

# Advocating for the Removal of Polystyrene from Simsbury School Cafeterias

## Issue

In my school district, only the elementary schools use plastic, washable trays. In the middle school and high school, however, polystyrene trays are used every day. When the trays are heated to a certain temperature, there are potential carcinogens (benzene and styrene) that are harmful to student health. Polystyrene that is thrown into the garbage is collected by Paine's and the waste is incinerated, contributing to harmful chemicals that pollute the air. The Board of Education provides no extra funding to the Nutrition Services department, therefore, more expensive and environmentally friendly options cannot be used. Given these points, polystyrene products should not be used in our cafeterias (or any, for that matter) due to the numerous negative health and environmental effects.



Figure 1. Five compartment trays used in the Simsbury High School cafeteria

## Objectives

By raising student awareness of the issues with polystyrene use, my goal was to convince the BOE that an important switch must be made to environmentally friendly materials for the sake of our health and our environment.

### Objectives

- 1: review academic research to clarify the risks of the use of polystyrene trays
- 2: explore possible alternatives to polystyrene
- 3: investigate the economic impacts of possible safer alternatives
- 4: educate students with informational fliers
- 5: collect student support with a petition
- 6: advocate for change by presenting my results to the Board of Education and requesting the much needed change

## Methods: Research Phase

- My research phase took place from early September to the beginning of December. I referenced credible sources to obtain an overview of the risks of polystyrene as well as possible alternatives to its use.
- I contacted the Director of Nutrition Services who informed me of the BOE's reluctance to extend funds for recyclable or compostable foodware. She also helped me to obtain data on how much our trays cost on a yearly basis.
- I contacted Paine's, the local refuse company, to learn how the trays are incinerated after collection.
- I contacted the Center for Environmental Health, a non-profit organization that offers free testing of food containers to identify the presence of harmful chemicals (I sent them my school's trays).
- Lastly, I called the head councilman of Norwalk to discuss what worked for them in terms of making the switch away from polystyrene as well as community resistance. I then contacted John Hampton, our state representative to discuss the status of SB 229 which would have required the state to eliminate polystyrene.

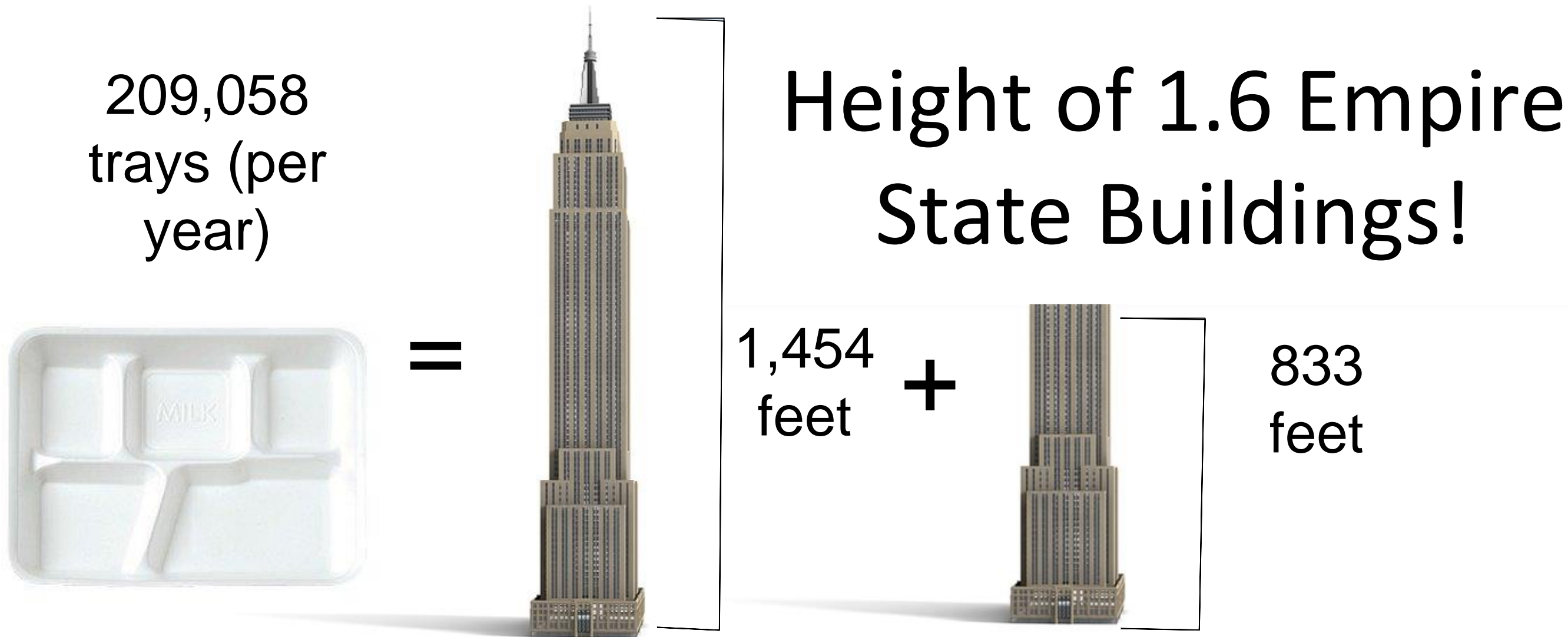


Figure 2. This graphic shows the height of all the trays our school uses in one year. 209,058 trays equates to a height of almost 2,300 feet!

## Methods: Action Phase

With my research completed, I moved into the "Advocacy Phase" of my project:

- I culminated my knowledge of the issue into a flier to present to homerooms and lunch waves at my school.
- I also created a petition that students could sign if they wanted to show support in front of the BOE that they were opposed to the use of polystyrene in our cafeterias.
- I created a presentation to give to the BOE to report on my findings and hopefully convince them to make the switch in the near future.



Fig. 3.

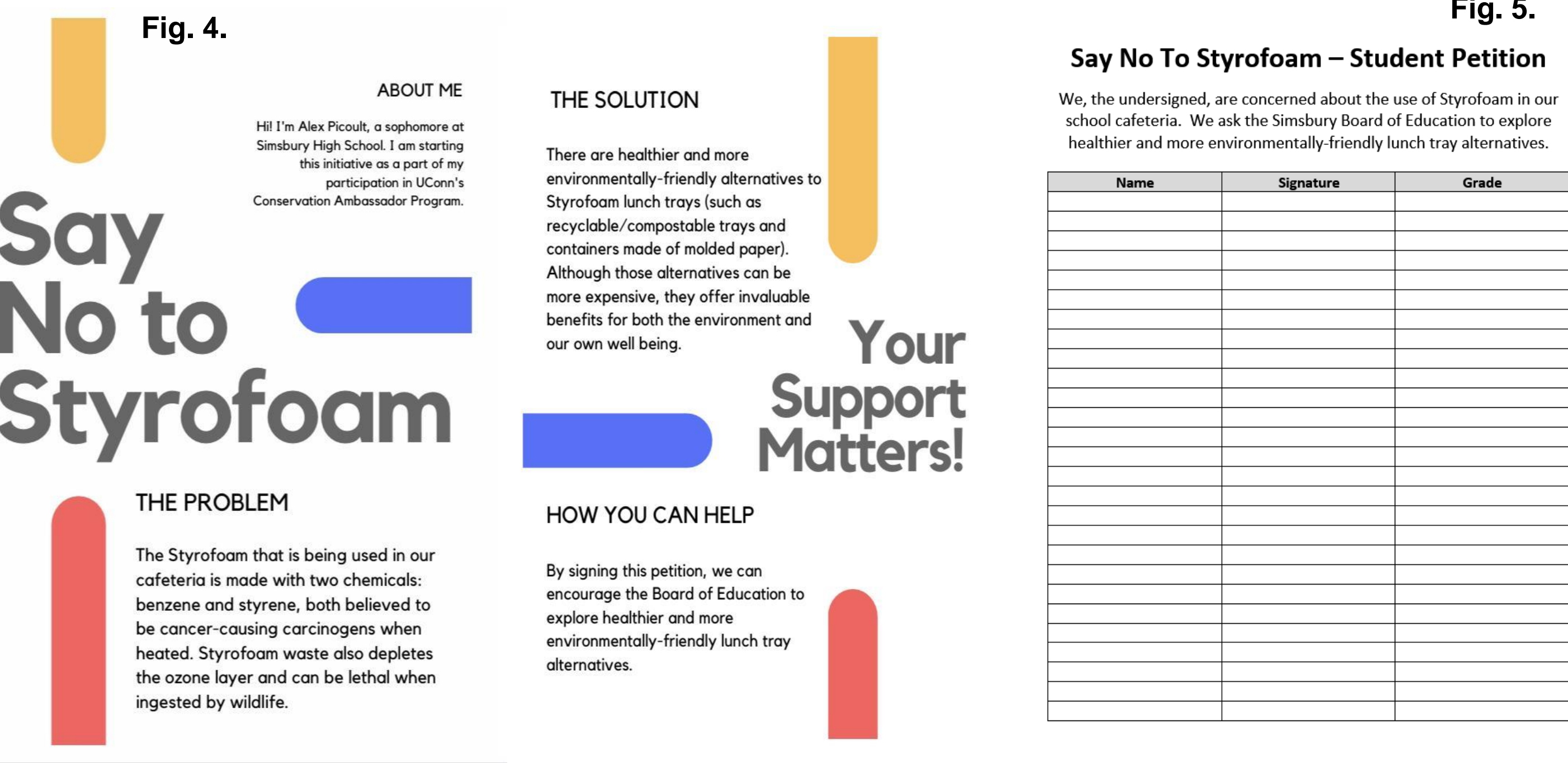


Figure 3. An image of me giving my presentation to the Board of Education

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## Results

- My school district's cafeterias use trays that tested positive for styrene - 227 parts per million (results from the Center for Environmental Health).
- There is clear evidence that styrene in the trays can leach into hot foods or be scraped off and ingested with utensils.
- Wildlife and environmental health concerns are valid. Polystyrene does not biodegrade, therefore, it can be ingested by animals. It is one of the worst industries for global hazardous waste and is made with nonrenewable fuels.
- There was strong student support for my proposal. In just under two weeks, I collected over two hundred student signatures at my school. Environmentally-friendly materials would only cost about \$4,000 more than the current trays.

Single Unit and Annual Costs of Styrofoam vs. Molded Fiber

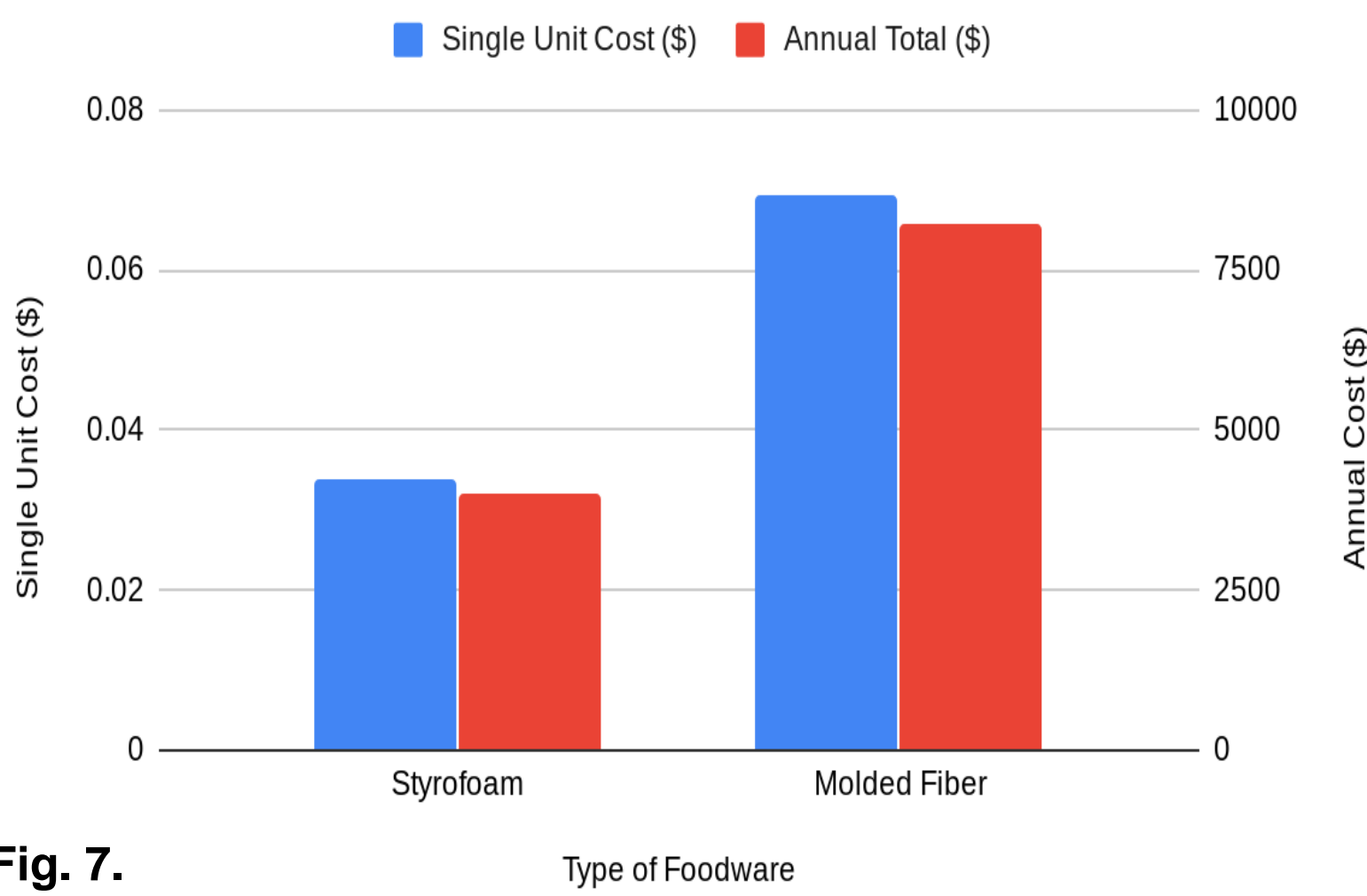
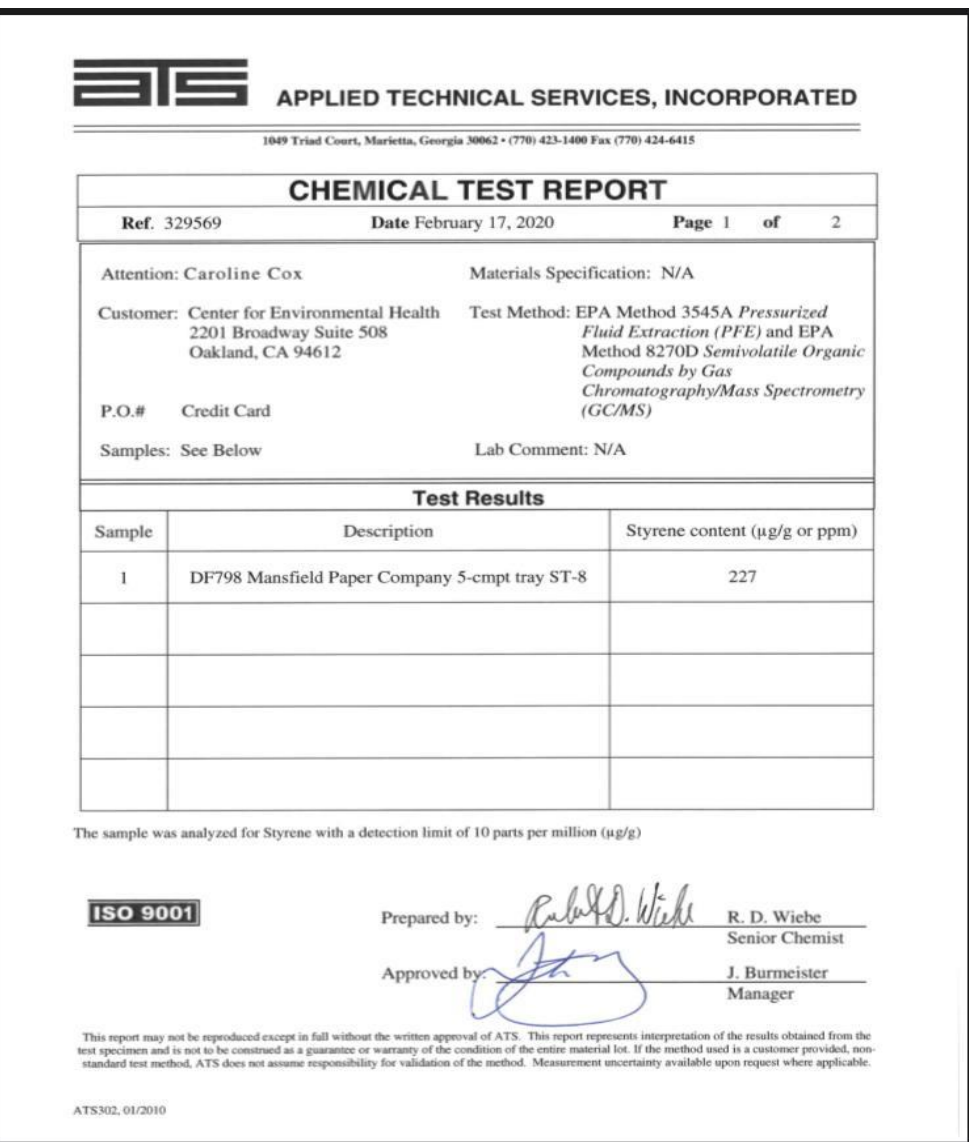


Fig. 7.



Figures 7 and 8. The bar graph above demonstrates the difference in unit and yearly cost of polystyrene and molded fiber trays. Molded fiber trays cost about 4,000 dollars more, which, in the grand scheme of things, is not much money in a school budget. The image on the right is a copy of the test results I received from the Center for Environmental Health.

## Conclusions and Next Steps

- Over the course of my project, I determined that polystyrene trays are not an ideal material for use in school cafeterias. While it is a cheaper alternative, it is also associated with adverse health and environmental effects. The key question I posed to the Board of Education was this: Isn't it worth \$4,000 a year to know that our students will not be eating off of trays laced with a known carcinogen?
- Following my Board presentation, I was advised by the Superintendent that he had appointed a member of his staff to look into this issue and report back with recommendations. I am looking forward to working with the Board to make this change a reality, and make my community healthier and more environmentally friendly.

## References

- 14th Report on Carcinogens. (2016, November 3). Retrieved February 23, 2020, from National Toxicology Program website: [https://ntp.niehs.nih.gov/whatwestudy/assessments/cancer/roc/index.html?utm\\_source=direct&utm\\_medium=prod&utm\\_campaign=ntpgolinks&utm\\_term=roc](https://ntp.niehs.nih.gov/whatwestudy/assessments/cancer/roc/index.html?utm_source=direct&utm_medium=prod&utm_campaign=ntpgolinks&utm_term=roc)
- Mackar, R. (2011, June 10). New substances added to HHS Report on Carcinogens. Retrieved February 23, 2020, from National Institutes of Health website: <https://www.nih.gov/news-events/news-releases/new-substances-added-hhs-report-carcinogens>