

Shell



93:2

DEER PARK MANUFACTURING COMPLEX

1995 start-up goal

\$1 billion upgrade to position Refinery as world-class performer

Complex Manager Steve Reeves announced earlier this year that Shell has moved forward with permitting and engineering for a major capital projects program expected to improve the refinery's global competitiveness, operating efficiency and long-term economic viability.

The Deer Park Refinery Upgrading Program includes several projects: a Residue Reduction Project (a delayed coker unit, hydrotreater and sulfur recovery units); a Clean Fuels Project (MTBE Unit and Alkylation Unit) which has already been permitted and is under construction; and a Cogeneration Project. All together, the capital program requires an investment of approximately \$1 billion and is expected to take three years to complete.

"This program is very significant to the long-term viability of the Deer Park refining venture with Pemex," says Reeves. Reeves added that formation of the Shell/Pemex joint venture is moving along well, with details being finalized.

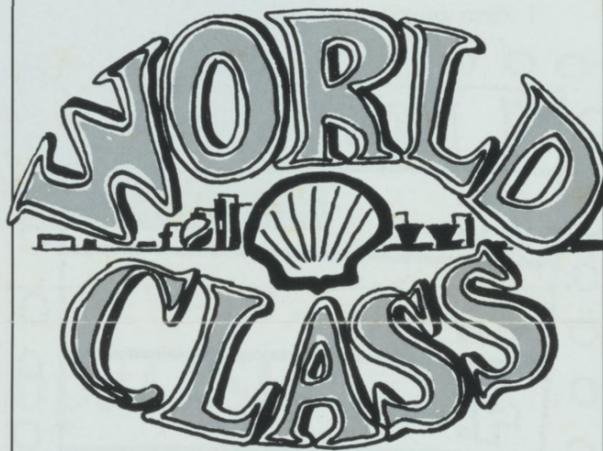
Upgrading program benefits

- DPMC Refining becomes a world-class competitor
- Generates energy savings
- Allows implementation of Shell/Pemex agreement
- Reduces plant air emissions
- Produces reformulated clean fuels
- Creates jobs
- Increases tax revenues

The Complex prepared and submitted permit applications to the Texas Air Control Board (TACB) for review of the cogeneration and coker facilities. DPMC is optimistic it will receive permits so that construction may begin in June.

S&B Engineering and Foster Wheeler will be engineering contractors on the Clean Fuels project, and Brown & Root Braun and S&B Engineering will be construction contractors. Foster Wheeler, SIP Engineering and S &

B Engineering will be engineering contractors on the coker. Construction contractors are still to be determined.



Announcements about the Refinery Upgrading Program have been made to Shell Deer Park employees and retirees, and periodic meetings have begun with the Deer Park

community-local officials, and community groups—who will be kept informed of the progress over the coming months and years.

At peak time the projects will create as many as 3,000 construction jobs. Approximately 100 permanent jobs will be created from the construction of these new operating units and related support facilities.

While providing competitive advantages and operating efficiencies, the projects also provide environmental benefits. The project is expected to result in a significant reduction in total air emissions such as volatile organic compounds (VOC), nitrogen oxide (NOx) and sulfur dioxide (SO₂) from DPMC operations.

A major component of the upgrade, the coker, will allow conversion of a greater percentage of crude oil to higher valued products like gasoline. The refinery will be able to efficiently process heavy Mexican Mayan crude oil available to DPMC as a result of the pending joint venture with Pemex (Petroles Mexicanos).

DESCRIPTIONS OF FACILITIES:

- Delayed Coker:**
Converts petroleum pitch into petroleum coke and liquid feed for conversion in other process units to higher quality, higher value jet fuel, diesel fuel and gasolines.
- Gas Oil Hydrotreater:**
Provides for removal of sulfur and nitrogen from various products, making them more suitable for conversion feed to other process units.
- Sulfur Recovery:**
Recovers sulfur from refinery streams as elemental sulfur for sale as end-use products.
- Cogeneration Power Plant:**
Uses surplus refining fuel and natural gas to generate electricity and

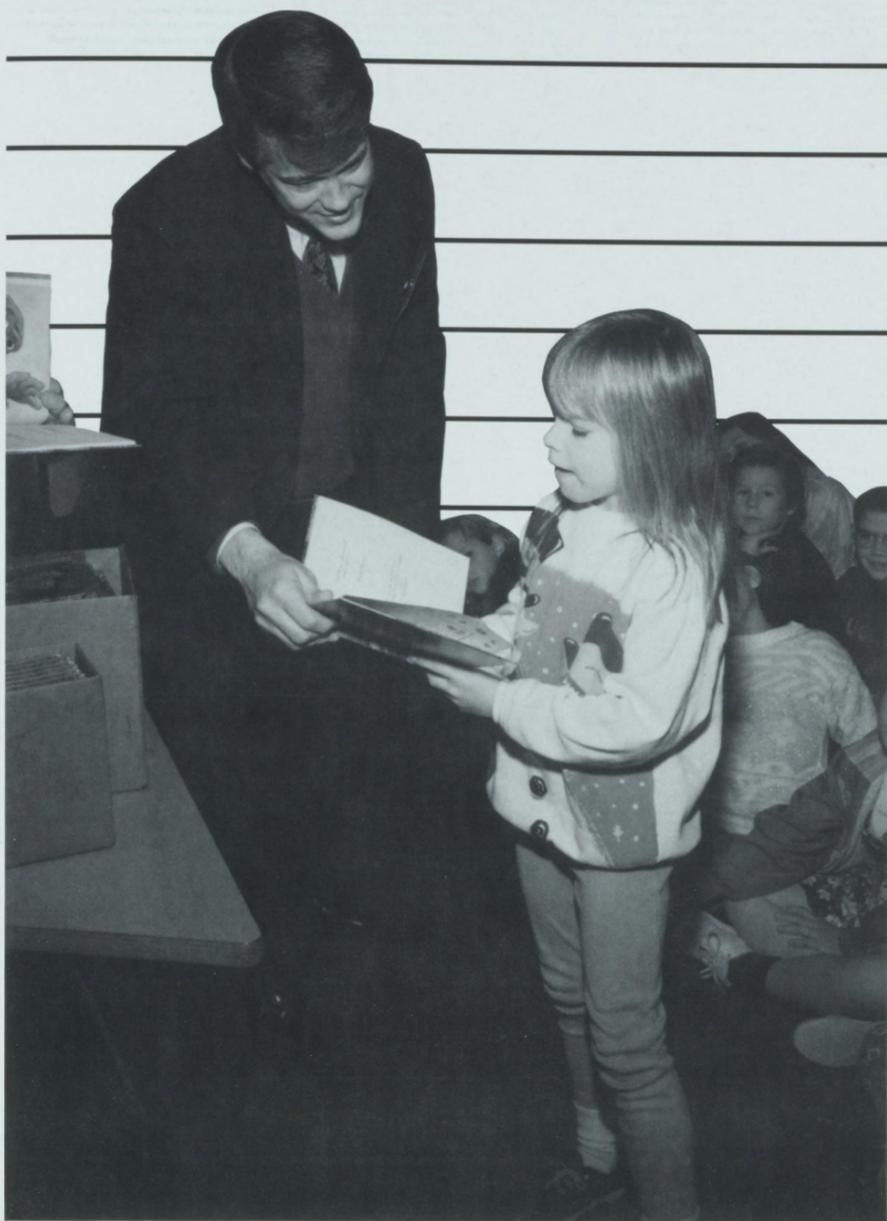
steam to be used by the Complex. It will have a capacity to produce 150 megawatts of electricity (the equivalent of 30,000 households) and one million pounds of steam per hour.

- Alkylation Plant:**
Converts light olefinic hydrocarbons to a high-octane component for use in reformulated gasoline.
- MTBE (Methyl Tertiary Butyl Ether) Plant:**
Combines isobutylene and methanol into a high octane, oxygenated gasoline component, MTBE, used in reformulated gasoline to reduce carbon monoxide emissions. ■

KEEP IT SAFE
KEEP IT CLEAN
KEEP IT RUNNING



WALK THE TALK TOGETHER TOWARD WORLD-CLASS PERFORMANCE



SAFETY FOR ME - Shell Deer Park Community Relations Manager Dennis Winkler enjoys a special moment with a Deer Park Elementary School student. Winkler delivered safety books to each Deer Park second grade student earlier this year. The personalized book, "McGruff and Me -- Be Smart, Be Safe," features a crime dog who instructs children on self protection and crime prevention.



TRUCK O'TOYS—SERVE volunteers fill a pickup truck full of new toys donated by Shell Deer Park employees. The toys were delivered to the City of Deer Park fire station for distribution to needy children just in time for Christmas.

Aromatics tops OSHA, production records

On December 4, Aromatics completed four years without an OSHA Recordable. It also achieved a level of performance and reliability never before seen in the 30-year operation of its two benzene extraction units, ACU and BEU.

The department set a new Benzene total production record of 155 mm gallons of which a record 99.93 percent was on spec.

According to VINCENT ROGERS, TSO, keys to success included a new motor control center, which improved electrical reliability; changes in pump seals and the establishment of an improved pump monitoring program, which increased the mean time between failures from 2.04 years in 1984 to 8.1 years in 1992; development of procedures for furnace system maintenance, which reduced furnace shutdowns to almost zero; and a new sulfolane solvent regenerator, which led to a "dramatic improvement" in benzene production—a maximum BEU production feed rate of 5.8 MBD compared to a new maximum production feed rate of 6.5 MBD.

"The key to execution was good communication," says Rogers. "Operators' input was greatly valued in the decision-making process. In the setting of realistic operating strategies and targets, operators were the primary source."

"One of the best decisions was to create area craftsmen," says BILL WHITE, SOM. "Communication between operator and craftsman has drastically improved our equipment reliability."

"Setting the record could not have been achieved without the support from the entire Shell organization that supports the department—operators, craftsmen, foremen and engineers; HT-2, which produces the bulk of our feed; past personnel; and Head Office," says White.

"As for safety, we didn't achieve our distinction without each of us going through personal process change," says White. "Everyone had to be willing do some things that involved personal commitments to Shell's HASIP program, and this was accomplished."

"We seem to be moving in the right direction on the key fundamentals," says BILL WENDES, manager. "One other thing we are thrilled about is that we haven't had an environmental exceedance in over a year."

Wendes says it's going to be tough for Aromatics to improve on its production record, but it's going to set that as an objective in 1993. From a safety and environmental perspective, adds Wendes, "Our goal will continue to be the elimination of human suffering while meeting our environmental requirements."

SCORANOTES

Fall '92 volleyball results

Tourn.	Finish	Team Captain	Season Finish
1st	No-Netters	Curtis Gandy	7th/8th
2nd	Lab Rats	Stan Shroyer	3rd
3rd	Air Balls	David Copous	Last
4th	NWA	Ace Rhodes	1st
5th/6th	Rookies Strikers	Jerry Nelson BenManzanales	2nd 7th/8th

Major camping trips set

Make plans for these camping trips: Memorial Day, May 28-31, at Houston County Lake in Crockett, with 20 sites available; and Labor Day at New Braunfels, Sept. 3-6, with 21 sites. Register anytime but be sure to book early. Vacancies will go fast. And remember, payment must be received in order to reserve your spot.

PUNCH up a story

Don't forget, home safety stories are at your fingertips on RMDS. Read about the latest home-related mishaps or near mishaps submitted by fellow employees, or submit your own to share your experience with others.

Family Safety Storybook is easy to use. Log on PROFS, punch in "Safety" from the Main Menu (or type "RMDS SAFETY" at the PROFS command line), and select "Family Safety Story Book" to read a story, or "Family Safety Storybook Input Form" to submit a story.

If you're reading, just select from the categories given. You can always return to the previous screen to read more stories in that category and other categories.

If you want to input a story, an input form indicates exactly what to do and where to type.

Keep Family Safety Storybook fresh with your close home encounters. Read or submit a story today! ■



MILESTONES

Service Anniversaries

25 YEARS

B.D. BRUPBACHER
Engrg. Svcs.
P.G. DOWNEY
Solv./Dist./Cust.
M.R. McMINN
Business Serv.
J.H. McWHORTER
Engrg. Svcs.

20 YEARS

J.W. HOLDEN
Envir. Compl.

15 YEARS

A.G. BOOKER
BPA4
E.D. CASTANEDA
Solv./Dist.
R.R. DRIVER
Eng./MTC E
A. GARCIA
BPA Manufac.
W.E. HIGHTOWER
BD/HT/IP

N. HOOD
BPA Manufac.
H.D. JACKSON
Central Maint.
G.W. JESSEN
Control Systems
H.G. LEDE
BPA4
D.G. McGALLION
Eng./MTC Olefins
J.M. McGUIGAN
BPA Manufac.
E.C. MALLETT
Solv./Dist.
M.J. MORRIS
BD/HT/IP
F.T. OSUNA
Log./Util. Prod.
P. O'VALLE, JR.
Phenol Acetone
F.H. PATTERSON
Pyrolysis III
R.M. PHILLIPS
Eng./MTC W Lube
Z.A. POE
Solv./Dist.

M.R. RAINS
BD/HT/IP
E.J. SIBIGA
Eng./MTC Resins
J. SILVAS, JR.
Pyrolysis III
P.K. WILLIAMS
Eng./MTC W Lube

DPMC WELCOMES

J.N. LUCIANO
Cat. Crack./Gas
J.E. McADAMS
Control Sys./QA
J.W. OVERMAN
Olefins

RETIREMENTS

M.D. BERGSTROM
Project Engrg.

MEMORIAM

JOHN L. BANKS, retiree,
died Jan. 1 in Pasadena, TX.

NEALEVANS, retiree, died
Jan 3 in Houston, TX.

Employees celebrating retirements or 25-years and up service anniversaries who want their photos included in the *Shellegram* should make an appointment with the designated photographer for a portrait sitting as early as possible. It takes at least two months from the date of your sitting to see your photo in print. A notice regarding this portrait sitting is mailed to your home from your manager at the beginning of the month of your service anniversary/retirement.



More new records

Alkylation/Thermal Cracking completed 1992 with no OSHA recordables, while setting new production records, and significantly improving environmental performance. DON NETEK, SOM, offers his congratulations to all ATC personnel.

Light Olefins III achieved five years without an OSHA recordable in November

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Pyrolysis III achieved one year OSHA-free in December.

Medical supervisor recognized by nursing profession

KATHERINE MOORE, supervisor, Medical, was one of 20 Houston-area registered nurses recognized for outstanding contributions to patient care and the nursing profession.

The "Great 20" awards were presented at "Nursing Celebration 92" in November, a banquet celebrating the accomplishments of nursing and a fundraiser for nursing scholarships, research and recruitment programs sponsored by Texas Nurses Association (TNA).



Katherine Moore

TNA, District Nine, is a professional organization representing more than 23,000 registered nurses in the greater Houston area. A Blue Ribbon Committee composed of TNA representatives and distinguished Houston community leaders selected the 20 outstanding nurses from over 100 nominations.

Attending with Moore were her two daughters, mother and brother, along with Complex Medical Director ED SHEPPER; Corporate Medical Director DAVID MILLER, Corporate Nurse RAMONA DEETJEN, and DPMC nurses JACKIE BAKER and ANNA MORALES.

Moore has been employed by DPMC since 1982. She participates in numerous professional and community organizations and is active in the American Association of Occupational Health Nurses.

In January Moore was re-elected to a second term as vice president of the Texas Occupational Health Association. She is a frequent speaker at local, state and national nursing conferences and is also an adjunct assistant professor at the University of Texas School of Public Health in Houston.

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