New ventures in search for more energy

In a San Francisco speech, Shell Oil president Harry Bridges said, "The answer to short energy supply is neither price control, which further stimulates demand, nor mandatory allocations, but increased investments. Only increased investment will moderate the short supply situation in this country. That is, increased investment in new refining capacity, in exploring for and developing new oil and gas reserves in the United States and around the world, and in development of unconventional hydrocarbon sources--tar sands, coal and shale."

Accordingly, Shell has announced new ventures both here and abroad which, in a variety of ways, are designed to meet future energy requirements.

World-wide search

Bridges said that in Indonesia Shell Oil has an agreement to earn one-half of Superior Oil Company's 50 percent interest in a 30-million acre concession in the Arafura Sea and onshore West Irian. Seismic work began in September and drilling will start next year.

In New Zealand, Shell Oil is in the process of acquiring a one-sixteenth interest in the Maui gas field and a one-eighth interest in an exploration license covering 7 million acres. Both the gas field and the license area are in the offshore Taranaki Basin. The Maui gas field, discovered in 1969, is estimated to contain about 5 trillion cubic feet of gas and 200 million barrels of crude and condensate.

In a proposed project to extract hydrocarbons from tar sands, Shell Oil is entering a joint venture with Shell Canada Limited to produce 100,000 barrels a day from the Athabasca tar sands.

Solar energy

With an interest in helping develop practical uses of solar energy, Shell has invested about $3 million in Solar Energy Systems Inc. (SES) of Delaware, becoming a minority stockholder. This will provide initial financing for operating capital and research and development for SES.

Dr. Karl Boer, director of the University of Delaware's Institute of Energy Conservation and chief executive officer of SES said his company initially will manufacture a low cost, long life solar energy cell, but eventually plans to develop a solar energy system that can supply supplemental electric power, heating and cooling for residences, businesses and industries.

Such a system would involve the use of roof-top solar energy panels and other components which would convert sunlight into electricity and make use of the sun's heat for both heating and cooling. In most areas of the United States, this system would be supplemental to existing public utilities and could help shave the power drain during peak use times.

Solar energy has been recognized as an ideal alternative source of energy to the fossil fuels because it is clean, quiet and inexhaustible in supply. Solar cells have been used to convert sunlight into electricity for power in space satellites. Their relatively low efficiency and comparatively high cost have been drawbacks to widespread usage.

Solar Energy Systems believes these technical problems can be overcome, however, and solar cells can be mass produced so they are competitive economically. Expanded use of solar energy could make a significant long-range contribution to our nation's energy resources.

Coal lease

Last year Shell acquired a coal lease on the Crow Indian reservation in southeastern Montana. This is Shell's first and only coal lease. The land contains about one billion tons of sub-bituminous coal economically recoverable by surface mining techniques.

The sulfur content of this coal is among the lowest in the United States. As air pollution standards tighten, demand for this coal increases. Shell plans to bid on contracts with utility companies next year, but mining operations would not begin for several years.

In mining the coal, Shell will take every step in protecting the environment. The company is currently supporting research efforts by Montana State University to study the ecology, hydrology, and methods of reclamation and revegetation for the area. An archeological study was conducted by the University of Montana to insure the preservation of any Indian burial grounds, historic sites, or artifacts which might be in the area to be mined.

Aromatics shutdowns accomplish much

SHELL Review Wood River, Illinois

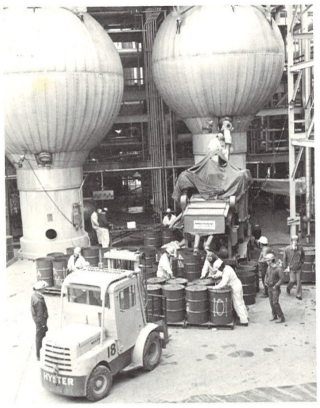
VOL. 36 NO. 10 WOOD RIVER REFINERY NOVEMBER, 1973

The shutting down of an operating unit can be either something that is scheduled or something unexpected. Scheduled shutdowns are more desirable. For one thing, the entire effort can be planned in advance, with parts, equipment, and supplies ready at the site. And, sufficient manpower can be made available to complete the work.

With a properly prepared and planned shutdown, more maintenance can be done in less downtime than when a unit must be shut down without prior notice.

The maintenance shutdowns at the Hydrocracker (HCU) and Catalytic Reformer No. 1 (CR-1) in Hydroprocessing were scheduled shutdowns. The idea was to refurbish these two massive units, which together play an important part in the production of high octane motor gasolines, so they may continue their important functions without any unwanted surprises.

But the requirements of two concurrent shutdowns the size of HCU and CR-1 are anything but simple. HCU started down October 20 and CR-1 October 27, with estimates for scheduled maintenance to be completed on each the latter part of November or early December.



CATALYST CHANGE AT CR-1. Platinum catalyst is screened by a special machine and packed into barrels according to pellet size.

A great deal of pre-planning was made, including the purchase or fabrication of replacement parts and supplies. Manpower was scheduled to make certain the many different dismantling, inspection and repair jobs could be done in the time allotted.

Denzil Dyer, Engineering Field's shutdown coordinator for these projects, said, "A shutdown of this magnitude requires the skill and cooperation of many people beginning with Economics and Scheduling who have to plan the product balances, to Operations and Engineering who agree on and plan the work to be done, to the operators of an efficient and well coordinated bringing down of the units, to the maintenance personnel who tackle the repairs to be done, to the inspectors who make sure all work meets standards, to Safety who helps us all monitor the safe execution of the work. And there are many more . . . too many to mention . . . who help make a successful shutdown. I think we have had successful shutdowns here at HCU and CR-1 because of this teamwork."

Literally every craft in the plant has been involved in these shutdowns, and the work at times went on 24 hours a day. On peak days over 200 craftsmen were working on these shutdowns.

E. D. "Ham" Hamilton, maintenance coordinator for Aromatics West, acted as operations shutdown coordinator for the HCU while Manuel Lopez, operations foreman, was shutdown coordinator for the CR-1.

Ham said, "The most challenging aspect of the HCU shutdown was the re-tubing of three giant vertical exchangers. Because of their size and construction we had to re-tube them in place rather than hauling them over to the shops as is usually done.

"This made the job somewhat more challenging. We had never done this sort of in-place re-tubing at Wood River before. Engineering people went to Houston and Norco to learn more about the procedure. The skill of our Wood River people really showed up when they took on this one. They did a fine job."

According to Manuel, "A variety of different jobs was done at CR-1, but two things stand out as being particularly of note.

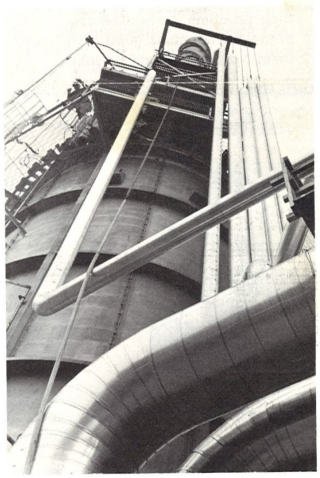
"First, we changed the platinum catalyst in three of the five reactors: a special catalyst screening machine was rented which enabled us to sort the platinum pellets into the various sizes we use. The 'spent' catalyst is sent to a company which rejuvenates it for future use. We have to account for all platinum catalyst coming in and going out of our reformers. It is carefully weighed and packaged in barrels according to pellet size. I understand we handled about $700,000 worth of platinum in this exchange."

Manuel also indicated that during this shutdown a new furnace (H-7) was connected to CR-1. Construction of the furnace was completed last April (as covered in the March issue of the *Review*) but couldn't be tied into CR-1 while the unit was running. This furnace will help CR-1 produce gasolines more efficiently.

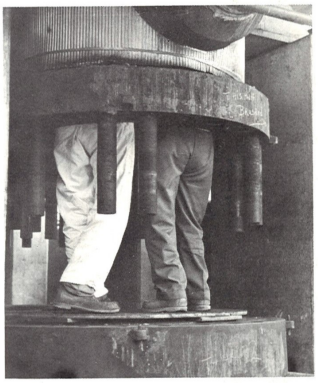
Manuel said, "A lot of intricate piping had to be fabricated, welded together, inspected, and insulated for this hook-up, and more than once we felt like we were 'threading a needle.' I understand John Allison, Jerry Yarnik and Larry Leuck of Ray Thrasher's drafting group played a big role in the layout of this large diameter piping to assure our being able to thread the needle in the first place."

Engineering Projects was assigned the installation work and the job was planned many months before the shutdown began. During the actual installation of the large diameter piping the meticulous designing and planning paid off.

Denzil Dyer spoke for all concerned when he said of the shutdowns, "The prime concern is to plan and execute the work in such a manner so no one is exposed to danger while at the same time the job is completed in an expeditious and thorough manner."



GLEAMING SILVER PIPES. H-7 furnace has been waiting since last spring to be tied into the CR-1 system. A good deal of planning and precise work went into this complex job.



EVER TRY USING SCOPE? Two unidentified boilermakers roll tubes in one of the vertical exchangers at the HCU.

Sports and shorts

Horse sense

Carolyn Bruss, 12 year old daughter of Doug Bruss, manager of the Refinery Lab, has placed high in three recent horse shows she has entered with her pony, "Tom". Her record: Horse Palace, Weldon Springs, Missouri, 1st place; Len-Mar Horse Show, Florissant, Missouri, 2nd place; Paddock Stables Horse Show, Florissant, Missouri, 1st place. Judging is based on horsemanship, grooming and the manner in which the horse is shown.

Refinery golf champions

Tech defeated Inspection in an 18 hole playoff to become this year's refinery team champions. In individual competition, the winners and runners-up in the SRA tournament were:

	Winner	Runner-up
Championship Flight	Tony Allaria	Tom Buller
A-Flight	Terry Abernathy	John Tomfohrde
B-Flight	Bill Gibson	John Ventress
C-Flight	Ray Penrod	Bud Molloy
D-Flight	Bob Woods	Joe Clark

Football champs

The Pipefitters didn't exactly do it "untouched" but they did show their heels to the rest of the league in winning another touch football championship.

Awards Banquet

The annual SRA Awards Banquet will be held Tuesday, December 4, at the Lewis and Clark restaurant in East Alton. Speaker for the affair will be Ken Daust, promotions director for the St. Louis baseball Cardinals. Jackets and trophies have been secured and will be presented to winners at the banquet.

Christmas party

The annual Christmas party for employees, retirees and their families will be held Tuesday, December 18, at the East Alton-Wood River Community High School in Wood River. Activities will begin at 6:30 p.m. Entertainment and goodies will be provided and Santa will make a special visit.

Gifts on display

The Junior Achievement companies sponsored by the refinery will be displaying their products in the cafeteria for anyone desiring to place orders. Many of the products will make good Christmas decorations for your home and any one of them would be a good present.

ANNIVERSARIES

Lawrence McGrew
Engineering Field
35 years

Herb Neemann
Light Oil Processing
35 years

Leland Garner
Engineering Field
30 years

Red Gill
Engineering Field
30 years

Velmer Schuette
Dispatching
30 years

Ray Thrasher
Engineering Office
30 years

Ed Witis
Dispatching
30 years

John Hodapp
Light Oil Processing
25 years

Wag Wagner
Safety
25 years

TEAMWORK. Junior Achievement Achievers and their Shell advisors followed a tour of the refinery with a spirited touch football game and picnic.

JA students find business can be profitable *and* fun

Local high school students under the guidance of refinery employees have begun another year of learning first hand about the business world through the Junior Achievement program. The refinery is sponsoring six mini-businesses, three at the Wood River Center and three in Alton. Each business consists of about a dozen student Achievers who are its owner/employees.

The business year began October 11 with the formation of companies and will run until next spring. Each company elects officers, chooses a product(s) to make and prepares production and sales plans. Throughout the year the students learn that in order to stay in business and make profits for themselves they must use good business sense and pull together for efficient and enthusiastic operation.

Saturday, October 20, the refinery hosted its sponsored Achievers to a tour of the refinery followed by a picnic at Kendall Hill.

Dick Keeler, process engineer in Hydroprocessing, greeted the students with an explanation in layman's language of the basic operations of petroleum refining and explained in graphic terms the various processes used at Wood River to turn crude into finished products.

Keeler and Clo Laird, process engineer in Light Oil Processing, then conducted a bus tour of the refinery with a stop at the Distilling-2 control room.

The day was capped off with a picnic and spirited football and softball games at Kendall Hill. Sam Hutchinson, Shell's center coordinator in Alton, and Frank DeLapp, center coordinator in Wood River, agreed when they said, "The Achievers and advisors in attendance all seemed to have a good time and got to know each other much better. It is through such activities everyone develops a better sense of teamwork, and teamwork is one of the most important aspects of a successful company--be it in Junior Achievement or elsewhere. We look forward to a very successful year."

AND ON YOUR LEFT . . . Clo Laird points out various process units during a bus tour of the refinery for JA students.

IN REMEMBRANCE

EUGENE VICTOR KEPNER, October 22. Mr. Kepner was a senior lab technician in Research and had been with Shell since 1952.

J. T. FITZGERALD, October 26. Mr. Fitzgerald was an operator 1st in Lube before retiring in 1947.

CARL E. FOSTER, November 1. Mr. Foster was an Engineering Field supervisor before retiring in 1950.

JOHN MARTIN, November 3. Mr. Martin was a gateman before retiring in 1963.

HARRY LADEAN NEWNOM, November 3. Mr. Newnom was a pipefitter 1st before retiring in 1968.

CHESLEY EWING WOOLDRIDGE, November 4. Mr. Wooldridge was an operator 1st in Gas-Thermal Cracking before retiring in 1966.

CLARENCE JOSEPH WILSON, November 6. Mr. Wilson was a zone supervisor before retiring in 1961.

LEE J. BRACKEN, November 11. Mr. Bracken was a shop machinist 1st before retiring in 1957.

CARL COLBORN, November 12. Mr. Colborn was a foreman in Gas-Thermal Cracking before retiring in 1970.

Bright comet

What may be the most spectacular Christmastime stellar sight since the Star of Bethlehem could make stargazers of us all this December and January.

It is known as Comet Kohoutek and it is now hurdling through space toward the vicinity of Earth. At its closest point it will still be 75 million miles away, but its size and makeup are such that it will be prominently displayed nightly in the western skies at dusk for almost a month.

Scientists say Kohoutek will be even more spectacular than Haley's Comet which last appeared in 1910.

Kohoutek will first be visible to the naked eye in December, reaching its peak brilliance sometime between Christmas and New Year's when it can be seen even during the day.

To catch a glimpse of Comet Kohoutek, watch the western horizon at dusk. Depending upon the weather you should have many chances to see this spectacular phenomenon. But if you miss it this time, don't expect to get another chance. Experts estimate that if Kohoutek visits our solar system again it probably won't be for another 10,000 years or more.

This engineer wears daisies

"Who's that long-haired hippy fella over there in the coveralls taking readings?"

"That's no fella, that's Clo Laird; she's a process engineer."

It has happened before (coveralls really aren't very flattering) and it will happen again, but Clo Laird, process engineer in Light Oil Processing, doesn't mind if her fellow employees don't recognize her in coveralls as long as they do recognize her for what she is -- a chemical engineer.

For those of you who haven't had the pleasure of meeting Clo Laird, be assured that she is very much a woman, very gregarious and very outspoken, ("I'm from southern Mississippi but I don't fit the typical southern belle image. My mother, who is a delightfully genteel southern lady, sometimes just *dies* at the things I say.")

She Means It

Clo received her B.S. degree in chemical engineering from Mississippi State in 1967. "That was pre-women's lib," Clo points out. "When some people realize that, they say, 'gee, you really mean it, being a chemical engineer'. Sure I mean it!"

She started her permanent employment with Shell shortly after graduation, and was assigned to the Houston Data Service Center as a technical programmer. Clo said, "We were setting up a system of computer programs applicable to technical problems. Engineers or chemists wanting to solve design or analysis problems could feed their data into the computers and save a great deal of hand calculation. They used to call us from all over the country. Now the system has a series of remote terminals so you can 'talk' directly to the computers in Houston. We have a terminal here at Wood River."

It was the installation of that terminal that brought Clo to Wood River in 1969. She said, "I was sent here on temporary assignment as a computer consultant to teach the people how to avail themselves of the system through their new terminal. But I also got involved in some local design projects and was permanently assigned here in the Tech Department later that year."

Process Engineer

After spending three years in Tech, Clo was transferred to Light Oil Processing in November, 1972. Of her move, Clo said, "Tech was nice, but I was itching to get out in the plant where the real action is. And now that I'm out here, I really love it. It allows me to see on a day-to-day basis the fruits of my engineering skills. Also, I enjoy the more direct working relationships with all refinery employees.

"At first, I guess some people were concerned about having a girl climbing around the columns, etc., but there haven't been any problems. I think most everyone has accepted me as what I am: an engineer, who just happens to be female. I don't sense any uneasiness by anyone because I'm around. I know that *I* feel perfectly comfortable. There are also female operator types in the plant and I understand things are working out fine with them also."

Clo is spending several weeks on midwest college campuses this fall as a technical recruiter. "I'm looking forward to it," she said. "It will be a challenge; representing Shell's image to the students on one hand, and having a direct hand in the company's future on the other. Who knows, I may find a future vice-president or something."

Her recruiting trip won't be the first time Clo has represented Shell on campus, though. In addition to having served as a tour guide for groups coming to the refinery, she has also gone to local elementary and junior high schools to explain petroleum refining.

Public Speaker

She has also written a speech which she has given at colleges and businesswomen's seminars. "I don't pull any punches in the speech," said Clo. "Although the situation for women in business has improved greatly, it still isn't perfect. Nowadays a girl with an engineering degree can step directly into a front line position, but not too many years ago about all she could find was some behind the scenes technical job.

"Even so, you still can usually find someone around with built in prejudices against most anybody or anything. And that works in reverse, too. I know women who'd be a flop in a job like mine because they'd always be trying to prove something or put down the 'skeptics' rather than getting on with the job at hand."

In addition to getting on with the job at hand at Wood River, Clo is involved in many outside activities. In one of these, the Alton/Wood River chapter of AIChE (American Institute of Chemical Engineers), she was recently elected to chair the group--all men, except Clo--for the coming year. Since then, two more females have joined the group.

But like a lot of things in which she is involved, Clo Laird led the breakthrough.

PROCESS ENGINEER. Clo Laird of Light Oil Processing.

Refinery man pedals away on vacation

Want to know a sure fire way to save gasoline on your next vacation trip? Ride a bike.

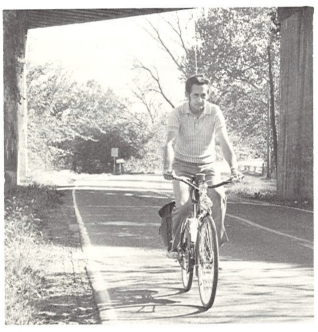
Charlie Schafer, senior office assistant in Utilities, did just that last month when he rode from his home in Granite City to Pleasant Plains, Illinois, near Springfield, to visit friends. The round trip was 240 miles and he spent about 2½ days on the road.

Mounting his Japanese 10-speed at 7 a.m. on a Tuesday, Charlie headed up highway 3 to Hartford, then over to 111 and north past the refinery, and he was on his way.

"I had some flat tire troubles early the first day," said Charlie, "and that, coupled with a stiff breeze in my face, held down my progress."

Charlie experienced his own personal "energy shortage" after 70 miles, and decided to find a room in Carlinville. "There are only two motels in Carlinville," Charlie said. "One was full and the other had only one room left . . . and it was already reserved.

"I was exhausted after fighting that 20 m.p.h. head wind all day and asked the lady if I could just sit in the motel office and rest for awhile." As he recalled those moments, Charlie sunk lower in his chair, seemingly tired again just from the thought.



ON THE ROAD: Charlie Schafer, formerly of Engineering field, now in Utilities, is an avid bicycle tripper.

He continued, "After about half an nour the lady decided she would give me the room since I was already there and the other guy wasn't. I guess she figured I needed it worse than he did."

Rejuvenated from a night's rest, Charlie was back in the saddle early Wednesday morning. The wind wasn't as bad as the day before, but this time there was "frost on the pumpkin." He said, "Until the sun got higher in the sky, the temperature hovered in the thirties. My eyes watered, and I had to stop several times to warm up my hands. That was the worst part; my hands got plumb numb."

By early afternoon Charlie reached his destination -- the home of Mr. and Mrs. Kelsey Cave in Pleasant Plains. The Cave's are old friends and Charlie had visited them many times in the past, but this was the first time he had ever pulled into their driveway on two wheels.

"They knew I was coming up by bicycle so they weren't surprised, but I guess they were a little concerned for my safety, what with all the other traffic on the roads," said Charlie. "Actually I picked roads with wide shoulders wherever I could along the route, and stayed away from the highly traveled roads like 66.

"Route 3 west of the refinery is a good example. It has wide, paved shoulders so you can get out of the way of traffic without slowing down. It has one tough spot, though. That's the bridge over the canal near Lewis and Clark State Park. There's no shoulder on the bridge. You wait on one side until there's a break in the traffic and then ride like the devil to the other side."

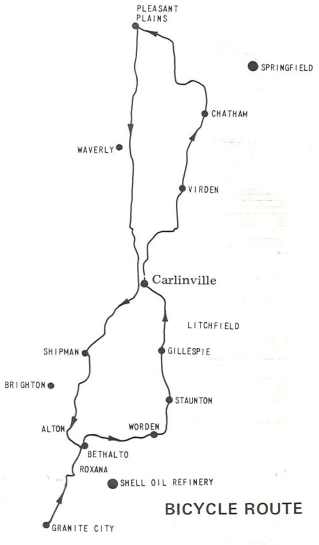
Charlie says he had only one close call the entire trip. That was when an on-coming truck forced him off the road. "After he pulled out to pass he saw me in 'his' lane. He blinked his lights and kept on coming. I guess he figured *his* right-of-way took precedence over my right-of-way. I didn't argue, but took to the ditch. I went one way and the bike went the other. Luckily, neither of us was injured."

After an overnight stay in Pleasant Plains ("That Mrs. Cave is the best darn country cook alive."), Charlie began his return trip. He took a different route this time: back roads -- paved, but definitely more rustic and deserted.

"What a difference the wind can make," Charlie said. "I made it home (108 miles) in one day with the wind at my back, while it had taken almost two going up." Since the roads on the return trip weren't well marked, Charlie navigated by the sun until he got to Carlinville. Charlie said, "I remembered Carlinville from a couple of days before, but this time I arrived there before noon and just breezed on through."

Charlie enthusiastically recommends others taking a long bike trip such as he took, "You can't beat it. The countryside is so much prettier when you have the time and the peace and quiet to appreciate it. It's kinda like taking a sail boat rather than a speed boat, or a glider instead of a jet."

But he offers words of caution, too: "It's good exercise and for a long trip you'd better be in good bicycling condition . . . like a year of training. Your knees get the worst beating. Can you imagine how many knee-pumps there are in 240 miles?"



BICYCLE ROUTE

CLASSIFIED ADS

Movie Equipment. GAF super-8 camera and GAF dual automatic projector. One year old. Used only once. $125. Orlin Johnson. 618-635-2689.

100 Lb. weight set with storage rack on wheels. $12. Dale Williams. 618-465-5203.

Electric range. Enterprise 30 inch. Gourmet series. Coppertone. $140. George Evans. 618-465-5976.

Assorted Items. Coppertone Magic Chef gas stove with double oven. Appaloosa riding mare with bridle and saddle. Slot car racing set. Pingpong table. Electric sidewalk edger. Two snow tires: G78x15 and 8.55x14. H. Kuhlman, 618-888-2427

Two snow tires on wheels. 7.75x14. $15 for both. Robert O'Connell. 314-867-5992.

1973 Kawasaki 350. $700. Frank Essary. 618-259-0599.

1969 Chevy II Nova SS. 396 cu. in. 4 speed. Disc brakes. 30,000 miles. Ben Visser. 618-259-8063.

Star Craft boat. 1966. 16 foot. 80 hp Johnson and trailer. $600. Gary Baker. 618-345-4525.

Mark Twain inboard/outboard. 140 hp. Less than 20 hours use. Susie Campbell. 618-635-5139.

House trailer. 12 x 60 feet. New carpeting throughout. Luther Felton. 618-254-8602.

Glass blocks. 4x8x8. 136 blocks for $100. Blocks are still in boxes. J. L. Rhodes. 618-254-3565.

Preparing for winter is everyone's job

At the refinery

We all prepare in our own ways for winter. In our private lives we prepare our homes and automobiles and put away our light summer togs in deference to sweaters, coats and other heavier clothing.

A refinery prepares for winter too. Throughout the refinery things have been going on since September to get ready for whatever old man winter throws at us. And through the winter months careful monitoring continues to assure the weather doesn't interfere with full operations.

Heat Tracing

Processes in the refinery are involved essentially with substances in liquid or gaseous states. As outside temperatures drop, many of these liquids have a tendency to solidify. This must be avoided or some operations could grind to a halt.

One of the ways to keep liquids moving is by heat tracing and insulation. The refinery keeps its various pipes and tanks at proper temperatures by two main methods: steam tracing and electrical tracing.

Some products such as asphalt require the assistance of heat tracing on lines and tanks throughout the year, whereas other feeds and products need help from artificial heat only when the outside temperatures begin dropping.

About mid-September refinery departments begin testing their heat tracing and insulation and make any necessary repairs. In October the heat tracing is turned on to run continuously through the winter because a sudden cold snap could occur and no one wants to be caught short.

Water

When the average person thinks of something freezing he usually thinks of water. The refinery uses tremendous amounts of water in the various processes and extra care is taken in the winter with regard to this water.

Cooling water towers are modified. On updraft towers, for instance, lower rows of louvers are removed so as icicles form they can be readily knocked off. Icicles can be a safety hazard if a big one would break free and fall on someone. Besides frozen water is not flowing and performing the heat transfer duty it is designed for.

As far as cooling water towers are concerned, the cold winter air makes them more efficient--too efficient in some cases. Plastic is spread over parts of some towers so the outside air doesn't freeze the water. And some of the fans are shut down because fewer fans can do the job of cooling the water in winter. By-pass systems, generally closed in summer, are opened to keep the water from gathering, becoming stagnant, and freezing.

Lines which carry other liquids with traces of water in them must be insulated and monitored--especially at low spots or bends in the piping where water can settle and freeze. A refinery must be alert to "gas line freeze-up" just like you must be with your car.

Charlie Pike, maintenance coordinate in Aromatics East, said, "Water draw piping and valves on storage tanks are examples of this. You don't want to jam up a big tank because you didn't prepare your water draw. Nowadays we pack the immediate area around the valve with sawdust. Back a few years we used another, more organic material, but I guess it's hard to find enough of it anymore--that's progress for you."

Flare lines and steam traps are other examples of places condensates can gather and freeze and therefore must be monitored carefully throughout the cold weather.

Docks

At the river, the loading docks have some unique problems during freezing weather and must prepare for them accordingly. To make sure nothing spills into the Mississippi River, the docks are equipped with a series of drains so whatever substance might end up on deck can be gathered into a self-contained sump.

Whenever a snow or ice storm is imminent, docks personnel put several gallons of anti-freeze in these drains to make certain the sleet or snow doesn't freeze in the drains and make them useless. Since the drains ultimately are released to the sump, this exercise must be done every time a new storm comes along. Non-corrosive de-icer is used in the center drain where the loading arms are drained of residue after each barge load is completed.

When loading caustic to a barge, standby water wash is always available. This is done year around. But in winter the hose must be kept running, lest it freeze and be of no help if or when needed. After each load, this hose must be unhooked and drained.

Utilities

You have read already how the demand for heat via steam or electricity is in prime demand all over the refinery in winter. The Utilities Department is responsible for meeting this demand.

In addition to preparing its own pipes, valves and pumps like the other departments, Utilities must get its steam and electricity producing equipment ready for winter so it may provide for the increased needs of the refinery. Careful and complete maintenance of all systems is made long before winter winds blow to avoid any unforeseen interruptions in Utilities' important services.

The refinery is prepared for winter. Are you?

At home

PREPARING FOR WINTER. One of the things Tony Amburg, operator 1st in Gas, does to prepare his home for winter is install storm windows. You can do this and more.

You don't need to be told there were gasoline shortages last summer, and although none of us wants to admit it, there very well could be shortages in heating fuels this winter.

What can be done? Each household on an individual basis can do its part in conserving fuel by preparing the home for winter and by practicing good sense through the cold weather. No matter what form of heat your home uses the tips below can be helpful. And you might save yourself some money in the process.

- Put up your storm windows and doors, or if your house is equipped with summer/winter windows, make sure they are all switched over.
- Seal off cracks and openings around windows and doors.
- If you have a fireplace make sure the flue is closed when not in use.
- Set your thermostat lower and wear warmer clothing -- it won't hurt. Turn it even lower at night.
- Check your furnace. An "out of tune" furnace or dirty filters reduce efficiency just like on your car.
- Make sure heat registers are unobstructed so their heat can get to all parts of the room.
- Is your home well insulated? An investment in insulation can save heat and money.
- Let the sun help you. Windows facing the south or west in winter should be left unshaded during sunny days.
- Frequent opening of doors to the outside robs your home of its heat. Encourage the family (especially the children) not to run in and out so often.
- If you have a room which is seldom used (like a guest room) close the register and the door.

You can save on other home utilities too, by following some logical practices.

- Open the refrigerator or freezer as little as possible, and follow the manufacturer's recommended thermostat setting.
- Plan oven meals around dishes requiring the same temperature and time, and cook them at the same time
- Turn down the burner when boiling starts.
- Wait until you have a full load to run the dish or clothes washers.
- Repair leaky faucets.
- Take showers . . . they take less water than baths.

RETIREMENTS

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Review Wood River, Illinois

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