

Mueller® Service Lines

OCTOBER 1977

NEWS ABOUT MUELLER MARKETS, PLANTS, PRODUCTS, PERFORMANCE, AND PEOPLE

Chattanooga employees build Resilient Seat Gate Valve

For years, people in the water distribution industry had been saying, "Give us a gate valve that won't leak when it's shut off and won't damage itself when it's shut part way."

When a main or lateral is being worked on, it's essential that no water leak through the shut off valve. And when the utility wants to control the flow of water by "throttling," it's important that a valve can be partially closed without the valve "seat" clattering about and getting damaged.

Mueller Co. could have built such a valve, based on existing designs. But the whole idea of the "Mueller Margin," the extra margin of quality that makes the difference between a superior product and a marginal one, would have been lost. In time, the company's reputation as a manufacturer of quality products could have been hurt. Sales would suffer. The net result could be a loss in business and jobs.

So Mueller engineers turned their time and talent toward designing a quality valve that would deliver everything expected of it.

Just what they wanted

First they developed a new valve from a concept originated in Europe. But it was scrapped when testing proved it wouldn't do the job. So back to the boards they went and, the result, after developing and proving, was the Mueller Resilient Seat Gate Valve (RSGV) — a major contribution to the water industry in the U.S.

It proved to be everything the water distribution industry people wanted. The RSGV is leak-proof even at 200 PSI (pounds per square inch pressure). And when open, it leaves the line free

of obstructions so less pumping power is needed to keep water flowing. It can also be used to reduce flow to any degree by using it partially closed. And it works equally well no matter which direction the water is flowing. What the water distribution people asked for, they got. The only valve with this particular design and the best valve of its kind on the market.

The new valve went into production at Mueller's Chattanooga, Tennessee, plant in June, 1976.

Chattanooga gets job

The Chattanooga plant is equipped with modern foundry facilities and a skilled workforce. These factors made it the logical place to manufacture the new RSGV. The process is complicated but well-coordinated . . . with the accent on quality.

Cores made to "recipe"

A classic case where the machine depends on the man to do its job properly is the muller, or mixer, that prepares the sand used for cores and molds into which the molten iron is poured. The machine does the mixing, but the operator must carefully follow the correct "recipe" of sand, binder and other ingredients to make the right mix for core and mold making.

The sand cores that form the interior shape of the castings are machine-made, but final core preparation required to produce clean, smooth castings depends on the coremaker's skill.

The human element also plays an equally important part in the operation of the automatic molding machine that makes the sand molds for the exterior of the castings. Correct core setting, mold cleaning, and pouring

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Furnace operator carefully fills ladle from one of four electric induction furnaces used to melt scrap steel and pig iron into high grade cast iron used in valves.

Shell machine operator cleans a core for Resilient Seat Gate Valve to remove irregularities, then coats it in critical areas to assure clean, smooth castings.

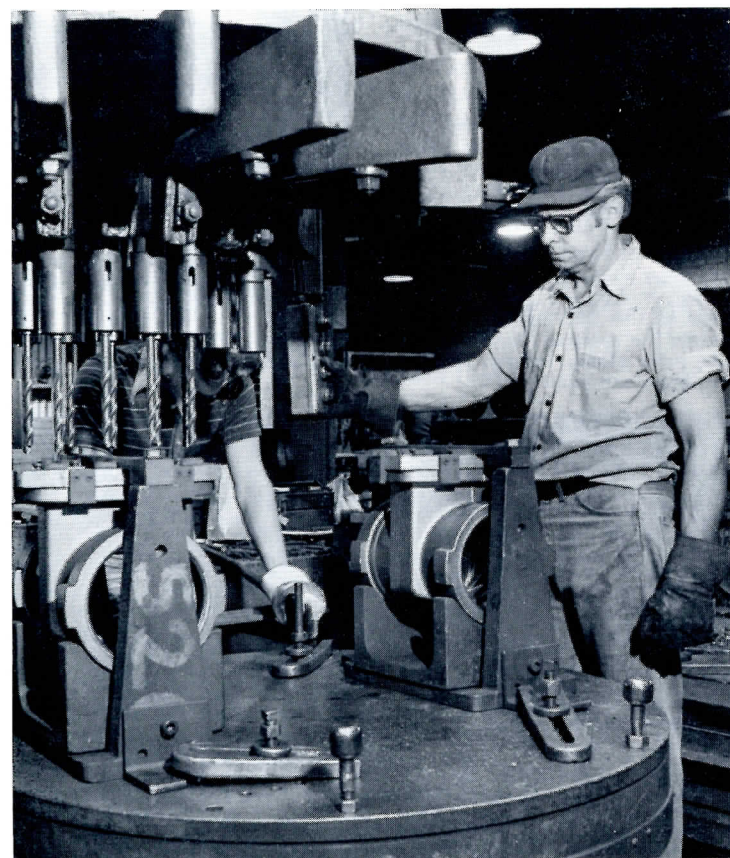


Below, molds are automatically made on this 300-foot long Mold-master. The "monster" automatically fills, rams, closes, weighs, indexes and shakes out molds.

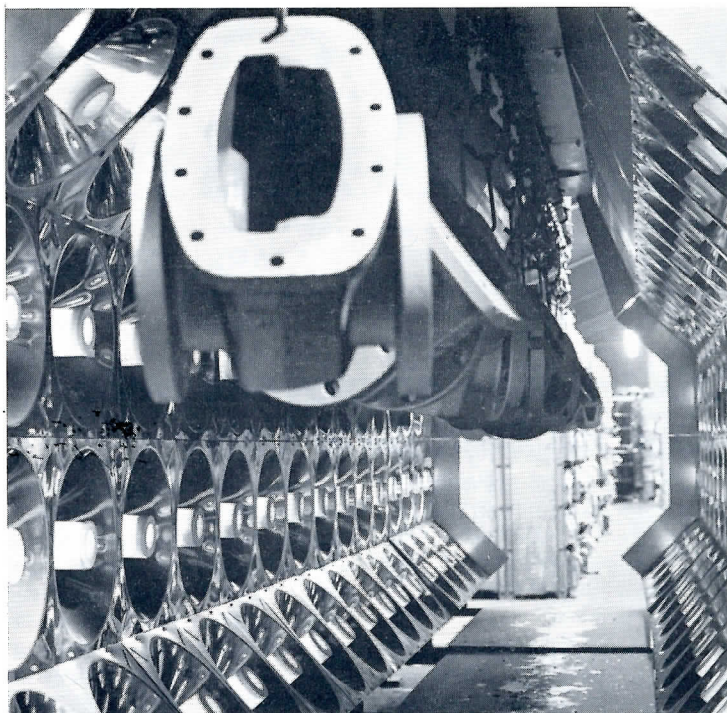




Grinders remove fins, gates and other rough spots from castings. Knowing what and how much to grind away is critical job. How well the final product looks depends largely on how well grinders do their work.



Multiple-spindle drill press bores bolt holes in body and bonnet sections of the valves. Machinists can load or unload one piece on an index table while machine is drilling a second piece with watch-like precision.



Heat's on as Mueller HP® epoxy coating is cured in a 20 foot long infra-red oven. Coating protects inside of valves against corrosion. Uniform baking assures smooth, tough finish approved for drinking water — also ideal for sewage handling.

Chattanooga Continued

the molten metal helps maintain the "Mueller Margin."

The metal used to pour the molds comes from a bank of modern electric induction furnaces. Employees responsible for this operation are an important factor in determining good casting production because they control the pour temperature and the quality of the iron used to make the valves.

After the molds are broken open, sand sticking to the castings is removed by blasting with steel shot resembling BBs. Valve bonnets are tumble-blasted in a unit resembling a giant clothes dryer, while valve bodies are blasted as they pass through a cabinet.

Castings become valves

Machinists can now practice their precise art — machining, smoothing the flange faces, drilling, tapping and performing other operations to make each

part fit to another and make the RSGV a unit of great accuracy.

Next, the valves are sprayed with protective coatings. The interiors with epoxy and the exteriors with asphalt varnish. The spray painters determine how good the final product will look to the customer, who is the ultimate inspector.

The machined parts go together quickly in the hands of experienced assemblers. They carefully tighten bolts and screws to make certain all joints are leaktight and all parts work properly. Each valve then is hydrostatically tested at 400 PSI.

Quality is step-by-step

Assurance of the RSGV's quality and performance however, starts right at the beginning as trained quality control people critically evaluate each step from core-making to final inspection.

The people who take the last look at the finished valve before it leaves the plant are the shipping department employees.

They give it a final check to see that a good product is properly packed, loaded on the best carrier, and on its way to the correct destination to show that we care . . . and are all firmly a part of the "Mueller Margin." □

More photos Page 3

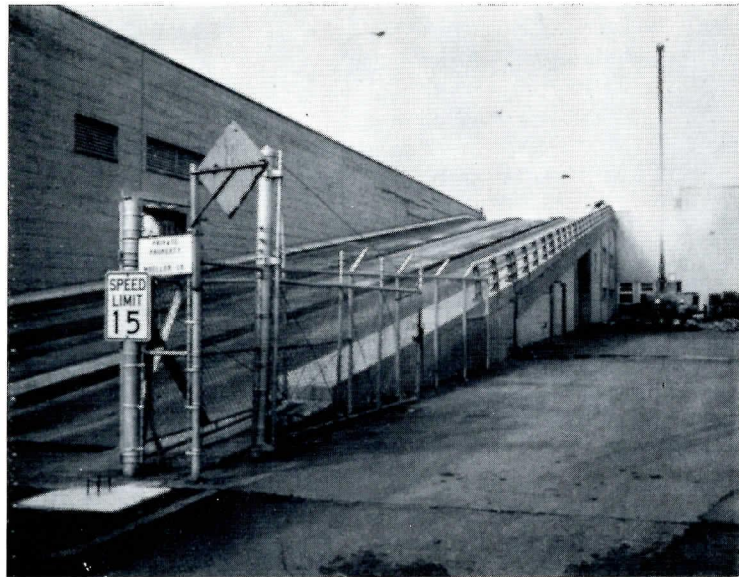
Photos and data for the story on the Resilient Seat Gate Valve were provided by Jack N. Malone, manager of Employee Relations at the Chattanooga plant with the help of the Industrial Engineering Department. Photos were taken by Hinkle Studios, Chattanooga.

Strictly Personal Decatur

Don Bathe

NEWS ABOUT MUELLER CO. EMPLOYEES AND THEIR FAMILIES

ROOF PARKING RAMP



Roof parking ramp is taking on a new look as it is going to be enclosed to prevent

snow and ice from forming on the ramp.

SUGGESTIONS PAY OFF



Michael L. Taylor, 2nd shift electrician, Plant 4, receives a suggestion award check in the amount of \$979.43 from plant Manager, Gene Hullinger, with Chuck Schroeder, plant 4 maintenance foreman and George Lebo, production superintendent looking on.

Michael's suggestion was regarding the train in Dept. 60. The suggestion was to place angle iron under the present angle irons to eliminate the horizontal wheel from dropping below the present angle iron.



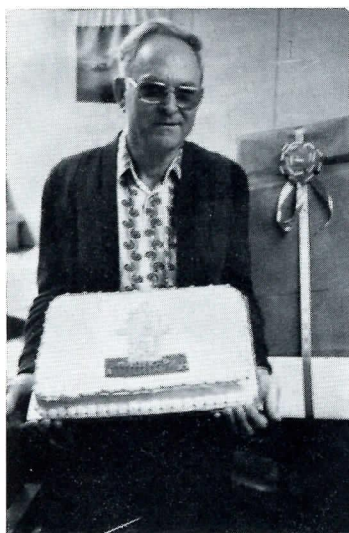
Donald McQuality, checker in the shipping department receives a suggestion award check in the amount of \$471.87 from plant manager, Gene Hullinger, as Walter Taylor, packaging engineer,

and George Lebo, production superintendent, look on. Don made the suggestion to return empty pallets from Sparks by our leased truck instead of not sending them back at all.

RETIREMENTS



Wilbur W. Shasteen gets a farewell hand shake from foreman Melvin Rubin of the model shop.



John Whitehurst, received a cake with a fire hydrant decoration to celebrate his retirement.

SERVICE AWARDS

SARNIA

30 years: Charles Guthrie
John Bazeley
40 years: Dick Dennis

DECATUR

10 years: Dwaine C. Mescher
Jerry West
Freddie T. Young
Don B. Cross
Charles Morey
Jack Phillips
Robert W. Taylor
20 years: Stan Metz
Samuel F. Parker
Walter H. Jenkins
Leroy Lawson
John J. Zingale

KARATE WINNER



Cubby Thompson, secretary in the sales department, and a beginning white belt Karate student entered a Karate contest at Pekin, Illinois recently and came home with the 1st place trophy in the women's light weight division. The style Cubby uses is "TAE-KWON-DO" and is under the direction of Yant Woon Choi, instructor from Korea now living in Decatur.

CPR COURSE

Dick Tish, foreman department 20, and his wife recently completed an Illinois Heart Association Cardiopulmonary Resuscitation (CPR) 6 hour course offered by the Ladies Auxiliary at Decatur Memorial Hospital.

CPR is a life saving technique used to aid in saving someone's life suffering from a heart attack or some other complications.

Dick is the first supervisor at Plant 4 to be trained in CPR. He encourages more employees to take the CPR course, as it gives you a great feeling to know that you could assist in saving someone's life at home or at work.

FAMILIAR FACES IN NEW PLACES

Billie J. Brooks, formerly checker in shipping department has been promoted to foreman of Plant 4 service.

Walter Morganthaler, formerly specialty production control manager has been promoted to the position of manager of production and inventory control.

LETTER OF THANKS

Donald Wilson, senior draftsman, Plant Engineering Department and on behalf of the Plant Engineering Dept., received a letter of thanks from a student at the Decatur Area Vocational Center as follows:

Dear Mr. Wilson:

Thank you for allowing me the time to interrupt your regular schedule and talk to you and your colleagues about your jobs and the areas around them.

You made me realize the importance of a college education if you intend to move ahead quickly.

I hope to return someday and bring some of my work and have you to look over and tell me what you think of them.

Thanks again,
David Sobottka

LET IT RAIN



Joe Caulk, driving the interfactory high lift truck, was getting wet from the recent heavy rains as he crossed over the outside bridge over Monroe Street. Some of his friends, feeling sorry for Joe, fixed up a temporary umbrella and mounted it on the high lift.

RETIREMENTS

DECATUR

Willie L. Tucker, furnace operator and metal skimmer, 27 years, 4 months and 12 days, August 12, 1977 (80 plan).

John W. Whitehurst, foreman-service department, 15 years, 5 months, 26 days, October 8, 1977.

Wilbur W. Shasteen, experimental mechanic "A", 29 years, 6 months and 12 days.

SARNIA

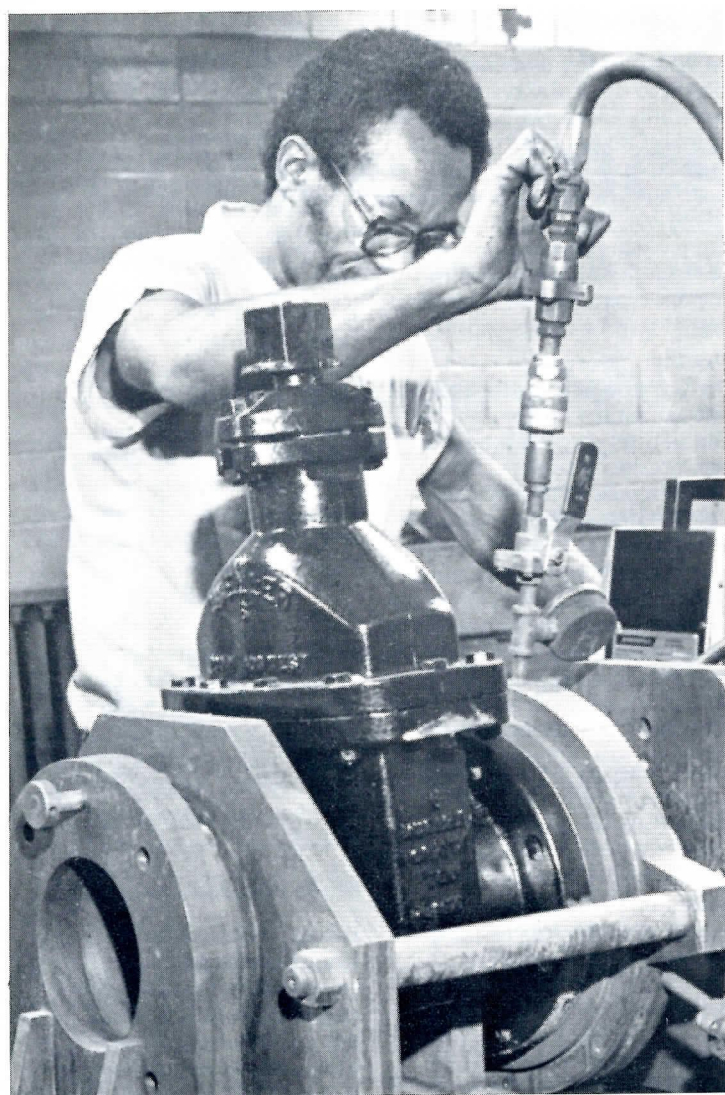
Dick Dennis, specialty assembler, 40 years, 2 months, August 1, 1977.

Bruce Preece, tool maker, 34 years, 8 months, September 21, 1977.

**Perk up
your future.**



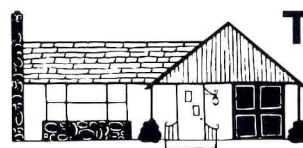
**Take stock in America.
Buy U.S. Savings Bonds.**



Checking quality of his handiwork, assembler tests finished valve with 200 pounds-per-square inch water pressure to assure zero leakage at seat, and 400 pounds per square inch to test casting for leakage.



Are angles on wedge disc accurate? Dual-gauge instrument tells the inspector what he wants to know. Testing and inspection are conducted throughout manufacturing process to assure the high quality level that has always been a Mueller trademark.



The Housing Scene

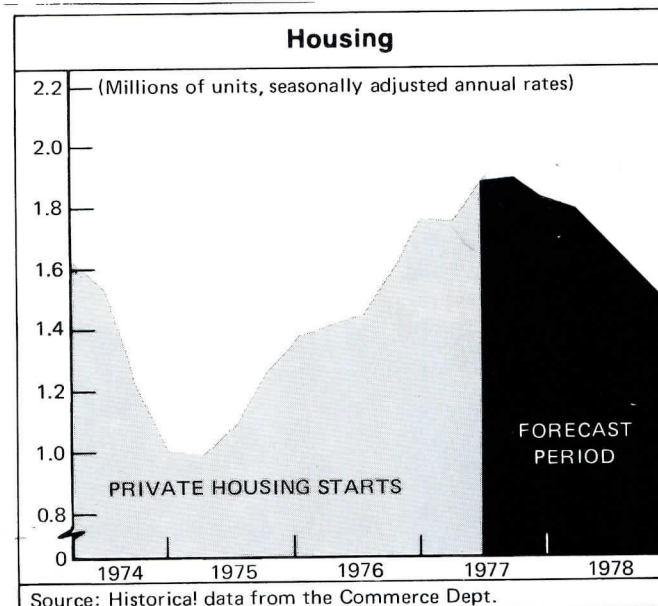
If you should need it... where's your birth certificate?

Can you lay your hands on important documents when you want them? Birth certificates? Deeds? Insurance policies? Stock certificates? You're certain to need them sometime, so an efficient record-keeping system is essential. Here, according to Continental Bank's newsletter, *The Family Banker*, are the kind of documents to keep, and suggested places to store them:

Stock certificates, real estate deeds, leases and other legal papers, birth certificates, marriage documents and military papers, insurance policy numbers and company names, and original signed wills should be kept in a safe deposit box.

Unpaid bills and paid bill receipts, bank statements and cancelled checks, tax returns, a list of credit cards and numbers, insurance policies, unsigned copies of wills, appliance warranties and operating instructions, health records, and an inventory of safe deposit items should be kept in a more accessible spot, perhaps a home file drawer.

You might keep older items such as the following in a dead-storage chest: superseded legal papers, old tax returns and support documentation, other tax records. A final note: make sure your record-keeping and filing system is one that both husband and wife are familiar with. □



Housing construction, according to Industry Week magazine, may have reached its peak during the third quarter of 1977. From a rate of 1.889 million new starts in the second quarter, starts in the third quarter were expected to climb to 1.9 million. Then

growth is expected to diminish gradually through 1978, but will still continue at a healthy pace.

Increases and decreases in the number of homes and other buildings started has an effect on the sales of Mueller water and gas products. □

Editorial

The Carter Energy Plan – Disaster Brewing in Congress?

The energy bill recently passed by the U.S. House of Representatives and being considered by the Senate will have an enormous impact on all Americans both in industry and at home. It is an energy bill that may not necessarily benefit the energy problem. Yet it asks for large increases in taxes that will ultimately come from our pockets.

Energy supply problem

There is increasing demand for oil and gas in the U.S. in spite of our conservation efforts. The law of supply-and-demand means that production must also increase to keep up with this demand. Our supply problem stems from the fact that U.S. oil production is *not* keeping up with the demand.

Instead, to meet demand, the U.S. now imports half of the oil we use. This importing also involves stockpiling of oil in case of future embargo. Massive imports won't solve the supply problem satisfactorily.

It only drives up deficit spending into the billions and invites outside influence over our national affairs.

To effectively solve the energy supply problem, the U.S. needs to step up domestic oil and gas production. If production is not increased, the U.S. will be faced with a long-range oil and gas shortage.

To help solve the energy problem, it is urgent that Americans take action. We must continue to conserve on energy usage. But

most importantly, we must encourage domestic energy production until alternative energy sources are developed.

Carter's energy plan

The Carter administration has come up with a complicated plan (580 pages long) called H.R. 8444. It is described as an energy bill but resembles more a huge tax bill which involves one of the largest tax increases in U.S. history. According to *Congressional Quarterly* (Sept. 10), "Roughly one-half of the Carter energy package consists of tax proposals." An estimated \$145 billion in taxes will be called for between now and 1985. And you will help pay this bill.

These taxes appear to be placed on business but taxes on business profits become part of the costs of products and services. These costs are passed on as price increases for the products and services you buy. So the taxes are not necessarily just on the business, but ultimately on the American consumer — you.

The Carter administration might use these new taxes to reduce the national spending deficit and/or increase welfare programs. A neat political move in the name of solving energy problems. But no matter how worthy the announced use of the money may sound, remember where the tax money came from in the first place.

More taxes

The Carter plan calls for a

"crude oil equalization tax" to be added to the price of domestic crude oil. Total revenues from this added tax could be as high as \$88 billion. This could mean that Americans may be paying more than \$1 per gallon of gas by 1980. The new tax money will probably not be used to dig more oil wells, as none of the anticipated revenue has been committed to this purpose.

Another new tax proposed by the Carter plan would be an excise tax on industries using oil and natural gas. Revenue from this tax could be more than \$4 billion a year between 1980 and 1985. Some industries would be compelled, by increased costs in fuel, to shift from oil or gas to coal. But if the Environmental Protection Agency vetoes a shift to coal, the companies will still be required to pay this tax.

We can't conserve enough

There is no doubt that energy will cost more in the future. Cheap fuel is a part of nostalgia. And these low prices, while helping the family budget in past years, have also compounded the supply problem by encouraging wasteful usage. Low prices will not pay the increased costs for finding new sources of energy. But the supply-and-demand device for setting prices and increasing supplies has been ignored by this bill.

Conservation alone is not the answer, but it can help. And higher prices based on supply-and-demand will force more conservation. Even so, to keep our economy growing at the desired rate to meet the needs of the people, we must rely on massive imports until we discover more energy sources through oil and gas exploration, coal gasification or other means. None of these is economically feasible in a price controlled market.

Other objectionable features

The Carter plan extends price controls of natural gas, petroleum products, and crude oil. It decreases revenues for gas producers by regulating intrastate prices for the first time, according to *Congressional Quarterly* (Aug. 6). It does nothing to encourage nuclear power expansion. It does nothing about the

present environmental laws that unnecessarily restrict the mining and burning of coal.

Alternative plan

First, natural gas, petroleum products, and crude oil sold in the U.S. should be allowed to reach free market levels. Unrealistic federal regulations should be removed. This will allow the demand for energy to encourage the increase of domestic production.

Then, environmental and energy leaders should get together to permit more mining of coal for burning as fuel or for gasification. The technology exists to do this. It's the economic problems that keep it from being done.

Environmentalists should be heard and the environment should be protected, but many insist on over protection. These impractical requirements should be set aside if we are to heat, light and run our plants and homes.

What you can do

It's up to each of us to learn the facts about the energy problem and the Carter proposal. You can get more information about this issue from your local library. Ask your librarian to help you find articles about the energy bill in the weekly news magazines, *Congressional Quarterly* and other sources. Read your newspaper. Listen to the news on the radio and T.V.

And most importantly, let your opinion be known. Write to your Congressman and Senator and tell them how you feel. This issue involves you and your tax dollar.

**Good quality
goes a long way
Poor quality
comes back**

**You are the
Mueller Margin**

It takes a lot of doing things right to build a reputation for quality. But it takes very little of doing things wrong to destroy it. One bad piece. One late shipment. One order filled wrong. These are the things customers never forget. This poster on display at all Mueller Co. plants is a reminder that doing things right has carried Mueller Co. a long way in a tough business. Doing things wrong comes home to plague all of us.

MUELLER® CO.

DECATUR, ILL. 62525

Factories at Decatur, Ill., Chattanooga, Tenn., Albertville, Ala.
MUELLER LIMITED, Sarnia, Ont., St. Jerome Que., Canada.
Sales office and Western Service Center, Sparks, Nevada.

serving the water and gas industries since 1857