

# **An Insight to an Asbestos Laborer**

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Asbestos laborers are often overlooked and not cared for much in construction projects. While they are often forgotten in the construction industry, they play a big role in most remodels or demolition projects. Abatement workers are exposed to the dangers of asbestos on a daily basis. Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) are the federal agencies that regulate asbestos. The EPA regulates the use, transportation and disposal of asbestos, while OSHA sets the standards for work involving asbestos minerals. OSHA has regulations that demolition and/or abatement contractors must comply with since asbestos is considered a hazardous material. The data collected for this paper focuses on what laborers, superintendents and others working in the industry think about this work. I wanted to see how dangerous they felt their work is and to identify if OSHA could do anything more to protect the workers. This data was collected from companies based in the Bay Area and laborers from Laborers Local 67 in Oakland, California.

**Key Words:** Asbestos, OSHA, Laborers, Health, Abatement

## **Introduction**

From past research and current regulations, we know that asbestos is a very dangerous mineral that was at one point used in almost every industry. One of the industries affected by asbestos the most is construction. Although asbestos use was reduced significantly it is still present in the industry. Many projects require some type of demolition if a remodel is going to happen or if a whole building must be demolished to build something new. During this part of the construction process is where asbestos becomes a problem. If asbestos is found in the construction material after it was tested, an asbestos contractor is required to come in and remove this asbestos containing material (ACM), before any other work happens. Under the Environmental Protection Agency (EPA) this material is considered to be hazardous. It is deemed hazardous because it has been medically and scientifically proven that this mineral leads to lung diseases like lung cancer, mesothelioma and asbestosis.

Being aware of the consequences related to asbestos, I became concerned with the health of asbestos workers due to their exposure to this harmful mineral. How safe do asbestos laborers feel at their job? Are they really safe from the dangers of asbestos? Is the Occupational Safety and Health Administration (OSHA) doing enough? These are the questions I wanted to get answered. It is important to know how safe the laborers feel because at the end of the day they are the ones working under these harsh conditions. We must take their input into consideration in order to develop new regulations that make workers feel comfortable in their working environment. It is also important to know if the work they are performing is safe because we do not want to put innocent people at the risk of getting diseases later in their lives.

## **Literature Review**

Asbestos is a natural occurring fibrous mineral that was used in many products. Asbestos was mined and then sent to factories to be used in products. Many of the products it was used in was construction material.

It was used in insulation, drywall adhesive, drywall, roofing shingles, plaster, stucco, flooring tile and many more materials. The reason why it was used in many materials was because it was basically indestructible. Asbestos fibers are resistant to fire and heat making it perfect for insulation, and it is almost impossible to dissolve this mineral. After it had been used for many years finally medical evidence came up linking asbestos with deadly diseases in the 1930's but no one took action to prevent the public from this hazardous mineral (Lahav, 2018). Later on, the health hazards of asbestos exposure gained public attention because asbestos related diseases take years to develop. After this gained notice in the United States, some federal agencies started to regulate asbestos exposure. OSHA passed its first asbestos related regulations on the work industry on May 29<sup>th</sup>, 1971 (Landrigan & Lemen, 2017). The EPA passed its first law regarding asbestos in 1970. The EPA and OSHA both continued to push for better asbestos laws to minimize the exposure of this substance to the workers and ultimately the general public as well. Some of the laws that followed were the Toxic Substance Control Act which allowed the EPA to regulate existing materials that pose unreasonable health or environmental risks such as asbestos (Lahav, 2018). OSHA aimed to minimize the exposure of asbestos in the workforce of the United States that in 1970's OSHA set up the permissible exposure limit (PEL) in the workplace of 12 fibers/ cubic centimeter (f/cc) as an eight-hour time-weighted average. A PEL is basically the legal limit of exposure to substance in this case of asbestos. In 1972 it was lowered to 5 f/cc. Later on in 1975 OSHA again changed the permissible exposure of asbestos to 0.5 f/cc, but this applied to all industries besides construction.

After continuous changes of the legal limit it is currently set as of 2019 at 0.1 f/cc of air as an eight-hour time-weighted average, with an excursion limit (EL) of 1.0 asbestos fibers per cubic centimeter over a 30-minute period (OSHA, 2014). Some other OSHA standards involve:

- Assessments of workplace
- Monitoring to detect asbestos exposure is kept within its limits
- Using proper respiratory protection and gear
- Using proper engineering controls and work practices
- Having proper signage
- Having separate decontamination and lunch areas
- Trainings
- Medical surveillance
- Record keeping

On the side of the EPA in 1989 it took a huge step in banning asbestos in the United States by issuing a final rule banning most asbestos-containing products under Section 6 of the Toxic Substance Control Act (Lemen & Landrigan, 2017). The problem was that this ban was short lived as the industry appealed the ban in courts. As of now asbestos is not ultimately banned from the United States but it is not readily used because of its known damage to human lungs and because it would be bad for publicity. A very recent and notable change by the EPA on the construction industry was the Significant New Use Rule in 2018. This required any work done with the use of ACM must provide prior notice the EPA of the activities details and procedures of activities. The purpose of this is to serve as a notice used so the EPA is aware of the work and date of material disturbance on a project site to monitor the progress and document any exposure. The EPA can also provide fines if the work is not being done safely.

ACM is any material containing more than or equal to 1% of asbestos. Before any type of demolition happens, contractors are usually required to hire a third-party agency that test materials for asbestos. These third-party entities take multiple samples to get the most accurate results on what material is ACM. If the material comes back to being below the 1% there is two options that the contractor can take. Option one is to treat material as ACM and option two is to dispose of material as if it was normal construction debris (Byers, 2017). This type of waste that contains less than the legal limit is characterized as Asbestos-Containing Construction Material (ACCM). However, in California Cal-OSHA has stricter policies regarding ACM classification. They say that if material contains more than or equal to 0.1% of asbestos then it would be considered ACM and all proper abatement and/or encapsulation procedures must be followed.

Regarding the disposal of both ACM and ACCM are different based on its classification. ACM is required to be disposed as hazardous material, while ACCM can be thrown out as regular construction waste after

being double bagged. When dealing with ACM you are also required to hire a professional abatement contractor to remove the ACM properly and safely. Dealing with ACCM is not clear and some say that an asbestos contractor should be hired while others say that there is no need since there is no regulations that clearly outline this issue. Procedures for removing ACM involve a full containment, negative air machines, respirators and body suits. Some basic procedures for reducing and containing asbestos when there is a potential that it might be disturbed are:

- The use of mini enclosures
- Applying water to ACM
- Using high efficiency particulate air vacuum
- Area isolation
- Avoidance of activities that will create dust such as sawing, sanding and drilling ACM.

Working in a containment can be challenging because the procedures are time consuming and expensive. A containment, often referred to as a regulated area, is the enclosed area where the asbestos is located. These asbestos demolition procedures are much longer than regular demolition procedures. For example, when working with ACM a full containment is put up around the work area using plastic, tape and spray glue to completely seal work area. Negative air machines are then set up to keep good air flow and keep the air as clean as possible. The workers must wear proper respiratory equipment and full body suits to prevent asbestos fibers from getting into the lungs and to prevent it from sticking to your body. Refer to Figure 1 for proper asbestos worker gear. In some cases, laborers must shower after leaving the containment to prevent from bringing the asbestos fibers out of the containment. After all demo in the containment is complete and trash was disposed of properly, the asbestos contractor will clean and wipe down all the work area inside the containment. Lastly the inspector or certified specialist must take air samples and make sure the air quality is adequate to remove the containment.



*Figure 1. Proper Asbestos PPE*

When talking about the proper respirators to use, there are many options. Some of the common respirators are a half face, full face or a powered air purifying respirator (PAPR) which works with a battery. The proper respirator depends on the amount of exposure of asbestos the laborer will be under. For example, when working with asbestos containing fire proofing, a PAPR will be usually required because the amount of exposure to asbestos is significant.

The reason why asbestos is very regulated and so many procedures must be taken before dealing with it is because of health implications it has on the lungs. Some of the diseases that it causes are asbestosis, mesothelioma and the most common is lung cancer (American Cancer Society, 2015). The inhalation of asbestos increases the risk of developing lung cancer, and it is statistically proven that if you smoke you are

even more likely to generate lung cancer. Mesothelioma is also another form of cancer. Mesothelioma is a fairly rare form of cancer that most often affects the thin linings of the organs in the chest and abdomen. Most cases of mesothelioma are linked to exposure of asbestos in the work place. Lastly asbestosis is a disease that causes irritation of lungs due to the asbestos fibers that get stuck in your lungs forever, and it also leads to scarring of the lung tissue. One thing to keep in mind is that all these diseases take years to show symptoms, which is why OSHA requires workers to get medical checkups often to see if their lungs have been affected by asbestos (American Cancer Society, 2015).

## Methodology

All the data collected was in the form of surveys and interviews. I decided to use these two techniques because they are both simple and efficient in getting the information needed. Using surveys gave me the quantitative data that was necessary to get a general idea. The purpose of the interviews was to get more detailed qualitative data. The objective of the data that was collected was to see how people who worked around asbestos felt about their type of work, to see if they felt safe, to see if there is some other things OSHA could improve on, to see their fear about their work place, and to ultimately get a better perspective on the asbestos industry. The people that were part of my data were only workers who are involved in the asbestos industry in the San Francisco Bay Area.

The survey was done on asbestos laborers from Sterling Environmental and NorthStar Contracting Group. These two are competing asbestos contractors in Northern California. The interviews were done on two superintendents from those two contractors as well. The last interview involved the president of the Laborers Local 67, which is the union that represents asbestos laborers. That is also the union the laborers I interviewed belong to.

## Results and Analysis

In the interviews I asked laborers five basic questions to see where they stood regarding the danger of their work. The first question I asked was about how long they had been working in the asbestos industry. The reason I asked this question was to see if experience played a role in how laborers felt and truly enough it did. From the data collected 44% of the laborers interviewed had less than four years in the industry. This portion of workers were also the ones who usually felt more at risk and unsafe. The workers with ten years or more of experience were the ones who felt more confident about the dangers of their work. From Figure 2 we can see how experience plays a role on how safe asbestos laborers felt about their work.



Figure 2. Relationship Between How Safe Laborer Feel and Experience

### Potential Changes in Asbestos Industry

Knowing that OSHA is the federal agency that regulates asbestos work, I asked the workers if there was something OSHA could do to improve the working conditions and safety for asbestos workers. Exactly fifty percent of the laborers felt that there should be a way for OSHA to verify if standards are being followed by contractors by regularly visiting job sites. Being aware of this, I followed up with the superintendents and the union president about the concerns in the interviews. Interestingly enough they all thought this was a great idea but believed it was far from being an attainable goal. Although it was a good idea it would be hard to get a OSHA representative to visit every construction site where asbestos is present simply because OSHA does not have enough workers. In fact, all workers including superintendents believe that OSHA's regulations are enough if they are followed correctly.

Laborers also believed they should be paid more because they deal with hazardous materials. Knowing this I found out that asbestos workers are one of the least paid in the construction industry. After bringing this up to the superintendents they also felt this was a problem. The superintendent from Sterling Sentimental mentioned that regular demolition workers get paid more than asbestos worker, but both do the same type of work the only difference is that asbestos workers obviously deal with asbestos exposure. Taking into consideration that asbestos workers are presented with greater risks than demolition laborers, the superintendent said it made sense for asbestos workers to have higher wages. According to the Department of Industrial Relations of California, the prevailing wage, the wage a contractor must pay its workers when performing work for the government, for asbestos work is \$24 an hour. This includes any construction in public schools, prisons, city halls and any other government property. This wage was one of the lowest compared to all the other construction trades listed. I asked the union president if the union could do something regarding the wage for asbestos laborers. Although he agreed the workers should be paid more, he does not have the final decision on how much asbestos laborers should be payed. He continued by saying that asbestos workers get paid better when part of the union compared to other asbestos laborers who work for no union working companies. Being part of the union also gives workers better benefits and more frequent medical screenings to see if asbestos is damaging workers lungs.

Classification (Journey person)	Employer Payments						Straight-Time		Overtime Hourly Rate	
	Basic Hourly Rate	Health and Welfare	Pension	Vacation/ Holiday <sup>a</sup>	Training	Other Payments	Hours	Total Hourly Rate	1-1/2X <sup>b</sup>	Holiday <sup>c</sup> 2X
Asbestos Removal Specialist II	28.49	5.84	8.25	2.75	0.46	0.18	8	45.97	60.215	74.46
Asbestos Removal Specialist I	27.11	5.84	2.76	2.75	0.46	0.18	8	39.10	52.655	66.21
Asbestos Removal Worker	24.00	5.84	2.25	2.75	0.46	0.18	8	35.48	47.48	59.48

*Figure 3. Asbestos Laborers Prevailing Wage*  
*Source.* State of California, Department of Industrial Relations

Another thing that I wanted to know was if there any extra pre cautions that should be taken by contractors to ensure safety on their job sites. For this, I turned to superintendents and asked if there was any extra pre cautions they like to enforce on their jobsites. The superintendent from Sterling Environmental says he encourages all his employees to shower before leaving containment. Showering is only usually required when working with Class I asbestos because it contains a higher percentage of asbestos. The reason he recommends showering is to prevent asbestos fibers from leaving the regulated area. The superintendent from NorthStar said there is no need to have extra pre cautions because OSHA are enough and because hygienists are there to monitor the work.

## *Demolition vs Asbestos Demolition*

While discussing the difference between regular demolition and asbestos demolition, the superintendent from Sterling Environmental pointed out that he believed asbestos laborers are, generally speaking, safer and more protected than regular demolition workers. The reason being that no one really knows exactly what is in the material being demolished. Although there is test performed on the material to see if it is ACM, these test can be misleading because only a couple of places are tested and other material is not tested. Asbestos was used basically in everything for construction purposes from foundations to roofs. Other hazardous material can also be found when performing regular demolition like lead, silica and/or mold. Demolition workers are not required to wear any respirators or protective gear meaning that the workers could be inhaling contaminated air while not even knowing. The superintendent proposed that all demolition workers should be asbestos, lead and mold certified so they can reduce health risks and to know how to properly deal with these hazards rather than treating it like clean waste.

## **Conclusion**

After hearing from some professionals in the asbestos industry, we know that although many believe OSHA's current regulations are enough if followed properly, there is still room from improvement. It is important to stay informed about this trade in the construction industry because not many construction professionals know much about asbestos work despite the fact that asbestos demolition is required in many projects, especially in most remodels and demolition projects of building that are twenty or more years old. It is also crucial to hear the voices of workers who are actually involved in abatement work because at the end of the day they are the ones putting their health at risks for a construction project.

Working on changing the concerns that asbestos industry workers talked about is a good way to start. For example, to make sure contractors and hygienists are following protocol, OSHA can send a representative on a randomized safety inspection at least one time per construction site. Also something simple as requiring contractors to preform QA/QC on their work because asbestos work impacts everyone on the jobsite. Even if some of the changes might be farfetched, little steps in the right directions is good way to see improvement.

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