October 14, 2021

Ujitha Perera, District Manager
2 MacArthur Place, Suite 720
Santa Ana, CA 92707

Dear District Manager Perera,

We, the undersigned workers, hereby file this complaint against our employer Kingspan. We are all employed at Kingspan's factory in Santa Ana, California. The factory has two separate buildings located across the street from each other. Their addresses are 302 Goetz Avenue, Santa Ana, CA 92707 and 401 Goetz Avenue, Santa Ana, CA 92707 (the "302 and 401 buildings"). We make skylights at the Santa Ana factory. Operations at the factory include welding galvanized metals, spray painting, fiberglass manufacturing, using power tools and saws to cut materials, and assembling skylights. Below are maps of each building that have been marked to identify where specific operations occur.

We believe the working conditions at the 302 and 401 buildings are in violation of the California Occupational Safety and Health Act.

As detailed below, we can attest to Cal-OSHA violations including high levels of indoor air pollution, inadequate or non-existent ventilation especially around welding and spray-paint operations, faulty machines, trip and fall hazards in working areas, obstructed eyewash stations, empty eyewash stations which are not filled with water, frequent workplace injuries, repetitive motion injuries, and a lack of proper training around chemical use and injury prevention. We ask for a comprehensive inspection of the facility to include the hazards described in this complaint as well all other hazards that may be observed.

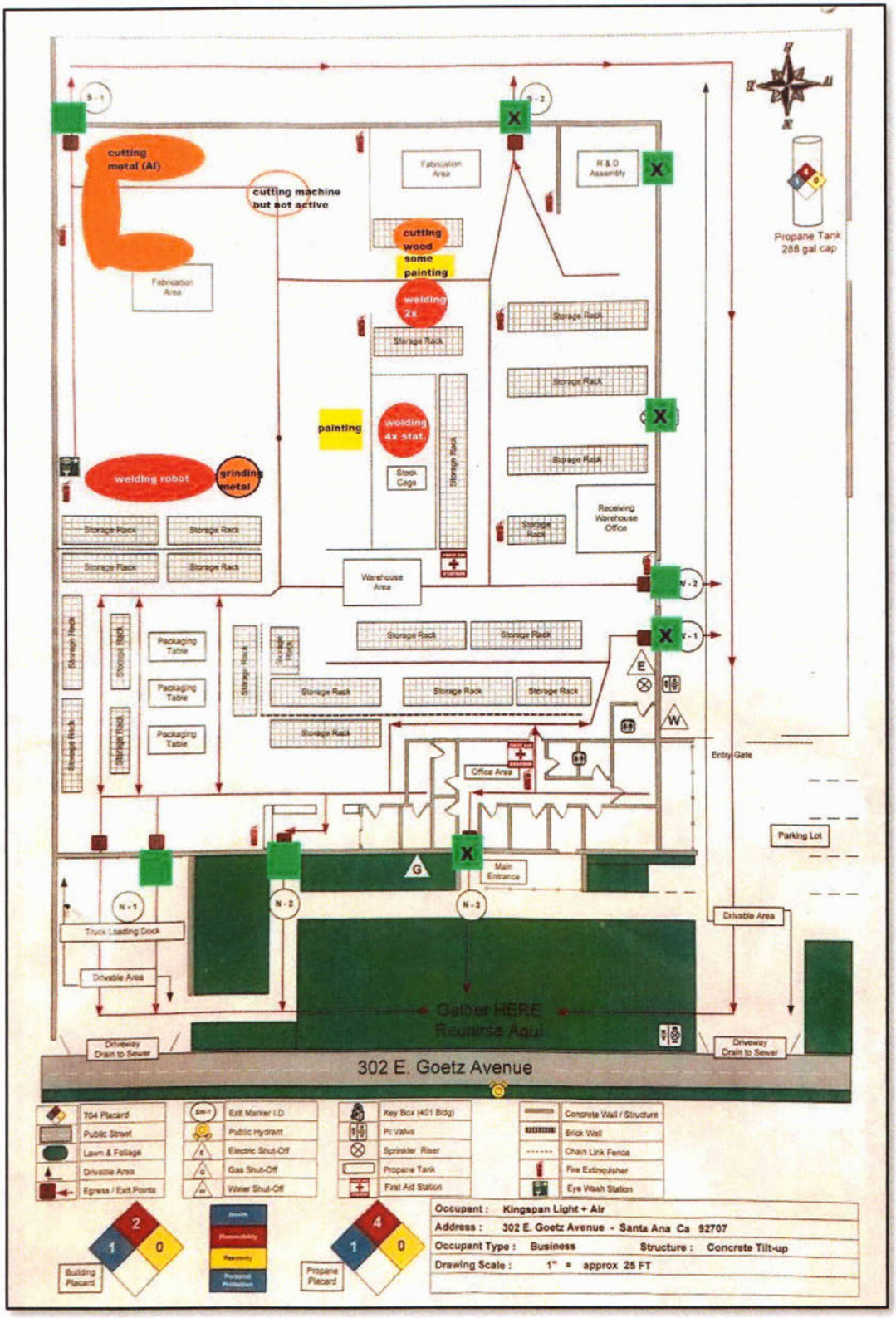
We thank you for your attention to this very serious matter, and we request that you investigate, at a minimum, the following potential Cal-OSHA violations as soon as possible. We would like to meet with inspectors at the time of the inspection (see last page for contacts). If possible, we would like to work with an inspector who speaks Spanish. Also, please be aware that we plan to publicize our complaint in the community.

Sincerely,

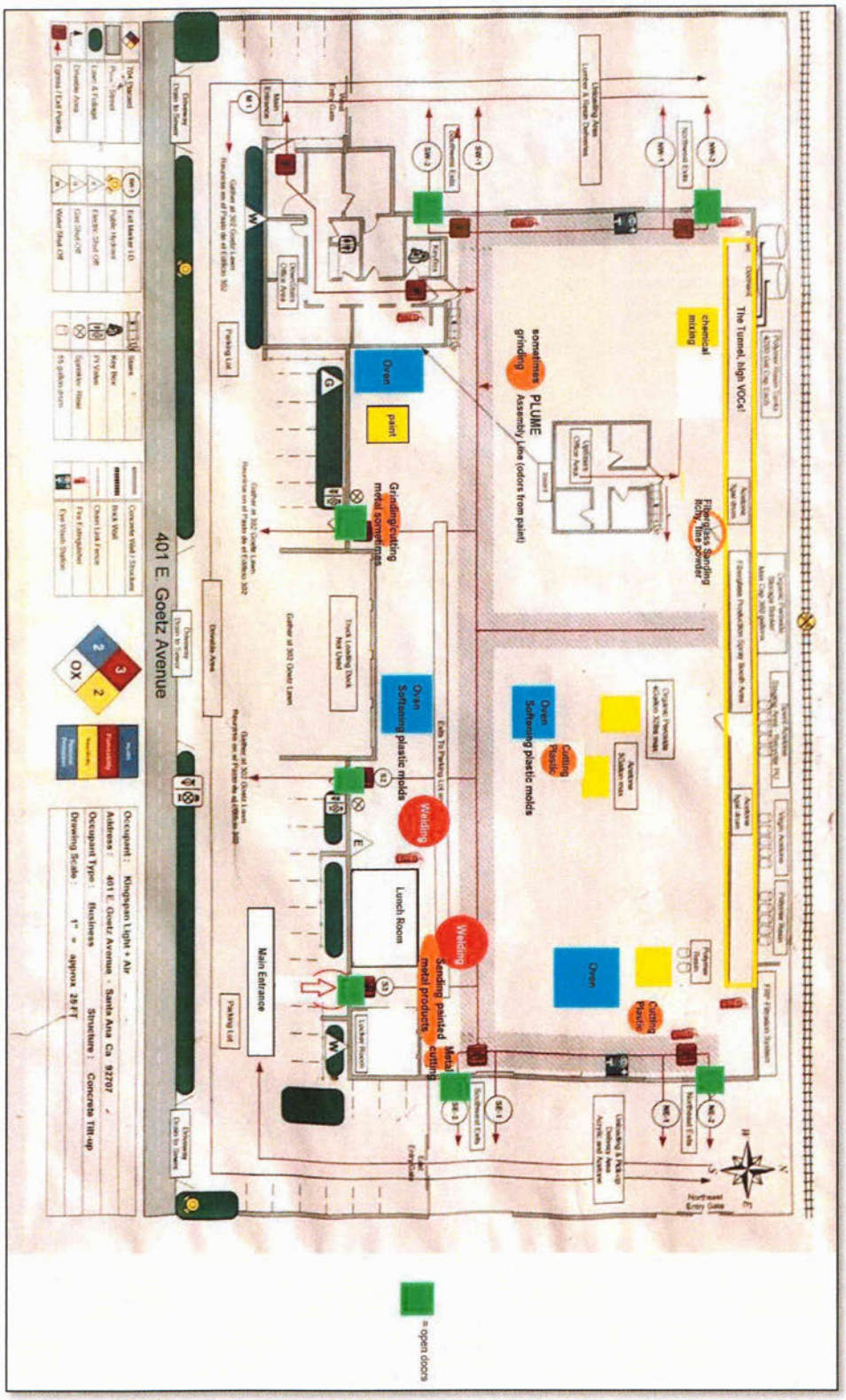
Name	Date
M.P.F	10-11-21
Carlos Villanueva	10-13-21
Lucas Hernandez	10-13-21
Gilberto Valdivia	10-14-21
Ramon Penaloza	10-14-21
Jaime Ocotlan	10-14-21
[illegible]	10-14-2021
Juan delaluz	10-14-21

Bartolo Calderon 10-14-21
JANET GARCIA 10/14/21
JORGE ESPINACIO 10/14/21

302 Building



401 Building



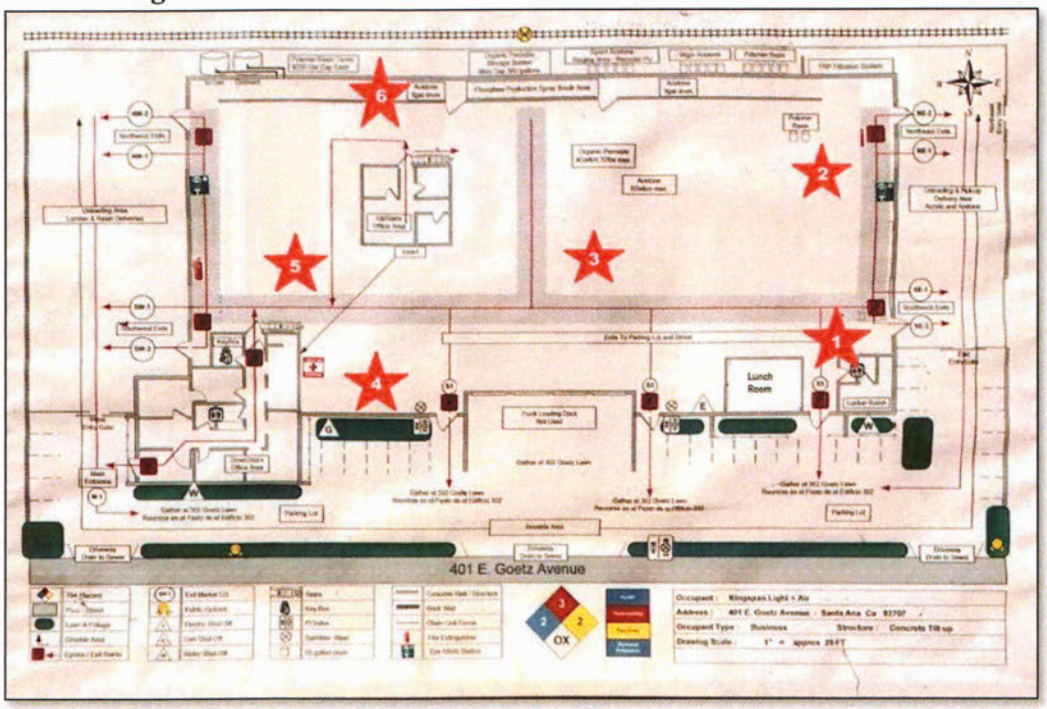
Airborne Contaminants (8 C.C.R. § 5155)

Workers have complained about being exposed to a high level of air pollution inside the factory for some time. They have raised the issue to management on several occasions. Kingspan has at times promised to make improvements, but those improvements have never actually occurred. The workers believe the sources of the pollution are the welding, spray painting, and fiber glass operations.

To the workers' best knowledge, Kingspan has never attempted to measure or calculate concentrations of airborne contaminants workers are exposed to, as § 5155(e) states should occur whenever it is reasonable to suspect that airborne contaminants are above the permissible levels. After unsuccessfully trying to raise the issue with management, workers decided to measure the harmful particles they are exposed to themselves.

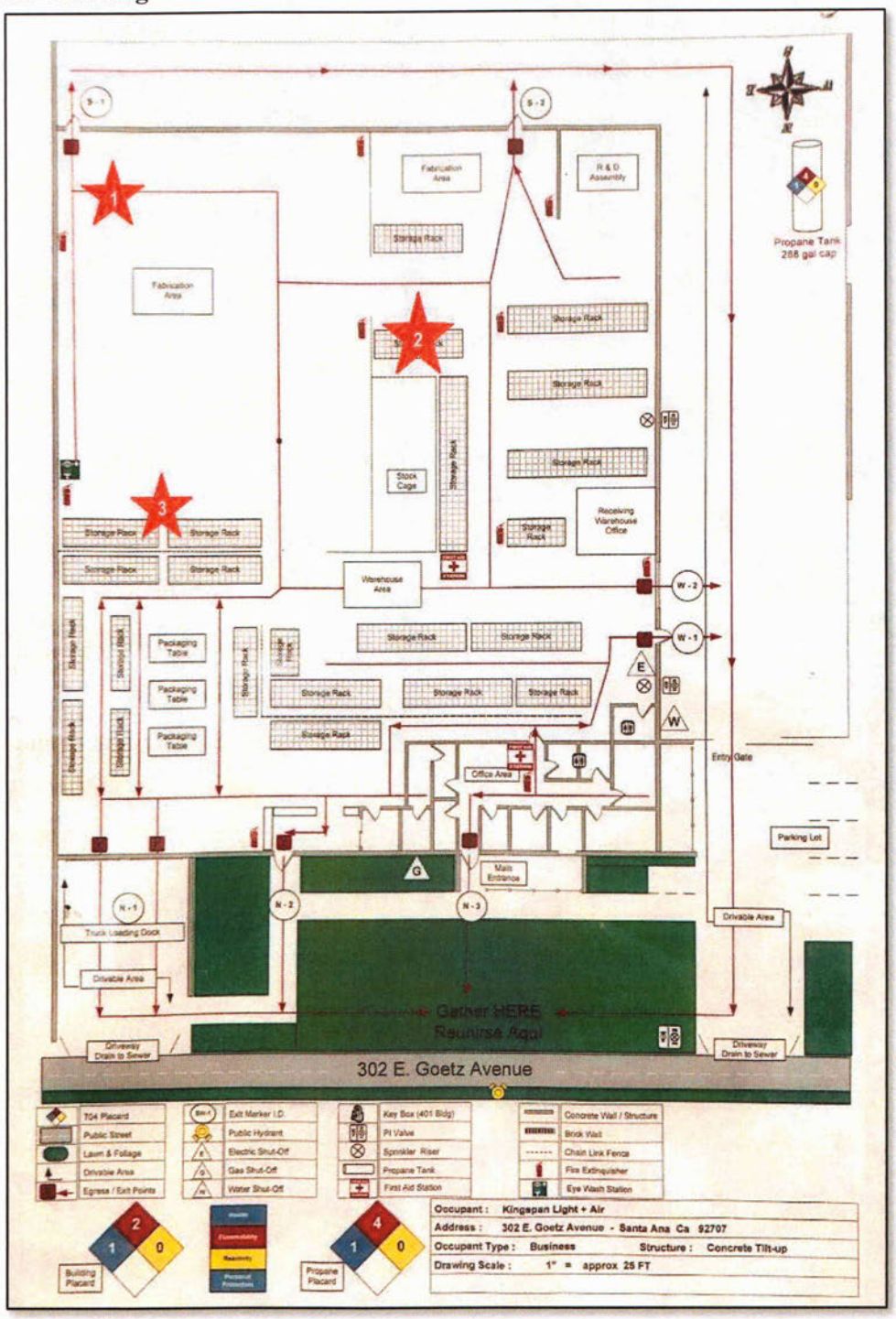
With the help of Dr. Shahir Masri, an air pollution scientist at UC-Irvine, the workers over the course of three workdays (5:30am-1:00pm) placed 8 Atmotube Pros throughout the 302 and 401 buildings. An Atmotube Pro is a wearable air pollution tracker. It is certified by the South Coast Air Quality Monitoring District to measure PM 2.5, which is particle pollution 2.5 micrometers and smaller.[1] 8 workers also carried an Atmotube Pro on their body. The locations of the stationary Atmotube Pros are marked on the maps below with red stars. Stationary locations were selected based upon air pollution sources reported by workers. While workers were measuring PM2.5 exposure inside the facility, allies from the community were measuring PM2.5 levels on the streets surrounding the 302 and 401 buildings.

302 Building



[1] https://www.aqmd.gov/aq-spec/sensordetail/atmotube---pro

401 Building



After using the Atmotube Pros to measure air pollution inside the buildings over 3 days, the workers returned the devices to Dr. Masri to analyze the results. His analysis is reproduced in part in the chart below.

5 of the 8 workers who carried AtmoTube Pros recorded a maximum PM2.5 reading above 300 $\mu g/m^3$ (1000, 1000, 728, 304, 274). These results are highlighted in blue. Some of the PM2.5 recordings were too high for the AtmoTube Pro to capture because the device's maximum reading is 1000.

The average PM2.5 recording for 4 of the 8 workers over the three days was above 100 $\mu g/m^3$ (118, 107, 103, 101), which the EPA defines as *unhealthy*.[2] A 5th worker recorded an average PM2.5 reading of 210 $\mu g/m^3$, which the EPA describes as *very unhealthy*. These results are highlighted in green.

5 of the 8 stationary devices recorded maximum PM2.5 readings at or above 786 $\mu g/m^3$ (786, 988, 1000, 1000, 1000). 3 of these 5 readings were 1000. A 6th stationary device recorded a maximum reading of 275 $\mu g/m^3$. These results are highlighted in yellow. Regarding average exposures for the stationary devices, 5 of the devices recorded an average PM2.5 reading during the three days at or above 92 $\mu g/m^3$ (92, 100, 106, 127, 184), which the EPA defines as *unhealthy*. A 4th device had an average reading of 406 $\mu g/m^3$, meaning PM2.5 in that area averaged a *hazardous* level. These results are highlighted in red.

In comparison, the community allies who measured PM2.5 levels outside the facility did not record a single PM2.5 reading above 39 $\mu g/m^3$.

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[2] Current AQI is divided into six categories by the U.S. Environmental Protection Agency. *See* 40 CFR Appendix G to Part 58 - Uniform Air Quality Index (AQI) and Daily Reporting.

PM2.5 ($\mu g/m^3$) 24-hour	Air Quality Index (AQI) Category for PM2.5	Levels of Health Concern
0.0 to 12.0	0 to 50	Good
12.1 to 35.4	51 to 100	Moderate
35.5 to 55.4	101 to 150	Unhealthy for Sensitive Groups
55.5 to 150.4	151 to 200	Unhealthy
150.5 to 250.4	201 to 300	Very Unhealthy
250.5 to 350.4	301 and above	Hazardous

Type of Device	Participant	# of Minutes Recorded	PM25 Mean	PM25 StdDev	PM25 Min	PM25 Max
Mobile	Gilbert	912	107.8092	74.33152	1	274
Mobile	Israel	1533	34.75734	19.57395	8	147
Mobile	Jaime	1036	103.5125	165.4609	3	1000
Mobile	Jorge	511	118.6282	110.2866	1	728
Mobile	Lucas	1548	50.30297	34.63643	9	209
Mobile	Mica	1533	210.9491	193.6903	3	1000
Mobile	Pablo	1533	101.3842	64.14521	1	304
Mobile	Ramon	1548	33.49354	18.46566	1	112
Stationary		1353	106.1988	60.53378	1	275
Stationary		1533	30.51859	25.68295	1	88
Stationary		1037	92.13983	119.6133	1	1000
Stationary		511	184.1879	140.8003	1	988
Stationary		1548	127.5329	116.0437	1	786
Stationary		1532	406.0849	315.0915	14	1000
Stationary		1548	99.15116	113.6135	1	1000
Stationary		1533	31.62557	13.7718	2	75
Outside		111	19.59459	2.595025	15	25
Outside		36	14.63889	0.487136	14	15
Outside		89	22.53933	2.70545	7	25
Outside		49	10	4.354117	2	14
Outside		46	11.69565	1.132736	8	13
Outside		51	17.82353	1.178234	14	19
Outside		78	20.10256	4.725146	6	39
Outside		46	11.86957	0.718291	10	13
Outside		73	17.63014	5.111281	9	28
Outside		41	14.78049	9.166548	1	23
Outside		128	18.17188	4.855566	8	26
Outside		35	22.74286	4.361212	9	25
Outside		43	16.25581	1.513322	8	19
Outside		41	13.14634	1.333435	11	15

Cal-OSH's Wildfire Smoke Emergency Standard, 8 C.C.R. § 5141.1, sets a current AQI for PM2.5 of 151 as the threshold for harmful exposures. When current AQI for PM2.5 exceeds 151 and there is reason to believe workers may be exposed to wildfire smoke, employers must reduce worker exposure by engineering and/or administrative controls when feasible and provide appropriate respirators in accordance with Section 5144. When current AQI for PM2.5 exceeds 500, respirator use is mandatory.

Workers recorded levels of PM2.5 Cal-OSHA has stated are unhealthy in its Wildfire Smoke Emergency Standard and the EPA has stated are either unhealthy, very unhealthy, or hazardous.

When all of the recordings are taken together, the average PM2.5 reading was 102 $\mu g/m^3$ in the 302 building and 120 $\mu g/m^3$ in the 401 building, which correlates to a current AQI reading of between 151 to 200, an exposure level the EPA deems *unhealthy*.

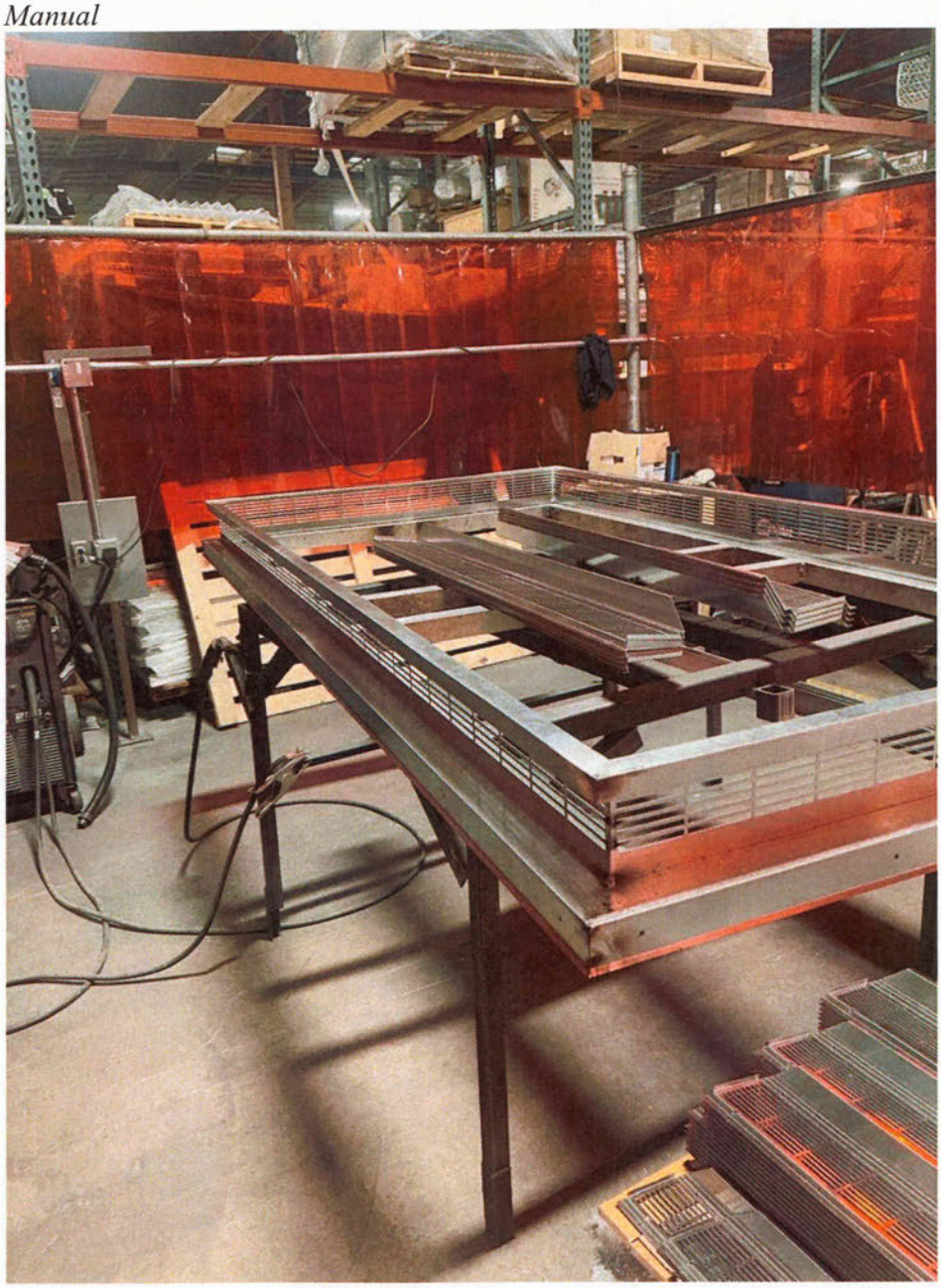
Location	# of Minutes Recorded	PM25 Mean	PM25 StdDev	PM25 Min	PM25 Max
Outdoor	867	17.3148789	5.340705819	1	39
Bld. 302	9187	102.21193	112.7923921	1	1000
Bld. 401	11562	120.274866	187.8530143	1	1000

The source of PM2.5 inside the 302 and 401 buildings is, of course, not wildfire smoke. But being exposed to an unhealthy level of PM2.5 is concerning to workers all the same. Workers are unsure of the exact airborne contaminants they are being exposed to, but they believe these levels of exposure are in violation of 8 C.C.R. § 5155.

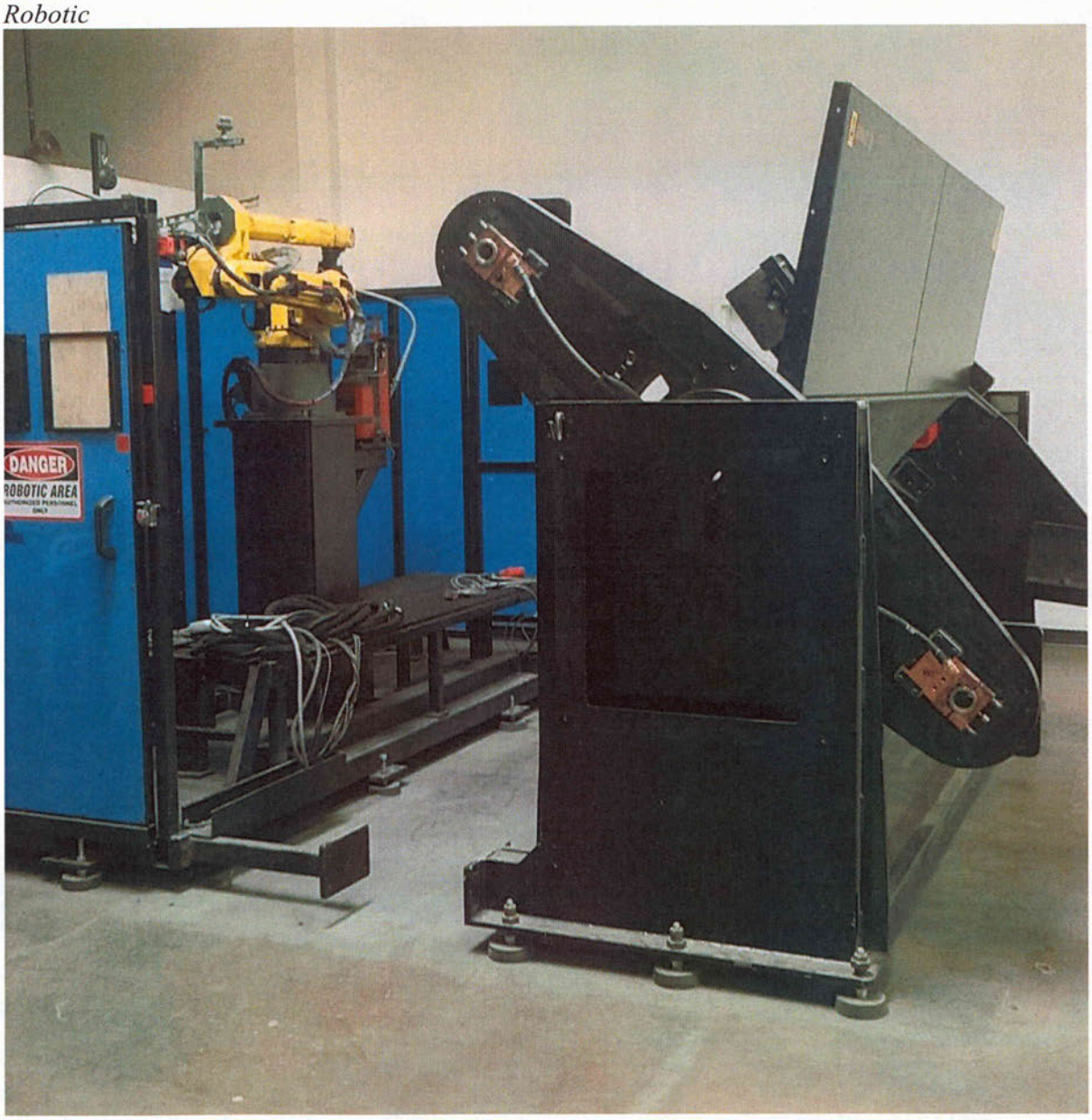
Inadequate Ventilation Around Welding Operations (8 C.C.R. § 5150)

Most of the welding occurs in the 302 building, although there is also some welding on the 401 side. There are upwards of 10 welders. There are manual welding stations and also a robotic station. Below are pictures of a manual and robotic welding station.

Manual



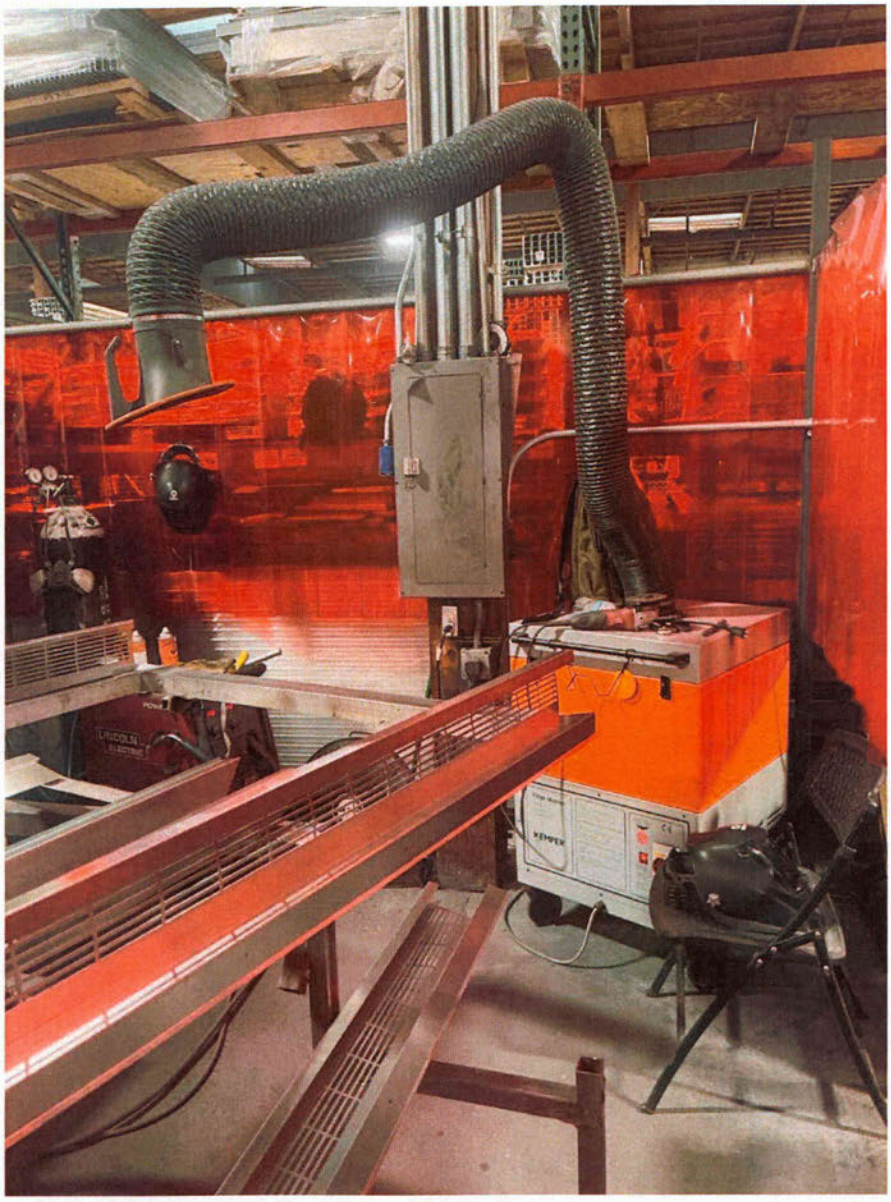
Robotic



The materials being welded are galvanized steel and aluminum. **Jorge/Lucas at 36:13.** Welders have stated that they sometimes weld non-stop for the whole day. This volume of welding creates a lot of smoke which then accumulates in the welding area. Welders state that when they remove their mask, their areas are filled with smoke.

Galvanized steel is steel coated in zinc. Under 8 C.C.R. § 5150(b)(1), the welding of metal coated in zinc is supposed to be done using local exhaust ventilation. The workers have stated that the extractors provided by Kingspan, pictured below, have little to no effect on the smoke, which continues to accumulate in the welding area and spreads throughout the factory. **Jorge/Lucas at 45:10, 47:00.** The workers do not know if this is because the ventilators are

weak or because of the high volume of welding going on. One welder stated that Kingspan stopped changing the filters on his extractor one or two months ago, and when he asked why they responded that the filters were too expensive. One filter, he says, costs about $600. **Jorge/Lucas at 45:10.** This welder is currently welding with just an individual fan. **Jorge/Lucas at 46:44.** He says that, because of the lack of ventilation, he is exposed to the welding fumes every time he removes his face shield. He says that when he removes his face shield the smoke is all over the factory. **Jorge/Lucas at 47:50.** Another welder states that he welds with 2 fans and an extractor, although the extractor does not capture all of the smoke. **Mica/Ramon at 38:20.**



A third welder says he has a similar setup, with a single ~12-inch fan and an extractor. This welder believes the extractor he uses works a little better than others. However, because the

extractor is too big for his workspace, he has to position the hood well above his head and away from the welding site, which leaves him directly exposed to the smoke. **Jorge/Lucas at 48:15.** This third welder also operates the robotic welding station. He describes the robotic station as running constantly and creating large amounts of fumes, more than the others, but without an extractor or any ventilation other than a fan present. **Jorge/Lucas at 54:46.**

A fourth welder whose job duties include grinding and welding imperfections off of metals welded by the robot is described as grinding and welding with only a blue surgical mask for protection. **Jorge/Lucas at 54:20.**

Per 8 C.C.R. § 5150(b)(3), when the nature of the welding is such that local exhaust ventilation is not an effective means for preventing hazardous exposures, then supplied-air respirators must be worn. Kingspan does not provide welders with supplied-air respirators, which can cost thousands of dollars. The welder whose extractor filter is not being changed uses a supplied-air respirator, but it is one he owns personally. **Jorge/Lucas at 37:30, 38:49.** He has stated that Kingspan provides him with filters, **Jorge/Lucas at 43:13,** and that he started using his own supplied-air respirator because of the smoke. Another welder uses a 3M half-face shield that he owns. **Jorge/Lucas at 40:42.** He says the only respirators supplied by Kingspan are blue surgical masks. **Jorge/Lucas at 41:00.**

Because of the volume of welding and lack of ventilation, the welders suffer symptoms which they associate with "metal fume fever" and zinc poisoning. One welder states that often – daily or every other day – there are moments when he is suddenly overcome with fatigue, and he often feels a tightness and pressure in his chest. **Jorge/Lucas at 50:51.**

Others working nearby the welding station are also exposed to the smoke. One welder estimates that the workers who assemble and paint the metals they weld are approximately 8 to 10 feet away from his welding station. **Jorge/Lucas at 43:44.** Another puts the closest non-welder workers at 5 feet. **Mica/Ramon at 41:16.** These workers do not have supplied-air respirators and may be breathing in the fumes the extractors do not filter.

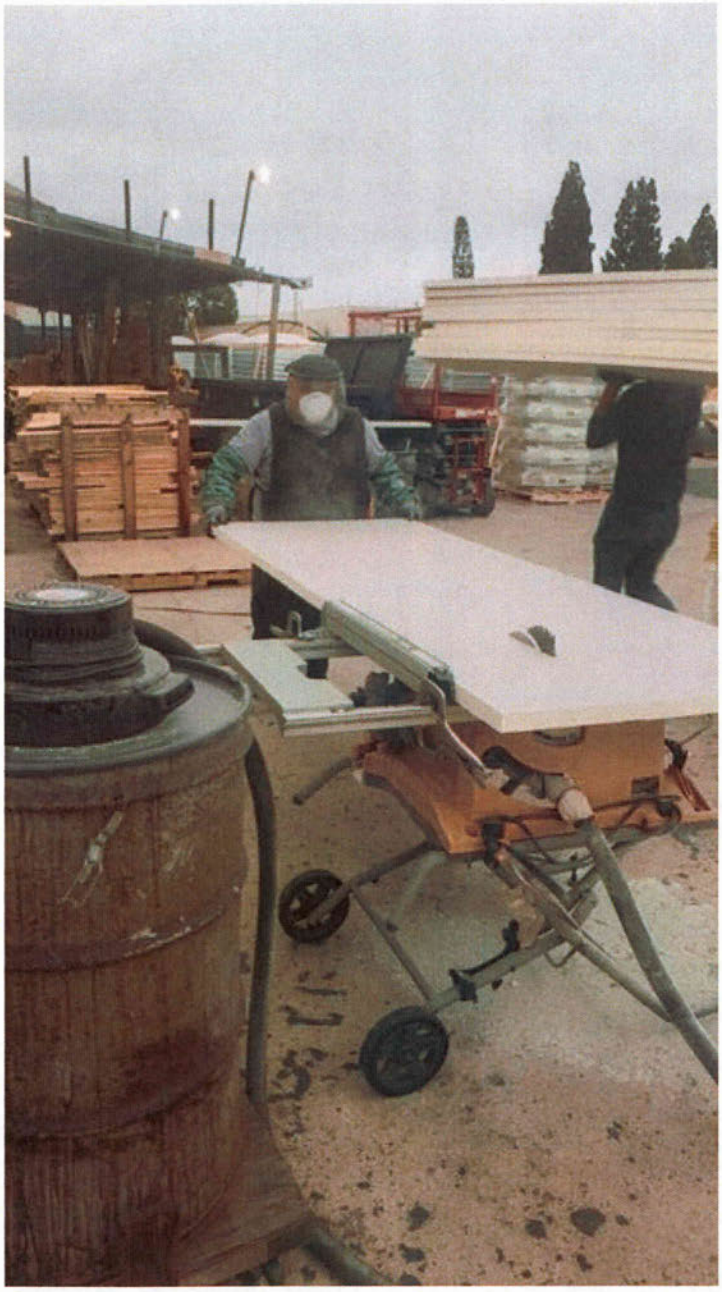
Spray Painting Without Adequate Ventilation (8 C.C.R. §§ 5153, 5415, 5445, 5446, 5450, 5452, 5453)

There is a large amount of spray painting happening inside the 302 and 401 buildings. The spray painting is constant in the 401 building, with workers estimating that they go through 64 cans of paint per shift. **Bartolo/Israel at 29:42.** Workers have stated that the "paints" being sprayed are galvanized and aluminum materials. **Bartolo/Israel at 29:28.** Workers spray within an area blocked off by curtains. **Bartolo/Israel at 28:36, 30:30; Jorge/Lucas at 1:15:45.** The spray area is not sealed off and does not have powered ventilation. **Bartolo/Israel 30:30.** The large amount of spraying and inadequate ventilation have caused workers to complain about headaches and the smell, especially during the winter months when the doors to the factory are closed to keep the cold out. **Bartolo/Israel at 30:49.**

There is also a lot of spray painting on the 302 side. Welders from that building state that assembly workers are about 35 feet away and use a paint with a very strong odor. These workers have the option of wearing masks because of COVID, but they did not wear them pre-COVID. **Jorge/Lucas at 1:17:50.** Workers state they can still smell the paint despite wearing masks. **Jorge/Lucas at 1:20:00.** Below is a photo of an assembly worker spray painting in the 302 building.

Table Saw Guard Removed (8 C.C.R. § 4184)

Shown below is a picture of a worker using a table saw. As the picture shows, the table saw's guard has been removed. Workers state that they told their supervisor Miguel that the fiber is too thick to cut with the guard and that his response was that it was okay for them to remove the guard. Workers state that the lack of a guard has created a very dangerous situation. **Bartolo/Israel at 20:03.**



Obstructed and Empty Eyewash Stations (8 C.C.R. § 5162)

The 302 and 401 buildings are often crowded with pallets, skylight domes, and other materials. **Bartolo/Israel at 11:30.** Workers state that these materials are often in the way of eyewash stations. **Jorge/Lucas at 1:07:58.** Shown below are pictures of obstructed eyewash stations. Uploaded to the thumb drive accompanying this complaint are videos which shows other obstructed eyewash stations. These videos are labeled **Eyewash station 1** and **Eyewash station 2**.

Workers state that the fiberglass cutting operation creates a lot of dust that can get trapped inside the faceguard Kingspan provides workers. The dust buildup inside the faceguards will be so large that workers regularly need to wash their face and eyes, but they are unable to do so at the eyewash stations, as these are empty. When asked when the last time the eyewash station was empty, one worker responded "today." **Bartolo/Israel at 22:30.**


EYE
WASH
STATION

Damaged Building Post Potentially Threatening Integrity of Rafters (8 C.C.R. §§ 3207 – 3299)

Approximately one year ago, there was an accident in the 302 building that resulted in two of the building posts being damaged. One of the posts now has a ~5 foot gash that you can see through. These posts hold up the rafters. Kingspan's response to the damage was to wrap the gash in plastic wrap. The posts have been in that damaged condition for the past year. **Jorge/Lucas at 1:20:00.** A video that shows the damaged posts is uploaded to the thumb drive labeled **Cracked posts.**

Below is a picture of a different building post which is also cracked and has been wrapped in plastic wrap.

Exposure to Hazardous Chemicals Without A Hazard Communication and Training (8 C.C.R. § 5194)

Workers are exposed to numerous hazardous chemicals either directly or indirectly over the course of their shift. These chemicals include "paints," acetone, various sprays including a cold, galvanized spray, gels for fiberglass production, and a product workers refer to as "Kelly." This list is likely incomplete. Although they are regularly exposed to these chemicals, several workers deny having ever been trained on how to use them, on the risks they pose, or on what to do in the event of an accident or emergency. **Mica/Ramon at 54:30; Jorge/Lucas at 1:13:15, 1:17:00.** One worker who has been at Kingspan for over 30 years says he has never been trained on how to use the chemicals he works with. When a new worker is hired, other workers show them what to do, but there is no training from Kingspan. **Bartolo/Israel at 9:00.** Another worker states that the only training he ever received was from a co-worker, who told him to wash himself in the bathroom or kitchen sink for at least 15 minutes any time a chemical lands on him. **Mica/Ramon at 56:30.**

Obstructions and Debris in Working Areas Leading to Injuries (8 C.C.R. § 3273)

As many of the photos and videos cited in this complaint demonstrate, the inside of the 302 and 401 buildings are crowded with pallets, skylight domes, and other materials. **Bartolo/Israel at 11:30.** The fast pace of production also leads to working areas strewn with debris. This has led to worker injuries. One worker states that, once, when he was lifting a base he was welding, he hurt his left knee due to a pile of welding spackle on the floor nearby, which caused him to slip and hear a cracking sound in his knee. His knee continues to bother him to this day. This worker explains that his work area used to be cleaned and swept more often by a designated person, but that stopped a while ago. **Jorge/Lucas at 1:00:43.**

Malfunctioning Controls On Crane Used For Moving Heavy Objects (8 C.C.R. § 4896)

Workers in the 302 building who assemble the skylights use a crane-like machine to move heavy parts. These parts can weigh up to 300 lbs. For approximately the past year, the controls on the crane have been malfunctioning. For example, when workers press the controls to move the crane in one direction, it will instead move in the opposite direction. The workers have reported the crane to Kingspan, but were told to continue using it until it was completely broken. To date, no workers have been injured using the crane, although there was one recent instance where a worker had to move away from the crane quickly to avoid being crushed by a heavy object it was moving. **Bartolo/Israel at 16:31.** The workers believe this crane is being used in violation of 8 C.C.R. 4896, which states that remote-operated cranes shall function so that if the control signal for any crane motion becomes ineffective, crane motion shall stop.

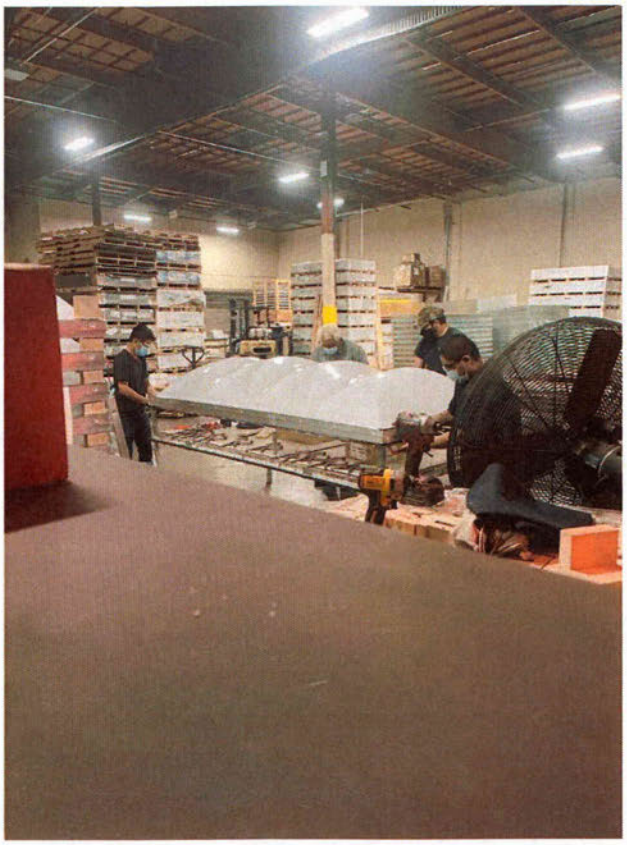
Inadequate PPE and Ventilation In Area Where Fiberglass Molds Are Cut and Sanded (8 C.C.R. 5152)

Fiberglass molds are cut and sanded down in the 401 building. These processes create a lot of dust. The dust is very irritating to the skin and workers in the vicinity of the sanding often ask for sleeves to protect themselves. Because of how crowded the facility is, many other workers also work near to where these molds are cut and sanded. One worker states that he works about 20 feet away from the sanding operation, but others work much closer, and that the itching caused by the dust persists even after showering. **Bartolo/Israel at 24:45.**

Repetitive Motion Injuries (8 C.C.R. 5110)

Many workers have been injured while working at Kingspan. Many of these injuries involve pulled muscles from lifting large and heavy materials. **Ramon/Mica at 28:39; Jorge/Lucas at 1:00:43; Bartolo/Israel at 31:40.**

One operation workers say is associated with a lot of injuries is assembly. Assembling skylights involves clamping the skylight to the frame until the parts can be drilled together. The materials are heavy so the clamping, which is done manually, is hard on the hands. Some workers clamp these skylights all day. One worker states that this repetitive activity often causes his hands to go numb and leaves him with a lot of blisters. **Bartolo/Israel at 3:02; 6:13.** Below is a picture of assembly workers using the clamps.



Conclusion

We ask Cal-OSHA to conduct an unannounced and comprehensive inspection of the Kingspan facility. In addition to the specific hazards described above, we ask that the inspection review Kingspan's compliance with the Injury and Illness Prevention Program standard (8 C.C.R. § 3203) and all other standards that may apply to the hazards discovered. Please advise us in advance of the opening of the inspection so that we may participate in the walkaround. We are willing to provide interviews and to identify other workers whom the inspector should interview.

In closing, workers at the 302 and 401 buildings have dealt with workplace injuries and an unresponsive Kingspan for a long time. Some workers have worked in these buildings for over 30 years. The results of the air monitoring tests have workers deeply concerned about the effects such high levels of exposure to contaminants have had on their health. Workers want these problems fixed. To that end, workers propose a number of short- and medium-term solutions:

- Kingspan should be ordered to disclose any and all hazardous chemicals in use in the 302 and 401 buildings and train employees who use or are exposed to hazardous chemicals on proper use and accident prevention and response.

- Kingspan should be ordered to conduct a comprehensive worksite analysis of all operations at the 302 and 401 buildings with the goal of identifying all sources of airborne contaminants. The results of the analysis should be shared with workers.

- Kingspan should be ordered to conduct periodic measurements of airborne contaminants in the 302 and 401 buildings, no less often than monthly, during regular production periods, with prior consultation from workers, and with the results shared with workers upon request. Based upon the results of these periodic measurements, Kingspan should be ordered to make modifications to their existing ventilation systems which eliminate harmful exposures to airborne contaminants, to be completed within 6 months.

- Kingspan should be ordered to provide the appropriate PPE to workers based on their job duties and the job duties of other workers around them, taking into consideration any inadequacies in existing mechanical ventilation. Welders, for instance, should be provided with supplied-air respirators.

- Kingspan should be ordered to maintain existing mechanical and local exhaust ventilation with working filters. Kingspan should also be ordered to test the strength of existing mechanical and local exhaust ventilation monthly in the presence of workers and with the results shared with workers upon request.

- Kingspan should be ordered to conduct a worksite analysis of all operations at the 302 and 401 buildings with the goal of identifying and correcting job processes which cause repetitive motion injuries, with the results shared with workers upon request. This analysis should include, but not be limited to, assembly workers' use of "clamps."

- Kingspan should be ordered to conduct training on safe work practices which minimize workplace injuries.

- Kingspan should be ordered to cease the practice of obstructing eyewash stations and leaving eyewash stations empty.

- Kingspan should be ordered to fix any structural deficiencies in the 302 and 401 buildings including damaged building posts and leaks, to be completed within 12 months.

- Kingspan should be ordered to construct spray booths and/or spray rooms which meet the relevant Cal-OSHA regulations, in which any and all spraying operations shall take place, to be completed within 6 months.

PLEASE CONTACT:

302 building: [redacted]
401 building: