



SAABE TIMES

A Publication of the San Antonio Association of Building Engineers

June, 2001

Mark Your Calendar —

JOBS / AMST

LaRue Coleman, owner of JOBS Building Services and Aluminum Maintenance Systems of Texas (AMST), will present a program at our June luncheon. JOBS/AMST has been in business for the past 30 years serving the Real Estate Management Industry. Their services include:

- Window Cleaning
- Metal Refinishing
- Exterior Building Restoration

JOBS/AMST presently performs the exterior cleaning and/or restoration on approximately 75 percent of the Class A office towers in Houston. With an office in San Antonio, JOBS/AMST also performs work in several other Texas cities, such as Austin and Corpus Christi.

In addition to his work in the U.S., LaRue formed a joint venture with a Malaysian company that was awarded the initial contract for the exterior cleaning of the Petronas Towers in Kuala Lumpur Malaysia, the world's tallest buildings.

LaRue is a member of several national safety committees that write the standards for his industry. He has served as President of the IWCA, an international association for the window cleaning industry.

Education Corner

by Kenny Aguilar

Classes being offered:

Tuning DDC/Process Control Loops: San Antonio, TX, June, 11-12, Houston, TX, June 14-15. \$795.00; NTT 800-922-2820.

Evening HVAC 2-100 hours: Texas Engineering Extension Service, Starts June 2001 Tues. and Wed. 6:00-10:00pm, Tuition—Same as for HVAC 1; Contact Leanna Ramirez at 210-633-1065, 210-633-1064 FAX for enrollment information.

Building Electrical Inspection: San Antonio, June 26-28. \$1095.00; NTT 800-922-2820.

Insko Schools

R410A Certification: June 21st, July 26th, August 23rd. One day class from 8am to 5pm, Cost \$135.00 includes CD-ROM, student workbooks, A/C learning manual. Registration form must be received and confirmed prior to class date. Contact Stan Soultaire at 210-828-9981 for registration form and confirmation of date.

APHCC of Texas Continuing Education: June 23rd, 30th, Instructor in San Antonio: Stricker.

APHCC-TX Special Classes:

Medical Gas: Amarillo, TX, June 8-10. \$435.00 non-members, \$395.00 members. Recertification first day of each class, \$125.00. Call APHCC-TX Office for class location and to register 800-831-9313.

Journeyman Test Preparation: Austin, TX, June 23-24. \$335.00 non-members, \$300.00 members. Call APHCC-TX Office for class location and to register 800-831-9313.

Construction Data's Texas Air Conditioning Contractor License Computer Exam Preparation: June 29-July 1 Dallas, July 20-22, Austin. All seminars held on Friday, Saturday, and Sunday. Instructor: Jay Peters. Guarantee: One time-lifetime, free reviews if necessary. Cost: \$450.00, TACCA Members: \$400.00. Call 888-500-PASS for registration and information or log on to hvacandplumbing.com.

continued on page 3

A Message from the President by Elena C. Castillo

Safety in Confined Spaces

Do you know the safe procedures for entering and working in confined spaces? According to the Occupational Safety and Health Act, there are several issues that need to be addressed before entering such an area. Enclosed or confined spaces are extremely critical to people or hazardous because of the lack of natural air movement. These confined spaces may have: 1) oxygen-deficient atmospheres, 2) flammable atmospheres, and/or 3) toxic atmospheres.

1. Oxygen-deficient atmospheres

a. Any atmosphere with less than 19.5% oxygen should not be entered without an approved breathing apparatus; that is, it must be self-contained. An air-purifying respirator, (half-mask or full-facepiece) should definitely not be used in an oxygen-deficient atmosphere because it does not supply fresh air; its only purpose is to filter the dangerous substances from the air being breathed. The best means is to provide safe breathing air from a tank or an uncontaminated area nearby.

b. Upon entering such an area, be aware that an area with 19.5% oxygen can be depleted rapidly by the work being done in that space. Brazing, welding or cutting helps decrease the oxygen levels in the atmosphere. It can also be reduced or displaced by gases, such as carbon dioxide or nitrogen. If the oxygen is totally replaced by carbon dioxide, unconsciousness will occur, followed by death.

c. The air we breathe is 20.5% oxygen (O_2), so any confined space must be at a minimum of 19.5% to enter safely. At 16%, a person will experience impaired judgment and difficult breathing. At 14%, that person will undergo faulty judgment and rapid fatigue will commence. At 6%, the person will breathe with great difficulty, and death will occur within minutes. That may not be enough time for a rescue team to reach this person.

2. Flammable atmospheres

a. When entering a confined space, determine whether or not the atmosphere is flammable. There are two things that make this possible: the oxygen in the air, and a flammable gas, vapor, or dust in the proper mixture. If an ignition source, such as an electrical tool or sparking device, is added into the space containing a flammable atmosphere, an explosion will definitely bring about dangerous consequences.

b. An oxygen-enriched atmosphere (above 21%) will cause all flammable materials to combust and burn violently when ignited. These materials can be things such as a person's clothing and hair. To prevent enriching the atmosphere in the combined space, always ventilate with normal fresh air. The supply of fresh air ventilation should be continuous because the hazardous atmosphere in the confined space will form again when the flow of air is stopped. NEVER, NEVER use pure oxygen.

3. Toxic atmospheres

a. Most liquids, vapors, gases, mists, solid materials, and dust should be considered hazardous in any confined space.

b. If any product has been stored in the space, it is possible that it has been absorbed in the walls or leftover porous construction materials, so that removal of this product may give off toxic gases. An example would be removal of sludge from a tank — the decomposed material can give off deadly hydrogen sulfide gas.

c. Another example includes welding, cutting, brazing, painting, scraping, sanding, degreasing, etc. Cleaning solvents used for cleaning or degreasing in the confined space is also very toxic. They may also migrate to occupied spaces.

d. Some gases or vapors are heavier than air (like hydrogen sulfide) and may settle on the bottom of the confined space. Still, others are lighter (methane) and may be found at the top of the space.

So, test the atmosphere with properly calibrated test instruments to determine which gases are present. Testing should be performed at the top, middle, and bottom areas of the confined space. If testing reveals an oxygen-deficient atmosphere, ventilate the space until normal readings are found. The same procedure is followed for the presence of toxic gases and vapors: Ventilate and retest. In an emergency rescue, if ventilation is not possible, the rescue team must have the appropriate respiratory protection.

Remember, NEVER trust your senses to determine if the air in a confined space is safe! You CANNOT see or smell many toxic gases and vapors, nor can you determine the level of oxygen present, just because you FEEL it's okay. Check out your space thoroughly or it may be the last time you do.

Next month: Standby/Rescue Procedures

Education Corner

continued from page 1

McQuay Training Courses

Screw Compressor Chiller Maintenance and Operation:
Stauton, VA. August 21-24, October 9-12. Cost \$1,100.


Centrifugal Chiller Maintenance and Operation:
Stauton, VA. August 21-24, October 9-12. Cost \$1,100.

For more information contact Linda Custer at McQuay International in Stauton at P.O. Box 2510, Stauton, VA 24402-2510. Telephone 540-248-9646, Fax 540-248-9210, or email at linda.custer@mcquay.com.

It Pays to Advertise!


Dimensions	1 Issue	3 Issues	1 Year
Full Page (7.25" w x 9.5" h)	\$110	\$280	1,000
Half Page (7.25" w x 4.35" h)	60	150	575
Half Page (3.5" h x 9.5" h)	60	150	575
Quarter Page (3.5" x 4.75" h)	30	75	280
Business Card (3.5" w x 2" h)	20	50	190

Send ad copy (camera-ready black and white laser, or black and white velox) and payment to SAABE, P.O. Box 691861, San Antonio, TX 78269.



Genesis Supply, LLC

1442 Parkridge
San Antonio, Texas 78216
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- You no longer associate bridges with water.
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- If the temperature drops below 90, you get a little chilly.
- You discover it takes only two fingers to drive your car.
- Hot water now comes out of both sides of the tap.
- It's noon, the kids are on summer vacation and not a soul is on the streets.
- Your fear is if you have a wreck and wind up lying on the street, you may cook to death.




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May Luncheon Was a Blast!

Our May General Membership Meeting featured an insightful presentation by one of the world's foremost explosion experts, Mr. Mike Pickett. Mike resides right here in San Antonio and his professional background includes military service, firefighting, and teaching as a college professor. We were treated to an informative video as an introduction to the subject of explosives and then were able to see and touch actual samples of bomb-making materials as he shared some fascinating real-life stories. All who attended thoroughly enjoyed his presentation, and were left wanting more. Our Board of Directors plans to look into the possibility of scheduling a half-day seminar focusing on bomb threat procedures.

On another note, we were delighted to have six special guests from AAFAME (Austin Association of Facility and Maintenance Engineers) join us. They were:

- Mike Hanrahan, SMA - President
- Ray Chairez - Treasurer
- Amy Ables - Secretary
- Tony Martinez - Lunch Programs
- Earl McGlothlin - Volleyball Committee
- Domingo Lopez - Committees

Tom Lasater announced that our new web site is now up and running... please check it out at www.saabe.org and let us know what you think. Mike Alvarez reported that the recent trade show was a great success, and the best one yet. A big thank you to all who had a part in that, whether committee members, exhibitors, sponsors or attendees!

We're Live... On the Web

Our new web site is online at www.saabe.org and ready for your viewing and assessment. Your comments and suggestions will be welcomed — just fax them to Lynn. Our site was developed by Steve and Kevin at Texas A&M University who did a great job for us. If you or your company would like to develop a web site, we recommend contacting them at Steve@ppri-nw.tamu.edu. Steve and Kevin spent hours and days working on this site and have our sincere thanks and appreciation of turning a suggestion into reality.

Kudos for SAABE

We have received a very nice letter from Ms Anita Contreras, Director of Partners in Success for Sam Rayburn Middle School, thanking us for SAABE's contribution of \$750 last August. With our help, they were able to make a positive impact on many of their students in several ways.

- They increased their mentoring program from 35 students to 100. Each mentor and mentee was given a book to read together which gave them something in common and helped focus on academics as part of the mentoring. Several of the teachers made wonderful comments about how this program is improving performance in English and Reading classes.
- Sam Rayburn staff and teachers held three different discipline contests where 500 students out of 750 remained referral-free for one month. Students who earned Raider Traders for positive behavior could redeem them for supplies at the school store.

Ms Contreras invited Mike Alvarez and Elena Castillo to a thank you luncheon, donated by Fuddruckers, for all the mentors, students, and sponsors who contributed in one way or another and made this a successful year. We were able to see firsthand how much our donation was appreciated, and we thank SAABE members for making us a successful organization capable of giving back to the community in this way.

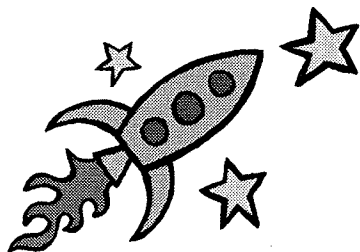
Heard It Through the Grapevine



- **Mike Alvarez** is now with Carrier Building Services. He may be reached at 210-495-2600.

Thank You, Trade Show Food Sponsors!

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- Alamo Controls
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- The Trane Company
- Electrol Systems



Thank You, Trade Show Exhibitors!

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- San Antonio Business Journal
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- Tyco / Fire & Security / Simplex / Grinnell
- Voss Lighting
- Ward Systems/Mechanical Maintenance of Texas
- Wheeler Coatings, San Antonio
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- York International San Antonio Sales & Service

Thank You, Trade Show Prize Sponsors!

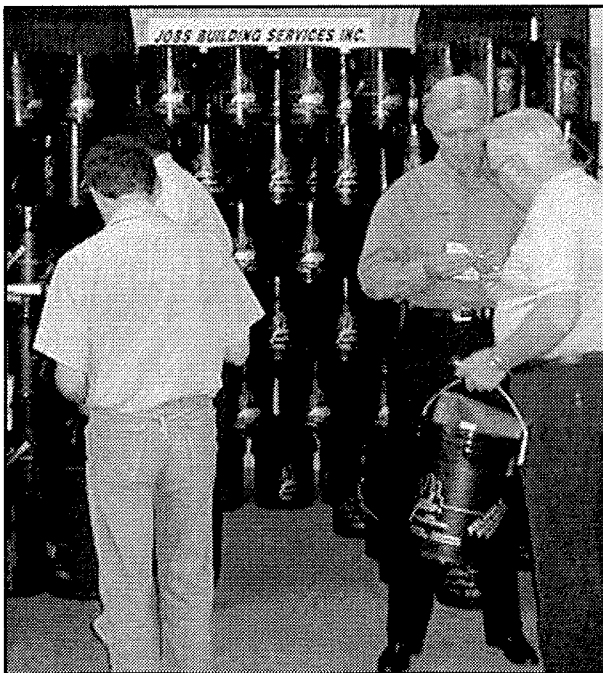
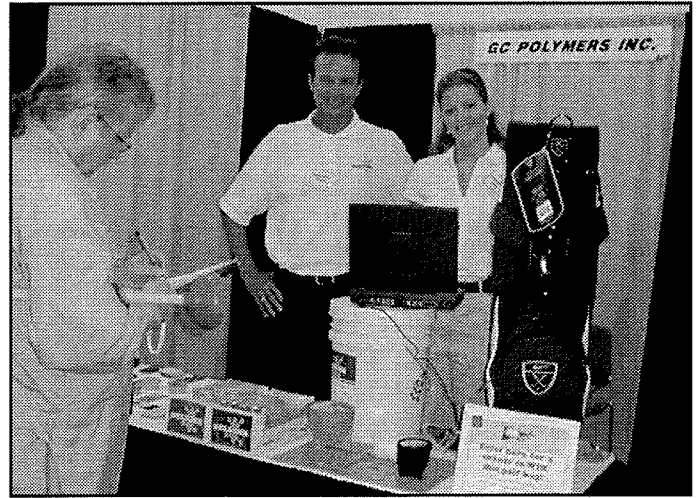
Door Prize	Donated by	Won by
Trip for 2 to Las Vegas	Holt Power Systems/Caterpillar	Cyndy Perez
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DVD player	Bexar Electric	Gilbert Saldana Jr.
Day at Patricia's Beauty Salon	JMJ Construction	Todd Reid
Port Aransas fishing trip	Amcon Controls	David Aguirre
Philips Portable CD player	Voss Lighting	Richard De La Garza
52" ceiling fan installed	Corbo Electric	Unknown (Signature was illegible)
Fiesta Texas Season Passes	Munters	Victor Jendrzey
Gerber "Super Tool"	Hydro Systems	Cole Farley
Golf Gear	Cummins	Jasper Guilleu
Denim Jackets	Hydro Systems	Mary Ellen Finkel, Cindi Furrow
Golf Shirts	Hydro Systems	Dee Vera, Richard Litton, Lis Williams
Ice Chest	A-1 Door	Barry Peterson
County Line gift certificates	Comfort-Air Engineering	Juan Avila, Roger Frazier, Lori Rose



2001 Trade Show Committee

Matt Accardi TDIndustries	Bill Hudson Ink Spot Ink
Mike Alvarez Carrier	Fred Kongabel Bexar Electric
Vince Baker Grinnell Fire Protection	Andy Koppenhaver Ed Flume Building Specialties
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Judy Garcia City Public Service	David Webb Cram Roofing
Richey Houdek ABM Janitorial Services	Tim Young Munters Moisture Control

An "Out-Of-This-World" Trade Show!



The Fire Drill — Who Needs It?

You do! Why? For at least two very important reasons: (1) the safety and well-being of our tenants and/or residents, and (2) the City of San Antonio has mandated them. The Uniform Fire Code (the code) has been adopted by Section 11-32 under Article III of the city code. Section 1303 of the Uniform Fire Code requires emergency plans, staff training, and FIRE DRILLS be provided along with a review of the emergency plans and the execution of assigned employee duties. The code states that all persons subject to the fire drill requirements shall participate; fire drills are to be conducted at various times and conditions to simulate fire situations; and records of fire drills are to be kept on site stating the time, date, person in charge, and other pertinent information including the time required to evacuate the building.

Naturally, a safe and efficient fire drill begins with a plan, and the following is included in the “Emergency Plan and Procedures” listed in the code. The evacuation route is to be posted on all floors and written in the plan, as well as any areas of refuge (such as stairwell landings where persons denied egress by the fire should be stationed for rescue) and the area where disabled persons should congregate for assistance down the stairs by the Fire Department. While exiting the building by the stairs, always stay to the right to allow the Fire Department personnel access. Since a free burning fire can reach extremely high temperatures and engulf a room in dense, choking smoke, knowledge of your escape route is vital. The Fire Department instructions are to drop and crawl in a smoke filled area, which indicates a **crawl** fire drill could be in order since landmarks at floor level are not that familiar to most tenants, especially with only emergency lighting available.

The building engineers consulted regarding standard procedures recommend that floor monitors or supervisors be appointed (calling them captains or marshals may get them confused with fire department personnel) to oversee the safe and efficient evacuation of personnel. They should be provided with an accurate listing of personnel which is updated regularly. Many firemen have lost their lives searching for persons who are not in the building — for example, at home due to sickness, out on calls, etc. Also, exterior areas of assembly should be away from fire

department access areas such as standpipes, loading areas, etc. Once roll call has been made and the location of all personnel known, a report should be made to the designated supervisor of the fire drill. Section 1303.6.1 “When fire drills are conducted, the orderly evacuation of the building shall receive priority over the speed of the evacuation” — panic never leads to order!

The procedure for reporting the fire should be in the plan and known to all employees, floor monitors, and guards.

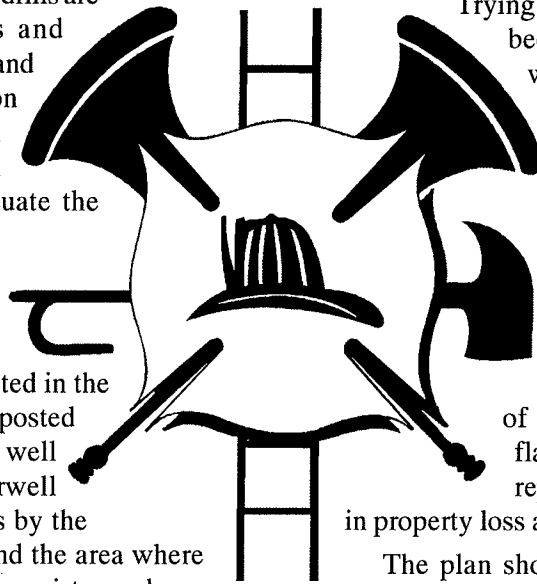
Trying to locate the manager by cell phone or beeper will result in delayed response — when to call the Fire Department and under what fire conditions must be established prior to a fire. These procedures should include day, night, and weekend situations. All personnel including night and weekend guards should know if your fire alarm system has a direct tie to the Fire Department or if they must call them by phone.

Section 1302.2 declares that discovery of fire, smoke, or unauthorized release of flammable or hazardous materials shall be reported without delay — time lost results in property loss and even worse, lives lost.

The plan should include notifying, relocating, and evacuating of occupants. Is a building annunciation system to be used or are tenants to be notified by phone? A written statement with concise information given to tenants or residents should include enough information to prevent calls being made to the office or guard so phone lines stay clear. A written record of the announcement or persons called should also be made. All personnel are required by the code to know the location and operation of pull stations, fire extinguishers, and all the previous listed information. A fire is not a time for questions or confusion but positive and possibly life saving action.

I’d like to acknowledge the assistance of the following building engineers: Charles Mikolajczyk of Endeavor Real Estate Group, Doug Graves of Hines Interests, Paul Thompson of Pyramid Property Management, Inc., and Elena Castillo, SAABE President. Next month we will cover employee duties and personnel training.

*Till then,
Tom Lasater*



The Technology Curve and the Building Engineer (5th Year Edition)

Building engineers' lack of access to current operating equipment such as personal computers, e-mail, digital cameras, etc., is alarming to say the least.

One of the most difficult tasks today for a building engineer is to stay current with technology and trends, for new technologies and practices are developed at a rapid pace. A building engineer without these basic instruments can be compared to an office without a fax machine.

We have found that some companies have drawn a line as to whom shall have access to these instruments and the building engineers are not included. In fact, the buildings in question are of substantial size. Reason? May be the additional expense, or quite possibly, the abuse of such tools. Realistically, (a) there is a computer already in use for the EMS system; (b) there should not be an additional expense for a dedicated phone line, for operating an EMS without remote capabilities is prehistoric; (c) unlimited time for an Internet provider is less than \$20.00 per month (or up to 8 months free if you utilize all of the 30-day free trial offers); (d) a tracker which is available to keep track of multiple user destinations will eliminate the abuse theory.

How about the management companies endorsing Internet shopping to their building engineers but will not provide the building engineers Internet access? Is there something wrong with this picture?

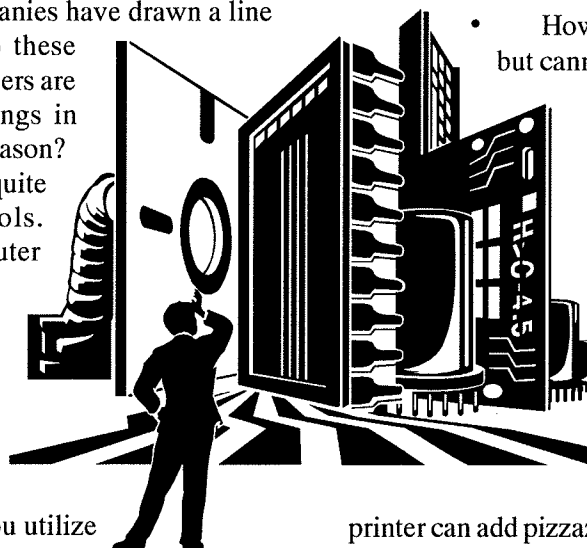
Let's look at a few examples of how the Internet is beneficial to the building engineer:

- Looking for new HVAC equipment? Dial up the manufacturer and get all the information you need and more (similar to shopping for a new car and dodging the salesman until you find what you want)!
- Need research on code issues regarding diesel fuel tanks and/or fuel delivery? (www.tnrcc.state.tx.us/oprd/rules/index.html)
- Or, ADA issues? (www.license.state.tx.us/AB/tas/abtas)

- If a picture is worth a thousand words, how much is a thousand words worth? With a digital camera, a picture can be taken and sent a thousand miles in five minutes.

- The instant ability to obtain cut-sheets on almost anything.

- Suppliers offering "free shipping" just for ordering on-line (www.grainger.com)



- How about that health package you have but cannot find? An instant copy is only a few clicks away.

- Want to check on progress of a project or development regarding permits and inspections? (www.ci.sat.tx.us/bldginsp)

- If this article were e-mail instead of a newsletter, you could go directly to the web site just by clicking one of the addresses listed above!

If you followed the previous three articles, the basic computer and color printer can add pizzazz to any document. Pie charts, graphs, pictures, etc. can be right at your fingertips in WordPerfect or Word. You can also generate custom billing sheets, chiller and mechanical logs with basic software like Excel. By using the Auto sum, you can build meter-reading logs that will automatically subtract the previous reading from the current one so you can instantly compare usage over the previous months. If one would supply you with the tools, all you have to do is enter the information.

There are other uses and benefits, which would outweigh all of the criticism of why a building engineer should not have Internet access or the basics at the least. Naturally, it would be difficult to justify for a 40,000 sf building. But you'd be surprised by the number of the 100,000+ sf buildings that don't. What side of the technology curve would you rather be on?

CHARLIE'S LAW: It may be that your sole purpose in life is simply to serve as a warning to others.

JUSTA MAINTENANCE MAN



San Antonio Association
of Building Engineers
P.O. Box 691861
San Antonio, TX 78269

Charlie

SAABE TIMES
June Issue

Final Thought —

Q: What Lies At The Bottom Of The Ocean And Twitches?
A: A Nervous Wreck.

2001 Board of Directors

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Association Coordinator (lynnfor@mindspring.com)

Membership Luncheon
June 20, 2001

Time: 11:30 a.m.

Location: The Barn Door
8400 N. New Braunfels Ave.

Topic: Window Cleaning Liability

Speaker: LaRue Coleman

Sponsor: JOBS/AMST

Upcoming Luncheons:

July 18, 2001: Program by Alamo Controls

August 15, 2001: Program by Munters Corp.

The SAABE Times is produced monthly for the San Antonio
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