

VII. ENERGY/INDUSTRIAL DEVELOPMENT

A. INTRODUCTION

A number of energy facilities are located in the City of Morro Bay and its surroundings, and recent signs indicate that the City will feel the pressure of more energy development in the near future.

As part of its Local Coastal Program, Morro Bay is required to address energy and other coastal-dependent industrial developments that may have a significant impact on the community. Existing facilities in Morro Bay which must be address include:

- (1) Chevron Estero Bay tanker-terminal;
- (2) Texaco fuel storage tanks;
- (3) U.W. Navy marine terminal and storage tanks;
- (4) Pacific Gas and Electric Fossil fuel thermal power plant, marine terminal and associated facilities.

In addition to these existing energy-related facilities, there is the potential that new energy developments may be located in the area; these include:

- (1) Estero Bay super tanker port;
- (2) Expansion of the PG&E power plant;
- (3) Support facilities for Outer Continental Shelf (OCS) oil and gas development;
- (4) New power plants.

B. COASTAL ACT POLICIES

The Coastal Act contains general and specific policies regarding energy. Although the Coastal Act emphasizes the protection, enhancement, and restoration of coastal resources, it also recognizes that energy-related development is necessary for the social and economic well-being of the state. An "energy facility" is defined by Section 30107 of the Act as "any public or private processing, producing, generating, storing, transmitting, or recovering facility for electricity, natural gas, petroleum, coal, or other sources of energy."

Energy development in the coastal zone is permitted based on Section 30001.2. The legislature finds and declares that, notwithstanding the fact electrical generating facilities, refineries, and coastal-dependent developments, including ports and commercial fishing facilities, off-shore petroleum and gas development, and liquefied natural gas facilities, may have significant adverse effects on coastal resources or coastal access, it may be necessary to locate such developments in the coastal zone in order to ensure that inland as well as coastal resources are preserved and that orderly economic development proceeds within the state.

The Coastal Act policies addressing industrial development distinguish between coastal-dependent and other types of development. Energy developments are classified as a type of industrial development. According to the Act, coastal-dependent development or use is one which requires a site on or adjacent to the sea. Examples of coastal-dependent energy facilities include: separation and treatment facilities which support offshore petroleum development (for separation of water and gas from oil), marine terminals, and liquefied natural gas terminals.

Under Section 30255 of the Act, both industrial and non-industrial coastal-dependent development are given priority over other developments on or near the shoreline. In addition, the following Section of the Act establishes criteria and allowances for overriding considerations regarding conflicting policies for siting coastal-dependent industrial facilities.

Sec. 30260. "Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this Section and Sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare, and (3) adverse environmental effects are mitigated to the maximum extent feasible."

This Section of the Act allows special consideration for industrial development that may not be consistent with other Coastal Act policies, yet may be necessary to provide for the public welfare.

The following Coastal Act policies relate to oil and gas development:

Sec. 30261. "(a) Multicompany use of existing and new tanker facilities shall be encouraged to the maximum extent feasible and legally permissible, except where to do so would result in increased tanker operations and associated onshore development incompatible with the land use and environmental goals for the area. New tank terminals outside of existing terminal areas shall be situated so as to avoid risk to environmentally sensitive areas and shall use a monobuoy system, unless an alternative type of system can be shown to be environmentally preferable for a specific site. Tanker facilities shall be designed to (1) minimize the total volume of oil spilled, (2) minimize the risk of collision from movement of other vessels, (3) have ready access to the most effective feasible containment and recovery equipment for oilspills, and (4) have onshore deballasting facilities to receive any fouled ballast water from tankers where operationally or legally required.

(b) Because of the unique problems involved in the importation, transportation, and handling of liquefied natural gas, the location of terminal facilities therefore shall be determined solely and exclusively as provided in Chapter 10 (commencing with Section 5550) of Division 2 of the Public Utilities Code and the provisions of this division shall not apply unless expressly provided in such Chapter 10."

The following Coastal Act policies pertain to siting thermal power generating plants.

Sec. 30264. "Notwithstanding any other provisions of this division, except subdivisions (b) and (c) of Section 30413, new or expanded thermal electric generating plants may be constructed in the Coastal Zone if the proposed coastal site has been determined by the State

Energy Resources Conservation and Development Commission to have greater relative merit pursuant to the provisions of Section 25516.1 than available alternative sites and related facilities for an applicant's service area which have been determined pursuant to the provisions of section 25516."

This Section establishes special consideration to coastal dependent energy development if other Coastal Act policies cannot be complied with and recognizes that the State Energy Resources Conservation and Development Commission (ERCDC) may decide to select sites in the coastal zone upon a showing that these sites have greater relative merit than available alternatives. This siting authority is limited within the coastal zone to areas not designated by the State Coastal Commission under Section 30413(b), which reads as follows:

Sec. 30413(b). "The Commission shall, prior to January 1, 1978, and after one or more public hearings, designate those specific locations within the coastal zone where the location of a facility as defined in Section 25110 would prevent the achievement of the objectives of this division; provided, however, that specific locations that are presently used for such facilities and reasonable expansion thereof shall not be so designated. Each such designation shall include a description of the boundaries of such locations, the objectives of this division which would be so affected, and detailed findings concerning the significant adverse impacts that would result from development of a facility in the designated area. The Commission shall consider the conclusions, if any, reached by the State Energy Resources Conservation and Development Commission in its most recently promulgated comprehensive report issued pursuant to Section 25309. The Commission shall transmit a copy of its report prepared pursuant to this subdivision to the State Energy Resources Conservation and Development Commission."

Though refineries are not necessarily coastal-dependent developments, their location in coastal metropolitan areas may put them in the coastal zone. The following Section of the Act establishes criteria for locating refineries in coastal areas.

Sec. 30263. "New or expanded refineries or petrochemical facilities not otherwise consistent with the provisions of this division shall be permitted if: (1) alternative locations are not feasible or are more environmentally damaging; (2) adverse environmental effects are mitigated to the maximum extent feasible; (3) it is found that not permitting such development would adversely affect the public welfare; (4) the facility is not located in a highly scenic or seismically hazardous area, on any of the Channel Islands, or within or contiguous to environmentally sensitive areas; and (5) the facility is sited so as to provide a sufficient buffer area to minimize adverse impacts on surrounding property."

The following provisions of the Act deal with the potential effect that new energy development may have on the coastal zone--air and water pollution that may result from oil and gas development, and the need to separate potentially hazardous industrial development from existing developed areas (see also Sec. 30233, Chapter XI):

Sec. 30232. "protection against the spillage of crude oil, gas, petroleum products, or hazardous substances, shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur."

Sec. 30250(b)... "where feasible, new hazardous industrial development shall be located away from existing developed areas."

Sec. 30253(3) "New development shall be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development."

C. GOVERNMENT REGULATION OF ENERGY DEVELOPMENT

Because energy facilities are generally considered to be of "greater than local significance, they are regulated by a large number of federal, state and local regulations, of which the California Coastal Act is but one. Local jurisdiction over energy-related development has been pre-empted by state and federal agencies over the last 20 years.

However, under Section 30519 of the Coastal Act, the permit authority over energy-related developments that the Coastal Commission now enjoys delegates to the City of Morro Bay upon certification of the City's Local Coastal Program. For those future energy projects not identified within the Local Coastal Program at the time of certification, an amendment to the Program may be requested if the purpose of the energy-related development proposal is to meet the needs of an area larger than the City.

Having discussed the existing basic responsibilities of the Coastal Commission as well as the future responsibilities for regulating energy-related development that will be shared or assumed by the City, it is now necessary to look into how specific types of energy-related facilities are regulated by a variety of government agencies.

1. Power Plant Siting

The State Energy Conservation and Development Commission is the sole permitting agency for siting thermal power plants exceeding 50 megawatts in the State. For every power plant proposed, three alternative sites must be evaluated, one of which must be in the coastal zone.

The construction or operation of new power plants and expansion or alterations to existing plants is, however, covered by Coastal Act Policy. The Coastal Act recognizes that power generating and other facilities which may be incompatible with coastal resource protection goals are necessary for the social and economic well-being of the state and nation. Section 3001.2 of the Act provides the basis for allowing this type of development in the coastal zone. This study will be discussed further under Pacific Gas and Electric's fossil fuel power plant.

2. Marine Terminals

The City of Morro Bay has jurisdiction over those portions of a marine terminal that are on land (i.e. pipelines, storage tanks and other associated facilities). Those portions of a marine terminal which are seaward of the mean high tide line are regulated by the Coast Guard and the State Lands Commission.

3. Pipelines

Technical performance standards for all oil and gas pipelines are governed by Federal regulations administered through the California Public Utilities Commission.

However, after certification of the LCP, pipelines will be reviewed for conformance with the Land Use Plan policies. But permits shall not be required for pipelines exempted from coastal development permits under Section 30610(d) of the California Coastal Act of 1976 as defined by the Interpretive Guidelines on Exclusions from Permit Requirements adopted by the State Coastal Commission on September 5, 1978.

4. Electrical Transmission Lines

The California Public Utilities Commission and the California Energy Commission are the agencies responsible for review and approval of all electrical transmission lines. This includes all technical, safety and environmental concerns. However, the Coastal Act does provide the City permit authority over proposed lines within the City. An exception to this permit authority is electrical transmission lines proposed as part of a new power plant with a capacity greater than 50 megawatts (Section 30264 of the Coastal Act.).

5. Outer Continental Shelf (OCS) Oil and Gas Development

Oil and gas development offshore is governed by State or Federal regulations, depending on whether the development is within the State's three mile limit.

Within the three mile limit, the State Lands Commission and the California Coastal Commission have jurisdiction over energy developments. Outside the three mile limit, the United States Department of the Interior through the Bureau of Land Management has the responsibility to oversee and regulate energy development.

Onshore facilities to support offshore energy developments fall within the jurisdiction of the City and Coastal Commission approval and may pre-empt the City's permit powers.

The City's permit powers and discretion for onshore energy developments on State Tidelands have been granted to the City. The State however has the use of these lands without local approval.

D. EXISTING INDUSTRIAL AND ENERGY-RELATED DEVELOPMENTS

The Section inventories the existing industrial and energy-related activities and facilities within the coastal zone, as well as proposed plans to expand or modify these facilities. Figure 14 shows the location of these facilities. It must be realized that due to the dynamics of the energy situation, projecting energy demands and the necessary facilities over a long period is extremely difficult. Currently, none of the facilities discussed here are projecting expansion and when such expansions would be proposed, they will require an amendment to the Coastal Plan.



FIGURE 14
 MORRO BAY ENERGY-RELATED FACILITIES

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| <ul style="list-style-type: none"> 1. Chevron U.S.A. Marine Terminals and Pipelines 2. Chevron U.S.A. Pier 3. Chevron U.S.A. Oil Storage Tanks 4. Texaco Oil Storage 5. Navy Marine Terminal and Pipeline 6. Navy Jet Fuel Oil Storage Tanks | <ul style="list-style-type: none"> 7. Former Texaco Marine Terminal and Abandoned Pipeline 8. PG&E Marine Terminal and Pipeline 9. PG&E Morro Bay Power Plant 10. PG&E Oil Storage Tanks and Pipeline 11. Chevron U.S.A. Pipeline from San Arco and San Joaquin Valley |
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1. Chevron U.S.A. Estero Marine Terminal

Chevron U.S.A. has a tank farm and tanker facility at Estero Bay, located at the extreme northern end of the City near Toro Creek. This is a multi-company used coastal dependent industrial facility.

Existing facilities at Chevron's installation consist of two offshore marine terminals, a 1,200 foot long pier, pipelines, pump stations, sixteen (16) fuel storage tanks and accessory buildings. Although the majority of these facilities are located just outside the City limits, the pier and pipelines from the pump station cross the corporate boundaries of the City of Morro Bay. The areas west of the mean high tide are leased from the State Lands Commission.

The marine terminal facilities handle California crude oil produced in the lower San Joaquin Valley and the San Ardo oil fields in southern Monterey County. This facility is a crude oil storage and loading terminal. It does not process or refine the crude oils. Crude oil is transported to this terminal via pipeline and stored in hilltop tanks. The crude oil is then loaded onto ships which moor at one of the two marine terminals. Generally, three ships a week utilize the terminal loading facilities. One terminal can handle tankers of up to 30,000 deadweight tons (dwt) and the other up to 70,000 dwt. The average loading time is 12 to 24 hours.

Although this facility is owned and operated by Chevron, it is used as an exchange facility by several of the major oil companies, such as Mobil Oil Company and Texaco, Inc., in keeping with the Coastal Act Policy. These other oil companies are charged a fee for the handling costs incurred by Chevron.

Approximately 90,000 barrels a day are transferred through the pipelines to the storage tanks. Steam is used to heat the oil to facilitate movement through the pipeline. Tanks are sited on the hilltop in order to utilize gravity flow. Most of the total crude oil imported to this facility is provided by San Joaquin Valley fields. Crude oil is shipped primarily to ports in Los Angeles, San Francisco and Washington.

The pipelines which carry the fuel from the onshore storage facility to the ships are submerged beneath the tideline. The loading activities are performed underwater. The loading ship moors offshore in one of the designated mooring areas. The ships must mechanically maneuver a submerged hose (250 foot length) to connect to the ships storage area. All pipeline and loading controls are operated and controlled by the onshore terminal; once the hose is connected to the ship, the oil flow is released. Total control for the oil flow is maintained by the onshore terminal.

The pier structure, and particularly the old pipelines that travel along the top of it, are not presently utilized for loading operations because the loading pipelines are now beneath the water. The decaying pier is now used only for transporting crews to tankers, and Chevron has considered removing the pier or rehabilitating it for sport fishing and other public uses.

Chevron has a Spill Prevention Control and Countermeasure Plan (Spcc) for the Estero Hill plant tankage. This SPCC plan covers the hill storage facilities only. This plan is augmented by the Port San Luis and Estero Bay Oil Spill Cooperative which was formed in June, 1975, and involves a mutual agreement between Chevron, Union and P G & E. Membership by the U. S. Navy in the cooperative is pending. The cooperative has an oil spill contingency plan for loading lines and onshore facilities. Chevron U.S.A. also has the maintenance contract from the Coast Guard for oil offshore spillage clean up. The company belongs to the Clean

Sea Association of Santa Barbara which handles oil spillage operations. Clean Sea stores a boat and storage truck tank at the Estero Marine Terminal (for the transportation of spill waste) for the immediate use in the event of a small spill incident.

Although there are no pending proposals to expand Chevron's Estero Bay facilities, two major expansions have been proposed in the past consisting of a deep water monobuoy for super tankers, and a proposal to use the facilities for transport of petroleum from the Elk Hills Naval Reserve. In addition, Chevron has indicated that their facilities may be needed for OCS leases and for other coastal-dependent uses.

In February, 1975, Standard Oil Company of California proposed to add a deep-water berth and expanded onshore facilities at its (Chevron, U.S.A.) existing marine terminal at Estero Bay. These plans were suspended due to economic considerations in April, 1975.

In the mid-1970's, the U. S. Navy proposed the use of Chevron's Estero Bay terminal as a site to deliver crude oil from the Elk Hills Naval Reserve.

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The Naval Petroleum Reserves Production Act of 1976 authorized the development of specified national petroleum reserves. The Act directs the Secretary of the Navy to ship at least 350,000 B/D from the Elk Hills Reserve in the San Joaquin Valley to unspecified marketing terminals. Three pipeline routes were considered: (1) Port Hueneme; (2) via Coalinga to Estero Bay; and (3) Avila Beach. Adverse impacts on air quality due to loading of crude at marine terminals eliminated these routes from further consideration.

It is not anticipated that Standard Oil will reconsider the Estero Bay site for a deepwater port within the time frame of the Local Coastal Program. However, if future plans are considered for a deepwater port or other expansion, an amendment to the Local Coastal Program would be required.

2. Texaco, Inc. Storage Tanks

Texaco, Inc., has a small amount of tankage and storage facilities located on North Main Street west of Del Mar School. A number of additional storage tanks are located in the hills adjacent to Chevron's storage tank area. These tanks, owned by Texaco, Inc. are located entirely outside the city limits, and as such they will be addressed in the County's Local Coastal Program.

At one time, Texaco did have a marine terminal for loading and unloading fuel for storage in the tanks, but decommissioned the terminal and pipeline in 1978. There have been no proposals to expand these facilities.

With removal of the marine terminal, expansion of this remaining facility seems unlikely. However, Chevron U.S.A. may utilize the Texaco, Inc. storage tanks in any expansion of its own facilities.

3. U.S. Navy Jet Fuel Marine Terminal

Another facility in Estero Bay within the corporate boundary of the City is the U.S. Navy jet fuel mooring facility and its associated storage tanks and pipelines located at Atascadero State Beach and the adjacent hillsides. Vessels unload jet fuel at the single five point mooring sporadically due to fluctuations in demand. Two storage tanks are located in the hillsides adjacent to residential areas in the City. An additional tank is used for water storage. The jet fuel is unloaded from the vessels and stored in the tanks where it is shipped through a 96-mile pipeline to Lemoore Air Force Base. The fuel is then transported through the pipeline by an electrical pump.

Past proposals to expand the Navy's facilities have been limited to their proposed use of Chevron, U.S.A.'s facilities (see discussion under Chevron's Estero Marine Terminal), and no proposals have been made to expand the Navy's fuel storage facilities in their current setting. Due to the proximity of the Navy's fuel storage tanks to residential development, expansion of tankage on the 10-acre site would be unlikely. However, moving the existing tanks upland from the abutting residential areas could conceivably allow expansion of the tankage. Expansion or increased use of the marine terminal could pose air and water quality concerns and would require environmental determination and amendment of the Local Coastal Plan.

4. Morro Bay Power Plant

The Pacific Gas and Electric Company Power Plant has an existing plant within the City limits. Figure 15 shows the location of the plant and its support facilities. The power plant was constructed in two segments of two units each, one in the early 1950's and one in the early 1960's. The first two units are 163,000 KW each and the second two are 338,000 KW each, for a total generating capacity of 1,002,000 KW net into the P G & E transmission system. This system extends from the vicinity of the Gaviota Pass in Santa Barbara County in the south, to the Oregon Border in the north. It also connects with neighboring utilities in Oregon, Nevada and Southern California.

The plant generates electricity from steam produced in boilers which consume about 34,000 equivalent barrels of fuel oil and/or natural gas per day at full turbine-generator capacity.

When steam is exhausted from the turbine, it must be condensed back into water in order for it to be re-used in the boilers. To provide sufficient water to accomplish this cooling, two pumps on each unit circulate the 50-55 degree Fahrenheit ocean water through the condensing heat exchanger for the associated unit where it turns the steam to water and increases its temperature up to approximately 75 degrees Fahrenheit. The No. One and Two unit pumps move 49,000 gallons per minute each, and the No. 3 and 4 unit pumps move 73,000 gallons per minute each, for a total of nearly 490,000 gallons per minute from the Morro Bay Harbor to Estero Bay at the base of Morro Rock.

One of the features of the plant is its ability to convert seawater to distilled water for use in its boilers which require distilled water of the highest purity. The Morro Bay Plant was the first plant in the United States capable of producing large quantities of distilled water from seawater. At maximum capacity under design conditions, the plant can produce over 250,000 gallons per day of distilled water.

Pacific Gas and Electric Company maintains an offshore terminal for unloading fuel oil to operate the plant. It is located 4500 feet offshore and was expanded from a five to seven point mooring in 1974. The maximum size vessel that can moor at this facility is 50,000 DWT.

Due to the fluctuation of ship availability and fuel demand, tanker deliveries are irregular and may vary from 15 to 30 tankers per year. The terminal includes five 165,000 barrel fuel oil storage tanks on the plant site. As a part of the marine terminal expansion in 1974, two 500,000 barrel storage tanks were installed north of Highway 41, about three miles from the plant site.

Long-range expansion plans for this facility include the construction of two additional steam turbine generators to the existing four generators. This addition would involve the construction of two additional exhaust stacks plus additional facilities for cooling the ocean water. One additional generator would cause the discharge water to rise about allowable levels. This would require additional cooling towers to bring the water back to an allowable temperature for discharge.

The power plant site covers 114 acres with 36.3 acres available for expansion onsite and an additional 50 acres available adjacent to the plant. According to a California Energy Commission report entitled "Feasibility of Expansion of Existing Coastal Zone Power Plants", the power plant site is the minimal adequate for expansion of small facilities whose location would not further affect the unique view corridor of Morro Rock and the report indicates that conversion is unfeasible due to a variety of factors. The study does conclude that expansion is feasible for a small scale facility utilizing either steam turbine, the existing generating system, combined cycle or combustion turbine.

A combustion turbine power plant operates much like a steam turbine power plant except that the medium which flows past the turbine blades, causing them to turn, is the gaseous product of a combustion process. The turbine drives both the electric generator and also a compressor whose function is to compress input air to a relatively high pressure before it is mixed with gas or liquid fuel in the combustion chamber. The exhaust gases are released to the air after passing through the turbine. The efficiency of combustion turbine power plants (20 to 30 percent) is lower than that of steam turbine power plants, so operating costs tend to be high.

Gas turbines have some environmental advantages compared with steam turbine power plants. Since they do not employ a steam cycle, they do not cause heat addition to water. Exhaust heat may be vented from a short stack into the air, and being relatively small plants, they require little ground space. One major impact associated with these facilities is the large noise levels generated.

Combustion or gas turbine plants are generally utilized as peak load facilities to meet a load demand level occurring only at certain times.

A combined cycle plant combines the best features of gas turbines and steam power plants. The combined cycle plant uses the hot exhaust gas from a gas turbine to provide heat to a boiler for a conventional steam generator-turbine. The gas turbine and the steam turbine drive separate electric generators. The efficiency of this device is about 40 percent. Combined cycle plants are generally utilized as base load facilities.

Another possibility for the power plant would be repowering. The Energy Commission (1979) identified the potential increase of efficiency for this plant as 15 percent (from 40 to 55 percent efficiency). Repowering of the existing facility would represent the process of converting the steam-turbine oil fired units into a more efficient combined cycle system by the addition of gas turbine generator units. Existing boiler units are replaced by waste heat recovery steam generators. The resulting repowered combined cycle plant, utilizing the existing steam-turbine generator unit provides a very substantial increase in the plant's

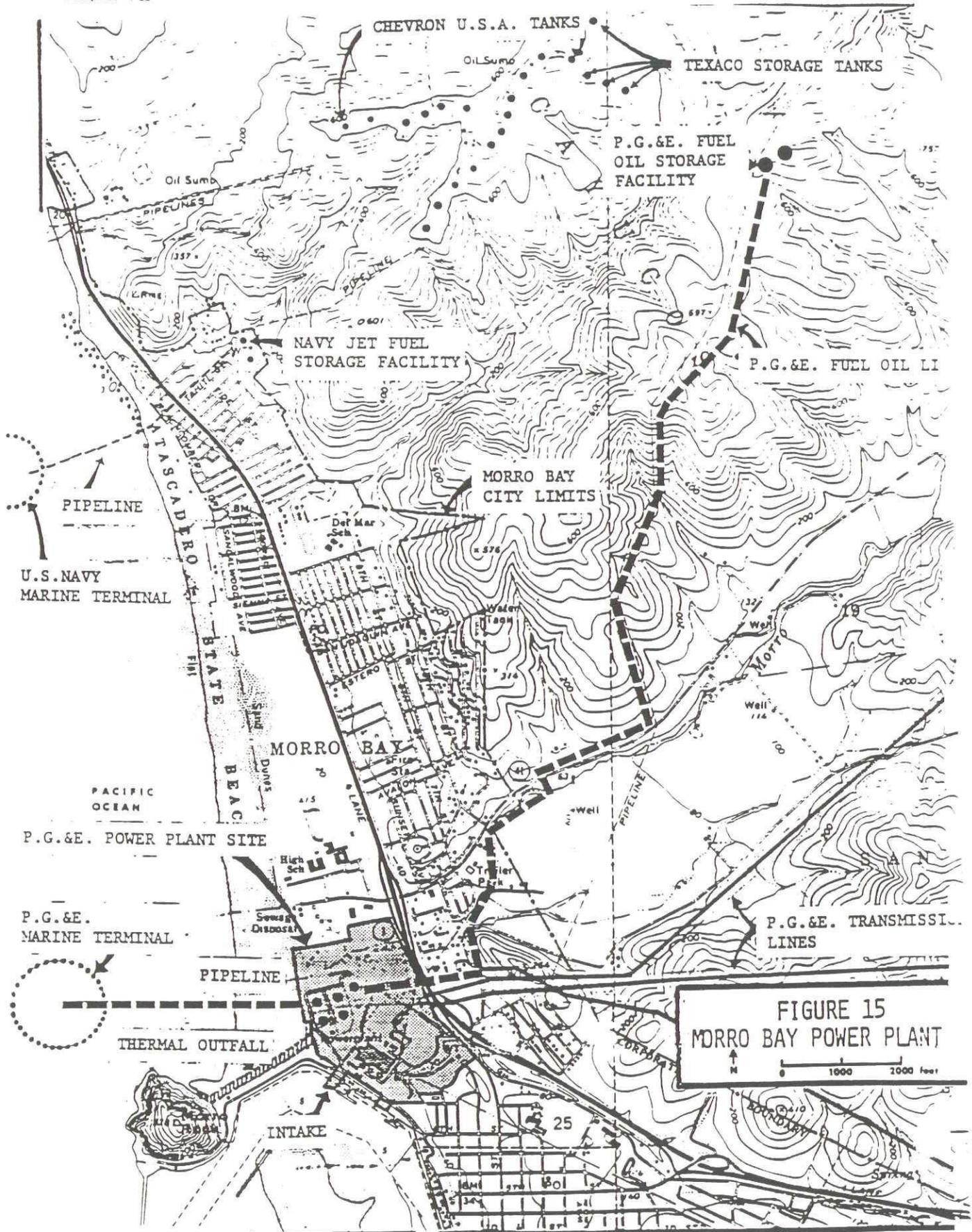
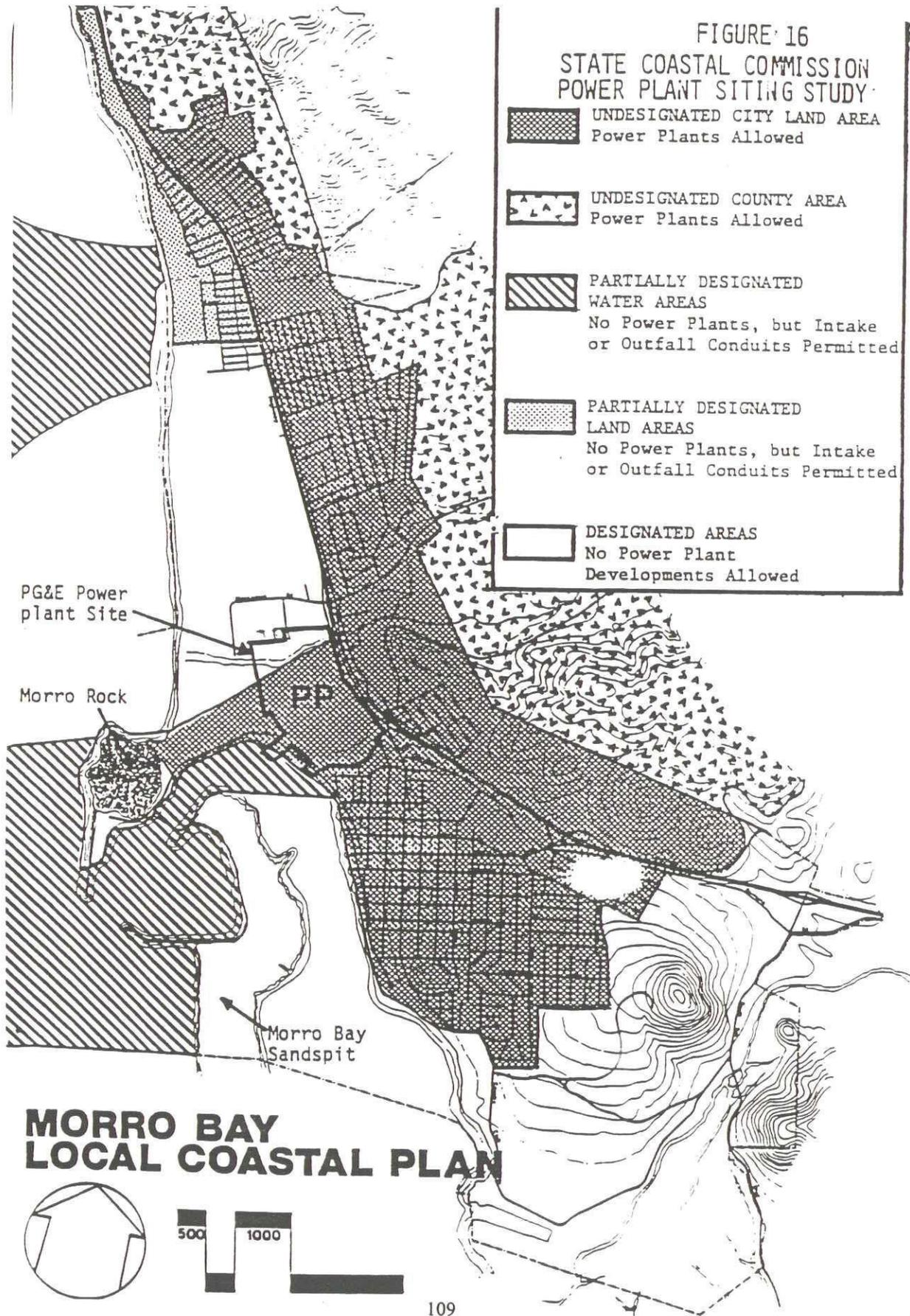


FIGURE 15
MORRO BAY POWER PLANT



generating capacity and an improved plant generating efficiency. Repowering also serves to extend the operating life expectancy of the plant when compared to the prior existing steam generating unit.

The advantages of facility repowering are numerous. Repowering capacity can be added in a relatively short period of time, and can be added at a low cost. Repowering can be completed at existing plants with little environmental impact, but will require the conversion to clean burning fuels. The repowered plant will be competitively efficient with other types of more modern generating facilities and suitable for intermediate load operation. The new capacity can be added at existing stations, with minimum impacts to surrounding communities. The primary disadvantage to repowering is the utilization of older equipment which may be approaching the end of its practical physical life. Another potential for more efficient use of fuel at the power plant would be co-generation. Co-generation combines industrial use of steam with the production of electricity. One potential for the Morro Bay power plant is use of co-generation with aquaculture. The excess heat could be used to heat water to allow for the cultivation of warm water species.

It should be noted that determination of the feasibility of converting the power plant to alternate systems or repowering requires extensive onsite evaluations.

Expansion of the power plant in areas not designated inappropriate for power plant siting by the Coastal Commission (see following discussion) is controlled by the California Energy Commission. As such, the City of Morro Bay has no jurisdiction over plant expansion.

Expansion of the offshore marine terminal is also a possibility. Tankers of less than 70,000 dwt are decreasing while on the west coast those in the 70,000 to 99,000 DWT class are increasing. These larger tankers would probably require fewer deliveries, and due to the newer and better equipment, reduce the possibility of oil spillage. P E & E has recently received a permit to allow expansion of the Moss Landing Marine Terminal to handle tankers of up to 90,000 DWT. For P G & E to expand its facilities in Estero Bay, it would require an environmental determination, amendment of the Local Coastal Plan and Coastal Commission review.

E. PROPOSED OR POTENTIAL INDUSTRIAL AND ENERGY-RELATED DEVELOPMENTS

1. Power Plant Siting Study Considerations

The Coastal Act requires the Coastal Commission to designate specific areas of the coastal zone that are not suitable for siting power plants. After these designations are adopted, the governing entity (the State Energy Commission) cannot approve a power plant located in a designated area. Figure 16 identified those areas designated as inappropriate for power plant siting within Morro Bay. In those areas of the City that the Commission does not designate, a power plant may be built or expanded without Coastal Commission approval.

A "partial designation" may be given to areas where power plant siting is deemed unsuitable but underground facilities such as cooling water conduits are permitted.

Areas not recommended for designation may nonetheless contain valuable coastal resources and the City and the Coastal Commission can participate in the Energy Commission's power plant siting proceedings. This participation could include proposing modification to the proposed site and plant that would mitigate any potential adverse effects on coastal resources.

The Energy Commission must implement any recommendations made by the Coastal Commission unless those recommendations are found to cause more environmental damage or are not feasible.

As indicated by Figure 16, the area within the community not designated by the power plant siting study is the land immediately west of the P G & E power plant. This area covers about 50 acres and consists of portions of Atascadero State Beach, state tidelands and private holding (Den Dulk). This area was left nondesignated in the siting study to allow potential expansion of the power plant. However, based on the scale of expansion identified as being feasible by the Energy Commission for the power plant, sufficient acreage is available onsite. The study indicated acreage requirements for small scale plant expansion would not exceed ten acres (utilizing a once-through water cooling system). Even for large scale power plant expansion utilizing steam turbine, combined cycle or combustion turbine, land requirements would not exceed 33 acres, the amount available onsite.

The Morro Bay power plant site does have some constraints in terms of expansion. While cooling water is readily available, air quality standards may be a limiting factor. Environmental determination and an EIR would be required before expansion could occur.

The Coastal Act requires the Commission to "every two years revise and update the designations." These biennial revisions give the Commission an opportunity to examine the designations as more coastal resource data becomes available and may help to implement this City's Local Coastal Plan. This biennial revision also affords the City of Morro Bay the opportunity to recommend areas for designation. Specifically, the recommendations would address the need to designate the developed portions of the community as unsuitable for power plant siting, and would continue to stress expansion of the existing facilities in the existing P G & E owned properties.

2. Outer Continental Shelf (OSC) Oil and Gas Development

Increased demand for domestic fuel supplies has spurred the federal government to encourage oil industry development of Outer Continental Shelf oil and gas development. Currently, the Bureau of Land Management (BLM) has initiated proceedings towards a proposed lease sale for five basins off California's coast. The sale, known as Lease Sale #53, would include tracts totalling over 1,000 square miles off the San Luis Obispo County shoreline, as shown on Figure 17. In addition to Lease Sale #53, the BLM is initiating proceedings for other sales off California's central coast. Precise locations of the sales were not available at the time of writing of this chapter.

The tracts being proposed in 1980-81 for leasing off the County's coast are in what is known as the Santa Maria Basin. This is believed to be an offshore extension of oil bearing rock strata stretching from Point Conception north to Morro Bay. This basin, while comprising nearly half of the tracts in the total lease sale (115 out of 243), is estimated to contain over 70 percent of the recoverable oil and 404 billion cubic feet of gas.

While this estimate from the United States Geologic Survey (U.S.G.S.) is considered to be the most likely find, actual recoverable resources are possibly much higher or lower, though the likelihood of there being found no commercially recoverable oil or gas is quite small.

The process of recovering oil and gas from the Outer Continental Shelf requires considerable industrial activity on land as well as at sea. Offshore platforms must be constructed. Food, fuel and drilling supplies must be assembled and shipped to the offshore work site. The

workers from these activities need housing as well as community facilities and services. Estimating onshore impacts depends on whether or not recoverable resources are discovered, and if so, in what quantity. Until exploration is completed, the scale of onshore support requirements cannot be accurately predicted.

To meet the requirements of the National Environmental Protection Act of 1969, BLM was required to prepare an Environmental Impact Statement ((EIS) before leasing can occur. In the EIS for Lease Sale #53, the Bureau stated "There would be three (3) major onshore operations required in Humboldt Bay, San Francisco Bay and Morro Bay. The level of onshore facilities identified for Morro Bay "...could occupy approximately six (6) hectares (15 acres)" and would be used "...to store pipes and offshore drilling materials". Examination of service bases from other lease sales show that 15 acres may be the minimal size necessary for a base and, in fact, the area required could be considerably larger.

While identification of the City of Morro Bay as a service base site in the EIS does not preempt the City's authority to approve or deny such development, it does point out the desirability of

the harbor for such uses. The siting of service bases for OCS development is left to the oil companies. The oil industry prefers to locate services bases as close to their offshore operations as possible, due to the high cost of transportation. Consequently, final decisions on location may not be made until after the lease sale.

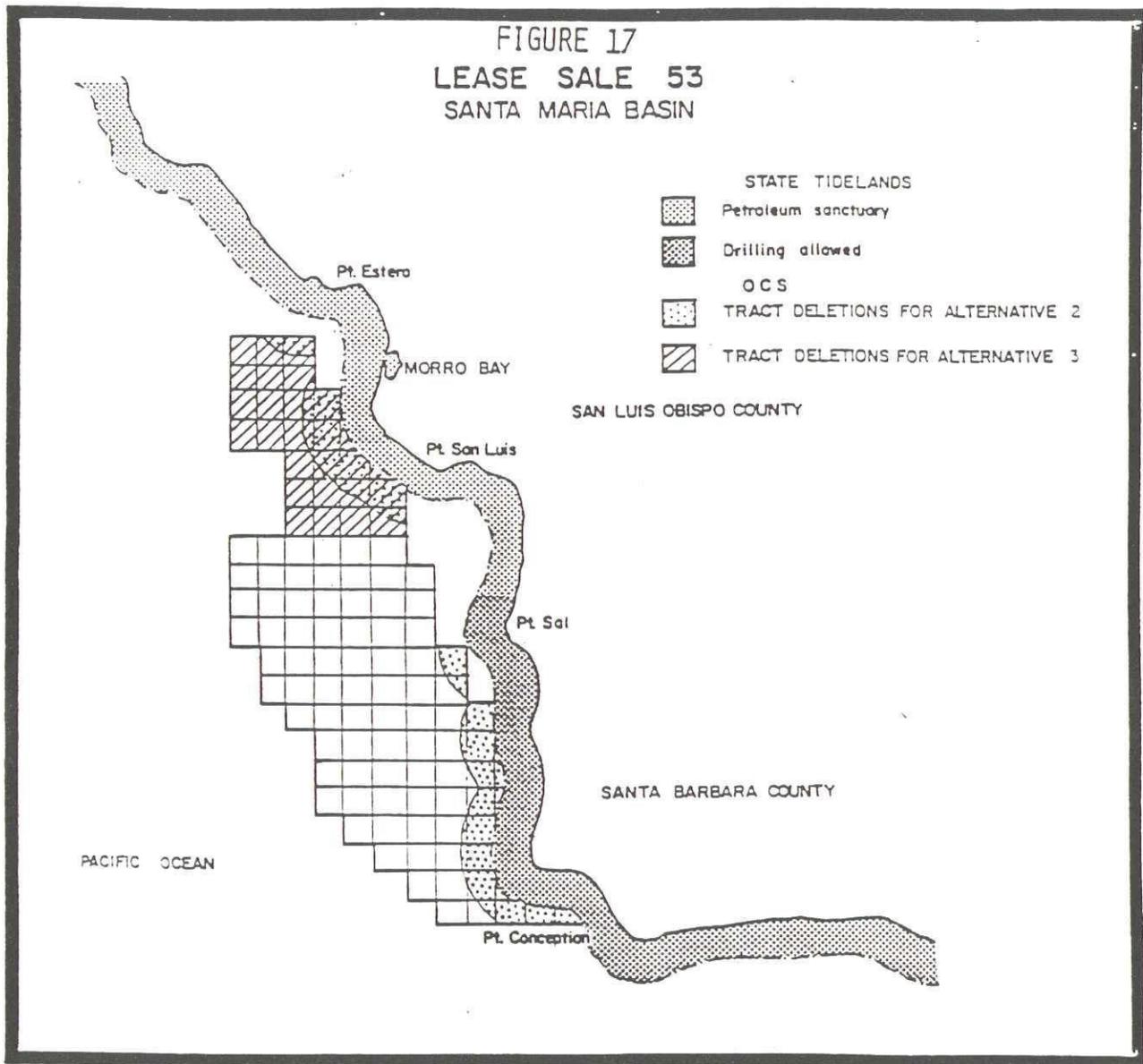
Besides proximity to offshore development, industry evaluates locations on the following factors:

- (1) good truck and/or rail access;
- (2) port facilities;
- (3) available labor;
- (4) skilled machine shop facilities;
- (5) housing, medical and municipal facilities;
- (6) environmental concern.

Since there is a shortage of suitable wharfage space, moorings and areas for expansion of commercial fishing industry, competition between commercial fishing and OCS related development will probably occur. From the oil industry's point of view, protected harbors which serve the commercial fishing industry are more desirable than pleasure boat marinas or cargo ports. However, construction and drilling boats associated with service bases are generally 180 to 220 feet in length and have a displacement of 15 to 20 feet. Presently, Morro Bay Harbor could not accommodate this type of craft unless there is a total overhaul of the harbor with a tremendous amount of dredging.

Wharfage requirement for a service base most likely would require a minimum of 200 feet of waterfront property. The only area for this would be the land between P G & E and Morro Rock in the Coleman Park area. But this area is critical to the City's plans to develop facilities to meet the needs of the commercial fishing industry and to improve the land area as a quality waterfront park and recreation area.

Other impacts that would result from locating OCS support facilities in the City of Morro Bay include:



*Note: State Lands Commission states that the petroleum sanctuary shown is a State Oil and Gas Sanctuary set up by the State Legislature (PRCS6871.2). Oil and gas exploration and/or production are prohibited except when drilling on an adjoining federal lease threatens to drain state resources.

- (1) Displacement of commercial fishing industry: Due to the similarities in the requirements of commercial fishing boats and of those service vessels, and because the oil industry can afford to pay more for the services required by their boats than can the fishing industry, commercial fishing would tend to be displaced if a competitive situation arose.
- (2) Displacement of labor force: Some portion of the previously employed labor force might be attracted to the new industries due to higher wages, perhaps resulting in the decline of traditional industries.
- (3) Creation of new jobs: Employment for local and imported labor, generating local cash flow, induced and indirect employment, would be generated.
- (4) Increased demand for housing: Housing demand from the OCS labor force would have a significant impact on the community's limited housing supply.
- (5) Environmental impacts: Resulting oil spills and dredging may have significant impact on Morro Bay's wetlands.

Beyond the impacts that would be posed by the location of an onshore support base in Morro Bay, the development of tracts in the Outer Continental Shelf would have the following additional impacts on the community:

- (1) Air Quality: San Luis Obispo County is an air quality attainment district and meets its air quality standards. OCS development is a problematic source of hydrocarbon emissions and may cause the County's air quality to exceed standards. Further information regarding impacts and mitigation measures which would reduce impacts is needed.
- (2) Oil Spills: An oil spill in Morro Bay would have a devastating effect on the wetland and associated wildlife species, including rare and endangered bird species. An oil spill on the beaches may severely reduce tourism, vital to the City's well-being.
- (3) Visual Impacts: The siting of oil platforms offshore may impact coastal views. These visual concerns must be balanced, however, with the nation's increased need for domestic fuel supplies.

Personnel employed in commercial fishing and support industries may be recruited by the oil industry. This could lead to a decline in the industry. Other than these, however, personnel for OCS development will most likely be recruited from other areas due to the requirement for skilled help. While the percentage of new personnel (non-local to those hired who are local) ranged from 31 percent to 85 percent (Department of the Interior, 1978), it must be noted that the lower numbers come from areas, unlike San Luis Obispo County, with an already established oil industry.

With the existing limit of new residential development in the community due to the water moratorium, housing for OCS support personnel may not be available. Typically, employment is greatest during the development phase of OCS because facility construction requires a large labor force.

Later, when oil and gas production becomes the primary activity, employment typically declines rapidly. The primary concern for the community would be the City's ability to accommodate housing, public services, and other secondary impacts of service base development.

Environmental impacts stemming from service base (and other facilities) development would be of the same nature as any other comparably scaled development, except for those stemming from harbor expansion or oil spills. Coastal wetlands and associated wildlife are extremely sensitive to dredging, the resulting increased turbidity and sedimentation and oil from spills. The preliminary draft EIS indicated damage to a wetland from an oil spill may last for up to ten (10) years.

Alternatives to locating a service base in Morro Bay would either be the Chevron Estero Bay tanker-terminal, Port San Luis or the proposed service base at Gaviota. The proposed base at Gaviota could potentially accommodate the heavy industry requirements of OCS while smaller scaled facilities could be sited at a location within the County.

To conclude, accurate identification of specific onshore OCS-related facilities and their potential impacts on the community is not possible until the exploration phase is over. Short of this, projections of recoverable resources and facility requirements can be made. These projections or scenarios are currently being developed by the County through a Coastal Energy Impact Program (CEIP) grant. Identification of potential offshore development and onshore facility requirements will allow proper planning for impact stemming for OCS development in the event Lease Sale #53 and other subsequent sales occur and commercial development begins.

F. POLICIES ON ENERGY-RELATED DEVELOPMENT

1. General Policies

Policy 5.01. The City shall designate the existing P G & E parcel and the Chevron pier parcel as coastal-dependent industrial uses. Any proposals for energy dependent industrial uses within zones designated for general industrial development will require an amendment to the land use plan consistent with Section 30515 of the Coastal Act. Power plant expansion on P G & E owned property shall have priority over other coastal dependent industrial uses. Power plant expansion shall be limited to small facilities whose location would not further affect the views of Morro Rock from State Highway One and high use visitor-serving areas, consistent with Policy 12.11.

Policy 5.02. Interim uses shall be allowed in areas designated coastal-dependent industrial uses until the existing owners have an approved coastal-dependent industrial development. Interim uses shall be limited to projects which have relocatable (not permanent) structures, are subordinate to the character of the visual setting, and are limited to the following uses:

- (1) Visitor access, paths, lookout points, etc.
- (2) RV parks
- (3) Parking
- (4) Picnic areas
- (5) Campgrounds

- (6) Restrooms and service facilities
 - (7) Playgrounds
 - (8) Temporary boat storage
 - (9) Temporary boat repair area
 - (10) Ancillary uses for the above
 - (11) Other uses serving visitors or commercial fishing which do not require permanent structures
- Policy 5.03. The Morro Bay Wastewater Treatment facilities shall be protected in their present location since an important operational element, the outfall line, is coastal-dependant.
- Policy 5.04. In the areas designated for industrial land uses, coastal-dependent uses shall have priority over non-coastal-dependent uses.
- Policy 5.05. In areas designated for coastal dependent industrial uses, any proposed service bases or proposed additions or modifications of the existing marine terminals and associated facilities (including storage tanks) and oil separation, treatment and processing facilities shall be subject to review and approval of the following:
- a. Phasing plan for the staging of development indicating the anticipated time table, and site plans for project initiation, expansion possibilities, completion, consolidation possibilities and decommissioning.
 - b. Oil spill contingency plan indicating the location and type of cleanup equipment, designation of responsibilities for monitoring, cleanup, waste disposal and reporting of incidents and provisions for periodic drills by the operator as requested by the County, to test the effectiveness of the cleanup and containment equipment and personnel.
 - c. Submission of the advantages and disadvantages of the proposed expansion and possible alternatives in terms of air quality, oil spill probability, frequency of vessel trips and loading/unloading time.
 - d. Submission of an examination of the effects the expansion has on the related transportation processing system.
 - e. Upgrading of the existing facilities in terms of reducing overall air pollutant emissions, assuring the adequacy of screening from public view including the use of decorative walls, fences, and landscaping, etc.
 - f. Preparation of an Environmental Impact Report.
 - g. Availability of adequate water, wastewater services and other public services either provided by the City or applicant.
- Policy 5.06. The routing of any new pipelines or transmission lines shall utilize whenever possible existing pipeline or transmission line corridors.
- Policy 5.07. Except for those pipelines and transmission lines exempted from coastal development permits under Section 30610 (d) and (f) of the Coastal Act as

defined by the State Coastal Zone Conservation Commission's interpretive guidelines adopted September 5, 1978, the City shall review and approve all proposed plans for the expansion of transmission lines and pipelines in and through City boundaries.

- Policy 5.08. The City will require that new pipelines and transmission lines are installed with suitable mitigation measures such as erosion control, revegetation, and other measures necessary to protect all scenic resources and habitat values.
- Policy 5.09. The City shall participate in the biennial review of power plant locations by the Coastal Commission and make recommendation where amendments, alterations, or conditions are needed.
- Policy 5.10. The City shall request CEIP or other available state or federal funding to assist in the evaluation of OCS development with respect to socioeconomic and environmental concerns at such time as private industry proposes specific OCS-related development within or adjacent to the city limits.
- Policy 5.11. Due to the presence of sensitive wetlands and endangered species habitat and the City's status as a Bird Sanctuary, the City will advocate that the Coastal Commission change the recommendation of its Power Plant Siting Study to designate all areas within the City limits except the site presently occupied by the P G & E Power Plant, as unsuitable for power plant siting, and designate the City's primary coastal-dependent permitted use as commercial fishing and recreation.
- Policy 5.12. Due to limited available space, constraints of the harbor, the sensitivity of the Morro Bay Estuary, the needs of the commercial fishing industry, and the needs of tourism and recreation near the bay, Morro Bay opposes the development of a major OCS onshore support base and other competing support facilities within the City limits.
- Policy 5.13. The City wishes to go on record as opposing the leasing of OCS lease tract #53.
- Policy 5.14. In the event the Federal or State government mandates that minor OCS support facilities must be accommodated here, such facilities may be allowed as a conditional use in the City provided that:
- a. The facilities shall not interfere with public shoreline access or access to Morro Rock.
 - b. The development shall financially participate in the programs to stabilize the dunes between Morro Rock, the P G & E power plant, and Morro Creek. Any Coastal Conservancy funding expended on dunes stabilization should be reimbursed commensurate with the benefit received.
 - c. The development shall involve construction of waterfront facilities that can be shares or used by the commercial fishing industry.
 - d. Any storage areas shall be inconspicuously located and extensively screened from public view with heavy landscaping.

- e. All heavy equipment or large quantities of bulky supplies shall be stored and transported from other existing service bases or the proposed Gaviota supply base.
- f. Development will be required to fully assess and mitigate the effects of a partial crew base on Morro Bay's economy and housing supply.
- g. Any such development shall procure and furnish any water supplies needed for their operation and maintenance and for the maintenance of their personnel without impinging on Morro Bay's available supply and without cost to the City.
- h. Any such development shall likewise procure and furnish any sewer capacity needed for their operation and maintenance and for the maintenance of their personnel without impinging on Morro Bay's existing capacity and without cost to the City.
- I. Any such development shall agree to reimburse the City for the cost of police, fire, public works and other City services made necessary by reason of the development.

2. Specific Planning Area Policies

The following policies apply to specific industrial land use areas within the North Morro Bay, Del Mar and Bayfront Planning Areas.

Area 1 - North Morro Bay

- Policy 5.15. In addition to the requirements set forth in the applicable general policies, any proposals to improve, upgrade, or expand Chevron, U.S.A.'s facilities shall be conditioned to allow for public access provided that access will not endanger the public or interfere with industrial operations.
- Policy 5.16. At such time as Chevron U.S.A. no longer requires the existing property for petroleum operations, the City requests that a State or County agency or the City be offered the right of first refusal to acquire the pier and pier property for recreational purposes.
- Policy 5.18. Should it become necessary for the U.S. Navy to expand its jet fuel storage operations in Morro Bay, existing tankage and new facilities shall be located if possible at or adjacent to either the Chevron, U.S.A. site or at a site in the hills behind the City of Morro Bay, subject to appropriate measures to mitigate impacts to view and other resources.

Area 2 - Del Mar

- Policy 5.19. Any proposals to reactivate or improve Texaco, Inc. facilities shall be limited to those uses which are compatible with existing surrounding residential development and which do not represent a physical expanding of the previously existing operations such as office space.

Area 3 - Bayfront

- Policy 5.20. Any expansion of the P G & E power plant shall give priority to the options that would best utilize available on-site space. Additionally, no dunes areas should be disrupted unless there is no other less environmentally damaging alternative. P G & E shall contribute to the dunes stabilization program and reimburse their pro rata share of any Coastal Conservancy (or City) expenditure for dune stabilization in this area.
- Policy 5.21. As a condition of any expansion of the P G & E power plant, the City will require substantial landscaping and screening to mitigate the visual impacts of existing and future facilities; with particular emphasis on screening the facilities located between the power plant and Highway One.
- Policy 5.22. The City shall insist that the present operation and any further expansion of the P G & E Plant conform to the standards of the Federal and State pollution control requirements and emission levels be maintained.