DOE/EA-1003

Environmental Assessment on the Leasing of the Strategic Petroleum Reserve St. James Terminal

St. James Parish, Louisiana

U.S. Department of Energy

January 1995

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Washington, DC 20585

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[6450-01]

DEPARTMENT OF ENERGY

10 CFR Part 1021

Finding of No Significant Impact on Leasing of the Strategic Petroleum Reserve, St. James Terminal, St. James Parish, Louisiana

AGENCY: Department of Energy

ACTION: Notice

SUMMARY: The Department of Energy (DOE) has prepared an Environmental Assessment (EA), DOE/EA-1003, of the proposed leasing of the Strategic Petroleum Reserve (SPR) St. James Terminal to private industry. The St. James Terminal would be used by the lessee for crude oil common carrier operation, resulting in continuous rather than intermittent use of the terminal; however, the basic functional activities of the St. James Terminal would not change (i.e., short-term storage and movement of crude oil).

Based on the analyses in DOE/EA-1003, DOE has determined that the proposed action is not a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321, et seq.). Therefore, the preparation of an Environmental Impact Statement (EIS) is not required, and DOE is issuing this Finding of No Significant Impact (FONSI).

ADDRESSES: Copies of the EA are available from Mr. Hal Delaplane, Strategic Petroleum Reserve (FE-423), Department of Energy, 1000 Independence Avenue, S.W., Washington, D.C. 20585, telephone (202) 586-4730, facsimile (202) 586-7919.

The EA also is available for review at the above address in the Freedom of Information Reading Room, 1E-190, during normal operating hours, 9 a.m. to 4 p.m., Monday through Friday.

FOR FURTHER INFORMATION ON THE DOE NEPA PROCESS, CONTACT:

Ms. Carol Borgstrom, Director, Office of NEPA Oversight (EH-25), Department of Energy, 1000 Independence Avenue, S.W., Washington, D.C. 20585, telephone (202) 586-4600 or (800) 472-2756.

SUPPLEMENTARY INFORMATION:

I. Proposed Action

The proposed action is to lease the SPR St. James Terminal to private industry for crude oil common carrier operation. St. James Terminal, which provides oil terminaling services for the SPR Bayou Choctaw and Weeks Island storage facilities and connects them to the commercial infrastructure, is located in St. James Parish, Louisiana, on the west bank of the Mississippi River about 48 kilometers (30 miles) southeast of Baton Rouge.

St. James Terminal is currently underutilized. DOE requires a modest level of periodic use to support site standby activities and future oil movement operations and dedicated use in the event of a President-ordered SPR drawdown. A shared-use arrangement with industry could result in more effective use of St. James Terminal, reduce the operational cost of the SPR, and provide a source of revenue for the Government.

Industry has expressed interest in leasing the St. James Terminal as well as several DOE pipelines. A potential lease of the St. James Terminal can be sufficiently characterized to enable the preparation of an EA in advance of proposals. The property to be leased would include six crude oil storage tanks, a pumping station, two marine docks, and interconnecting piping, including pipeline connections to two neighboring crude oil common carrier terminals, Capline and LOCAP.

The St. James Terminal would be used for commercial operations carried out by the lessee, but the basic activities of the Terminal would not change. The lessee would be responsible for supporting DOE's requirements for fill, drawdown, and oil movements to and from SPR storage facilities. Commercial use would be subordinate to DOE use in the event of a national energy emergency. There would be no material modification of St. James Terminal's capabilities or equipment; commercial use would be limited to existing connections. Because the Terminal has no vapor recovery capability, tankers could be unloaded at the docks but not loaded under existing limits on air emissions.

In contrast to the case with St. James Terminal, no meaningful EA of leasing DOE pipelines can be done in advance of proposals because of the dependence of such an action on project specific information, such as the location of new connections, other material modifications, and related new construction that would not occur without the lease. Consequently, the NEPA process to address leasing DOE pipelines must be conducted in conjunction with the competitive procurement provisions of DOE's NEPA Implementing Procedures, 10 CFR Part 1021.216. Therefore, leasing of DOE pipelines is outside the scope of the proposed action considered in the EA on leasing of the St. James Terminal.

II. Alternatives

Under the no action alternative, DOE would continue to operate St. James Terminal exclusively to support SPR requirements. Utilization would be expected to be comparable to routine operations of the past ten years. Over this period, St. James Terminal handled an average of 22,750 barrels per day (bbl/day) in routine operations. Most of this (19,100 bbl/day or 84 percent) was intermittent standby oil movements between the terminal tanks and Bayou Choctaw and Weeks Island associated with site and pipeline maintenance and operational tests. The rest, an average of 3,650 bbl/day, were marine receipts across the docks during site fill. The SPR is currently not filling and has no plans to fill, although Bayou Choctaw has 23.3 million bbl of unfilled capacity that could be filled under the no action alternative.

Over the past ten years, there have been three limited drawdowns during which routine operations were suspended. A total of 6,403,250 bbl was delivered, mostly by pipeline, to buyers over a total of about 150 days.

In summary, once site fill operations end, standby operations at St. James Terminal involve intermittent activity at a small fraction of the facility's capability. Under the no action alternative, the standby mode likely would continue for the foreseeable future.

Under the proposed action, private industry would operate the St. James Terminal as a crude oil common carrier under a five year lease (with a possible five year extension at the option of the Government). The lessee would pay DOE for the use of the facilities and would be responsible for their routine operation and maintenance and attendant costs. Major maintenance costs, such as equipment replacements or upgrades and storage tank certifications, would be subject to DOE funding. The proposed action would involve neither new pipeline connections nor new marine dock construction.

Based on industry's expression of interest, DOE believes that the primary commercial activity at the St. James Terminal most likely would be use of the tanks for short-term storage. The lessee would likely use the tankage for temporary or breakout storage when transferring oil (originating from either offshore ports, nearby docks, or domestic production) to refineries via existing pipelines. The docks probably would be used infrequently if at all. Occasionally, a tanker might be diverted to St. James Terminal from another port or

terminal to avoid vessel demurrage charges. As discussed above, DOE assumes that no commercial loading of tankers would occur at St. James Terminal.

The lease would require the lessee to comply with applicable regulations and permits, but assuring compliance would be the responsibility for the cognizant regulatory agencies.

To compare the impacts of a leased operation with the baseline of the no action alternative, DOE evaluated a reasonable use case and a theoretical maximum use case. Based on confidential submissions received in response to its solicitation of interest and on the known characteristics of the regional market, DOE estimates that reasonable use by the lessee would range from 100,000 to 200,000 bbl/day via pipelines connected to St. James Terminal. In addition, DOE assumes no more than one shipment of 450,000 bbl/month would be unloaded over the docks for an average of 15,000 bbl/day.

For a maximum throughput scenario, which would be highly unlikely based on current market conditions, DOE assumes that the limiting factor for pipeline transfers would be the current market for crude oil. Approximately 400,000 bbl/day of Capline terminal throughput is imported and is transferred via pipeline to the mid-continent. Although no expression of interest indicated such intensive use of the St. James Terminal's storage tanks, this rate can be taken as a theoretical limit for the Terminal. For unloading vessels, the docks would be uncoupled from the SPR's system fill constraints such that they could probably sustain 450,000 bbl/day based on DOE operating experience.

Another alternative considered but eliminated from detailed study was the sale of St. James terminaling services to private industry instead of a lease. Under this alternative, the use of the Terminal would be the same as the proposed action (i.e., use of the facilities for commercial crude oil movements in addition to SPR requirements). The difference between this alternative and the proposed action is that a lease would make the lessee responsible for the operation and maintenance, while under a sale of services alternative, the Government would continue to have day to day responsibility for the operation and maintenance of St. James Terminal plus the added responsibility of handling the commercial movements.

This alternative was not evaluated in detail because the sale of services in this situation would be contrary to DOE policy as set forth in DOE Order 4300.2B, which establishes that DOE may provide commercial services only if the services otherwise are consistent with DOE objectives and such services would not place the facility in direct competition with the domestic private or public sectors. Selling terminaling services at the St. James Terminal was determined to be in direct competition with the services offered by several crude oil transportation companies.

III. Environmental Impacts

Under the proposed action, use of St. James Terminal would change from intermittent operation to more or less continuous throughput of crude oil. Increased throughput would

result in minor impacts to air quality and an increase in potential impacts to water quality as a result of an increase in oil spill risk. Impacts to other environmental resources would be negligible.

During routine operations for the SPR, St. James Terminal is a small source of volatile organic compounds (VOC) emissions in St. James Parish. The principal source of VOC emissions is from the six external floating roof tanks, specifically, from working or shell wetting losses which are throughput-dependent. Idling tanker engines during unloading is a minor source. Other sources of VOC emissions, such as seal and fitting losses are small and independent of throughput. St. James Terminal VOC emissions for the most recent year (1993) are calculated to have been 30 tons. Emissions of particulate matter smaller than 10 micrometers (PM_{10}), sulfur dioxide (SO_2), and carbon monoxide (CO) are inconsequential, and emissions of oxides of nitrogen (NOx) are small (1.1 tons/year). Idling tanker engines during unloading is the major source of NOx. Under the no action alternative, these emissions would remain essentially unchanged.

Under the proposed action, tank shell wetting losses would increase with increased throughput. For the reasonable use case of up to 200,000 bbl/day via pipelines plus one tanker shipment of 450,000 bbl per month (for an average 15,000 bbl/day received across the docks), VOC emissions would increased by a maximum of 5.7 tons/year to 36 tons/year or less. As a result of tanker engine idling, NOx emissions would increase by 2.78 tons/year to 3.8 tons/year. For the maximum use case of 400,000 bbl/day via pipelines plus one tanker

shipment of 450,000 bbl/day received across the docks, VOC emissions would increase by 26 tons/year to 56 tons/year and NOx emissions would increase by 81 tons/year to 82 tons/year. Even for the maximum use case, emissions at these levels would not contribute to the frequency or severity of ozone violations. It can be assumed the proposed action would be in compliance with the State's Implementation Plan.

The increased handling of crude oil under the proposed action would cause only a minor increase in spill risk onshore at the Terminal and a minimal increase in spill risk from tankers in the lower Mississippi River. For the reasonable case, the number of spills per year at the Terminal onshore is estimated to increase by less than two to 2.0 and the average spill size is estimated to increase by more than 237 barrels to 247 barrels. This quantity would likely be contained onsite by existing containment structures, devices, and procedures. At the docks and in the waterways, it is estimated there would be 0.1 spill per year from a vessel (one spill per 10 years) with an average size of 22 barrels. For the maximum use case, the average spill size would be the same but the number of spills per year is estimated to grow to 11.3 - 8.0 onshore at the Terminal and 3.3 from vessels at the docks or in the waterway.

Under the proposed action, it would be unlikely for marine transport of crude oil to St. James Terminal to be routine. Therefore, oil spill impacts in the lower Mississippi River probably would be nil. If, as expected, the proposed action were to enhance transport into

the Capline system via pipeline from the Louisiana Offshore Oil Port, it could reduce marine transport of crude oil in the lower Mississippi River and the associated spill risk.

The staffing for the commercial operation of St. James Terminal would probably be less than under the no action alternative. DOE would mitigate any direct impacts on affected workers by offering a transfer of employment to nearby SPR facilities. No impact to the regional economy would be anticipated.

St. James Terminal is a small quantity generator of regulated wastes. A lessee's activities could easily result in an increase in waste generation without a material change in status under the Resource Conservation and Recovery Act. Any increase in waste generated by the lessee would probably be minor and capable of being handled by existing facilities. Under the Emergency Planning and Community Right-to-Know Act, St. James Terminal currently does not trigger Section 313 reporting thresholds but does report to state and local authorities under Section 312.

Finally, the proposed action would take place within a developed industrial plant property, and would not cause any adverse impacts to natural and scenic resources, cultural, historical, and archaeological sites, Native American land, other minority or low-income populations, ambient noise levels or threatened or endangered species. No sensitive environments would be involved. The proposed action would not impact the 100-year floodplain, because the St. James Terminal is protected by a levee and is in a nonflood zone.

No cumulative or long-term impacts of the proposed project have been identified.

IV. Determination

Based on the information and analyses in the EA, DOE has determined that the proposed leasing of St. James Terminal is not a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. Therefore, the preparation of an EIS is not required and DOE is issuing this FONSI.

Issued at New Orleans, Louisiana, this 26th day of January, 1995.

William C. Gibson, Jr.
Project Manager
Strategic Petroleum Reserve

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SUMMARY

The U.S. Department of Energy (DOE) proposes to lease the Strategic Petroleum Reserve's (SPR) St. James Terminal to private industry. The St. James Terminal consists of six storage tanks, a pumping station, two marine docks and ancillary facilities. DOE believes that the St. James Terminal presents an opportunity to establish a government-industry arrangement that could more effectively use this asset to serve the nation's oil distribution needs, reduce the operational cost of the SPR, and provide a source of revenue for the Government. DOE solicited interest in leasing its distribution facilities in a notice published March 16, 1994.[1] In response, industry has expressed interest in leasing the St. James Terminal, as well as several DOE pipelines, to enhance the operation of its own facilities or to avoid having to construct new ones. Under such a lease, industry use would be subordinate to DOE use in the event of a national energy emergency. This Environmental Assessment describes the proposed leasing operation, its alternatives, and potential environmental impacts.

Under the proposed action, the St. James Terminal would be used to support commercial operations carried out by the lessee, but the basic functional activities of the St. James Terminal would not change (i.e., storage and movement of crude oil). The lessee would be responsible for supporting DOE's requirements for fill, drawdown, and oil movements to and from DOE storage sites. Under the no action alternative, routine operational readiness activities at the Terminal would continue. The major difference between the no action alternative and the proposed action is that under the proposed action the activity at the Terminal would change from intermittent to continuous and therefore the volume of oil received, stored, and moved would increase.

Impacts to air, water, socioeconomics and other environmental resources were examined for both alternatives. Operating in its mission readiness mode, the St. James Terminal is a small source of volatile organic compound (VOC) emissions in St. James Parish. Thus, the no action alternative represents no change in air quality within the region. Under the proposed action, the primary cause of increased VOC emissions would be greater use of storage tanks; tanker engine idling during unloading would also cause some VOC emissions. Tanker engine idling would be the major source of nitrogen oxide (NO_x) emissions under the proposed action. All of these emissions represent minimal air quality impacts. Even if the St. James Terminal were in a non-attainment area, emissions from the proposed action, predicted to be 26 tons per year of VOC and 81 tons per year of NO_x in the maximum use scenario, would be far below levels that would trigger the applicability of regulatory programs designed to protect air quality and attain and maintain the National Ambient Air Quality Standards. Small emissions of other air pollutants (e.g., carbon monoxide (CO), sulfur dioxide (SO_2), lead (Pb), and particulate matter smaller than 10 micrometers (PM_{10})) would be expected.

Impacts to water from permitted stormwater and sewage discharges have been minimal during routine operations at the St. James Terminal. These impacts would not be expected to change under the proposed action. Based on an examination of the historical data, the proposed action would result in a minimal increase in the risk of oil spills. The predicted increase in spills is likely to be offset to some extent by regional shifts in oil distribution patterns from transportation up the Mississippi River by vessel, to the transportation of the oil by pipeline through the lower Mississippi region.

There would be no socioeconomic impacts to the local community under the no action alternative, because the staffing level at the Terminal would remain the same. If the Terminal were leased for private use, DOE assumes that a smaller staff would be needed and that not all of the staff currently at the St. James Terminal would be retained. DOE would offer transfer of employment to nearby SPR facilities. Thus, any direct impacts on specific individuals would be mitigated. Based on the minimal number of newly unemployed individuals as compared to the current employment numbers for St. James Parish, regional economic impacts would not be anticipated.

Additionally, the proposed action would take place on previously disturbed land, and would not cause any adverse impacts to natural and scenic resources, cultural, historical, and archeological sites, Native American land, other minority or low-income populations, ambient noise levels or threatened or endangered species. Sensitive environments potentially impacted by the proposed action would be limited to man-made wetlands, the floodplain area, and the Louisiana Coastal Zone. The proposed action would not impact the 100-year floodplain, because the St. James Terminal is protected by a levee and is consequently in a nonflood zone within the floodplain. The proposed action would not directly affect the coastal zone because leasing the facility would not result in any new construction. The proposed action would not result in any material change in generated hazardous waste, because the generation of waste is independent of crude oil throughput. No cumulative or long-term impacts of the proposed action would be anticipated.

1.0 PURPOSE AND NEED FOR ACTION

The Strategic Petroleum Reserve (SPR) was established in 1976 to store up to one billion barrels of crude oil to respond to an interruption in the supply of petroleum imports to the United States.[a] The SPR's facilities currently include five storage sites located in Texas and Louisiana, pipelines linking the sites to the commercial infrastructure, and the St. James Terminal located on the lower Mississippi River in Louisiana (Figure 1). The storage sites currently have the capacity to store up to 750 million barrels (MMB) of crude oil and currently have in storage approximately 592 MMB of crude oil. These facilities are connected to local and interstate commercial crude oil pipelines and marine terminals in the Gulf Coast to permit the rapid distribution to refineries in the event of an energy emergency. Integration with the commercial infrastructure allows SPR access to the common carrier pipelines that transport domestic and foreign crude oil from the Gulf Coast to inland refining centers. Marine distribution options allow SPR crude oil to be loaded on tankers at various commercial marine terminals and the St. James Terminal for transport to the East Coast, the Caribbean, and other coastal areas of the United States.

The St. James Terminal is located in St. James Parish, Louisiana, about 73 kilometers (45 miles) north of New Orleans and 48 kilometers (30 miles) southeast of Baton Rouge, on the west bank of the Mississippi River. It has two docks which can simultaneously load or unload two tankers of up to 123,000 dead weight tons at rates of up to 40,000 barrels (bbl) per hour each. There are six steel crude oil tanks with a total capacity of two MMB, a pump station, and metering and custody transfer facilities. The St. James Terminal can deliver crude oil by pipeline through connections to two neighboring commercial crude oil terminals, Capline and LOCAP.

The St. James Terminal is currently underutilized. The Department of Energy (DOE) built the St. James Terminal between 1978 and 1980 to provide oil terminaling services for the SPR Bayou Choctaw and Weeks Island storage facilities. The Terminal has received more than 125 MMB of oil across the docks and transferred it to the storage sites. Weeks Island was filled in 1982. While Bayou Choctaw has more than 23 MMB of unfilled capacity, DOE is currently not filling it and has no plans for fill. DOE requires a modest level of periodic use of the tanks, pumps, and pipelines to support standby activities at the sites and future oil movement operations and dedicated use in the event of a President-ordered SPR drawdown.

DOE believes that current circumstances present an opportunity to establish a government-industry arrangement for shared use of the St. James Terminal that could more effectively use this asset to serve the nation's oil distribution needs, reduce the operational cost of the SPR, and provide a source of revenue for the Government.

The St. James Terminal's connections to the distribution system are shown schematically in Figure 2. The Capline Terminal, which lies along the north boundary of the St. James Terminal, is the origin of the Capline Pipeline System, a major common carrier that can provide 1.1 MMB/day to Midwest refineries. At maximum operations, Capline is projected to receive 400,000 bbl/day of imported oil from Louisiana Offshore Oil Port, Inc. (LOOP) through the LOCAP

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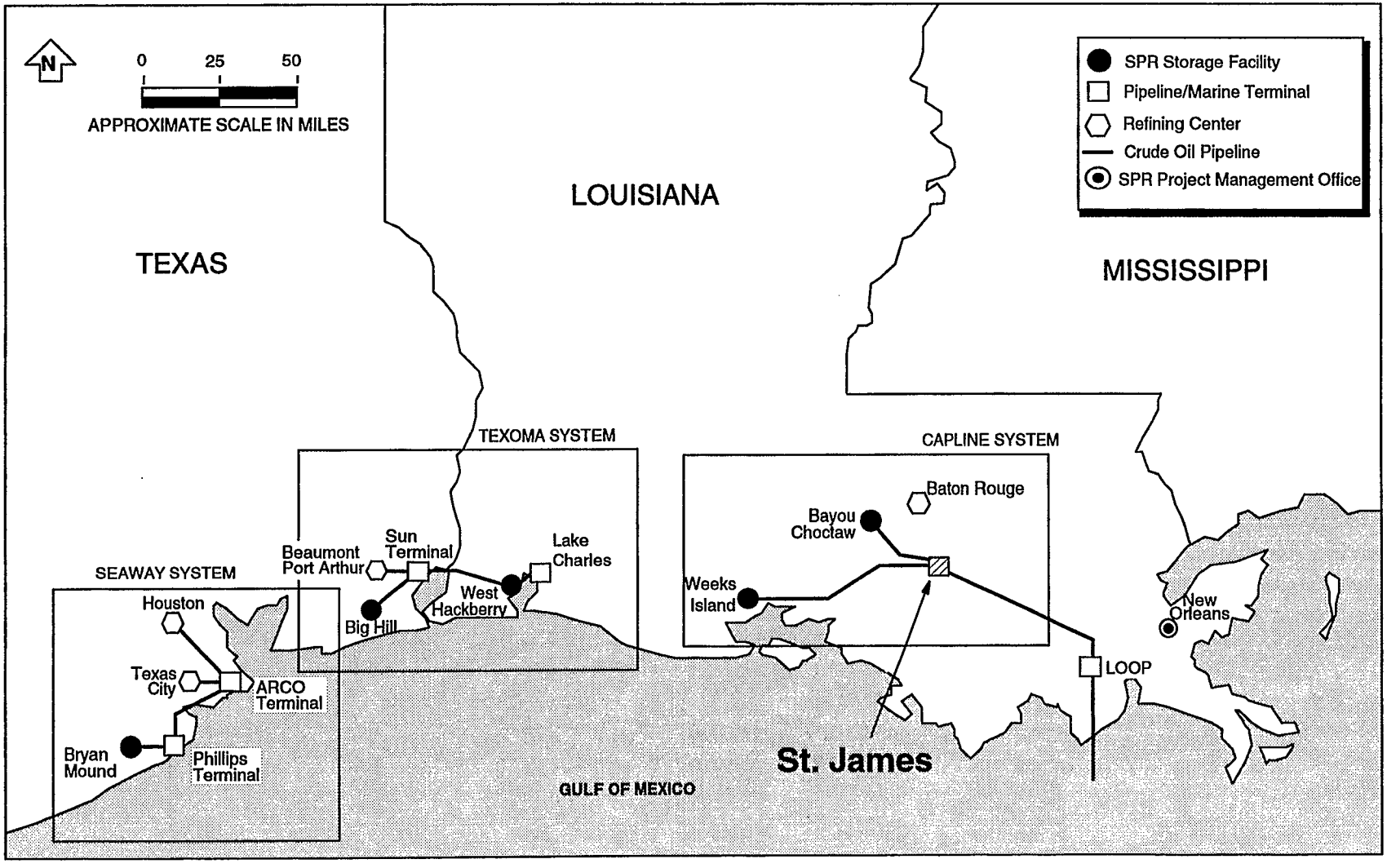
[a] The SPR's authorizing legislation, the Energy Policy and Conservation Act refers to "petroleum products," which are defined as including crude oil. Because SPR stores only crude oil, and normal commercial usage distinguishes between crude and refined products, this Environmental Assessment (EA) uses the term crude oil rather than the statutory term.

Figure 1
Location of SPR Facilities

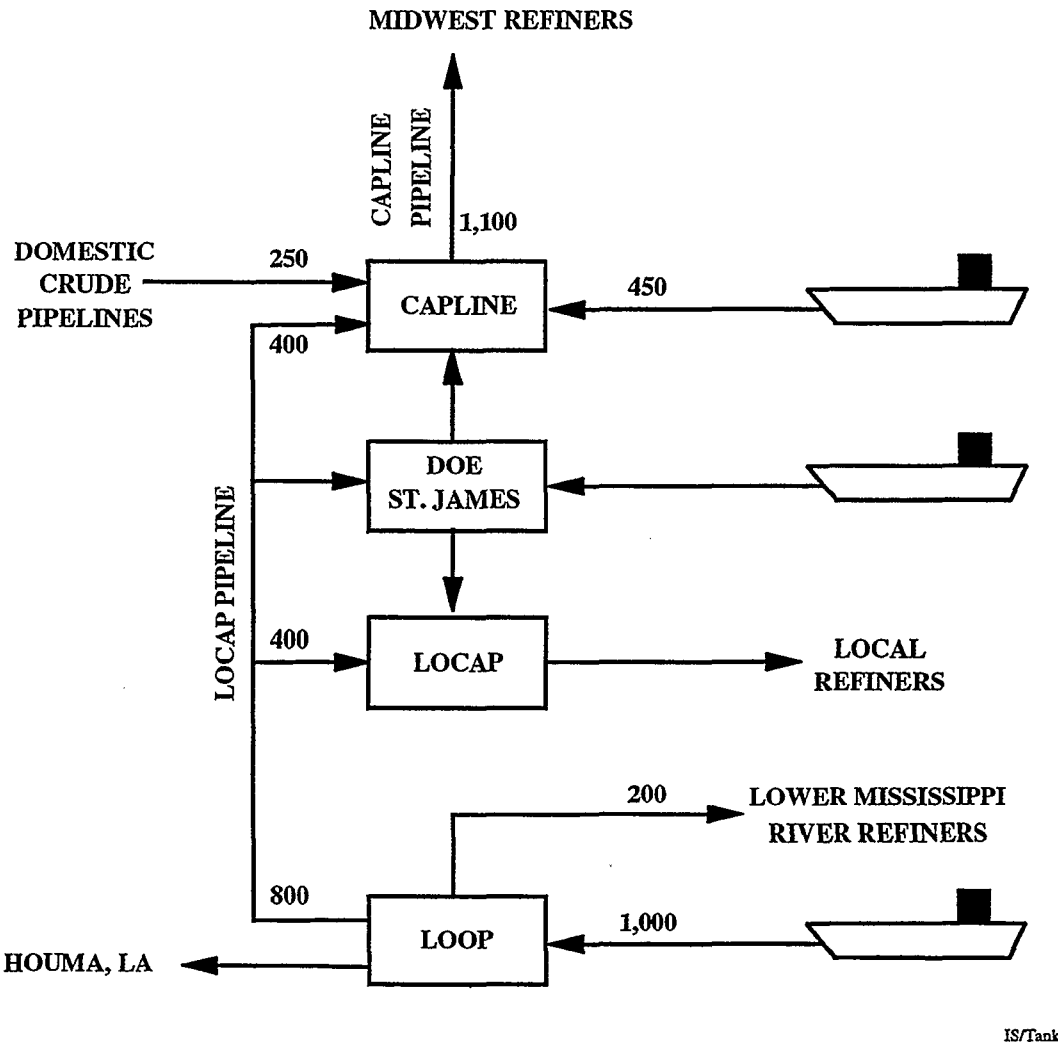


Source: U.S. Department of Energy, Strategic Petroleum Reserve.

Figure 2

System Interconnections and Commercial Oil Movements at St. James Terminal

(In Thousands of Barrels Per Day)



Pipeline, and about 450,000 bbl/day of imported oil across its four docks which are adjacent upriver from DOE's docks. In addition, Capline receives domestic crude oil by pipeline from Louisiana's producing fields offshore and onshore.

Capline is presently operating at capacity; the level of operations is not likely to change significantly over the next five years. DOE expects that as domestic production declines, the increasing demand for oil imports will tax Capline's upstream pipeline and marine import capabilities.

DOE also has a bidirectional connection to the LOCAP Terminal which is on the south side of the St. James Terminal. LOCAP distributes imports from LOOP by pipeline to local refineries along the lower Mississippi River. The St. James Terminal has complete flexibility in crude oil receipt and distribution operations. It can receive oil from both docks while simultaneously delivering oil to the Capline and LOCAP terminals.

A government-industry arrangement for the commercial use of the St. James Terminal would most likely serve to enhance pipeline distribution capability in the lower Mississippi River region, potentially modifying crude oil distribution patterns by augmenting the use of the commercial facilities connected to the St. James Terminal. Commercial interest would be expected primarily in using St. James Terminal's tankage to provide additional storage and segregations for crude oil in existing operations. It is less likely that there would be commercial interest in DOE's docks for routine operations, but commercial access for occasional tanker unloading could be useful for avoiding demurrage (penalty fees that occur when a ship stays longer in port longer than the allotted time).

A government-industry arrangement for the commercial use of the St. James Terminal could change the facility from intermittent to continuous operation. This Environmental Assessment (EA) assesses the potential impacts of such a change.

2.0 PROPOSED ACTION AND ALTERNATIVES

DOE proposes to lease the St. James Terminal to private industry for crude oil common carrier operation. The property to be leased would include the two marine docks, six crude oil storage tanks, the pumping station, and interconnecting piping, including pipeline connections to the neighboring crude oil common carrier terminals, Capline and LOCAP. The scraper traps[b] that represent the interface between the Terminal and the DOE crude oil pipelines to Bayou Choctaw and Weeks Island would be excluded.

DOE solicited interest in leasing these distribution facilities in a notice published March 16, 1994.[2] In response, industry expressed interest in leasing the St. James Terminal as well as several DOE pipelines to enhance the operation of its own facilities or to avoid having to construct new ones. Commercial use of DOE facilities would be subordinate to DOE use in the event of a national energy emergency. Based on industry responses, no modification of the Terminal's capabilities or equipment would be required; commercial use of the Terminal would be limited to existing connections.

A potential lease of St. James Terminal can be sufficiently characterized to enable the preparation of an EA in advance of proposals. In contrast, no meaningful EA of leasing DOE pipelines can be done in advance of proposals because of the dependence of such an action on project-specific information, such as the location of new connections, other material modifications, and related new construction that would not occur without the lease. Consequently, the National Environmental Policy Act (NEPA) process to address leasing DOE pipelines must be conducted in conjunction with the competitive procurement provisions of DOE's NEPA Implementing Procedures, Title 10, Code of Federal Regulations, Part 1021.216 (10 CFR Part 1021.216). Therefore, leasing of DOE pipelines is outside the scope of the proposed action and this EA.

2.1 Description of Existing Facility

The St. James Terminal storage facilities occupy approximately 42 hectares (105 acres) of land, and the marine docks occupy an additional 19 hectares (48 acres). The marine docks are located on the west bank of the Mississippi River at mile post 158.1 and 158.3, about 3 kilometers (2 miles) southeast of the storage tanks, and commercial pipeline connections. The relative locations of the docks, tanks, and pipelines, as well as other terminals nearby, are shown in Figure 3. Figure 4 is a site plan of the Terminal. Photographs of the St. James Terminal and marine docks are presented in Appendix A. Further information about the Terminal is available in the document entitled *St. James Marine Terminal Facility Description* (DOE/FE-0285).

Storage Tanks

The St. James Terminal contains four 400,000-bbl, 91-meter (300-foot) diameter floating roof storage tanks and two 200,000-bbl, 65-meter diameter (212-foot) floating roof storage tanks, giving the facility a total shell storage capacity of two MMB. The tanks are constructed on a concrete ring wall and compacted sand base foundation with a single skin floating roof. The six storage tanks are divided into two groups of three, each of which is surrounded by a secondary containment dike. Each of the two dikes could contain the volume of one of the 400,000-bbl

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[b] Scraper traps are the devices at the end of the pipeline used for retrieving scrapers, known as pigs, which are cylindrical devices inserted in pipelines for cleaning and integrity testing.

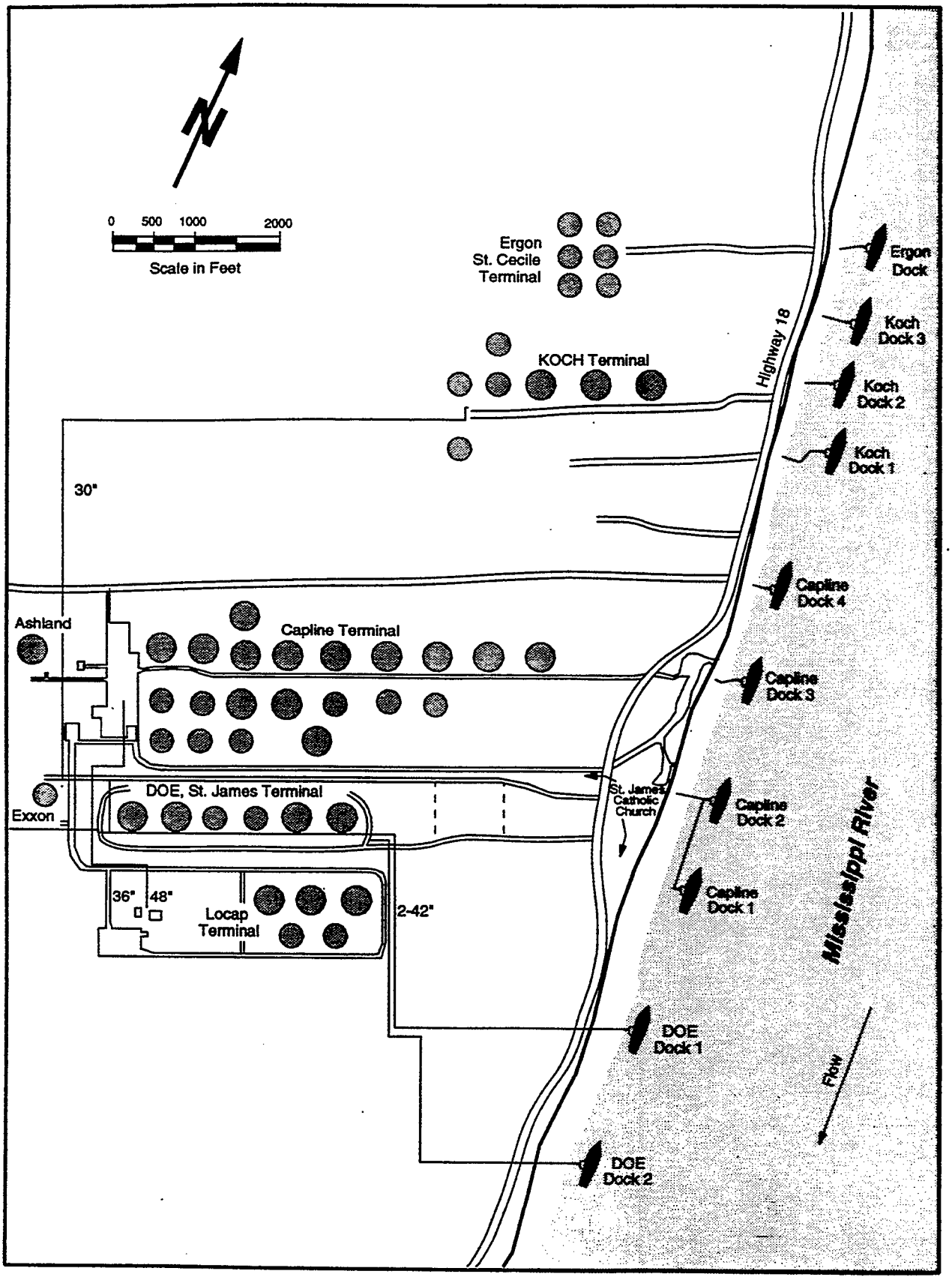

Figure 3
Map of the Local Area Surrounding the St. James Terminal

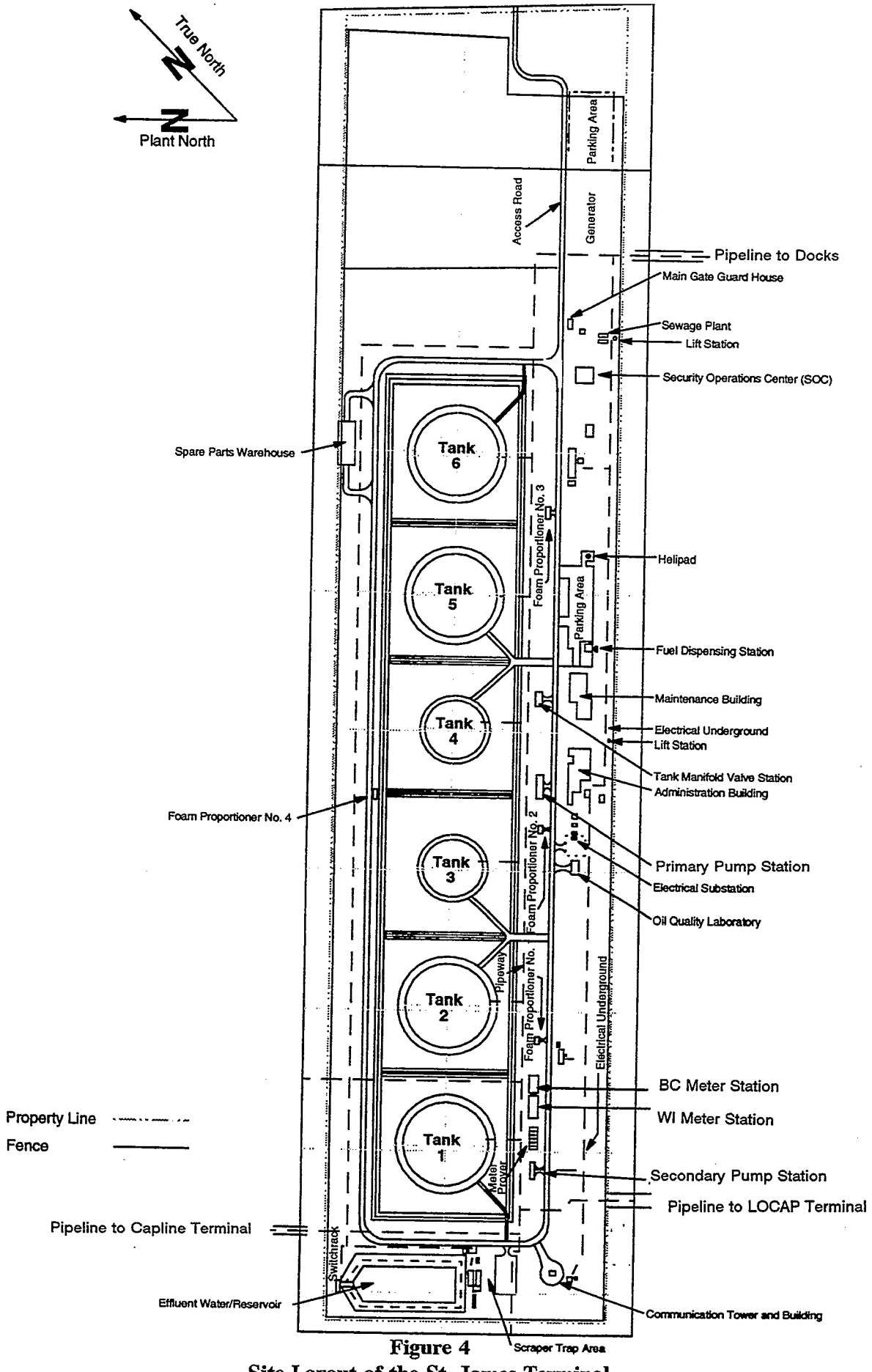

Figure 4
Site Layout of the St. James Terminal

tanks with some freeboard allowance (i.e., additional capacity to accommodate stormwater). Smaller internal dikes between individual tanks are designed to contain minor spillage.[3]

Pumps and Pipelines

The Terminal's main pump station has five pumps with a discharge capacity of 25,000 bbl/hour (Figure 4). The pumps are manifolded into two independent units of two pumps each; the fifth pump is a spare. The Terminal is equipped with two separate meter stations for crude custody measurement. Each meter station has three 12-inch turbine meters of 18,000 bbl/hour capacity each. Pipeline connections include a 36-inch, 59-kilometer (37-mile) pipeline to Bayou Choctaw; a 36-inch, 107-kilometer (67-mile) pipeline to Weeks Island; a 30-inch, 0.8-kilometer (0.5-mile) pipeline to the adjacent Capline facility; and a 36-inch bi-directional 0.2-kilometer (0.1-mile) connection to the LOCAP terminal.

Marine Docks

Each of the St. James Terminal docks is connected to the storage tanks and auxiliary equipment with a 42-inch pipeline, a 6-inch oily water line, and a 2-inch potable water line. In addition, a 20-inch line from the Terminal carries the site's effluent to a permitted outfall at dock 1. Each of the two docks can operate independently and simultaneously, and each has a design unloading rate of 40,000 bbl/hour. On a sustained basis, tanker unloading rates are substantially lower due to tanker pumping rates, dock utilization, and Terminal tank capacity. Experience has shown that the sustainable unloading rate using both docks simultaneously is about 450,000 bbl/day.

The docks are made of concrete and steel, and are equipped with four mooring and four breasting dolphins each (used as shock absorbers to protect the docking platform from the impact of a tanker as well as to tie-off the tanker in the docked position). Other dock equipment includes an anchor buoy, three hydraulic arms for tanker loading and unloading, a hydraulic dock crane, a control room, three in-line samplers with positive displacement pumps that are manifolded to a single collection pot, emergency shutdown controls, a foam proportioner station, and spill containment equipment. The marine docks can accommodate vessels up to 123,000 dead weight tons. The docks are curbed to contain approximately 700 bbl of oil (equivalent to a one-minute spill at the maximum flow rate of 40,000 bbl/hour). Oily waste and stormwater is pumped to the storage tank and auxiliary equipment area for separation. The docks do not possess capabilities for vapor recovery, fueling ships (bunkering), or unloading the oily water that collects in the bottom of ships (deballasting).

Fire Protection Systems

The St. James Terminal is equipped with extensive fire protection and oil spill containment equipment. This equipment meets all the requisite Federal and state environmental and safety regulations. The primary fire protection system consists of a 400,000 gallon water tank, two 1,500-gallon-per-minute pumps and a 50-gallon-per-minute jockey pump. A secondary system located at the upstream dock has two 10,000-gallon-per-minute pumps, two 1,300-gallon-per-minute pumps, and a 150-gallon-per-minute jockey pump. The Terminal maintains a 750 gallon-per-minute pumper fire truck which has dry chemical and foam agents. Portable extinguishers are located throughout the facility. Five foam proportioners with foam concentrate bladder tanks supply foam to tanks, pumps, and meter stations. Foam retention ponds collect foam discharge.

This equipment was designed for operation during emergency drawdown conditions, and would also be sufficient for the level of oil movement DOE anticipates during a lease of the Terminal.

2.2 Alternatives

Under the proposed action, the St. James Terminal would be used for commercial operations carried out by the lessee, but the basic functional activities of the Terminal would not change (i.e., storage and movement of crude oil). In addition, the lessee would be responsible for supporting DOE's requirements for fill, drawdown, and oil movements to and from DOE storage sites. The major difference between the proposed action and the no action alternative is that under the proposed action, the activity at the Terminal would likely change from intermittent to continuous and therefore the volume of oil received, stored, and moved would increase.

2.2.1 No Action

Under the no action alternative, the Government would continue to operate the St. James Terminal exclusively to support SPR requirements. The same level of activity would be expected with the SPR Management and Operating (M&O) contractor being responsible for handling loading/unloading/throughput of SPR oil. Because fill of the Weeks Island and Bayou Choctaw facilities is essentially complete, there is currently little crude oil movement activity at the facilities and under the no action alternative, they would remain essentially idle for long periods of time between emergencies.

Under the no action alternative, future use would be expected to be comparable to routine Government operations of the past ten years. Over the ten years preceding September 1994, there have been three limited drawdowns during which routine operations at the St. James Terminal were suspended. These drawdowns occurred during two test sales (December 1985 and October/November 1990) and during the Desert Storm operations (February/March 1991). Drawdown thus occurred four percent of the time, for a total of about 150 days, during which a total of 6,403,250 bbl was delivered through the Terminal to buyers, primarily by pipeline. The rest of the time, the Terminal was engaged in routine operations of fill, periodic movements associated with site standby operations, or was idle. Routine operations of the Terminal may be considered in two parts: dock use and pipeline throughput. These are discussed below.

Dock Use

The docks are used to transfer marine receipts of crude oil to the St. James Terminal tanks and/or Bayou Choctaw or Weeks Island during site fill. When there is no fill activity, the sites are in standby mode and the docks are inactive. Initial fill of Weeks Island was completed in 1982. Fill during the past ten years, in the amount of 12,761,009 bbl (3,650 bbl/day), has been exclusively of Bayou Choctaw. Bayou Choctaw has 23.3 MMB of available capacity that could be filled under the no action alternative; however, DOE is currently not filling and has no plans for fill. Thus, the docks have been used at a small fraction of their capability and are likely to be used even less under the standby mode in the future.

Pipeline Throughput

The main pump station and associated pipeline transfer system of manifolds, piping, and pipeline connections handle crude oil during both fill and standby activities. Standby activities

consist of crude oil movements between the Terminal tanks and Bayou Choctaw and Weeks Island associated with operational exercises, cavern workovers, site maintenance, pipeline integrity tests, and pigging. Over the past ten years, the volume of oil moved due to standby activity was 66,769,385 bbl, yielding an average pipeline throughput of 19,100 bbl/day. This rate may be combined with the average pipeline throughput from fill activity (3,650 bbl/day) to give an average total throughput of 22,750 bbl/day. Thus, once site fill operations end, standby operations involve intermittent activity at a small fraction of the pipeline transfer capability. Under the no action alternative, the standby mode likely would continue for the foreseeable future.

2.2.2 Leasing of the St. James Terminal

Under the approach being considered, private industry would take possession of the facilities under a five year lease (with a possible five year extension at the option of the Government). The lessee would pay DOE for the use of the St. James Terminal. The lessee would also be responsible for movements of SPR crude oil to and from the SPR storage sites at Weeks Island and Bayou Choctaw in support of the routine operations of fill or standby activities or in the event of drawdown. Under the lease, DOE would have preemptive rights for its drawdown distribution operations in the event of an energy emergency. Other times, the lessee would be required to operate the Terminal as a common carrier, thus providing for storage or transportation of crude oil for itself and other customers. The lessee would be responsible for routine operation and maintenance of the facilities and the attendant costs. Major maintenance costs of the facility such as equipment replacements or upgrades and storage tank certifications would be subject to DOE funding. The proposed action would include neither construction of new pipeline connections nor new marine docks.

Based on the expressions of interest, DOE expects that the primary commercial activity at the St. James Terminal would be use of the tanks for short-term storage. The lessee would likely use the tankage for temporary or breakout storage when transferring oil (originating from either offshore ports, nearby docks, or domestic production) to refineries via existing pipelines. When an existing terminal or port is unavailable for unloading crude (e.g., due to concurrent tanker unloading or emergency repairs), the lessee would be more likely to unload oil from tankers at the St. James Terminal marine docks, but continuous unloading is not expected.

DOE assumes that a lessee would not outload crude oil into tankers because currently there appears to be no demand for such services and, given the characteristics of the regional market, no demand is likely to arise. This is corroborated by the expressions of interest which did not indicate any intention of outloading.

In addition, the lessee would need to obtain a new air permit in order to outload tankers.[c] A lease would not preclude the lessee from seeking a permit enabling outloading, but Government approval would be required and a decision to approve outloading would have to be preceded by further NEPA review and appropriate documentation.

The lease would require the lessee to comply with applicable Federal, State, and local permits and regulations and would include a provision for termination by the Government for noncompliance. DOE would conduct semiannual site inspections to verify maintenance and

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[c] The Terminal currently has no vapor recovery capability; assuming that no loading takes place, a vapor recovery system would not be required.

Terminal readiness to support SPR requirements and would require the lessee to report unusual and off-normal occurrences to SPR, including spills and regulatory noncompliance events. However, DOE does not plan to assure the lessee's regulatory compliance. That would be the responsibility of the cognizant regulatory agencies.

In order to quantify the potential for increased oil spills and air emissions, DOE has developed throughput estimates for increased oil transfers by the lessee. Reasonable use estimates for the St. James Terminal pipelines are based on confidential submissions received in response to the solicitation of interest and on the known characteristics of the regional market. DOE expects that the reasonable throughput by the lessee could range from 100,000 to 200,000 bbl/day from pipelines connected to the St. James Terminal. Under the reasonable use scenario, DOE has hypothesized that the lessee would unload no more than one shipment of 450,000 bbl/month over the docks for an average of 15,000 bbl/day.

A maximum throughput scenario, although highly unlikely based on current market conditions, is also provided to assess the maximum potential for emissions and oil spills. DOE has assumed that the limiting factor for pipeline transfers in the maximum use scenario is the current market for crude oil. As shown in Figure 2, approximately 400,000 bbl/day of Capline terminal throughput is imported and is transferred via pipeline to the mid-continent. Although no expression of interest indicated such intensive use of the St. James Terminal's storage tanks, this amount can be taken as a theoretical limit for the Terminal. For unloading vessels, the docks would be uncoupled from the SPR's system fill constraints such that they could probably sustain 450,000 bbl/day based on DOE operating experience. Table 1 summarizes the daily and annual throughput volumes assumed under each scenario.

Table 1
Throughput Assumptions (bbl)

Throughput (bbl)	Reasonable Scenario		Maximum Use Scenario	
	Daily	Annual	Daily	Annual
Pipeline	100,000-200,000	36,500,000-73,000,000	400,000	146,000,000
Docks (Unloading)[d]	15,000	5,400,000	450,000	164,300,000
TOTAL	115,000-215,000	41,900,000-78,400,000	850,000	310,300,000

[d] Oil movement over the docks is based on the reasonable use assumption of one tanker of 450,000 bbl per month, or an average of 15,000 bbl per day; operationally, a month's discharge would occur over one to two days.

2.2.3 Alternatives Considered but Eliminated from Detailed Study

DOE considered the sale of St. James terminaling services to private industry instead of leasing the St. James Terminal. Under this alternative, the use of the Terminal would be the same as the proposed action (i.e., use of the facilities for commercial crude oil movements in addition to SPR requirements). The difference between this alternative and the proposed action is that the leasing of the Terminal under the proposed action would make the lessee responsible for the operation and maintenance, while under a sale of services alternative, the Government would continue to have day-to-day responsibility for the operation and maintenance of St. James Terminal plus the added responsibility of handling the commercial movements.

This alternative was not evaluated in detail because the sale of services in this situation would be contrary to DOE policy as set forth in DOE Order 4300.2B, which establishes that DOE may provide commercial services only if the services otherwise are consistent with DOE objectives and such services would not place the facility in direct competition with the domestic private or public sectors. Selling terminaling services at the St. James Terminal was determined to be in direct competition with the services offered by several crude oil transportation companies.

3.0 DESCRIPTION OF AFFECTED ENVIRONMENT

In the course of the development of the 750 MMB reserve, DOE has prepared a number of NEPA documents including Environmental Impact Statements (EISs) and EAs. This NEPA documentation of the phased development is summarized in Table 2 below. Early NEPA documents covered the acquisition and subsequent development of SPR facilities. More recently, EAs have covered site-specific activities concerning configuration and operational changes. The documents in these tables contain a detailed description of the regional and site-specific environments for the SPR facilities, including the St. James Terminal.

Table 2
NEPA Documentation of SPR

NEPA Documentation	Subject	Year(s)
Programmatic EIS[4]	The non-site-specific development of a 500 MMB storage program	1976
Supplement to the Programmatic EIS[5]	Non-site-specific expansion of the SPR to one billion bbl	1979
Eight EISs and Supplements[6]	Phase I of the three-phase development, acquisition and conversion of existing space in salt domes	1977 and 1978
Three EISs[7]	Phase II, the expansion of the SPR by solution-mining new space at existing and new salt dome sites	1978
Phase III EIS[8]	Phase III, the expansion by solution-mining to the present 750 MMB-capacity, and increase in drawdown rate to 4.5 MMB per day	1981
Five EAs[9]	Various configuration and operational changes in the SPR system	1985, 1987, 1990, and 1993
Draft EIS[10]	An expansion of the SPR to one billion bbl	1992

The programmatic EIS in Table 2 described the possible need to construct terminals for distribution of stored oil. Hydrocarbon emissions from tanker loading and unloading operations, including throughputs at the St. James Terminal, were examined in the 1979 supplement to the programmatic EIS. For the proposed Phase I and Phase II expansions of the Capline group salt domes (e.g., Weeks Island), the impacts of adding new docks and more storage tanks were assessed. The 1992 Draft EIS again addressed an expansion of the Terminal in association with expansion of the SPR.[e] Updated regional and site-specific environmental information for the St. James Terminal and its affected environment was developed for this NEPA document. This information is still valid and applicable and is incorporated by reference in this EA.

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[e] The proposed action detailed in the 1992 Draft EIS has not been carried out, nor has the EIS been finalized.

The St. James Terminal is located within the Louisiana Coastal Zone, as defined by the Louisiana State and local coastal Resources Management Act of 1978, La. R.S. 49:213.1 (Act 361). The area immediately adjacent to the Terminal is a combination of industrial land and farmland. In addition, as of 1981, there were over 100 residences or places of business within 1.5 kilometers (5,000 feet) of the St. James Terminal. However, the area around the St. James Terminal is mostly rural; sugar cane, tobacco cultivation, and cattle grazing are the dominant land-use activities in the surrounding area. St. James Parish has a total population of about 21,000 according to the 1990 census.

3.1 Air Quality

In the recent past, St. James Parish, the area in which the St. James Terminal is located, was in attainment for all of the National Ambient Air Quality Standards (NAAQS) with the possible exception of ozone.[f,g] The Parish was considered an ozone nonattainment area because ozone monitoring data was incomplete.[11] The State of Louisiana is currently applying to EPA for a redesignation of St. James Parish as a transitional attainment area for ozone; Louisiana considers the Parish to be part of the New Orleans consolidated metropolitan statistical area (CMSA).[12] The New Orleans CMSA is a transitional area; it was previously designated nonattainment for ozone but no longer has measured violations. The St. James Terminal does not maintain an ozone monitoring station; however, the Louisiana Department of Environmental Quality (LDEQ) maintains an ozone monitoring station in Convent, which is 1.6 kilometers (one mile) east of the Terminal, across the Mississippi River. The ozone level did not exceed the NAAQS of 0.12 parts per million (ppm) in either 1988 or 1989.[13] The highest ozone measurements were 0.119 ppm and 0.089 ppm, recorded on August 15, 1989 and October 11, 1988, respectively.[14,15] Recent conversations with LDEQ staff indicate that the St. James Parish is currently not in violation of the ozone NAAQS, although specific monitoring data for more recent years were not readily available.[16]

Although St. James Parish is no longer a nonattainment area, (i.e., it is considered transitional), it adjoins the Baton Rouge CMSA, which is a serious nonattainment area. The LDEQ Division of Air Quality imposes stricter reporting regulations on facilities that adjoin nonattainment areas. Potential emissions of such facilities are limited to 50 tons per year of

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f As authorized by the Clean Air Act, the United States Environmental Protection Agency (EPA) has established NAAQS for six pollutants: ozone, carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), lead (Pb), and particulate matter smaller than 10 micrometers (PM_{10}). Because ozone generally is not emitted directly but is formed in the atmosphere by photochemical reactions of nitrogen oxides (NO_x) and volatile organic compounds (VOCs), strategies to attain and maintain the ozone NAAQS typically involve reducing area wide NO_x and VOC emissions. Ozone, CO, SO_2, NO_2, Pb, and PM_{10}, along with NO_x and VOCs, are typically referred to as "criteria" air pollutants. The primary NAAQS specify ambient concentrations of these pollutants that are protective of the public health, while secondary NAAQS specify ambient concentrations that are protective of welfare (e.g., property, etc.).

g Areas in which a pollutant in the ambient air exceeds the primary NAAQS are designated as nonattainment for that pollutant; areas in which a pollutant does not exceed the primary NAAQS are designated as attainment for that pollutant. Thus, an area may be nonattainment for one or more pollutants, and in attainment for others.

volatile organic compounds (VOCs) or 100 tons per year of other criteria pollutants (including NO_x).[17]

3.2 Surface Water Environment

The St. James Terminal is located in the Mississippi River delta plain in the upper reaches of Louisiana's Mississippi River Basin, on the west bank of the river. In the vicinity of the St. James Terminal, this narrow river basin is bounded by the Barataria Basin to the west and the Lake Pontchartrain Basin to the east. The Mississippi River itself is bordered by man-made levees. An average of 1.5 meters (60 inches) of precipitation falls annually at Donaldsonville, Louisiana, about 13 kilometers (eight miles) northwest of the St. James Terminal[18] and although the site topography is very flat, stormwater that does runoff from the site drains either toward the Mississippi River to the east or toward the St. James Canal about 1.6 kilometers (one mile) to the west.

The hydrology of the Mississippi River system has been significantly altered in an attempt to reduce the risk of flooding which could result in loss of land and increased salinity in adjacent wetlands.[19] Water quality in the basin has been adversely affected by pesticides, priority and non-priority organics, siltation, pathogens, and suspended solids. The major water quality problems in the upper portion of the Mississippi River basin are fecal coliform and turbidity.[20] Sources of this contamination include numerous industrial and municipal discharges, agriculture, urban runoff, land disposal of industrial and municipal wastes, hydromodification, miscellaneous material spills, in-place contaminants, and heavy barge and ship traffic from the Gulf of Mexico and New Orleans.[21] In the St. James area, the Mississippi River is the main source of drinking water for most of the river Parishes.[22] As described in Section 2.1, the St. James Terminal has NPDES, and LWDPS permits for retained stormwater drainage and treated sanitary waste. Three separate outfalls are named in each permit, all of which are sampled prior to commingling then pumped to the discharge located at the upstream marine dock. The nearest downstream public intake on the Mississippi, however, is at least 16 kilometers (ten miles) from the St. James Terminal marine docks. There is a public intake that serves about 700 people in Convent directly across the Mississippi River from the Terminal, but this intake is not in the path of the downstream flow.

Surface water bodies other than the Mississippi River in the vicinity of the St. James Terminal are predominately freshwater systems. Saltwater intrusion, however, may occur during some portion of the year as a result of low flows. Designated uses for these water bodies include primary contact recreation, secondary contact recreation, and agriculture,[23] although designated water uses are only partially attained over much of the Mississippi River Basin due to the water quality problems described above.[24]

There are no jurisdictional wetlands within the main site area of the St. James Terminal. However, the areas between the Mississippi River and the flood protection levee, called battures, are jurisdictional wetlands and include man-made, freshwater wetlands and borrow pits created by excavation for levee construction along the river. This area is often inundated during high water periods. Plants that occur in these wetlands are duckweed, pennywort, mud plantain, white water lilies, and water lettuce. Willows are the dominant canopy species along the edge of these wetlands. The St. James Terminal is located in an area designated as Zone C, nonflood, by the National Flood Insurance Program and is protected from the 100-year floodplain by a

levee.[25,26] The Terminal was not damaged by the 500-year flood of 1993 in the upper Mississippi River Basin.

3.3 Socioeconomic Characteristics

Population trends for St. James Parish showed an increase from 21,495 in 1980 to a peak of 22,200 in 1986. Since 1986, however, population steadily dropped to 20,879 by 1990.[27] Three major towns located approximately ten miles east of the town of St. James are North Vacherie (population 2,354), Lutcher (population 3,907), and Gramercy (population 2,412). St. James is an unincorporated area and consequently has no confirmed population estimates.

The St. James Parish Sheriff's Department, located in the town of Vacherie, approximately 8 kilometers (5 miles) east of the St. James Terminal, is staffed by 100 employees, and has 38 patrol cars, and two boats. Fire protection for the Parish is provided by six volunteer departments with a total of 329 fire-fighters and 20 pumper trucks. A St. James fire station is located approximately four kilometers (two and a half miles) from the DOE facility. There are two local providers of ambulance service. Additionally, the St. James Parish Emergency Operations Center monitors weather patterns, stores information on potential hazards, generates digitized regional maps, and notifies emergency personnel.

The St. James Parish economy was once dominated by agricultural interests, which have recently been supplanted by a significant industrial concentration. St. James Parish has two major industrial parks, and a 800-hectare (2,000-acre) site under development. Petroleum, chemicals, sugar, and aluminum, as well as trapping and commercial catfish and crawfish production are significant industries in the Parish. Industrial trends in St. James Parish reflect those in the corridor between New Orleans and Baton Rouge, in which over 50 major facilities produce 20 percent of all U.S. chemicals and refine ten percent of U.S. gasoline. The influence of such industry is also reflected by St. James Parish's largest employers: Star Enterprise ((Texaco (723 employees)), Kaiser Aluminum (over 500 employees), and the Occidental and LaRoche chemical companies (each with approximately 250 employees)).

Agriculture, however, is still a significant economic force in the Parish. Soybeans are the largest income-producing crop, followed by cotton, rice, and sugar cane. Colonial Sugars, Inc. is the oldest industry in the Parish, begun in 1896, and currently employing 350 workers. St. James Parish is also the world's sole producer of perique tobacco. Total crop production for the Parish in 1990 had a gross farm market value of about $12,738,000. Additionally, several historical and archeological sites have spawned a tourism industry in the Parish.

The St. James Parish labor force stood at 9,325 in 1990, reversing a decreasing trend in labor force participation since 1987. Manufacturing is the largest employment sector in the Parish, with 3,359 employees, followed by the transportation/utilities industry (886 employees), and the retail industry (706 employees). The St. James Parish unemployment rate reached a peak in 1988 of 15.7 percent in contrast to the 1988 Louisiana and national averages of 10.6 percent and 5.5 percent, respectively. It subsequently declined by 1990 to 8.6 percent (compared to 6.2 percent for Louisiana and 5.5 percent nationally). Total earnings for St. James Parish in 1989 were roughly $204.5 million. This corresponds to a 1989 per capita income figure for St. James Parish of $12,873, as compared with per capita personal income figures of $12,923 and $17,592, for the State of Louisiana and the entire U.S., respectively.

The St. James Terminal currently employs 84 people, including two DOE representatives, 52 contractor maintenance and operations personnel, and 30 security personnel. Most of these workers commute to the St. James Terminal from residences within St. James Parish.[28]

3.4 Other Environmental Resources

Other than the man-made wetlands and the Louisiana Coastal Zone, there are no sensitive environments at the site. There are no endangered plant or animal species occurring at the St. James Terminal and based on information supplied by the U.S Fish and Wildlife Service in Louisiana and the Louisiana Department of Wildlife and Fisheries, there are no endangered plant or animal species occurring at or within a one-mile radius of the St. James Terminal. Only one endangered or threatened species, the Pallid Sturgeon, is listed in St. James Parish. Terrestrial wildlife of the area is primarily small mammals, reptiles and birds. The aquatic biological community of the lower Mississippi River is composed principally of nongame fish of little commercial or recreational value. Several nearby man-made wetlands and canals contain a number of the fish species that typically inhabit the fresh water areas of southern Louisiana.

The area surrounding the St. James Terminal is a relatively industrial and developed area without unique natural or scenic features. The Louisiana Natural Heritage Program conducted a data base search of the project area and found no rare, threatened, or endangered species or critical habitat in the area. The State of Louisiana performed a file search and determined that there are no recorded archeological or historical sites located within the St. James Terminal area.[29] There are no Native American Reservations in the vicinity of the Terminal.[30] As detailed in Section 3.2, the Terminal is in a nonflood area.

The existing ambient noise activity around the St. James Terminal includes agricultural and industrial land use and activities from the Terminal. Ambient sound level measurements when the Terminal was in a "shut down" mode ranged from 52 decibels (dBA) to 68 dBA.[31] As of 1981, there were over 100 residences or places of business within the 1,500-meter (5,000-foot) impact zone at St. James Terminal. The nearest of these residences is approximately 400 meters (one-fourth of a mile) away.[32,33,34]

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4.0 ENVIRONMENTAL IMPACTS

The no action alternative is the continued exclusive use of the St. James Terminal to support DOE operations. Because the impacts of the no action alternative assist in clarifying the existing Terminal operations, they are addressed in each subsection prior to analysis of the proposed action impacts.

Under the proposed action, the major difference from current use would be an increase in the crude oil volume throughput. DOE expects that the primary commercial activity at the Terminal would be the use of tanks for short-term storage and occasional use of the marine docks for unloading. DOE assumes that the proposed action to lease the St. James Terminal to private industry would involve no modifications to the Terminal's existing facilities. Based on current and projected crude oil transportation patterns, DOE would expect no commercial loading at the St. James Terminal. Therefore, the impacts to air quality would be minor. There would be an increase in potential impacts to water quality as a result of an increase in oil spill risk. Impacts to other environmental resources would be negligible.

Given the current commercial market for crude oil, commercial use of the St. James Terminal could result in a shift of crude oil transportation patterns on the lower Mississippi River to LOOP's terminal with subsequent inland transportation by pipeline. Therefore, it is likely that the environmental impacts discussed in this section would be offset by reductions in impacts at commercial terminals which would otherwise have handled the crude oil.

4.1 Air Quality Impacts

As detailed in section 4.1.2, the proposed action would result in only minor impacts to air quality. The principal source of emission increases would be working or shell wetting losses (which result from the evaporation of liquid clinging to the interior of the tank shell when the liquid level of the tank is lowered) from the six storage tanks. Calculations supporting the emissions estimates in this section are provided in Appendix B.

4.1.1 Impacts of the No Action Alternative

During routine operations of standby and fill, the St. James Terminal is a small source of VOC emissions in St. James Parish. Table 3 presents the estimated emissions from the Terminal for 1993. VOC emissions from the facility originate mainly from the Terminal's six storage tanks. PM_{10}, SO_2, NO_x, and CO emissions are due to various onsite pumps and engines (i.e., diesel pumps and emergency generators), which are tested regularly and operated as emergency power backups. Under the no action alternative, emissions at the facility would remain unchanged. Thus, the no action alternative would represent no change in air quality with the region.

Table 3
Current Emission Levels from the St. James Terminal

	Emissions (tons per year)				
	PM_{10}	SO_2	NO_x	CO	VOC
TOTAL	0.07	0.08	1.09	0.19	30.01

4.1.2 Impacts of the Proposed Action

Storage Tank Emissions

VOC emissions from external floating roof tanks are generally partitioned into seal losses, fitting losses, and working or shell wetting losses.

Seal and fitting losses are dependent on physical tank configurations and properties of crude oil (e.g., vapor pressure and molecular weight) and are independent of oil throughput volume. Because DOE assumes that the lessee would not alter the physical configuration of the tanks, no emissions change would occur from that factor. Although the crude oil handled by the lessee may have different properties than the crude oil normally handled in operational readiness mode, it is unlikely that the crude oil(s) handled by the lessee would have both a higher vapor pressure and a higher molecular weight of the condensed vapor.[h] Detailed information on the vapor pressure and molecular weight of the crude oil(s) that would be handled by the lessee would be needed to determine absolutely if emissions would increase or decrease. Some general conclusions, however, may be reached.

- Seal and fitting emissions would be more likely to decrease than increase or remain constant;[i] and

- The assumption that seal and fitting emissions remain constant is a reasonable "maximum emissions scenario."

Unlike seal and fitting losses, shell wetting losses or working losses are directly related to liquid throughput. Because leasing the facility would be likely to result in higher liquid throughput than DOE's operation of the facility in the readiness mode, emissions from shell wetting would be expected to increase. Assuming an average tank diameter of 84 meters (275 feet) and a crude oil density of 0.84 grams per milliliter (7.0 lbs per gallon), emissions from the facility would increase by about 2.6 tons per year of VOC for every 100,000 bbl of additional daily throughput. The emissions increase due to storage tank emissions under the maximum use scenario would be about 22 tons per year of VOC, and under the reasonable use scenario, the increase would range from about 2.6 to 5.2 tons per year, depending upon the exact nature of throughput.

The overall increase in VOC emissions from the tanks attributable to leasing the facility is expected to be below 5.6 tons per year. This assumes that there are no increases in seal or fitting losses, which represents a maximum emissions scenario. The overall predicted increase is small and would not be expected to cause NAAQS violations in the St. James Parish area.

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h In general, the higher the molecular weight of the condensed vapor, the lower the liquid vapor pressure. While this relationship is not always true there is a general tendency for smaller, lighter molecules to have higher vapor pressures than larger heavier molecules.

i An emissions decrease is possible because the vapor pressure of the liquid may drop dramatically (e.g., to 5 pounds per square inch (absolute), or psia), without a drop in molecular weight sufficient to offset the decrease in the change in value of the vapor pressure function.

Tanker and Other Emissions

Tankers unloading crude oil at the facility will emit air pollutants, which are primarily attributable to engine idling. It should be noted that there are no emissions due to the transfer of crude oil during unloading,[35] and tankers will have no emissions from ballasting if segregated ballast vessels are used.[36] Most modern tankers use segregated ballast and the U.S. Coast Guard has regulations pertaining to segregated ballast vessels. Therefore, the main source of emissions would be engine idling while the vessel is unloading. Assumptions used in calculating tanker emissions are described in Appendix B. Specifically, the annual emissions increase from tanker engine idling under the maximum use scenario would be 3.6 tons per year of VOC and 81 tons per year of NO_x, and under the reasonable use scenario the increase would be 0.12 tons per year of VOC and 2.7 tons per year of NO_x. For emissions increases of other criteria pollutants, all of which are very small, refer to Appendix B.

The St. James Terminal has a series of small diesel pumps and emergency generators. These diesel engines are minor sources of PM_{10}, SO_2, and CO and also emit small amounts of both NO_x, and VOC. To the extent the lessee operates the equipment more frequently, a small increase in emissions may occur but would not be expected to contribute to air quality problems in the area. Overall, these emissions would not be expected to contribute to violations of the NAAQS for ozone.

Summary and Analysis of Emissions Increases

The VOC emissions increases that would be attributable to the proposed action are summarized in Table 4; NO_x emissions increases are summarized in Table 5. The primary cause of increased VOC emissions would be greater use of storage tanks; tanker engine idling would also cause some VOC emissions. Tanker engine idling would be the major source of NO_x emissions under the proposed action. The potential impact of these emissions may be determined by comparing the increases to programs designed to maintain and attain the NAAQS.

Table 4
Reasonable and Maximum Use Increases of VOC Releases to Air (Tons)

Emissions Source	Reasonable Scenario		Maximum Use Scenario	
	Daily	Annual	Daily	Annual
Storage Tanks	0.008-0.015	3-5.6	0.06	22
Tanker Engine Idling	0.0003	0.12	0.01	3.6
TOTAL	0.008-0.015	3-5.7	0.07	26

Table 5
Reasonable and Maximum Use Increases of NO_x Releases to Air (Tons)

Emissions Source	Reasonable Scenario		Maximum Use Scenario	
	Daily	Annual	Daily	Annual
Tanker Engine Idling	0.007	2.7	0.22	81

There are numerous programs authorized by either the 1977 or 1990 amendments to the Clean Air Act designed to protect air quality and help states attain and/or maintain the NAAQS, and many of these major programs contain emissions levels triggering the applicability of the program. Clean Air Act (CAA) programs with threshold emissions quantities include: 1) the New Source Review (NSR) and Prevention of Significant Deterioration (PSD) permitting programs; and 2) the General Conformity Regulations (CAA Section 176(c), implemented through 40 CFR Parts 6, 51, and 93).

The NSR program (for nonattainment areas) and the PSD program (for attainment areas) apply to new or modified sources. These programs do not apply to the leasing action because the facility is not new, nor is it being modified. The conformity analysis regulations apply to Federal actions in nonattainment areas, and set threshold levels of emissions below which Federal actions are presumed to conform to a State Implementation Plan (SIP). Even if the St. James Terminal were in a non-attainment area, emissions from the proposed action, predicted to be 26 tons per year of VOC and 81 tons per year of NO_x in the maximum use scenario, would be far below the levels that would trigger the applicability of these programs. Although none of these regulations are applicable to the proposed action, threshold levels of these programs are shown in Table 6 below as benchmarks to demonstrate the minimal air quality impacts of the proposed action.

Table 6
Clean Air Act Regulatory Benchmarks for VOC and NO_x Releases (tons per year)

Program	Comments	Program Threshold Level	Reasonable Use Emissions	Maximum Use Emissions
NSR	For new or modified sources in nonattainment areas	VOC: 100 NO_x: 100	VOC: 5.7 NO_x: 2.7	VOC: 26 NO_x: 81
PSD	For new or modified sources in attainment areas	VOC: 250	VOC: 5.7	VOC: 26
Conformity	For Federal actions in nonattainment areas; listed thresholds are for marginal and moderate marginal nonattainment areas outside an ozone transport region	VOC: 100 NO_x: 100	VOC: 5.7 NO_x: 2.7	VOC: 26 NO_x: 81

The criteria pollutants with the highest potential emissions levels are VOC and NO_x. The levels of VOC and NO_x in the reasonable use case would be far below the most stringent regulatory benchmarks. Even in the maximum use scenario, the potential emissions would be below regulatory benchmarks. The pollutant closest to a regulatory threshold, NO_x under the maximum use scenario, is due to tanker engine idling. Although it is physically possible to be continuously unloading tankers at the St. James Terminal, this maximum use scenario is highly unlikely given current market conditions, and currently available infrastructure for tanker unloading. Therefore, it may be concluded that emissions from the proposed action would not contribute to the frequency or severity of ozone violations. Because emissions from the proposed action would be below the levels at which the action is presumed to conform to the SIP, it can be assumed the proposed action would be in compliance with the SIP.

4.2 Water Quality Impacts

The primary potential impact to water quality would be the increased risk of an oil spill. Generally, the greater the throughput at a marine transfer terminal, the greater the risk of an oil spill. Also, the greater the amount of marine transport, the greater the oil spill risk to the waterways. Therefore, the proposed commercial leasing of the St. James Terminal could potentially result in increased spill rates, due to the increased levels of activity at the St. James Terminal. The impact of the proposed action is assessed below by predicting the number of spills expected from generalized marine transfer terminal operations and from increased vessel unloading at the Terminal.

4.2.1 Impacts of the No Action Alternative

The actual spill history at the St. James Terminal indicates that only six oil spills occurred in seven years (1987-1993), less than one spill per year, with the largest spill being 10 bbl.[j] Under the no action alternative this minimal spill rate would be expected to continue. The level of activity (frequency of vessel transfers and the use of the storage tanks for operational purposes) at the St. James Terminal is currently much less than the average level of a commercial terminal.

SPR personnel regularly monitor point source discharges from the St. James Terminal. The St. James Terminal has a National Pollutant Discharge Elimination System (NPDES) permit and Louisiana Water Discharge Permitting System (LWDPS) permit for retained stormwater drainage from a retention pond and treated sanitary waste. Each permit includes three separate discharges, all of which are sampled prior to commingling and then pumped to the outfall located at dock 1. The St. James Terminal water discharge permit monitoring program fulfills all program requirements.

The operating history of St. James Terminal shows that DOE has complied closely with its water discharge permits. Table 7 below shows the NPDES and LDEQ permit limitations for effluent discharges. Over the past six years, there have been seven noncompliance events (of 763 measurements). Only one was a measured violation of permit limits; a biochemical oxygen demand level ten percent above the limit was measured after a failure in the sanitary system.

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[j] Prior to 1987, oil spill data were not broken down by site in the SPR annual site environmental reports. Therefore, this EA discusses spill history from 1987 through 1993 because these data indicate which oil spills occurred at the St. James Terminal.

Other noncompliance events were caused by improper sampling and laboratory oversights that invalidated test results.[37]

Table 7
NPDES Compliance Parameters for the St. James Terminal

Location/Discharge	Parameter	Compliance Range
Retention pond[k]	flow oil and grease pH TOC	(report only) <15 mg/l 6.0 - 9.0 <50 mg/l
sewage treatment plants	flow BOD_5 TSS pH	(report only) <45 mg/l <45 mg/l 6.0 - 9.0

Source: U.S. Department of Energy, *1993 Annual Site Environmental Report for the Strategic Petroleum Reserve*, DynMcDermott, New Orleans, Louisiana, 1994.

4.2.2 Impacts of the Proposed Action

Although the probability of a spill is dependent on many factors, historical oil spill rates can be used as a reasonable indicator of the likely future probability of oil releases. To quantify the impacts of increased commercial activity at the St. James Terminal, two types of historical spill data were analyzed. The first type of data involves spills from marine transfer terminals. Spill rates for the St. James Terminal were calculated based on historical spill rates for U.S. marine transfer terminals. These data provide a good indication of the localized impacts of increased terminal operations. However, because the available data on spills at marine transfer terminals do not provide detailed information on the exact source and location of the each spill, it is possible that the data do not contain complete information on oil spills resulting from vessels servicing the terminal. For this reason, data on vessel deliveries to marine transfer terminals were also analyzed. The spill rates from vessels servicing the St. James Terminal are based on historical spill rates for tank vessels supplying U.S. Gulf Coast terminals. Because this approach analyzes both marine transfer terminals and vessel deliveries, there is some possible overlap in the data and therefore, the predicted number of spills. For example, a spill from a vessel offloading at a marine transfer terminal could have been reported as a spill at a marine transfer terminal, a vessel

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k The term "retention pond" here refers to the catchment basin intended for two purposes: (1) containment of a 10-minute discharge of aqueous film-forming foam (AFFF) plus an additional 125 percent by volume, and (2) passive collection of stormwater. AFFF, used in foam deluge fixed fire protection systems, is regulated under the Clean Water Act and NPDES permits because of its high biochemical oxygen demand. After an event in which AFFF is discharged, any foam is removed from the basin by vacuum truck. Stormwater that collects in the basin is normally pumped to keep the basin empty; however a 10-year 6-hour storm will flood the basin if it is not emptied. Such an overflow would result in an unplanned bypass and a noncompliance under the NPDES permit.

delivery spill, or both. As a result of this overlap, the estimate of the number of spills that may result from increased throughput at the St. James Terminal is conservative.

Based on an examination of the historical data, the proposed action would result in only a minimal increase the risk of oil spills. Moreover, the predicted increase in spills is likely to be offset to some extent by regional shifts in oil distribution patterns from transportation up the Mississippi River by vessel, to the transportation of the oil by pipeline through the lower Mississippi region. Based on an analysis of the amount of oil transported per a given distance, oil spills are more likely to occur during tanker transportation than during pipeline transportation. This is largely because of the inherent risks of waterborne transport near land (e.g., groundings, collisions, etc.). Thus, if pipeline delivery replaces the movement of tankers or barges on the Mississippi River, the overall risk of oil spills to the region would be reduced. Because of the complex and uncertain nature of such shifts, this analysis does not attempt to quantify the potential decrease in spill rates.

Spill Rates for Marine Transfer Terminals

Table 8 below presents data on the size and frequency of oil spills from marine transfer terminals in the U.S. for 1987-1990.

Table 8
Oil Spills from Marine Transfer Terminals, 1987-1990

Year	Number of Spills	Total Estimated Spill Volume (bbl)	Average Spill Volume (bbl)
1987	477	31,800	67
1988	383	86,800	227
1989	460	210,700	458
1990	452	109,000	241
Average	443	109,600	247

Source: United States Coast Guard Marine Safety Information System (MSIS).

There were 1,772 oil spills at marine transfer terminals during the four-year period, or an average of about 443 spills per year. Based on an average capacity of aboveground storage tanks at bulk terminals of 487 MMB,[38] about 1 spill per year would be expected for every one MMB of oil storage at a terminal operating under normal conditions. Thus on average, under a reasonable use scenario, the expected number of spills at the St. James Terminal, given a storage capacity at the facility of 2 MMB, would be about 2 spills per year. The above data also indicate that the average spill size of a spill at marine transfer terminals is 247 bbl.

For a maximum use scenario the expected number of spills would be greater. Using the conservative assumption that the likelihood of a spill is directly proportional to throughput given a

fixed storage capacity, the expected number of spills on an annual basis would increase to approximately 8 spills per year given a maximum use throughput of 850,000 bbl/day.

Spill Rates for Vessel Deliveries to the Terminal

Data on crude oil imports and tanker spills for the Gulf Coast region for 1986 to 1990 were obtained from the USCG. The resulting oil spill rate, expressed in terms of spills per quantity transported, is assumed to be the same as the expected spill rate for vessels unloading crude oil at the St. James Terminal. From 1986-1990, there were 5,300 MMB of Gulf Coast crude oil imports and 154 Gulf Coast spills of crude oil reported from tankers. The 154 spills were distributed by distance from shore as shown in Table 9. Data indicate that tanker spills in port or within a mile from shore occur at a rate of about two spills per 100 MMB of oil transported. The average spill size for spills occurring in port or within one mile of the shore was approximately 22 bbl.

The expected number of spills from vessels during commercial operation of the St. James Terminal depends on how much oil is delivered to the Terminal by vessel. The reasonable use scenario assumes a throughput of 15,000 bbl/day on average over the marine docks or an estimated 5.4 MMB delivered annually to the St. James Terminal by vessel transiting the Gulf of Mexico and Mississippi River. Thus, the estimated number of spills in the vicinity of the St. James Terminal (in port or within one mile from shore) from vessels offloading at the Terminal would be 0.1 spills annually. Under the maximum use scenario (throughput of 450,000 bbl/day delivered by vessel) the expected number of spills would increase to 3.3 spills per year.

Table 9
Vessel Spill Rates by Location

Location of Spill	Number of Spills/ Transport of 100 MMB
Greater than 32 kilometers (20 miles) offshore	0.5
One to 32 kilometers (1 to 20 miles) offshore	0.3
Less than 1.6 kilometers (1 mile), in port	2.1
TOTAL SPILLS	2.9

Summary of Spill Rates

Table 10 presents a summary of spill rates for the St. James Terminal and associated vessel deliveries.

Table 10
Oil Spill Rates for the St. James Terminal Under Reasonable and Maximum Use Scenarios

Location of Spills	Average Spill Volume (bbl)	Annual Number of Spills	
		Reasonable Scenario	Maximum Use Scenario
Terminal	247	2.0	8
Vessel	22	0.1	3.3
Total	n/a	2.1	11.3

Containment and Response

In the case of a discharge, onsite containment devices and procedures are in place to help prevent oil spills from reaching surface waters or the man-made wetlands. The St. James Terminal has access to five oil spill response contractors and the following on-site equipment: 3 small boats, 12 to 16 feet long; 490 meters (1,600 feet) of containment boom; 2 floating suction skimmers; 3 oil/water separators; and various sorbent materials. The St. James Terminal has a Spill Prevention, Control, and Countermeasure Plan to prevent and mitigate oil spills, as required by 40 CFR part 112, and a facility response plan to respond to a worst-case discharge of oil, as required by the Oil Pollution Act (OPA). Commercial operation of the facility would not alter these requirements. Continued adequate and appropriate training of site personnel concerning the plans would assure that environmental damage would be minimized in the event of an oil spill.

DOE's current M&O contractor for the St. James Terminal is charged with maintaining contracts with private oil spill response contractors, as required by OPA. In addition to such contractor services, the lessee of the Terminal would likely be affiliated with the existing oil industry cooperative organization which was formed for the purpose of responding to oil spills in accordance with OPA.

There is an estimated probability of 0.1 spills per vessel per year under the reasonable use scenario, and 3.3 spills per year under the maximum use scenario, with each spill having an estimated average volume of 22 bbl. For the Terminal, there is an average spill volume of 240 bbl, with an estimate of two spills annually under the reasonable use scenario and eight under the maximum use scenario. Based on these figures, impacts to water would be minimal. Spills from the Terminal would probably be contained in containment structures and would be unlikely to reach to the inland waters. In addition, vessel spills at the docks would likely be small in size and produce minimal impacts.

4.3 Socioeconomic Impacts

4.3.1 Impacts of the No Action Alternative

Under the no action alternative, the existing emergency response infrastructure would continue to support the needs of routine operations at the St. James Terminal. The staffing level at the Terminal would remain the same, causing no impacts to the local labor force. Routine

operations at the St. James Terminal, which would continue under the no action alternative, have not affected local industrial trends and agriculture crop production. Existing mutual aid agreements with local responders would remain in place. As a result, no socioeconomic impacts are anticipated under the no action alternative.

4.3.2 Impacts of the Proposed Action

Under the proposed action the lessee would be responsible for setting staffing levels and hiring staff. DOE assumes that a smaller staff would be needed and that not all of the staff currently at the St. James Terminal would be retained. To mitigate any impact on employment from the proposed action, DOE has made a commitment to offer transfer of employment to nearby SPR facilities at Bayou Choctaw, New Orleans, or Weeks Island. Employees at the St. James Terminal predominantly reside in St. James Parish; those who transferred to any of the other SPR facilities are likely to be within a 30 to 45-minute commute of their homes. For those personnel who decline transfers, monetary compensation in the form of severance pay would be provided. Thus, any direct impacts on specific individuals would be mitigated. Based on the minimal number of newly unemployed individuals as compared to the current unemployment numbers for St. James Parish, regional economic impacts would not be anticipated.

With regard to mutual aid agreements that the St. James Terminal has with local emergency response agencies, DOE would not require that the lessee maintain all current agreements. However, DOE anticipates that it would be in the lessee's best interest to make arrangements for emergency response that are similar to the present agreements.

As discussed in sections 4.1.1 and 4.2.1, DOE use of the Terminal currently poses minimal air and water impacts that have not adversely affected the neighboring community. To ensure that the proposed action would not increase the potential for accidents, DOE would require and approve, prior to execution of the lease, a safety and maintenance plan at least equivalent to DOE's current site plan. DOE would inspect the St. James Terminal semiannually for adherence to this safety and maintenance plan, as well as to all Federal, State, and local laws, regulations, and codes (i.e., Occupational Safety and Health Administration regulations, Department of Transportation Pipeline requirements). The lessee would be required to manage its fire protection program according to "improved risk criteria," which is the insurance industry's classification for the most protected industrial risk. The lessee would carry an improved risk insurance policy throughout the lease period.

4.4 Other Environmental Impacts

All activity under the proposed action would occur in previously disturbed areas and, therefore, the proposed action would not directly impact the environmental resources surrounding the facility. The proposed action at the St. James Terminal would not cause any adverse impacts to natural and scenic resources, cultural, historical, or archaeological sites, or Native American land. In addition, there would be no secondary effects to any neighboring minority or low-income communities. The action would be consistent with the current land use of the area. No endangered species would be impacted by the proposed action. Additionally, no sensitive environments would be involved other than the man-made wetlands and the floodplain area. The proposed action would not impact the 100-year floodplain, because the St. James Terminal is protected by a levee and is in a nonflood zone.[39,40]

The proposed action would not directly affect the Louisiana Coastal Zone, because leasing the facility would not result in any new construction. Therefore, the proposed action would not alter surface water quantity or quality in the coastal watershed or coastal zone, or result in dredge fill, development, construction, or waste discharge in or into coastal waters. The proposed action would not adversely impact air quality in the coastal zone, because increases in air emissions would be below permit thresholds.

The overall risk of oil spills in the coastal zone would not increase for the following reasons. First, terrestrial oil spills within the boundaries of the storage tank and auxiliary equipment area would be contained onsite. Second, any use of the St. James Terminal docks under the lease is likely to be a replacement of an equivalent use of other's docks on the lower Mississippi River. No increase in marine transportation is expected to result from the proposed action. Therefore, at worst, the increased risk of an accidental release to the Mississippi River at the St. James Terminal docks would represent an inconsequential relocation of spill risk at one point in the River within the Louisiana Coastal Zone to an equivalent point. On the other hand, the proposed action may well result in a shift in marine transportation patterns for crude oil from the lower Mississippi River, to Louisiana Offshore Oil Port's (LOOP's) terminal with subsequent inland transportation by pipeline. This would be a beneficial impact on the Louisiana Coastal Zone. For these reasons, DOE believes that the proposed action would not directly affect the Louisiana Coastal Zone and therefore that a coastal consistency determination is not required.

The proposed action would not result in any material change in generated hazardous waste, as regulated under the Resource Conservation and Recovery Act (RCRA), because the generation of most waste is essentially independent of crude oil throughput. In 1993, operations at the St. James Terminal generated RCRA waste as shown in Table 11 below.

Table 11
Generated RCRA Waste[41]

Source of RCRA Waste	Amount of Waste in kilograms (pounds)
Paint liquids (ongoing maintenance)	78 (172)
Laboratory liquids (ongoing crude oil lab operations)	133 (294)
Spent batteries (uninterrupted power source)	1,020 (2,250)
Total	1,231 (2,716)

The 1993 reporting year was the first in which SPR had to dispose of the batteries from the central control system. Comparable battery disposal would be required every five years under the existing central control system configuration. Without knowing the lessee's sampling and analysis requirements, it is problematic whether the lessee's laboratory use and generation of laboratory wastes would be substantially greater than DOE's. The lessee's generation of waste paint liquids should be comparable to DOE's because the need for maintenance painting of most surfaces, such as structures, piping, pump stations, tanks, docks, and large equipment should be controlled primarily by the passage of time. The current level of waste generation at St. James Terminal is so low that the lessee's activities could easily increase waste generation without

changing the site's small quantity generator status under RCRA. Any increase in waste generated by the lessee would probably be minor and capable of being handled by existing disposal facilities.

The lessee would minimize waste generation at least to the extent required by RCRA. DOE waste minimization orders would not apply to the lessee.

The St. James Terminal does not use large volumes or quantities of hazardous materials listed under the Emergency Planning and Community Right-to-Know Act (EPCRA) and, consequently, does not trigger the Section 313 thresholds for reporting chemical usage under EPCRA.[42] The Terminal does report the smaller volumes of hazardous materials stored onsite to state and local authorities for emergency planning purposes under Section 312 of EPCRA.

When the St. James Terminal is in an operational mode, ambient sound levels 150 meters (500 feet) from the Terminal, would likely be lower than the high level reading presented in Section 3.5. Based on sound level readings of pump noise taken at the Big Hill site and on the land uses around the St. James Terminal, the day-night sound level, or L_{dn}, would likely be less than 68 dBA, or comparable to an urban or a noisy urban area. Although the noise level at the St. James Terminal would not increase under the proposed action, the duration of noise output would substantially change from sporadic to more frequent.

4.5 Cumulative Impacts

No cumulative or long-term impacts of leasing the St. James Terminal have been identified.

5.0 CONCLUSIONS

Impacts of No Action

- The no action alternative would result in no air impacts to the St. James Facility. Operating in its mission readiness mode, the St. James Terminal is a small source of VOC emissions in St. James Parish. Thus, the no action alternative represents no change in air quality with the region.

- The no action alternative would result in no water impacts to the St. James Facility. Under the no action alternative the minimal spill rate of less than one spill per year, based on historical data, would be expected to continue.

- The no action alternative would result in no socioeconomic or other impacts to the St. James Facility. Under the no action alternative, the staffing level would remain the same.

Potential Impacts of Proposed Action

- The proposed action would result in only minor impacts to air quality. The principal source of emission increases would be working or shell wetting losses from the six storage tanks.

  - The primary cause of increased VOC emissions would be greater use of storage tanks; tanker engine idling would also cause some VOC emissions.

  - Tanker engine idling would be the major source of NO_x emissions under the proposed action.

  - St. James is in transitional attainment for ozone. Emissions from the proposed action, predicted to be 26 tons per year of VOC and 81 tons per year of NO_x in the maximum use scenario, would be far below levels that would trigger the applicability of regulatory programs, including conformity regulations, designed to protect air quality and attain and maintain the NAAQS. Therefore, the proposed action is presumed to conform.

  - The potential air emissions under the probable, reasonable use scenario are 3 to 5.7 tons per year of VOC, 2.7 tons per year of NO_x, and lesser amounts of other criteria pollutants.

- The proposed action would result in some minimal water impacts the St. James Facility. Based on an examination of the historical data, the proposed action would not result in a substantial increase in the risk of oil spills. Moreover, the predicted increase in spills is likely to be offset to some extent by regional shifts in oil distribution patterns from transportation up the Mississippi River by vessel, to the transportation of the oil by pipeline through the lower Mississippi region.

- The proposed action would result in some minimal socioeconomic impacts to the St. James Facility. DOE assumes that a smaller staff would be needed and that not all of the staff currently at the St. James Terminal would be retained. To mitigate any impact on

employment from the proposed action, DOE has made a commitment to offer transfer of employment to nearby SPR facilities at Bayou Choctaw, New Orleans, or Weeks Island.

- Other than the affects to air, and staffing, the proposed action at the St. James Terminal would have minimal or no impact.

  - The proposed action at the St. James Terminal would not cause any adverse impacts to natural and scenic resources, cultural, historical, and archaeological sites, Native American land, or to minority or low-income communities. The action would be consistent with the current land use of the area. No endangered species would be impacted by the proposed action.

  - No sensitive environments would be involved other than man-made wetlands, the floodplain area, and the Louisiana Coastal Zone. The proposed action would not impact the 100-year floodplain, because the St. James Terminal is protected by a levee and is in a nonflood zone.

  - The proposed action would not directly affect the Louisiana Coastal Zone, because leasing the facility would not result in any new construction. A coastal consistency determination, therefore, is not required.

  - The proposed action would not result in any material change in generated RCRA waste, because the generation of waste is independent of crude oil throughput.

  - Although the noise level at the St. James Terminal would not increase under the proposed action, the duration of noise output would change from sporadic to more frequent.

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U.S. Department of Energy, *Strategic Petroleum Reserve Annual Site Environmental Report for Calendar Year 1990*, Boeing Petroleum Services, Inc., New Orleans, Louisiana, June 1991.

U.S. Department of Energy, *Strategic Petroleum Reserve Annual Site Environmental Report for Calendar Year 1991*, Boeing Petroleum Services, Inc., New Orleans, Louisiana, June 1992.

U.S. Department of Energy, Strategic Petroleum Reserve Project Management Office, *Annual Site Environmental Report: Calendar Year 1992*, New Orleans, Louisiana, June 1993.

U.S. Department of Energy, Strategic Petroleum Reserve Project Management Office, *Annual Site Environmental Report: Calendar Year 1993*, New Orleans, Louisiana, June 1994.

38. Entropy Limited, *Aboveground Storage Tank Survey*, prepared for the American Petroleum Institute, April 1989.

39. Personal communication with D. Cheniur, Director of Operations, St. James Parish Council, August 16, 1994.

40. Federal Emergency Management Agency, Flood Insurance Rate Map, St. James Parish, Louisiana, Community Panel Number 220261-0025-B, July 13, 1982.

41. Memorandum, *Request for 1993 RCRA Hazardous Waste Generation Data for Saint James Terminal*, From: E. Hollander, DynMcDermott Petroleum Operations Company, To: H. Delaplane, U.S. Department of Energy, Strategic Petroleum Reserve, October 7, 1994.

42. U.S. Department of Energy, *Strategic Petroleum Reserve Pollution Prevention Plan*, New Orleans, Louisiana, May 1993, Publication D506-03287-09.

APPENDIX A

PHOTOGRAPHS OF THE ST. JAMES TERMINAL

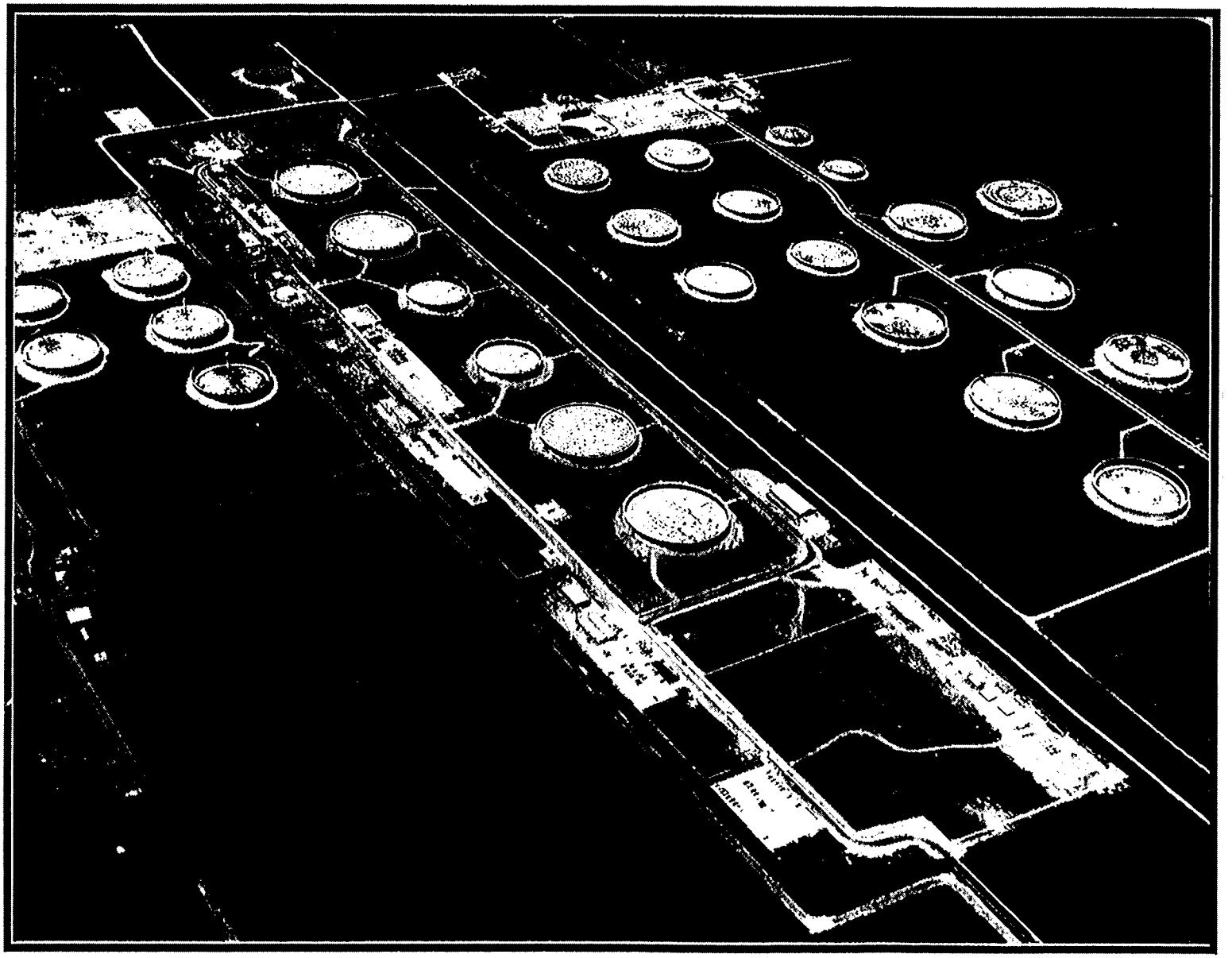

Figure A-1
St. James Terminal with LOCAP Terminal to the South and Capline Terminal to the North

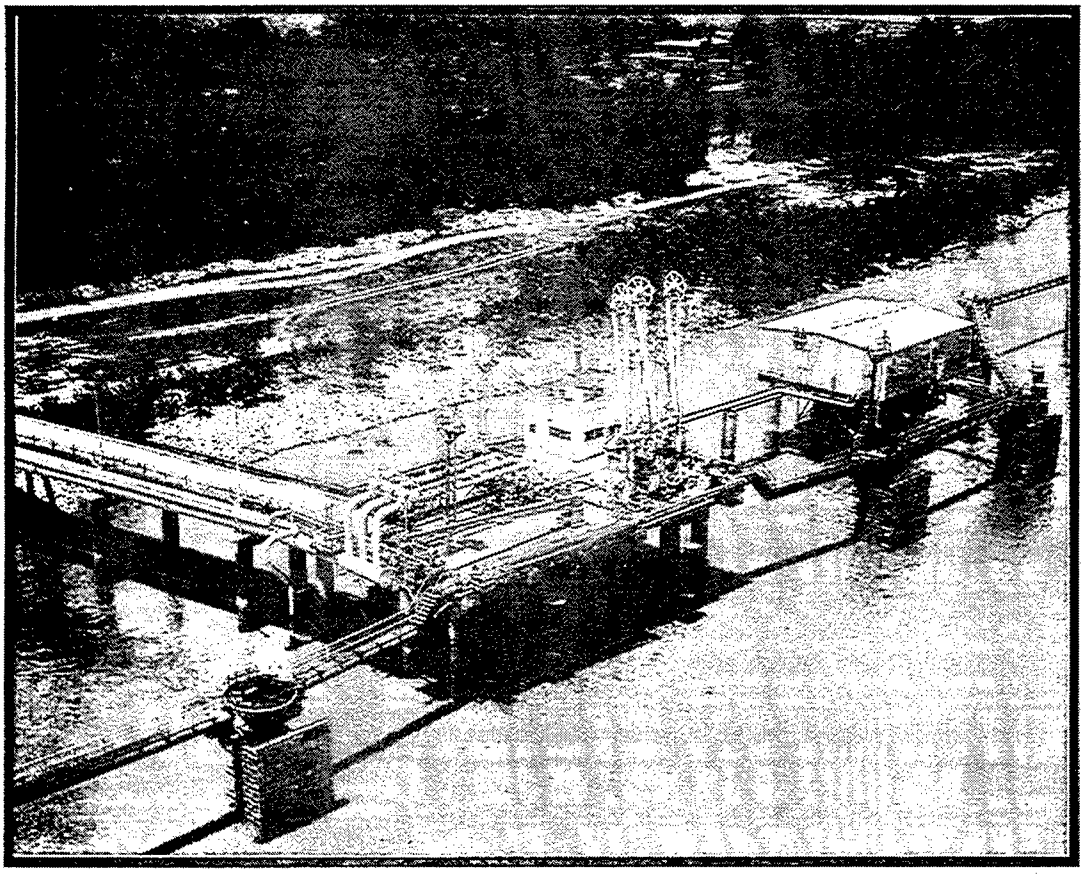

Figure A-2
St. James Terminal Dock No. 1 and Fire Water Pump House

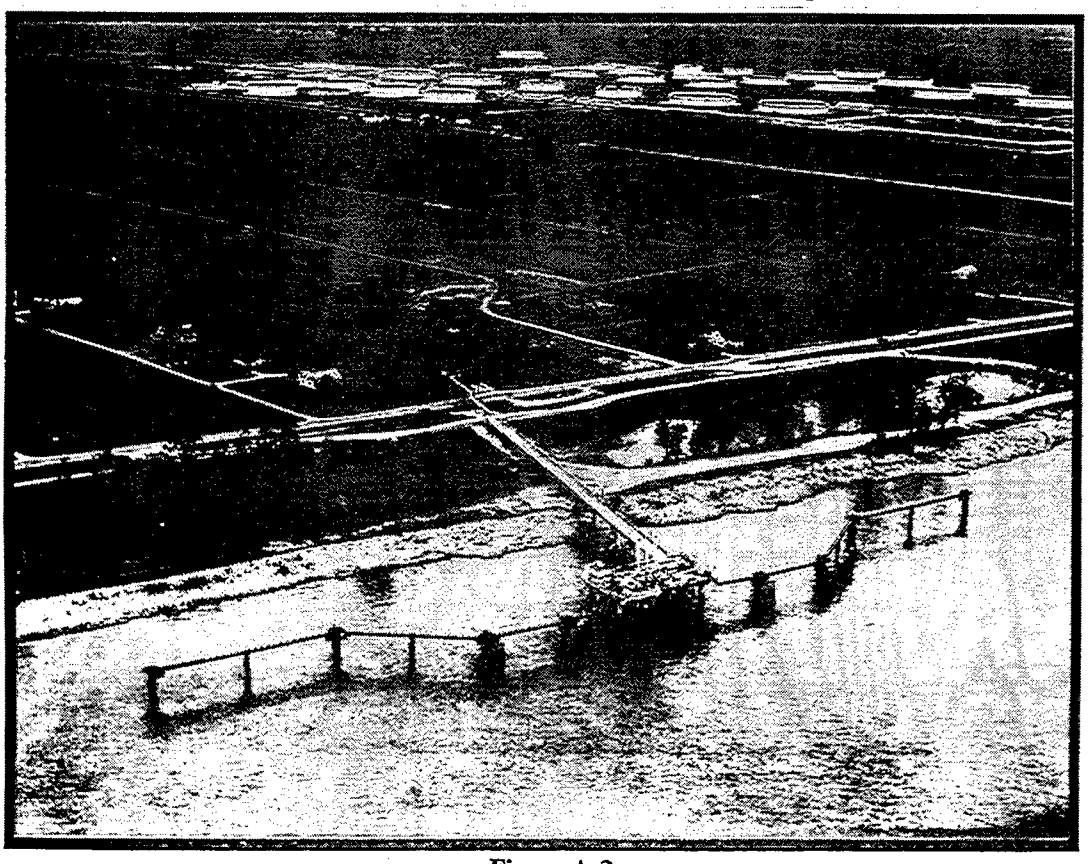

Figure A-3
St. James Terminal Dock No. 2

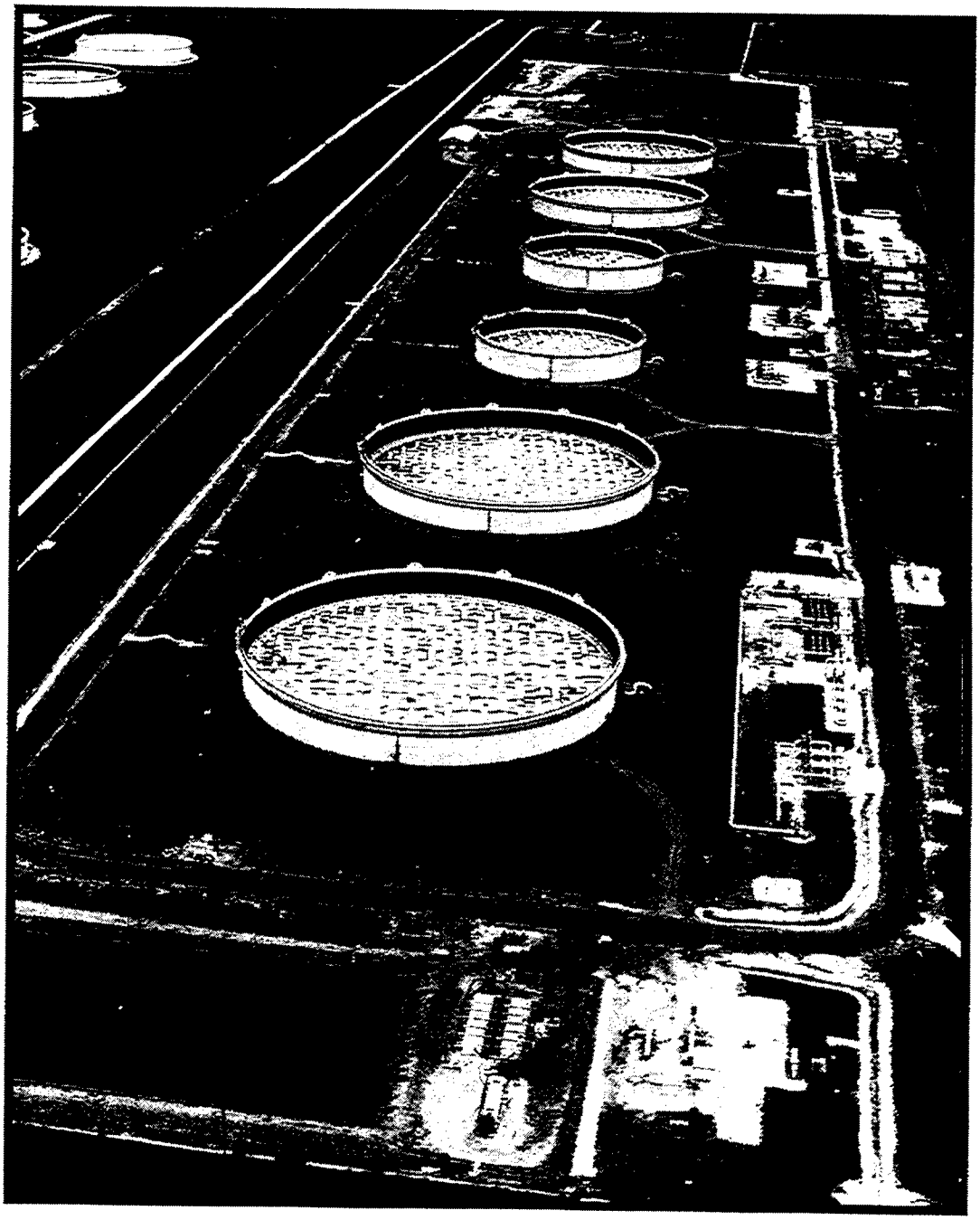

Figure A-4
St. James Terminal Main Facility

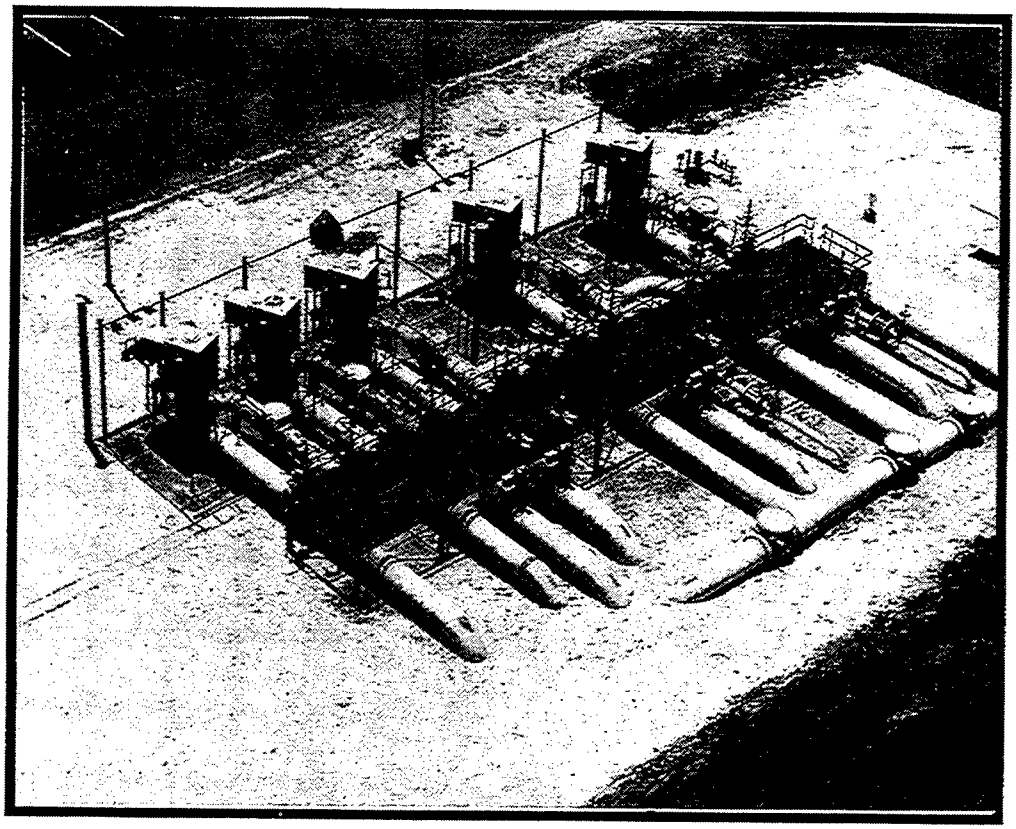

Figure A-5
St. James Terminal Primary Pump Station

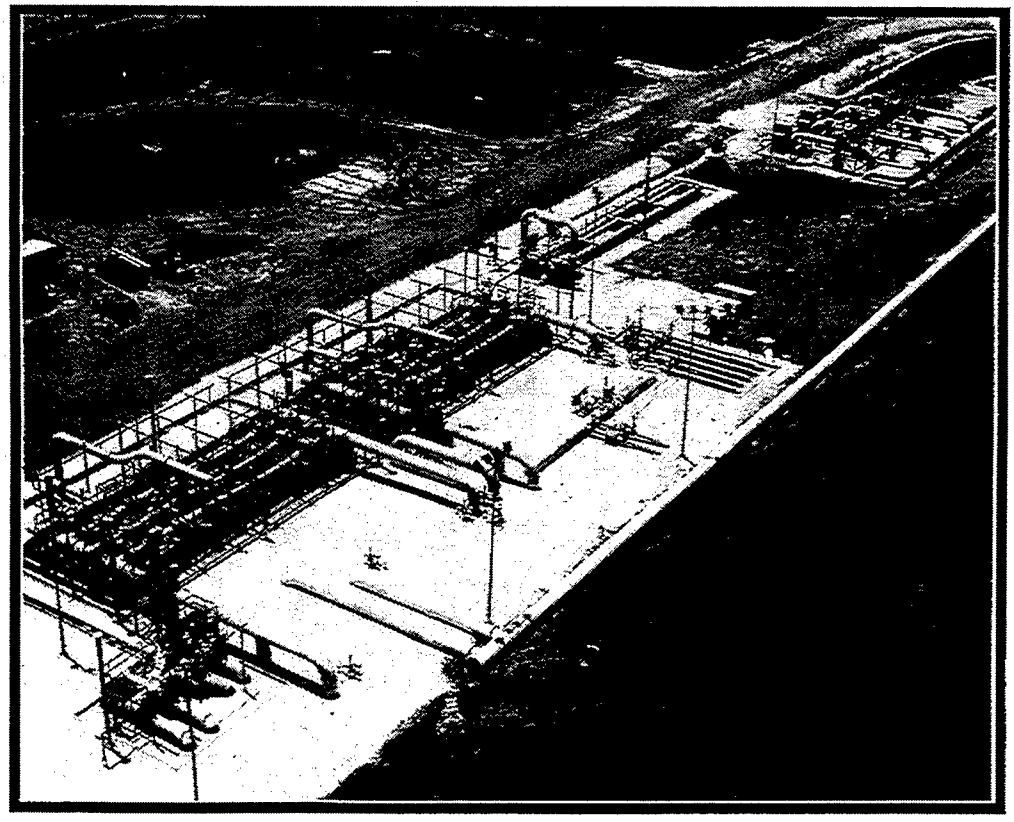

Figure A-6
St. James Terminal Weeks Island Meter Station

Figure A-7
St. James Terminal Maintenance and Administration Buildings

APPENDIX B

CALCULATIONS OF POTENTIAL AIR EMISSIONS

CALCULATIONS OF POTENTIAL AIR EMISSIONS

This appendix presents the calculations used in analyzing air impacts of the proposed action. Emissions related to the proposed action are discussed in terms of storage tank emissions (Section B.1) and tanker emissions (Section B.2).

B.1 Storage Tank Emissions

The St. James Terminal has six external floating roof tanks storing crude oil. Each of these tanks is 10 meters (33 feet) in height, and the diameters of four of the six are 90 meters (300 feet), while the remaining two tanks each have a diameter of 65 meters (212 feet). External floating roof tanks emit only VOCs, and emissions may be partitioned into seal losses, fitting losses, and working or shell wetting losses.

Seal losses and fitting losses are independent of the quantity of crude oil flowing through the facility. These losses depend primarily upon the configuration of the tank (e.g., type of seal, type of gauging system, etc.), and some properties of the crude oil (e.g., true vapor pressure, molecular weight of the condensed vapor, etc.). Equation (1) presents the general functional dependencies of emissions.

$$L = M_v P^* \sum(KV^n) \quad (1)$$

Where:

- L = VOC emissions
- M_v = Molecular weight of the condensed vapor
- P^* = The vapor pressure function
- K = Represents a series of constants describing the physical configuration of the tank
- V^n = V is the wind speed in miles per hour. The exponent varies with the individual piece of equipment.

The liquid properties most relevant to emissions are the true vapor pressure of the stored liquid, and the molecular weight of the condensed vapor. The dependence of emissions on liquid vapor pressure is described by the vapor pressure function P^* presented in Equation (2) below:

$$P^* = \frac{P/Pa}{[1+(1+P/Pa)^{0.5}]^2} \quad (2)$$

Where:

P^* = vapor pressure function

P = vapor pressure of the stored liquid in pounds per square inch (absolute) (psia); and,

Pa = atmospheric pressure (psia)

As operated by the DOE, the crude oil reaching the terminal has a vapor pressure of 11.0 psia, which is very close to the 11.1 psia maximum at which it is no longer permissible to use

external floating roof tanks.[a] The lessee, therefore, could not increase the vapor beyond 11.1 psia, and no significant increase in emissions would be expected due to changes in vapor pressure. It is entirely possible that the lessee could ship a much lower vapor pressure crude through the facility, in which case emissions might substantially decrease.

Seal and fitting losses have a linear dependence on the molecular weight of the condensed vapor. If the crude shipped by the lessee has a higher molecular weight than the crude normally handled by DOE, emissions would increase. Conversely, if the crude shipped by the lessee has a lower molecular weight, emissions may decrease.

Without detailed information on the vapor pressure and molecular weight of the crude oil(s) that will be handled by the lessee, it is not possible to determine absolutely if emissions will increase or decrease. Some general conclusions, however, may be reached. In general the molecular weight of the condensed vapor and liquid vapor pressure tend to be inversely related; i.e., the higher the molecular weight the lower the liquid vapor pressure. While this relationship is not always true, there is a general tendency for smaller, lighter molecules to have higher vapor pressures than larger heavier molecules. Therefore, it would be unlikely that the crude oil(s) handled by the lessee would have both a higher vapor pressure and a higher molecular weight of the condensed vapor, so an emissions increase over current levels is unlikely.

The last type of storage tank emissions are shell wetting losses or working losses. These result from the evaporation of liquid clinging to the interior of the tank shell when the liquid level of the tank is lowered, and thus are directly related to liquid throughput. Equation (3) describes shell wetting losses.

$$L_W = \frac{(0.942)QCW_L}{D} \qquad (3)$$

Where:

L_W = emissions in lbs/day
Q = liquid throughput (bbls per day)
C = Clingage factor (0.006 for crude oil)
W_L = Liquid density in lbs/gal
D = Tank diameter in feet.

Because leasing the facility would result in higher liquid throughput than DOE's operation of the facility in the readiness mode, emissions from shell wetting are expected to increase. Assuming an average tank diameter of 82m (270 ft) and a crude oil density of 0.84 grams per milliliter (7.0 lbs per gallon), emissions from the facility would increase by 2.6 tons per year of VOC for every 100,000 bbl of additional daily throughput. Based on an increased maximum use scenario throughput of about 850,000 bbls per day, the overall maximum emissions increase would be about 22 tons per year of VOC per year, and the expected emissions increase from reasonable

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[a] Federal and State environmental regulations prohibit the use of external floating roof tanks for any liquid with a vapor pressure exceeding 11.1 psia. For example, refer to 40 CFR 60 Subparts Ka and Kb.

use would be 3 to 5.6 tons per year of VOC per year (based on a throughput of 115,000 bbl to 200,000 bbl per day).

The overall increase in VOC emissions from the storage tanks attributable to leasing the facility is expected to be 3 to 5.6 tons per year, and is unlikely to be higher than 22 tons per year (assuming that there are no increases in seal or fitting losses, which represents a maximum emissions scenario). This increase is small and would not be expected to cause NAAQS violations in the St. James Parish area.

B.2 Tanker Emissions

The assumptions used in estimating engine idling emissions are shown in Table B-1 below.

Table B-1
Assumptions for Estimating Engine Idling Emissions

Parameter	Reasonable Case	Maximum Case[b]
Tanker size (deadweight tons)	85,000	85,000
Engine size (horsepower)	28,000	28,000
Idling time per unloading event (hours)[c]	36	36
Tankers unloading per month	1	30

Emissions factors for this type of engine are presented in the form of emissions per 1,000 gallons of fuel consumed (Table B-2).[1] Data on tanker fuel consumption were not available. To determine tanker fuel consumption, the fuel consumption of an idling 5,000 horsepower diesel locomotive was obtained and was scaled to a 28,000 horsepower tanker engine. Fuel consumption of the idling locomotive was estimated to be 3 to 4 gallons per hour. Scaling this estimate to the tanker engine results in a consumption rate of about 23 gallons per hour. Annual emissions from tanker engine idling in the reasonable case scenario are presented in Table B-2. To obtain annual emissions in the maximum use scenario, the reasonable case emissions are multiplied by 30 (because one tanker would be unloaded every day, rather than one day, per month). The proposed action at the St. James Terminal would result in at most 3.6 tons per year of VOC and 81 tons per year of NO_x from tanker engine idling, even if tankers were to unload their entire cargo every day (the maximum use scenario).

---

[b] For maximum use tanker idling, the assumption was made that the docks are alternately used, so that one tanker may idle for up to 36 hours while the next day's tanker unloads at the other dock.

[c] Thirty-six hours is assumed to be the longest amount of time a tanker would idle during an unloading event.

Table B-2
Tanker Engine Emissions for Reasonable Case

Pollutant	PM	SO_x	CO	NO_x	VOC
Emissions Factors (lbs/1000 gallons)[2]	33	142 x (%S)[d]	4	550	24
Fuel Consumption (gallons per hour)	23	23	23	23	23
Idling time (hours)	36	36	36	36	36
Emissions per unloading event (lbs)	27.3	0.38	3.3	455	19.9
Emissions per year (tons)	0.16	0.002	0.02	2.7	0.12

B.3 Summary

Combining potential emissions from storage tanks and tanker engine idling, the reasonable case scenario would increase VOC emissions by 3 to 5.7 tons per year, NO_x emissions by 2.7 tons per year, and other criteria pollutant emissions by the amounts shown in Table B-2. The maximum case scenario would increase VOC emissions by up to 26 tons per year, NO_x emissions by up to 81 tons per year, and other criteria pollutant emissions by lesser amounts. The limits imposed by the LDEQ Division of Air Quality are 50 tons per year of VOC or 100 tons per year of other criteria pollutants (including NO_x). Therefore, these emissions would not exceed regulatory limits.

[d] The percentage of sulphur was assumed to be 0.32 based on data from *Oil in the Sea* (National Research Council, National Academy Press, 1985).

ENDNOTES

1. U.S. Environmental Protection Agency, *Commercial Marine Vessel Contributions to Emissions Inventories*, Office of Mobile Sources, October 7, 1991.

2. *Ibid.*

APPENDIX C

AGENCIES AND PERSONS CONSULTED

AGENCIES AND PERSONS CONSULTED

A list of Federal, State and local agencies contacted is given below. DOE is providing them with a copy of this Environmental Assessment. Members of the public and others who have expressed interest will also receive a copy. No Native American tribes were consulted since the proposed action would not affect a reservation.

		Jurisdiction/Expertise
A.	**Federal Agencies**	
	U.S. Environmental Protection Agency RCRA Permit Branch, Region 6 Dallas, Texas	RCRA Permit Requirements
	U.S. Environmental Protection Agency Office of Air Quality Planning and Standards Research Triangle Park, North Carolina	Tanker Idling Emissions
B.	**State Agencies**	
	Louisiana Department of Environmental Quality Division of Air Quality Baton Rouge, Louisiana	Air Quality Attainment Status Air Quality Regulations
	Louisiana Department of Environmental Quality Hazardous Waste Permits Baton Rouge, Louisiana	RCRA Permit Requirements
C.	**Local Agencies**	
	St. James Parish Council Director of Operations	Floodplains

APPENDIX D

COORDINATION WITH THE STATE OF LOUISIANA AND OTHER INTERESTED PARTIES

COORDINATION WITH THE STATE OF LOUISIANA AND OTHER INTERESTED PARTIES

This EA was coordinated with the State of Louisiana and other interested parties. Written comments were received from the Louisiana Department of Wildlife and Fisheries, the Louisiana Department of Natural Resources, and DynMcDermott Petroleum Operations Company. Their comments are addressed below followed by copies of their letters.

D.1 Responses to comments from the Louisiana Department of Wildlife and Fisheries

D.1.1

"...significant adverse impacts to fish and wildlife resources will not occur as a result of the proposed activity ..."

Response: DOE acknowledges the Department's comments on the proposed action.

D.2 Responses to comments from the Louisiana Department of Natural Resources

D.2.1

"...no direct and significant effects to the Louisiana Coastal Zone are likely to result from the proposed activity...."

Response: DOE acknowledges the Department's comments on the proposed action.

D.3 Responses to comments from DynMcDermott Petroleum Operations Company

D.3.1 "[Summary, paragraph 3, 3rd sentence]'with the region' should read 'within the region'."

Response: The line edit has been adopted.

D.3.2 "[Summary, paragraph 3, 4th sentence] The proposed action should include loading of vessels which would significantly increase air emissions in the area."

Response: The EA does not address a lessee outloading crude oil into tankers because DOE believes there is currently no demand for such services and none is likely to arise.

The current regional crude oil transportation market is configured: 1) to receive imports across the docks for local refining or for pipeline shipment to the interior; and 2) to receive Louisiana domestic crude by pipeline for local refining of for pipeline shipment to the interior. If there were a local market for shipping domestic crude across docks to tankers, it should be evident at Capline's docks but it is not. This is corroborated by confidential written expressions of interest received by DOE

from industry which did not indicate any intention for outloading.

Finally, because the St. James Terminal has no vapor recovery capability, tankers could not be outloaded during non-emergency operations under existing limits on air emissions. A lease would not preclude a lessee from seeking a permit enabling outloading at St. James Terminal, but Government approval would be required and a decision to approve outloading would have to be preceded by NEPA review and appropriate documentation. These considerations-- the cost to the lessee to obtain an amended air permit as compared with the length of the lease period; the need to revisit the NEPA process; and the apparent lack of a market for the service-- are such impediments that the likelihood of outloading by a lessee appears very remote.

The discussion in Section 2.2.2 concerning the expected nature of commercial activity under the proposed action has been expanded to include this reasoning.

D.3.3 "[Sec.1.0] Paragraph 5 does not make any mention of loading vessels across the docks."

Response: A discussion of the commercial activities that would be expected under a lease is found in Section 2.0, Proposed Action and Alternatives. See the response to comment D.3.2 above for DOE's position on addressing a lessee loading vessels across the docks.

D.3.4 "[Sec.1.0, paragraph 8] Where does DOE get the information that industry wants to use the facility for just tanks and pipelines? At the Pre-Bid conference, industry representatives gave the impression that they would want to use the docks for loading vessels also."

Response: As discussed is Section 2.0, Proposed Action and Alternatives, DOE's understanding of probable commercial use of St. James Terminal is based on written expressions of interest from industry in response to a DOE solicitation of interest published March 16, 1994. Respondents indicated no interest in loading vessels. DOE gives more credence to these confidential responses than to casual remarks made at an open, pre-bid conference.

D.3.5 "[Sec.2.1, Marine Docks]There is only one effluent line (outfall 001) which goes to dock 1."

Response: The discussion of the docks in Section 2.1 has been revised accordingly.

D.3.6. "[Sec.2.1, Fire Protection Systems, paragraph 2]The discussion on NPDES permits is included here. Suggest adding a new subtitle, 'Environmental Permits'. In sentence two the words 'discharges' and 'outfalls' should be switched. Also move sentence three to the beginning of the paragraph. It is a lead-in sentence on permits. While discussing permits, both air permits and the Corps of Engineers permits should be

mentioned."

Response: The suggested line edits have been adopted and the paragraph has been moved to Section 4.2.1 and incorporated into a revised discussion of water quality impacts of the no action alternative.

D.3.7 "[Sec. 2.2.1]Table 1 does not make any sense as written. What is the point that is trying to be made?"

Response: Table 1 has been deleted and the subsequent tables have been renumbered. Section 2.2.1 has been revised to amplify St. James Terminal's low rate of utilization under the no action alternative.

D.3.8 "[Sec.3.3]Paragraph 2 locates Vacherie 15 miles north of St. James and therefore, no longer even in St. James Parish. On two different maps referenced, Vacherie is located approximately 5 miles east of the site."

Response: The text has been corrected to indicate Vacherie is 8 km (5 mi) east of St. James.

D.3.9 "[Sec. 4.2.1]The EA discusses seven years of spill data from the annual site environmental reports (1987 - 1993), however, the 'Endnotes' lists only those documents from 1989 forward."

Response: References containing spill statistics for 1987 and 1988 have been added to the Endnotes.

D.3.10 "[Sec.4.2.2, Containment and Response] The EA states that [St. James] has three response vessels. The connotation is of large river-going types, not the [small] ones on site..."

Response: The text has been changed to refer to small boats, not vessels.

D.3.11 "[Sec.4.3.2, line 6]'predominately' should be spelled 'predominantly'."

Response: The line edit has been adopted.

D.3.12 "[Sec.4.4]In the third paragraph the statement is made that use of the docks 'is likely to be a replacement of an equivalent use of other's docks on the lower Mississippi River.' [DynMcDermott] seriously doubts that. It is more logical that the lessee would be using [St. James] to expand operations, not substitute existing operations from somewhere else in the area."

Response: The proposed action would more likely augment current distribution patterns than

result in market growth for the following reasons. As explained in Section 1.0, Purpose and Need for Action, Capline Pipeline is operating near capacity. DOE assumes that Capline's capacity and utilization will not change substantially over the next several years, notwithstanding a projected increase in demand for imports in the mid-continent.

Common-carrier operation of St. James Terminal would augment the distribution system by adding flexibility that could debottleneck the commercial pipeline infrastructure upstream of the Capline Terminal. This could produce a limited increase in distribution by increasing the effective utilization of the pipeline system. This would represent a gain without having to construct new commercial facilities, but it would be an exaggeration to characterize it as a substantial expansion of operations.

DOE believes that the use of St. James Terminal's docks would be incidental if it occurred at all. As described in Section 1.0, the docks could be useful for occasional tanker unloading to avoid demurrage (hence the reference in Section 4.4 to a substitution of other docks within the vicinity). The routine commercial marine transport of crude oil to St. James would be unlikely because it would be less efficient than pipeline transport from LOOP. In addition, the liability requirements of the Oil Pollution Act of 1990 will likely drive the maximum use of LOOP in preference to inshore terminals. Therefore, at worst, the impact of the proposed action on spill risk in the lower Mississippi River would be nil. If the proposed action were to enhance transport into the Capline system by pipeline from LOOP, this would reduce spill risk. The extent of this positive effect, however, would probably be negligible.

D.3.13 "[Sec.4.4] Paragraph four contains the statement that 'generation of waste is independent of crude oil throughput.' Increased throughput will increase spill risk and therefore, probably spillage. Some waste may become contaminated and have to be treated as hazardous. Increased throughput would probably increase analytical sampling, therefore, laboratory wastes. Lastly, more use means more maintenance--therefore more painting and thus, paint wastes. Nowhere in the document does it state that the lessee will have to use as stringent a waste reduction or chemical substitution pollution prevention program as does DOE's Management and Operating (M&O) contractor. Therefore, there will probably be an increase in hazardous wastes generated. Quite conceivably, the lessee will end up generating enough waste to become fully regulated. (Has DOE considered the disposal of hazardous wastes in the contract? Presently, the M&O is severely constrained to incinerate, and at only a few approved disposal facilities...)"

Response: Waste from spills is implicit in the spill risk calculation and is not considered a regularly occurring waste generation activity subject to regulation.

While DOE agrees that there could be an increase in waste generation by a lessee from an increase in laboratory wastes from analytical sampling, DOE disagrees that increased throughput would lead to an increase in painting and paint wastes.

The lease would not require the lessee to comply with DOE requirements on waste minimization, but the lessee would have to comply with waste minimization and pollution prevention requirements of the Resource Conservation and Recovery Act (RCRA) and the Pollution Prevention Act.

The St. James Terminal currently generates low levels of waste; therefore, the lessee's activities could easily result in an increase in waste generation without a material change in generator status under the RCRA. If the lessee did become a large quantity generator, the lessee would have to comply with the appropriate RCRA requirements. DOE believes that any increase in waste generated by the lessee would be minor and could be handled by existing disposal facilities.

Clarifying language has been added to the discussion of Section 4.4.

D.3.14 "[Sec.4.4] Paragraph five states that [St. James] 'does not use large volumes or quantities of hazardous materials listed under [EPCRA] and consequently, does not trigger the thresholds for reporting chemical usage under EPCRA.' The SPR annually submits lists of chemical groups present on site including crude oil on site and in pipelines, and any accumulation of hazardous waste over 500 pounds to local and state entities."

Response: The St. James Terminal does not trigger EPCRA Section 313 reporting thresholds but does report the smaller volumes of hazardous materials stored onsite to the state and local authorities for emergency planning purposes under EPCRA Section 312.

D.3.15 "Throughout the entire document the assumption is made that the docks will only be used for unloading vessels. The interested industry representatives at the Pre-Bid conference stated that they would use the docks for loading also. If the docks are used for loading, the increase in air emissions would be at a rate of 23 tons per million barrels of throughput. St. James would be considered a major facility for VOC and HAPs. This potential activity could significantly change the concept of this EA."

Response: The DOE position on addressing outloading tankers is provided in the response to comments D.3.2 and D.3.4 above.

Received 10/31/94

State of Louisiana

Department of Wildlife and Fisheries
Post Office Box 98000
Baton Rouge, LA 70898-9000
(504) 765-2800

Joe L. Herring
Secretary

Edwin W. Edwards
Governor

October 24, 1994

Mr. Hal Delaplane
Strategic Petroleum Reserve, FE-423
U.S. Department of Energy
1000Independence Ave., S.W.
Washington, D.C. 20585

Re: Environmental Assessment on the Leasing of the Strategic Petroleum Reserve St. James Terminal, St. James Parish, Louisiana

Dear Mr. Delaplane:

Personnel of our technical staff have reviewed the preliminary project data provided for the above referenced project and have found that significant adverse impacts to fish and wildlife resources will not occur as a result of the proposed activity.

We very much appreciate the opportunity to review and comment on this project during the early planning stages.

Sincerely,

for Lee Caubarreaux
Assistant Secretary

LC:fod

Received 11/4/94 : WKH

State of Louisiana

EDWIN W. EDWARDS
GOVERNOR

JACK McCLANAHAN
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

November 2, 1994

Mr. Hal Delaplane
U. S. Department Of Energy
Strategic Petroleum Reserve
1000 Independence Ave SW
Washington, DC 20585

RE: **C940381,** Coastal Zone Consistency
U. S. Department Of Energy Strategic Petroleum Reserve
Solicitation of Views/Direct Federal Action
Draft EA-1003: Proposed leasing of the Strategic Petroleum Reserve St. James Terminal.
St. James Parish, Louisiana

Dear Mr. Delaplane:

The above referenced Draft Environmental Assessment has been received by this office. After careful review, it has been determined that no direct and significant effects to the Louisiana Coastal Zone are likely to result from the proposed activity. This determination is made on the basis of information provided in your Draft EA. Receipt of the Final EA by Coastal Management will satisfy your requirement for Federal and State agency coordination pursuant to National Oceanic and Atmospheric Administration regulations at 15 CFR 930.35(d). Unless significant changes to the proposed activity are incorporated into the Final EA, a Consistency Determination for the proposed activity will not be required.

Be advised that such findings are made on a case-by-case basis. The Coastal Zone Management Act of 1972, as amended, at 16 USCA §1456(c)(1)(A) and (C), requires Consistency Determinations for all Federal activities within the coastal zone which affect land or water use or natural resources.

COASTAL MANAGEMENT DIVISION P.O. BOX 44487 BATON ROUGE, LOUISIANA 70804-4487
TELEPHONE (504) 342-7591 FAX (504) 342-9439
AN EQUAL OPPORTUNITY EMPLOYER

Please inform your lessee that future changes to the facilities of the St. James Terminal may require a Coastal Use Permit from Coastal Management Division.

If you should have any questions concerning this matter, please do not hesitate to contact Mr. Jeff Harris of my staff at (504) 342-7591.

Sincerely,

Terry W. Howey

Terry W. Howey,
Administrator

cc: Jody Chenier, St. James Parish
Fred Dunham, LDWF
Tim Killeen, CMD/FI

DynMcDermott *Petroleum Operations Company*
Strategic Petroleum Reserve

850 S. Clearview Pkwy., New Orleans, LA 70123 • (504) 734-4200 • FAX: (504) 734-4614 • VER: (504) 734-4967

October 31, 1994
10300-JT-94-0201

Mr. Hal Delaplane
Strategic Petroleum Reserve, FE-423
U. S. Department of Energy
1000 Independence Ave., S.W.
Washington, D.C. 20585

Dear Mr. Delaplane:

Subject: Contract No. DE-AC96-93PO18000; Review of Environmental Assessment (EA) on Leasing the Strategic Petroleum Reserve St. James Terminal, St. James Parish, Louisiana (DOE/EA-1003)

Reference: Department of Energy (DOE) Letter dated October 14, 1994, from H. Delaplane to Interested Party

The comments below, on the subject document, are provided for your information from DynMcDermott Petroleum Operations Company's (DM) Environmental, Safety, and Health directorate.

Summary Paragraph 3, 3rd sentence -- "with the region" should read "within the region."

Summary Paragraph 3, 4th sentence -- The proposed action should include loading of vessels which would significantly increase air emissions in the area.

§1.0 Paragraph 5 does not make any mention of loading vessels across the docks.

§1.0 Paragraph 8 -- Where did DOE get the information that industry wants to use the facility for just tanks and pipelines? At the Pre-Bid conference, industry representatives gave the impression that they would want to use the docks for loading vessels also.

§2.1 Marine Docks -- There is only one effluent line (outfall 001) which goes to dock 1.

§2.1 Fire Protection Systems, paragraph 2 -- The discussion on NPDES permits is included here. Suggest adding a new subtitle, "Environmental Permits." In sentence two the words "discharges" and "outfalls" should be switched. Also move sentence three to the beginning of the paragraph. It is a lead-in sentence on permits. While discussing permits, both air permits and the Corps of Engineers permits should be mentioned.

§2.2.1 Table 1 does not make any sense as written. What is the point that is trying to be made?

§3.3 Paragraph 2 locates Vacherie 15 miles north of St. James (SJ), and therefore, no longer even in St. James Parish. On two different maps referenced, Vacherie is located approximately 5 miles east of the site.

§4.2.1 The EA discusses seven years of spill data from the annual site environmental reports (1987 - 1993), however, the "Endnotes" lists only those documents from 1989 forward.

§4.2.2 Containment and Response -- The EA states that SJ has three response vessels. The connotation is of large river-going types, not the ones on site. One each 12, 14, and 16-footer does not sound like "vessels." Reword to Jon boat, pirogue, or something more appropriate.

§4.3.2 Line 6 -- "predominately" should be spelled "predominantly."

§4.4 In the third paragraph the statement is made that use of the docks "is likely to be a replacement of an equivalent use of other's docks on the lower Mississippi River." DM seriously doubts that. It is more logical that the lessee would be using SJ to expand operations, not substitute existing operations from somewhere else in the area.

§4.4 Paragraph four contains the statement that "generation of waste is independent of crude oil throughput." Increased throughput will increase spill risk and therefore, probably spillage. Some waste may become contaminated and have to be treated as hazardous. Increased throughput would probably increase analytical sampling, therefore laboratory wastes. Lastly, more use means more maintenance -- therefore more painting and thus, paint wastes. Nowhere in the document does it state that the lessee will have to use as stringent a waste reduction or chemical substitution pollution prevention program as does DOE's Management and Operating (M&O) contractor. Therefore there will probably be an increase in hazardous wastes generated. Quite conceivably the lessee will end up generating enough waste to become fully regulated. (Has DOE considered the disposal of hazardous wastes in the contract? Presently, the M&O is severely constrained to incinerate, and at only a few approved disposal facilities. Cradle to grave concept.)

§4.4 Paragraph five states that SJ "does not use large volumes or quantities of hazardous materials listed under [EPCRA] and consequently, does not trigger the thresholds for reporting chemical usage under EPCRA." The SPR annually submits lists of chemical groups present on site including crude oil on site and in pipelines, and any accumulation of hazardous waste over 500 pounds to local and state entities.

Throughout the entire document the assumption is made that the docks will only be used for unloading vessels. The intereseted industry representatives at the Pre-Bid conference, stated that they would use the docks for loading also. If the docks are used for loading, the increase in air emissions would be at a rate of 23 tons per million barrels of throughput. St. James would be considered a major facility for VOC and HAPs. This potential activity could significantly change the concept of this EA.

Questions and comments may be addressed to the undersigned at 504/734-4557.

Sincerely,

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cc: D. Brine FE-4441