BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

IN RE: APPLICATION OF ENTERGY LOUISIANA, LLC FOR APPROVAL TO CONSTRUCT BAYOU POWER STATION, AND FOR COST RECOVERY	))))	DOCKET NO. U-_____

DIRECT TESTIMONY

OF

GARY C. DICKENS

ON BEHALF OF

ENTERGY LOUISIANA, LLC

PUBLIC REDACTED VERSION

MARCH 2024

TABLE OF CONTENTS

EXHIBITS

I. INTRODUCTION AND PURPOSE

A. Qualifications

Q1. PLEASE STATE YOUR NAME AND CURRENT BUSINESS ADDRESS.

A. My name is Gary C. Dickens. My business address is 2107 Research Forest, Lake Front North, The Woodlands, Texas 77380.

Q2. ON WHOSE BEHALF ARE YOU FILING THIS DIRECT TESTIMONY?

A. I am testifying before the Louisiana Public Service Commission ("LPSC" or the "Commission") on behalf of Entergy Louisiana, LLC ("ELL" or the "Company") in support of its Application seeking approval to construct and operate the Bayou Power Station ("BPS" or the "Project"), a proposed new 112 megawatt ("MW") power barge generating station consisting of six natural-gas fired reciprocating internal combustion engines ("RICE") with black-start capability in Leeville, Louisiana and an associated microgrid that would serve downstream of the Clovelly substation, including Port Fourchon, Golden Meadow, Leeville, and Grand Isle.

Q3. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Entergy Services, LLC ("ESL"), the service company for the Entergy Operating Companies ("EOCs"),[1] as Vice President, Capital Projects. Before taking that position in May 2021, I served as Vice President, Project/Construction Management, New Generation Program Execution.

[1] ESL is an affiliate of the EOCs and provides engineering, planning, accounting, technical, and regulatory-support services to each of the EOCs. The five EOCs are Entergy Arkansas, LLC, ELL, Entergy Mississippi, LLC, Entergy New Orleans, LLC, and Entergy Texas, Inc.

Q4. PLEASE DESCRIBE YOUR EDUCATION AND BUSINESS EXPERIENCE.

A. I have worked in the energy industry since 1991, primarily with the development, design, construction, operation, and maintenance of industrial and utility power generation facilities. My initial entry into the industry was in operations, with the position of Shift Engineer and then into a management role as Plant Operations Manager through a division of the Finnish utility, IVO Generation Services, engaged in the design, building, ownership, operation and maintenance of combined-cycle combustion turbine ("CCCT") power projects. I joined Entergy Corporation in 1998 as the Operations Manager providing operations and commissioning oversight of Entergy's Saltend 1,200 MW Combined Heat and Power project in England. I also completed the commissioning of the 800 MW Damhead Creek CCCT project in England as commissioning manager, seconded to the engineering, procurement, and construction ("EPC") contractor's team. During the transition from overseas development, I relocated to the United States for Entergy in the role of Director of Commissioning for EntergyShaw LLC, completing the following EPC projects: Crete Energy 320 MW combustion turbine ("CT"), Warren County 320 MW CT, and Harrison County 550 MW CCCT projects.

I transferred to Entergy Services, Inc. ("ESI") (now ESL) and represented fossil operations in the due diligence and acquisition team for the 830 MW CCCT Perryville plant, 480 MW CCCT Attala plant, and the 320 MW CT Calcasieu plant. In 2007, I joined an EPC Contractor as a Senior Project Manager on power proposals and contract development for the United States and Central South America regions. In 2012, I returned to ESI as Director, Capital Projects to handle the construction of Ninemile 6.

Following completion of that project, I became Vice President, Project/Construction Management, New Generation Program Execution. During my tenure in this position, in addition to MCPS, I have also overseen the construction of the J. Wayne Leonard Power Station and Lake Charles Power Station. In May 2021, I accepted my current position as Vice President, Capital Projects.

I am a graduate of the British Royal Naval School of Engineering (Mechanical). I served fifteen years in fleet engineering on conventional powered and gas turbine powered ships.

Q5. WHAT ARE YOUR RESPONSIBILITIES AS VICE PRESIDENT FOR THE CAPITAL PROJECTS ORGANIZATION?

A. I oversee the capital planning, development, and construction of new fossil generation power plants, transmission, and distribution assets. I have overall responsibility for monitoring key objectives of safety, cost, schedule, environmental, and quality. I lead a team that manages the processes concerned with construction safety, project budget, cost and schedule control, engineering design review, overall construction site control, start-up and commissioning, documentation control, and progress review.

B. Purpose of Testimony

Q6. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. My testimony supports the Company's Application in this proceeding. I first provide an overview of the proposed Project. I go on to present the current total cost estimate and schedule associated with the Project. I then describe the process used to select

Grand Isle Shipyards, LLC ("GIS") to provide EPC services for the generation portion of the Project and the management approach that the Company intends to employ through completion of the Project. I also discuss the risk mitigation measures put in place to control Project risk and the status of required permits and approvals. Finally, I discuss the estimated non-fuel operation and maintenance ("O&M") costs for the Project.

Q7. HAVE YOU PREVIOUSLY TESTIFIED BEFORE A REGULATORY COMMISSION?

A. Yes. Attached as Exhibit GCD-1 is a list of my prior testimony.

II. PROJECT OVERVIEW

Q8. PLEASE PROVIDE A BRIEF OVERVIEW OF THE PROJECT.

A. BPS is a new 112 MW power barge generating station consisting of six Wartsila 18V50SG engines and other balance of plant equipment located in Leeville, Louisiana adjacent to the existing Leeville substation (see Exhibit GCD-2 and Exhibit GDC-3). The Project also includes an associated microgrid that would serve the area downstream of the Clovelly substation, including Port Fourchon, Golden Meadow, Leeville, and Grand Isle, when power is not available from the transmission system.

The Project will be primarily constructed by GIS under a fixed-price,[2] fixed-schedule duration form of EPC Agreement and, including an allowance for funds used during construction ("AFUDC") and estimated transmission upgrades, will cost an estimated $411.3 million. This amount includes $374.3 million associated with the generation portion of the Project, or roughly $3,318 per kilowatt ("kW"), and $37 million for transmission costs associated with local transmission interconnection to the switchyard. If there are no unanticipated project delays due to the inability to obtain all necessary regulatory approvals, permits, materials, and equipment, BPS is expected to enter service in the second half of 2028.

Q9. PLEASE DISCUSS THE DESIGN OF THE BPS, INCLUDING ANY SAFETY FEATURES.

A. The six Wartsila 18V50SG natural gas-fired engines will be placed on the deck of a barge where the engine hall is fully enclosed and weather tight (see Exhibit GCD-4 and Exhibit GCD-5). RICE is a well-known technology used in automobiles, trucks, marine propulsion, and backup power applications. The engines use the expansion of hot gases to push a piston within a cylinder, converting the linear movement of the piston into the rotating movement of a crankshaft to generate power.

[2] Throughout my testimony, I refer to the EPC Agreement with GIS as a "fixed-price" form of EPC Agreement. It should be noted that while the EPC Agreement with GIS is a fixed-price form of Agreement, there are elements of the pricing that are not fixed, which will be discussed below in my Direct Testimony. The primary element that is not fixed is the craft labor and per diem escalation provisions in the BPS-GIS EPC Agreement designed to clearly allocate the risk of escalating labor and per diem rates in the Gulf Coast region during the period of construction, which are explained more fully later in my Direct Testimony.

The barge includes a control room, transformers, and a selective catalytic reduction system to allow the power barge to operate as a self-contained, floating power plant that can operate in-place once connected to a fuel source and transmission line. The power barge also includes a fire protection system, fire and gas detection systems, automatic fuel disconnect valves for each engine, an automated emergency shut off valve for the plant and all exhaust gases vented safely above the deck of the barge. The barge and mooring system are designed for 100-year storm events able to withstand 178 mph 3-second gust wind and a maximum design surge including tide of 18 feet.

Q10. WHAT IS THE EXPECTED OUTPUT OF THE PROJECT?

A. BPS is designed with a gross output of 112.8 MW.

Table 1: Base Proposal Predicted Unit Performance

	Unit Capacity (MW)	Heat Rate (Btu / kW-hr, HHV)
Maximum output	112.8	

Q11. PLEASE DESCRIBE THE ADVANTAGES OF RICE TECHNOLOGY.

A. RICE generating units have a low levelized cost of electricity on a dollars per megawatt-hour ($/MWh) basis, as well as other benefits such as low water usage, a low emissions profile, the ability to support renewable resources, and the inclusion of black start capability. Heat rate pertains to the fuel required to generate a unit of electricity. The lower the plant's heat rate, the less fuel is required to generate each unit of electricity needed to supply customers. The lower heat rate of RICE technology

compared to older, less efficient technology more positively impacts customers than a higher heat rate option. Moreover, each engine achieves the heat rate noted above at full load, which means that the beneficial heat rate is achievable at this plant at lower plant capacity factors (i.e., not all the engines are running at the same time) in contrast to larger resources like a CT that also require full load before achieving the maximum heat rate. The engines are also capable of co-firing up to 25% hydrogen gas by volume upon commercial operation, though additional infrastructure and fuel supply arrangements would be required, which are not included in Project's scope or costs.

RICE technology uses significantly less water than alternative technologies such as CTs, which use a relatively significant amount water for evaporative cooling purposes during summer months when the air intake to the CT requires cooling prior to that air being presented into the compressor section of the machine. RICE technology, on the other hand uses a closed-loop cooling system, and water requirements are more limited to cooling water makeup to the engines due to evaporation in the generation process, engine turbo-washing water for general plant washdown, and potable water for plant restrooms and faucets.

The RICE units are able to start and achieve full load in a very short period of time (about five minutes from warm engine), and they are able to start and stop multiple times in a single day. Both of these characteristics are critical to supplying generation when renewable resources are not available (e.g., on cloudy or rainy days or after sunset) as well as in a peaking or emergency situation. RICE technology also allows for partial load operation in the event there is some but not enough renewable energy available to meet grid needs.

BPS will have black-start capability, which is the ability of a plant to start up under its own power without a back feed of power from the electric grid. Typically, there is an auxiliary load supplied to the unit from the local switchyard. In the event of a complete loss of power at BPS, compressed air bottles will be used to drive the engine during start-up, and a small generator is expected to be on board the barge to help energize the electronics. The low auxiliary load requirement for RICE technology makes the ability to black-start RICE machines more attractive than other options that require a large, self-starting generator, which has a higher cost.

Q12. DO THE ENTERGY OPERATING COMPANIES HAVE ANY EXPERIENCE WITH BUILDING RICE UNITS?

A. Yes. Entergy New Orleans, LLC ("ENO") completed the construction of a brownfield RICE power plant in New Orleans in 2020. New Orleans Power Station ("NOPS") is an electric power generation plant with a nominal net output of 128 MW. The site is located in Orleans Parish on the site of the former Michoud Power Plant. This project included the installation of seven Wartsila W18V50SG RICE generators.

Q13. PLEASE PROVIDE AN OVERVIEW OF THE MICROGRID.

A. As discussed by Company witness Samrat Datta, when a transmission outage occurs, a microgrid controller (microprocessor) will automatically carry out switching actions necessary to separate the area from the rest of the transmission system and establish a microgrid island that is capable of serving the area downstream of the Clovelly substation. The primary microgrid controller will be installed at the Leeville substation

along with redundant microgrid controllers, auto synchronization relays, and networking equipment at the Fourchon, Golden Meadow, Clovelly, and Valentine substations. The microgrid controller will also automatically reintegrate the "island" with the rest of the transmission system when normal transmission system conditions are restored.

Q14. PLEASE EXPLAIN THE CAPITAL PROJECTS ORGANIZATION WITH RESPECT TO BPS.

A. The Capital Projects' role with respect to BPS is to ensure key objectives of safety, cost, schedule, environmental, and quality are met on behalf of ELL. This involves leading a team that will manage the processes concerned with construction safety project budget, cost and schedule control, engineering design review, overall construction site control, start-up and commissioning, documentation control, and progress reviews.

III. SITE CONFIGURATION AND TECHNOLOGY SELECTION

Q15. WHAT IS THE CURRENT CONFIGURATION OF THE SITE ON WHICH THE PROJECT IS PROPOSED TO BE LOCATED?

A. The Project is proposed to be located on the former site of Bobby Lynn's Marina, which was directly hit in each of Hurricanes Delta, Zeta, and Ida and not rebuilt or operating when ELL purchased the site in late 2022. Figure 1 below shows the location of the site on a regional map, and Figure 2 below shows an aerial view of the site. See also Exhibit GCD-2 and Exhibit GCD-3.

Figure 1

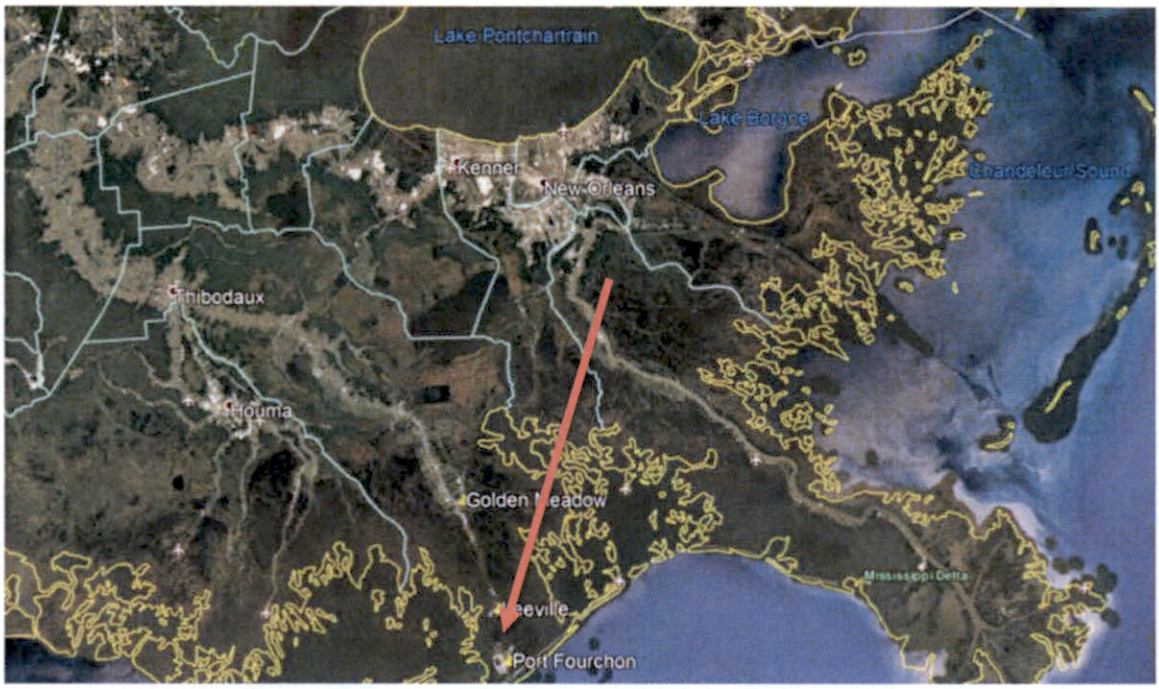


Figure 2

Q16. PLEASE EXPLAIN WHY RICE GENERATION IS THE PREFERRED TECHNOLOGY FOR THE PROJECT.

A. As explained in more detail by Company witness Laura K. Beauchamp and Mr. Datta, RICE capacity – because of its design and performance characteristics, and in particular its quick-start capability and lack of minimum up-time – is the technology of choice for the peaking and reserve role that BPS will play. RICE units can start and reach full load within five minutes and are flexible in their dispatch, allowing BPS to produce 5 to 112 MW of power, which makes them well suited for quickly responding to the changes in weather and output from intermittent resources. Given the geography and history of hurricane impact, it is also advantageous to be able to build the plant on a floating barge.

Q17. WHAT ARE THE ADVANTAGES OF PLACING GENERATION ON A BARGE COMPARED TO A LAND-BASED GENERATING PLANT?

A. A floating power plant with RICE units on a barge is economical compared to a land-based plant in this situation. That is because the cost to elevate existing land or build the plant on a structure high enough to allow for similar surge protection is cost prohibitive. Furthermore, a floating generation facility allows the barge to be moored in place and rise and fall with the tide or storm surges. A land-based facility would be required to comply with local building codes to determine final site elevation. Unlike a floating power facility that can rise and fall, a land-based facility could be subject to storm surge inundation if the level of storm surge exceeds that of the final site elevation. Finally, because BPS is a self-contained, portable generation facility, ELL ultimately

could move the resource to another location as circumstances may warrant – for example, if load requirements change or if the BPS may be deemed more economic for customers elsewhere.

IV. ESTIMATED PROJECT COST AND SCHEDULE

Q18. WHAT IS THE CURRENT ESTIMATE OF THE COSTS TO COMPLETE THE BAYOU POWER STATION?

A. As detailed in Table 2, the current estimate of the costs to complete BPS is approximately $411.3 million, inclusive of, among other things, the GIS EPC Agreement, expenses related to seeking Commission certification, costs related to transmission interconnection to the switchyard, contingency, AFUDC, and regulatory costs. This amount includes $374.3 million associated with the generation portion of the Project, or roughly $3,318 per kW.

Table 2: BPS Capital Cost Estimate (Millions)

[redacted]

GIS EPC Agreement	[redacted]
Other Vendors	[redacted]
Labor	[redacted]
Other Expenses	[redacted]
Fuel Reservation Fees	[redacted]
Other Indirect Costs	[redacted]
AFUDC	[redacted]
Project Contingency	[redacted]
Transmission Projects	$37
Total Project Cost	**$411.3**

Q19. HOW WERE THESE COST ESTIMATES PREPARED?

A. These estimates are largely derived from the largest single cost component, the EPC Agreement with GIS. The GIS EPC Agreement estimate includes a detailed scope of work describing the plant, its required functionality, and its required performance, all of which were developed by GIS based on the preliminary engineering. In addition to the GIS EPC contract, ESL will execute an EPC contract with Ampirical for the transmission interconnection portion of the Project, and the transmission interconnection costs are based on a detailed scope of work developed with the project team and supported by Company's experience with Ampirical on other transmission projects. Finally, ESL will execute an EPC contract for the microgrid, and the Project estimate is based on that initial scope.

The other costs include project management and oversight (both internal and external services), inspections and testing, environmental permitting, pursuing regulatory approvals, temporary facilities and supplies, as well as AFUDC. The estimate for these costs was developed both from internal subject matter experts and third-party providers using the actual costs of the NOPS project as a reference.

Q20. WHAT KINDS OF COSTS ARE INCLUDED IN THE GIS EPC AGREEMENT ROW IN TABLE 2 ABOVE?

A. GIS EPC Agreement costs are the expenditures that will be incurred by GIS and billed to the Company during the performance of the EPC Agreement, including the following:

1. engineered equipment, including the Wartsila engines, generators, generator step-up transformers, auxiliary transformers, and barge;
2. home office engineering and construction management services, including procurement, project controls, scheduling, and progress tracking;
3. supervisory and administrative staffs at the construction site;
4. craft laborers (such as welders, electricians, and pipefitters);
5. construction materials (copper, steel, concrete, etc.) used by both GIS and subcontractors;
6. subcontractors;
7. the indirect construction costs that support the construction project (such as scaffolding, administrative offices, or safety equipment);
8. sales taxes born by GIS on consumables; and
9. labor and materials associated with the dedicated start-up and commissioning teams, including onboarding and training costs necessary to prepare BPS Staff to operate the plant.

Q21. PLEASE DISCUSS THE OTHER COST ESTIMATES SHOWN IN TABLE 2.

A. The other cost estimates shown in Table 2 include:

- Other Vendors: There is a wide range of services and expenses captured in the Other Vendors category, including expense for contract personnel on the project management team, rental of temporary office trailers, construction power, environmental permitting services, the cost of permit applications, site inspections and surveys, transmission studies, gas used during commissioning, miscellaneous consumables related to safety and office supplies used during project execution, consultant fees, materials, tools and equipment (including IT hardware used during construction), and plant labeling. The estimate for this

line item was informed by the actual costs incurred for the NOPS project. The remaining costs in this category cover the microgrid portion of the project, which will be constructed through a separate EPC contract. That portion of the costs is estimated to be $2.9 million, and the microgrid portion of the Project is further discussed by Mr. Datta.

- Labor: Labor costs include internal construction management, training, and expenses. Internal construction management includes personnel to manage any contracts to engineer, procure, and construct the Project. Training includes, but is not limited to, operations, maintenance, safety, environmental, and NERC training.
- Other Expenses: This category includes land acquisition costs, including purchase price and title fees, GIS escalation, and GIS Barge mooring analysis.
- Fuel Reservation Fees: This category includes an estimate of the pipeline fuel reservation charges during commissioning.
- Other Indirect costs: This category includes Capital Suspense, which distributes costs associated with administrators (*e.g.*, Financial Processes ("FP") Property Accounting), engineers, and supervisors that support various capital projects. The purpose of capital suspense allocation is to distribute these capital overhead charges to specific Capital Funding Projects and Work Orders.
- AFUDC: Allowance for Funds Used During Construction allocates the costs of funds used for a capital project (*i.e.*, debt and equity).
- Project Contingency: This is a general contingency estimate of approximately 5% of the total BPS Project cost estimate to allow for circumstances that could

affect the cost of the Project that are currently unidentified or uncertain and could include:

- the discovery of facts currently unknown to either the Company or GIS that affect the Project and that are the responsibility of the Company. Examples include the discovery of unknown underground obstructions and additional fuel supply infrastructure costs;
- circumstances beyond the control of either the Company or GIS that affect the cost of the Project, such as damages and delays from significant weather events;
- changes in laws or regulation that affect the cost of the Project; and
- delays in obtaining regulatory approval, transmission access, fuel supply, and/or permits that result in higher costs.

- Transmission Projects: The amount in this category is based upon an estimate to construct the interconnecting transmission lines between BPS and the Leeville Substation pursuant to an EPC contract with Ampirical. This estimate includes substation upgrades that will center around the connection of the generation units to the broader MISO transmission system. To interconnect the units, the Leeville substation (site of interconnection) will require additional breakers, switches, relays, and controls. The Leeville substation will need to be expanded in the surrounding property currently owned by ELL to accommodate the additional equipment.

Q22. DOES THE GENERATION PROJECT COST ESTIMATE REFLECT COST ESCALATION ADJUSTMENTS AND PROJECT CONTINGENCIES?

A. Yes. The GIS EPC Agreement includes a fixed-price and fixed schedule duration, subject to craft labor wage and per diem rates that will be updated before full notice to proceed ("FNTP") is issued. FNTP is not expected to be issued prior to receipt of acceptable approvals from the Commission, and timely approval is important due to the risk of increased costs for craft labor on the Project resulting from the anticipated labor shortage in the Gulf Coast Region due to ongoing and proposed industrial capital investments over the next decade. The EPC Agreement, which has been substantially negotiated but is not expected to be executed until the Commission certifies the Project, contains a craft labor wage and per diem true-up mechanism that will adjust the price based upon actual wage rates and per diem rates as compared to estimated escalation rates included in the EPC estimate. These provisions are discussed more fully later in my testimony.

Further, the Company included a contingency estimate that addresses the fact that construction projects of the cost magnitude and time duration of BPS have cost elements that are beyond the reasonable control of the Company and its management. Even with a fixed-price EPC Agreement and well-defined scope, experience demonstrates that unpredictable events, such as the discovery of unknown site conditions or changes in laws or regulations, can require change orders that will affect project costs. Thus, a contingency must be included in the estimate in order to provide a realistic estimate of the ultimate cost to complete the Project. The current Project estimate contains a contingency line item of approximately 5% of the total project

costs, which is reasonable for a project of this nature. I describe risks to the Project and mitigation plans later in my Testimony.

Q23. DOES THE TRANSMISSION PROJECT COST ESTIMATE INCLUDE COST ESCALATION AND PROJECT CONTINGENCIES AS WELL?

A. The Company included a contingency in the total transmission project estimate for the same reasons discussed above with respect to the generation portion of the Project, but transmission EPC contracts typically do not need to include provisions for cost escalation, and none are expected here. Unlike the more complex power barge construction that requires a significant amount of major equipment and subcontracts that must be procured over a long period of time, the transmission upgrades and interconnection are conventional in scope and do not require provisions for cost escalation that could not otherwise be captured in the contingency.

Q24. DOES THE TOTAL COST ESTIMATE INCLUDE GAS PIPELINE INTERCONNECTION COSTS?

A. Yes. BPS will require connections to gas pipelines. The Project site is located adjacent to two natural gas suppliers, Tennessee Gas Pipeline and Kinetica, both of which are capable of delivering gas at pressures required by the RICE generators without improvements. ESL's System Planning and Operations ("SPO") Fuels group is in discussion with both gas pipelines to serve the Project, and both have expressed an interest and intent to support the Project and construction schedule, pending the finalization of transportation contracts.

Like the commodity costs of natural gas, the costs associated with pipeline transportation service will be recovered through the Fuel Adjustment Clause ("FAC") and, therefore, are not included in the Project cost estimate. However, an estimate of pipeline interconnection and gas delivery charges during the period of construction and commissioning has been included in the Project cost estimate because these costs are incurred prior to the in-service date of the Project and capitalized in accordance with required utility accounting, as opposed to the ongoing cost of fuel and fuel transportation that are expense items recovered through the FAC.

Q25. DO YOU BELIEVE THAT THE CURRENT PROJECT COST ESTIMATE IS A REASONABLE ESTIMATE OF THE COSTS OF BPS?

A. Yes. Based on the unique technical details of the project, pricing was established by using an "Open Book" process with GIS to ensure the competitiveness of GIS's pricing with market alternatives. Under an Open Book process, GIS provides transparency into their pricing structure based on a fixed price proposal with granular detail into cost, negotiated profit, and applicable escalation prior to FNTP. The actualized costs for material and direct and indirect labor costs are detailed by category of the Project schedule and provided in GIS's True-Up Mechanism workbook.

Pricing was also supported by market benchmarking provided by Power Advocate, which uses the Bureau of Labor Statistics Producer Price Index ("PPI") to normalize market pricing. The PPI is calculated by dividing the average weighted prices of goods and services produced in the U.S. during the current month and year by the average weighted prices of goods and services produced in the U.S. in a base month

and year then multiplying the result by 100. GIS's proposal for actual and escalated pricing increase was validated using the PPI approach to normalize current market conditions based on the proposed pricing structure detailed in the proposal. The proposed pricing from GIS was rigorously reviewed by Supply Chain and the project team over the duration of the development of the Project, which included the development of the final scope of work. The final cost estimate is reasonable based on the level of detail completed through this price development exercise.

The estimated EPC costs for Ampirical are based on a detailed scope of work developed with the project team and supported by Company's experience with Ampirical on other transmission projects. The final fixed-price EPC contract will be executed using an open-book process following certification by the Commission.

Q26. IS THE PROJECT CONSTRUCTION PRICING FIXED?

A. Not entirely. As mentioned earlier, the estimated Project costs include EPC costs for GIS, Ampirical, a microgrid contractor, and other costs. Only the EPC costs are fixed. Moreover, while the GIS EPC prices are fixed assuming the defined scope of work, other factors such as changes in scope due to discovery of new facts, force majeure events, craft labor wage rate and per diem rate escalation above projections, or changes in law could affect EPC costs. Those subsequent events could result in change orders that increase or decrease EPC costs. Also, development projects spanning several years are exposed to a number of risks, both known and unknown, and despite diligent mitigation plans and efforts, scope changes may be required.

Q27. CAN YOU PROVIDE AN EXAMPLE OF A DEVELOPMENT THAT COULD REQUIRE A CHANGE IN THE SCOPE OF WORK AND CHANGE THE PROJECT'S COST ESTIMATE?

A. One example of a development that could change the Project's scope of work is a discovery event. While performing site work and associated trenching, something underground could be discovered that was not on the current site drawings, was not visible on the surface and could not be anticipated. Any work that a contractor has to perform related to that discovery would be added to the scope of the project through a change order.

Q28. WHAT ARE SOME OF THE KEY MILESTONES IN THE ESTIMATED PROJECT SCHEDULE?

A. Target Substantial Completion is expected by February 2028. GIS would receive incentives for early completion or be required to pay liquidated damages for delayed completion. Some of the key milestones in the schedule (assuming Commission certification by February 3, 2025) are:

Table 3: Key Milestones Assuming February 2025 Certification

[redacted]

Milestone	Date
LPSC Regulatory Filing	**03/2024**
Contract Execution Date (NTP)	[redacted]
LPSC Regulatory Approval	[redacted]
Begin Construction	[redacted]
Permitting Complete	[redacted]

Milestone	Date
Barge Topside Completion	[redacted]
Barge Transfer/Delivery	[redacted]
Barge First Fire	[redacted]
Operations Permits Issued	[redacted]
Target Substantial Completion	[redacted]
Commercial Operations Date	[redacted]

Q29. WHAT IS THE EXPECTED TIMING OF THE SPENDING AND FINANCIAL COMMITMENTS ASSOCIATED WITH THE PROJECT?

A. The following graph containing highly sensitive protected materials ("HSPM") depicts the Project's projected cash flow, spend commitment, and cancellation exposure:

Figure 3

[redacted]

Q30. WHY IS IT IMPORTANT TO OBTAIN TIMELY REGULATORY APPROVALS?

A. As described by Company witness Ryan Jones, the Company needs reasonable assurance from the Commission that construction of the BPS is in the public interest prior to spending several hundred million dollars to construct a plant needed to serve the Company's customers. Accordingly, the Company reasonably does not intend to issue FNTP under the EPC contract without certification from the Commission that undertaking BPS serves the public convenience and necessity, as required by the 1983 General Order.[3] It is critical that the Commission understand how the timing of its approvals affects BPS. The longer it takes to issue FNTP, there is higher risk that the price escalations in the GIS EPC Agreement will exceed the estimate (resulting in higher project costs) as well as result in a day-for-day delay of the in-service date.

V. PROJECT MANAGEMENT AND CONTRACTING APPROACH

Q31. HOW DOES THE COMPANY PROPOSE TO MANAGE THE PROJECT?

A. Given the magnitude of this Project and the Company's existing infrastructure for construction and project management, the Company determined that it would be appropriate to follow the same structure used for the construction of Ninemile 6, St. Charles Power Station, Lake Charles Power Station, and NOPS, using an EPC contractor in conjunction with the Company's management team.

The project management approach will follow Entergy's Project Delivery System ("PDS") Policy, Standards, and Guidelines in support of driving consistency

[3] See General Order (Corrected) (May 27, 2009), In re: Possible modifications to the September 20, 1983 General Order to allow: (1) for more expeditious certifications of limited-term resource procurements; and (2) an exception for annual and seasonal liquidated damages block energy purchases, Docket No. R-30517.

and certainty in project delivery outcomes. The PDS provides a framework to ensure the different business units consistently and effectively develop and implement capital Projects. The PDS establishes a Stage Gate Process ("SGP") approach as a single and comprehensive framework for project development, planning, and execution. The SGP provides a roadmap of key deliverables and decisions that need to be sequentially completed to promote consistent, reliable, and high-quality project outcomes. Additionally, the SGP prescribes a continuous, systematic evaluation of the project organization, scope, and maturity of project management deliverables that helps ensure projects are successfully executed. This occurs through a series of independent Gate Reviews/Assessments and Approvals.

Q32. WHY USE AN EPC CONTRACTOR IN THE FIRST INSTANCE?

A. A large construction project like BPS is a substantial undertaking, and the Company does not have the in-house capability necessary to execute the engineering, procurement, and construction for such a project. The use of an EPC contractor that can perform all of these functions under a single agreement is cost-effective and common for such projects within the power industry.

Q33. IS THERE A SINGLE COMMON FORM OF EPC AGREEMENT?

A. No. There are several types of EPC contracting approaches, and the suitability or desirability of each depends largely on the type of project. From an owner's perspective, fixed-price contracts are preferred because of the relative certainty they provide to a project's overall cost. When a project's scope is uncertain and likely to

vary, however, EPC providers will either refuse to contract on a fixed-price basis or perhaps agree to do so in exchange for a significant risk premium added to the fixed-price. By contrast, when a project entails a well-defined scope of work and presents an acceptable risk of material changes in scope, EPC providers are more willing to contract on a fixed-price basis without charging a significant risk premium.

Q34. WHAT EPC CONTRACTING STRATEGY WILL BE UTILIZED?

A. As was the case with NOPS, the Company was able to substantially negotiate a fixed-price (with exceptions), fixed-schedule form of agreement with GIS that reflects a detailed scope of work. The contractor must complete construction within [redacted] of receiving FNTP or else pay daily liquidated damages as defined in the Agreement. The contractor also has the opportunity to earn incentives if the Project is completed before the required date.

Q35. WHY DID THE COMPANY ELECT TO USE A FIXED-PRICE FORM OF EPC AGREEMENT?

A. The EPC strategy used by the Company is expected to yield the lowest reasonable cost with an adequate level of risk mitigation when the project site can accommodate a standard design and there is a minimal amount of retrofit into an existing site. The Company, working with GIS, was able to develop a site plan that would accommodate a standard design and minimize the retrofit scope. BPS readily lends itself to the EPC Agreement structure selected by the parties.

Q36. HOW WAS THE BPS EPC CONTRACTOR SELECTED?

A. Grand Isle Shipyard, LLC is a Louisiana-based company that has been serving the energy, power, infrastructure, and industrial markets since 1948. GIS has transformed from a modest company in Grand Isle, Louisiana servicing the commercial fishing industry, to an industry leading global energy partner. As a member of the Edison Chouest Offshore ("ECO") family of companies, GIS has the capability to lead the performance of the scope with in-house resources, reducing ELL's overhead to manage multiple contractors. The ECO family of companies offers services ranging from engineering, procurement, fabrication, and construction through commissioning with extensive industrial, oil & gas, and marine experience with a proven delivery track record. ECO, collectively, has extensive marine experience with existing facilities and manpower, and has designed, constructed, and currently operates approximately 300 vessels worldwide, primarily in support of oil and gas operations. The ECO family of companies includes thousands of employees and over a dozen fabrication and shipyard facilities and has its global headquarters in Lafourche Parish, Louisiana.

For this project, GIS was chosen as the EPC contractor for the power barge, teaming with key partners in Wartsila for the power technology and Bollinger Shipyard, LLC (another member of ECO) for the barge design and fabrication. As EPC contractor, GIS will be responsible for engineering, procurement, and construction at their South Louisiana facilities, as well as management and oversight of subcontractors, including Wartsila and Bollinger, for all other activities through final commissioning.

Bollinger, which will design and construct the barge portion of the Project, has been serving the marine industry with new construction, repair, and maintenance

services for over 75 years. Bollinger owns and manages multiple shipyards across the Gulf Coast and specializes in new construction, steel fabrication, vessel repair, and conversion of a wide variety of U.S. military and commercial vessels. In addition, Bollinger offers a full range of logistics, lifecycle support and training packages for commercial, industrial, and government customers.

The power technology will be provided by Wartsila based on ESL's and ENO's recent, positive experiences with Wartsila at the NOPS facility. As a global power technology provider serving the power plants, energy storage, and renewables integration sectors, Wartsila will be a key component to teaming with GIS and Bollinger to provide this solution for ELL.

GIS and Bollinger's proven history of performance in the marine engineering, fabrication and construction market will provide the level of expertise required to deliver a timely solution while maintaining emphasis on safety and quality. Furthermore, GIS's and Bollinger's corporate headquarters are based in lower Lafourche Parish, Louisiana, which is within 20 miles from the Project's final mooring location. This headquarters locale will allow GIS to engage with local companies that will have personnel that directly benefit from the power output objectives of this program. On a daily basis, GIS partners and works with these local vendors, subcontractors, as well as holds long standing relationships with local stakeholders, municipal and parish government, and the Greater Lafourche Port Commission (Port Fourchon), which highlights another synergy that aides in the execution of a project of this magnitude.

The power provided by this project has a direct correlation to the current and future growth demands in Port Fourchon and the surrounding area. GIS's Technical Services teams have been actively engaged, since inception, in supporting the Port with its expansion plans, infrastructure improvements and dredging needs. GIS and Bollinger, as members of the ECO family of companies, have indicated that they are confident that this positive, local influence, accompanied by their collective global experience, will ensure a successful outcome for the Project.

It should be noted that the decision to pursue negotiations with GIS was also supported by the project team's favorable assessment of GIS's financial strength, GIS's expertise in the management of maritime construction projects, and experience in the Louisiana construction market.

Q37. WHAT ACTIVITIES WILL GIS PERFORM AS EPC CONTRACTOR?

A. Under the fixed-price EPC Agreement structure, GIS will act as an independent contractor with respect to the engineering, procurement, and construction services defined in the scope of work. GIS also will procure the six Wartsila 18V50SG engines, six generators, two Generator Step Up ("GSU") transformers, supporting auxiliary equipment, and barge hull to support top side erection of the Wartsila equipment from the original equipment manufacturers ("OEMs"). Firm, fixed prices for this equipment are included in GIS's fixed price, subject to certain escalation at the rates specified in the EPC Agreement. GIS's procurement of this equipment will allow full coordination and scheduling of the OEMs in order to meet the fixed schedule provided in the Agreement. GIS will provide a "wrap" (*i.e.*, guarantee) of the commitments on

schedule and performance for the entire Project, providing for risk mitigation if there are delays or performance shortfalls.

Q38. HAVE THE COMPANY AND GIS AGREED UPON THE TERMS OF AN EPC AGREEMENT?

A. The Company is in the final stages of negotiating the contract and expects the final EPC Agreement to be executed following certification of the Project. The general terms and conditions of the EPC Agreement have been agreed upon and are not expected to change. The key terms are summarized in HSPM Exhibit GCD-6.

Q39. WHY WAS AMPIRICAL SELECTED AS THE EPC CONTRACTOR FOR THE TRANSMISSION INTERCONNECTION?

A. The Project team and ESL Supply Chain reviewed current EPC partners, and Ampirical best aligns with the requirements of this Project based on the following attributes. The Project's substation brownfield attributes are well aligned with Ampirical's demonstrated strengths in executing complex greenfield and brownfield projects. Ampirical successfully completed several open-book negotiated projects in the last several years, including St. Charles Power Station transmission interconnection, NOPS transmission interconnection, and the Jefferson Parish Reliability Improvement Phase 1 Project. In addition, Ampirical has completed several other open-book and competitively-bid projects for Entergy's Transmission organization, and it is currently planning or executing several additional projects.

Q40. HAVE THE COMPANY AND AMPIRICAL AGREED UPON THE TERMS OF AN EPC AGREEMENT?

A. No, although a standard EPC contract is expected to be executed after certification, and it is expected that the terms will be similar to prior Ampirical EPC contracts.

VI. CONSTRUCTION RISK MANAGEMENT AND MITIGATION

Q41. IS IT IMPORTANT TO HAVE PLANS IN PLACE TO MANAGE AND MITIGATE THE POTENTIAL RISKS ASSOCIATED WITH THE PROJECT?

A. Yes. BPS represents a substantial capital investment, and it needs to be well-managed. Good management includes proper consideration of the risks that can be reasonably foreseen and the development of a plan to reasonably manage and mitigate those risks. Good project management should not seek to eliminate all potential risks irrespective of costs to do so but instead should reasonably manage those risks considering the probability of occurrence, potential magnitude of impact, and cost to mitigate.

Q42. HOW ARE THE RISKS AFFECTING THE PROJECT'S SCHEDULE AND PROJECTED COSTS MITIGATED?

A. The fixed-price structure and well-defined scope of the GIS EPC Agreement are the principal mitigation tools to minimize the effects risks may have on Project costs. The Company developed mitigation plans and included contingency in the Project cost estimate that is thought to be reasonably sufficient to mitigate those risks identified. Delays in receiving regulatory approvals or the required permits beyond the dates assumed in the Project schedule will increase total costs and result in a delayed in-

service date. The Project schedule has been developed by optimizing the sequence of activities to produce the shortest practical schedule at the lowest reasonable cost. The schedule has a built-in contingency for critical path activities that will help mitigate short delays.

Q43. IS THE CONTINGENCY REFLECTED IN THE PROJECT COST ESTIMATE ADEQUATE TO COVER ALL POSSIBLE RISKS THAT COULD INCREASE COST?

A. No, but that is not the purpose of contingency funds in project management. Contingency is used to reasonably mitigate unplanned increases in project cost, whether caused by known risks or unforeseen risks. It recognizes that large construction projects that span several years can be adversely affected by events beyond the utility's control. ESL used a Monte Carlo simulation to determine the level of contingency that would provide a reasonable level of mitigation of known and unknown risks, but it is possible that some of these risks, if realized, could cause cost increases beyond the contingency included in the cost estimate. As was the case with Ninemile 6, St. Charles Power Station, and Lake Charles Power Station, the Company does not retain any unused project contingency.

Q44. PLEASE DISCUSS SOME OF THE KEY RISKS UNDER THE EPC AGREEMENT.

A. While the EPC Agreement with GIS is not yet executed, the agreed-upon general terms and conditions reflected in HSPM Exhibit GCD-6 provide for a fixed price and fixed schedule. Any fixed-price contract presents a risk of price increases through change

orders and extra work claims. This risk has been mitigated to the extent possible by broadly defining the scope of work assigned to GIS as including everything necessary to complete the Project that meets the specification and performance requirements, except for items expressly stated in the scope document to be the Company's responsibility. The agreed-upon terms for the EPC Agreement also contain favorable change order provisions that will enable the Company to direct GIS to proceed with a change over which there is a good faith dispute between the parties, with the dispute over price impact to be resolved in arrears. This will protect the Company and its customers from the possibility that the EPC contractor would threaten to delay work until change order disputes are resolved to its satisfaction. Further, GIS must notify the Company before making any changes required by force majeure events or changes in laws, and must document such changes and the resulting impacts before being entitled to any schedule relief, increase in the fixed-price, or additional reimbursement.

Finally, wage rate escalation on craft labor and per diem is expected to be a risk as a result of the anticipated labor shortage in the Gulf Coast region due to ongoing and proposed industrial capital investments over the next decade. To address this risk, the GIS EPC Agreement contains a craft labor wage and per diem true-up mechanism that will adjust the price one time based upon actual wage rates and per diem rates.

Q45. PLEASE ELABORATE ON THE CRAFT LABOR PROVISIONS CONTAINED IN THE GIS EPC AGREEMENT.

A. Under the terms of the pending Agreement, GIS agreed to assume productivity risk associated with craft labor (*i.e.*, man-hour estimates). GIS also agreed to assume

subcontractor craft labor wage escalation risk as well as engineering and project management labor. The EPC Agreement pricing will reflect an annual [redacted] escalation assumption for direct and indirect craft labor rates and an annual [redacted] escalation assumption for direct and indirect craft labor per diem as placeholders in the EPC fixed-price cost.[4] These EPC Agreement placeholders are approximately $[redacted] for craft wage rates and $[redacted] for craft per diem and are based on 2023 wage and per diem rates.

The placeholders will be allowed a one-time true-up before FNTP. For the one time true-up, the actual GIS craft wages and per diem escalation for the project period in review would be compared to the amount of wage rate and per diem escalation included in the EPC fixed price for the same period. The Company will pay the actual direct and indirect craft labor and per diem rates at FNTP once the one time true-up exercise is complete. GIS and the Company will review all wage and per diem adjustments before any final adjustments are approved.

Moreover, an additional disincentive for GIS to arbitrarily increase wages and/or per diem rates on the Project is the market forces' effect on GIS's other projects in the Gulf Coast region. In other words, should the wage and per diem rates for BPS become misaligned with the market, GIS's other projects would be negatively affected, as higher wages would attract craft labor from other GIS projects, increasing GIS's costs of doing business. Thus, GIS is incented to follow the market as opposed to setting it. In addition, under the EPC Agreement, GIS will provide wage and per diem

[4] Direct craft labor refers to craft laborers who are directly involved in the construction of the permanent plant. (*i.e.*, pipefitters, welders). On the other hand, indirect craft labor refers to craft laborers who are indirectly involved in the construction of the permanent plant. (*i.e.*, scaffolding, support personnel).

market information that it periodically obtains from area labor surveys and exit interviews to support wage and per diem adjustment justification. Details of GIS's actual wage and per diem payments for craft labor will be available for the Company to audit. Certain historical and projected data related to wage and per diem rates will be included in GIS's monthly project report.

Q46. WILL THE EPC AGREEMENT HAVE PROVISIONS THAT MITIGATE RISK RELATING TO GIS'S PERFORMANCE?

A. Yes. As I discussed earlier, the fixed-price, fixed-duration form of the contract, coupled with liquidated damages for late delivery, heat rate, and output, provide a measure of protection for customers. Additionally, the agreed-upon terms of the EPC Agreement require that GIS deliver a finished product that meets minimum requirements for performance and warranty its work for 12 months following substantial completion. GIS is also required to indemnify the owner against claims for bodily injury and third-party property damage.

The agreed-upon terms of the EPC Agreement establish a milestone payment structure whereby the contractor will only be paid for the work that has been completed, as verified by the Company. The milestone payments are subject to a cumulative cap with monthly values stated in the Agreement that protects the Company's cash flow. Additionally, payment retention is authorized for: (a) the greater of agreed upon punch list value or $[redacted] plus (b) potential performance liquidated damages that may be payable; plus (c) any schedule liquidated damages. These and other contractual

protections, as well as applicable limits of liability, are included in the Summary of GIS EPC Contract Terms, attached as HSPM Exhibit GCD-6.

Q47. WHAT TYPE OF INSURANCE IS INCLUDED IN THE COMPANY'S COSTS ESTIMATE FOR THE PROJECT?

A. As with the NOPS project, the Company expects insurance coverage will include Builders All Risk ("BAR") and Delay in Startup ("DSU") policies.

Q48. WHAT DOES BAR INSURANCE COVER?

A. BAR is for the benefit of the Company, the contractor, and subcontractors of every tier. It covers property damage to the Project work from non-excluded perils while it is under construction, from the moment of inland shipment from an OEM and/or supplier until the policy lapses. The limit of liability on the BAR policy is expected to be roughly equal to the EPC Agreement value, subject to various deductibles depending on the insured peril.

Q49. WHAT DOES DSU INSURANCE COVER?

A. DSU insurance covers certain schedule-delay costs resulting from property damage to project work caused by a non-excluded peril under the BAR insurance. After the deductible period is met, DSU insurance provides coverage for certain costs until project completion is achieved, including AFUDC, owner's costs, and contractor increased site costs. The indemnities under the DSU policy are subject to a monthly maximum as well as an aggregate limit. Although DSU coverage for BPS has not yet

been procured, a maximum monthly indemnity of approximately $3.3 million and an 18-month maximum indemnity of approximately $60 million is expected.

VII. REQUIRED PERMITS

Q50. PLEASE DESCRIBE THE VARIOUS REGULATORY OVERSIGHT REQUIREMENTS THAT WILL APPLY TO THE PROJECT.

A. BPS will be subject to permitting and regulatory oversight by the Commission, the Port Fourchon Parish Police Jury, the Louisiana Department of Environmental Quality ("LDEQ"), Louisiana Department of Natural Resources ("LDNR"), the United States Environmental Protection Agency ("EPA"), Office of Coastal Management ("OCP"), and the United States Army Corps of Engineers ("USACE"). The LDEQ is primarily responsible for implementing the various federal and state environmental laws applicable to the Project, such as the Clean Air Act ("CAA"), the Clean Water Act ("CWA"), the Resource Conservation and Recovery Act, and the Louisiana Environmental Quality Act. The EPA is responsible for oversight to ensure that the LDEQ properly implements federal law through federally enforceable state implementation plans, regulations, and permits. The LDNR and USACE are responsible for approving construction standards in navigable waterways relating to navigation safety, fill, dredge, and preservation of jurisdictional wetlands and issuance of the coastal use permit. All of the environmental issues associated with the construction and operation of the BPS would be subject to regulatory requirements imposed and administered by the LDEQ, EPA, USACE, and LDNR in consultation with other state and federal agencies, as required.

A. Air Quality Permits

Q51. WHAT ARE THE PERMITTING REQUIREMENTS ASSOCIATED WITH AIR EMISSIONS FROM THE PROJECT?

A. Because BPS will be a "major stationary source," as defined under the CAA, it will be subject to multiple regulations. In particular, the Project will be subject to:

- National Ambient Air Quality Standards ("NAAQS") and Title V Operating Permit ("Title V") rules;
- applicable federal New Source Performance Standards ("NSPS") associated with stationary compression ignition or reciprocating internal combustion engines;
- compliance with federal requirements associated with hazardous air pollutants; and
- other regulatory requirements associated with air emissions, including continuous monitoring, emissions market allowance obligations, and greenhouse gas emission regulations.

The Company will obtain a Title V (Part 70) New Source Review Air Operating Permit for BPS encompassing each of the requirements listed above, issued by the LDEQ.

Q52. WILL BPS BE DESIGNED TO MEET THE BEST AVAILABLE CONTROL TECHNOLOGY REQUIREMENTS?

A. Yes. BPS will employ emission reduction controls to meet Best Available Control Technology ("BACT") standards. The Project will include Selective Catalytic Reduction ("SCR") to reduce NO_x emissions and an Oxidation Catalyst for the control of carbon monoxide ("CO") emissions.

In summary, the Company has evaluated control technology performance and costs and selected a variety of controls that will meet BACT standards for all affected

pollutants. The controls identified are considered BACT for engines and will be included in the Title V NSR Operating Permit application that will be submitted to the LDEQ for the BPS.

B. Water Quality

Q53. WHAT WATER QUALITY REGULATIONS WILL APPLY TO THE PROJECT?

A. Like the CAA, the LDEQ has been delegated enforcement and permitting authority under the CWA. All industrial facilities that discharge wastewater and some that discharge storm water into waters of the State of Louisiana must obtain a discharge permit under the Louisiana Pollutant Discharge Elimination System ("LPDES"). The LPDES permit is the state counterpart to the CWA's National Pollutant Discharge Elimination System ("NPDES") permit. These permits require treatment or management of wastewater and/or storm water prior to discharge to maintain designated water quality criteria. If the BPS has operational wastewaters to be discharged to surface water of the State, an LPDES permit application incorporating wastewater discharges from the BPS will be filed with LDEQ. Stormwater requirements for the BPS facility operation consist of submitting a Notice of Intent ("NOI") to the LDEQ for coverage under the Multi-Sector General Permit for Storm Water Discharges, and preparing a Storm Water Pollution Prevention Plan for the BPS.

Q54. WHAT OTHER WATER QUALITY REQUIREMENTS MAY BE APPLICABLE TO BPS?

A. A construction storm water discharge permit from the LDEQ to authorize storm water discharges from the construction area during construction of the BPS will also need to be obtained.

Q55. ARE THERE POTENTIAL ENVIRONMENTAL EFFECTS RELATED TO WATER QUALITY ASSOCIATED WITH BPS?

A. Yes. Typical water quality effects for power projects include the use of freshwater resources for process use and the discharge of treated wastewater, heated cooling water, and storm water to receiving streams.

Q56. HOW DOES THE COMPANY PROPOSE TO ADDRESS THESE POTENTIAL WATER QUALITY EFFECTS?

A. The LPDES permitting process is predicated on the requirement that discharges from a permitted facility are protective of the State's water quality standards. A LPDES permit cannot be issued if it would allow a facility to cause or contribute to violations of water quality standards. The issuance of this permit, and ELL's compliance with conditions contained therein, will minimize any water quality impacts. The BPS facility is being designed to operate in accordance with all water discharge regulatory requirements.

C. Other Issues

Q57. WHAT OTHER ENVIRONMENTAL ISSUES WITH RESPECT TO BPS HAVE BEEN ANALYZED?

A. The Company has analyzed information regarding the Project's potential effect upon archaeological and historical resources and threatened and endangered species. In addition, the unique nature of the project being located over water means the potential involvement with the United States Coast Guard, which is a less common requirement for Entergy Operating Company facilities. The requirements associated with maintaining a dock operations manual and sanitary treatment unit authorizations are included in the potential authorizations for the Project. No additional significant issues have been identified at this time. The Phase 1 Cultural Resource Survey was completed in December 2020 and concluded that no impacts to historic properties listed or eligible for listing in the NRHP were anticipated in association with the BPS.

Q58. WHAT USACE PERMITTING MAY BE APPLICABLE TO THE PROJECT?

A. The Project will impact jurisdictional wetlands and is located within the Louisiana Costal Zone. The Company has drafted the authorization request from the USACE under CWA Section 404, Section 10 of the Rivers and Harbors Act ("RHA"). Additionally, the draft application for a Coastal Use Permit ("CUP") from the LDNR Office of Coastal Management is prepared as required for activities located within the Louisiana Coastal Zone. The Company also drafted the request for a jurisdictional determination from USACE, which will identify those wetland areas and waters of the United States that the USACE will take jurisdiction over and must undergo permitting

action if impacted by Project construction. The Company has identified the following permits as necessary for the construction of the proposed Project and associated elements:

- USACE Section 404 Permit
- USACE Section 10 Permit
- LDEQ Water Quality Certification ("WQC")
- Office of Coastal Management ("OCM") Coastal Use Permit

A Section 404 permit is required to place fill material into wetlands or "waters of the United States." When impacts to wetlands cannot be avoided, compensatory mitigation will be required. Mitigation is a part of the Section 404 permit process and must be purchased before the USACE issues a Section 404 permit. The purchase of mitigation credits from an approved mitigation bank is the USACE's preferred method. An allowance for this risk has been included in the Project's estimate and contingency. A WQC, or waiver or exemption of the same, is required to demonstrate that the placement of fill material and the construction and operation of the facility will not violate the water quality standards of Louisiana.

The Section 10 permit is for the dredging work affecting navigable waters of the U.S. The LDNR, USACE, and OCP have a joint permitting program where a single application is prepared for both state and federal permits. The draft Joint Permit Application ("JPA") has been prepared for the project.

Q59. WILL BPS UNREASONABLY IMPAIR VISIBILITY OR VEGETATION?

A. No. In addition to the NAAQS analysis described earlier, two other air quality modeling impact analyses are being conducted and are anticipated to show negligible

impact on other air quality related values. The EPA and the LDEQ require both an Additional Impact Analysis and a Class I Area Analysis be conducted in certain circumstances.

The Additional Impact Analysis is conducted to determine the impairment to visibility and the effects on soils and vegetation. Impacts due to commercial, residential, industrial, and other growth in the vicinity of the Project also must be addressed to the extent they are a result of the proposed action. It is anticipated that the results of this analysis demonstrate that BPS will not have a negative effect on the surrounding area.

Q60. DOES THE SITING OF BPS COMPORT WITH APPLICABLE ZONING LAWS?

A. BPS is within a portion of Lafourche Parish that is zoned Industrial along with surrounding commercial and industrial land. The City of Leeville and the State of Louisiana do not have numeric noise limits, but Lafourche Parish Code of Ordinances Section 26-104 restricts maximum sound level by receiving land use category to 50 dBA for industrial, commercial, and residential.

The BPS location at the marina is surrounded by industrial barges, tugboats, a gas compressor station 800 feet northeast of the project, and Old Highway 1 to the east. Site monitoring found ambient sound levels to be frequently above the 50 dBA level. Predicted noise from the Project is expected to be above the current ordinance levels. In response, the Project sound study was provided to Lafourche Parish for review, and ELL received a letter of no concern from Lafourche Parish President regarding the noise ordinance or BPS's impact on community noise levels. The project engineer GIS

is also pursuing a zoning variance for the site to facilitate the anticipated noise levels from the Project.

Q61. WHAT IS THE STATUS OF THE PERMITS FOR THE PROJECT?

A. The pre-application meeting for the air permit for the BPS was held with LDEQ in 2020. A new pre-application meeting will be held with LDEQ to refresh any requirements that may have changed since the prior meeting. As discussed above, BPS will apply for a LPDES permit, which will be submitted to the LDEQ in late 2024 or early 2025. The Company has evaluated the project area for its effect on jurisdictional wetlands and waters of the U.S. and is in the process of updating the draft Joint Permit Application to be submitted to the USACE, LDNR, and OCM with an anticipated submittal date in Summer 2024.

VIII. ESTIMATED NON-FUEL O&M COSTS

Q62. HAS THE COMPANY PREPARED AN ESTIMATE OF OPERATIONS AND MAINTENANCE COSTS THAT WILL BE INCURRED IN OPERATING THE BAYOUR POWER STATION?

A. Yes. ESL has prepared an estimate based on a number of other assumptions related to operating systems and conditions at the unit beginning in 2028. This estimate was provided to Mr. Jones for use in estimating the first-year revenue requirement associated with the BPS, based on the current best understanding of what equipment will be installed at the site. The estimate also makes assumptions on a general inflation rate, a payroll escalation rate, and a materials and supplies escalation rate across the

estimate time frame for the purposes of presenting the estimate starting in 2028 dollars. In estimating the O&M expense, the average general inflation rate is assumed to be 2.5% per year, with payroll increasing by 2.5% per year. All cost estimates are based on 2024 estimates, escalated to 2028 by the appropriate escalation rate and escalated each year thereafter by the appropriate escalation rate.

Q63. HOW WAS THE ESTIMATE DEVELOPED?

A. The estimate was developed based on experience gained in the operation of the other RICE facility that has been developed by one of the Entergy Operating Companies, ENO's NOPS facility, and on information gleaned from general industry sources. This estimation process compiles O&M performance and cost into a spreadsheet model for the processes, systems, and components that will be employed within a plant, and uses that data to estimate routine annual and major periodic inspection O&M expenses.

Q64. WHAT IS THE CURRENT ESTIMATE OF O&M EXPENSES?

A. The estimated O&M expenses for BPS in its first year of operation are summarized in Table 4 below. The O&M numbers in Table 4 are for the O&M associated with BPS only, excluding any current O&M costs that are otherwise reflected in the Company's rates. My estimate reflects costs in 2028 dollars. The O&M estimate is supported by the workpapers attached as HSPM Exhibit GCD-7 and Exhibit RDJ-3 to the Direct Testimony of Mr. Jones.

Table 4: Estimated Bayou Power Station
First Year O&M Expenses (Thousands)

O&M Expenses		
Payroll		$ 3,013
Outage O&M Expense		$ 982
Baseline O&M Expense		$ 1,174
	Total O&M Expense	$ 5,169
Insurance		$ 616
TOTAL O&M		**$ 5,785**

Q65. HOW WAS THE PAYROLL COST ESTIMATE PREPARED?

A. A preliminary incremental plant staffing organizational chart was developed, based on ENO's experience with NOPS, that takes into account the expected staffing of BPS when it reaches commercial operation. That preliminary organizational chart is attached as HSPM GCD-8. Labor rates were then applied to the different job families and incremental headcount included in that organizational chart. Those costs were then totaled to arrive at the annual plant staff labor figure shown in Table 4 above.

Q66. WHAT ARE THE OUTAGE O&M EXPENSES INCLUDED IN TABLE 4?

A. The O&M outage expenses listed in Table 4 include routine annual maintenance expenses incurred as part of annual planned maintenance outages as well as periodic major maintenance on the engines and associated generators.

Q67. WHAT TYPES OF COSTS ARE INCLUDED IN O&M BASELINE EXPENSE?

A. BPS will be a set of large, complex mechanical systems that will require routine maintenance to ensure continued reliable, safe, and economic operations. This maintenance will require materials, chemicals, labor, and rental equipment, and will address the O&M costs for activities for the following equipment and systems: gas engines and generators, the plant's electrical instruments and controls, the circulating water and water production systems, environmental systems, and substation and transmission facilities. Detailed estimates of these costs, which include both fixed and variable components, are shown in the workpapers attached as HSPM Exhibit GCD-7.

Q68. HOW DOES THE COMPANY INTEND TO MANAGE LONG-TERM MAJOR MAINTENANCE ASSOCIATED WITH THE PROJECT?

A. The Company will manage major maintenance as part of the operation and maintenance program described above.

Q69. DID THE COMPANY EVALUATE A LONG-TERM SERVICE AGREEMENT FOR LONG-TERM MAJOR MAINTENANCE?

A. The other RICE plant owned and operated on behalf of an Entergy Operating Company, NOPS, is managed without a Long Term Service Agreement ("LTSA"), and that is currently the expectation for BPS. ESL, on behalf of ENO and ELL, respectively, has engaged in discussions with Wartsila around developing an LTSA, potentially for both NOPS and BPS. Should those discussions eventually result in an LTSA, Mr. Jones

describes how those costs would be treated from a ratemaking perspective consistent with past LPSC practice.

Q70. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY AT THIS TIME?

A. Yes.

AFFIDAVIT

STATE OF TEXAS

COUNTY OF MONTGOMERY

NOW BEFORE ME, the undersigned authority, personally came and appeared, **GARY C. DICKENS**, who after being duly sworn by me, did depose and say:

That the above and foregoing is his sworn testimony in this proceeding and that he knows the contents thereof, that the same are true as stated, except as to matters and things, if any, stated on information and belief, and that as to those matters and things, he verily believes them to be true.

Gary C. Dickens

SWORN TO AND SUBSCRIBED BEFORE ME
THIS 22nd DAY OF FEBRUARY, 2024

Carol Tompkins
NOTARY PUBLIC

My commission expires: February 01, 2025

CAROL TOMPKINS
My Notary ID # 130989368
Expires February 1, 2025

Listing of Previous Testimony Filed by Gary C. Dickens

DATE	TYPE	JURISDICTION	DOCKET NO.
01/15/2016	Rebuttal	LPSC	U-33633
06/25/2020	Direct	LPSC	U-35584
12/08/2020	Direct	LPSC	U-36222
07/01/2022	Direct	PUCT	53719
11/16/2022	Rebuttal	PUCT	53719


1
3235
Golden Meadow
1
Leeville
Bayou Power Station
Lake Raccourci
Port Fourchon


GAS REGULATING STATION
FLOATING POWER FACILITY

BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

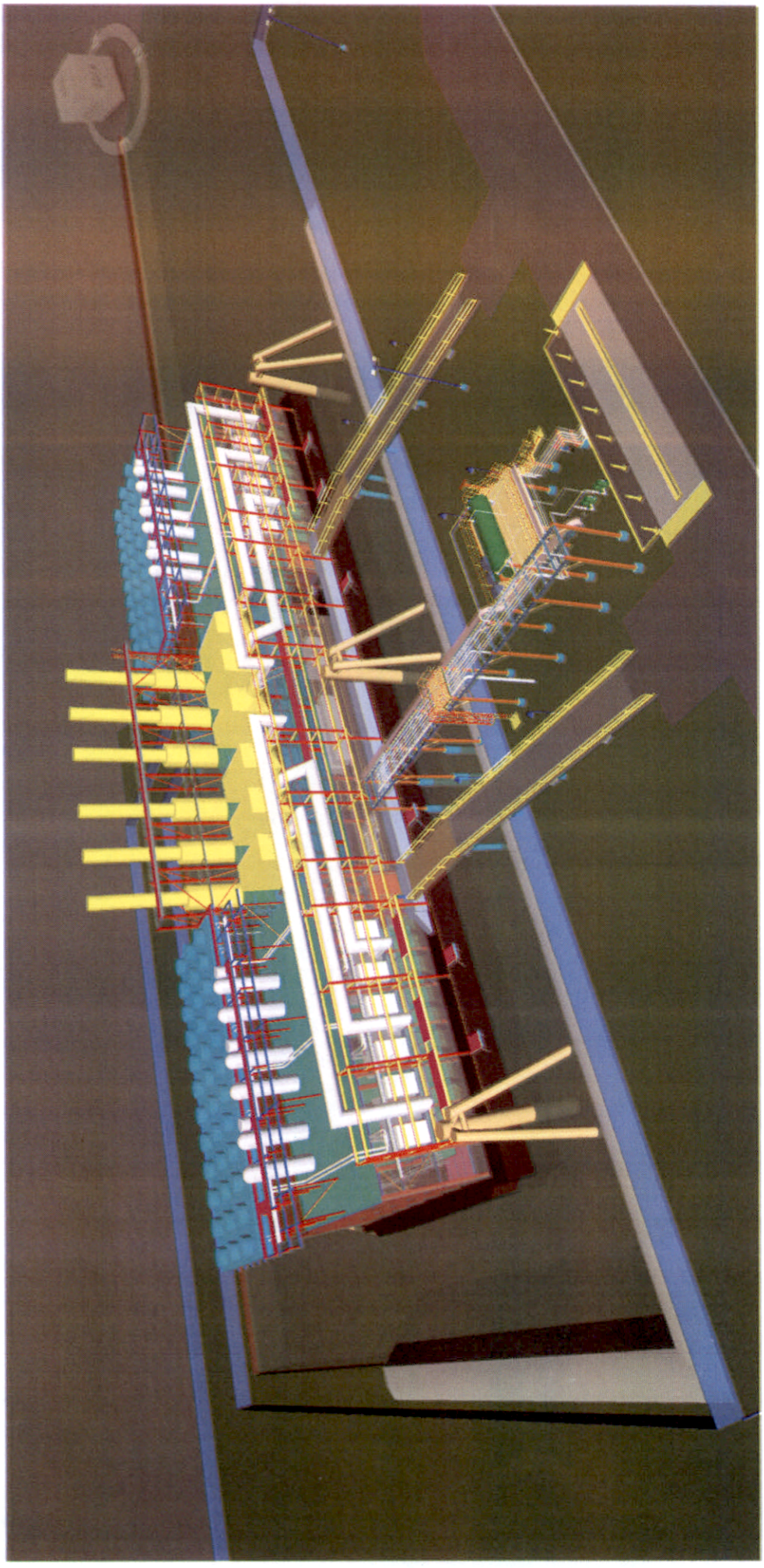
***IN RE*: APPLICATION OF ENTERGY LOUISIANA, LLC FOR APPROVAL TO CONSTRUCT BAYOU POWER STATION, AND FOR COST RECOVERY**	))))	**DOCKET NO. U-_____**

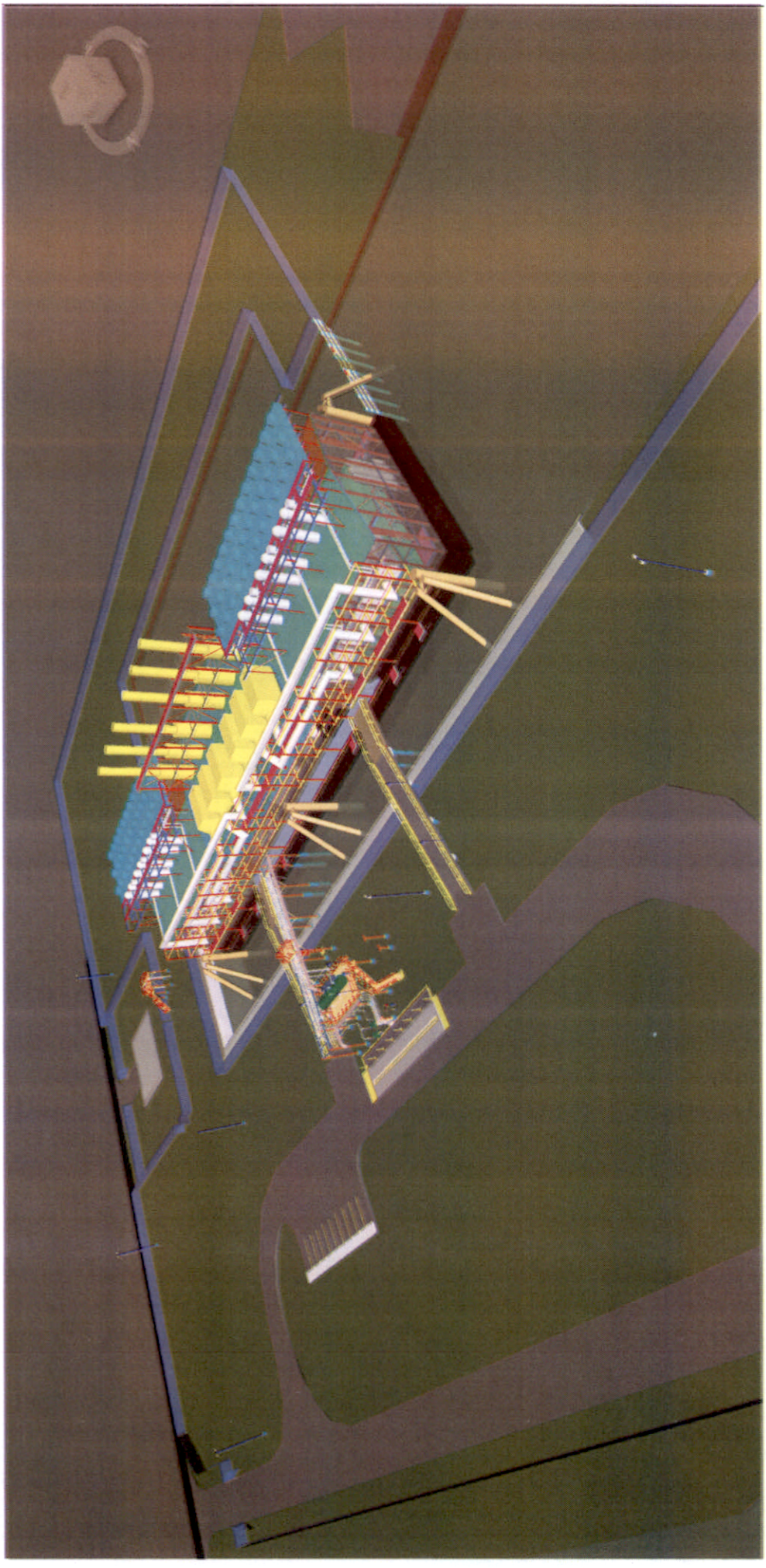
EXHIBIT GCD-4

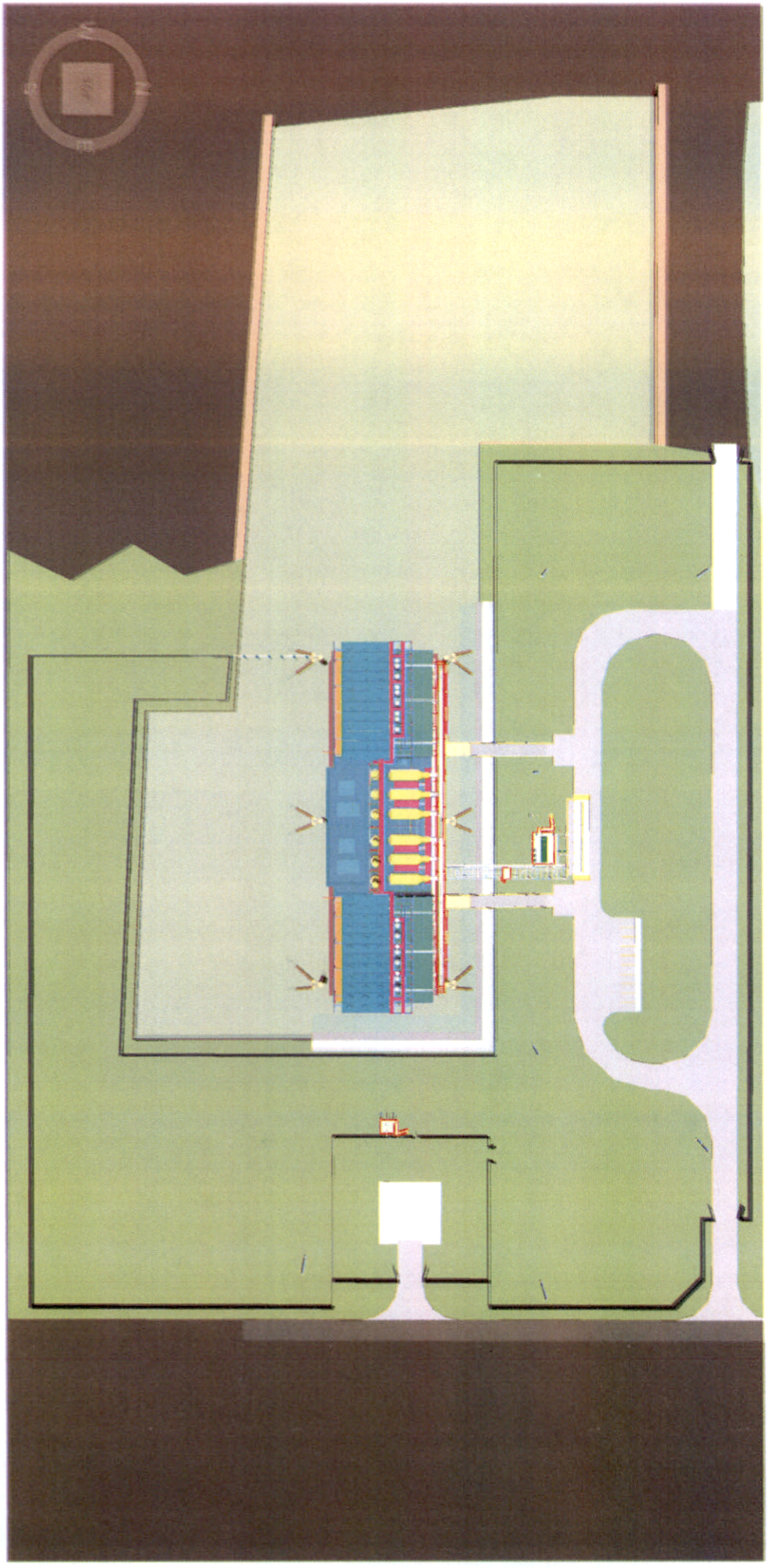
HIGHLY SENSITIVE
PROTECTED MATERIAL

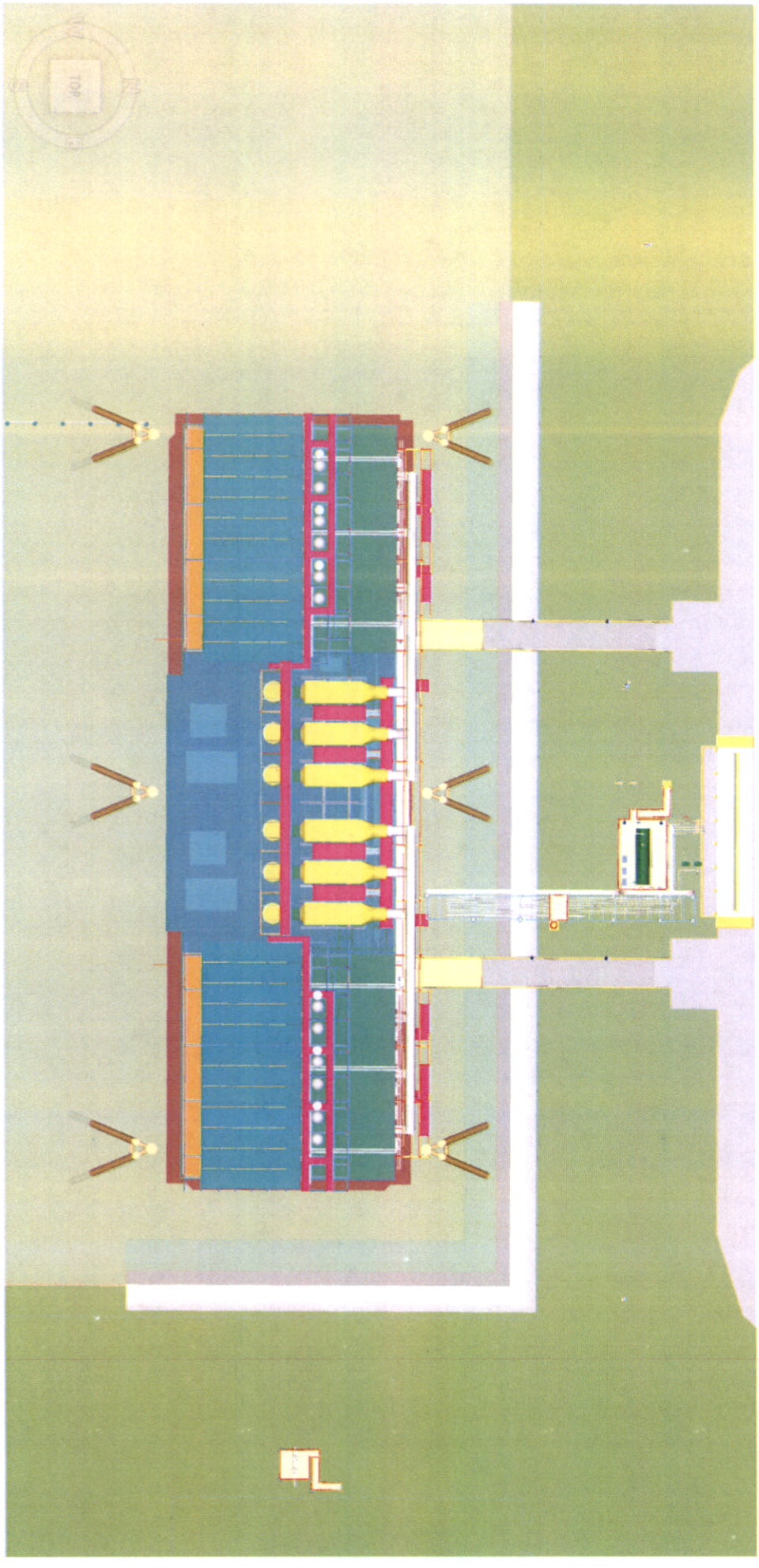
INTENTIONALLY OMITTED

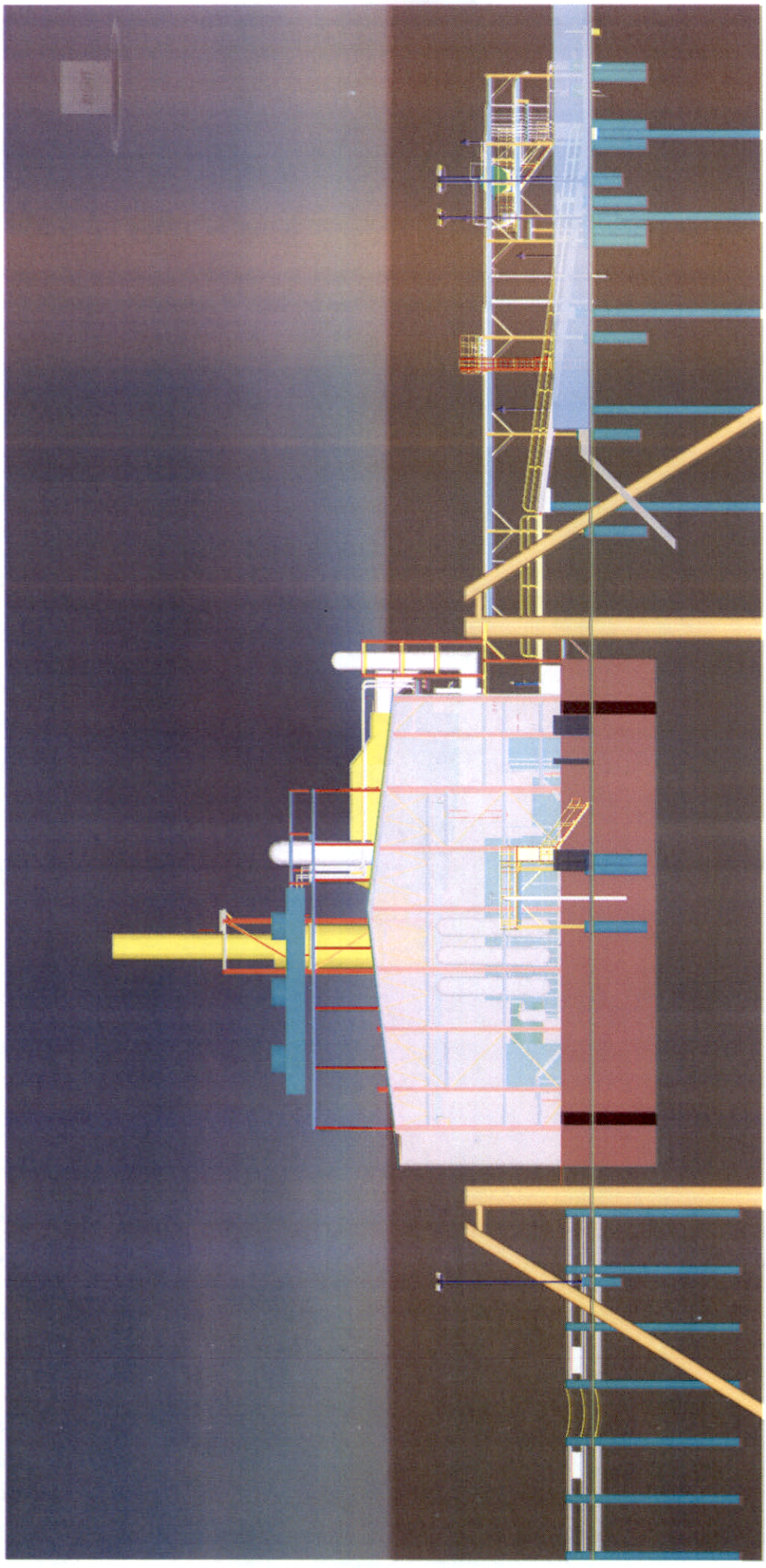
MARCH 2024

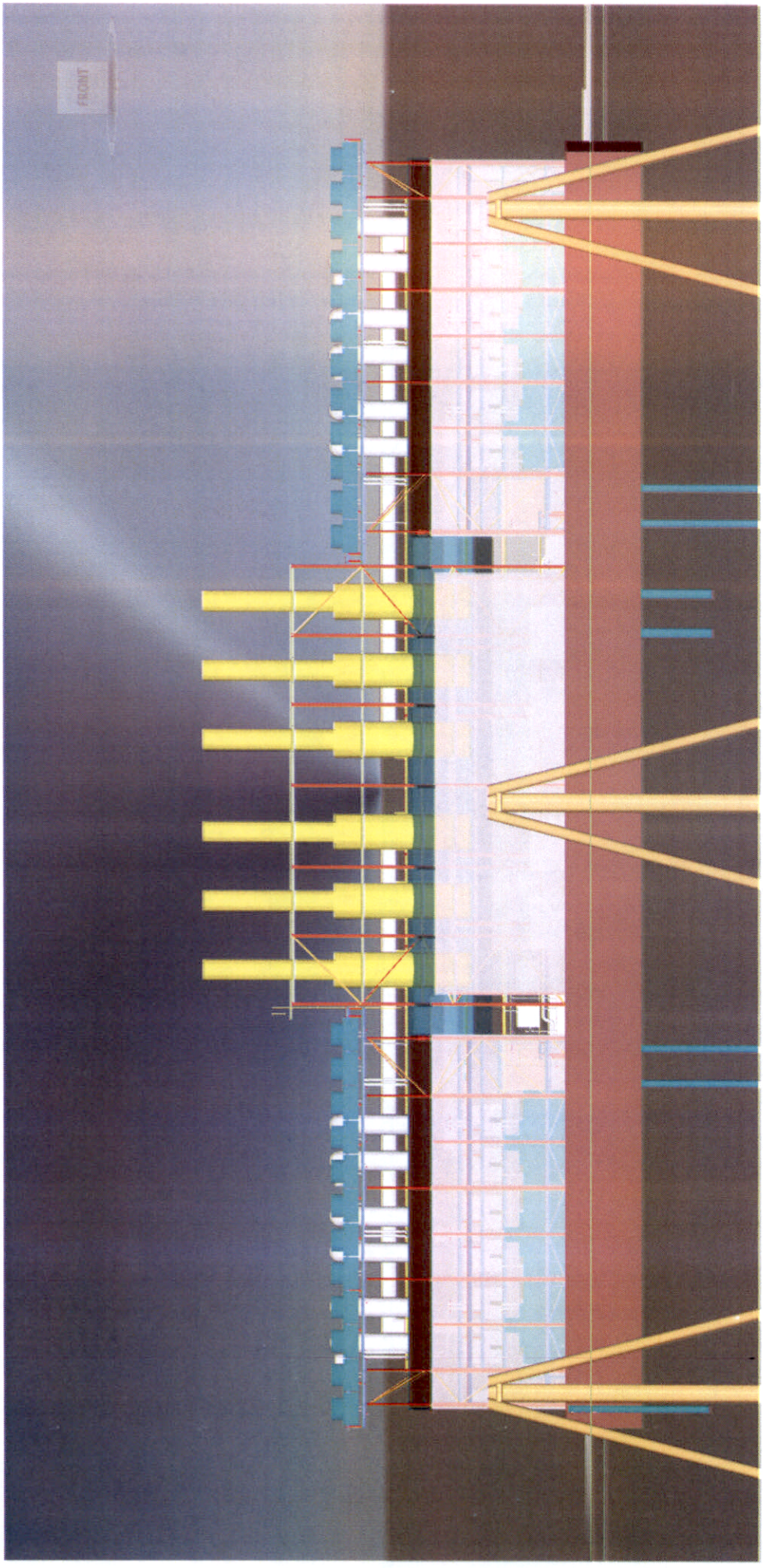


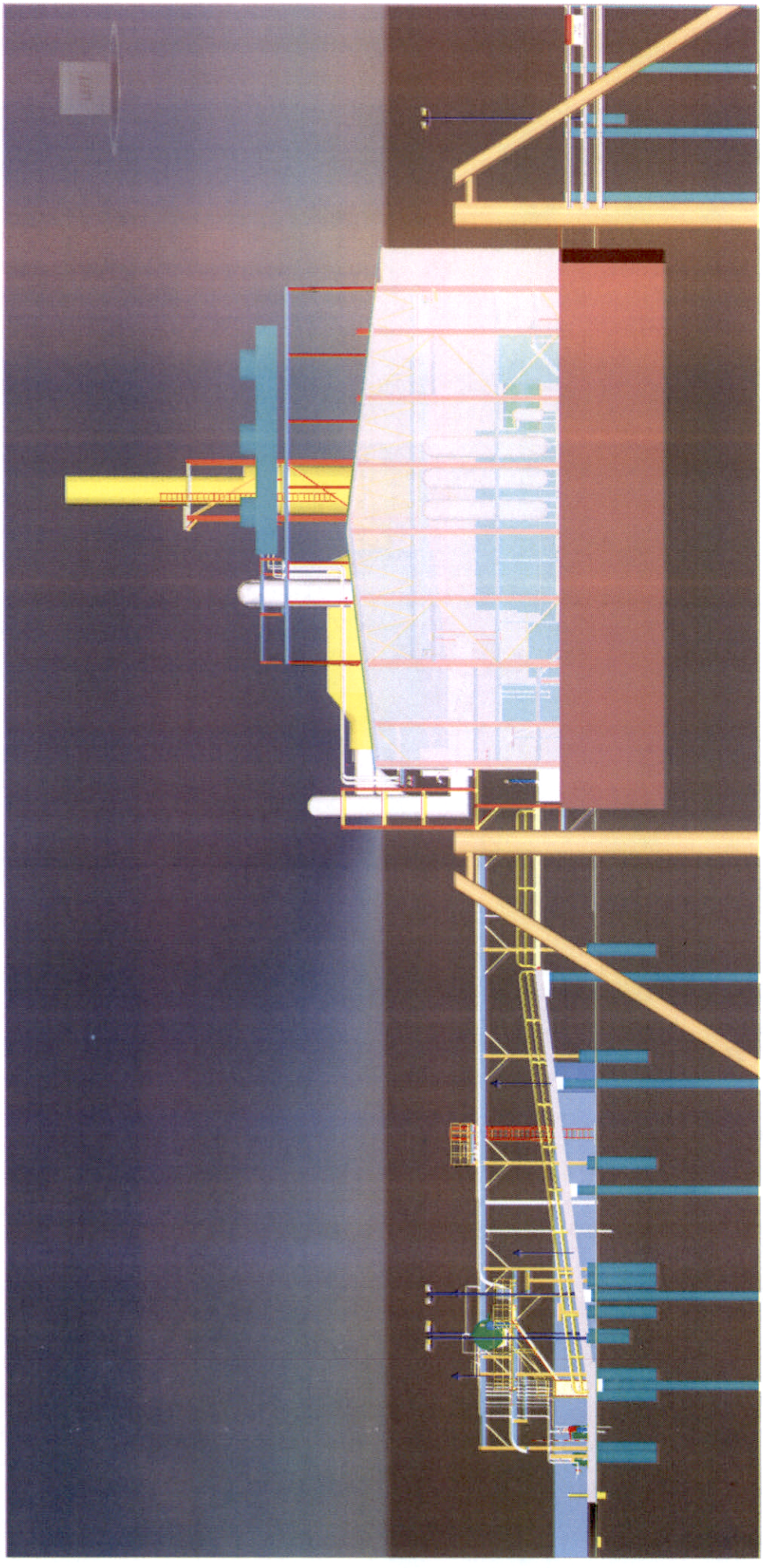


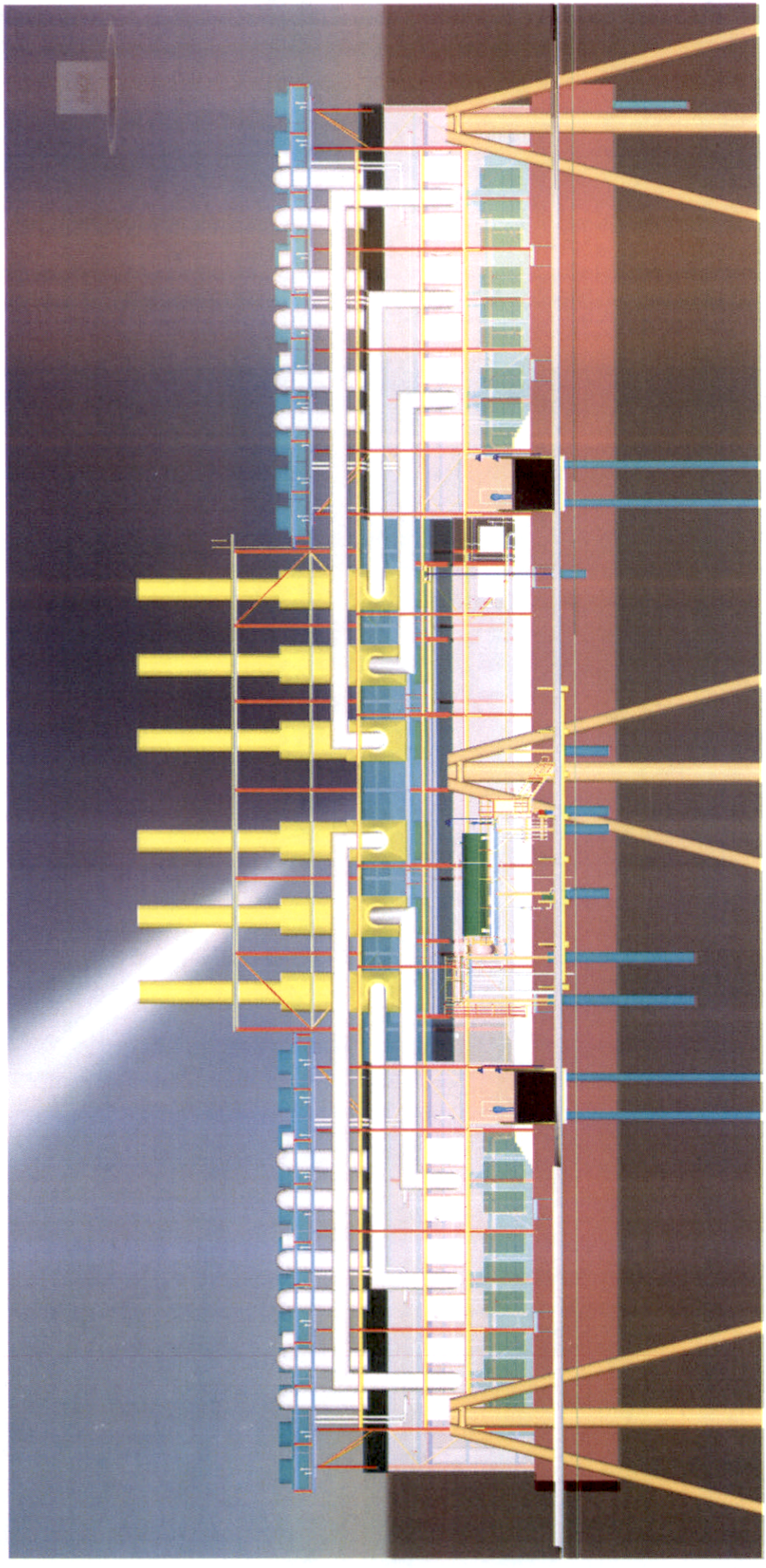


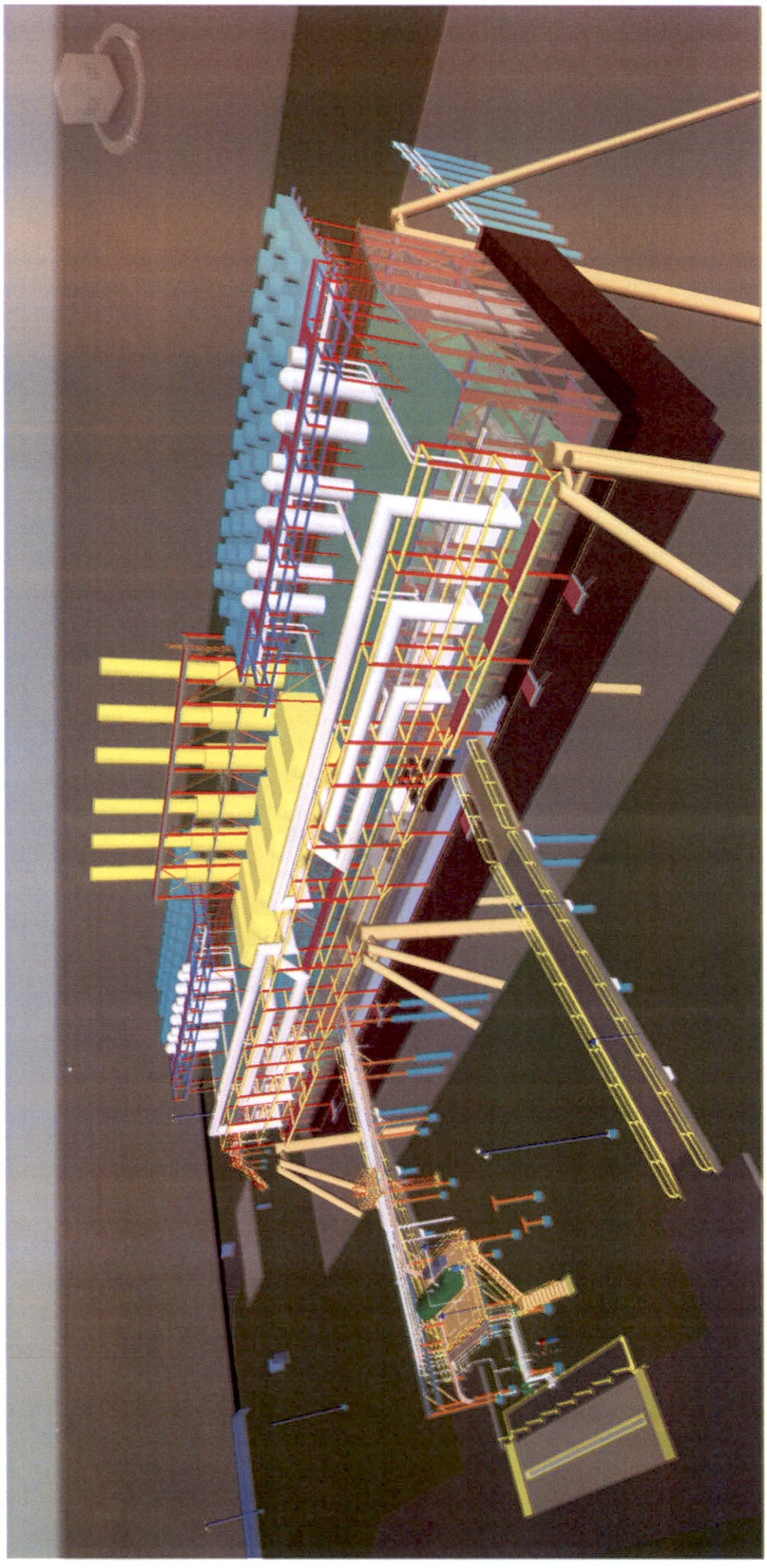


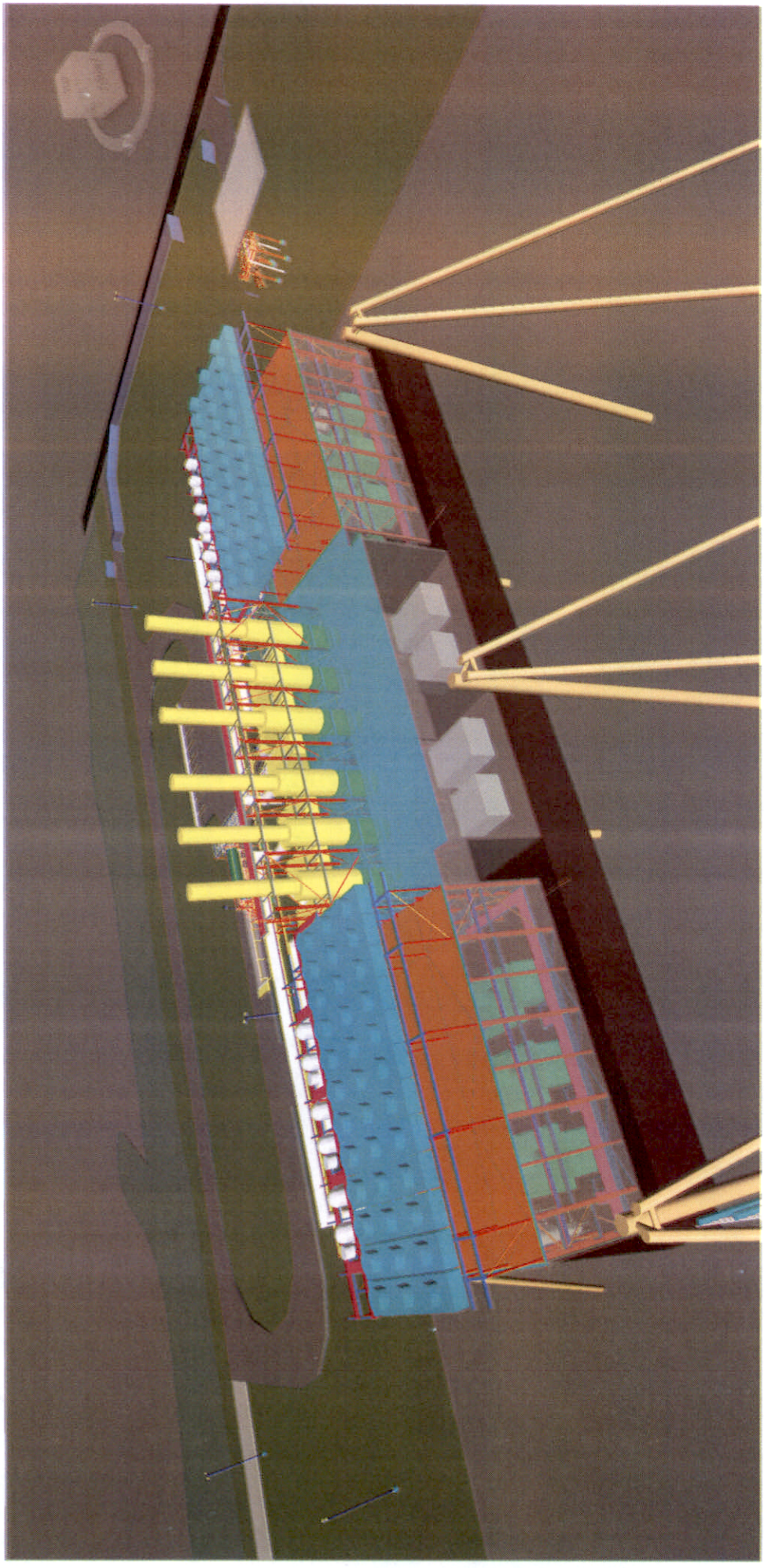


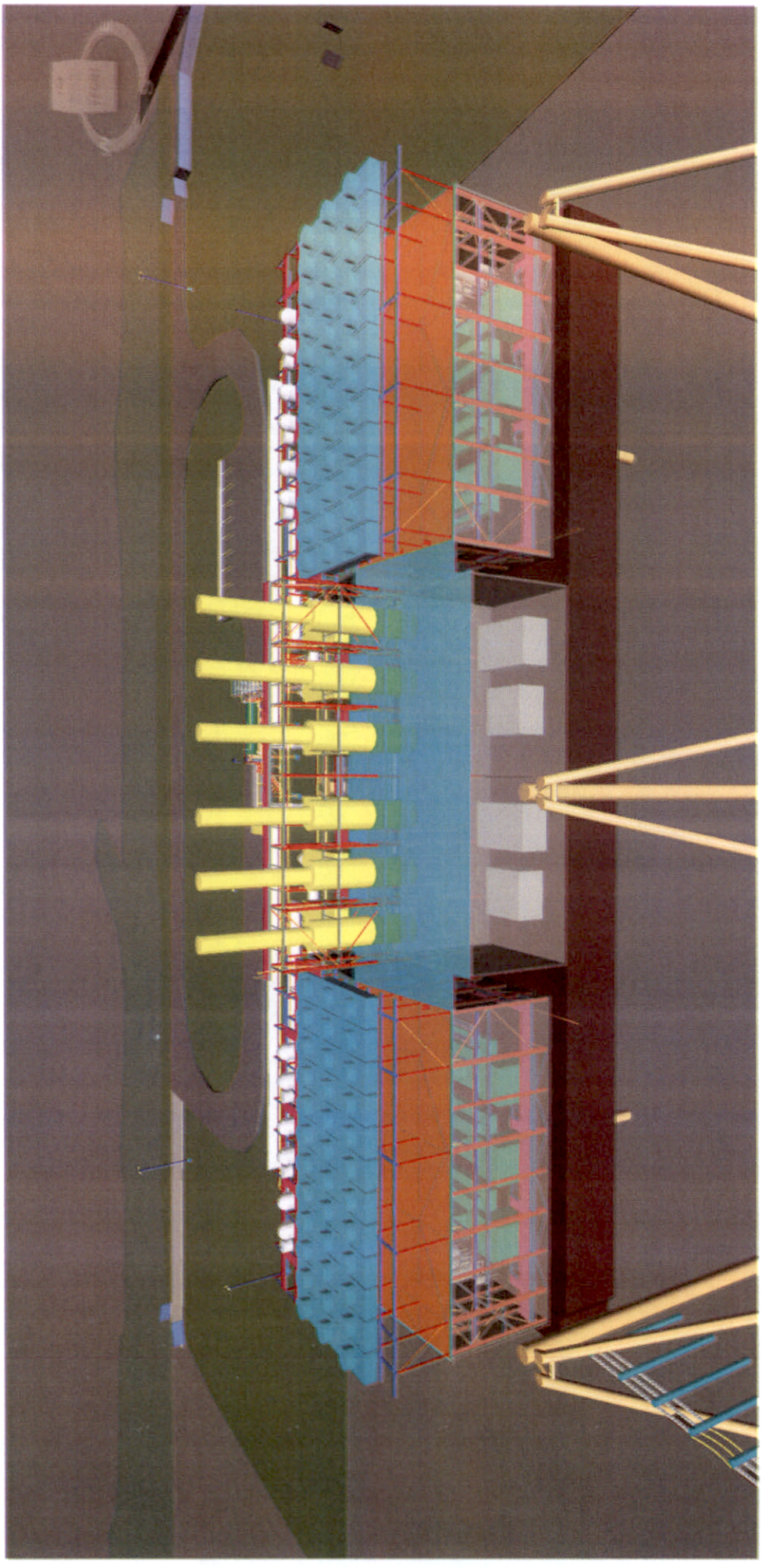

FRONT

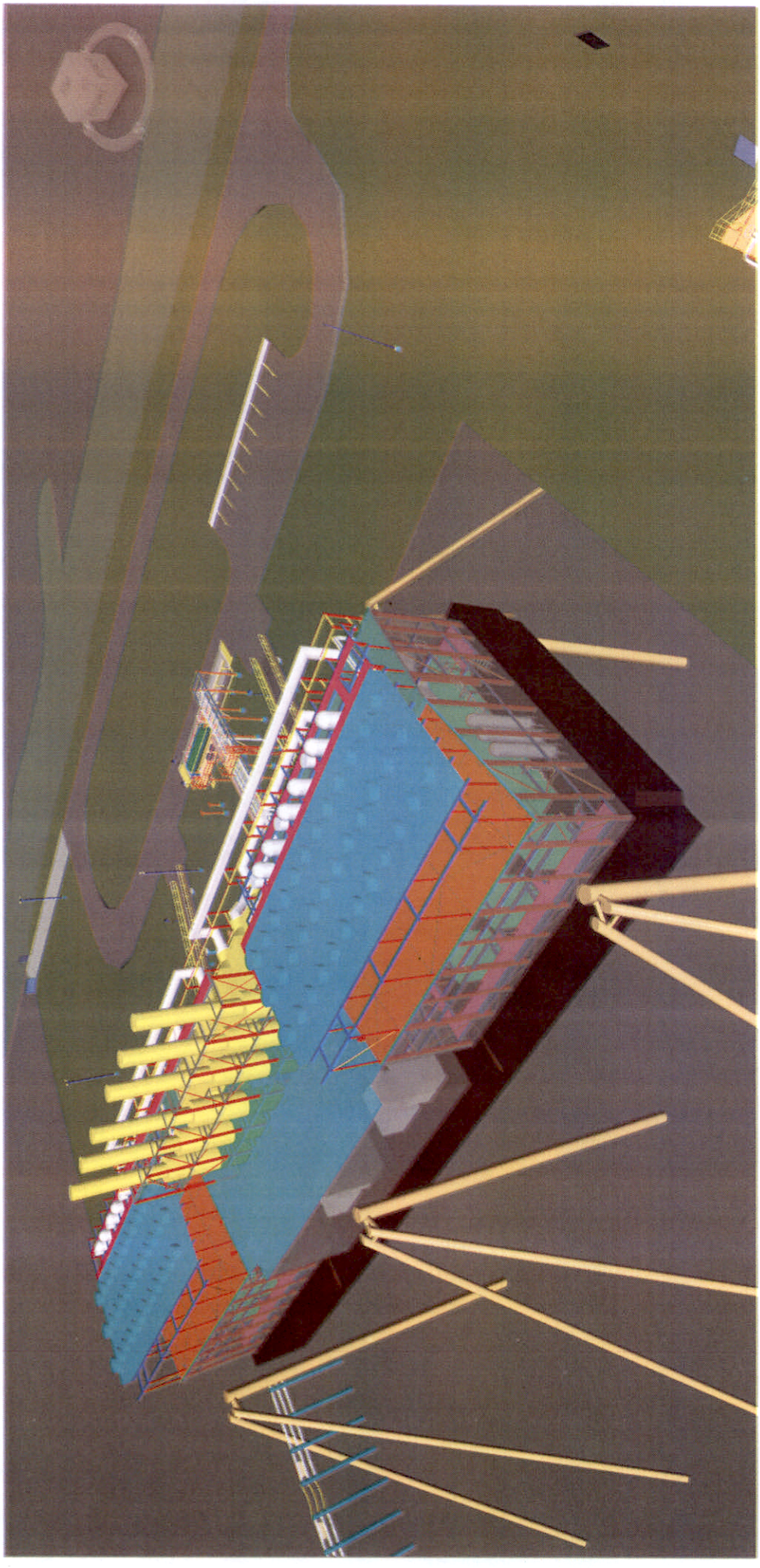


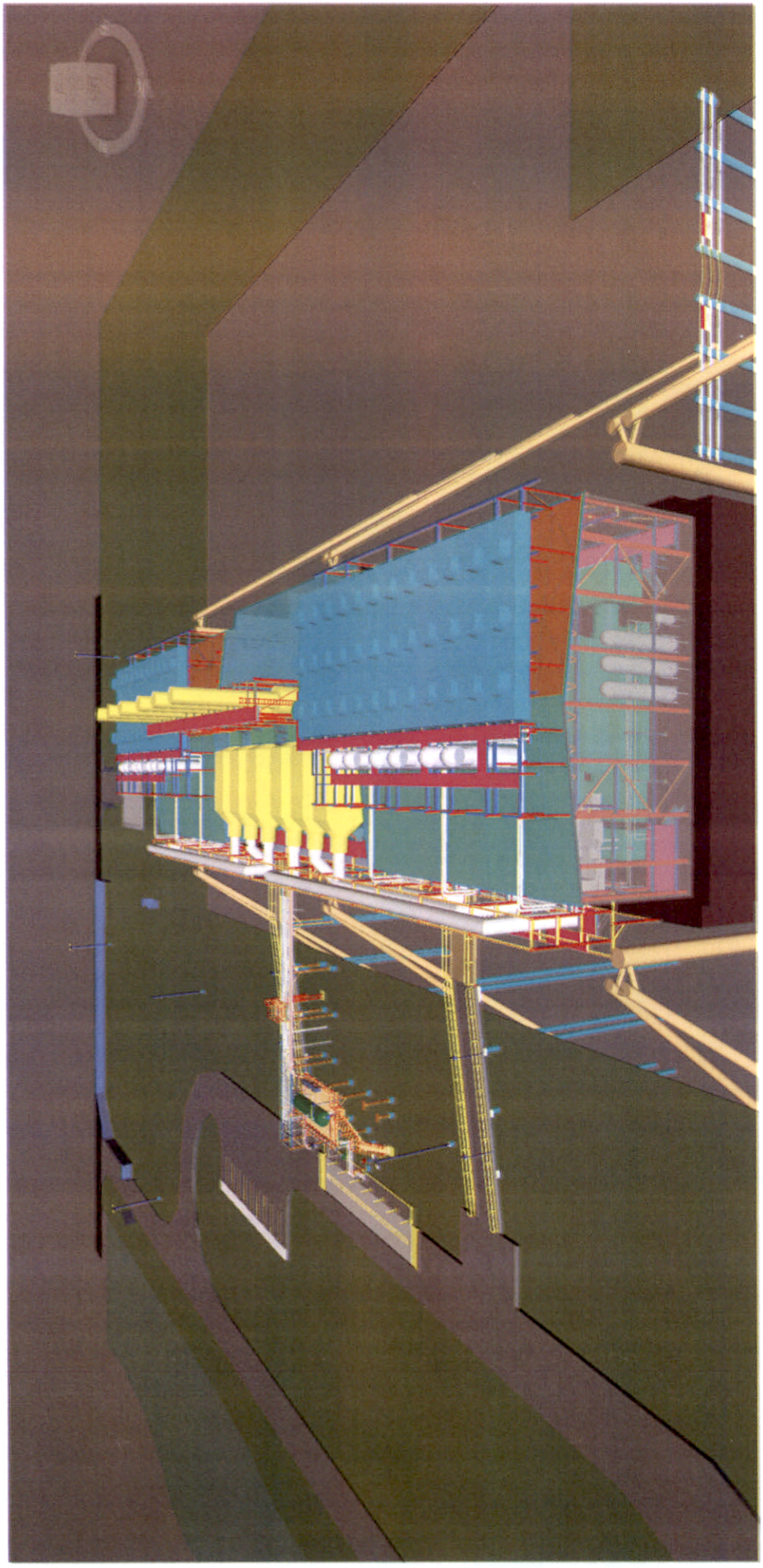












BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

***IN RE*: APPLICATION OF ENTERGY LOUISIANA, LLC FOR APPROVAL TO CONSTRUCT BAYOU POWER STATION, AND FOR COST RECOVERY**	))))	**DOCKET NO. U-_____**

EXHIBIT GCD-6

HIGHLY SENSITIVE
PROTECTED MATERIAL

INTENTIONALLY OMITTED

MARCH 2024

BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

***IN RE*: APPLICATION OF ENTERGY LOUISIANA, LLC FOR APPROVAL TO CONSTRUCT BAYOU POWER STATION, AND FOR COST RECOVERY**	))))	**DOCKET NO. U-_____**

EXHIBIT GCD-7

HIGHLY SENSITIVE
PROTECTED MATERIAL

INTENTIONALLY OMITTED

MARCH 2024

BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

***IN RE*: APPLICATION OF ENTERGY LOUISIANA, LLC FOR APPROVAL TO CONSTRUCT BAYOU POWER STATION, AND FOR COST RECOVERY**	))))	**DOCKET NO. U-_____**

EXHIBIT GCD-8

HIGHLY SENSITIVE
PROTECTED MATERIAL

INTENTIONALLY OMITTED

MARCH 2024