~300 acre fires thereby generating greater ground-level smoke and particulates;
  - 2) the worst case meteorological conditions were chosen such as stable air over the Libby area;
  - 3) the exposures were a continuous three-day exposure concentration pro-rated over a 70-year exposure duration;
  - 4) there were one or two fires during the 70-year lifetime exposure evaluation; and
  - 5) we assumed that the resident resided in Libby for a total of 70 years.
- Cumulatively, these assumptions provided a conservative estimation of potential exposure to residents in Libby during a forest fire event occurring at the mine site. Risk assessment evaluated cancer risk and noncancer hazard and both are found to be below EPA targets. Additionally, EPA's laboratory studies found that most (+90%) of asbestos fire stay in ash and less than 10% are in smoke.
- EPA does not have data for asbestos behavior during a large wildfire. EPA continues to engage with local responders as more information becomes available.

- **Amount of Asbestos Deposited in Soil (after large wildfire):**
  - Using typical values for LA fibers seen at the site, a settling rate of about 30 cm/hr was estimated. Based on this settling rate, the estimated increase in soil concentration due to fallout from a worst case fire is about 5 fibers per gram of soil. Based on typical LA fiber size, this would correspond to an increase is soil concentration of much less than 0.0000001% of LA in soil by weight. This value is very small compared to estimates of the amount of naturally occurring ("background") LA in soil. For comparison, the USGS reported concentrations in background soil ranging from 0.004% to 0.047% (average = 0.025%) in the Libby valley.
  - Based on this, deposition of LA fibers from a fire in OU3 to soil in Libby is not expected to be an exposure source of significant concern although EPA will evaluate data as it becomes available.
- **Post-Fire:**
  - Due to limited data on how ash distribution following a fire would change site conditions, EPA plans to take soil samples of highly impacted areas to determine if LA was deposited following a wildfire which would warrant additional cleanup. Best practices for homeowners would be using water to clean or wetting down areas with ash deposition—so as not to release any potential asbestos fibers into the breathing zone.
  - EPA also plans to sample surface water in the creek nearest to the burn area during the first precipitation event following the fire to gather more information on the

concentrations of LA found in surface water following a wildfire event. The surface water sampling effort includes the collection of samples upstream/downstream of the burn area to provide information on runoff contribution.