

Underwriters Laboratories:
Santa Clara Office

An Essay
Presented to
The California Pioneers
Of Santa Clara County

By:
Gina Ravo
2040 Jonathan Avenue
San Jose, Ca 95125
(408) 448-2479

Table of Contents

Introduction.....	1
Background.....	2-4
In the Beginning.....	5-8
The Opening.....	9-10
The Growth.....	11-14
Employer and Consumer.....	15-16
Impact on Society.....	17-19
Appendices.....	20-28
Endnotes.....	29-30
Bibliography.....	31

Introduction

Although Underwriters Laboratories Inc. corporate headquarters is located in Northbrook, IL, it has a large full service laboratory in the Santa Clara Valley. Underwriters Laboratories Santa Clara is not one of the larger organizations in the Santa Clara Valley, but it provides services to and supports most of the major companies in the area. For the past forty-five years, UL Santa Clara has been a constant and positive contributor to the economy and overall well being of the Santa Clara area and beyond.

UL's Mission is very simply "Testing for Public Safety". Everything UL does can be traced back to this very basic theme. UL has been true to this mission for over one hundred years, helping many companies to bring various types of safe products to market for all types of users. The products tested by UL range from building materials like doors and wallboard to high technology electronic equipment like computers and pacemakers to common household items like hair dryers and coffee makers. The places we work and the tools and appliances we use in our daily lives are made safer because of UL. Products that are safe can be identified by the familiar UL in a circle (page 21) on products that have passed their rigorous testing programs.

Background

Underwriters Laboratories Inc., also known as UL, is a private organization known to the public for assuring safety of many types of products from building materials to electrical and electronic appliances. The “UL Mark” is attached to all products that have been found, by testing and constructional evaluation, to comply with published requirements. Another role Underwriters Laboratories Inc. plays is in the development of the previously mentioned published requirements. UL is a leader in the development and publication of national and international product safety standards.

During the past 100 years, UL has grown from a single site based in Chicago, IL, to now having five main testing laboratories in the USA, twelve testing laboratories internationally and over 150 other business offices both domestically and internationally.¹

The Worlds Fair held in 1893 opened the eyes of the public to the coming dominance of electricity. This influence of electricity changed manufacturing, transportation and even art.² However, along with the more widespread use of electricity came concerns about electrical shock and fire hazards as a result.

The original purpose of UL which, was founded in 1893, was “to solve problems in connection with fire alarm service in Chicago and inspect electrical installations at the World’s Fair”.³ The idea for a laboratory, testing for public safety, was developed at this time by William Henry Merrill, the person called to solve the fire alarm problems and inspect the electrical installations.⁴ It didn’t take long for the idea to take hold and UL came into being and began offering other services to more customers. At one point, UL

even evaluated and certified automobiles and airplanes. Some of the services now offered by UL include:

1. Safety evaluation of electrical and electronic products
2. Safety evaluation of building materials
3. Evaluation of quality management systems
4. Performance testing on telecom products to test for possible harm to the telecommunications network
5. Electromagnetic Compatibility Testing to make sure electronic products don't interfere with the operation of other products
6. Burglary and fire protection alarm services certification
7. Inspection and verification services
8. Standards development and publication (over 726 published)⁵
9. Public education related to the safe use of products

From its initial work to the wide range of services offered today, UL continues to be true to its original mission of "Testing for Public Safety".

UL initially existed as a result of the need for insurance companies or underwriters to reduce the amount of risk they had as the use of electricity came into more common use. In fact, UL initially operated as part of the insurance underwriting business. However with the growth of the company and its services it wasn't too long before it incorporated and was well on its way to becoming the organization it is today.

Over the years, UL's Chicago facility had grown and continues to be the corporate headquarters for the organization. However, with the increase in business UL opened additional facilities in the USA with the second facility being in New York and

the third facility in San Francisco in 1923. The San Francisco facility serves as the starting point for the focus of this paper since it was what later became UL Santa Clara.

The existence of UL can be recognized in our daily lives through the identification of the UL in a circle on most electrical and electronic products we may use in our daily routines. UL issues over 14 billion UL Marks per year for products, which are sold worldwide.⁶

In The Beginning

William Henry Merrill was the founder and first president of UL. William Henry Merrill started UL in Chicago as part of the insurance underwriters in 1893. By 1901, UL had grown and was incorporated as a separate and private organization in the state of Illinois. The growth of UL continued and after the establishment of the New York facility, a recognized need for UL representation on the West Coast was identified by William Henry Merrill in 1920.⁷

In 1920, inspection authorities in major cities in the west were expressing concern with the safety of electrical products that were appearing in the marketplace. This concern was due to the fact that an increasing amount of electrical products were coming into use in the west and along with them a number of safety problems.⁸ However, manufacturers on the West Coast didn't want the hassle of submitting to laboratories so far away – remember, at that time, travel was not quite as efficient as it is today. The distance for trains as well as the time for mail and freight shipments took a long time. Telephone communication was in its infancy still and was questionable as an effective business tool. Local governments therefore sympathized with the manufacturers and refused to require UL Marks as long as Chicago was the closest laboratory. More than one entity considered opening a laboratory to investigate electrical products.

As a result, in 1921, William Henry Merrill hired R. J. Larrabee to head the first Western division, which was located in San Francisco.⁹ UL could provide local services

to the manufacturers on the West Coast to allow for the easier use of the UL Mark by manufacturers.

On opening day, the San Francisco laboratory's only equipment was to test switches. The switches were tested for their ability to control their intended load safely and ensure that the switch could operate the load over several cycles.

In 1923, Portland Oregon enacted the first sales control ordinance in the USA requiring all electrical products offered for sale in the city to be Listed by UL. In 1924, Los Angeles, California followed suit with a very similar sales control ordinance.¹⁰

The continued growth of the electrical industry in the West Coast brought on the need to expand UL's West Coast operation. However, the UL staff in the San Francisco facility were concerned that the lab was already crowded and additional people and test equipment would make the working conditions very difficult. San Francisco was a fairly mature city and there was not much room for growth. The picture of the original San Francisco Office on page 22 illustrates how it was right up against the next building as are buildings in San Francisco today. One expansion of the San Francisco laboratory was completed in 1937 with a move to a larger building.¹¹ By 1950, even the newer San Francisco Laboratory had become outgrown. In 1953 a contract was signed to begin construction of the UL Santa Clara laboratory.

The Santa Clara location was described as "one quarter mile north of El Camino Real at 1655 Scott Lane, Santa Clara, California. It was comprised of 33,000 square feet of floor space and was designed to resist earthquake and fire" (note: all UL facilities are built to the highest standards using the proper UL Listed materials to demonstrate UL's commitment to safety). The site was to be in the middle of seven acres of pear orchard.¹²

This pear orchard was in the middle of Santa Clara Valley then know by some as the “Garden Spot of California”.¹³

The selection of the Santa Clara site was quite a move from the existing San Francisco facility. It seemed that UL was moving away from industry. At that time, the Santa Clara Valley was still heavily agricultural. However, businesses were gradually moving into the area and UL saw it as an opportunity to be close to a future industry base that would be larger than San Francisco. Additionally, the Santa Clara site had enough room for the UL West Coast operation to grow into the foreseeable future.

The relocation of UL into the Santa Clara area certainly caused some local concern as it displaced additional orchard land and further added to the increasing industry presence. Other, more well known industry names moving into the Santa Clara Valley at that time included IBM, FMC, Westinghouse, Sylvania, GE and HP.¹⁴ UL wasn’t as well known at that time and the presence of a testing laboratory in the still rural Santa Clara Valley raised questions about the impact it might have.

As mentioned, UL Santa Clara played a role in the decline of the agricultural industry in the Santa Clara valley by moving its operations into the area. In fact, during the 1950’s, the county’s population rose to more than half a million as a new economy took control and 20,000 acres of California’s finest land began being converted to industrial and residential development.¹⁵ UL was only responding to an increasing and apparent industry trend by setting up its laboratory in Santa Clara.

Although UL served to displace some of the agricultural industry, it made up for it by providing jobs for construction workers who built the facility and later, engineers and other support staff who worked for UL. Also, concerns about its impact in the valley

were gradually eliminated over time as UL became better known and worked closely with the local governments on safety issues.

The Opening

In preparation for the opening of this much larger office in 1954, a huge caravan of moving vans spent several days transporting some client samples, equipment and loads of furniture from the old San Francisco office to the new building in Santa Clara. The new building in Santa Clara was in the unusual location of what looked like the middle of a pear orchard. The aerial picture of the Santa Clara Office on page 24 shows the office surrounded by the pear orchard.

The Santa Clara Office officially opened for business on Monday, November 15, 1954. Both the office and the lab spaces seemed huge to all the employees that had moved from the packed little San Francisco offices. Engineers were very pleased to find their desks generously spaced in a row versus being close together so only the slender could slide into chairs. The Santa Clara office was huge and each engineer had a bench. There was a wet room with rain test sprinklers and a sump, which was used for testing various kinds of underwater light fixtures. There was a burn out room and a no draft room for testing light fixtures. All of these were luxuries and only dreamed about. The Santa Clara office was found to be very well designed with a service corridor, a huge loading dock, a fabulous plant department and an extremely large storage area located at the rear of the building.¹⁶

The initial design of the UL Santa Clara laboratory was typical light industrial architecture for the 1950's as can be seen in the picture on page 23 that shows the original front entrance of the building.

The Santa Clara laboratory space was more than adequate in the early days, but the quantity of test equipment was not adequate. There were a few product lines being tested where the volume of submittals was such that a test set up could be used repeatedly. However, the norm was to build a customized "Haywire" test set up for a test program and to tear it down after testing.¹⁷

This opening of the Santa Clara office had just begun a fantastic new era for UL by providing the greatest capability of a full service lab facility that otherwise had existed only in the combination of the Chicago and Northbrook facilities.

The Growth

What was originally thought to be a well-constructed UL Santa Clara Laboratory building could have been made better which became apparent with the passage of time. As was becoming the normal story for UL, business continued to increase which meant more staff and more test equipment. However, in the new facility, there was room on the site for all the future expansion that was expected.

Underwriters Laboratories Inc.'s first large expansion was sometime in 1967. It occurred under the administration of Norman Davis Jr. when a partial second floor had been built and the very first cubicles (small working areas- kind of like miniature offices) were installed in the building.¹⁸ This provided the necessary space for a time, but it wasn't too long before still more space was needed.

In 1971 Underwriters Laboratories had undergone even more construction. About one-third of the eventual size of the original building had been constructed.

Again, in 1979, another addition was added due to the tremendous growing number of the hard working staff members. The 1979 addition included a "face lift" of the building at the request of the City of Santa Clara to bring the building more in line with the local architectural features that were planned by the city. The size of the building as well was limited to two stories, again at the request of the city to maintain the rural feel of the area. The picture on page 25 shows a current view of the front of the laboratory with its still existing Spanish style that had been requested by the city. UL

management expected the 1979 addition to be the last major construction effort in Santa Clara, which resulted in a facility three times the size of the initial laboratory.

The year 1979 also was a milestone for UL in Santa Clara in that it was the twenty-fifth anniversary of the office in this area. The Santa Clara Chamber of Commerce proclaimed November 15, 1979, to be UL day honoring this accomplishment as shown on the picture on page 24.

However, again the rapidly growing high tech industry brought more business to UL than ever expected and even more staff and lab space were needed to meet the needs of the growing customer base. As a result in 1986 another expansion was completed which increased the size of the facility considerably to about ten times its original size.¹⁹ This one single addition totally eliminated all of the remaining lawn area around the laboratory just leaving enough room for the building and the parking lot at the facility. This maximum facility size includes office and lab space for 750 staff and the parking lot at the facility.

UL Santa Clara can not grow any more, as there is simply no more room. The color pictures on pages 25 through 28 illustrate the facility in its current state. It is fairly modern but is crowded (full parking lot and similar to that picture of the San Francisco facility on page 27 with buildings now on both sides).

One option was for UL to build another Santa Clara office. However, that was determined to be too costly. Another option was to close the Santa Clara office and open one where it is less expensive. This option was dismissed as well because unlike with the San Francisco office there is still a large industry and customer base in Santa Clara that UL would be unwise to leave.²⁰

The third option was to keep the Santa Clara facility and build other West Coast facilities. This was the option selected and the first West Coast Laboratories was opened in Camas, WA, and another one is planned for Los Angeles, CA. in 2000.

The expansion option chosen allows UL Santa Clara to continue to serve and even focus more on the Santa Clara area. UL plans to provide more of its existing and new services to meet the needs of the Santa Clara (Silicon Valley) industries.

In addition, the new services provide many new and interesting opportunities to the many UL staff members. Also for the near future, over the next two years UL Santa Clara has begun some additional construction. It is called for to modify the entire building to make a better and more efficient work environment for all of the number of employees and staff.

As with the initial construction, the current construction will be done exclusively using local contractors and workers since bids for the work are only being accepted from local contractors. Some previous local contractors used have been The Austin Company, Nicholson-Brown, Charles Peterson and Blach Construction.²¹ Also, the building construction continues to be done in such a way to showcase UL's high standards for safety.

Some of the more recent changes over the past two years allow UL Santa Clara to provide several of the new services mentioned to their customers.

As UL Santa Clara now celebrates its forty-fifth year in the area, it looks like it is here to stay as long as there continues to be a need for an independent safety laboratory. In fact several of the more recent competitors of UL such as CSA, Intertek Testing Services, MET Labs, TUV PS and NEMKO have also recently opened laboratories in the

area to try and get in on the large market for engineering testing services in the area that is a result of the concentration of high technology industry.

Employer and Consumer

Underwriters Laboratories Inc. has been a steady employer of an increasing number of the local population since 1954. Santa Clara UL hires most of its staff from the local population. UL compensates its staff at a competitive level and offers one of the most stable work environments in the whole Santa Clara county area. UL also focuses heavily on family values allowing and encouraging its employees to have time for personal and family activities.

Although certainly not one of the largest employers in Santa Clara, UL does steadily employ approximately 800 people who contribute to the tax base in the area.²² UL's turnover of staff is considered low in comparison to other companies in the area and there is a large number of long term employees at the lab which indicates that it is a good place to work and make a career.

As for these many lucky staff members at Underwriters Laboratory in Santa Clara, 500 of them are college degree employees and the remaining 300 have at least a high school degree.²³ UL supports continuing education for all staff, which is contracted through local providers.

UL is a not for profit organization serving many customers around the world. Although not for profit, Underwriters Laboratories does pay many taxes on several of its operations such as performance testing, quality registration services, standards sales and seminars. UL also pays various types of local payroll and property taxes as well as taxes on many of its foreign operations where the not-for-profit status is not recognized.

Also as indicated, Underwriters Laboratories exclusively uses local subcontractors for any of their various building improvements. UL also exclusively uses local subcontracts for the many services it currently provides yet doesn't have the facilities to do all the testing.

As can be seen from the above, UL is a direct employer of a large number of people. These people in turn further contribute to the local economy as consumers. UL also contributes as a consumer by its exclusive use of services and sub-contractors.

UL is also a considerate consumer in that all of its testing and operations are done in a manner friendly to the environment. This is done in some of the following ways:

1. By conducting high power testing at off-peak times so the local electrical distribution network is not overloaded.
2. By carefully handling, tracking and disposing of hazardous waste materials.
3. By actively managing a recycling program for all types of recyclable materials.
4. By cleaning any exhaust gasses or smoke from tests using the latest types of filtering equipment. UL recently removed an older piece of fire test equipment since it could not meet the local pollution standards and the testing is now done in a new high tech testing facility in UL's Northbrook, IL. Office.

Impact on Society

The Underwriters Laboratories Inc. office in the Santa Clara Valley has had a huge impact on the local environment.

UL Santa Clara was one of the first companies in the Santa Clara area to contribute to the displacement of existing agricultural economy. This might have been considered negative at the time, but it can be argued that the long term contributions made by UL have been positive as well.

Although UL Santa Clara was one of the initial participants, in displacing local agriculture with industry, it was joined by several other big companies to soon make Santa Clara the highest technology center in the entire West Coast area and ultimately the world.

As a result of the technology growth in the area, it was obvious to UL that this would soon be a huge center of activity and so UL Santa Clara continued to grow and expanded into its Santa Clara facility, in order to support the local industry.

UL and UL Santa Clara has given a great contribution to the whole society. First of all UL's mission is to "Testing for Public Safety". This testing goes well beyond simple product safety testing. It extends into the many service areas mentioned in the Background to UL Santa Clara's own use of best safety construction practices to UL Santa Clara supporting local government and building officials with its experienced engineers and testing facilities.²⁴ UL routinely meets with and assists local government and building officials in matters related to building and electrical safety. In fact, most recently, UL has been very active with US Customs on the West Coast to help them

identify counterfeit products being imported from China.

UL Santa Clara is also found to be extremely involved in many different local charitable activities such as the United Way where UL matches employee contributions dollar for dollar, the American Heart Association, Second Harvest Food Bank, Toys for Tots and more. UL actively promotes and supports employee participation in charitable activities and hosts many activities in house.

UL Santa Clara is extremely active in several different educational activities as well as many local schools with various presentations and demonstrations. UL employees routinely visit local schools for career fairs and to present and discuss various topics related to engineering and safety. UL periodically holds open houses for employees and the community and participates yearly in the Take Our Children to Work Day. UL also supports local universities when it hires new graduates in the form of grants for each new graduate hired.

UL Santa Clara is very active in the County Science Fair as well as including the awarding of prizes to projects that present safety-related ideas. UL supports the fair organization and management through people who are on the board and with staff who serve as judges for the fair. UL also periodically supports the Tech Museum with various exhibits and demonstrations related to safety.

Although not a large big name brand company like HP, Intel, or Cisco, UL Santa Clara has been and will continue to be a strong steady force in the Santa Clara environment. This is done directly with jobs for the local population, services for local industry and government, and safe products for them to use. It is done indirectly by supporting local activities/charities and encouraging supporting employees to do so as

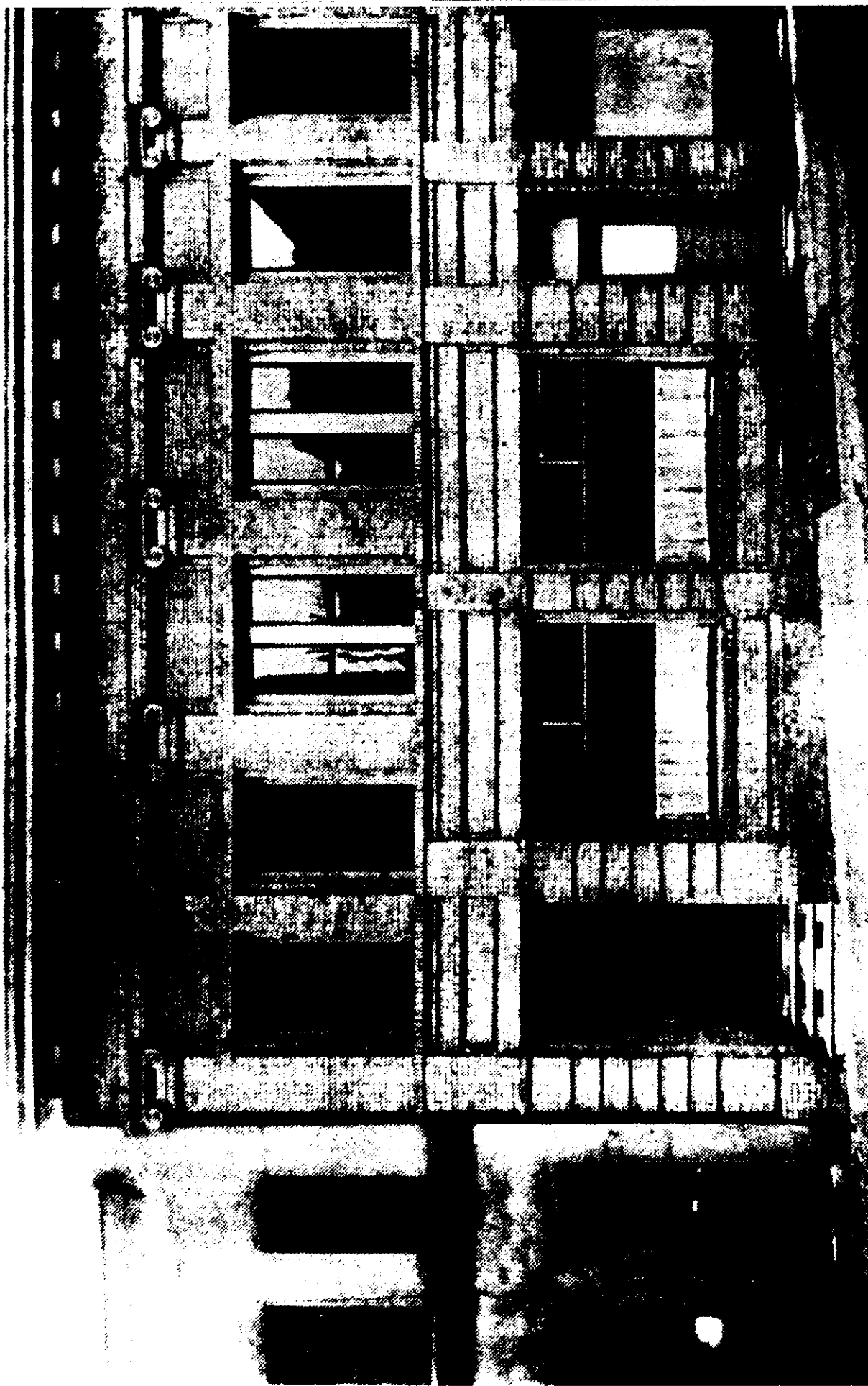
well. Finally it is done by UL being a good local corporate citizen and supporting local business and helping keep the environment clean and safe.

Appendices

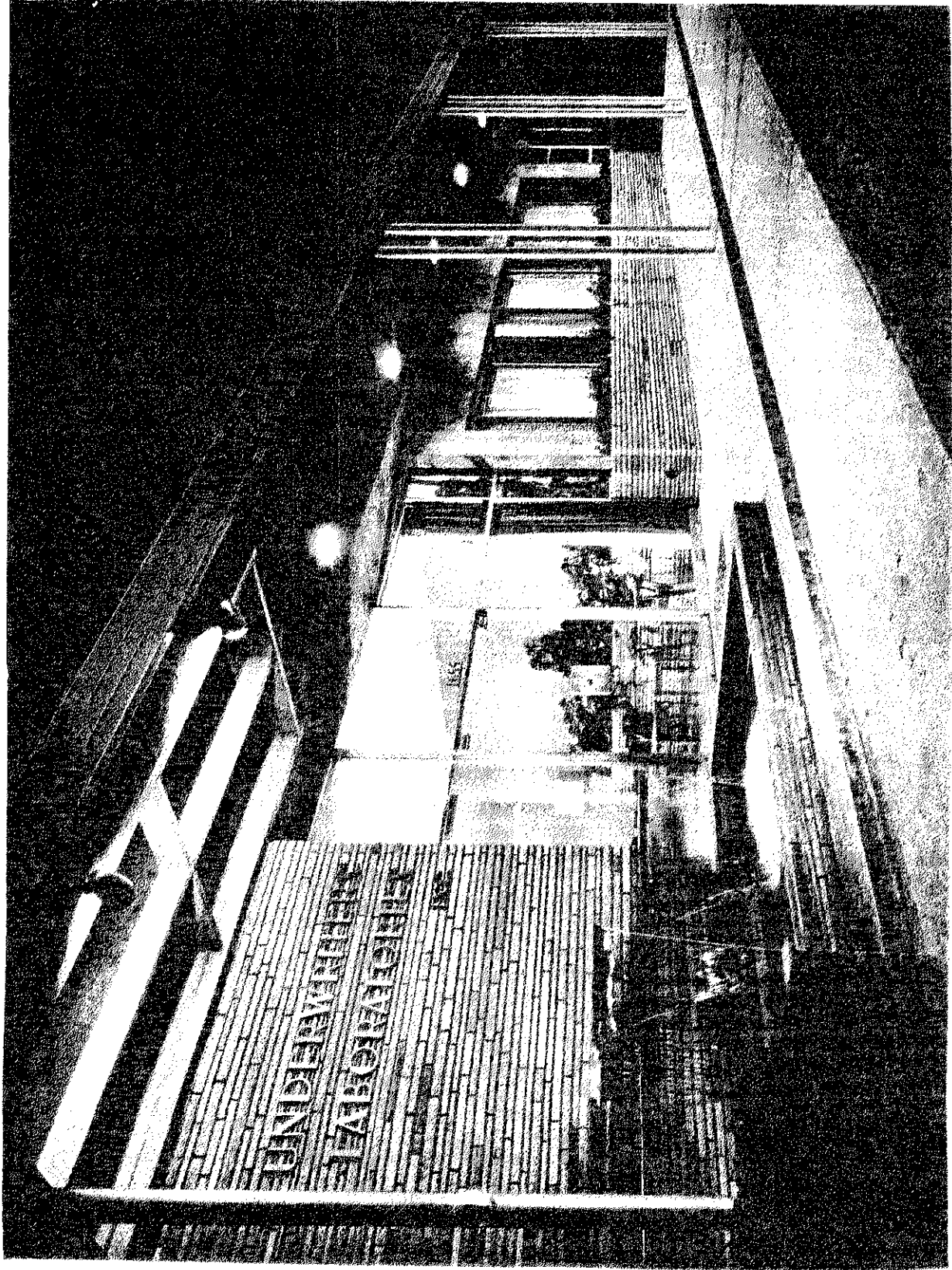
The following are pictures referenced in the body of the paper.



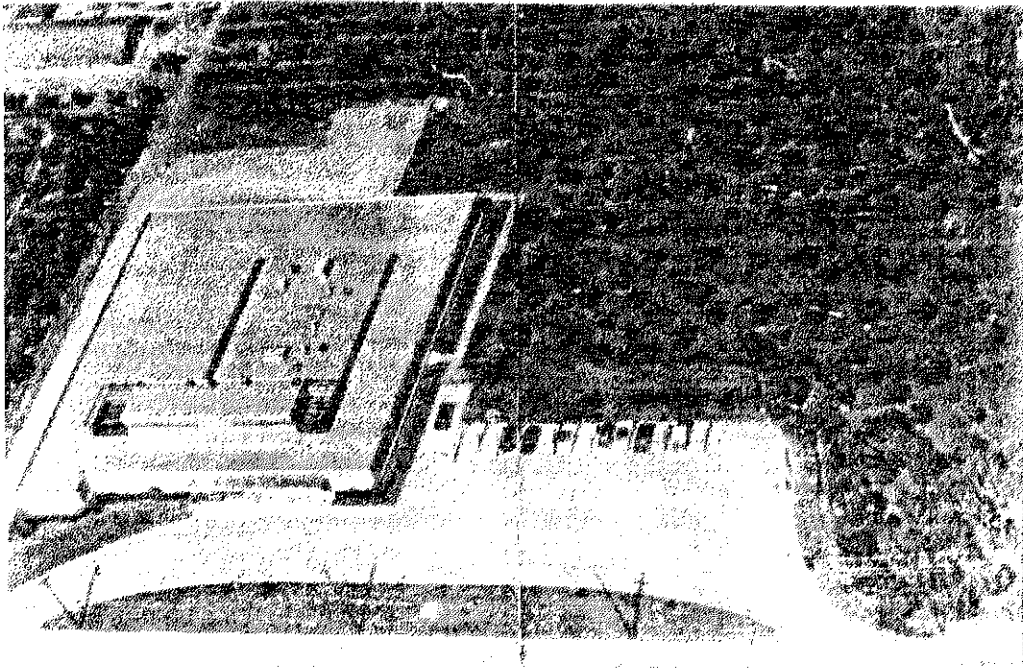
The UL Mark



UL's first West Coast testing station
615 Commercial Street, San Francisco, CA
1923 to 1937



Entrance to the UL Santa Clara Office - 1954



An aerial view of the Santa Clara Office - 1955



Miles Barber, left, Chamber of Commerce President, with Gene Bockmier, center, And Santa Clara Mayor Bill Gissler. The city proclaimed November 15, 1979, to be Underwriters Laboratories Inc. Day, honoring UL's 25 years in Santa Clara.



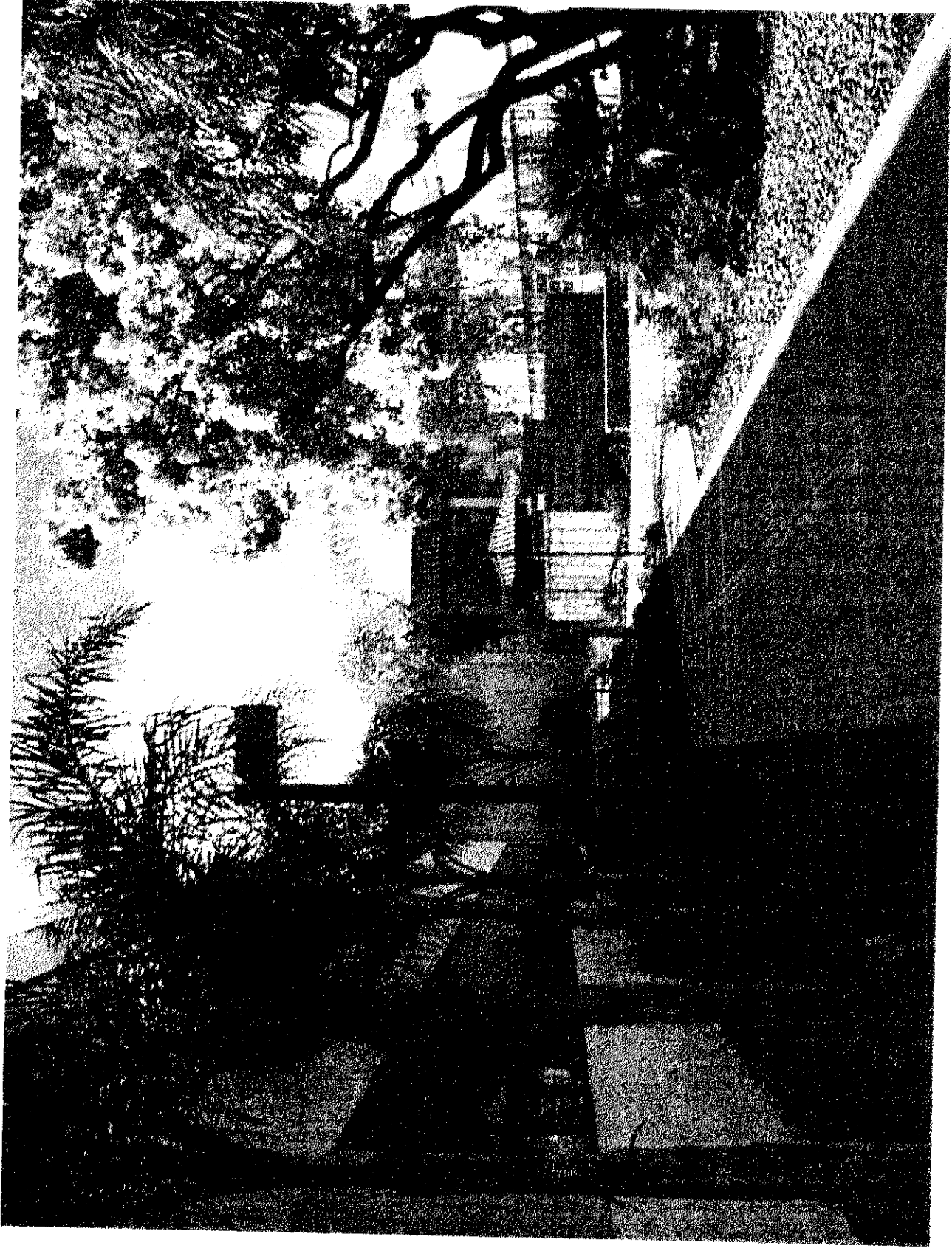
UL Santa Clara front view from El Camino Real - 1999



UL Santa Clara - 1999
1655 Scott Blvd



UL Santa Clara - 1999
Rear View



UL Santa Clara - 1999
Employee Entrance - one of the few green areas left after the last expansion.

Endnotes

1. Underwriters Laboratories Inc., World Wide Web Site, April 23, 1999.
2. Harry Chase Brearley, A Symbol of Safety, 1923, p.17.
3. Merwin Brandon, Reminiscences of Underwriters Laboratories, April 1964, p. 1.
4. Ibid, p.18.
5. Underwriters Laboratories Inc., Op. Cit.
6. Ibid
7. Gene Bockmier, A History and Reminiscence of Underwriters Laboratories on the West Coast, 1993, p. 1.
8. Ibid.
9. Ibid.
10. Ibid., p. 2.
11. Ibid., p. 4.
12. Ibid., p. 14.
13. Eugene T. Sawyer, History of Santa Clara California, 1922, p. 33.
14. Stephen M. Payne, Santa Clara County, Harvest of Change, 1946, p. 168.
15. Clyde Arbuckle, Clyde Arbuckle's History of San Jose, 1986, p.163.
16. Bockmier, Op. Cit., p. 16.
17. Ibid., p. 20.
18. Ibid., p. 31.
19. Ravo, Kevin, interviewed by Gina Ravo, March 21. 1999.
20. Ibid.
21. Bockmier, Op. Cit., p. 99.

22. Ravo, Kevin, interviewed by Gina Ravo, April 3, 1999.
23. Ibid.
24. Underwriters Laboratories Inc., Op. Cit.

Bibliography

- Arbuckle, Clyde, Clyde Arbuckle's History of San Jose, Smith and McKay Printing Company, 1986.
- Bockmier, Gene, A History and Reminiscences Of Underwriters Laboratories on the West Coast, Underwriters Laboratories Inc, June 1, 1993.
- Brandon, Merwin, Reminiscences of Underwriters Laboratories Inc, Underwriters Laboratories Inc., April 1964.
- Brearley, Harry Chase, A Symbol of Safety, Doubleday, Page and Company, 1923.
- Payne, Stephen M., Santa Clara County, Harvest of Change, Windsor, 1946, p.168.
- Saywer, Eugene T., History of Santa Clara California, Historic Record Company, 1922.
- Ravo, Kevin, 25-year engineer for UL. Interviewed at 2040 Jonathan Avenue, March 21, 1999 and April 3, 1999.
- Underwriters Laboratories Inc., World Wide Web Site, April 1999.

Willow Glen High School
Advisor: Mrs. Kathryn C. Philp

Kathryn C. Philp