PUBLIC VERSION

UNITED STATES OF AMERICA
BEFORE FEDERAL TRADE COMMISSION

In the Matter of	)	
CHICAGO BRIDGE & IRON COMPANY N.V.,	)	
a foreign corporation,	)	
CHICAGO BRIDGE & IRON COMPANY,	)	
a corporation,	)	Docket No. 9300
and	)	
PITT-DES-MOINES, INC.,	)	
a corporation.	)	

RESPONDENTS' CORRECTED PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

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III. LNG FINDINGS OF FACT

A. LNG BACKGROUND

3.1 Liquefied natural gas ("LNG") is natural gas that has been converted to a liquid by cooling and condensing the natural gas to about -162° C (-260° F). (Glenn, Tr. 4066; CX 1259, at CB&I-HWH030454). LNG is composed primarily of methane (typically at least 90%), but may also contain ethane, propane and heavier hydrocarbons. (Kistenmacher, Tr. at 889; CX 1259, at CB&I-HWH030464). Neither LNG, nor its vapor, can explode by common ignition sources in an unconfined environment. (CX 1259, at CB&I-HWH030469). LNG weighs approximately 45% as much as the same volume of water. (*See* CX 1259, at CB&I-HWH030465).

3.2 The term methane cannot be used interchangeably with the term LNG because natural gas may contain other components such as nitrogen, ethane and higher hydrocarbons. (Kistenmacher, Tr. 889). Natural gas is not pure methane. (Kistenmacher, Tr. 889). For example, in Europe natural gas may be comprised of at least 10% nitrogen. (Kistenmacher, Tr. 889).

3.3 The purpose of an LNG tank is to contain natural gas in liquid form. (Glenn, Tr. 4066; Price, Tr. 530). When stored at ambient temperatures (i.e. room temperature), natural gas takes a gaseous form. (CX 1259, at CB&I-HWH030454). When liquefied, natural gas is far easier to store, as natural gas in gaseous form takes up 600 times the volume of its liquid equivalent. (CX 1259, at CB&I-HWH030454).

3.4 LNG tanks are essentially comprised of a tank within a tank. (*See* RX 428, at CB&I001193-PLA). The annular space between the tanks is filled with insulation materials of various types. (Glenn, Tr. 4110; RX 428, at CB&I001194-PLA). The bottom insulation system can consist of "cellular" load bearing materials and the sidewalls and suspended deck often utilize an insulation called perlite. (Glenn, Tr. 4110; RX 428, at CB&I001194-PLA; CX 573, at CB&I-PL031582-83). The inner tank is made of a material suitable for cryogenic temperatures (-260° F) and is usually made out of a nine percent nickel steel. (Glenn, Tr. 4109; Price, Tr. 530; RX 428, at CB&I001194-PLA). Nine percent nickel steel is used for the inner tank because it is less brittle, at low temperatures, than carbon steel. (Glenn, Tr. 4109-4110). The outer tank and roof contain the LNG vapor and protect the insulation systems; they are usually made of carbon steel. (*See* RX 428, at CB&I001194-PLA).

1. Types Of LNG Tanks

3.5 There are various types of LNG tanks including single containment, double containment and full containment tanks. (Scorsone, Tr. 4919).

3.6 A single containment tank is a conventional double wall metal storage tank with an earthen dike. (RX 428, at CB&I001193-PLA). For a single containment tank, only the inner tank is capable of containing the liquefied natural gas. (Price, Tr. 530-31; RX, 428 at CB&I001193-PLA). A low dike wall is built around the inner tank for spill containment. (Price, Tr. 530-31; RX 428, at CB&I001193-PLA). A single wall tank is the least expensive of the three tank types (J. Kelly, Tr. 6274). Historically, single containment LNG tanks have been constructed in the U.S. (Glenn, Tr. 4108; Scorsone, Tr. 4919).

3.7 A double containment tank is a conventional single containment tank surrounded by a close-in but separate, high concrete dike. (Price, Tr. 531; RX 428, at CB&I001193-PLA). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XX]** (Jolly, Tr. 4720). For a double containment tank, both the inner tank and the impoundment wall are capable of containing the liquefied natural gas. (Price, Tr. 531; RX 428, at CB&I001193-PLA). The outer tank/wall, however, is not required to contain vapor released due to leakage from the inner tank. (Price, Tr. 531-32; RX 428, at CB&I001193-PLA). A double containment tank has never been constructed in the continental U.S. (Scorsone, Tr. 4919-20). Neither CB&I nor PDM have ever constructed a double or full containment tank in the continental U.S. (Scorsone, Tr. 4920).

3.8 PDM has built a double containment tank in Puerto Rico. (Price, Tr. 531; Scorsone, Tr. 4920). PDM did not use a traveling labor force for the tank built in Puerto Rico; rather, it used labor indigenous to Puerto Rico. (Scorsone, Tr. 4920-21). Thus, PDM's labor force did not gain any experience building a double containment tank from working on the Puerto Rico project. (Scorsone, Tr. 4921).

3.9 A full containment tank is an integrated concept with a single containment tank surrounded by another tank of concrete. (RX 428, at CB&I001193-PLA). A full containment tank creates complete containment by capping off the double containment tank, typically with a concrete roof. (Glenn, Tr. 4112; Price, Tr. 532). For full containment tanks, both the inner and the outer tanks are capable of containing the liquefied natural gas. (RX 428, at CB&I001193-PLA). The outer tank contains both the liquid and the vapor released during a spill from the inner tank. (RX 428, at CB&I001193-PLA). Double and full containment LNG tanks are commonly constructed in other parts of the world. (Scorsone, Tr. 4920; Glenn, Tr. 4113).

3.10 The decision as to what tank type to build in a particular circumstance is governed by a variety of factors the most import of which is Federal Energy Regulatory Commission

("FERC") regulations, which look at factors such as amount of available land and population density. (*See* Bryngelson, Tr. 6133). Other factors include owner preference and political pressure. (*See e.g.,* Bryngelson, Tr. 6133). When the customer does not have a large amount of land, a double wall or full-containment tank is preferable and may be required by FERC. (See *e.g.,* Bryngelson, Tr. 6133, 6192; J. Kelly, Tr. 6268). A single containment tank can be appropriate when the tank is to be located far from a populated or industrialized area and where the owner has a large amount of land; if the customer is close to a heavily populated area, a double or full containment tank is preferable and may even be required. (*See e.g.,* Bryngelson, Tr. 6133; J. Kelly, Tr. 6268).

2. United States Trend To Double And Full Containment

3.11 There is a trend in the United States toward the use of double and full containment LNG tanks for projects currently under development. (Glenn, Tr. 4112-13; Scorsone, Tr. 4921-22; Izzo, Tr. 6491-92). Customers are specifying double and full containment tanks because the tanks have a secondary containment integral with the tank structure to contain LNG in the event of a spill. (Glenn, Tr. 4112-13; Scorsone, Tr. 4922). Therefore, an owner can site a double and full containment LNG tank on a smaller piece of property than it could for a single containment tank in order to comply with federal laws relating to vapor dispersion and thermal radiation in the event of a spill. (Scorsone, Tr. 4922).

3.12 LNG customers also see a trend toward double and full containment tanks in the United States. (Izzo, Tr. 6491-92; Cutts, Tr. 2501). Calpine expects that new LNG tanks in the United States will be "at least double containment if not full containment." (Izzo, Tr.

6492). LNG customers have also indicated that the "enhanced value" of double containment may be greater than the additional cost and, therefore, that might be what they build in the future. (Cutts, Tr. 2501). Customers also view full and double containment tanks as safer than single-containment tanks. (Glenn, Tr. 4112-13; Hall, Tr. 1842-43). As demonstrated by the plans of several owners including Dynegy, Williams, and Cheniere, most of the new LNG projects currently under consideration in the United States are requiring the use of double or full containment tanks. (Puckett, Tr. 4541-42; Scorsone, Tr. 4988; Eyermann, Tr. 6968; RX 185, at TWC000006).

3.13 Current LNG competitors also believe there is a trend to build double and full containment LNG tanks in the U.S. The trend is to reduce the risk, which means full and double containment is becoming more popular. (Cutts, Tr. 2573). AT&V believes the trend partly stems from customers concerns about terrorism. (Cutts, Tr. 2573). AT&V believes FERC's expectations have changed since 9-11 to require safer applications of LNG tanks. (Cutts, Tr. 2498-2500). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] XXXXX XXXX [XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] XXXXX XXXXX XXXXX [XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] [XXXXXXXXX]**

3.14 Two current expansion projects in Cove Point, Maryland and Lake Charles, Louisiana specify the use of additional single containment tanks. (Eyermann, Tr. 7054). Unlike a new facility, however, these expansions are constructing tanks on sites that already contain numerous single containment LNG tanks. (Eyermann, Tr. 7054). These owners are allowed to build additional single containment tanks because the new construction is "grandfathered". (Eyermann, Tr. 7054).

3. Types Of LNG Facilities

3.15 The first and most common type of LNG facility is known as an "import terminal." LNG import terminals are constructed near coastal areas to receive natural gas from LNG ship or truck tankers. (Glenn, Tr. 4068). Import facilities vaporize LNG on a continuous basis to meet the day-to-day demands for gas year round. (CX 1259, at CB&I-HWH030458).

3.16 Owners of import terminals may include major utilities, oil companies and pipeline companies. (Glenn, Tr. 4070). The LNG tank usually represents only a third or less of the cost of these facilities. (*See e.g.* Puckett, Tr. 4566-67).

3.17 Import terminals are normally located in the geographic area that needs natural gas. (Glenn, Tr. 4068). Import terminals are located in industrial nations including France, England, Italy, Japan, Spain and the United States. (CX 1259, at CB&I-HWH030458). There are four import terminals in the United States: Everett, Massachusetts; Cove Point, Maryland; Elba Island, Georgia; and Lake Charles, Louisiana. (Glenn, Tr. 4068-69). Many countries, like China, are beginning to use more natural gas than they have in the past; these countries are beginning to build import terminals. (Glenn, Tr. 4068).

3.18 El Paso is developing technology for a shipboard regasification, which it believes could serve as a substitute for LNG import terminals. (Bryngelson, Tr. 6158). The shipboard regasification technology involves an LNG tanker with on-board regasification equipment. (Bryngelson, Tr. 6158). A subsea interconnect will then transfer gas from the ship onto shore into a pipeline. (Bryngelson, Tr. 6158). El Paso believes the shipboard regasification technology will allow natural gas to be transferred to specific markets in a quicker time, and may not be subject to certain permitting hurdles. (Bryngelson, Tr. 6158-59).

3.19 The second type of LNG facility is known as a "peak-shaver." LNG peak-shaving facilities take natural gas from gas transmission lines during warm months, liquefy the gas and store the liquid until cold weather. (Glenn, Tr. 4069; CX 1259, at CB&I-HWH030454). During severe cold periods, liquid is withdrawn from storage, vaporized (converted into a gas) and reinjected into the gas transmission line to meet peak winter demands for natural gas. (CX 1259, at CB&I-HWH030454).

3.20 The major components of a peak-shaving facility include a liquefaction unit, a vaporization system and an LNG tank. (Kistenmacher, Tr. 885).

3.21 A peak-shaving facility includes a process unit whereby incoming natural gas is liquefied. (Kistenmacher, Tr. 884). Natural gas is brought in from a natural gas pipe, liquefied in the liquefaction unit and stored in an LNG storage tank. (Kistenmacher, Tr. 884-85). When natural gas is needed, the LNG is vaporized and sent back through the natural gas pipe. (Kistenmacher, Tr. 885).

3.22 Owners of peak-shaving facilities include gas utilities, electric utilities, and companies that own and operate pipelines. (Glenn, Tr. 4070). About eighty-two of these plants are in operation in the United States, Canada, England, the Netherlands, Belgium, West Germany and Australia, with sixty-six of the plants located in the United States. (CX 1259, at CB&I-HWH030454).

3.23 There are several companies that compete with CB&I for liquefaction units for peak-shaving facilities in the U.S. including Air Products, Black & Veatch, Air Liquide, Lotepro, and BOC. (Davis, Tr. 3188). Since 1990, Air Products has bid on peak-shaving projects for Alabama Gas Company; Key Span on Long Island; Cove Point; and Philadelphia Gas Works in Richmond, Virginia. (Davis, Tr. 3193). These projects involved the replacement of liquefiers, and did not involve the construction of an LNG tank. (Davis, Tr. 3193-94, 3204).

3.24 LNG tanks in peak-shaving facilities are similar to, but tend to be smaller than, LNG tanks used at import terminals. (Glenn, Tr. 4070; Bryngelson, Tr. 6141-42).

3.25 Peak-shaving plants are only used a few days per year. (Davis, Tr. 3186). There are several substitutes to address demand peaks without using a peak-shaving facility including: (1) excess pipeline capacity; (2) cavern storage; and (3) natural gas holders that store vapor phase natural gas. (Davis, Tr. 3185). One company considered using underground cave storage and an option to use propane air mixtures as alternatives to building an LNG tank at its peak-shaving facility. (Hall, Tr. 1781).

4. The LNG Design And Construction Process

3.26 CB&I uses the same construction steps when it build an LNG tanks as it does when it builds any ambient-temperature flat-bottom tank. (Scorsone, Tr. 4885). The steps include: (1) the development of engineering drawings; (2) procurement of materials; (3) fabrication of materials; (4) transporting equipment; (5) employing labor; and (6) erecting the tank. (Scorsone, Tr. 4885, 4895-96).

a. Engineering

3.27 The engineering phase involves the performance of calculations and analysis to determine the size and shapes of the various components to be placed in the structure. (Scorsone, Tr. 4886). This phase entails writing the specifications for the various materials and welding processes that will be used. (Scorsone, Tr. 4886). Drawings are created to be used by fabrication shops, construction crews, and subcontractors. (Scorsone, Tr. 4886-87).

3.28 The engineering of an LNG tank does not differ from the engineering of any cylindrical flat-bottomed tank. (Rano, Tr. 5894). The same processes are used. (Rano, Tr. 5894). In each case, the specifications provided by the customers are digested, drawings are produced, and lists of needed raw materials are generated. (Rano, Tr. 5894-95).

3.29 CB&I does not have an engineering staff that is solely directed at working on LNG projects, LIN/LOX projects, LPG projects, or thermal vacuum chambers projects. (Scorsone, Tr. 4887). CB&I uses its engineers across several product lines. (Scorsone, Tr. 4888). Engineers who design flat-bottom tanks also have the capability to design LNG tanks. (Glenn, Tr. 4114-15; Scorsone, Tr. 4888). CB&I's engineers are located in Pittsburgh, Pennsylvania, Plainfield, Illinois, Houston, Texas, Canada, the Middle East, Philippines, and Australia. (Scorsone, Tr. 4887).

b. Materials procurement

3.30 After engineering is completed, the builder begins the process of purchasing raw materials. (Rano, Tr. 5895). A bill of materials, containing a list of the necessary materials, is then sent to the procurement group. (Scorsone, Tr. 4889-90). The procurement group then procures these materials from a wide variety of vendors. (Scorsone, Tr. 4890).

3.31 One essential part of the procurement process for an LNG tanks is the purchase of nine percent nickel steel. (Rano, Tr. 5896; Scorsone, Tr. 4890). The supply base for nine percent nickel steel is "limited." (Rano, Tr. 5896-97). Prior to the acquisition, PDM purchased nine percent nickel steel from steel mills located in Europe, including

Charleroi and Cruset Loix. (Scorsone, Tr. 4890-91). CB&I currently procures nine percent nickel steel from sources in either Europe or Japan, including NKK and Mitsui. (Scorsone, Tr. 4891).

3.32 In the past, CB&I made an effort to locate an American supplier of 9% nickel steel. (Rano, Tr. 5897). As a result of that search, it became clear that there are "no credible suppliers of 9 percent nickel steel in the U.S." (Rano, Tr. 5897).

c. Steel fabrication

3.33 Steel fabrication for LNG tanks is a simple process, involving the squaring, beveling, and rolling of manufactured steel plate. (Rano, Tr. 5898). The fabrication process for LNG tanks is the same as that used for other types of tanks, including water tanks, oil storage tanks, and LPG tanks. (Rano, Tr. 5898).

3.34 In most cases, steel plate fabrication occurs near the mill where the steel plate is purchased. (Rano, Tr. 5899). Steel mills generally have a fabrication facility within them or associated with them. (Rano, Tr. 5899). The steel mills in Europe and Japan, which provide nine percent nickel steel, typically provide a fabrication service in which the steel plates are squared, beveled, cut, rolled, and then exported to the job site. (Scorsone, Tr. 4891-92)

3.35 PDM EC used three fabrication facilities located in Warren, Pennsylvania, Clive, Iowa, and Provo, Utah. (Scorsone, Tr. 4892). CB&I Industrial utilizes fabrication shops in Houston, Texas and Provo, Utah. (Scorsone, Tr. 4893). The water division uses the fabrication shops in Clive, Iowa and Warren, Pennsylvania, however, CB&I Industrial uses those shops for storage tanks when it is geographically convenient. (Scorsone, Tr. 4893).

3.36 The nine percent nickel steel procured for the Cove Point LNG project and Puerto Rico LNG project was fabricated in Europe and shipped to the job site. (Scorsone, Tr. 4893-94). Although CB&I had the capability and the capacity to fabricate the steel for the Cove Point project at one of its fabrication facilities, it chose to have it fabricated overseas because it was "less expensive." (Scorsone, Tr. 4894-95; *see also* Glenn, Tr. 4118-19). Similarly, for the Bonny Island, Nigeria LNG project, CB&I fabricated the steel in Japan, where it was purchased. (Rano, Tr. 5898-99).

d. Transporting equipment

3.37 After fabrication is completed, the next step in constructing an LNG tank is to bring all of the equipment to the jobsite. (Rano, Tr. 5900-01). The length of time associated with this task depends on the remoteness of the jobsite. (Rano, Tr. 5900-01). For a remote location, such as Nigeria, it can take 4-5 months to bring all of the relevant equipment to a jobsite. (Rano, Tr. 5900). In places such as the U.S. or Australia, where equipment rental and spare parts are widely available, this task is easier. (Rano, Tr. 5901).

3.38 CB&I owns approximately 90% of its equipment, however, it typically rents large cranes. (Scorsone, Tr. 4897). CB&I carries the cost of owning equipment whether or not it uses it. (Scorsone, Tr. 4897). The PDM EC Division shared tools, equipment, and fabrication facilities with PDM's Water Division. (Scorsone, Tr. 4779).

e. Labor force

3.39 The next step in the construction of an LNG facility is to assemble a labor force. (Rano, Tr. 5905). CB&I's strategy in the U.S. is the same as it is elsewhere in the world: CB&I recruits local labor, workers who live less than 100 miles from the jobsite, to construct the facility. (Rano, Tr. 5906-07). CB&I will use a small, core team of 4-5 management employees, including a project manager and two or three key people to begin the project.

(Rano, Tr. 5917-18, 5952-53). The bulk of the labor force, however, will be locally recruited. (Rano, Tr. 5917-18, 5952-53).

3.40 CB&I recruits local labor by advertising in the local media, and by making contacts with local labor leaders, and local government officials. (Rano, Tr. 5908-09).

3.41 Field labor is very migratory and generally flows to where work is available. (Rano, Tr. 5917-18, 5953). Many field laborers work for different companies depending on where work is available. (Rano, Tr. 5953-54, 5957).

3.42 All field crew hands in the U.S., including those in the core group, are paid on an hourly basis. (Rano, Tr. 5953). Most of the touch-craft field labor and supervision is paid on an hourly basis. (Scorsone, Tr. 4896). Construction supervisors are paid on a salaried basis. (Scorsone, Tr. 4896). CB&I carries the cost of paying salaried field construction personnel whether or not they are used. (Scorsone, Tr. 4897).

f. Foundation and concrete work

3.43 The next step in building a field-erected LNG tank is to construct the foundation. (Rano, Tr. 5920-21). CB&I subcontracts the foundation work to a company with an expertise in concrete work, because concrete work is not a "core competency" of CB&I. (Rano, Tr. 5920-21). Since it is not necessary for the subcontractor to have extensive experience with LNG work, CB&I has used subcontractors with no prior experience in LNG concrete work. (Rano, Tr. 5950-51).

3.44 Once the foundation is laid, further concrete work is done (if the tank to be built is a double or full containment concrete tank). (Rano, Tr. 5921-22). This process involves the construction of formwork, insertion of steel reinforcing rods, and pouring and curing of concrete. (Rano, Tr. 5921-22).

3.45 CB&I has never self-performed the construction of concrete walls for field-erected LNG tanks; it has always subcontracted this function to "competent concrete people." (Rano, Tr. 5923). The concrete subcontract on a full containment, field-erected LNG tank is "significant," and can amount to 40% of the value of the work. (Rano, Tr. 5923). With respect to full containment tanks to be built in the U.S., CB&I has determined that it will subcontract the concrete work for these jobs. (Rano, Tr. 5923-24).

g. Field erection

3.46 The field erection process for an industrial tank involves erecting the structure in accordance with the plans and contract specifications, and testing the work quality. (Scorsone, Tr. 4895-96). The construction of both flat-bottom and LNG tanks involves rigging, which is the practice of attaching cables, slings, and ropes to pieces and hoisting them into position. (Scorsone, Tr. 4897-98). The rigging "skill sets are identical" for both flat-bottom and LNG tanks. (Scorsone, Tr. 4898).

3.47 During the construction process, the steel roof is constructed and air-raised using air propulsion. (Rano, Tr. 5925). After the roof is raised, construction of the nine percent nickel steel liner and inner tank begins. (Rano, Tr. 5927-28). This construction involves three main tasks: steel erection, welding, and quality control. (Rano, Tr. 5929-30). This process does not differ depending on the location of the tank. (Rano, Tr. 5930).

3.48 In order to weld a field-erected LNG tank, two different welding processes are used: (1) hand welding, in which the welder holds the welding cable in his hand; and (2) submerged arc welding, which involves the use of a welding machine. (Rano, Tr. 5930-31). These welding processes are not only used for LNG tanks, but also for LPG tanks, water tanks, and oil tanks. (Rano, Tr. 5931).

3.49 All welders that work on a field-erected LNG tank for CB&I or anyone else in the industry must be certified in accordance with ASME Section 9 -- the international code that governs certification of welders. (Rano, Tr. 5931-32). In addition, customers and owners often require CB&I to re-certify and re-qualify welders for a particular job. (Rano, Tr. 5932).

3.50 CB&I does not always use welders who have already been certified by any authority. (Rano, Tr. 5933). In many cases, CB&I will train local workers with some aptitude for welding. (Rano, Tr. 5932-33). Prior experience with welding nine percent nickel steel is not a prerequisite for working on an LNG tank. (*See e.g.,* Rano, Tr. 6031-32). Workers with some welding experience can be trained and qualified to weld nine percent nickel steel in 1-2 weeks, while workers with no prior welding experience can be trained in 2-3 weeks. (Rano, Tr. 5947-48).

3.51 The other types of work needed to construct the steel portion of an LNG tank -- steel erection and non-destructive examination/quality control -- are identical to tasks that are done for every cylindrical tank. (Rano, Tr. 5945). In many cases, the workers necessary to perform these tasks cannot be found -- they are trained. (Rano, Tr. 5945).

5. Market Characteristics

a. The lng market is a global market

3.52 The LNG tank market is a "worldwide market" in which a few LNG contractors compete against each other all over the world. (Eyermann, Tr. 6994; J. Kelly, Tr. 6262). **[XXX XXXXX XXXXX XXXXX XXXXX XXX] XXXXX XXXXX [XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] XXXXX XXXXX XXX]** El Paso agrees that the LNG business is an "international business" in which "no one participant controls the market." (Bryngelson, Tr. 6160).

b. Few tanks have been built in the United States

3.53 Demand for LNG in the United States has been very small over the past 20 to 30 years. (Glenn, Tr. 4091; Carling, Tr. 4513; J. Kelly, Tr. 6263). The U.S. has been the least active market for the sale of LNG tanks worldwide. (Scorsone, Tr. 4859). Most of the LNG tanks in the world have been sold in Japan and Korea. (Scorsone, Tr. 4859).

3.54 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4683).

c. LNG demand has increased

3.55 CB&I believes that the global demand for LNG is rising and will continue to rise over the next 10 to 20 years. (Glenn, Tr. 4090). Demand for LNG facilities has increased since the 1990s, as a number of companies are developing LNG import terminals in the U.S., Caribbean, and Mexico. (Scorsone, Tr. 4934). In the U.S., LNG demand has exceed supplies, causing prices to rise, so CB&I believes demand is rising and will continue to rise over the next 10 to 20 years, due to rising gas prices. (Glenn, Tr. 4091). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** [**XXXXX XXXXX]**.

B. COMPETITION IN THE LNG TANK MARKET IS VIBRANT

1. There Are Numerous Qualified And Economically Viable Competitors To Construct LNG Tanks In The United States.

3.56 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 726-27; Jolly, Tr. 4683).

a. Skanska/Whessoe is a qualified and economically viable competitor to construct LNG tanks in the United States.

i. Skanska/Whessoe background

3.57 Skanska AB ("Skanska") is one of the world's largest construction groups, and is a well-established Swedish based civil contractor that has operated internationally for more than 50 years. (RX 839, at 4/17; RX 870, at 25/138). In 2002, ENR ranked Skanska as the number one contractor in the world. (RX 736, at 1/17). Skanska earned an annual revenue of more than $14 billion in 2001. (RX 736, at 1/17). ENR ranked Skanska Inc., a subsidiary of Skanska located in Whitestone, New York, as the third best contractor in the United States. (RX 737, at 1/16). In August of 2000, Skanska acquired Whessoe International ("Whessoe"). (RX 770, at 33/49).

3.58 Whessoe is a 200 year old engineering and construction firm with a well established reputation in the international LNG business. (RX 908, at 1/19). Whessoe has had continuous involvement in the LNG industry for more than 40 years. (RX 839, at 2/17). Whessoe has been involved in various aspects of LNG storage for facilities including an 80,000 M^3 LNG tank in Trinidad; two (2) 150,000 M^3 LNG tanks in Dahl, India; one (1) 105,000 M^3 LNG tank in Cartagena, Spain, and LNG storage in Greece and Algeria. (RX 839, at 5-8/17).

3.59 Skanska/Whessoe is now poised as a specialist EPC company combining contracting and risk management with engineering and design skills to offer its clients a complete package in the design and construction of facilities for cryogenic gas storage and handling. (RX 870, at 5/138). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4699). From its UK base, Skanska/Whessoe operates worldwide to design and build LNG tanks and terminals. (RX 870, at 5/138).

3.60 Skanska/Whessoe offers a combination of skills for the LNG and associated markets that "few can rival." (RX 870, at 6/138). Skanska/Whessoe combines the engineering and construction skills of Skanska Construction with the design, engineering and procurement skill of Whessoe International Skanska. (RX 870, at 6/138). The result is a single company that offers this specialist market a total capability to take a project through from inception to completion. (RX 870, at 6/138). This lump sum turnkey capability is backed by the worldwide financial and technical strengths of the Skanska group. (RX 870, at 6/138).

3.61 Skanska/Whessoe set new records for LNG storage tank design and construction by concurrently building three of the worlds largest LNG tanks, including air-lifting the 77 ton roofs, within a six month overlap. (RX 870, at 6/138).

3.62 Skanska/Whessoe engineers have coordinated a number of the original patents for the LNG storage industry. (RX 870, at 9/138). These engineers continue to sit on code committees that drive the LNG industry forward towards technical excellence. (RX 870, at 9/138).

3.63 Skanska is clearly one of the largest contractors in the world and one of the top builders in the United States. (Izzo, Tr. 6496).

ii. Black & Veatch

3.64 While competing to become Dynegy's EPC contractor, Skanska/Whessoe presented itself as a team with Black & Veatch. (Puckett, Tr. 4579).

3.65 Freeport LNG understands that Skanska/Whessoe teamed with Black & Veatch for the Dynegy project. (Eyermann, Tr. 6986-87). In June 2001, Freeport LNG received a letter from Black & Veatch it which it indicated that it had formed an alliance with Whessoe to build LNG tanks in the Western Hemisphere. (Eyermann, Tr. 6992; RX 935, at CHE0357) (state of mind). Based on this document, Eyermann believes that Black & Veatch and Whessoe are "serious and trying to compete." (Eyermann, Tr. 6992; RX 935, at CHE0357) (state of mind).

iii. Cryocrete

3.66 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 688, 691). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 736). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 688-89). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 688). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 688).

3.67 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4700). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4221) (state of mind).

iv. Skanska/Whessoe has entered the U.S. LNG market

3.68 Skanska/Whessoe endeavored, and interviewed with Dynegy, to become the EPC contractor for the Hackberry facility. (Puckett, Tr. 4547). Skanska/Whessoe was ultimately successful as Dynegy awarded it the EPC contract (Puckett Tr. 4547).

Dynegy decided to bid the LNG tank portion of the project separately and Skanska/Whessoe submitted a bid to win this portion of the project as well. (Puckett, Tr. 4543-44, 4556). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4760). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4691, 4760).

3.69 In June of 2001, Skanska/Whessoe responded to an inquiry from Yankee Gas' consultant CHI Engineering concerning the Waterbury peak-shaving facility. (Andrukiewicz, Tr. 6445; RX 4, at 2/4). Skanska/Whessoe sent CHI Engineering information regarding the Waterbury facility that included: preliminary design solutions; preliminary design data sheets complete with design drawings; and pricing information. (Andrukiewicz, Tr. 6445; RX 4, at 2/4).

3.70 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6284).

3.71 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6087). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6088).

3.72 In August 2002, Skanska/Whessoe had a meeting with Freeport LNG to discuss contracting strategies and general tank designs for the Freeport LNG project. (Eyermann, Tr. 6983). Skanska/Whessoe provided Freeport LNG with marketing materials. (Eyermann, Tr. 6983). Freeport LNG believes Skanska's worldwide LNG director expressed interest in competing for the Freeport LNG project and other LNG projects in the United States. (Eyermann, Tr. 6981-82). Freeport LNG knows that Skanska/Whessoe has built LNG tanks in Dabhol, India, Trinidad, and Greece, and that Whessoe did a "very good" job on the Dabhol project. (Eyermann, Tr. 6980-81).

3.73 A Skanska/Whessoe sales representative told Nigel Carling that Skanska/Whessoe is "keen to enter the [United States] market." (Carling, Tr. 4483).

v. United States customers and LNG participants have accepted Skanska/Whessoe

3.74 Dynegy chose Skanska as its EPC contractor based on a negotiation to convert FEED costs into a lump-sum turnkey price, Skanska's experience in Dahl, India, and Skanska's ability to execute the project in the United States on Dynegy's schedule. (Puckett, Tr. 4548-49). Dynegy investigated Skanska's performance on the Dabhol, India project and heard that Skanska was performing in a satisfactory manner. (Puckett, Tr. 4565).

3.75 Dynegy is also satisfied that Skanska/Whessoe has the necessary reputation, the ability to do the requisite fabrication and field erection and the ability to manage the actual construction of the LNG tanks for the Hackberry facility. (Puckett, Tr. 4557-58). Dynegy is also satisfied that Skanska/Whessoe will be capable of meeting the necessary United States codes and standards. (Puckett, Tr. 4551). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XX]** (Jolly, Tr. 4691).

3.76 In the preliminary engineering report CHI's submitted to Yankee Gas for the Waterbury facility, CHI specifically proposed a double containment tank, with a concrete roof, in which both the inner tank and outer tank would be made of concrete. (Andrukiewicz, Tr. 6464-65). The concrete double containment tank cited in CHI's report was specifically related to the Skanska/Whessoe proposal. (Andrukiewicz, Tr. 6447).

3.77 CMS Energy believes that Whessoe is qualified to construct LNG tanks in the United States. (J. Kelly Tr. 6261). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6291-92) (in camera). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6291-92.)

3.78 British Petroleum would include Whessoe on a potential bidder list for LNG projects in the United States. (Sawchuck, Tr. 6062). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6092). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6088).

3.79 Calpine would be comfortable hiring Skanska to construct an LNG tank in the United States because Calpine considers Skanska one of the top two construction builders in the America. (Izzo, Tr. 6505). Calpine has no doubt that Skanska/Whessoe can build LNG tanks. (Izzo, Tr. 6498). Calpine considers Skanska to be an extremely qualified, large contractor. (Izzo, Tr. 6498). Based on his experience with Whessoe while at Enron, Izzo believes Skanska/Whessoe can construct an LNG tank in the United States to API standards. (Izzo, Tr. 6500). In Dabhol, Whessoe was able to coach the Indian contractor, Punj Lloyd, to construct its design. (Izzo, Tr. 6498). Therefore, a company with a competent engineering design could work with an American constructor to build an LNG in the United States. (Izzo, Tr. 6498). According to Larry Izzo, Skanska is "clearly one of the largest contractors in the world, one of the top builders in the United States." (Izzo, Tr. 6496, 6505).

3.80 Freeport LNG knows that Skanska is a "very big" construction company. (Eyermann, Tr. 6980). Freeport LNG believes that Whessoe is "serious and trying to compete." (Eyermann, Tr. 6992). Freeport LNG believes that Skanska/Whessoe is a potential supplier of LNG tanks and plans to solicit a bid from Skanska/Whessoe for the Freeport LNG project. (Eyermann, Tr. 6993). Freeport LNG plans to solicit a bid from Skanska/Whessoe for its Freeport LNG facility. (Eyermann, Tr. 6993).

3.81 Freeport LNG is not concerned that Skanska/Whessoe has not previously built an LNG tank in the United States. (Eyermann, Tr. 6993-94). If Whessoe can build an LNG tank in India with Indian labor or in Trinidad with Trinidadian labor, "they should be able to do that in America with local labor." (Eyermann, Tr. 6994).

3.82 Bechtel also believes Whessoe is able to competitively pursue LNG jobs in the United States. (Rapp, Tr. 1326-27). Bechtel acknowledges that Whessoe is a tank builder with experience constructing LNG tanks internationally. (Rapp, Tr. 1316). Bechtel is "satisfied" that the tanks Whessoe built in Trinidad are "well-constructed." (Rapp, Tr. 1333).

3.83 El Paso believes it would pre-qualify Skanska to build LNG tanks in the United States. (Bryngelson, Tr. 6131-32). El Paso already pre-qualified Skanska for its Altamira project. (Bryngelson, Tr. 6125-26). El Paso believes Skanska has sufficient financial stability to satisfy its requirements. (Bryngelson, Tr. 6128). Based on input received from its consultant KBR, El Paso believes that Skanska has a good reputation for building LNG tanks. (Bryngelson, Tr. 6130). El Paso believes that Skanska is capable of building LNG tanks in the United States at a competitive price. (Bryngelson, Tr. 6132).

3.84 Enron saw Skanska as a very large international engineering and construction company with operations in the U.S., and one of the larger contractors for steel structures in the U.S. (Carling, Tr. 4466). A former Enron employee with extensive experience in the LNG industry considers Whessoe as "very interested" and "increasingly enthusiastic" about competing in the United States market. (Carling, Tr. 4514). Carling would pre-qualify Skanska to obtain competitive bids for an LNG project in the United States. (Carling, Tr. 4485-86). In fact, Enron solicited a bid from Skanska/Whessoe for its Bahamas project based on Skanska's "significant financial strength" and "logistical expertise". (Carling, Tr. 4481). Carling considers Skanska/Whessoe to be a competitor for LNG facilities in the United States because it is actively pursuing work in America. (Carling, Tr. 4482). Skanska wanted to be on the bidders list for several LNG opportunities in the United States. (Carling, Tr. 4482-83). Carling would consider hiring Skanska/Whessoe for an LNG project in the United States. (Carling, Tr. 4485).

3.85 Clay Hall of Memphis, Light, Gas and Water believes that as of 1994 or 1995 Whessoe had significant international experience in building field-erected LNG tanks and that it had the capability to engineer an LNG tank. (Hall, Tr. 1805, 1845).

3.86 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim Tr. 750).

vi. Whessoe demonstrated its ability to work in a foreign country when it constructed LNG tanks in Dabhol, India

3.87 Enron selected Whessoe to construct three LNG tanks in Dabhol, India. (Carling, Tr. 4455; Izzo, Tr. 6483). The Dabhol facility consisted of a power plant and an import facility. (Izzo, Tr. 6478). Enron used a competitive bid process to select the EPC contractor for the LNG import terminal. (Izzo, Tr. 6483). Enron solicited and received bids from Whessoe, PDM, Technigaz and CB&I for the Dabhol LNG tanks. (Carling, Tr. 4452; Izzo, Tr. 6483). Enron selected Whessoe for the three LNG tanks because it offered the lowest price. (Carling, Tr. 4455; Izzo, Tr. 6485). Nigel Carling, formerly of Enron, testified that the three bids submitted by Whessoe, PDM, and CB&I were within 5 percent (in U.S. dollars) of each other. (Carling, Tr. 4455).

3.88 Prior to selecting Whessoe as the winning bidder, Larry Izzo, formerly of Enron, reviewed Whessoe's experience and his staff advised him that Whessoe was qualified to be a bidder and a winner. (Izzo, Tr. 6485).

3.89 Although Enron selected Whessoe, Whessoe was purchased by Kvaerner so Kvaerner/Whessoe became the EPC contractor. (Izzo, Tr. 6486). Whessoe designed the LNG facility and tank as part of Kvaerner, Kvaerner was the builder and construction manager on site and Punj Lloyd, an Indian contractor, actually constructed the tanks. (Izzo, Tr. 6486).

3.90 Construction for the Dabhol project began in 1999 and progressed through 2001. (Carling, Tr. 4457). There were several risks working in India: (1) the construction site was remote from organized labor; (2) Enron had a commitment to train local labor; and (3) Enron had to deal with politics from local villages. (Carling, Tr. 4456).

3.91 While the Whessoe group initially encountered some work glitches, Enron was satisfied with the quality of work by Whessoe, Kvaerner, and Punj Lloyd. (Carling, Tr. 4458-59). Kvaerner, Whessoe, and Punj Lloyd did an "excellent job" on the Dabhol tanks, and were responsive to Enron's earlier concerns about scheduling; Carling's opinion of their reputation rose after the project was completed. (Carling, Tr. 4464-65). Enron was pleased with Whessoe, Kvaerner, and Punj Lloyd because they were responsive and competent in controlling the local labor force. (Carling, Tr. 4459-60). The Dabhol job was more difficult to construct than the double containment tank built by PDM in Penuelas, Puerto Rico. The increased difficulty lay in the remotenes of the Indian facility and the quality of the labor force. (Carling, Tr. 4473-74).

3.92 Whessoe/Kvaerner successfully constructed LNG tanks for Enron in Dabhol, India. (Izzo, Tr. 6488). Kvaerner and Whessoe finished the Dabhol project successfully and completed the first LNG tank in 28 months, "probably a record for a tank of that size." (Izzo, Tr. 6487). By the end of the project, Enron was satisfied with the schedule, completion and quality of the Dabhol job. (Izzo, Tr. 6487).

vii. LNG Competitors and CB&I perceive Skanska/Whessoe as a capable U.S. competitor

3.93 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] XXXXX XXXXX XXXXX [XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] XXXXX XXXXX [XXXXX XXXXX XXXXX XXXXX XXXXX]** [**XXXXX XXXXX [XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** [**XXXXX XXXXX**]

3.94 AT&V views Skanska/Whessoe as one of TKK/AT&V's competitors for LNG projects in the United States. (Cutts, Tr. 2450).

3.95 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (Glenn, Tr. 4221) (state of mind). Whessoe has been a longtime competitor in the global LNG market. (Scorsone, Tr. 4852). CB&I competed against Skanska for the Dabhol, India LNG project and for an LNG project in Spain. (Scorsone, Tr. 4863-64; Glenn, Tr. 4093). Skanska/Whessoe is competing in the U.S. for LNG tank projects, and specifically is involved in the development of the Hackberry, Louisiana LNG import terminal for Dynegy. (Scorsone, Tr. 4863).

3.96 Skanska's acquisition of Whessoe created a "formidable pair" in the LNG industry. (Scorsone, Tr. 4864). Scorsone has a high regard for Skanska/Whessoe as a competitor. (Scorsone, Tr. 4864).

3.97 Gerald Glenn sees Skanska/Whessoe is a large competitor. (Glenn, Tr. 4092). Mr. Glenn believes that Skanska is currently ranked the largest engineering construction company in the world and the third largest in the United States for that division. (Glenn, Tr. 4093). Mr. Glenn believes that Skanska/Whessoe is promoting itself to many owners or potential projects in the area. (Glenn, Tr. 4094).

3.98 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4221) (state of mind). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4221) (state of mind).

b. TKK/AT&V is a qualified and economically viable competitor to construct lng tanks in the United States.

i. TKK/AT&V background

3.99 Toyo Kanetsu K.K ("TKK"), established in 1941, is a Japanese company involved in the construction of low temperature and cryogenic tanks. (RX 872, at 2/14). TKK has successfully constructed some of the largest above ground storage tanks in the world, including 180,000 k*l* crude oil tanks and a 180,000 k*l* LNG tank. (RX 872, at 5/14; RX 186, at TWC 000084). With over 4,500 tank installations across the world, TKK is recognized as a leader in the field, and it claims to continue to set new records for size and safety. (RX 872, at 5/14; RX 186, at TWC 000084). TKK's annual sales are approximately 34.9 billion Yen. (RX 872, at 2/14).

3.100 TKK is based in Japan but works on a world-wide basis. (*See e.g.*, RX 772, at 6-11/50). TKK has completed over 200 low temperature tanks throughout the world, including 72 LNG storage tanks. (RX 772, at 2-21/50; RX 818). TKK has built LNG tanks in Malaysia, Brunei, Oman, Nigeria, Australia, Indonesia, Algeria, and Korea. (RX 772, at 2-21/50). TKK has also built low temperature tanks in Qatar, Saudi Arabia, Greece, Iran, Iraq, Libya, Taiwan, and Japan. (RX 772, pp. 2-21).

3.101 TKK is the "world's leader" in constructing double containment and full containment LNG tanks. (Cutts, Tr. 2572-73). TKK has build more double containment and full containment LNG tanks than any other constructor in the world. (Cutts, Tr. 2572-73).

3.102 American Tank & Vessel, Inc. ("AT&V") is an engineering and construction firm that was incorporated in 1982. (RX 818). AT&V, based in Mobile, Alabama, offers complete turnkey services for, and has extensive experience in, the engineering, design, and fabrication of tanks, vessels and spheres. (RX 31, at 9/70; Carling, Tr. 4489).

3.103 AT&V has engineering facilities in Birmingham, Alabama, Houston, Texas, George County, Mississippi, and Mobile, Alabama. (RX 31, at 1/70). AT&V also has fabrication facilities in George County, Mississippi and Houston, Texas. (RX 31, at 1/70). The Mississippi fabrication facility contains five sets of plate rolls and three presses. (RX 31, at 2/70). AT&V's field erection equipment consists of automatic welding equipment, cranes, air compressors, and generators. (RX 31, at 3/70).

3.104 In addition to the U.S., AT&V maintains global operations of service and support in Mexico, Argentina, Brazil, Ecuador, Trinidad, Philippines, Indonesia, and Thailand. (RX

31, at 19/70). AT&V has worked on "hundreds and hundreds" of projects overseas. (Cutts, Tr. 2476-77). AT&V has brought over foreign employees from Indonesia, Japan, Venezuela and Argentina to the U.S. to witness the construction of projects several times in the past five years. (Cutts, Tr. 2477-78). TKK/AT&V have established partnerships with two companies located in Trinidad and one firm in Chile for field-erected tanks. (Cutts, Tr. 2481).

3.105 In November 2001, AT&V entered into an agreement with TKK to jointly supply all types of large-scale LNG storage tanks to the U.S. market. (RX 250; Cutts, Tr. 2437-38; RX 818 (state of mind)). As part of this joint venture, TKK will carry the lead responsibility for performing the engineering and design work for LNG tanks. (Cutts, Tr. 2327). AT&V will be responsible for providing the field labor and field erection for LNG tanks in North America. (Cutts, Tr. 2328). Additionally, TKK and AT&V have "developed an understanding and general relationship" to also jointly pursue projects outside of North America. (Cutts, Tr. 2444).

3.106 AT&V chose TKK as its partner because of TKK's track record in the LNG industry and other tank structures. (Cutts, Tr. 2462). AT&V entered into the relationship with TKK to obtain the "complete package of technology" for building LNG projects in the U.S. (Cutts, Tr. 2463-64). TKK will provide engineering expertise, management expertise, and welding technology to the TKK/AT&V partnership. (Cutts, Tr. 2376-77).

3.107 Part of AT&V's goal in building a relationship with TKK for LNG projects is to provide stability: "stability requires you to sometimes do things at break even or modest profitability or almost none at all . . . ." (Cutts, Tr. 2461). AT&V is also aware of TKK's ability to obtain better bonding capacity. (Cutts, Tr. 2556-57). Customers have felt satisfied that TKK is of sufficient size to be able to provide a financial guarantee for an LNG project. (Cutts, Tr. 2557-58).

3.108 AT&V is capable, by itself, of building double-wall steel LNG tanks. (Cutts, Tr. 2439). Prior to entering into the joint venture with TKK, AT&V solicited work from customers for LNG tanks. (Cutts, Tr. 2438). Employees of AT&V have experience building LNG tanks in the U.S. (Cutts, Tr. 2463). AT&V believes that its existing fabrication facilities are sufficient to pursue and fabricate LNG tanks in the U.S. market. (Cutts, Tr. 2457). AT&V has undertaken steps to research, design, and develop steps associated with scheduling, welding technology, and general construction sequencing for LNG tanks. (Cutts, Tr. 2440). AT&V has researched and developed techniques to weld nine percent nickel steel. (Cutts, Tr. 2464).

ii. TKK/AT&V has entered the U.S. LNG market

3.109 AT&V has expended capital on the TKK/AT&V joint venture for estimating, drafting, design, coordinating, and bidding. (Cutts, Tr. 2341-42). Personnel from TKK have come to AT&V's offices to train employees. (Cutts, Tr. 2441). TKK has trained employees of AT&V for LNG tanks on estimating, scheduling, construction techniques, welding, operation of welding equipment, and coordinating. (Cutts, Tr. 2324-25). TKK and AT&V will bear its own costs for the training of employees. (Cutts, Tr. 2443).

3.110 TKK has also trained an AT&V project manager on scheduling, and has plans to train field employees and fabrication shop employees of AT&V. (Cutts, Tr. 2325-26, 2442). TKK personnel have spent between 40 and 250 hours training with AT&V's estimators. (Cutts, Tr. 2441).

3.111 TKK has provided information to AT&V to assist it in the development of technical specifications for LNG tanks. (Cutts, Tr. 2564-65) TKK will be sharing welding technology with AT&V, and plans to train AT&V's welders on nine percent nickel steel. (Cutts, Tr. 2442, 2565-66).

3.112 AT&V has independently taken steps to provide LNG construction services to customers in the U.S. by marketing, researching, staffing, bidding and by procuring equipment. (Cutts, Tr. 2437). AT&V's marketing steps include publicizing its capabilities, calling on customers, and educating its sales force. (Cutts, Tr. 2439). AT&V emphasizes its relationship with TKK with respect to its marketing effort for large scale LNG tanks in the U.S. (Cutts, Tr. 2439). AT&V has created formal marketing materials that allude to TKK as its partner. (Cutts, Tr. 2439-40).

3.113 TKK's sales force will supplement AT&V's sales force in the LNG area. (Cutts, Tr. 2569-70). While AT&V and TKK jointly made sales calls to customers, TKK does its own sales and marketing in the U.S. as well. (Cutts, Tr. 2440). AT&V, with Dywidag and TKK, recently approached Linde to form an alliance to build import terminals and peak-shaving plants. (Kistenmacher, Tr. 902-03, 915).

3.114 AT&V/TKK have bid on three LNG projects for three separate customers during the past year. (Cutts, Tr. 2464-65). TKK/AT&V has also submitted budget pricing for three LNG projects. (Cutts, Tr. 2447). For a given project that TKK/AT&V work on, each company places a profit on the job, and neither company discloses to the other what their profits will be. (Cutts, Tr. 2482-84).

3.115 Around February 1, 2002, TKK/AT&V submitted a bid proposal to Dynegy for the construction of three LNG tanks. (Puckett, Tr. 4556; Cutts, Tr. 2468-69). Both TKK and

AT&V assisted in preparing the bid proposal. (Cutts, Tr. 2470). TKK/AT&V's bid met Dynegy's technical expectations and was within Dynegy's expected price range. (Puckett, Tr. 4557). Dynegy is "entirely comfortable with ATV and TKK and their ability to execute" the contract for Dynegy. (Price, Tr. 639-40).

3.116 TKK/AT&V have a comprehensive plan for executing the Dynegy job through its own work and the extensive use of subcontractors. For example, if TKK/AT&V win the Hackberry LNG project, it will subcontract the concrete work to Dywidag. (Cutts, Tr. 2471-72). Dywidag, a German company partnered with TKK/AT&V, is responsible for performing civil engineering and civil construction coordination. (Cutts. Tr. 2358-59, 2472-73, 2484-85). Dywidag will also implement the engineering and design that TKK submits for the project. (Cutts, Tr. 2484-85).

3.117 AT&V, TKK, and Dywidag have had discussions in an attempt to lower their bid price by reducing their costs. (Cutts, Tr. 2488).

3.118 AT&V does not expect that Japanese laborers will participate in the erection of the Hackberry LNG tanks. (Cutts, Tr. 2472-73). AT&V personnel and the subcontractors will be responsible for tank erection while four to eight Japanese employees will travel to the United States to supervise. (Cutts, Tr. 2472-73). A lot of the engineering will be done by TKK, in Japan, and electronically transmitted to AT&V for review. (Cutts, Tr. 2473).

3.119 AT&V predicts that the joint venture will purchase components from both Japan and the United States. (Cutts, Tr. 2473-74). The joint venture will purchase components from the country offering the best price, schedule, quality, and process. (Cutts, Tr. 2473-74). Heavy nine percent nickel steel will be purchased from Japan. (Cutts, Tr. 2474-75).

TKK/AT&V plan on fabricating components in the country from which they are purchased. (Cutts, Tr. 2473-74). Thus, a component purchased in Japan will be fabricated in Japan and a component purchased in the United States will be fabricated in the United States. (Cutts, Tr. 2473-75).

3.120 TKK has also provided a comprehensive budget quotation package to Halliburton KBR in connection with Williams plans to expand its existing Cove Point LNG facility in Cove Point, Maryland. (*See* RX 185). This budget pricing package contains engineering designs, pricing, estimates and detailed technical drawings and reports. (*See* RX 185). To execute this project, TKK has formed a consortium with Dywidag. (RX 185, at TWC 000035). TKK will be responsible for the project management, engineering, procurement, and construction of the tanks. (RX 185, at TWC 000035). Dywidag will be responsible for the civil design/engineering, while AT&V will be responsible for the construction, under TKK's direct control. (RX 185, at TWC 000035-36).

3.121 In 2001, TKK/AT&V approached Freeport LNG for a proposed LNG project in Freeport, Texas. (Eyermann, Tr. 6999-7000). TKK/AT&V prepared presentations on the companies' capabilities, and discussed contracting capabilities. (Eyermann, Tr. 7000-01). AT&V portrayed the TKK/AT&V to Freeport LNG as being "at the forefront of the [cryogenic tank] industry within the United States." (RX 936) (state of mind).

3.122 TKK/AT&V also successfully competed against CB&I for an LNG tank project in Trinidad. (Carling, Tr. 4488-89).

iii. United States customers and LNG Participants have accepted TKK/AT&V

3.123 Dynegy is satisfied that TKK/AT&V has the reputation necessary to construct the Hackberry LNG tanks, is capable of doing the necessary fabrication and field erection work on the Hackberry LNG tanks and will be able to manage the actual construction of the LNG tanks for the Hackberry facility. (Puckett, Tr. 4557-58). Dynegy was "quite comfortable about the capability of teaming TKK with AT&V and the ability to execute a project here in the States." (Puckett, Tr. 4584-85).

3.124 CMS believes that TKK is qualified to build LNG tanks in the U.S. (J. Kelly, Tr. 6262).

3.125 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** [**XXXXX XXXXX**]

3.126 El Paso would pre-qualify TKK for a U.S. based LNG project. (Bryngelson, Tr. 6131-32). El Paso believes that TKK has sufficient financial stability, and is technically capable to build LNG tanks. (Bryngelson, Tr. 6128). El Paso pre-qualified TKK for LNG projects in Altamira, Mexico and Rosarito, Mexico. (Bryngelson, Tr. 6125-26).

3.127 Nigel Carling, a former Enron employee with substantial experience in the LNG industry, would pre-qualify TKK/AT&V for a U.S. LNG project. (Carling, Tr. 4447-48, 4485-86, 4489). Carling believes that TKK's prices for LNG tanks in the U.S. will be competitive to the level of PDM's prices. (Carling, Tr. 4519). Since TKK has a proven track record of entering into alliances with local contractors in countries such as Egypt, Indonesia, and Ras Laffan, Carling believes that TKK will be successful working in the U.S. (Carling, Tr. 4522-23). Mr. Carling is aware that AT&V employs many ex-CB&I workers. (Carling, Tr. 4489).

3.128 Bechtel would consider pre-qualifying TKK for an LNG project in the U.S. (Rapp, Tr. 1326). Bechtel acknowledges TKK as having international LNG experience. (Rapp, Tr. 1326).

3.129 Calpine would put TKK/AT&V on its EPC bid list for a proposed LNG tank project in Humboldt Bay, California. (Izzo, Tr. 6494-95). Calpine believes that TKK/AT&V has the experience and the balance sheet necessary to construct a large LNG project. (Izzo, Tr. 6495). Calpine further believes that AT&V is a competent cryogenic tank contractor that could compete on an LNG tank project alone, if TKK guaranteed it. (Izzo, Tr. 6499, 6536).

3.130 Freeport LNG received a variety of documents from TKK/AT&V, and met with its representatives regarding the Freeport LNG project. (Eyermann, Tr. 7002-04). Freeport LNG believes that TKK/AT&V is a strong competitor for U.S. LNG projects. (Eyermann, Tr. 7004-05). Freeport LNG perceives that AT&V has quality welders which will be sufficient to perform the proposed LNG project in Freeport, Texas. (Eyermann, Tr. 7001-02). Freeport LNG also believes that TKK is a qualified tank constructor with the ability to adapt to different working conditions in different countries. (Eyermann, Tr. 7000, 7004-05). Freeport LNG plans on soliciting bids from TKK/AT&V, even though the partnership has never constructed a field erected LNG tank in the U.S. (Eyermann, Tr. 7005).

3.131 S&B Engineers and Constructors approached TKK/AT&V in the past year to solicit their services for LNG projects. (Cutts, Tr. 2450-51).

3.132 MLGW permitted TKK to bid on an LNG project in 1994 because it believed TKK was capable of building field-erected LNG tanks in the United States. (Hall, Tr. 1805, 1849-50). MLGW would consider soliciting a bid from TKK/AT&V if and when it requires an additional LNG facility. (Hall, Tr. 1854).

3.133 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXX] XXXXX XXXXX**.

iv. LNG competitors and CB&I perceive TKK/AT&V as a capable U.S. competitor

3.134 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] XXXXX XXXXX**.

3.135 Based on RX 818, a press release announcing the TKK/AT&V partnership, CB&I perceives that TKK/AT&V is very serious about capturing LNG storage work in the United States and North American. (Scorsone, Tr. 4856, 4861) (Glenn, Tr. 4102) (state of mind evidence).

3.136 CB&I perceives TKK as a very formidable, global LNG competitor that has operated in Africa, Nigeria, the Middle East, southeast Asia, Malaysia, and Japan. (Scorsone, Tr. 4856, 4860; Glenn, Tr. 4092). CB&I competed against, and lost to, TKK for a project in Malaysia. (Glenn, Tr. 4093). TKK has developed state of the art nine percent nickel welding technology. (Scorsone, Tr. 4860).

3.137 In the 1970's, PDM had a licensing agreement with TKK, under which PDM provided LNG construction technology to TKK in exchange for royalties. (Scorsone, Tr. 4857).

3.138 CB&I views AT&V as the third largest tank builder in the U.S. (Glenn, Tr. 4103) (state of mind evidence). AT&V is an experienced and reputable company, having a strong understanding of the design and construction of cryogenic tanks. (Glenn, Tr. 4103; Scorsone, Tr. 4866).

3.139 Although AT&V has never built an LNG tank project, CB&I perceives that AT&V has "always been willing to push itself into new areas" such as pressure spheres and LOX/LIN tanks. (Scorsone, Tr. 4867).

3.140 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4221). Based on CB&I's loss to TKK/AT&V for an LNG tank in Trinidad, CB&I perceives that the partnership will be a tough competitor to CB&I in the U.S. (Scorsone, Tr. 4866, 4874-75).

c. Technigaz/Zachry is a qualified and economically viable competitor to construct lng tanks in the United States.

i. Technigaz background

3.141 From its establishment in 1964, French based SN Technigaz has handled the conceptual design, engineering and construction of LNG facilities. (RX 773, at 2/40). In 1984, Technigaz became a subsidiary of Bouygues, a leading construction group worldwide. (RX 773, at 2/40). Bouygues is the fourth largest contractor in the world with 2001 revenue of more almost $13 billion. (RX 736, at 2/17). Bouygues is highly-skilled in the implementation and management of large-scale international projects and in the vanguard of construction and civil works technologies. (RX 773, at 2/40).

3.142 The Bouygues Group provided Technigaz with its knowledge of giant concrete structures, and the financial backing to undertake major projects. (RX 773, at 2/40). Technigaz has not had difficulty obtaining bonding or parent guarantees when bidding large LNG projects around the world. (Jolly, Tr. 4438).

3.143 Technigaz was recently acquired by Saipem making it one of the largest engineering construction companies in the world, many, many times the size of CB&I. (Glenn, Tr. 4093).

3.144 Technigaz and its parent company earn an annual revenue of more than $3 billion and employ about 20,0000 people. (Jolly, 4438). Technigaz has considerable experience in the design and construction of LNG tanks worldwide. (RX 43, at ZCC000005).

Technigaz is one of the world's leading suppliers of liquefied gas facilities. (RX 871, at 6/78). Technigaz has a solid reputation with both customers and partners. (RX 871, at 6/78).

3.145 Technigaz offers a broad range of services including: feasibility studies and conceptual design, basic and detail engineering, project management, procurement, quality control, construction, coordination of subcontractors, supervision and technical assistance, commissioning and start-up, and operation. (RX 773, at 3/40).

3.146 Technigaz has the ability to undertake large-scale turnkey projects and is in a position to carry out a project right through from front-end engineering to delivery. (RX 773, at 3/40). Technigaz is one of the few companies in the world capable of carrying out the design and construction of complete liquefied gas terminals. (RX 773, at 3/40).

3.147 Technigaz's capabilities also cover all aspects of the design and construction of LNG peak-shaving facilities. (RX 773, at 4/40). Technigaz supplies the associated liquefaction units and send-out systems for peak-shaving facilities. (RX 773, at 4/40). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4732-33).

3.148 Technigaz primarily works on two types of LNG tanks, both of which utilize concrete outer tank: membrane tanks and full containment tanks with nine percent nickel inner tanks. (Jolly, Tr. 4439). In designing and building full-containment type storage tanks, Technigaz draws on its skills in post-tension concrete and its experience with steel tanks. (RX 773, at 5/40). Technigaz's **[XXXXX XXXX]** membrane technology relies on a post-tensioned concrete outer tank for structural resistance and a stainless steel corrugated membrane for liquid and gas tightness. (Jolly, Tr. 4730-31; RX 773, at 5/40).

3.149 Therefore, if an owner specifies a concrete-and-steel design, Technigaz can propose either a membrane or full containment concept, both being equivalent regarding safety towards internal or external hazards. (RX 773, at 5/40). Technigaz has experience working on double containment concrete tanks as well. (Jolly, Tr. 4439). Technigaz has specific concrete experience and built the world's largest concrete LNG tanks. (Jolly, Tr. 4439; RX 773, at 7/40).

3.150 Technigaz currently has eight full-containment LNG tanks under construction around the world: Spain, Egypt and India. (Jolly, Tr. 4440). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4732). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4732). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4732). Technigaz has already constructed three full-containment LNG tanks in Qatar. (Jolly, Tr. 4439-440).

3.151 Taking into account the eight LNG currently under construction, Technigaz believes it, in the last ten years, has built more full containment LNG tanks than any other company in the world. (Jolly, Tr. 4440). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4689).

3.152 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4725). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4747).

3.153 Technigaz pursues an active partnership policy, which has for many years enabled it to develop cooperation with industrial partners in various countries. (RX 773, at 7/40). For example, Technigaz has partnered with local construction companies to build facilities in

Spain (with Initec), Qatar (with Midmac), and Greece (with Technical Union). (RX 773, at 13-15/40).

3.154 Technigaz has built an LNG tank to Appendix Q design codes and specifications. (Fahel, Tr. 1410). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4721).

ii. Zachry background

3.155 Founded in 1924, Texas-based Zachry Construction Corporation is a leading United States construction company, with sales of around $1.7 billion and more than 14,000 employees in 2001. (RX 43, at ZC 000002). In 2001, Zachry was ranked eighteenth in the annual ranking of top construction contractors by Engineering News-Record, a leading industry publication. (RX 871, at 71/78). Zachry placed fifteenth overall among construction firms that also sold their own design work. (RX 871, at 71/78).

3.156 Zachary's broad capabilities in construction and industrial maintenance have earned the company a track record of successes and trust. (RX 871, at 77/78). That reputation has fostered alliances with customers, engineers, and manufacturers, resulting in even greater success for the benefit of all. (RX 871, at 77/78).

3.157 Zachry is the largest direct hire open shop contractor in the United States. (RX 43, at ZCC 000005). Zachry owns more than 6,000 pieces of equipment. (RX 45, at ZCC 000037). Zachry has worldwide experience. (RX 45, at ZCC 000037). Zachry is stable, secure and reliable and has never failed to complete a project. ((RX 45, at ZCC 000039). Zachry is seasoned and experienced with a proven safety program. (RX 45, at ZCC 000039).

3.158 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (Fahel, Tr. 1682-83). **[XXXXX XXXXX XXXXX**

XXXXX XXXXX XXXXX XXXXX XXX] (Fahel, Tr. 1680-81). Zachry has expertise in concrete construction and concrete walls. (Fahel, Tr. 1405).

3.159 Zachry has unlimited bonding capacity. (RX 45, at ZCC 000039). Zachry's satisfied customers include British Petroleum Chemicals, Calpine Corporation and Chevron WWTU. (RX 871, at 61/78).

3.160 Zachry is "low-cost driven" and has broad capabilities in the industrial and heavy civil industry. (Scorsone, Tr. 4865). While Zachry has never built an LNG tank before, it has experience in the general contracting and heavy civil industries, which includes concrete placement, logistics management, and direct craft hire. (Scorsone, Tr. 4868). Zachry also understands the various types of cultures of owners with sophisticated projects, based on its experience in a wide range of industrial projects. (Scorsone, Tr. 4868).

3.161 Zachry is an experienced civil contractor in the United States with licensed engineers and access to local labor in the United States. (Price, Tr. 656-57).

iii. Technigaz/Zachry alliance

3.162 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4683). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** (Jolly, Tr. 4729). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** (Jolly, Tr. 4757).

3.163 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX**

XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] (Jolly, Tr. 4693-94).

3.164 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4694, 4764; *see also, e.g.,* Cutts, Tr. 2501). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XX]** (Jolly, Tr. 4702). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4725). Technigaz decided to create a strategic alliance with Zachry to broaden its competencies and geographic reach. (RX 871, at 46/78). Technigaz consider its alliance with Zachry a "valuable asset" that enables it to leverage opportunities in a high-potential market. (RX 871, at 46/78).

3.165 **[XXXXX XX]** (Fahel, Tr. 1676). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1676).

3.166 **[XXXXX XXXXX]** (Jolly Tr., 4685). A press release announcing the joint venture was issued in January of 2002. (RX 43, at ZCC000002). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4718). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4685).

3.167 In the press release, the alliance held itself out as pooling Technigaz's recognized turnkey LNG project expertise and broad-based knowledge of the market with Zachry's construction capabilities and strong positions in the Americas. (RX 43, at ZCC000002). The press release also stated that the two companies are already working together on a number of tenders for LNG construction in the United States and Mexico. (RX 43, at ZCC000002).

3.168 A subsequent press release characterized the combination as enabling Technigaz/Zachry to play a "major role" in the high-potential, fast-growing LNG market. (RX 8) (state of mind evidence).

3.169 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4684). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4685).

3.170 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1684). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (*See* Fahel, Tr. 1684).

3.171 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4702). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4689, 4709). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4689). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX**

XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] (Jolly, Tr. 4710).

3.172 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4687). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4687).

iv. Technigaz/Zachry has entered the U.S. LNG market

3.173 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4690). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1684-85). The alliance represented to Dynegy that it, along with its parent companies, was prepared to commit the resources to support the Hackberry project immediately. (RX 45, at ZCC 000059).

3.174 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4692). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1650-51, 1689) (in camera). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1652). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1656). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1657).

3.175 Technigaz/Zachry approached Freeport LNG to present its alliance. (Eyermann, Tr. 6994). The alliance sent Freeport LNG marketing materials describing its expertise in liquefied gas facilities and Technigaz's experience building LNG tanks. (Eyermann, Tr. 6996-98). In these marketing materials, Technigaz/Zachry held itself out being committed to engage in all types of undertakings to provide its expertise and long standing excellent reputation as designers/constructors of LNG terminal facilities. (RX 934, at CHE 0310) (state of mind evidence). The alliance emphasized that Technigaz is currently constructing large terminal facilities in Spain, India and other locations. (RX 934, at CHE 0310) (state of mind evidence). Based on these representations, Freeport LNG believes that Technigaz is "keenly interested" in working on the Freeport LNG project. (Eyermann, Tr. 6996-98). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1657).

3.176 In its marketing documents, Technigaz/Zachry explained that the joint venture parties are committed to safety, excellence, and community service, the parties to the joint venture have never failed to complete a project under any circumstance, the parties to the joint venture enjoy a world renowned reputation for performance, and the joint venture parties aspire to be the best in class in all their doings. (RX 45, at ZCC 000032-33).

3.177 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4685). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4693). On June 12, 2001, in response to a request from Yankee Gas' consultant CHI Engineering, the alliance submitted a preliminary pricing proposal for an LNG storage tank. (RX 4, at 3/4). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XX]** (Jolly, Tr. 4693).

3.178 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**. (Jolly, Tr. 4764-65).

v. United States customers and LNG Participants have accepted Technigaz/Zachry

3.179 Dynegy has made it clear that it is satisfied that Technigaz/Zachry has the necessary reputation, the ability to do the requisite fabrication and field erection and the ability to manage the actual construction of the LNG tanks for the Hackberry facility. (Puckett, Tr. 4557-58). Dynegy is also satisfied that Technigaz will be capable of meeting the necessary United States codes and standards. (Puckett, Tr. 4551).

3.180 El Paso believes it would pre-qualify Technigaz to build LNG tanks in the United States. (Bryngelson, Tr. 6131-32). El Paso already pre-qualified Technigaz for its Altamira and Rosarito projects. (Bryngelson, Tr. 6125-26). El Paso believes Technigaz has sufficient financial stability to satisfy its requirements. (Bryngelson, Tr. 6128). Based on input received from its consultant KBR, El Paso believes that Technigaz has a good reputation for building LNG tanks. (Bryngelson, Tr. 6130). El Paso believes that Technigaz is capable of building LNG tanks in the United States at a competitive price. (Bryngelson, Tr. 6132).

3.181 Calpine considers Zachry a competent American contractor capable of teaming with an LNG design company to build LNG tanks. (Izzo, Tr. 6499). Calpine is "perfectly comfortable" with Zachry building an LNG tank based on its familiarity with Zachry's skill sets. (Izzo, Tr. 6505). Calpine has used Zachry extensively to build power plants; Zachry is one of its five "go-to" contractors. (Izzo, Tr. 6496). Zachry has built half a dozen or more power plants for Calpine. (Izzo, Tr. 6499). Calpine believes Zachry has an experienced labor force. (Izzo, Tr. 6505). Calpine believes Technigaz has built LNG tanks to API standards. (Izzo, Tr. 6501). More importantly, Calpine believes Technigaz will guarantee the standards in its contracts. (Izzo, Tr. 6501).

3.182 Despite the fact that Technigaz/Zachry has never built an LNG facility in the United States, Freeport LNG considers the alliance to be a potential LNG tank supplier for its Freeport LNG project. (Eyermann, Tr. 6998). Freeport LNG plans to solicit a bid from Technigaz/Zachry for the Freeport LNG project. (Eyermann, Tr. 6999).

3.183 British Petroleum accepted Technigaz's bid for an LNG project in Bilboa, Spain. (Sawchuck, Tr. 6053). British Petroleum believes that Technigaz has the technical capabilities to construct and execute an LNG import terminal, and would consider Technigaz as a viable supplier for LNG products in the U.S. (Sawchuck, Tr. 6062-63, 6092).

3.184 Bechtel also considers Zachry to be a reputable company. (Rapp, Tr. 1325). Bechtel regards Zachry's field labor force as "well-trained and experienced." (Rapp, Tr. 1325). Further, Bechtel believes that the Technigaz/Zachry joint venture can effectively compete for LNG jobs in the United States. (Rapp, Tr. 1325). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1661, 1688).

3.185 In June of 2001, Technigaz/Zachry received an invitation from Enron to bid on a project in the Bahamas. (Fahel, Tr. 1400). Nigel Carling, a former Enron employee, would pre-qualify Technigaz/Zachry to obtain competitive bids for an LNG project in the United States. (Carling, Tr. 4485-86). Mr. Carling believes that Technigaz has a proven track record of designing and managing the construction of LNG tanks. (Carling, Tr. 4487). Mr. Carling considers Zachry one of the larger construction companies in the United

States with experienced construction practices, labor forces, and pricing structures. (Carling, Tr. 4487). Mr. Carling would feel comfortable having Zachry construct an LNG tank because it is one of the "powerhouse contractors in the United States" and because a tank "is a relatively straightforward exercise when compared with other aspects of construction." (Carling, Tr. 4526). Mr. Carling would consider hiring Technigaz/Zachry for an LNG project in the United States. (Carling, Tr. 4487-88).

3.186 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 745-46).

vi. LNG Competitors and CB&I perceive Technigaz/Zachry as a serious U.S. competitor

3.187 AT&V views Technigaz/Zachry as TKK/AT&V's competitor for LNG projects in the United States. (Cutts, Tr. 2450).

3.188 CB&I has been aware of the Technigaz/Zachry alliance since its announcement. (*See* RX 256) (state of mind evidence). CB&I has also tracked the success and strength of Technigaz's parent company, Bouygues. (*See* RX 271).

3.189 CB&I considers Technigaz to be one of its main competitors in the LNG market. (Glenn, Tr. 4095; RX 234). CB&I competes against Technigaz in the global competitor. (Glenn, Tr. 4093). CB&I recently competed against Technigaz, and lost, a project in Egypt. (Glenn, Tr. 4093).

3.190 Mr. Glenn also considers Technigaz to be a competitor in the domestic market. (Glenn, Tr. 4095). Mr. Glenn knows Zachry to have a lot of experience in the U.S., particularly in concrete construction. (Glenn, Tr. 4095). Mr. Glenn believes Zachry has a very good reputation in the United States as a general contractor with particular expertise in things like highway construction, power plants and concrete placement. (Glenn, Tr. 4097).

3.191 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4222). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4222). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4222). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4222).

3.192 Scorsone perceives that Technigaz and Zachry are "very serious" about winning contracts in the U.S. (Scorsone, Tr. 4854). Scorsone's perception of Technigaz as an LNG competitor in the U.S. is based, in part, on alliance's January, 2002 press release. (Scorsone, Tr. 4854-55; RX 306). Scorsone perceives that Technigaz/Zachry has the sales and marketing expertise to promote its joint venture. (Scorsone, Tr. 4855).

3.193 Given Zachry's heavy civil construction background, Scorsone perceives the partnership of Technigaz/Zachry as a "formidable competitor" given the number of LNG projects in the U.S. employing concrete containment tanks. (Scorsone, Tr. 4865-66).

3.194 PDM partnered with Technigaz on the execution of an LNG import terminal in Turkey, and an LNG export terminal in Qatar. (Scorsone, Tr. 4861).

d. Daewoo/S&B engineers is a qualified and economically viable competitor to construct lng tanks in the United States.

i. Daewoo/S&B background

3.195 Daewoo Engineering & Construction Co., Ltd. ("Daewoo"), a Korean company that was founded in 1973, has been a prominent name in the construction of LNG terminals, pipelines and related facilities. (RX 760, at 10/31). Headquartered in Seoul, South Korea, Daewoo is the 61st top international contractor. (RX 736, at 6/17). In 2001, Daewoo had revenues exceeding 2.3 billion. (RX 736, at 6/17).

3.196 Daewoo is a world leader for the construction of full-containment LNG tanks, and plays a leading role in the construction LNG terminals in Korea. (RX 873, at 3/77). Korea is the world's second largest importer of LNG, and Daewoo holds itself out as the dominant contractor in the design and construction of LNG terminals and gas main trunklines in Korea over the past decade. (RX 10) (state of mind evidence). Since 1990, Daewoo has acted as a turnkey constructor for at least 12 LNG tanks for LNG projects located in Korea and Nigeria. (RX 760, at 10/31, 29/31; RX 873, at 3-6/77). Daewoo has constructed several LNG facilities for Korea Gas Corporation and Shell Petroleum Development Co. (RX 760, at 29/31; RX 873, at 5-6/77).

3.197 S&B Engineers and Constructors, Ltd. ("S&B") is an engineering contracting firm with corporate headquarters located in Houston, Texas. (RX 873, at 61/77). S&B offers a wide range of services including feasibility studies, engineering, procurement, field construction, and plant start-up. (RX 873, at 61/77). S&B has formed alliances with various international companies to perform projects in the Asia-Pacific and India. (RX 873, at 61-63/77). S&B's clients for the design and construction of process plants include Phillips, Shell USA, Arco Chemical, Conoco, and Chevron. (RX 873, at 61/77).

3.198 In mid 2002, Daewoo and S&B represented to the public that it had signed an agreement to jointly pursue LNG receiving terminals in North America. (RX 10) (state of mind evidence). The alliance further represented that S&B, Daewoo, and specialized LNG consultants formed teaming agreements to provide a complete range of services for LNG projects throughout North America, including fast track regulatory and insurance approvals, financial guidance, developmental and detailed engineering, material procurement, and construction and commissioning services. (RX 10) (state of mind evidence).

3.199 According to the firms, S&B's project execution, construction management skills and knowledge of the U.S. EPC market, along with Daewoo's international experience in LNG technology form a strong competitor in the North American LNG market. (RX 10) (state of mind evidence).

ii. Daewoo/S&B's have entered the U.S. LNG market

3.200 Daewoo approached Dynegy, seeking to be included on Dynegy's bid list for the LNG tanks at the Hackberry, Louisiana LNG facility. (Puckett, Tr. 4553).

3.201 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6078, 6090).

3.202 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 754).

3.203 S&B contacted Freeport LNG and indicated it had combined its efforts with Daewoo to compete in the American market for LNG tanks. (Eyermann, Tr. 6976-77). Representatives from S&B and Daewoo had a meeting with Freeport LNG to discuss its capabilities, experience with current projects, and contracting strategies. (Eyermann, Tr. 6976-77; 7008). S&B and Daewoo also presented various brochures to Freeport LNG. (Eyermann, Tr. 7008). Based on these discussions, Freeport LNG requested Daewoo's LNG tank drawings to be used in connection with Freeport LNG's FERC application for its proposed LNG facility in Freeport, Texas. (Eyermann, Tr. 6976-77).

iii. United States customers and LNG participants have accepted Daewoo/S&B

3.204 Dynegy believes that Daewoo has the requisite experience and capabilities to build the LNG tanks at Dynegy's Hackberry, Louisiana facility. (Puckett, Tr. 4553).

3.205 BP believes that Daewoo has the capabilities and skills to construct LNG tanks in the U.S. (Sawchuck, Tr. 6062). BP would consider accepting a bid from Daewoo for the construction of an LNG tank on one of its proposed projects in the U.S. (Sawchuck, Tr. 6062).

3.206 Freeport LNG considers Daewoo/S&B to be a potential supplier of LNG tanks for the proposed LNG project in Freeport, Texas, and intends on sending them a bid package and a request for a bid. (Eyermann, Tr. 7014). Freeport LNG believes, based on reviewing Daewoo's brochures and technical documents, that Daewoo has experience building LNG tanks outside of Korea, and is considered a pioneer in the LNG industry. (Eyermann, Tr. 7010-11; *See also* RX 940, RX 929, RX 930) (state of mind evidence). Freeport LNG was also satisfied with LNG tank drawings that Daewoo provided to Freeport LNG for its FERC application. (Eyermann, Tr. 6974-75).

3.207 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 753). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 753-54).

3.208 Bechtel believes that S&B is a qualified company that can construct an LNG tank in the U.S. if partnered with an experienced foreign LNG tank company. (Rapp, Tr. 1327).

3.209 El Paso would consider pre-qualifying Daewoo and S&B Engineering for LNG projects in North America. (Bryngelson, Tr. 6145-46).

iv. CB&I perceives Daewoo/S&B engineers as a serious U.S. competitor

3.210 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX] [XXXXX XXXXX XXXXX XXXXX]** Mr. Scorsone of CB&I perceives that the team of Daewoo/S&B Engineers is "formidable, tough, experienced, worldly competition." (Scorsone, Tr. 4858). Scorsone also views Daewoo as a serious competitor for LNG projects in the U.S. (Scorsone, Tr. 4862). PDM competed and lost to Daewoo for an LNG terminal in Pyong Taek, Korea. (Scorsone, Tr. 4862). CB&I executives saw a press release, dated March of 2002, announcing the Daewoo/S&B alliance. (Scorsone, Tr. 4857-58).

3.211 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] XXXXX XXXXX XXXXX XXXXX XXX XXXXX] [XXXXX XXXXX XXXXX]**

e. Other global competitors are poised to enter the United States lng market.

i. Tractebel

3.212 Tractebel, the energy division of SUEZ, is a global energy and services business. (RX 874, at 1/8). SUEZ is a French-Belgium conglomerate that provides energy, water, waste and communication services to municipal, residential, and industrial customers. (RX 389, at CB&I065924). In 2001, SUEZ had revenues of $36.5 billion. (RX 389, at CB&I065924). Tractebel contributed $19.36 billion to SUEZ's 2001 revenue. (RX 389, at CB&I065924). Tractebel is able to design and build LNG facilities. (RX 389, at CB&I065921).

3.213 Tractebel recently acquired, and now operates, the United State's first LNG import terminal in Everett, Massachusetts. (RX 389 at CB&I065921). Tractebel also recently acquired Entrepose. (Scorsone, Tr. 4998).

3.214 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4703).

3.215 Tractebel is often a direct competitor of CB&I for LNG terminals around the world. (Glenn, Tr. 4150-51). Tractebel is a very large Belgian company; Tractebel is involved in building, owning and operating LNG facilities. (Glenn, Tr. 4094). Tractebel owns the LNG facility in the Massachusetts area. (Glenn, Tr. 4150). By purchasing Entrepose, Tractebel now has the ability to build LNG tanks. (Glenn, Tr. 4150).

3.216 Former Enron executive Nigel Carling would consider using Tractebel/Entrepose as an LNG tank contractor for a U.S. project. (Carling, Tr. 4491). Tractebel representatives expressed to Mr. Carling that it is interested in U.S. LNG projects. (Carling, Tr. 4514). Tractebel/Entrepose recently won a job in Hammerfest, Norway for Statoil involving three LNG tanks. (Carling, Tr. 4491). Tractebel/Entrepose submitted a bid for Enron's Bahamas project. (Carling, Tr. 4490). Enron ultimately sold the Bahamas project to Tractebel. (Scorsone, Tr. 4998). CB&I believes that Tractebel, as EPC contractor, could build the Bahamas project by itself. (Scorsone, Tr. 4998) (state of mind).

ii. MHI

3.217 Mitsubishi Heavy Industries ("MHI") is well-renowned for its LNG cryogenic technology; it has an excellent history of performance in the design and production of transportation and storage facilities. (RX 767, at 16/26). MHI has been active in the field of cryogenic storage tanks for many decades. (*See* RX 767). MHI is capable of constructing single containment and full-containment tanks. (RX 875, at 2/9). MHI has received orders of 36 large LNG storage tanks including: a full containment LNG tank for Oasaka Gas Co., Ltd. in 2000; the world's largest class membrane LNG tank for Toho Gas Co., Ltd. in 2001; and three full containment tanks at Ras Laffan, Qatar. (RX 875, at 5-7/9, 9/9).

3.218 British Petroleum would consider soliciting a bid from MHI to construct LNG tanks for its various projects in the United States. (Sawchuck, Tr. 6062). BP believes MHI has the technical capabilities and skills to construct LNG tanks in the United States. (Sawchuck, Tr. 6062-63). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6092).

3.219 El Paso believes it would pre-qualify MHI to build LNG tanks in the United States. (Bryngelson, Tr. 6131-32). El Paso already pre-qualified MHI for its Altamira and Rosarito projects. (Bryngelson, Tr. 6125-26). El Paso believes MHI has sufficient financial stability to satisfy its requirements. (Bryngelson, Tr. 6128). Based on input received from its consultant KBR, El Paso believes that MHI has a good reputation for building LNG tanks. (Bryngelson, Tr. 6130). El Paso believes that MHI is capable of building LNG tanks in the United States at a competitive price. (Bryngelson, Tr. 6132).

3.220 Bechtel pre-qualified MHI to construct the LNG tanks for the train four Trinidad expansion. (Rapp, Tr. 1318). Bechtel recognizes that MHI has experience in constructing LNG tanks on an international scale. (Rapp, Tr. 1309, 1316).

3.221 Former Enron executive Nigel Carling would consider using MHI as an LNG tank contractor for a U.S. project if MHI worked with a domestic partner. (Carling, Tr. 4492). MHI is "one of the big players in Japan" and has built tanks in Ras Laffan, Qatar, Taiwan, and Indonesia. (Carling, Tr. 4492).

3.222 Based on its recent bidding activity for LNG projects in Mexico, CB&I believes that MHI is positioned to compete in the U.S. for LNG tank projects. (Scorsone, Tr. 4849).

iii. IHI

3.223 Ishikawajima-Harima Heavy Industries, Co., Ltd. ("IHI") is rated as the world's leading constructor of LNG receiving terminals. (RX 764, at 6/36). IHI LNG storage tanks are currently operating at all LNG terminals in Japan. (RX 764, at 6/36). IHI is capable of constructing double and full containment LNG tanks. (RX 764, at 22/36).

3.224 British Petroleum would consider soliciting a bid from IHI to construct LNG tanks for its various projects in the United States. (Sawchuck, Tr. 6062). BP believes IHI has the technical capabilities and skills to construct LNG tanks in the United States. (Sawchuck, Tr. 6062-63). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6092).

3.225 Freeport LNG believes that if IHI finds an American partner it will be a potential supplier of LNG tanks in the United States. (Eyermann, Tr. 7017). In October 2002, Freeport LNG was contacted by a representative of IHI; the representative, stationed in New York, sent Freeport LNG marketing materials listing IHI's experience. (Eyermann, Tr. 7015-16; RX 931) (state of mind evidence). Freeport LNG understands IHI to have built 23 LNG terminals in Japan, with each terminal containing between 4 and 6 LNG tanks. (Eyermann, Tr. 7015-16).

3.226 IHI is included on the list of LNG tank contractors El Paso considers for its LNG projects. (Bryngelson, Tr. 6126). Bechtel recognizes IHI as a company with experience constructing LNG tanks on an international scale. (Rapp, Tr. 1309, 1316).

3.227 Based on its recent bidding activity for LNG projects in Mexico, CB&I believes that IHI is positioned to compete in the U.S. for LNG tank projects. (Scorsone, Tr. 4849).

2. EPC Contractor Competition Is Plentiful

3.228 In addition to facility owners, LNG tanks are often procured by general contractors known as engineering, procurement, and construction ("EPC") contractors. (Scorsone, Tr. 4934-35). EPC contractors do not perform every aspect of an LNG project. (Scorsone, Tr. 4935). Rather, they use specialty subcontractors, vendors, and equipment suppliers to construct the facility. (Scorsone, Tr. 4935-36). It is common for EPC contractors to subcontract out labor for LNG facilities. (Scorsone, Tr. 4936).

3.229 An owner may hold a bidding process to select its EPC contractor. (Izzo, Tr. 6494-95; Puckett, Tr. 4546-47). While CB&I has experience acting as an EPC contractor for various projects throughout the world, there are a number of global and U.S. based EPC firms that compete with CB&I for the development of LNG facilities including: Skanska; Technigaz; TKK; Fluor Daniel; Halliburton Kellogg Brown & Root; Tractebel; Bechtel; Foster Wheeler; Chiyoda JGC; and Black & Veatch Pritchard. (Scorsone, Tr. 4934-35; Izzo, Tr. 6494-95; Sawchuck, Tr. 6061). Each of these companies are experienced, have a good reputation, and are capable of serving as an EPC contractor for LNG projects. (Izzo, Tr. 6494-95; Sawchuck, Tr. 6061).

3.230 Because owners impose bonding requirements, the size of an EPC contractor is a substantial factor which can influence the competitiveness of the contractor. (Scorsone, Tr. 4938; Price, Tr. 656). Most of CB&I's EPC contractor competitors are significantly larger than CB&I. (*See* RX 736; RX 737).

3.231 Bechtel, with annual revenues of over $11 billion, is the 6th largest international contractor in revenue, and is the number one ranked contractor in the U.S. (RX 736, at 2/17; RX 737, at 1/16). Bechtel employs approximately 50,000 employees worldwide, and is regarded as a world-class engineering construction firm. (Rapp, Tr. 1303-04). Bechtel is currently serving as the EPC contractor for the Trinidad project, and has engineered and constructed LNG facilities in Kenai, Alaska for Phillips; Arun, Indonesia; Badak, Indonesia; and Arzu, Algeria. (Rapp, Tr. 1286, 1310).

3.232 Skanska, with revenues of over $14 billion, is the number one international contractor in terms of revenues. (RX 736, at 1/17). Skanska has domestic operations out of Whitestone, New York, and is considered the third ranked domestic contractor. (RX 737, at 1/16).

3.233 Fluor is a large EPC contractor that has a high-grade reputation across a number of industries including large industrial complexes and petroleum/petrochemical facilities. (Scorsone, Tr. 4942). Fluor Corp. is ranked second among domestic contractors, and 11th among international contractors. (RX 736, at 2/17; RX 737, at 1/16). Fluor earned revenues in excess of $7 billion in 2001. (RX 736, at 2/17).

3.234 Halliburton KBR, the sixth ranked U.S. contractor, is based in Houston, Texas. (RX 737, at 1/16). KBR is rated as the fifth largest international contractor with over $5 billion in revenues. (RX 736, at 2/17). Halliburton KBR is the "leading EPC contractor dealing with owner issues, front-end engineering studies, specifications development, taking the bids, construction terminals." (Scorsone, Tr. 4941).

3.235 Foster Wheeler is headquartered in Clinton, New Jersey, and is the 15th largest domestic contractor. (RX 737, at 2/16). Foster Wheeler has annual revenues of over $2 billion, and is rated as the 16th largest international contractor by revenue. (RX 736, at 2/17).

3.236 Black & Veatch is the 27th largest domestic contractor in the U.S., and the 69th largest international contractor in revenue. (RX 736, at 6/17; RX 737, at 2/16).

3.237 CB&I, however, is only the 41st largest contractor in the U.S., and the 53rd largest international contractor. (RX 736, at 6/17; RX 737, at 2/16).

3.238 CB&I offered to become the EPC contractor for an LNG import terminal to be built in Baja, California by Marathon. (Scorsone, Tr. 4939). However, Marathon rejected CB&I's offer because it felt that CB&I was not large enough to "tackle such a job." (Scorsone, Tr. 4939).

3.239 CB&I also competed, but was not successful, to become the EPC contractor for the expansion of the Cove Point LNG terminal. (Scorsone, Tr. 4937). Marlboro Enterprises was the successful EPC contractor for this project. (Scorsone, Tr. 4937-38).

3.240 CB&I does not perceive that it can force an owner to select CB&I for the EPC position of an LNG terminal by refusing to bid the tank portion of the work out competitively. (Scorsone, Tr. 4938). After a six week, world-wide, search, Dynegy ultimately selected Skanska/Whessoe as EPC contractor for the Hackberry LNG project over CB&I and several other bidders. (Puckett, Tr. 4545-47). While conducting the search, Dynegy first reviewed all the contractors it felt had adequate experience and capabilities to do the project. (Puckett, Tr. 4546-47). Along with a contractor's capabilities, Dynegy also considered the size of the projects a contractor would typically construct. (Puckett, Tr. 4544-45).

3.241 Dynegy identified six contractors that met its guidelines. (Puckett, Tr. 4545-46). The six contractors that made Dynegy's list were Kvaerner, Technip, Skanska, CB&I, Kellogg Brown & Root, and Bechtel. (Puckett, Tr. 4546). Dynegy believed these contractors had some level of LNG experience and the ability and capacity to execute the Hackberry project in the required time frame. (Puckett, Tr. 4545).

3.242 Dynegy interviewed all six firms on its list. (Puckett, Tr. 4547). At the conclusion of the interview process, Dynegy felt that all six companies were qualified to provide EPC service for the Hackberry LNG project. (Puckett, Tr. 4547). Dynegy believes all of the companies on its EPC list are capable of meeting United States' codes and standards. (Puckett, Tr. 4551).

3.243 During CB&I's interview, CB&I indicated that it wanted to do the entire project, including the tanks and the terminal, on a turnkey basis. (Puckett, Tr. 4558). CB&I felt that it could give Dynegy a faster and less expensive result by doing the entire project. (Puckett, Tr. 4558). Dynegy rejected this approach and disqualified CB&I as a bidder for the EPC portion of the job. (Puckett, Tr. 4559).

3.244 Dynegy chose Skanska/Whessoe, as its EPC, based on a deal it negotiated for the Front End Engineering Design ("FEED") work, Skanska's experience based on the recent work it had done on a project in Dabhol, India, for Enron, Skanska/Whessoe's ability to execute the Hackberry project, and its willingness to do the project in the United States. (Puckett, Tr. 4548-49).

3.245 BP believes it has many options for EPC contractors for its proposed LNG terminals in the U.S. (Sawchuck, Tr. 6061). These options include Halliburton KBR, Fluor Daniel, Bechtel, Kvaerner, and Foster Wheeler. (Sawchuck, Tr. 6061). BP believes each of these companies has the requisite skills and capabilities to serve as an EPC contractor. (Sawchuck, Tr. 6061).

3.246 Calpine is considering Skanska/Whessoe, Technigaz/Zachry, and TKK/AT&V to be its EPC contractor. (Izzo, Tr. 6494-95). El Paso believes that Halliburton KBR and Fluor have the capability to be an EPC contractor for an LNG facility. (Bryngelson, Tr. 6146).

3. Current LNG Customers Are Not Concerned About CB&I's Acquisition Of PDM Assets Because Of The Presence Of Foreign Competition.

3.247 LNG owners are sophisticated buyers who know what an LNG project ought to cost. (Glenn, Tr. 4125-26).

3.248 Dynegy, the owner of what will be the largest LNG import terminal ever constructed in the United States, is satisfied with the post-merger LNG pricing it has received for the Hackberry project. (Puckett, Tr. 4540, 4587-88).

3.249 Bechtel believes it can obtain a reasonable price for an LNG tank in the United States as a result of a bidding process between CB&I and Technigaz. (Rapp, Tr. 1333-34).

3.250 Calpine does not believe that the PDM acquisition will allow CB&I to raise its prices. (Izzo, Tr. 6534).

3.251 El Paso, which is currently developing four LNG projects in the United States, Bahamas and Mexico, does not believe that the merger has affected the price for field-erected LNG tanks. (Bryngelson, Tr. 6155). Because the LNG industry is "an international business", El Paso believes that "no one participant controls the market." (Bryngelson, Tr. 6159-60). El Paso believes the LNG market is a "very competitive global market" and has not seen CB&I exert dominance with respect to any of El Paso's LNG projects. (Bryngelson, Tr. 6146).

3.252 Freeport LNG, currently developing an LNG import terminal in Freeport, Texas, is comfortable with the options it currently has available for builders of field-erected LNG tanks for its project. (Eyermann, Tr. 6959-60, 7019).

3.253 Nigel Carling, a former Enron employee with extensive experience in the LNG industry, does not believe the acquisition has adversely affected his ability to get a competitively priced LNG tank. (Carling, Tr. 4494). Competition since the acquisition has increased as foreign competitors are now trying to break into the United States market. (Carling, Tr. 4494). Mr. Carling believes there is no reason to believe they cannot be competitive in the United States. (Carling, Tr. 4495). These foreign competitors have excellent credentials and they have been able to put together competitive pricing. (Carling, Tr. 4494). In Mr. Carling's view, increased competition means prices will decrease. (Carling, Tr. 4495).

3.254 Likewise, CMS, which is adding an LNG tank to its existing Lake Charles, Louisiana facility, does not believe it is likely that prices for LNG tanks in the United States will increase as a result of the merger between CB&I and PDM. (J. Kelly, Tr. 6263-64). CMS believes the LNG market will remain competitive. (J. Kelly, Tr. 6263-64.)

3.255 British Petroleum, currently deciding between sole-sourcing and competitively bidding three potential LNG projects, believes that the current level of competition will provide a fair and reasonable price. (Sawchuck, Tr. 6066). MLGW has seen no evidence to date that CB&I has the ability to control a market as a result of the Acquisition. (Hall, Tr. 1858-59). It is possible that there may be more competition for LNG tanks in the U.S. today as compared to 1994-1995. (Hall, Tr. 1860-61).

4. Post-Acquisition Competition Demonstrates CB&I's Acquisition Of PDM EC Will Not Substantially Lessen Competition.

a. Dynegy is not concerned about CB&I's acquisition of PDM assets

3.256 Dynegy is currently scheduled to build a large LNG import facility that will be located on the Calcasieu River, south of Lake Charles, Louisiana, in the town of Hackberry. (Puckett, Tr. 4539). The facility will contain three LNG tanks, two docks for receiving LNG ships, pump and vaporization capacity of 1.5 billion cubic feet per day, and roughly 30 miles of pipeline to move the gas from the terminal to other interstate pipelines for delivery. (Puckett, Tr. 4539-40).

3.257 Dynegy originally planned to construct two LNG tanks; ultimately the scope changed and expanded to three tanks. (Price, Tr. 602-03). Each of the three full containment LNG tanks will be roughly 250 feet in diameter, 150 feet tall and have a capacity of 160,000 cubic meters. (Puckett, Tr. 4540). Dynegy believes actual construction on the facility will begin sometime in 2006 and last between 33 and 43 months. (Puckett, Tr. 4567).

3.258 The Hackberry LNG tanks are being built to meet the necessary API and NFPA codes and standards required in the United States. (Puckett, Tr. 4551).

3.259 When completed, the Hackberry facility will be the largest LNG regasification facility in the United States. (Puckett, Tr. 4540).

3.260 Dynegy chose to specify full containment LNG tanks to be built at the Hackberry facility because full containment tanks are more secure and will meet the requirements of the air dispersion modeling, which suggests the use of full containment tanks, due to the relatively small size of Dynegy's property. (Puckett, Tr. 4541-42). Given the amount of land at the Hackberry site, Dynegy does not believe it would be allowed to build single containment tanks. (Puckett, Tr. 4585). Additionally, due to terrorist concerns, more secure tanks are desirable. (Puckett, Tr. 4586-87).

3.261 When completed, the Hackberry LNG tanks will be the first full containment LNG tanks, of this size, built in the United States. (Puckett, Tr. 4541).

3.262 Dynegy estimates that the approximate dollar value for the entire project is somewhere between $550 to $700 million. (Puckett, Tr. 4565). Dynegy estimates that each of the three LNG tanks will cost around $40 or $50 million. (Puckett Tr. 4566).

i. EPC contractor search

3.263 Dynegy began its process by selecting an EPC contractor for the facility. (Puckett, Tr. 4543-44). After a six week, world-wide, search, Dynegy ultimately selected Skanska/Whessoe as EPC contractor for the Hackberry LNG project over CB&I and several other bidders. (Puckett, Tr. 4545, 4547). While conducting the search, Dynegy first reviewed all the contractors it felt had adequate experience and capabilities to do the project. (Puckett, Tr. 4544-45). Along with a contractor's capabilities, Dynegy also considered the size of the projects the contractors had typically constructed. (Puckett, Tr. 4545).

3.264 Dynegy identified six contractors that met its guidelines. (Puckett, Tr. 4545). The six contractors that made Dynegy's list were Kvaerner, Technip, Skanska, CB&I, Kellogg Brown & Root, and Bechtel. (Puckett, Tr. 4546). Dynegy believed these contractors had some level of LNG experience and the ability and capacity to execute the Hackberry project in the required time frame. (Puckett, Tr. 4545).

3.265 Dynegy told all the parties up-front that it planned to bid the LNG tank portion of the project separately. (Puckett, Tr. 4550).

3.266 In selecting an EPC contractor, Dynegy relied upon the following: the experience of Dynegy employees that had previously been involved with LNG projects, literature provided by the engineering firms, and presentations in which the engineering firms explained their capabilities. (Puckett, Tr. 4545-46).

3.267 Dynegy interviewed all six firms on its list. (Puckett, Tr. 4547). At the conclusion of the interview process, Dynegy felt that all six companies were qualified to provide EPC service for the Hackberry LNG project. (Puckett, Tr. 4547). Dynegy believes all of the companies on its EPC list are capable of meeting United States' codes and standards. (Puckett, Tr. 4551).

3.268 Dynegy asked CB&I to submit a proposal to become the EPC contractor for its project. (Glenn, Tr. 4128).

3.269 During CB&I's interview, CB&I indicated that it wanted to do the entire project, including the tanks and the terminal, on a turnkey basis. (Puckett, Tr. 4558). CB&I felt that it could give Dynegy a faster and less expensive result by doing the entire project. (Puckett, Tr. 4558).

3.270 CB&I ultimately submitted a proposal to become Dynegy's EPC contractor. (Glenn, Tr. 4128-29). Dynegy rejected this approach and disqualified CB&I as a bidder for the EPC portion of the job. (Puckett, Tr. 4558; Glenn, Tr. 4410).

3.271 In the middle of the EPC search, Technigaz and Zachry introduced themselves to Dynegy, presented their credentials, and explained their capabilities in the LNG area. (Puckett, Tr. 4549).

3.272 Between the summer and fall of 2001, Dynegy selected Skanska/Whessoe as its EPC contractor. (Puckett, Tr. 4547). Dynegy chose Skanska/Whessoe, as its EPC, based on a deal it negotiated for the Front End Engineering and Design ("FEED") work, Skanska's experience based on the recent work it had done on a project in Dabhol, India, for Enron, Skanska/Whessoe's ability to execute the Hackberry project, and its willingness to do the project in the United States. (Puckett, Tr. 4548-49). Dynegy learned, through its investigation, that Skanska performed the Dabhol, India project in a satisfactory manner. (Puckett, Tr. 4565).

3.273 During the EPC search, Skanska/Whessoe and Black & Veatch essentially presented themselves as a team. (Puckett, Tr. 4579). Black & Veatch ended up partnering with Skanska on the EPC contract. (Price, Tr. 600). Black & Veatch was responsible for evaluating the LNG tank bids taking charge of a number of engineering parts of the project. (Puckett, Tr. 4548; Glenn, Tr. 4130).

3.274 To develop the budget for the Hackberry facility, Black & Veatch obtained a budget price for the LNG tanks from Whessoe. (Price, Tr. 601-02). Whessoe's budget price estimated the cost of an LNG tank at $55 million. (Price, Tr. 602-03). Black & Vetch did not request budget pricing from CB&I because it was already working with Skanska; it was natural to ask Skanska for pricing. (Price, Tr. 603-04).

ii. LNG tank constructor search

3.275 After selecting Skanska/Whessoe as EPC contractor, Dynegy began the process of pre-qualifying firms to bid on the LNG tank portion of the facility. (Puckett, Tr. 4552). The pre-qualification process was similar to the EPC selection process. (Puckett, Tr. 4552). Because of their size and magnitude, LNG tanks are essentially an EPC contract in and of themselves. (Puckett, Tr. 4552).

3.276 Dynegy began the pre-qualification process by identifying companies that had manufactured LNG tanks in the past. (Puckett, Tr. 4552). Dynegy did not limit its search to tank manufacturers in the United states; Dynegy searched world-wide. (Puckett, Tr. 4552).

3.277 Based on its search, Dynegy created a list of four tank manufacturers, TKK, Technigaz, Skanska/Whessoe, and CB&I. (Puckett, Tr. 4552). Technigaz came partnered with Zachry and TKK had a relationship with AT&V. (Puckett, Tr. 4553-54). Dynegy invited each of the four companies to provide its pre-qualifications and come in for a meeting. (Puckett, Tr. 4554). Each firm presented Dynegy with written materials outlining its capabilities to construct the LNG tanks. (Puckett, Tr. 4554). Dynegy interviewed each of the tank builders. (Puckett, Tr. 4554).

3.278 As a result of the interviews and documents, Dynegy was satisfied that each of the four firms could construct the three LNG tanks as part of the Hackberry project. (Puckett, Tr. 4554).

3.279 Dynegy is satisfied that Skanska/Whessoe, Technigaz/Zachry, and TKK/AT&V all have the reputation necessary to construct the Hackberry LNG tanks. (Puckett, Tr. 4557).

3.280 Dynegy believes that Skanska/Whessoe, Technigaz/Zachry, and TKK/AT&V are all capable of doing the necessary fabrication and field erection work on the Hackberry LNG tanks. (Puckett, Tr. 4557-58).

3.281 Dynegy believes that Skanska/Whessoe, Technigaz/Zachry, and TKK/AT&V will all be able to manage the actual construction of the LNG tanks for the Hackberry facility. (Puckett, Tr. 4558).

3.282 Due to Skanska/Whessoe's desire to bid on the LNG tank portion of the project, Dynegy set up a Chinese wall to ensure fairness in the bidding process. (Puckett, Tr. 4554). Prior to soliciting bids, Dynegy explained its Chinese wall to the bidders. (Puckett, Tr. 4575-76). As part of the Chinese wall, all bidders were required to submit their bids directly to Black & Veatch in its Kansas City office. (Puckett, Tr. 4555).

3.283 Dynegy ultimately asked four tank builders, TKK, Technigaz, Skanska/Whessoe, and CB&I, to provide lump-sum turnkey bids for the construction of the Hackberry LNG tanks. (Puckett, Tr. 4552-53). Dynegy sent bid requests in the fourth quarter of 2001. (Puckett, Tr. 4568).

3.284 Although Daewoo was not on Dynegy's original list, Daewoo approached Dynegy just after Dynegy released the specifications to the bidders. (Puckett, Tr. 4553). Daewoo appeared capable of constructing the LNG tanks, but Dynegy chose not to include it in the bidding process because Dynegy did not want too many bidders bidding on the Hackberry project. (Puckett, Tr. 4553).

3.285 Dynegy does not believe in bidding a project to too many companies; Dynegy prefers giving the bidders a chance to believe that they have an opportunity to win the project (Puckett, Tr. 4553).

3.286 All of the bidders indicated a concern about submitting a bid given that Skanska, a competitor, was the EPC contractor. (Puckett, Tr. 4576). CB&I had never encountered a situation where one of the competitors was the EPC contractor taking bids on the tank, and also competing to bid on the tank; CB&I considered this arrangement highly unusual. (Scorsone, Tr. 4948-49).

3.287 Dynegy received bids sometime after February 1, 2002. (Puckett, Tr. 4556). Dynegy received a bid from TKK/AT&V, Skanska/Whessoe, and Technigaz/Zachry. (Puckett, Tr. 4556; Cutts, Tr. 4568-96).

3.288 All three of the bids Dynegy received met its technical expectations and were within Dynegy's expected price range. (Puckett, Tr. 4557). Dynegy's consultants are studying the LNG tank bids it received. (Puckett, Tr. 4557).

3.289 Gerald Glenn perceived Skanska/Whessoe, TKK/AT&V, and Technigaz/Zachry as competitors for the Hackberry LNG tanks. (Glenn, Tr. 4094-95, 4097-98) (state of mind evidence).

3.290 William Puckett believes the Hackberry facility will be built. (Puckett, Tr. 4569).

3.291 TKK and AT&V both played a part in preparing the Dynegy LNG tank bid. (Cutts, Tr. 2470). AT&V projects that its combined margin and contingency for the Dynegy project is approximately ten percent. (Cutts, Tr. 2357).

3.292 If TKK/AT&V win the Hackberry project, it will subcontract the concrete work to Dywidag, a company with foreign and domestic ties headquartered in Germany. (Cutts, Tr. 2471-72, 2358-59). Although TKK will have lead engineering responsibility for the entire project, Dywidag will perform civil engineering and civil construction coordination; Dywidag will implement TKK's engineering and design. (Cutts, Tr. 2484-85).

3.293 TKK will do the engineering in Japan and electronically transmit the information to AT&V. (Cutts, Tr. 2473). AT&V and Dywidag will be responsible for field erection, Japanese laborers will not participate. (Cutts, Tr. 2472-73). However, TKK will provide on-site staff, between four and eight employees, to supervise the construction process. (Cutts, Tr. 2444, 2476).

3.294 For the Dynegy project, TKK/AT&V must purchase the requisite nine percent nickel steel from Japan because this type of steel cannot be purchased in the United States. (Cutts, Tr. 2474-74). Depending on where the materials are purchased, fabrication may take place in the United States or Japan. (Cutts, Tr. 2473-74).

3.295 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1684-85). **[XXXXX XXXXX]** (Fahel, Tr. 1685). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1630). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1632).

3.296 **[XXXXX XXXXX]** (Fahel, Tr. 1693; *See also* RX 45, at ZCC000059). **[XXXXX XXXXX]** (Fahel, Tr. 1694; *See also* RX 43, at ZCC000005). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX**

XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] (Fahel, Tr. 1694; *See also* RX 43, at ZCC000005).

iii. CB&I's decision not to provide a tank-only bid

3.297 CB&I was also offered the opportunity to bid on the LNG tank portion of the Hackberry project. (Glenn, Tr. 4133). As part of the bid procedure, Dynegy required CB&I to submit its drawings, technical information and a firm price to Black & Veatch, a competitor. (Glenn, Tr. 4130). Besides sending CB&I an inquiry package, Black & Veatch did not make any efforts to encourage CB&I to submit a tank-only bid. (Price, Tr. 619).

3.298 CB&I met with Dynegy and indicated that it was uncomfortable providing a bid given that the Skanska/Black & Veatch group, a major competitor, was acting as the EPC contractor. (Puckett, Tr. 4574-75). CB&I did not want Skanska to obtain its bidding information; CB&I did not want a competitor to gain access to its prices and designs. (Puckett, Tr. 4577-78).

3.299 Prior to the bid due date, CB&I indicated to Dynegy that it was not going to submit a bid, however, CB&I was prepared to submit a proposal to cover the construction of the entire project on a turnkey basis. (Puckett, Tr. 4559).

3.300 CB&I sent William Puckett a letter expressing its decision not to submit a tank-only bid. (Glenn, Tr. 4133-34; RX 143). In its letter, CB&I again offered to construct the Hackberry facility on a turnkey basis. (RX 143). Dynegy rejected CB&I's second attempt to propose a turnkey approach. (Puckett, Tr. 4559).

3.301 CB&I ultimately decided not to submit a tank-only bid because Black & Veatch, a company under contract with Skanska/Whessoe, was evaluating the bids and Skanska/Whessoe was a bidder. (Glenn, Tr. 4411). Given these circumstances, CB&I believed that its chance of being awarded the project was slim even if it provided the lowest bid. (Glenn, Tr. 4411). Under these conditions, CB&I did not believe it would get a fair shake; bidding would be a waste of time and money. (Glenn, Tr. 4411).

3.302 After learning of CB&I's decision not to bid, Dynegy further solicited a tank-only bid by offering to let CB&I submit its bid directly to Dynegy and promising not to share the information with Black & Veatch. (Puckett, Tr. 4578; Glenn, Tr. 4134-35; RX 144).

3.303 After considering Dynegy's new offer, CB&I decided that if Dynegy would accept and evaluate the bids itself, CB&I would submit a tank-only bid. (Glenn, Tr. 4136). CB&I communicated its decision to Dynegy within two to three weeks after it received Dynegy's offer. (Glenn, Tr. 4136). CB&I requested to submit a tank-only bid in March of 2002. (Glenn, Tr. 4412; Puckett, Tr. 4578).

3.304 William Puckett responded to CB&I's request by informing CB&I that Dynegy was satisfied with the three tank-only bids it had received and telling CB&I that it was too late in the process to accept its bid. (Puckett, Tr. 4559-60; Glenn, Tr. 4137).

3.305 Gerald Glenn was not happy with Mr. Puckett's response and he personally phoned Dynegy's CEO, Chuck Watson. (Glenn, Tr. 4137). Based on his conversation with Mr. Watson, Gerald Glenn believed Dynegy was perfectly happy with the three bids it received. (Glenn, Tr. 4137) (state of mind evidence). CB&I's perception was that Dynegy believed it had everything it needed to proceed with the Hackberry project and did not need CB&I's bid. (Glenn, Tr. 4137) (state of mind evidence).

3.306 Subsequently, CB&I did not submit a tank-only bid to Dynegy. (Glenn, Tr. 4138; Puckett, Tr. 4573).

iv. LNG tank finalists

3.307 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4691). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX X]** (Fahel, Tr. 1632). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4760). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4760). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4760). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4761).

3.308 Gerald Glenn also believes, based on conversations with William Puckett and Chuck Watson, that Skanska/Whessoe and TKK/AT&V are the finalists to construct the Hackberry LNG tanks. (Glenn, Tr. 4094-95, 4105) (state of mind evidence).

3.309 William Puckett has no doubt that Dynegy conducted the right due diligence in selecting competent bidders to bid on the Hackberry LNG tanks. (Puckett, Tr. 4587). At the time of Mr. Puckett's deposition, Dynegy was satisfied with the three bids it received. (Puckett, Tr. 4587-88).

3.310 Dynegy will award the LNG tank bid very soon. (Price, Tr. 619-620).

v. FERC

3.311 Dynegy filed its FERC application around December 2001. (Puckett, Tr. 4551). In December 2002, FERC provided preliminary approval for Dynegy's proposed LNG project. (RX 926).

3.312 Dynegy hired a number of firms, including Foster & Wheeler, to support it in its FERC filing application. (Puckett, Tr. 4551). Dynegy was able to get the resources it needed to complete the FERC filing. (Puckett, Tr. 4551-51).

vi. Pricing

3.313 Dynegy is satisfied with the post-merger LNG pricing it has received for the Hackberry project. (Puckett, Tr. 4568-69, 4587-88).

3.314 Black & Veatch has a team that is analyzing the firm fixed price bids submitted for the Hackberry LNG tanks. (Price, Tr. 609). Due to Dynegy's desire to keep the pricing extremely confidential, only four employees at Black & Veatch have seen the firm fixed bids. (Price, Tr. 610, 625).

3.315 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4691).

b. Atlantic LNG is not concerned about CB&I's acquisition of PDM assets

3.316 Bechtel, a "world-class construction firm, engineering construction company" (Rapp, Tr. 1303-04), is serving as the EPC contractor for the expansion of an LNG export terminal owned by Atlantic LNG in Trinidad. (Rapp, Tr. 1286; JX 11, at par. 1).

3.317 CB&I believes that the Trinidad LNG facility supplies gas to the U.S. market. (Glenn, Tr. 4104-05) (state of mind).

3.318 Bechtel believes there are unique challenges to working in Trinidad; there is a rainy season that "can slow down" the schedule. (Rapp, Tr. 1311).

3.319 Whessoe constructed the first two LNG tanks for the Trinidad LNG facility. (Rapp, Tr. 1287; Glenn, Tr. 4139). Bechtel is satisfied that the tanks Whessoe built are "well-constructed" and built to API standards. (Rapp, Tr. 1332-33). Whessoe imported a supervisory staff, and trained local labor for the Trinidad project. (Rapp, Tr. 1310).

3.320 Phillips Petroleum was responsible for providing the liquefaction process technology for the Trinidad project. (Rapp, Tr. 1314, 1316).

3.321 In 1999, CB&I bid against PDM to build a third LNG tank for the Trinidad's facility train two expansion. (Rapp, Tr. 1286-87; JX, 11 at par. 1). Bechtel chose CB&I for this project because: (1) CB&I "had worked in Trinidad before"; (2) CB&I "had a following of craftsman that worked" in Trinidad; and (3) CB&I had a lower price. (Rapp, Tr. 1294-95).

3.322 CB&I is approximately 85% complete with the construction of the third tank in Trinidad, and expects to complete the project in May 2003. (Scorsone, Tr. 4957; Glenn, Tr. 4139).

3.323 CB&I is on schedule with the construction of the LNG tank in Trinidad, and there have not been any performance problems. "Bechtel is pleased and the job is a successful one so far for CB&I." (Scorsone, Tr. 4957-58; Glenn, Tr. 4139-40).

3.324 CB&I, TKK, and MHI, among others, were pre-qualified by Bechtel to construct an additional LNG tank at the Trinidad facility. (Rapp, Tr. 1318).

3.325 CB&I recently submitted a bid, and competed against TKK, for a fourth LNG tank at the Trinidad LNG facility. (Scorsone, Tr. 4950). CB&I believes that AT&V was involved with TKK's bid because TKK formed a joint venture with AT&V, and because AT&V has a connection in Trinidad. (Scorsone, Tr. 5224).

3.326 TKK/AT&V was the successful bidder for this project. (Carling, Tr. 4488-89; Glenn, Tr. 4095, 4105; Scorsone, Tr. 4950).

3.327 Based on conversations with Bechtel, CB&I perceived that "[t]he price that TKK and ATV was awarded was greater than 5 percent or more under the price that CB&I submitted for the project." (Scorsone, Tr. 4950-52) (state of mind).

3.328 CB&I initially bid the project with a 10% profit margin, anticipating that it would have to reduce its price throughout the course of negotiations with Bechtel. (Scorsone, Tr. 4954).

3.329 CB&I was told that there was at least a 5% price difference between its bid and TKK's bid. (Scorsone, Tr. 4954).

3.330 CB&I cut its initial price it offered to Bechtel for the Trinidad project. (Scorsone, Tr. 4953-54). CB&I reduced its margin to a 5% level. (Scorsone, Tr. 4954). CB&I's best and final offer was five to six percent higher than CB&I's contract price for the third LNG tank. (JX 11, at par. 11). CB&I did not have the lowest bid. (Glenn, Tr. 4140).

3.331 CB&I believes that TKK, through the course of negotiations, reduced its price to the point that there "was greater than 5 percent between the prices" CB&I and TKK offered. (Scorsone, Tr. 4954).

3.332 CB&I believed that it had a competitive advantage over TKK for the Trinidad project. (Scorsone, Tr. 4954; Glenn, Tr. 4140). CB&I was currently working on the site where the fourth tank would be constructed at the time the bid was awarded to TKK/AT&V. (Scorsone, Tr. 4954). CB&I was already employing labor from Trinidad at the time of the award. (Scorsone, Tr. 4954-55). CB&I has a good knowledge of local labor in

Trinidad based on working in Trinidad over the past 30 years. (Scorsone, Tr. 4955). CB&I has a good relationship with the local labor. (Scorsone, Tr. 4956). CB&I also has good knowledge of the local regulatory environment in Trinidad, and has good knowledge of the local subcontractors available in Trinidad. (Scorsone, Tr. 4956).

3.333 Despite all the advantages CB&I perceived it had in Trinidad, it still cut the price of its bid for the fourth tank. (Scorsone, Tr. 4958). CB&I was surprised and upset that it lost future work at Trinidad. (Glenn, Tr. 4140).

3.334 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4697). **[XXXXX XX]** (Jolly, Tr. 4697).

3.335 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4697). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XX]** (Jolly, Tr. 4698).

3.336 The pricing CB&I perceived that TKK/AT&V submitted in Trinidad has influenced CB&I's perception of TKK/AT&V's ability to compete for U.S. LNG projects. (Scorsone, Tr. 4951-52) (state of mind). CB&I perceives that TKK/AT&V is "a very serious competitor, that [is] highly focused . . . ." (Scorsone, Tr. 4953).

c. Yankee Gas is not concerned about CB&I's acquisition of PDM assets.

3.337 Yankee Gas, a Connecticut corporation, is a natural gas distribution company servicing approximately one hundred and ninety thousand customers in fifty-six cities and towns in Connecticut. (Andrukiewicz, Tr. 6439). Yankee Gas is planning to construct an on-system LNG production and vaporization system, also known as a peak shaving facility, in Waterbury, Connecticut. (Andrukiewicz, Tr. 6439-40).

3.338 Yankee Gas is constructing the facility to increase its supply portfolio to meet projected customer demand. (Andrukiewicz, Tr. 6462). The major components of the Waterbury facility include: one 2 BCF LNG tank with ten thousand cubic feet per day liquefaction and sixty thousand cubic feet per day vaporization; a liquefaction system; and a vaporization system. (Andrukiewicz, Tr. 6439-40).

3.339 The Waterbury facility will represent Yankee Gas's single largest capital expenditure. (Andrukiewicz, Tr. 6458). Yankee Gas is confident that the facility will be built and hopes to begin the construction phase in the first quarter of 2003. (Andrukiewicz, Tr. 6458).

3.340 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4693).

3.341 Yankee Gas hired CHI Engineering ("CHI") to perform a preliminary engineering analysis to determine the siting capabilities, budgetary costs and economic need for the Waterbury facility. (Andrukiewicz, Tr. 6444). As part of its analysis, CHI sought information regarding the Waterbury LNG tank from several potential LNG tank constructors. (Andrukiewicz, Tr. 6445).

3.342 CHI received responses and information from Skanska/Whessoe, Technigaz and CB&I. (Andrukiewicz, Tr. 6445). Each of the three tank builders provided pricing information, for the Waterbury LNG tank, as part of its submission. (Andrukiewicz, Tr. 6446).

3.343 In August 2001, CHI presented Yankee Gas with a preliminary engineering report. (Andrukiewicz, Tr. 6444). The report estimated the cost for the entire Waterbury facility in the $53 million range. (Andrukiewicz, Tr. 6461). The LNG tank itself would cost between $25 and $28 million. (Andrukiewicz, Tr. 6462). In addition to providing its own cost estimate, CHI's report also contained the supporting pricing documentation provided by Skanska/Whessoe, Technigaz and CB&I. (Andrukiewicz, Tr. 6445).

3.344 CHI's preliminary report indicated that due to the size of the Waterbury site, Yankee Gas would be required to build a double containment LNG tank. (Andrukiewicz, Tr. 6443). CHI's report proposed a double containment tank, with a concrete roof, in which both the inner tank and outer tank would be made of concrete. (Andrukiewicz, Tr. 6464-65). The concrete double containment tank cited in CHI's report was specifically related to the Skanska/Whessoe proposal. (Andrukiewicz, Tr. 6447).

3.345 CB&I believes Yankee Gas has indicated a preference, based on discussions with the community and other constituencies, for a double concrete wall full containment LNG tank. (Glenn, Tr. 4098, 4141) (state of mind). CB&I also bases its belief on Yankee Gas' submittal to the Connecticut Department of Public Utilities. (Scorsone, Tr. 4988).

3.346 Concrete is a major component of a double concrete wall full containment LNG tank. (Glenn, Tr. 4141). CB&I does not execute its own concrete work or possess a double concrete wall full containment LNG tank design. (Glenn, Tr. 4141; Scorsone, Tr. 4989).

CB&I knows of two companies with experience in this type of construction: Technigaz and Skanska/Whessoe. (Glenn, Tr. 4141).

3.347 Yankee Gas is currently planning to utilize the Waterbury facility to exclusively serve Yankee Gas's intrastate customers. (Andrukiewicz, Tr. 6463). Therefore, Yankee Gas does not believe FERC approval is required. (Andrukiewicz, Tr. 6463). The Waterbury facility will only be subject to FERC approval if Yankee Gas chooses to market the capacity of the tank on the interstate market. (Andrukiewicz, Tr. 6462-63).

3.348 As a regulated natural gas distribution company in the state of Connecticut, Yankee Gas is regulated by the Department of Public Utility Control ("DPUC"). (Andrukiewicz, Tr. 6443). DPUC has ordered, in a recent Yankee Gas rate case decision, that it would have the opportunity to approve the final design of the Waterbury facility. (Andrukiewicz, Tr. 6463).

3.349 After Yankee Gas received CHI's preliminary report, Skanska/Whessoe made a presentation to Yankee Gas and CHI in which Skanska/Whessoe described its tank construction capabilities. (Andrukiewicz, Tr. 6447, 6449).

3.350 Yankee Gas also met separately with CB&I and CHI. (Andrukiewicz, Tr. 6449). These conversations, however, were different than the Skanska/Whessoe presentation. (Andrukiewicz, Tr. 6449).

3.351 While the Skanska/Whessoe presentation dealt solely with tank construction, Yankee Gas's conversations with CB&I and CHI revolved around each company's methodology for building the entire LNG facility. (Andrukiewicz, Tr. 6449).

3.352 Since receiving CHI's preliminary report, Yankee Gas has contracted with another engineering consultant, SEA Consultants ("SEA"). (Andrukiewicz, Tr. 6444-45). Prior to selecting SEA, Yankee Gas conducted a series of interviews with firms interested in assisting Yankee Gas to develop the Waterbury facility. (Andrukiewicz, Tr. 6455). Companies expressing interest included AI Group, Fuss and O'Neil, and PTL Associates. (Andrukiewicz, Tr. 6456).

3.353 Yankee Gas chose SEA because it believed SEA was best equipped to meet its needs. (Andrukiewicz, Tr. 6456). SEA's first assignment, which it is currently working on, is to develop project specifications that would allow Yankee Gas to solicit design build proposals. (Andrukiewicz, Tr. 6450). In addition to developing specifications, SEA is also charged with sending the specifications to, and soliciting information from, appropriate companies, reviewing responses, and assisting Yankee Gas in analyzing the final proposals. (Andrukiewicz, Tr. 6453).

3.354 CHI no longer has any role in the Waterbury project. (Andrukiewicz, Tr. 6459-60). While developing the preliminary engineering report, CHI expressed an interest in being involved in the design build phase of the project. (Andrukiewicz, Tr. 6459-60). Based on CHI's interest, Yankee Gas determined that CHI should not provide further engineering services. (Andrukiewicz, Tr. 6450). Currently, Yankee Gas considers CHI to be a potential EPC contractor. (Andrukiewicz, Tr. 6450).

3.355 CB&I also believes that CHI may become a potential bidder against CB&I, as an EPC contractor for the Waterbury facility. (Andrukiewicz, Tr. 6466).

3.356 Yankee Gas has not yet begun its pre-qualification process. (Andrukiewicz, Tr. 6451-52). In the pre-qualification stage, Yankee Gas will consider a constructor's prior experience, specifically with other double containment tanks a constructor has built, both domestically and abroad. (Andrukiewicz, Tr. 6452).

3.357 Yankee Gas would consider qualifying Skanska/Whessoe, Technigaz, CB&I and CHI for the Waterbury project. (Andrukiewicz, Tr. 6453-54). Yankee Gas has not disqualified Skanska/Whessoe, Technigaz, CB&I, CHI or any other company from the pre-qualification process. (Andrukiewicz, Tr. 6452-53).

3.358 Yankee Gas intends to pre-qualify firms in January 2003, and receive firm, fixed-price bids in April or May of 2003. (Scorsone, Tr. 4989).

3.359 It is unclear whether CB&I will bid on the Yankee Gas project if the design calls for a double concrete wall full containment LNG tank. (Scorsone, Tr. 4989-90; Glenn, Tr. 4141).

3.360 CB&I believes Technigaz/Zachry and Skanska/Whessoe will be competitors for the Waterbury facility. (Glenn, Tr. 4098). CB&I believes both companies will be strong competitors because they are the only two companies with direct experience with, and a design for, double concrete full containment LNG tanks. (Glenn, Tr. 4098). Preload licensed its double wall concrete design to Skanska/Whessoe. (Scorsone, Tr. 4989).

3.361 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4685). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4693). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** (Jolly, Tr. 4693, 4752). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4693).

3.362 Black & Veatch also intends to discuss plans to submit a bid to Yankee Gas. (Price 651-53). In fact, Brian Price has already communicated to Yankee Gas Black & Veatch's experience on the Dynegy project. (Price 653-54).

d. El Paso is not concerned about CB&I's acquisition of PDM assets

3.363 El Paso's non-regulated business is developing three land-based terminals in North America which will require LNG tanks: (1) the Rosarito terminal in Baja California, Mexico; (2) the Altamira terminal in Altamira, Mexico; and (3) the Bahamas terminal on the Grand Bahamas Island. (Bryngelson, Tr. 6122-23). El Paso has partnered with Shell for the Altamira project. (Scorsone, Tr. 4992; Bryngelson, Tr. 6168-69).

3.364 The Baja California terminal will initially contain two LNG tanks, with the potential to expand to a third tank. (Bryngelson, Tr. 6123). Each tank will have a capacity of approximately 143,000 cubic meters. (Bryngelson, Tr. 6123). The project is being built between 25 and 30 miles away from the U.S. border. (Bryngelson, Tr. 6139).

3.365 The Altamira terminal will have three LNG tanks, each with a capacity of 150,000 cubic meters. (Bryngelson, Tr. 6123). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4695). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4695).

3.366 At the Bahamas terminal, there will initially be two LNG tanks, with the potential to expand to six tanks. (Bryngelson, Tr. 6123). Each tank will have a capacity of 140,000 cubic meters. (Bryngelson, Tr. 6123). The Bahamas terminal will serve the U.S. market. (Glenn, Tr. 4145).

3.367 El Paso sent pre-qualification letters to a list of potential bidders for the LNG tanks at the Altamira and Baja California terminals. (Bryngelson, Tr. 6124). The pre-qualification letters requested information on each company's previous experience and financial capabilities. (Bryngelson, Tr. 6124). The pre-qualification process was used to narrow the field down to a smaller list of qualified bidders. (Bryngelson, Tr. 6124).

3.368 El Paso's pre-qualification standards for LNG tanks is "fairly stringent." (Bryngelson, Tr. 6131). El Paso pre-qualifies a company if it meets El Paso's technical and financial requirements. (Bryngelson, Tr. 6127).

3.369 In determining the financial status of a bidder, El Paso considers a company's ability to post performance bonds and provide necessary liquidated damages coverage. (Bryngelson, Tr. 6127). El Paso will also consider the total assets of the company, and determine if "they're a strong enough company, [so that] we can go and get some money to cover our damages." (Bryngelson, Tr. 6127-28).

3.370 El Paso's pre-qualification list of LNG tank builders varies depending on who it partners with for a specific job. (Bryngelson, Tr. 6126). El Paso's general list of contractors that it considers for projects includes TKK, MHI, CB&I, TKK, Technigaz, Skanska, and IHI. (Bryngelson, Tr. 6126).

3.371 For the Rosarito terminal, El Paso pre-qualified TKK, MHI, CB&I, Entrepose (which is owned by Tractebel) and Technigaz. (Bryngelson, Tr. 6125-26). Each of the companies on the pre-qualification list for the Rosarito job have sufficient financial stability that satisfy El Paso's requirements and are technically capable of building LNG tanks. (Bryngelson, Tr. 6128-29).

3.372 CB&I believes that El Paso will solicit bids from Skanska/Whessoe, TKK, MHI, IHI, and Technigaz/Zachry for the Rosarito (Baja California) project. (Scorsone, Tr. 4992-93) (state of mind evidence); (Glenn, Tr. 4146) (state of mind).

3.373 Each of the companies on the Rosarito list submitted bids, and "they're still in the running." (Bryngelson, Tr. 6139-40). El Paso has not yet awarded a contract for this project. (Bryngelson, Tr. 6138-39).

3.374 El Paso pre-qualified six LNG tank companies for the Altamira terminal including: TKK; MHI (Mitsubishi Heavy Industries); CB&I; Technigaz; and Skanska. (Bryngelson, Tr. 6125). Each of the companies on the pre-qualification list for the Altamira job have sufficient financial stability that satisfy El Paso's requirements, and are technically capable of building LNG tanks. (Bryngelson, Tr. 6128-29).

3.375 El Paso has not yet solicited bids, or awarded a contract, for the Altamira project. (Bryngelson, Tr. 6138-39).

3.376 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (Fahel, Tr. 1668).

3.377 Kellogg Brown & Root is an engineering contractor that El Paso employs for the purpose of designing and assisting with the development process for LNG terminals. (Bryngelson, Tr. 6129). El Paso believes that KBR has an excellent reputation as an engineering consultant. (Bryngelson, Tr. 6130).

3.378 El Paso hired KBR to act as the FEED contractor for the Rosarito project, and will be probably considered for the EPC contractor position. (Glenn, Tr. 4146).

3.379 Based on input received from KBR and El Paso's engineering staff, El Paso believes that all of the bidders on the Altamira and Rosarito bid list are technically qualified, and have a good reputation for building LNG tanks. (Bryngelson, Tr. 6129-30). All of the companies on the Altamira and Rosarito bid lists are "fairly equal as far as reputation for building field-erected LNG tanks." (Bryngelson, Tr. 6130-32). El Paso also believes that each of the companies on the Altamira and Rosarito bid lists, including IHI, can serve as a turnkey contractor for an LNG facility. (Bryngelson, Tr. 6144-45).

3.380 El Paso is sole-sourcing the Grand Bahamas job with CB&I. (Bryngelson, Tr. 6126). However, the EPC contract for the Bahamas job has not yet been awarded to CB&I. (Bryngelson, Tr. 6134). El Paso believes that all of the companies on the Altamira and Rosarito bid lists are capable of building the LNG tank for the Bahamas job at a competitive price. (Bryngelson, Tr. 6138).

3.381 El Paso would pre-qualify each of the companies on the Altamira and Rosarito bid lists to build tanks in the U.S., and believes that each of the companies are capable to build tanks in the U.S. at a competitive price. (Bryngelson, Tr. 6131-32).

3.382 El Paso would not be concerned about using a company to build an LNG tank in the U.S. if that company had no prior experience in the U.S.: "So the actual construction of the tank, it would be the same in the U.S. as it would be in an international location, by and large." (Bryngelson, Tr. 6141).

3.383 El Paso does not believe that CB&I has any competitive advantage over other companies in providing LNG facility services because: "It's a very competitive global market and we haven't seen them exert dominance in any of our bid -- our one bid process to date or any other information I have from KBR or any of the four advisers." (Bryngelson, Tr. 6146).

3.384 **[XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4695). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4695).

e. Freeport LNG is not concerned about CB&I's acquisition of PDM assets

3.385 Freeport LNG is a partnership that is developing an LNG import terminal in Freeport, Texas. (Eyermann, Tr. 6959-60). Cheniere Energy is a 40% owner of the Freeport LNG project. (Eyermann, Tr. 6961).

3.386 Freeport LNG will be constructing double-containment LNG tanks to fulfill NFPA 59A requirements on the site. (Eyermann, Tr. 6968). The tanks will each contain 160,000 cubic meters of LNG. (Eyermann, Tr. 6968). Freeport LNG currently has a completely negotiated lease for the site. (Eyermann, Tr. 6978).

3.387 Freeport LNG had a difficult time finding property large enough for the tanks because NFPA 59A requires that the radiation intensity emanating from a tank fire does not exceed a certain distance from the property line. (Eyermann, Tr. 6969-70). Freeport LNG "looked around" to find a property site that could accommodate a single containment tank, but it was ultimately unsuccessful. (Eyermann, Tr. 6970-71). Freeport LNG believes it is difficult to find enough land to build a single containment tank. (Eyermann, Tr. 7054). "If you build -- try to find a new site, you are going to have a hard time finding one that will allow you to construct a single containment tank." (Eyermann, Tr. 7055). Safety was also a consideration in choosing a double containment tank design for the Freeport facility. (Eyermann, Tr. 6971-72).

3.388 Freeport LNG plans on filing the FERC application in February 2003. (Eyermann, Tr. 6977). Freeport LNG must file 13 resource reports as part of its FERC application for the LNG terminal. (Eyermann, Tr. 6972).

3.389 Freeport LNG has retained several consultants to supply information for the FERC resource reports: (1) Economy & Environment is handling the reports relating to the environment, wildlife, fisheries, and air pollution; (2) PTL is working on the reports relating to NFPA 59A and the calculations regarding the size of the site; (3) Scheiner Mosely is responsible for the marine design; (4) Technip was hired to do front-end engineering design for the facility; and (5) Daewoo has provided tank designs for the project. (Eyermann, Tr. 6973-74).

3.390 Freeport LNG contacted Daewoo, TKK, and CB&I to request LNG tank engineering designs for the FERC application. (Eyermann, Tr. 6976, 7048-49).

3.391 Freeport LNG ultimately selected Daewoo because it "had the lowest fee, and we know that they can do the job, so that's why we asked them to do it." (Eyermann, Tr. 6976).

3.392 Daewoo provided double containment tank designs to Freeport LNG for its FERC application in September 2002. (Eyermann, Tr. 6974-75; 7048-49). Freeport LNG was satisfied with Daewoo's submission: "They did a good job on that . . . and we will be using those documents." (Eyermann, Tr. 6974-75).

3.393 Freeport LNG hired Technip, a foreign EPC contractor, to prepare front end engineering and design ("FEED") work for the Freeport LNG facility. (Eyermann, Tr. 6974, 7044; Scorsone, Tr. 4991). Freeport LNG believed it had options other than CB&I to conduct engineering work for the project. (Eyermann, Tr. 7070).

3.394 Several foreign LNG tank builders have contacted Freeport LNG, expressing interest in constructing the Freeport LNG facility including: Skanska/Whessoe (Eyermann, Tr. 6981-83); Technigaz/Zachry (Eyermann, Tr. 6994-96); TKK/AT&V (Eyermann, Tr. 7000-01); Daewoo/S&B Engineers (Eyermann, Tr. 7008); and IHI (Eyermann, Tr. 7015-16).

3.395 Freeport LNG will seek bids from at least Technigaz, TKK, CB&I, Daewoo, and Skanska/Whessoe to receive a competitive price for the LNG tanks. (Eyermann, Tr. 7018, 7022-23).

3.396 Freeport LNG has "obtained budgetary pricing unofficially from different vendors" for the Freeport LNG project. (Eyermann, Tr. 7030). CB&I perceives, based on discussions with Freeport LNG, that Technigaz, TKK/AT&V, Skanska Whessoe, MHI, and IHI have submitted budgetary pricing to Cheniere. (Scorsone, Tr. 4990-91) (state of mind); (Glenn, Tr. 4145).

3.397 Freeport LNG has determined that it will need four or five bidders to receive a satisfactory price for the LNG tanks: "If I have six potential bidders, I would expect four or five of them to bid, and that will be plenty . . . ." (Eyermann, Tr. 7023-24). Freeport LNG does not believe it will need more than six bidders because most of the costs are fixed for the project: "They all will have to go to the Texas labor market . . . and the labor rates are whatever they are in the Freeport area. And they cannot do a lot of - a lot of maneuvering with the concrete price. A cubic meter of concrete is what it costs, so, most of these things are really fixed." (Eyermann, Tr. 7024).

3.398 Freeport LNG is comfortable with the options that it currently has available for LNG tank builders for the Freeport project. (Eyermann, Tr. 7019).

f. Calpine is not concerned about CB&I's acquisition of PDM assets

3.399 Calpine is currently exploring the possibility of developing an LNG regasification terminal in Humboldt Bay, California. (Izzo, Tr. 6474). The Humboldt Bay import facility will include a single one million barrel LNG tank. (Izzo, Tr. 6474-75). Calpine estimates that the regasification facility will cost approximately $250 million. (Izzo, Tr. 6493).

3.400 Calpine is considering this project because it is concerned about the current supply of natural gas in the United States. (Izzo, Tr. 6490). Calpine would like to have its own supply of natural gas for power plants it owns in California. (Izzo, Tr. 6490). This is particularly true given the recent natural gas price spike due to supply and demand issues. (Izzo, Tr. 6490).

3.401 Calpine will probably competitively bid the Humboldt Bay project. (Izzo, Tr. 6494). The project owner has complete control over which contracting approach will be used for a given project. (Izzo, Tr. 6480-81).

3.402 Due to a current trends, Calpine expects that new LNG tanks built in the United States will be at least double containment and possibly full containment. (Izzo, Tr. 6491-92).

3.403 Calpine will probably hire an EPC contractor for the tank and facility. (Izzo, Tr. 6494). Calpine believes that at least Skanska/Whessoe, Technigaz/Zachry, CB&I and TKK/AT&V are qualified to bid for the EPC contracts. (Izzo, Tr. 6494-95). Calpine would include at least these four companies on its bid list. (Izzo, Tr. 6494-95). Calpine believes that all four companies have the requisite experience and balance sheets necessary to construct a large LNG project. (Izzo, Tr. 6495). Calpine would also consider Kellogg, Brown & Root and Black & Veatch as an overall engineer or manager for its project. (Izzo, Tr. 6497).

3.404 Calpine would consider Skanska/Whessoe, Technigaz/Zachry, CB&I, TKK/AT&V, and maybe others, to construct the Humboldt Bay LNG tank. (Izzo, Tr. 6496, 6501).

3.405 Calpine believes there are enough competitors for it to obtain a very competitive bid. (Izzo, Tr. 6495). Calpine needs four bidders to get a very good competitive bid and Skanska/Whessoe, Technigaz/Zachry, TKK/AT&V and CB&I are qualified to provide such bids. (Izzo, Tr. 6494-95).

3.406 Calpine, as the owner, will be responsible for preparing and submitting the FERC application for the Humboldt Bay facility. (Izzo, Tr. 6492-93). Although the Humboldt Bay project is still in early development, Calpine hopes to make a public announcement at the end of the first quarter of 2003. (Izzo, Tr. 6490).

3.407 CB&I believes that Calpine will competitively bid the Humboldt Bay project. (Scorsone, Tr. 4994) (state of mind). CB&I considers Skanska/Whessoe, Technigaz/Zachry, TKK/AT&V, Daewoo/S&B, MHI and IHI as potential competitors for this project. (Glenn, Tr. 4102, 4147; Scorsone, Tr. 4994) (state of mind).

g. British Petroleum is not concerned about CB&I's acquisition of PDM's assets.

3.408 British Petroleum ("BP") is a global company, located in Great Britain, with operations throughout the world. (Sawchuck, Tr. 6063). BP is currently developing three potential LNG import terminals in confidential locations in the United States: the northern U.S. project, the northeast U.S. project and the Tampa project. (Sawchuck, Tr. 6054; Scorsone, Tr. 4994).

3.409 All three of the projects are currently in a holding pattern as BP conducts commercial negotiations, develops gas sales contracts and evaluates other commercial opportunities. (Sawchuck, Tr. 6057). Commercial developments will determine whether BP will go forward with one or more of the LNG projects. (Sawchuck, Tr. 6058). BP does not intend to build all three terminals at the same time, as such a decision would be very expensive. (Sawchuck, Tr. 6060).

3.410 BP has already hired CB&I to assist it in creating Resource Report 13 for its northeast U.S. project's FERC application; outside environmental consultants are also assisting with the necessary environmental reports. (Sawchuck, Tr. 6056). BP also hired CB&I to evaluate methods in the construction and project management to reduce the overall construction schedule for its projects. (Scorsone, Tr. 4994).

3.411 Initially, CB&I refused to provide any front-end services unless BP awarded it the full contract. (Sawchuck, Tr. 6069). CB&I wanted BP to choose CB&I as its contractor of choice. (Sawchuck, Tr. 6069). BP was uncomfortable with this arrangement, because it wanted to keep its options open, and held serious discussions with CB&I. (Sawchuck, Tr. 6069).

3.412 CB&I eventually agreed to work with BP on its FERC application in exchange for a deal that would allow CB&I to see the project through to completion if CB&I met all of BP's requirements. (Sawchuck, Tr. 6071). Under this contractual arrangement, BP maintained the option of sole-sourcing with CB&I or conducting a competitive bid process. (Sawchuck, Tr. 6058-59).

3.413 BP has indicated that it will sole-source negotiate with CB&I, but, it will explore other options with other contractors if it cannot reach an agreement with CB&I. (Scorsone, Tr. 4995).

3.414 BP is a sophisticate worldwide play; BP knows how much LNG storage should cost. (Glenn, Tr. 4149). CB&I does not believe it can dictate pricing and terms to BP. (Scorsone, Tr. 4995).

3.415 BP has internal benchmarks that it could use to determine the cost of LNG facilities. (Sawchuck, Tr. 6075). CB&I believes that BP has developed a sophisticated pricing model enabling it to very accurately predict the cost of some of these facilities. (Scorsone, Tr. 4995-96) (state of mind). CB&I employees that have worked with BP's model believe it to be very accurate. (Scorsone, Tr. 4997) (state of mind). CB&I believes BP's model will affect how CB&I will negotiate with BP. (Scorsone, Tr. 4997) (state of mind).

3.416 CB&I submitted budget pricing to BP for its proposed LNG terminals. (Sawchuck, Tr. 6075). BP evaluated the budget price against its own estimate, and found that the budget price was within the accuracy of the estimate. (Sawchuck, Tr. 6076).

3.417 The northeast U.S. project, started in March 2001, is the furthest along of the three projects. (Sawchuck, Tr. 6055). BP has already completed approximately 60% to 70% of the front-end engineering work needed for this project's FERC application. (Sawchuck, Tr. 6055).

3.418 BP estimates that the northeast U.S. import terminal will cost approximately $250 million dollars. (Sawchuck, Tr. 6066). The northern U.S. project, still in its early stages, will be a brand-new import terminal located in a coastal area in the northern United States. (Sawchuck, Tr. 6055).

3.419 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6112). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6109-10). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XX]** (Sawchuck, Tr. 6112). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6112).

3.420 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (Sawchuck, Tr. 6088). The Cryocrete technology can be used as a single concrete wall and is an alternative to a metal single containment structure. (Sawchuck, Tr. 6078-79). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6087).

3.421 CB&I believes that BP is planning to build full-containment LNG tanks at its confidential locations. (Scorsone, Tr. 4995).

3.422 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** (Sawchuck, Tr. 6091). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6091-92).

3.423 BP has a list of potential tank contractors that it would consider accepting bids from for the construction of one or more of the LNG tanks on the various projects in the United States. (Sawchuck, Tr. 6062). The potential bidder list includes: Whessoe, Mitsubishi Heavy Industries, IHI, Daewoo, Hyundai, Technigaz and CB&I. (Sawchuck, Tr. 6062). BP believes that all seven of these companies have the capabilities and skills to construct LNG tanks in the United States. (Sawchuck, Tr. 6062-63). Each of these companies have successfully constructed LNG projects in other parts of the world. (Sawchuck, Tr. 6063).

3.424 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] [XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6087). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6088).

3.425 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6090).

3.426 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (Fahel, Tr. 1657). **[XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4696). In fact, BP recently awarded Technigaz an LNG project in Bilboa, Spain. (Sawchuck, Tr. 6053). **[XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4696). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4696).

3.427 BP believes that the current level of competition will provide it with a fair and reasonable LNG tank price. (Sawchuck, Tr. 6075).

h. Williams Energy is not concerned about CB&I's acquisition of PDM's assets

3.428 Williams has plans to add between four and six new LNG tanks to its existing Cove Point facility in Cove Point, Maryland ("Cove Point II expansion"). (Scorsone, Tr. 4987-88). These additional tanks are required to be full-containment designs because of property limitations at Cove Point. (Scorsone, Tr. 4988). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4693).

3.429 Williams hired Halliburton KBR to do a feasibility study for the Cove Point II expansion. (Scorsone, Tr. 4987-88).

3.430 TKK, in partnership with DYWIDAG and AT&V, submitted budgetary pricing to Halliburton KBR for the Cove Point II expansion. (RX 185). Under this arrangement, TKK would execute the engineering, procurement, and select vendors/subcontractors. (RX 185, at TWC 000036). AT&V will be responsible, under TKK's direct control, for site construction and fabrication of materials done in the U.S. (RX 185, at TWC 000036). DYWIDAG will be responsible for the civil engineering aspects of the facility. (RX 185, at TWC 000035).

3.431 CB&I also submitted budgetary pricing to Halliburton KBR for this project. (Scorsone, Tr. 4988; Glenn, Tr. 4148).

3.432 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4693). CB&I believes that Williams is investigating the possibility of using a membrane type tank technology, which is exclusively owned by Technigaz. (RX 237).

3.433 CB&I believes that Skanska/Whessoe, TKK/AT&V and possibly Technigaz/Zachry are potential competitors for the Cove Point II expansion. (Glenn, Tr. 4148) (state of mind evidence).

i. Marathon Oil is not concerned about CB&I's acquisition of PDM's assets

3.434 Marathon Oil owns an LNG project in the Baja Peninsula of Mexico that is being built to service the United States. (Glenn, Tr. 4151).

3.435 CB&I approached Marathon about becoming the overall contractor for the entire terminal. (Glenn, Tr. 4151).

3.436 CB&I was not allowed to pursue a bid as an EPC contractor based on its size. (Scorsone, Tr. 4938-39). CB&I made an overture toward Marathon to become the turnkey EPC contractor and Marathon told CB&I that it appreciated CB&I's efforts but it did not feel CB&I was large enough to tackle such a job. (Scorsone, Tr. 4938-39).

3.437 CB&I believes, based on a conversation with Marathon, that Marathon did not think CB&I had the financial capacity and bonding capability to handle the $500 to $700 million project. (Glenn, Tr. 4151) (state of mind).

3.438 CB&I believes that KBR will be the EPC contractor. (Glenn, Tr. 4151-52) (state of mind).

3.439 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 753).

3.440 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 754).

3.441 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 755).

j. A former Enron executive is not concerned about CB&I's acquisition of PDM's assets.

3.442 In 2001, Enron planned to construct an LNG project in the Bahamas to supply LNG to Florida through the use of a sub sea pipeline. (Scorsone, Tr. 4997; Carling, Tr. 4481; Glenn, Tr. 4149). CB&I submitted pricing to Enron around the time it went into bankruptcy. (Glenn, Tr. 4149-50).

3.443 Enron solicited, and received, competitive bids for LNG tanks in the Bahamas from CB&I, Skanska/Whessoe and Tractebel. (Carling, Tr. 4480-81). Each of these companies expressed interest in bidding the project, and had proven track records of designing LNG tanks. (Carling, Tr. 4480-81).

3.444 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1400, 1659, 1688). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Fahel, Tr. 1660).

3.445 Enron received the three bids for the Bahamas job in September/October 2001. (Carling, Tr. 4481). The bids for the Bahamas project were "close" and were within a "range of 7 to 10 percent." (Carling, Tr. 4481). The "Tractebel bid was the low one, with Skanska second and CB&I third." (Carling, Tr. 4481-82).

3.446 The LNG tanks for the Bahamas job were never awarded because of Enron's bankruptcy. (Carling, Tr. 4482). Enron sold the Bahamas project to Tractebel, which recently acquired Entrepose. (Scorsone, Tr. 4998; Glenn, Tr. 4150). CB&I believes that Tractebel, an EPC contractor, could build the Bahamas project by utilizing its own forces. (Scorsone, Tr. 4998) (state of mind) (Glenn, Tr. 4151).

k. Chevron/Texaco project

3.447 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4694). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4694). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XX]** (Jolly, Tr. 4694).

3.448 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4695).

3.449 **[XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4694). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4694).

3.450 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4685-86).

5. CB&I Perceives Fierce Competition In The United States LNG Market

3.451 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4223-24) (state of mind). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4224) (state of mind).

3.452 CB&I believes that in some instances its competitors may be at a cost advantage for a specific project over CB&I; e.g. double concrete full containment or full containment. (Glenn, Tr. 4408-09) (state of mind).

3.453 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4224) (state of mind). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Glenn, Tr. 4224) (state of mind). CB&I does not perceive that it can get away with a 5% price increase on LNG tanks now that PDM is no longer a competitor of CB&I. (Scorsone, Tr. 5062-63).

3.454 Mr. Scorsone's perceptions about competition in the LNG market have changed over time. (Scorsone, Tr. 5225). CB&I's current competitors are not the same companies Mr. Scorsone perceived to be PDM's competition for LNG tanks in 1997, 1998, 1999, and 2000. (Scorsone, Tr. 4850-52).

3.455 Mr. Scorsone knew that CB&I was a competitor to PDM for LNG tanks, but believed foreign companies could, and probably would, enter the market if demand increased. (Scorsone, Tr. 4851). This belief was based on some of the foreign companies involvement with Memphis Gas in 1994. (Scorsone, Tr. 4851).

3.456 Mr. Scorsone's perception about LNG competition changed in 2001, when press releases announced the formal establishment of joint venture companies, involving a number of global LNG builders, to pursue work in the U.S. (Scorsone, Tr. 4851).

3.457 Mr. Scorsone's perception of LNG competition changed between 2000 and early 2002 when: (1) the "market began to increase" as "potential LNG projects were being developed" in the U.S. and North America; and (2) formal announcements were made of the Technigaz/Zachry joint venture, the TKK/ATV joint venture, and in that time period Skanska acquired Whessoe from Kvaerner. (Scorsone, Tr. 4852).

3.458 Additionally, as President of PDM EC, Mr. Scorsone was responsible for submitting board reports to the Board of Directors. (Scorsone, Tr. 4883). There was a competitors section in these board reports, which included PDM EC's competitors Scorsone perceived at the time. (Scorsone, Tr. 4883). The competitors section, however, did not include an exhaustive list of PDM EC's competitors; rather, it only represented a "quick snapshot". (Scorsone, Tr. 4883). Mr. Scorsone's perceptions as to competition in the relevant markets has changed since the time he had responsibility to submit board reports to the PDM board of directors. (Scorsone, Tr. 4884).

3.459 Mr. Scorsone perceives that each of the foreign LNG tank builders are technically capable of constructing and executing an LNG project in the U.S. (Scorsone, Tr. 4873-74) (state of mind). Mr. Scorsone also perceives that each of the foreign LNG tank builders will be able to competitively price LNG tanks against CB&I in the U.S. (Scorsone, Tr. 4874) (state of mind). While competing against foreign companies that have never previously built an LNG tank in the U.S., CB&I will assume that the foreign companies will "have a very good chance of successfully capturing the work". (Scorsone, Tr. 4872).

6. Owners Can Get Competitive Pricing Through Either Sole Source Negotiated Contracts Or A Bidding Process.

3.460 LNG contracts can be awarded either by a competitive bidding process or through a sole-source arrangement. (Scorsone, Tr. 4959). A bidding process can take between 3 and 6 months to complete. (Bryngelson, Tr. 6134-35). Owners also incur an expense while reviewing bids. (Rapp, Tr. 1304-05). Reviewing bids can cost as much as one million dollars (Bryngelson, Tr. 6135), and **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6299).

3.461 Under a sole-source agreement, an owner negotiates a contract exclusively with one contractor. (Scorsone, Tr. 4959). Owners choose to sole-source negotiate contracts even if they have competitive alternatives. (Bryngelson, Tr. 6137-38; Scorsone, Tr. 4959).

3.462 Owners choose to engage in sole-source negotiations with a contractor for efficiency, continuity, and to save resources by not holding a bidding process. (J. Kelly, Tr. 6267). Sole-sourcing "oftentimes result in a shorter overall schedule." (Scorsone, Tr. 4959).

Companies will sole-source projects when their schedules do not allow sufficient time for a bidding process. (Glenn, Tr. 4124).

3.463 Owners will also sole-source projects when they do not have the in-house staff available to manage a bid process. (Glenn, Tr. 4124). Sole-sourcing with one contractor can provide an owner with greater flexibility, less costs, and can save time when a project is under development. (Bryngelson, Tr. 6134; Scorsone, Tr. 4959). This creates "[a] certain degree of comfort" for the owner. (Scorsone, Tr. 4959). An owner may solicit bids because of a company policy or a loose schedule. (Glenn, Tr. 4124).

3.464 The ultimate decision regarding what format the contracting process will take is the owners decision. (Glenn, Tr. 4125; Izzo, Tr. 6480-81).

a. Sole-sourcing was a common practice prior to the acquisition

3.465 Prior to the acquisition, customers commonly sole-source negotiated LNG projects in the U.S. (Scorsone, Tr. 4959-60). The three most recently constructed LNG projects in the U.S. prior to the acquisition were sole-source negotiated. In 1994, PDM negotiated a sole-source contract with Enron for an LNG import terminal in Penuelas, Puerto Rico. (Scorsone, Tr. 4960; Izzo, Tr. 6480). In 1995, CB&I negotiated a sole-source agreement for the Pine Needle peak-shaving plant, consisting of two single-containment LNG tanks, in North Carolina. (Scorsone, Tr. 4960; RX 447). PDM also entered into sole-source negotiations, and was granted a letter of intent, with Williams to construct the Cove Point LNG facility just prior to the acquisition in 2001. (Scorsone, Tr. 4963).

3.466 The Puerto Rico project consisted of a power plant and import regasification facility, including a one million barrel double containment tank. (Izzo, Tr. 6478-79). Enron was comfortable with the open-book process it used with PDM for the Puerto Rico project, and believed that it got a "reasonable, fair price". (Izzo, Tr. 6481).

3.467 While negotiating, PDM did not assume it had no competition for the Puerto Rico project: "my view of our business is that there's always competition at some point and throughout the negotiations on a sole-source basis the customer can at any time change their mind and decide to drop you and pursue the project with some other contractor." (Scorsone, Tr. 4960).

b. [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX]

3.468 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5074; J. Kelly, Tr. 6285). The Lake Charles facility currently has three single-containment LNG tanks; each tank is 95,000 cubic meters in size. (J. Kelly, Tr. 6257-58).

3.469 As part of the Lake Charles expansion, CMS has decided to construct an additional, single containment LNG tank at the Lake Charles facility. (J. Kelly, Tr. 6260). The new tank will be larger than the three original tanks and will add 140,000 cubic meters of storage. (J. Kelly, Tr. 6260). The one tank expansion will cost approximately $35 million. (J. Kelly, Tr. 6260). The expansion will expand the send-out capacity of the facility from 630 million cubic feet a day to 1.2 billion cubic feet per day. (J. Kelly, Tr. 6261). To do this, CMS will build a new unloading dock, additional pumps and vaporizers and a new turbine generator. (J. Kelly, Tr. 6261). The total facility cost is approximately $177 million. (J. Kelly, Tr. 6260).

3.470 CMS entered into an EPC agreement with CB&I for the Lake Charles expansion. (J. Kelly, Tr. 6260). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6288).

3.471 CMS engaged in a sole-source negotiation with CB&I due to efficiency, continuity and resource savings; CMS saved resources by foregoing a formal bid process. (J. Kelly, Tr. 6267). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6283). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (J. Kelly, Tr. 6283).

3.472 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (J. Kelly, Tr. 6283). **XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX** (J. Kelly, Tr. 6266). **[XX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (J. Kelly, Tr. 6284). **XXXXX XXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX XXXXX XXXXX** (J. Kelly, Tr. 6266-67). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6284).

3.473 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6284). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6292). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6295).

3.474 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6293). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6284). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6285, 6293).

> **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6285).

3.475 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** (J. Kelly, Tr. 6290). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (J. Kelly, Tr. 6290).

3.476 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6290-91). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6296). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6291) **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6296).

3.477 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Kelly, Tr. 6284-85). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5075). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6285). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6285).

3.478 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5077). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5075). **[XXXXX XXX]** (Scorsone, Tr. 5075) (state of mind evidence).

3.479 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** (J. Kelly, Tr. 6286). **XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX** (J. Kelly, Tr. 6272). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6285). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (J. Kelly, Tr. 6300).

3.480 **XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX** (J. Kelly, Tr. 6267). **XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX** (J. Kelly, Tr. 6272).

3.481 For example, CMS would not discount a foreign-based LNG tank constructor just because it was a foreign company. (Kelly, Tr. 6261). CMS is not aware that foreign-based tank constructors would have a problem complying with United States codes. (Kelly, Tr. 6263).

3.482 The size of a tank constructor is important because for the Lake Charles expansion contract, CMS requested a parent guarantee; the parent company needed to be financially large enough to support the size of the project. (Kelly, Tr. 6264).

3.483 CMS believes there is enough competition from international vendors to ensure that a single tank supplier will not be able unilaterally raise prices. (Kelly, Tr. 6263-64).

c. El Paso is satisfied with its sole source arrangement with CB&I

3.484 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5077-78). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5077-78).

3.485 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** (Scorsone, Tr. 5078). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5078).

3.486 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** (Scorsone, Tr. 5080). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5079). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5079).

3.487 CB&I is also in sole-source negotiations with El Paso to construct an LNG import facility in the Bahamas, which will serve the U.S. market. (Scorsone, Tr. 4991-92; Glenn, Tr. 4145). However, the EPC contract for the Bahamas job has not yet been awarded to CB&I. (Bryngelson, Tr. 6134).

3.488 El Paso decided to sole-source the Bahamas job to CB&I for two reasons: (1) sole-sourcing saves time during the development process; and (2) CB&I was willing to "wear a lot of the predevelopment costs in the design" of the facility. (Bryngelson, Tr. 6134).

3.489 A bid process could take between three and six months, and could cost El Paso "in the order of a million dollars plus." (Bryngelson, Tr. 6134-35). By sole-sourcing the Bahamas job to CB&I, El Paso was put in a better competitive position over other owners who are considering building a potential LNG facility in the same location. (Bryngelson, Tr. 6134-35).

3.490 El Paso felt "comfortable with deal structure" with CB&I for the Bahamas project. (Bryngelson, Tr. 6136). El Paso does not have any concerns with CB&I's price for the Bahamas job because it "will be done on an open-book basis where we see what costs going into--go into it, plus an agreed margin or fee structure on top of that." (Bryngelson, Tr. 6136).

3.491 CB&I does not believe it can dictate its price terms while in sole source negotiations with El Paso for the Bahamas project. (Scorsone, Tr. 4992). CB&I perceives that El Paso will "select another contractor to negotiate sole source with or bid the project" if it cannot reach an agreement with CB&I on price and terms. (Scorsone, Tr. 4993) (state of mind).

3.492 El Paso is not sole-sourcing the Bahamas project because it believes CB&I is the only company capable of performing the job. (Bryngelson, Tr. 6137-38). Rather, El Paso believes that all of the companies on the Altamira and Rosarito bid list are capable of building the LNG tank for the Bahamas job at a competitive price. (Bryngelson, Tr. 6138).

7. The Bids Submitted For The Memphis, Light, And Gas Project Are Not Remotely Predictive Of Today's Market Conditions.

3.493 In 1994, Memphis Light, Gas & Water ("MLGW"), a public utility located in Tennessee, solicited bids for a field-erected peak-shaving facility. (Hall, Tr. 1771, 1778-80). The Memphis project was a turnkey job involving the construction of a liquefaction unit and an LNG tank. (Price, Tr. 548).

3.494 MLGW sent requests for proposals to CB&I, PDM, Black & Veatch, Lotepro, and Stebbing & Associates. (Hall, Tr. 1802-03). MLGW made affirmative efforts to encourage these companies to bid on the project. (Hall, Tr. 1801-03).

3.495 Several companies bid on the Memphis project including: (1) PDM; (2) CB&I; (3) Lotepro; and (4) Black & Veatch. (Hall, Tr. 1804-05; Price, Tr. 548, 555). CB&I was the successful bidder for this project. (Scorsone, Tr. 5010).

3.496 PDM partnered with Air Products, which supplied the liquefaction unit, to bid the Memphis project in 1994. (Scorsone, Tr. 5009). At that time, PDM had a partnership agreement with Air Products to jointly bid on peak-shaving opportunities. (Davis, Tr. 3188-89). CB&I placed a turnkey bid for the entire project since it had its own liquefaction technology. (Hall, Tr. 1821; Davis, Tr. 3189).

3.497 Lotepro (Linde) bid on the Memphis project using quotations from Noell Whessoe and Titan Constructors and/or Erected Steel Products. (Hall, Tr. 1833-34; Kistenmacher, Tr. 896; Scorsone, Tr. 5013). Noell Whessoe was reluctant to get involved in the Memphis bid, and would not bid the entire LNG tank to Lotepro. (Kistenmacher, Tr. 895, 939-40). Lotepro "had difficulties" getting Noell Whessoe to provide an engineering quote. (Kistenmacher, Tr. 940). Noell Whessoe requested to be reimbursed for the engineering quote because it did not want to take the risk of bidding the project. (Kistenmacher, Tr. 940).

3.498 Lotepro's total facility bid was approximately $40 million. (Kistenmacher, Tr. 939). Lotepro incorporated an LNG tank construction quotation from Titan Constructors in its Memphis bid. (Kistenmacher, Tr. 895-96) Noell Whessoe's engineering package accounted for $1 million of the $15 million tank bid, while Titan Constructor's construction/erection costs accounted for the remaining $14 million. (Kistenmacher, Tr. 900, 938).

3.499 Noell Whessoe and Titan Constructors did not form a partnership for the Memphis project. (Kistenmacher, Tr. 900-01).

3.500 Black & Veatch bid the Memphis project with TKK and Graver Tank. (Price, Tr. 545). IHI, a Japanese LNG tank contractor, was also involved in the bidding process with Black & Veatch; the tank contractor changed during the course of the bidding process. (Hall, Tr. 1804-05). During the bidding process, Black & Veatch wanted to drop out one of the Japanese companies and switch it with another Japanese company. (Hall, Tr. 1804-05).

3.501 In the Black & Veatch/TKK/Graver Tank arrangement, TKK would provide the design/engineering, manage the construction, and specify the materials. (Price, Tr. 552). Graver Tank would perform the construction of the tank. (Price, Tr. 552). Black & Veatch would be responsible for "some of the civil engineering." (Price, Tr. 545).

3.502 Two Black & Veatch documents, RX 888 and CX 1571, provide a price estimate of the LNG tank Black & Veatch submitted for the Memphis project. Although MLGW requested a specified breakout of the price of the LNG tank, both PDM and Lotepro ignored this requirement. (RX 888). +RX 888 indicates that Black & Veatch's tank price, using TKK's design, was approximately $13 million. (RX 888). Of the $13 million tank price, over $10 million of the cost was attributed to materials and labor that would be supplied by Graver for the project. (RX 888). This document further indicates that "the erection costs quoted by Graver Tank are very high." (RX 888). CX 1571, which represents the bid results of the Memphis project, indicates that Black & Veatch's tank price was $16.7 million. (Price, Tr. 646; CX 1571).

3.503 Brian Price of Black & Veatch conceded that a primary reason it was unsuccessful at Memphis was because its liquefaction unit had a high cost. (Price, Tr. 561, 645). Black & Veatch's total bid price for the Memphis project was $47,700,000. (Price, Tr. 648). Black & Veatch submitted a liquefaction bid that was $31 million. (Price, Tr. 648; CX 1571). Black & Veatch's liquefaction bid was $11 million higher than PDM's bid, and $9 million dollars higher than CB&I's bid. (Price, Tr. 648-49). In fact, even if Black & Veatch partnered with PDM to bid on the Memphis project, the Black & Veatch/PDM bid still would have finished fourth in the bidding process. (Price, Tr. 648-49).

3.504 Preload also submitted a tank only bid for the Memphis project. (Price, Tr. 555). Preload proposed to build a steel-lined concrete tank. (Hall, Tr. 1816-17).

3.505 While PDM/Air Products submitted the lowest bid for the Memphis project, its bid did not conform to MLGW's specifications. (Hall, Tr. 1823-24; Davis, Tr. 3196). In fact, PDM's bid had approximately 157 shortcomings that were out of line with MLGW's request for proposal. (Hall, Tr. 1823-24). PDM also failed to address a variety of engineering issues. (Hall, Tr. 1838-40). Because of these shortcomings, PDM/Air

Products' bid was disqualified. (Hall, Tr. 1823-24; Scorsone, Tr. 5012). PDM's bid and CB&I's bid were "not quoted on the same item." (Hall, Tr. 1839-40).

3.506 PDM did not submit a separate break-out price for the LNG tank, apart from the liquefaction unit bid. (Scorsone, Tr. 5010). Because PDM failed to provide a separate price for the LNG tank, Mr. Scorsone testified that it would be difficult to determine what the cost break-out of PDM's tank bid was for the Memphis project. (Scorsone, Tr. 5011-12). CX 1571, a Black & Veatch document that represents the bid results of this project, suggests that PDM's tank price was approximately $13 million. (Price, Tr. 646; CX 1571). It is unclear whether CB&I's tank price for the Memphis project was $10.5 million (RX 888) or $13 million. (CX 1571).

3.507 Noell Whessoe's and TKK's participation in the Memphis bid in 1994 do not bear upon CB&I's current perceptions of their ability to compete in the U.S. (Scorsone, Tr. 5013). First, the Memphis project occurred nine years ago. (Scorsone, Tr. 5014). Second, neither Noell Whessoe nor TKK announced plans to construct LNG facilities in the U.S. in 1994: "They had not planted their flag at that point . . . ." (Scorsone, Tr. 5014).

3.508 At the time of the Memphis bid, Noell Whessoe was not affiliated with Skanska, and did not have offices in the U.S. (Kistenmacher, Tr. 939). Black & Veatch and TKK formed an alliance for the sole purpose of bidding on the Memphis project. (Hall, Tr. 1838). "TKK clearly came in on a one-shot deal in 1994 to work with" Black & Veatch on this project. (Price, Tr. 650).

C. BARRIERS TO ENTRY WILL NOT PREVENT THE NEW FOREIGN ENTRANTS FROM SUCCEEDING IN THE UNITED STATES

3.509 Nigel Carling, formerly of Enron, testified that "Building a tank is like any other construction job, it's all about the logistics of managing the job, managing the quality, managing the safety, managing the regulations and managing the unions." (Carling, Tr. 4526). Building a tank "is a relatively straightforward exercise when compared with other aspects of construction." (Carling, Tr. 4526).

1. U.S. Based Codes And Regulations Are Not A Barrier To Entry Or Success

3.510 The Federal Energy Regulatory Commission ("FERC") has jurisdiction over the construction of LNG tanks in the U.S. (Scorsone, Tr. 4923). FERC has adopted a comprehensive technical standard under which LNG tanks are required to be built called NFPA 59A. (Scorsone, Tr. 4924).

3.511 NFPA 59A codified standards developed by a private organization known as the American Petroleum Institute ("API"), relating to the construction of LNG tanks in the U.S. (Scorsone, Tr. 4923-24). The API 620 standard is one of the guidelines referenced in NFPA 59A that serves as the technical governing standard for LNG tanks built in the U.S. (Bryngelson, Tr. 6146-47).

3.512 NFPA 59A and API 620 are "internationally recognized" standards that list materials and design compliance. (Bryngelson, Tr. 6147; Rano, Tr. 5891). These standards are not difficult to follow. (Bryngelson, Tr. 6147). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] [XXXX XXXXX]** API standards do not address the outer concrete shells of double and full-containment tanks. (Rano, Tr. 5950).

3.513 Owners commonly require LNG tanks built outside the U.S. to adhere to API standards. (Scorsone, Tr. 4924-25). Global customers specify API standards outside the U.S. because they are comfortable with API's requirements, and recognize it as a proven standard. (Scorsone, Tr. 4925). Owners around the world accept the API 620 standard as a quality standard. (Carling, Tr. 4463). The Mexican government has proposed draft regulations requiring that LNG tanks built in Mexico be built according to NFPA 59A. (Bryngelson, Tr. 6162-63).

3.514 El Paso specified the use of NFPA 59A and API 620 standards for both the Altamira, and Rosarito, Mexico LNG jobs. (Bryngelson, Tr. 6147). El Paso retained PTL to determine whether the designs for these projects comply with U.S. codes and regulations. (Bryngelson, Tr. 6157, 6162). El Paso believes that all of the foreign companies on the Altamira and Rosarito pre-qualification lists are able to build field-erected LNG tanks to NFPA 59A and API 620 standards. (Bryngelson, Tr. 6147). El Paso further believes that all of the bidders on its Altamira and Rosarito pre-qualification lists have the necessary experience to build LNG tanks in the U.S. because "it is no more difficult to build it in the United States than it would be in other parts of the world." (Bryngelson, Tr. 6149).

3.515 The LNG tanks constructed by Whessoe/Kvaerner in Dabhol, India for Enron were be built to API 620 standards. (Carling, Tr. 4463; Izzo, Tr. 6488). Enron also specified that the Bahamas project be built to API 620 standards and FERC guidelines. (Carling, Tr. 4479). Shell also required that the LNG tanks built by TKK and CB&I in Bonny Island, Nigeria conform to NFPA and API standards. (Rano, Tr. 5890-91). Tanks built in the Dominican Republic, Spain, Malaysia, Australia, the Middle East, and Africa were built to API 620 standards. (Rano, Tr. 5891). Whessoe built LNG tanks in Trinidad to API 620 standards. (Rapp, Tr. 1332).

3.516 Several foreign LNG companies have built LNG tanks to API 620 standards including: (1) Technigaz - built tanks in Turkey and Qatar; (2) TKK - built tanks in Indonesia, Australia, and Nigeria; (3) Whessoe - built tanks in Dabhol, India and Trinidad; and (4) MHI - built a tank in Ras Laffan. (Scorsone, Tr. 4926-27).

3.517 Prior to the acquisition, PDM teamed with Technigaz to construct LNG tanks in Turkey and Qatar to API 620 standards. (Scorsone, Tr. 4928-29). The LNG tanks for these projects were completed on time, in accordance with the customers' requirements, and have been operating successfully. (Scorsone, Tr. 4930).

3.518 CB&I perceives that foreign LNG tank companies will not have any difficulties complying with NFPA 59A in the U.S. (Scorsone, Tr. 4927) (state of mind evidence).

2. The Need To Make A Filing With FERC Is Not A Barrier To The Entry Or Success Of Foreign Companies

3.519 Owners are required to get regulatory clearance from the Federal Energy Regulatory Commission in order to build an LNG import terminal in the U.S. (Scorsone, Tr. 4930). Owners who build peak-shaving facilities often do not have to gain approval for FERC if the facility does not involve interstate commerce. (Scorsone, Tr. 4930). For example, the Capleville peak-shaving plant in Memphis was not subject to FERC jurisdiction. (Hall, Tr. 1843).

3.520 Owners/customers are responsible for filing applications, and gaining permitting approval from FERC. (Scorsone, Tr. 4930-31; Cutts, Tr. 2500; Eyermann, Tr. 6975).

3.521 FERC applications consist of 13 technical and environmental resource reports, one of which pertains to the LNG storage facility. (Scorsone, Tr. 4931; Eyermann, Tr. 6972). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (Outtrim, Tr. 742). Resource report 13 pertains to the LNG facility. (Eyermann, Tr. 6972).

3.522 CB&I does not have a competitive advantage over foreign tank builders because of its experience regarding FERC issues. (Bryngelson, Tr. 6147). The tank contractor does not file for FERC permitting. (Bryngelson, Tr. 6148). Rather, owners are responsible for filing applications and gaining permitting approval from FERC. (Carling, Tr. 4480; Bryngelson, Tr. 6148; Scorsone, Tr. 4930-31; Cutts, Tr. 2500). The tank contractor will typically only provide technical data to support the filing. (Bryngelson, Tr. 6148).

3.523 Several owners such as El Paso, Williams, CMS and Tractebel have experience working on FERC applications. (Bryngelson, Tr. 6148-49). El Paso has experience filing for FERC permitting for the Elba Island reactivation, and has worked with Williams on FERC matters in connection with the Cove Point reactivation. (Bryngelson, Tr. 6149). Enron also was responsible for applying for FERC permitting for the Puerto Rico project and the Bahamas project. (Carling, Tr. 4480). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] [XXXXX XXXXX XXXX]**

3.524 CB&I assists owners in preparing reports for the FERC application. (Scorsone, Tr. 4931). There are several other companies that assist owners preparing for the FERC filing including: Economy & Environment, Shiner Mosely, Foster & Wheeler, and PTL. (Puckett, Tr. 4551; Eyermann, Tr. 6973). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 742). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 777-78, 782). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 696-97). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Sawchuck, Tr. 6093-94).

3.525 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 741-44). Owners such as Dynegy and Freeport LNG have used foreign tank companies to assist them for LNG projects. (Eyermann, Tr. 6974-75; Scorsone, Tr. 4931-33). Dynegy hired a number of firms to support its FERC filing application including Foster Wheeler. (Puckett, Tr. 4551). Skanska/Whessoe also assisted Dynegy in preparing its FERC application. (Scorsone, Tr. 4931-33). FERC gave preliminary approval to Dynegy to build its proposed LNG facility. (RX-926).

3.526 Similarly, Daewoo is assisting Cheniere in its FERC application for an LNG project in Freeport, Texas. (Scorsone, Tr. 4931-32; Eyermann, Tr. 6976). Daewoo provided tank designs to Freeport LNG for the FERC filing. (Eyermann, Tr. 6976). Freeport LNG was satisfied with the designs, and will be using those in connection with its FERC filing in February 2003. (Eyermann, Tr. 6974-75, 6977).

3.527 El Paso also agrees that each of the foreign tank contractors on its pre-qualification lists for its Altamira and Rosarito LNG projects have the capability to provide technical data in connection with a FERC filing. (Bryngelson, Tr. 6148).

3. Welding Skills Are Not A Barrier To Entry Or Success For Foreign Competitors

3.528 The construction of an LNG tank requires the use of welders who can weld nine percent nickel steel. (Glenn, Tr. 4120). Nine percent nickel steel is a type of steel with a high content of nickel. (Bryngelson, Tr. 6152).

3.529 All welders that work on a field-erected LNG tank for CB&I must be certified in accordance with ASME Section 9 -- the international code that governs certification of welders. (Rano, Tr. 5931-32). In addition, customers and owners often have their own requirements. (Rano, Tr. 5931-32). In many cases, owners require contractors to re-qualify and re-certify a welder for each job. (Rano, Tr. 5931-32).

3.530 CB&I does not have a competitive advantage over foreign companies such as Technigaz, TKK, MHI, and Skanska with regards to welding nine percent nickel steel. (Bryngelson, Tr. 6125, 6152). Moderately skilled welders have the capability to weld nine percent nickel steel (Rano, Tr. 5932-33), and local workers can be trained to weld nine percent nickel steel. (Bryngelson, Tr. 6152).

3.531 CB&I does not have any permanent salaried welders on its payroll. (Glenn, Tr. 4121). The welders CB&I employs are hired on a job by job basis. (Glenn, Tr. 4121).

3.532 The welding methods used for cryogenic tanks are an open art. (Scorsone, Tr. 4899). Nine percent nickel steel welders use the exact same processes and techniques that carbon steel welders use. (Rano, Tr. 5872-73). In fact, welding nickel and carbon steel is easier than welding stainless steel or aluminum. (Rano, Tr. 5873). While the processes and techniques used to weld nine percent nickel steel are the same used for welding other types of metals, the welding procedures may vary. (Rano, Tr. 5947; Rapp, Tr. 1287-88; Scorsone, Tr. 4899).

3.533 CB&I does not always use welders who have already been certified by any authority. (Rano, Tr. 5932-33). CB&I will often train local workers with some aptitude for welding. (Rano, Tr. 5932-33). CB&I's current business strategy in the U.S. is to enter the local community, locate the people who want to work, and train the necessary people. (Rano, Tr. 5935-36).

3.534 Many steel companies that fabricate steel have the capability and the willingness to teach people to weld alloys. (Glenn, Tr. 4121). Gas companies and welding equipment manufacturers will also teach welders. (Glenn, Tr. 4121-22). There are a half dozen places in the Houston area where people could take welding classes and become certified. (Glenn, Tr. 4122).

3.535 Prior experience with welding nine percent nickel steel is not a prerequisite for working on an LNG tank. (Rano, Tr. 6031-32). In connection with an LNG tank CB&I built in Bonny Island, Nigeria, CB&I's four welding supervisors did not have prior experience welding nine percent nickel steel. (Rano, Tr. 6031-32). CB&I's supervisors on LNG projects in Indonesia, Das Island, and Spain also did not have experience in working with nickel steel. (Rano, Tr. 6031-32).

3.536 CB&I does not have plans to staff its domestic LNG projects with welders who have experience nine percent nickel steel. (Rano, Tr. 5936-37). The use of experienced nine percent nickel welders is unnecessary, and can be counterproductive because: (1) the welder's qualifications may have lapsed; (2) the welder would have to be retested; and (3) improperly trained welders may need to be "untrained." (Rano, Tr. 5937).

3.537 Workers with some welding experience can be trained and qualified to weld nine percent nickel steel in 1-2 weeks, while workers with no prior experience welding can be trained in 2-3 weeks. (Rano, Tr. 5947-48).

3.538 With respect to the Bonny Island, Nigeria project, CB&I's newly-trained Nigerian welders achieved a weld acceptance rate of over 99 percent, which is well above industry norms in the U.S. and worldwide. (Rano, Tr. 5918-19).

3.539 Whessoe has knowledge of procedures to weld nine percent nickel as evidenced by the two LNG tanks that they built in Trinidad. (Rapp, Tr. 1312). In 1999, Whessoe and Kvaerner trained local Indian workers to weld nine percent nickel steel for an LNG project they were constructing in Dabhol, India. (Carling, Tr. 4461-62). The Indian labor force passed the welding tests within a week. (Carling, Tr. 4462). The welding failure rate on this project was below 2%, which fell within the acceptable performance range for similar sized jobs. (Carling, Tr. 4459).

3.540 TKK is sharing welding technology with AT&V, and training AT&V's welders on 9% nickel steel. (Cutts, Tr. 2442, 2565). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4721).

4. The Use Of Subcontractors Are Not A Barrier To Entry Or Success For Foreign Competitors

3.541 A turnkey contractor can have complete or partial responsibility for the engineering, procurement, construction, and start-up functions for an LNG facility. (Rapp, Tr. 1323-24). Turnkey contractors for LNG projects typically subcontract out portions of a construction project to other companies. (Bryngelson, Tr. 6143; Rapp, Tr. 1323-24).

3.542 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 719).

3.543 Subcontracting certain portions of an LNG tank job does not necessarily increase the costs of a particular job. (Bryngelson, Tr. 6143). In some cases, subcontracting actually lowers costs because subcontractors with an expertise in a particular area are able to use a standardized approach in performing work. (Bryngelson, Tr. 6143-44). Similarly, subcontracting can reduce the price of a bid because specialized subcontractors may be better at certain job functions than the general contractor, which could improve the overall schedule. (Cutts, Tr. 2472).

3.544 A turnkey contractor can reduce its overhead costs by using a local subcontractor because hiring local labor may be cheaper than retaining higher paid people on staff. (Bryngelson, Tr. 6144).

3.545 One project owner, El Paso, would not be concerned about qualifying a supplier to construct an LNG tank if more than fifty percent of the work would be subcontracted out to another company. (Bryngelson, Tr. 6169).

3.546 CB&I regularly subcontracts certain aspects of construction projects, such as concrete, to other firms. (Rano, Tr. 5923). Concrete work is not one of CB&I's core competencies. (Rano, Tr. 5920-21). CB&I has never self-performed the construction of concrete walls for field-erected LNG tanks, regularly subcontracts out concrete work for the tank's foundation. (Rano, Tr. 5920-23). CB&I has always subcontracted this function to competent concrete companies. (Rano, Tr. 5923). The concrete subcontract on a full-containment LNG tank is significant, and can represent almost 40% of the project's total value. (Rano, Tr. 5923).

5. The Price Of Shipping Raw Materials Is Not A Barrier To Entry Or Success For Foreign Competitors

3.547 CB&I's procurement group procures raw materials, listed on the bill of material, from a wide variety of vendors. (Scorsone, Tr. 4889-90). One essential part of the procurement process for an LNG tanks is the purchase of nine percent nickel steel. (Rano, Tr. 5895-96; Scorsone, Tr. 4890). CB&I generally acquires its nine percent nickel steel from foreign sources, principally Japan and Europe. (Glenn, Tr. 4116; Scorsone, Tr. 4890-91). For example, CB&I procured nine percent nickel steel from Europe for the current Cove Point, Maryland LNG expansion. (Glenn, Tr. 4116-17). CB&I believes there is only one manufacturer of nine percent nickel steel in the United States; CB&I has serious questions about the quality and the timeliness of delivery of this manufacturer. (Glenn, Tr. 4116; Rano, Tr. 5896-97).

3.548 Current customers agree that nine percent nickel steel is internationally sourced from a few steel mills. (Izzo, Tr. 6503). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** **XXXXX XXXXX** **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** **XXXXX XXXXX** **[XXXXX XXXXX XXXXX XXXXX XXXXX]** **[XXXX XXXXX]** AT&V concurs that steel for the Dynegy project must be imported from Japan because it is not available in the United States. (Cutts, Tr. 2474-75). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4717).

3.549 CB&I does not believe it has a competitive advantage over foreign LNG firms for the procurement of steel for jobs in the U.S. because "it's a global, competitive market." (Scorsone, Tr. 4892).

6. The Lack Of Local Labor/Workforce Is Not A Barrier To Entry Or Success For Foreign Competitors

3.550 Workers involved in the field erection of an LNG tank include: carpenters, pipe fitters, welders and painters. (Glenn, Tr. 4119). Field crew workers are free to work for a number of companies (Rano, Tr. 5952-53), and tend to move from job to job depending on where work is available. (Rano, Tr. 5957). Because field crews are very migratory, CB&I hires its general field labor on a job to job basis. (Glenn, Tr. 4119-20; Rano, Tr. 5917-18, 5952-53). Most of the touch-craft field labor and supervision are paid on an hourly basis. (Scorsone, Tr. 4896; Rano, Tr. 5952-53).

3.551 CB&I's salaried personnel on LNG projects include superintendents, construction supervisors, lead workers, and an accountant or time keeper. (Glenn, Tr. 4120; Scorsone, Tr. 4896). However, LNG projects are not unique; project directors with prior LNG experience are not required for LNG projects. (Rapp, Tr. 1306-07).

3.552 CB&I's current strategy in the U.S. is to recruit local labor, living less than 100 miles from the jobsite, for each particular LNG project. (Rano, Tr. 5906-07). CB&I is not planning to bring a large group of CB&I employees to build the next field-erected LNG facility in the U.S. (Rano, Tr. 5917-18, 5952-53). CB&I will use a small, core team of four or five management employees, including a project manager and two or three key people to initiate the project. (Rano, Tr. 5917-18, 5952-53). The majority of CB&I's labor force will be locally recruited. (Rano, Tr. 5917-18, 5952-53). All field crew workers, including those in the core group, are paid on an hourly basis. (Rano, Tr. 5952-53).

3.553 Prior to the Acquisition, PDM used Puerto Rican labor to construct an LNG facility in Puerto Rico. (Scorsone, Tr. 4921).

3.554 Using local labor is cheaper than employing traveling workers because it reduces the need to pay increased expenses associated with room and board for out-of-town workers. (Rano, Tr. 5909-10). CB&I recruits local labor by advertising in the local media, and making contacts with local labor leaders and local government officials. (Rano, Tr. 5908-09).

3.555 In the United States, it is relatively easy to find skilled labor. (Rano, Tr. 5972-73). The average U.S. worker has some high school education and some training in the crafts.

(Rano, Tr. 5972-73). If CB&I cannot find a trained and qualified local labor force, it will train and qualify them to do the work. (Rano, Tr. 5916-17).

3.556 A foreign company building an LNG tank in the United States will not incur additional costs over a U.S. competitor as a result of having to import foreign labor. (Bryngelson, Tr. 6150). Similar to CB&I, a foreign company seeking to build an LNG tank in the United States would hire domestic workers from a local labor pool. (Bryngelson, Tr. 6150; Rano, Tr. 5906-07). Local labor in developed countries such as the U.S. has the necessary knowledge, expertise, and skill sets to build an LNG facility. (Rano, Tr. 5909).

3.557 CB&I, having field crews stationed in the U.S., does not have a competitive advantage over foreign companies in the construction of domestic LNG tanks. (Bryngelson, Tr. 6150). CB&I carries the cost of paying salaried field construction personnel whether or not they are used. (Scorsone, Tr. 4897). In this regard, CB&I may be at a disadvantage to foreign tank builders because CB&I incurs significant constant overhead as opposed to foreign companies who would hire temporary local labor forces on a job-by-job basis. (Bryngelson, Tr. 6150). Using local labor, as opposed to maintaining a permanent staff, can reduce labor costs, and result in lower overall costs for a company. (Bryngelson, Tr. 6150-51).

3.558 A foreign company's ability to work with local labor forces in a variety of different countries is a factor in determining whether that foreign company would be well-situated to work with local labor in the United States. (Rapp, Tr. 1337-38). Whessoe used local labor to build LNG tanks in Dabhol, India. (Carling, Tr. 4461-62). Whessoe was successful working with local labor in India even though the Indian labor force had skills and educational levels inferior to Western workers. (Carling, Tr. 4461-62). Whessoe also has experience working with a local labor force in Trinidad. (Rapp, Tr. 1310).

3.559 TKK has experience constructing field-erected LNG tanks in Nigeria. (Rano, Tr. 5926). The average U.S. worker has some high school education and some training in the crafts. (Rano, Tr. 5972-73). By contrast, the average worker in a place like Nigeria has very little education and infrastructure to support him. (Rano, Tr. 5972-73). These differences make it easier to construct a field-erected LNG tank in the U.S. as opposed to a place like Nigeria. (Rano, Tr. 5972-73).

7. The Lack Of Locally Owned Fabrication Facilities Is Not A Barrier To Entry Or Success For Foreign Competitors

3.560 Steel fabrication for LNG tanks is a simple process, involving squaring, beveling, and rolling of manufactured steel plate. (Glenn, Tr. 4117; Rano, Tr. 5898). Fabrication costs account for less than five percent of the total cost of an LNG tank. (Glenn, Tr. 4119). The fabrication process for LNG tanks is the same as that used for other types of tanks, including water tanks, oil storage tanks, or LPG tanks. (Rano, Tr. 5898).

3.561 The fabrication of nine percent nickel steel is generally done by the steel supplier. (Bryngelson, Tr. 6153). The steel mills in Europe and Japan, which provide nine percent nickel steel, typically provide a fabrication service in which the steel plates are squared, beveled, cut, rolled, and then exported to the job site. (Scorsone, Tr. 4891-92).

3.562 Since nine percent nickel steel is internationally sourced, it can be cheaper to fabricate the steel overseas, rather than importing the steel and fabricating it locally. (Izzo, Tr. 6503). CB&I generally does not use its own fabrication facilities to fabricate nine percent nickel steel because it can purchase nine percent nickel steel pre-fabricated more economically. (Glenn, Tr. 4118).

3.563 The nine percent nickel steel procured for the Cove Point LNG project and Puerto Rico LNG project was fabricated in Europe and shipped to the job site. (Glenn, Tr. 4118; Scorsone, Tr. 4893-94). Although CB&I had the capability and the capacity to fabricate the steel for the Cove Point project at one of its fabrication facilities, it chose to have it fabricated overseas because it was "less expensive." (Scorsone, Tr. 4894-95). Similarly, CB&I purchased pre-fabricated steel from Japan for an LNG tank it built in Salley, South Carolina. (Glenn, Tr. 4118-19). For the Bonny Island, Nigeria LNG project, CB&I also fabricated the steel in Japan, where it was purchased. (Rano, Tr. 5899).

3.564 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4715; *see also* Glenn, Tr. 4117, 4119; Rano, Tr. 5898).

8. CB&I Perceives That Foreign Companies Can Effectively Build LNG Tanks In The U.S.

3.565 Foreign LNG tank builders are able to work in countries where they don't have a permanent physical presence for several reasons: (1) they make an effort to understand the cultures of the countries they operate in; (2) they are sophisticated worldwide procurers of materials; (3) they mobilize an expatriate work force, while using a high degree of local labor and global subcontractors; and (4) they are very good at logistically planning, and project management. (Scorsone, Tr. 4869).

3.566 Luke Scorsone of CB&I perceives that global companies such as British Gas, British Petroleum, Exxon Mobil, and Shell would be comfortable using a foreign LNG tank supplier even if they have never worked in the U.S. before. (Scorsone, Tr. 4869-70) (state of mind). This perception is based on Mr. Scorsone's knowledge that foreign builders have constructed LNG tanks for these international companies in remote, greenfield areas around the world. (Scorsone, Tr. 4870-71) (state of mind). A "greenfield" location is an area that is not industrially developed. (Scorsone, Tr. 4871).

3.567 It is much easier for a tank builder to construct an LNG tank in the U.S. than it is to construct in a remote, greenfield location such as Nigeria where tank builders encounter obstacles relating to: (1) the local political environment; (2) weather; and (3) communication and infrastructure limitations. (Scorsone, Tr. 4871; Rano, Tr. 5973-87).

a. The U.S. political climate is not a barrier to entry in the LNG markets

3.568 The political situation in a particular country can affect the ability of a contractor to construct a field-erected LNG facility. (Rano, Tr. 5973-74). Based on his experience throughout the world, and on the information that he has acquired as Vice President of CB&I, Peter Rano is able to compare the ability to deal with the political situation in the United States with abilities outside of the U.S. (Rano, Tr. 5973-74). In a place like Nigeria, it is difficult to deal with the political situation: laws change regularly; the enforcement of those laws is erratic; and contractors must deal with various civil governments, and various local rulers. (Rano, Tr. 5974-76). These political aspects create an added burden that does not exist in developed countries, such as the United States, where the "laws are stated and understood and applied equally." (Rano, Tr. 5974-76).

b. Weather is not a barrier to entry in the U.S. LNG markets

3.569 The weather in a particular country can affect the ability of a contractor to construct a field-erected LNG facility. (Rano, Tr. 5977-79). Based on his experience throughout the world, and on the information that he has acquired as Vice President of CB&I, Mr. Rano is able to compare the ability to deal with weather in the United States with abilities outside of the U.S. (Rano, Tr. 5977-78). It is far more difficult to work in places such as

Nigeria (rain) and the Middle East (heat) than it is to work in the United States. (Rano, Tr. 5978-79). Weather in the U.S. is much more moderate. (Rano, Tr. 5978-79).

c. Communications and infrastructure are not a barrier to entry in the U.S. LNG markets

3.570 The communications and infrastructure that are available in a particular country can affect the ability of a contractor to construct a field-erected LNG facility. (Rano, Tr. 5980-81). Based on his experience throughout the world, Mr. Rano is able to compare communications and infrastructure available in the U.S. to that which is available elsewhere in the world. (Rano, Tr. 5980-81). In countries such as Nigeria, the available infrastructure is minimal and telephones work less than half of the time. Communication is important for many reasons, such as problem solving and informing management of developments. (Rano, Tr. 5986-87). Because of the developed communication infrastructure in the U.S., it is easier to construct a field-erected LNG tank in the U.S. than in other, less developed parts of the world. (Rano, Tr. 5986-87).

D. RESPONDENTS' WITNESSES HAVE FOUNDATION FOR THEIR VIEWS AND OBSERVATIONS BASED ON CURRENT COMPETITION IN THE LNG MARKETS

1. Nigel Carling Has Foundation To Discuss The LNG Markets

3.571 Nigel Carling served as a vice president for Enron Engineering and Construction from October 1998 through August 2002. (Carling, Tr. 4447-48). During this time, he was responsible for, and involved in, LNG projects in Dabhol, India, Penuelas, Puerto Rico, and the Bahamas. (Carling, Tr. 4448).

3.572 Prior to the acquisition, Mr. Carling witnessed LNG pricing submitted by Whessoe, PDM, and CB&I, for LNG tanks built in Dabhol. (Carling, Tr. 4455). Mr. Carling also personally reviewed bid prices for an LNG tank submitted by CB&I, PDM, and Skanska for an expansion of the Dabhol project. (Carling, Tr. 4465, 4473). Further, Mr. Carling was extensively involved in the Puerto Rico LNG facility that PDM constructed. (Carling, Tr. 4473-74).

3.573 Mr. Carling witnessed competition in the LNG market after the acquisition through his involvement in a LNG project proposed by Enron in the Bahamas. (Carling, Tr. 4477-82). Enron received three competitive bids for the Bahamas job in September/October 2001 by CB&I, Skanska, and Tractebel. (Carling, Tr. 4480-81). Mr. Carling observed that the bids were within a "range of 7 to 10 percent" of each other. (Carling, Tr. 4481).

2. Volker Eyermann Has Foundation To Discuss The LNG Markets

3.574 Volker Eyermann serves as the vice president of engineering for Freeport LNG, a firm that is developing an LNG import terminal in Freeport, Texas. (Eyermann, Tr. 6959-60). Mr. Eyermann first worked for an LNG tank project in 1976 for El Paso, and subsequently worked for several LNG projects in Indonesia, Trinidad, India, and China. (Eyermann, Tr. 6963-67).

3.575 Mr. Eyermann is currently involved in all technical aspects of the Freeport LNG project, including contracting strategies, detailed engineering, and is responsible for coordinating the activities Freeport LNG's consultants. (Eyermann, Tr. 6960, 6968).

3.576 Mr. Eyermann received budgetary pricing from various vendors for the Freeport project. (Eyermann, Tr. 7030). He also had discussions with several LNG tank contractors regarding their capabilities and contracting strategies including: Skanska Whessoe (Eyermann, Tr. 6981-83), Technigaz (Eyermann, Tr. 6994-96), TKK/AT&V (Eyermann, Tr. 6999-7001), Daewoo/S&B (Eyermann, Tr. 7008), and IHI (Eyermann, Tr. 7015-16).

3. Robert Bryngelson Has Foundation To Discuss The LNG Markets

3.577 Robert Bryngelson is the Managing Director of Business Development for El Paso Global LNG, and is responsible for developing LNG infrastructure throughout the world. (Bryngelson, Tr. 6121).

3.578 Mr. Bryngelson is currently managing a team for the development of three LNG terminals in Altamira, Mexico, Baja California, Mexico, and on the Grand Bahama Island. (Bryngelson, Tr. 6161-62). He was involved in identifying a list of qualified LNG tank bidders for these projects. (Bryngelson, Tr. 6124).

3.579 Mr. Bryngelson relied upon input provided by Kellogg Brown & Root, a reputable engineering contractor and consultant, who examined each of the LNG tank bidders and determined that they all have the necessary qualifications and reputations to successfully build LNG tanks for El Paso's projects. (Bryngelson, Tr. 6129-30). Halliburton KBR has access to historical pricing information of LNG tanks. (Scorsone, Tr. 4940). Halliburton KBR is capable of determining whether the price of an LNG tank price submitted is reasonable based on its access to historical tank pricing. (Scorsone, Tr. 4940). Halliburton KBR assists owners in evaluating tank bids. (Scorsone, Tr. 4940-41).

4. Jeffrey Sawchuck Has Foundation To Discuss The LNG Markets

3.580 Jeffrey Sawchuck is employed by British Petroleum, which is developing three potential LNG import terminals in the U.S., costing hundreds of millions of dollars. (Sawchuck, Tr. 6054, 6066). Mr. Sawchuck is responsible for the LNG technology program and LNG network within BP. (Sawchuck, Tr. 6050-51).

3.581 Mr. Sawchuck is entrusted by BP to oversee every LNG project which might be completed in the U.S. He has ultimate responsibility for the evaluation of potential LNG vendors. (Sawchuck Tr. 6050-51).

3.582 Mr. Sawchuck has worked on a number of BP's LNG projects in Trinidad and in Spain, and has evaluated bids from various suppliers including PDM, CB&I, and Whessoe. (Sawchuck, Tr. 6052-53). Mr. Sawchuck was also involved in the Bilbao, Spain LNG project, in which BP selected Technigaz as the LNG tank contractor. (Sawchuck, Tr. 6052-53).

5. William Puckett Has Foundation To Discuss The LNG Markets

3.583 As vice president of technical services, William Puckett is responsible for the execution of Dynegy's major projects including Dynegy's current plan to build the largest LNG regasification facility in the United States. (Puckett, Tr. 4539-40).

3.584 In addition to conducting a six week, world-wide search for an EPC contractor, Mr. Puckett has also performed a pre-qualification process for the LNG tank portion of the project. (Puckett, Tr. 4545, 4552).

3.585 During the pre-qualification process, Dynegy reviewed promotional materials of, conducted meetings with and interviewed four potential tank providers. (Puckett, Tr. 4554). Dynegy received bids from three of the contractors, Skanska/Whessoe, TKK/AT&V and Technigaz/Zachry. (Puckett, Tr. 4556).

3.586 Dynegy hired a consultant, Black & Veatch, to analyze the bids. (Puckett, Tr. 4557). All of the bids were within Dynegy's expected price range. (Puckett, Tr. 4557).

6. Larry Izzo Has Foundation To Discuss The LNG Markets

3.587 Larry Izzo of Calpine is considering constructing an LNG import facility at a cost of approximately $250 million. (Izzo, Tr. 6493). As senior vice president, Mr. Izzo is responsible for the company's current plans to construct an LNG facility in Humboldt Bay, California. (Izzo, Tr. 6474).

3.588 Mr. Izzo is personally familiar with LNG facilities, including peak-shavers, built in the United States. (Izzo, Tr. 6474, 6540). Prior to working at Calpine, Mr. Izzo worked for Enron for 11 years. (Izzo, Tr. 6475). While at Enron, Mr. Izzo was involved in several LNG projects including the Dabhol, India and Penuelas, Puerto Rico LNG projects. (Izzo, Tr. 6476).

3.589 Mr. Izzo has experience with, and knowledge of, international LNG tank suppliers; Mr. Izzo received bids from Technigaz and Whessoe on the Dabhol project. (Izzo, Tr. 6483). Mr. Izzo ultimately selected and worked with Whessoe. (Izzo, Tr. 6483).

7. John Kelly Has Foundation To Discuss The LNG Markets

3.590 John Kelly's involvement in the LNG industry began in 1981 when he became project manager responsible for overseeing engineering for the Lake Charles LNG import facility. (J. Kelly, Tr. 6256-57).

3.591 Mr. Kelly is currently the project manager for the CMS Lake Charles LNG expansion project. (J. Kelly, Tr. 6258). The total expansion will cost approximately $177 million. (J. Kelly, Tr. 6260).

3.592 Mr. Kelly has played a very large role in selecting a tank vendor for the Lake Charles expansion project. (J. Kelly, Tr. 6260). **[XXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX [XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XX]**. (J. Kelly, Tr. 6284, 6290-91, 6296). Other consultants, such as PTL, also have access to historical pricing information. (Scorsone, Tr. 4941.)

8. Jean Pierre Jolly Has Foundation To Discuss The LNG Markets

3.593 Jean Pierre Jolly has been employed by Technigaz for 35 years and is currently in charge of marketing and commercial activities and selling LNG tanks and terminals. (Jolly, Tr. 4434, 4436).

3.594 Mr. Jolly traveled all the way from France, voluntarily, to testify in the instant proceedings. (Jolly, Tr. 4435-36). Mr. Jolly wanted to testify to give some precision, as a courtesy, to his former declarations. (Jolly, Tr. 4436).

3.595 Mr. Jolly's experience working with LNG projects extends back to 1975. (Jolly, Tr. 4437). Mr. Jolly has worked on LNG projects in Korea, Turkey, Qatar, Spain, Egypt and India. (Jolly, Tr. 4437). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4700).

3.596 Aside from his international experience, Jolly has also been involved in the LNG market domestically. **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4684). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Jolly, Tr. 4691).

E. THERE IS NO EVIDENCE OF POST-ACQUISITION PRICE INCREASES

1. Budget Prices v. Fixed, Firm Prices

3.597 A firm, fixed-price contract is an agreement containing a defined scope of work. (Glenn, Tr. 4125). When a firm, final price is prepared, CB&I will develop an actual tank design that is specific to the site location of the project. (Scorsone, Tr. 5003). CB&I will accurately estimate the cost of materials. (Scorsone, Tr. 5003). "A very exhaustive effort is done to firm fixed-price projects that [CB&I] bid." (Scorsone, Tr. 5003). If an owner accepts a contractor's firm fixed price offer, the contractor is responsible for delivering the scope of work for that price. (Glen, Tr. 4125). The contractor bears the burden of any cost overruns. (Glen, Tr. 4125).

3.598 In contrast to a firm, fixed-price bid, a budget estimate is prepared from a general description of the work, using far less documentation and information. (Glenn, Tr. 4126). Budget pricing is "more conservative" and not very precise. (Price, Tr. 604).

3.599 Brian Price from Black & Veatch described budget pricing as follows: "At that point we're not looking for the lowest number we could conceive of. We're really doing a budget and so we wouldn't expect -- it's not yet based on engineering information from the site, for example, so it can't be a very precise price at that point." (Price, Tr. 604). In other words, a budget estimate is a SWAG -- a "scientific wild assed guess." (Hall, Tr. 1865-66). In some cases, a budget price is a "guesstimate". (Carling, Tr. 4472). Budget prices are numbers used by an owner to set up an investment budget. (Kistenmacher, Tr. 925).

3.600 Because years may elapse between the time budget prices are submitted and the time a firm final bid is requested, material costs, labor rates, and other costs are likely to change. (Scorsone, Tr. 5004). Accordingly, budgetary estimates typically have an accuracy of plus or minus 40%. (Hall, Tr. 1863-64).

3.601 A rough order of magnitude ("ROM") price is "more imprecise than a budget price or a budget estimate." (Scorsone, Tr. 4999). A ROM price is "a very rough estimate as to what that type of project could cost for that customer. It's a very high-level first-cut-type price." (Scorsone, Tr. 4999). When CB&I develops a ROM or budget price, it does not: (1) do an actual tank design; (2) call material suppliers for quotes; (3) call subcontractors for quotes; (4) estimate engineering hours for the project; (5) calibrate the hours that will be required for field erection; or (6) consider current fabrication rates. (Scorsone, Tr. 4999-5000).

3.602 CB&I does not know what the construction schedule will be when it submits a ROM or budget estimate. (Scorsone, Tr. 5000). CB&I cannot determine what its equipment and tool costs, or its mobilization and demobilization costs are at the time it submits a budgetary estimate or a ROM price. (Scorsone, Tr. 5000-01).

3.603 CB&I does not know what time of year a project will be constructed in when it submits a budgetary estimate or a ROM price. (Scorsone, Tr. 5001). CB&I's labor productivity is impacted depending on the weather in which it constructs; this impact will affect CB&I's price. (Scorsone, Tr. 5001).

3.604 CB&I often does not know the precise location for a project when it prepares a budgetary estimate or a ROM price. (Scorsone, Tr. 5001). This can impact the price of a project because CB&I cannot account for the movement of materials, accommodations for the field labor, storage, and access to roads. (Scorsone, Tr. 5001).

3.605 CB&I does not know if it will use traveling labor or local labor for a project when it submits a budgetary estimate or ROM pricing. (Scorsone, Tr. 5002).

3.606 CB&I does not send line items of budget estimates to the customer; CB&I only sends a letter with a price to the customer. (Scorsone, Tr. 5002). CB&I's internal budget documentation does not contain a line item for contingency in a budget estimate or ROM pricing. (Scorsone, Tr. 5002-03). When there are unknowns in a given project, CB&I accounts for these contingencies in the margin line calculation of a budget estimate or ROM pricing. (Scorsone, Tr. 5003). Thus, although a margin line item on a budget price may be 30%, this does not mean that CB&I will seek a 30% profit margin if a firm, final bid is submitted. (Scorsone, Tr. 5003).

3.607 Customers do not purchase LNG tanks based on a budget price. (Carling, Tr. 4472-73).

2. Memphis 2002

3.608 In 2002, CB&I submitted a "very coarse budgetary number" to Memphis Light Gas and Water ("MLGW") for a long range planning study that MLGW was conducting. (Scorsone, Tr. 5250). The purpose of preparing the budgetary estimate was to provide a rough idea of LNG tank pricing over the next 10 to 50 years, while assisting MLGW in conducting a long-term planning exercise. (Hall, Tr. 1864-65; Scorsone, Tr. 5251). There was no actual work at stake in connection with this estimate, and was given to MLGW as a matter of courtesy -- to assist MLGW. (Hall, Tr. 1864-65; Scorsone, Tr. 5251). Budgetary estimates of this type typically have an accuracy of plus or minus 40%. (Hall, Tr. 1863-64).

3.609 The budget price CB&I provided "was not a buying offer." (Scorsone, Tr. 5250). Rather, the estimate that CB&I provided to MLGW was a SWAG -- a "scientific wild assed guess." (Hall, Tr. 1865-66). MLGW did not provide CB&I nearly enough information to receive an accurate price on a proposed LNG tank. In fact, Mr. Hall of MLGW agreed that "volumes more" information would be required for this purpose. (Hall, Tr. 1865-66). Because MLGW was asking CB&I to "extrapolate" into the future, and because it did not provide detailed information (such as drawings) he was not expecting a number of more than plus or minus 40% accuracy. (Hall, Tr. 1866-68).

3.610 MLGW expected the SWAG from CB&I to be higher than it otherwise might be for two reasons: First, MLGW assumed that CB&I would assume that MLGW was planning on making its budget based on the numbers. (Hall, Tr. 1869). Second, the number was not provided under competitive conditions -- in other words, no formal bidding process had been entered into at this point. (Hall, Tr. 1869-70). Moreover, MLGW is at least five or six years away from entering into such a process. (Hall, Tr. 1869-70).

3.611 The budgetary price CB&I submitted to MLGW cannot be likened to a firm, fixed-price bid because: (1) CB&I does not know what the price of materials will be in five to seven years; (2) it does not know what engineering rates will be in five to seven years; (3) it does not know what fabrication rates will be in five to seven years; (4) it does not know if material will be imported from Europe in five to seven years; and (5) it does not know what the field engineering rates will be in five to seven years. (Scorsone, Tr. 5251).

3.612 CB&I will not seek a 30% margin if it submits a fixed, firm offer to sell the tank to Memphis. (Scorsone, Tr. 5251). The 30% margin included in the budget estimate contained a number of contingencies. (Scorsone, Tr. 5252).

3.613 When MLGW purchased a field-erected LNG tank in 1994, it did so only after receiving firm, fixed-price bids. (Hall, Tr. 1861-63). Mr. Hall of MLGW spoke with the FTC in September of 2002. (Hall, Tr. 1873). During that conversation, Hall was asked whether he had made any effort to compare the SWAG that he received to the firm, fixed-price bid received by MLGW in 1994. Hall told them that he had made no such comparison. (Hall, Tr. 1873-74). Further, to Hall's recollection, no one from the FTC asked him whether he believed it was proper to compare these numbers. (Hall, Tr. 1874).

3. Alaska Fairbanks

3.614 Alaska Fairbanks is considering building a one million gallon LNG tank or a five million LNG tank in Alaska. (Scorsone, Tr. 5007). In contrast, Dynegy is planning to build three LNG tanks each of which is 42 times the size of the one million gallon tank Alaska Fairbanks is considering. (Scorsone, Tr. 5007) .

3.615 A budget price for a project in Alaska will be "very rough" unless the customer provides very specific information. (Scorsone, Tr. 5006). Fairbanks, Alaska is in a very remote location, and is a very difficult area to work. (Scorsone, Tr. 5004-05). It is also more expensive to work in Alaska than in the lower 48 contingent states. (Scorsone, Tr. 5005). For example, it is difficult to ship construction materials to Alaska. (Scorsone, Tr. 5005). Additionally, due to the climate CB&I will encounter safety issues and productivity problems working in Alaska. (Scorsone, Tr. 5006).

3.616 Therefore, there are more unknowns when CB&I submits budget estimates or ROM prices for projects in Alaska than there are for projects in the United States. (Scorsone, Tr. 5006).

3.617 Within the LNG industry, it is known that the cost per unit stored volume increases as the tank size decreases. (Scorsone, Tr. 5008).

4. Cove Point, Maryland

3.618 Prior to the acquisition, PDM submitted a bid for the construction of a fourth LNG tank at the Cove Point facility. (Scorsone, Tr. 4962-63). Columbia was the owner of the Cove Point facility at the time of the bid. (Scorsone, Tr. 4962-63). The Cove Point facility was subsequently sold to Williams during the bidding process. (Scorsone, Tr. 4963).

a. PDM needed to re-price the tank after the project's scope changed

3.619 The size of the Cove Point tank was 750,000 barrels when PDM first submitted a bid for the project. (Scorsone, Tr. 4963-64). Subsequently, Williams modified the project's specifications, increasing the tank size from 750,000 barrels to 850,000 barrels. (Scorsone, Tr. 4964). As a result, PDM needed to re-design, and re-price, the tank to account for the specification change. (Scorsone, Tr. 4964). The re-design took approximately 200 hours, and the follow-up estimating for the project took between 100 and 200 hours. (Scorsone, Tr. 4964).

3.620 PDM ultimately submitted a new price for the 850,000 barrel tank. (Scorsone, Tr. 4965). At the time PDM submitted a new price, Mr. Scorsone believed that CB&I was competing against PDM for this project. (Scorsone, Tr. 4965). Mr. Scorsone subsequently discovered that CB&I did not submit a new price for the 850,000 barrel tank. (Scorsone, Tr. 4965).

3.621 PDM prepared a "brand-new estimate" for the 850,000 barrel tank because the "tank geometry changed". (Scorsone, Tr. 4966).

3.622 Before tank estimates were submitted to a customer, PDM typically held bid review meetings to analyze "on a line-by-line basis" each of the components, risks, and scope of the bid. (Scorsone, Tr. 4966-67). PDM's department managers, vice presidents, sales personnel, estimators, and project managers attended bid review meetings. (Scorsone, Tr. 4967). Particular line items of an estimate are sometimes increased as a result of discussions at a bid review meeting. (Scorsone, Tr. 4967).

3.623 PDM held a bid review meeting to discuss the re-estimated cost of the 850,000 barrel tank for the Cove Point facility. (Scorsone, Tr. 4967-68). The participants at the meeting included Luke Scorsone, acting as the chair of the meeting; Steve Owens, the vice president of operations for PDM; Jeff Steimer, the sales representative for the project; Mike Wilson, manager of PDM's estimating group; Kurt Schneider, a manager of the engineering group; and Ron Blum, who was the head of sales. (Scorsone, Tr. 4968).

3.624 A consensus was reached at the bid review meeting to set the price that was submitted to Williams. (Scorsone, Tr. 4968-69). The members of the group, however, were not in complete agreement. (Scorsone, Tr. 4969). A complete agreement is "rarely" reached among the participants at a bid review meeting. (Scorsone, Tr. 4969).

3.625 In an attempt to solicit comments from committee participants after the meeting, Scorsone circulated the price (CX 1160) that was reached at the bid review committee to the participants. (Scorsone, Tr. 4969-70).

3.626 CX-1160 contains a series of prices in two columns labeled "as reviewed" and "as submitted". (Scorsone, Tr. 4971). The "as reviewed" column represented the pricing that was submitted at the beginning of the bid review meeting. (Scorsone, Tr. 4971). The "as submitted" column reflects the actual price, on a summary level, that was submitted to Williams for the 850,000 barrel tank. (Scorsone, Tr. 4971).

3.627 On November 6, 2000, Jeff Steimer sent his comments regarding the results of the bid review meeting. (CX-1160; Scorsone, Tr. 4969-70).

3.628 The materials estimate was revised by the bid review meeting. (Scorsone, Tr. 4973). While Mr. Steimer did not agree with the revised material estimate, he did not hold a majority view. (Scorsone, Tr. 4973). Mr. Steimer "was a salesperson on the project and it's not untypical for salespersons to have concerns when prices are increased." (Scorsone, Tr. 4973). Mr. Steimer does not have any experience in estimating the amount of materials for an LNG tank, and does not have the basis of knowledge to hold a valid opinion on this subject. (Scorsone, Tr. 4974).

3.629 Mr. Scorsone also did not agree with Mr. Steimer's comments made in connection with the project's revised engineering estimates. (Scorsone, Tr. 4974). The engineering estimate was increased for this project because PDM's "engineering group was struggling" and Mr. Scorsone was "uncomfortable with the level of engineering effort . . . ." (Scorsone, Tr. 4975).

3.630 Neither Mr. Scorsone nor the bid review group agreed with Mr. Steimer's comments with respect to the revised estimates for fabrication, field erection, subcontracting, and project management. (Scorsone, Tr. 4976-80). Mr. Steimer has never been involved in the engineering, fabrication, field erection, or estimating of an LNG tank. (Scorsone, Tr. 4982). Mr. Scorsone and PDM's management team believed it was "prudent" to increase the fabrication cost. (Scorsone, Tr. 4976). Further, all cost increases were estimated because there was "a very uncertain date for this project . . . ." (Scorsone, Tr. 4978).

3.631 Neither Mr. Scorsone nor the bid review group agreed with Mr. Steimer's comment regarding the final bid submitted to Williams. (Scorsone, Tr. 4981-82). Mr. Scorsone considered the bid price submitted by PDM for the Cove Point expansion "to be reasonably lean considering the scope of this project . . . ." (Scorsone, Tr. 4980). At the time PDM submitted the price for the 850,000 barrel tank to Williams, PDM perceived that it was competing against CB&I for the project. (Scorsone, Tr. 4983).

b. CB&I's profit margin on the Cove Point project is reasonable

3.632 PDM entered into sole-source negotiations with, and was granted a letter of intent by, Williams to construct the expansion of the Cove Point facility. (Scorsone, Tr. 4963). The letter of intent was ultimately transferred into a negotiated contract after PDM was acquired by CB&I in February 2001. (Scorsone, Tr. 4963).

3.633 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5333). **[XXXXX XXXXX XXXXX XXXXX**

XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] (Scorsone, Tr. 5333-34). **[XXXXX XXXXX]** (Scorsone, Tr. 5334).

3.634 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5334). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5335). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5336).

3.635 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5336). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 5336).

c. CX 906 is not an accurate re-estimate of the Cove Point project

3.636 After the acquisition, CB&I performed a re-estimate of the price that PDM submitted for the 850,000 barrel tank at Cove Point for Williams. (Scorsone, Tr. 4983) (CX 906). The purpose of the re-estimate was for CB&I to analyze PDM's Cove Point bid "to make sure that the bid contained the sufficient budgets [for CB&I] to successfully execute the project and return the sold margin on the job." (Scorsone, Tr. 4984).

3.637 **[XXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (Scorsone, Tr. 4985). **[XXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Scorsone, Tr. 4985).

3.638 CB&I's estimator did not have any experience estimating PDM's tank designs. (Scorsone, Tr. 4987). Only A "few hours" of work was put into this re-estimate.

(Scorsone, Tr. 4985). Further, there are various inaccuracies contained in this re-estimate. (Scorsone, Tr. 4985-86).

3.639 First, the estimate did not properly account for the erection method that PDM used for the tank roof. PDM used "a complete[ly] different method" than the one used by CB&I. (Scorsone, Tr. 4986). "PDM and CB&I had totally different designs for the roof structure." (Scorsone, Tr. 4987).

3.640 Second, the estimator did not add in certain subcontractor costs, and failed to add in man-hours associated with the work. (Scorsone, Tr. 4986). If these two errors were taken into account, the difference in the two costs would be approximately $500,000. (Scorsone, Tr. 4986).

3.641 It is not appropriate to use the re-estimate contained in CX-906 as an accurate basis for performing budget estimates when customers are looking for pricing on comparable projects. (Scorsone, Tr. 4987). Because the price of an LNG tank depends on the size, location, the foundation, labor rates, labor efficiencies, material costs, and owner specification, it is difficult to compare prices of LNG tanks that sit in different locations. (Eyermann, Tr. 7071-72).

F. COMPLAINT COUNSEL'S WITNESSES LACK CURRENT KNOWLEDGE ABOUT THE UNITED STATES LNG MARKET

1. Eckhard Blaumueller

3.642 During Mr. Blaumueller's thirty-six year and four month career at People's Gas, Mr. Blaumueller was personally involved with the construction of only one LNG facility in 1973. (Blaumueller, Tr. 325). That one facility, in Champaign, Illinois was built more than 30 years ago before the industry "switched over to stainless steel." (Blaumueller, Tr. 286). The inner tank of the Champaign LNG tank was made of aluminum not 9% nickel steel. (Blaumueller, Tr. 286). CB&I gave People's Gas a good price for the 1973 Champaign facility. (Blaumueller, Tr. 288).

3.643 Mr. Blaumueller has been retired since December 1, 2001. (Blaumueller, Tr. 279). Since his retirement, Mr. Blaumueller has not done any research regarding the LNG tank market in the United States. (Blaumueller, Tr. 329). Mr. Blaumueller has not done any consulting in the LNG industry since his retirement either. (Blaumueller, Tr. 329).

3.644 Mr. Blaumueller lacks knowledge about the current state of competition in the United States LNG market. Mr. Blaumueller is not familiar with any foreign tank suppliers. (Blaumueller, Tr. 321). Mr. Blaumueller has no direct knowledge of whether foreign companies have positioned themselves to now compete and construct LNG products in the United States. (Blaumueller, Tr. 332). Mr. Blaumueller has not seen any experience lists of any foreign tank vendors. (Blaumueller, Tr. 315). Mr. Blaumueller never had a reason to study foreign suppliers; he does not claim to be an expert about foreign vendors. (Blaumueller, Tr. 309). In fact, Mr. Blaumueller does not even have direct knowledge about whether Technigaz makes LNG tanks. (Blaumueller, Tr. 330).

3.645 Mr. Blaumueller lacks knowledge about current project in the United States LNG market. Mr. Blaumueller has not read about Yankee Gas' peak-shaving project in Connecticut. (Blaumueller, Tr. 332). Mr. Blaumueller has no knowledge of Williams Energy's, El Paso's, Cheniere Energy's, Calpine's, BP's, CMS's, or the former Enron's view of foreign tank constructors. (Blaumueller, Tr. 334-35).

3.646 The Joliet methane facility is not an LNG facility. The term "methane" is not used interchangeably with the term "LNG". (Kistenmacher, Tr. 889). The source of the gas to be put in the Joliet methane facility would be local oil refineries. (Blaumueller, Tr. 328).

The refinery gas was created as a by-product from making gasoline and other products. (Blaumueller, Tr. 328). The source of the refinery gas for the Joliet facility is different from the direct natural gas, from the Gulf, that would be pumped directly to the Champaign facility. (Blaumueller, Tr. 328). Thus, the Joliet facility was based on refinery gas, not natural gas. (Blaumueller, Tr. 327). Methane derived from cracking petroleum is not a natural gas. (Blaumueller, Tr. 282).

3.647 The physical composition of the methane gas to be stored in the Joliet methane facility is "very similar", but not identical, to LNG. (Blaumueller, Tr. 282). In the Joliet facility, the methane portion of the refinery gas would be stored "in the equivalent of LNG tanks". (Blaumueller, Tr. 281).

3.648 The pricing Mr. Blaumueller received from CB&I and PDM, in 1998 or 1999, were only preliminary estimates, not firm price quotes. (Blaumueller, Tr. 328-29).

3.649 Mr. Blaumueller believes it will take a foreign company "decades" to learn how to complete a successful regulatory filing. (Blaumueller, Tr. 311-12).

2. Clay Hall

3.650 Clay Hall is an engineer employed by Memphis Light, Water & Gas ("MLGW"). (Hall, Tr. 1771-73). MLGW is not a current participant in the market for field-erected LNG tanks. (Hall, Tr. 1832-33). MLGW has not received firm bids on an LNG tank since 1994, and does not plan to procure an LNG tank until at least 2006. (Hall, Tr. 1832-33).

3.651 PDM has never done work for MLGW, and since 1994, Mr. Hall does not recall PDM ever contacting him regarding potential LNG work. (Hall, Tr. 1840-41).

3.652 Mr. Hall has limited knowledge regarding the LNG market; he is not familiar with projects relating to import terminals. (Hall, Tr. 1854-56). While Mr. Hall is generally aware of the Yankee Gas peak-shaving project, he is not familiar with any of the bidders that have been working on that project. (Hall, Tr. 1856-57).

3.653 Since 1994, neither Mr. Hall or MLGW has conducted any searches for builders of field-erected LNG tanks or facilities. (Hall, Tr. 1843-45). Mr. Hall does not monitor the LNG markets, and is not familiar with the current state of competition in these markets today. (Hall, Tr. 1857). Mr. Hall is not familiar with pricing submitted by any foreign company for an LNG facility in the past five years. (Hall, Tr. 1857).

3.654 In 1994-95, Mr. Hall was familiar with Whessoe; he knew that Whessoe had significant international experience in building field-erected LNG tanks, and that it had the capability to engineer the Capleville tank. (Hall, Tr. 1805:1-15, 1845:2-17). Mr. Hall, however, is not familiar with the fact that Skanska recently purchased Whessoe, nor is he familiar with any of Skanska/Whessoe's activities in the U.S. LNG market in the past couple of years, their current LNG abilities, or its cost structure in building field-erected LNG tanks in the U.S. (Hall, Tr. 1845:18-1846:17).

3.655 Mr. Hall admitted that in order to determine whether Skanska/Whessoe was a viable competitor to CB&I in the U.S., he would need a lot of additional information, including resumes of key employees, experience lists, and references. (Hall, Tr. 1846-48). Hall has not seen any of this information. (Hall, Tr. 1846:18-1848:5). When MLGW solicits bids for field-erected LNG tanks in the future, Mr. Hall would consider soliciting a bid from Skanska/Whessoe. (Hall, Tr. 1848-49).

3.656 In 1994-95, Mr. Hall was familiar with TKK, and allowed TKK to bid on the Capleville facility because he believed it was capable of building field-erected LNG tanks at that time. (Hall, Tr. 1805, 1849-50). Moreover, he believed they were a viable competitor.

(Hall, Tr. 1805, 1849-50). Mr. Hall is generally familiar with AT&V, but does not know whether a combination of TKK/AT&V would be able to build LNG tanks in the U.S. (Hall, Tr. 1850-53).

3.657 In order for Mr. Hall to determine whether TKK/AT&V was a viable competitor to CB&I in the U.S., Hall would need a lot of additional information, including resumes of key employees, experience lists, and references. (Hall, Tr. 1853-54). Mr. Hall has not seen any of this information. (Hall, Tr. 1853-54). When MLGW solicits bids for field-erected LNG tanks in the future, Mr. Hall would consider soliciting a bid from TKK/AT&V. (Hall, Tr. 1854). He does not know one way or the other whether that entity would be qualified to build such a tank from MLGW. (Hall, Tr. 1854).

3. Brian Price

3.658 Mr. Price, a Black & Veatch employee, works with salesmen in presenting Black & Veatch's credentials and capabilities to clients. (Price, Tr. 510-11).

3.659 Black & Veatch is a head-to-head competitor of CB&I on peak-shaving facilities. (Price, Tr. 641). Black & Veatch owns proprietary liquefaction technology called PRICO that it sells to customers for use at peak-shaving plants. (Price, Tr. 520). CB&I's liquefaction process competes with a liquefaction process that Mr. Price personally patented. (Price, Tr. 642).

3.660 Black & Veatch has a team that is analyzing the firm fixed prices that have been bid for the Dynegy tanks. (Price, Tr. 609). Mr. Price has not seen these bids. (Price, Tr. 610). Price has not seen the details of the budget pricing Black & Veatch received for the Dynegy project. (Price, Tr. 629).

3.661 Black & Veatch did not request budget pricing from CB&I for the Dynegy project because it was working with Skanska, who owns Whessoe. (Price, Tr. 603-04). Thus, "it was natural" for Black & Veatch to request a budget price from Whessoe for the Dynegy project. (Price, Tr. 603-04).

3.662 Black & Veatch, in documents submitted to U.S. LNG customers, touted the "alliance" between Black & Veatch and Skanska/Whessoe as a positive aspect of its corporate LNG strategy. (RX 935) (state of mind). Mr. Price admitted that Skanska has a presence in the U.S., and has offices in Houston in the same building as Black & Veatch. (Price, Tr. 659-60). Black & Veatch intends to discuss plans to submit a bid to Yankee Gas for a peak-shaving facility. (Price, Tr. 651-53). When asked who the potential tank bidders are for the Yankee Gas project, Mr. Price indicated that he communicated to Yankee Gas Black & Veatch's experience on the Dynegy project, which also involved Skanska Whessoe. (Price, Tr. 603, 653-54).

3.663 Other than sending CB&I an inquiry package for the tanks at Dynegy, Black & Veatch did not make any efforts to encourage CB&I to bid on the tanks. (Price, Tr. 619). Mr. Price is not aware of any efforts made by Dynegy to encourage CB&I to bid on the tanks. (Price, Tr. 619). Mr. Price did not know whether CB&I ever requested to make a bid on the Dynegy project. (Price, Tr. 661).

3.664 Mr. Price has no knowledge on whether TKK/AT&V are finalists for the Dynegy project. (Price, Tr. 650-51). Mr. Price does not know if Dynegy was happy with the bids it received from foreign suppliers for the LNG tanks. (Price, Tr. 641, 667).

3.665 Since at least 1990, Black & Veatch has not procured an LNG tank. (Price, Tr. 643). Black & Veatch has never procured LNG tanks overseas. (Price, Tr. 546). Since at least

1990, Black & Veatch has not received any firm, fixed-price bids for an LNG tank from either PDM or CB&I. (Price, Tr. 644).

4. Robert Davis

3.666 Robert Davis is the director of HYCO services for Air Products. (Davis, Tr. 3174). Mr. Davis does not have any current responsibility relating to LNG projects. (Davis, Tr. 3175). Mr. Davis does not have any firsthand experience with the construction of LNG tanks since he worked for CB&I in 1974. (Davis, Tr. 3177-79).

3.667 Air Products, Davis' employer, competed against CB&I for the sale of liquefaction units. (Davis, Tr. 3188). In 1994, Mr. Davis was responsible for selling a liquefaction unit to Memphis Light, Water and Gas in competition with CB&I. (Davis, Tr. 3175-76, 3195). While he claims that foreign tank builders submitted bids for the Memphis project that were higher than PDM's bid, Mr. Davis does not know how much higher the foreign LNG tank contractors' prices were compared to PDM's bid. (Davis, Tr. 3196). Moreover, Mr. Davis does not remember which domestic or foreign companies bid against Air Products for the Memphis project. (Davis, Tr. 3195).

3.668 Mr. Davis' sole basis for his concern over the acquisition comes from the Memphis project in 1994. (Davis, Tr. 3204). Mr. Davis has not personally kept up with companies that are constructing LNG tanks in the U.S. or worldwide. (Davis, Tr. 3204). Mr. Davis does not have specific knowledge of the LNG import terminal market, and does not focus on that area. (Davis, Tr. 3187-88).

5. Hans Kistenmacher

3.669 Mr. Kistenmacher admits he is only "somewhat" familiar with LNG tanks. (Kistenmacher, Tr. 879). Mr. Kistenmacher has been involved with "very, very few LNG tanks", and his experience is limited to the bidding phase of those tanks. (Kistenmacher, Tr. 888). Mr. Kistenmacher believes CB&I is the only company offering LNG tanks in the United States today. (Kistenmacher, Tr. 902).

3.670 Mr. Kistenmacher's company, Linde BOC does not compete in LNG import terminals. (Kistenmacher, Tr. 883). Therefore, Mr. Kistenmacher does not directly follow the LNG import terminal market. (Kistenmacher, Tr. 883).

3.671 Although Linde BOC competes for peak-shaving plants in the U.S., it is a very sporadic business. (Kistenmacher, Tr. 884). In fact, Linde BOC has not bid on a peak-shaving plant in the United States since the acquisition. (Kistenmacher, Tr. 918). Kistenmacher is not aware of the Pine Needle peak-shaving facility. (Kistenmacher, Tr. 910-11). Even before the acquisition, Linde BOC only competed for and bid on one LNG peak-shaving facility, that included storage tanks, since 1994: Memphis Gas. (Kistenmacher, Tr. 890). Mr. Kistenmacher is "somewhat" familiar with the construction of LNG peak-shaving plants; much less familiar than with LIN/LOX tanks. (Kistenmacher, Tr. 887-88).

3.672 Mr. Kistenmacher is not familiar with current competitors in the United States LNG market. Mr. Kistenmacher is not familiar with the TKK/AT&V joint venture to enter into LNG projects in the United States. (Kistenmacher, Tr. 937). Besides information gained during his deposition, Mr. Kistenmacher has no knowledge of the Technigaz/Zachry venture formed in the United States to pursue LNG projects. (Kistenmacher, Tr. 941). Besides information gained during his deposition, Mr. Kistenmacher has no knowledge of the Daewoo/S&B Engineering venture formed in the United States to pursue LNG projects. (Kistenmacher, Tr. 941). Mr. Kistenmacher does not know of any investments Skanska made to pursue LNG work in the United States. (Kistenmacher, Tr. 942).

3.673 Linde BOC competes against CB&I for the sale of liquefaction units in the United States. (Kistenmacher, Tr. 884, 935). Linde BOC competed against CB&I for a peak-shaving project for Memphis Gas and a liquefaction project, that did not include an LNG tank, in Baltimore. (Kistenmacher, Tr. 886, 934).

3.674 Since 1994, Linde has never bid with CB&I for an LNG project. (Kistenmacher, Tr. 935). From January 1, 1994 to February 7, 2001, Linde never bid with PDM on an LNG project. (Kistenmacher, Tr. 936).

3.675 Linde was upset it lost the Memphis bid. (Kistenmacher, Tr. 899-900). Linde thought it had a fantastic process and should have won the bid "hands down". (Kistenmacher, Tr. 900).

3.676 For the Memphis Gas bid, Whessoe would not bid the entire LNG tank to Lotepro. (Kistenmacher, Tr. 895). Whessoe was reluctant to even get involved in the Memphis bid. (Kistenmacher, Tr. 939-40). However, Whessoe was willing to give Lotepro an engineering package for the tank that included all the detailed know-how about how to build the tank. (Kistenmacher, Tr. 895).

3.677 Lotepro "had difficulties" getting Whessoe to provide the engineering quote. (Kistenmacher, Tr. 940). Whessoe requested to be paid for its quote; Whessoe wanted to be reimbursed because it did not want to take the risk of bidding. (Kistenmacher, Tr. 940).

3.678 Despite Whessoe's offer, Lotepro still needed to search in the United States for a construction company to build the LNG tank. (Kistenmacher, Tr. 895-96). Lotepro ultimately incorporated an LNG tank construction quotation from Titan Constructors. (Kistenmacher, Tr. 896). Whessoe and Titan did not form a partnership. (Kistenmacher, Tr. 901). Mr. Kistenmacher admits that the LNG tank price was high due to "the inexperience of those partners working together." (Kistenmacher, Tr. 901). "Whessoe didn't have a lot of experience in the U.S. and Titan didn't have a lot of experience in building cryogenic LNG tanks, and so they put their contingency in whatever on top of whichever and we ended up at this enormously large price." (Kistenmacher, Tr. 901).

3.679 Whessoe's engineering package accounted for $1 million of the $15 million tank price.; Titan Constructors construction/erection costs accounted for the remaining $14 million (Kistenmacher, Tr. 900, 938). Lotepro's total facility bid was $40 million. (Kistenmacher, Tr. 939).

3.680 Despite the fact that CB&I's tank bid was almost $5 million less than the Whessoe/Titan tank quotation, Lotepro still believed it won the Memphis project. (Kistenmacher, Tr. 899). Lotepro approached Memphis to discuss its evaluation method; Memphis used a different net present value calculation for the power consumption part of the bid. (Kistenmacher, Tr. 899).

3.681 Whessoe had no arrangement with Skanska at the time it submitted a quote to Lotepro for the engineering portion of the Memphis tank. (Kistenmacher, Tr. 939). Whessoe had no office in the United States at the time of the Memphis bid. (Kistenmacher, Tr. 939).

3.682 Mr. Kistenmacher believes TKK could probably, based on its experience, supply a good engineering package; Kistenmacher has concerns about TKK's ability to fabricate and build an LNG tank in the U.S. (Tr. 906:11-16.).

6. Patricia Outtrim

3.683 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 680). **[XXXXX XXXXX XXXXX XXXXX XXXXX**

XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] (Outtrim, Tr. 681-82, 684).

3.684 **[XXXXX XXXXX]** (Outtrim, Tr. 684, 686).

3.685 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 696-97). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 685). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 731-32).

3.686 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 688). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 688). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** (Outtrim, Tr. 787). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 736).

3.687 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 687). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (Outtrim, Tr. 688-89). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 734). **[XXXXX XXXXX XXXXX XXXXX XXXXX**

XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] (Outtrim, Tr. 738).

3.688 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 733). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 734).

3.689 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** (Outtrim, Tr. 691). **[XXXXX XXXXX]** (Outtrim, Tr. 690) (in camera). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 693).

3.690 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 737). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 787). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 787).

3.691 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 778). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 812-13).

3.692 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 702).

[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX] (Outtrim, Tr. 744). **[XXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 744). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 744). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 763).

3.693 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 746). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 746).

3.694 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 749). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 749).

3.695 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 753).

3.696 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** (Outtrim, Tr. 795). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXX]** (Outtrim, Tr. 796-97). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Outtrim, Tr. 804-05).

IV LPG FINDINGS OF FACT

A. LPG BACKGROUND

1. LPG Tanks

4.1 The term LPG tanks refers to field erected tanks that are used to store liquefied petroleum gases at low temperatures of approximately minus 50 degrees Fahrenheit. (RX 79 at 3, ¶ 14; N. Kelley, Tr. 7096-97).

4.2 LPG means liquefied petroleum gas, which is an umbrella term of butanes and propanes. (Cutts, Tr. 2436). The purpose of an LPG terminal is to store liquid petroleum gases, such as propanes, butanes, and possibly some others, that would have been stripped out of natural gas and may be sold as independent gases. (G. Glenn, Tr. 4072-73). Anything that exists naturally as a gas can be liquefied. For example, liquefied propylene, propane, butene, butane, and isobutane can be liquefied. (N. Kelley, Tr. 7080-81).

4.3 Field erected tanks mean a tank that is too large to construct in the shop. (N. Kelley, Tr. 7080).

4.4 LPG tanks are also pressure vessels. (N. Kelley, Tr. 7080). API 650 tanks are field erected tanks with no more than 2 pounds of pressure. API 620 tanks, typical LPG tanks, are refrigerated tanks or more than 2 pounds of pressure. (N. Kelley, Tr. 7103).

4.5 LPG tanks store material brought in by ship and held before being sold from the facilities by truck. (Warren, Tr. 2280-81).

4.6 Typical owners of LPG terminals are owners of pipelines intended for distribution of propane, natural gas, or trucked to other outlets. (G. Glenn, Tr. 4073-74).

4.7 The refrigeration systems on the tanks are readjusted depending on the customer and chemicals to be stored within the tank. At any time, the tank may or may not be operating at its full refrigeration capacity. (N. Kelley, Tr. 7100-01).

2. The Manufacture Of LPG Tanks

4.8 Typically, LPG tanks are manufactured the same way as LNG tanks, but for storage at a lower temperature. (G. Glenn, Tr. 4073).

4.9 LPG tank construction usually takes 8 to 10 weeks of fabrication in the shop -- from buying steel, fabricating, and preparing to send out the pieces. Then, the tank construction process usually lasts 16 weeks in the field. Finally, the remaining site work and piping systems occur after the tank is completed. (N. Kelley, Tr. 7109-10).

B. COMPETITION IN THE LPG MARKET

1. LPG Market Overview

a. Demand for lpg tanks

4.10 Competition in the LPG market is extraordinarily thin, and the market is almost nonexistent. (Harris, Tr. 7281-82).

4.11 Since 1992, only 8 LPG tanks have been constructed in the United States. (Harris, Tr. 7284-85; RX 947).

4.12 From 1993 to the date of the acquisition, CB&I did not build an LPG tank. (Harris, Tr. 7286; RX 947).

4.13 PDM constructed 3 of the 4 LPG tanks in the United States between 1994 and 2001. The other LPG tank was constructed by American Tank & Vessel ("AT&V"). (Harris, Tr. 7285; RX 947).

b. Insignificance of the lpg market

4.14 Since the PDM acquisition, CB&I has only been involved in one LPG project in the United States. That project was valued at $1-3 million. (G. Glenn, Tr. 4088-89, 4156). Gerald Glenn, CB&I's CEO, ("Glenn") is not actively involved in the decision making process for LPG tanks. (G. Glenn, Tr. 4156).

4.15 Historically, the price of an LPG project is less than $5 million. Current LPG sales reflect even smaller values. The last two LPG projects, constructed by AT&V and CB&I, were $300,000 and $1.2-1.3 million respectively. (Harris, Tr. 7281; RX 947).

2. Entry Has Occurred And Is Occurring In The LPG Market

a. Entry in the U.S. market -- AT&V

i. AT&V experience building lpg tanks and related products

4.16 William T. Cutts ("Cutts") is Vice President and Regional Director of AT&V. (Cutts, Tr. 2320). Mr. Cutts graduated from the University of South Alabama in finance and economics. (Cutts, Tr. 2321).

4.17 AT&V is technically capable of building, and has built, field erected LPG tanks. (N. Kelley, Tr. 7088-89, 7130; Kamrath, Tr. 2261). AT&V has already developed the skills, procedures, and obtained the necessary equipment. (Cutts, Tr. 2495).

4.18 AT&V is a key player successfully competing in the LPG market for a number of years. Not only has AT&V constructed an LPG tank for Intercontinental Terminals Co. ("ITC") in 2000 (Cutts, Tr. 2334), but AT&V has also built the following LPG tanks: an LPG tank in 1996 for CMS Nomeco in Equatorial Guinea; and an LPG storage tank in 1994 for Project Services in Port of Houston, Texas. (CX 396 at 2; CX 397 at 1).

4.19 Moreover, AT&V has built other LPG products, such as 3 LPG sphere projects in 2001 alone. AT&V built 3 LPG spheres for Westlake in Sulphur, LA in June 2001 (CX 396 at 1); 2 LPG ASME pressure spheres for Black & Veatch in Reno, NV in January 2001 (CX 397 at 1); and 8 spheres for International Matex in Avondale, LA in January 2001 (CX 397 at 4). Further, AT&V has built numerous API 620 tanks and ASME spheres. (CX 396; CX 397).

4.20 Mr. Cutts himself has been a project manager for three different structures that hold propane or butane. (Cutts, Tr. 2436-37).

4.21 LPG customers commonly evaluate the substitution alternative of refrigerated storage (LPG tanks) versus pressure storage (pressure spheres). (Scorsone, Tr. 5170-71). As such, AT&V has built both refrigerated and pressurized spheres and tanks or a combination of both. (Cutts, Tr. at 2495-96; CX 396; CX 397).

4.22 LPG customers have expressed satisfaction to AT&V with the work that AT&V has performed, and AT&V intends to pursue LPG projects in the future. (Cutts, Tr. 2455-56; N. Kelley, Tr. 7130-31).

ii. ITC -- Deer Park, TX LPG project

(a) ITC background

4.23 ITC is in the bulk liquid storage business. ITC acts as a distributor for customers, receiving product by ship, barge, tank car, truck, and pipeline. (N. Kelley, Tr. 7076-77). ITC handles all kinds of chemicals, mainly petrochemicals, benzene, xylene, toluene, butadiene, butene, and propylene. (N. Kelley, Tr. 7077). ITC specializes in the storage and handling of chemicals. It has docking capabilities and the ability to transport such products. (N. Kelley, Tr. 7095-96).

4.24 Norman Kelley ("Kelley") is currently Vice-President of Engineering at ITC. He is responsible for capital budgets and engineering as well as the construction of new facilities and systems. (N. Kelley, Tr. 7077). Mr. Kelley has been VP of Engineering for 7-8 years. (N. Kelley, Tr. 7078). Mr. Kelley managed jobs and budgets and took over all engineering functions. (N. Kelley, Tr. 7078, 7079).

(b) ITC Deer Park facility

4.25 The ITC facility contains the following: seven similar semi-refrigerated spheres (three 35,000 barrel spheres and four 25,000 barrel spheres) and one 50,000 barrel low-pressure tank for butadiene, two full pressure spheres for isobutane, and three fully refrigerated propylene tanks. All of these structures were built by CB&I, with the exception of the 50,000 barrel low-pressure tank for butadiene that was built by PDM. (N. Kelley, Tr. 7088, 7097, 7099-7100, 7101, 7102).

4.26 In the past 4-5 years, ITC has purchased one LPG tank (2000) at its facility in Deer Park, Texas. This LPG tank contains butene-1, which is similar to butane or isobutane. Currently, the tank is being stored at 20 degrees. (N. Kelley, Tr. 7081-82).

4.27 ITC has 178 storage tanks. All but 10 are ambient temperature tanks. ITC has 24 bullets, or pressure vessels. With the exception of the shop-erected bullets, ITC's storage tanks are all field erected. (N. Kelley, Tr. 7093-94). ITC's bullets store propylene at ambient temperatures under pressure or refrigeration. Mr. Kelley is responsible for the procurement of ITC's pressure vessels as well. (N. Kelley, Tr. 7094).

(c) The bidding and qualification process

4.28 The Deer Park project in 2000 was part of a terminal facility. The rest of the facility was successfully subcontracted by ITC. (N. Kelley, Tr. 7092-93).

4.29 ITC always subcontracts all the work themselves. ITC does not bid projects turnkey. ITC provides a foundation, then the contractor builds the tank, ITC tests the tanks, and finally completes all the piping themselves. (N. Kelley, Tr. 7086-87).

4.30 Serving as the general contractor is cheaper by eliminating subcontractors' mark ups. (N. Kelley, Tr. 7087). By executing a project turnkey itself, LPG customers save 10-15 percent of the total cost of the project. (N. Kelley, Tr. 7116-17).

4.31 ITC does not engage in a formal prequalification process. ITC knows from experience which contractors can compete based on past experience and reputation in the industry. (N. Kelley, Tr. 7084-85).

4.32 Without experience, complete confidence in the contractor can overcome any hurdle. ITC has complete confidence in AT&V and its engineers. (N. Kelley, Tr. 7104-05). AT&V used experienced field crews and welders, and ITC had complete confidence in AT&V's contact person. (N. Kelley, Tr. 7106-07).

4.33 As part of the purchasing process, ITC bid the LPG tank project. ITC sent out a specification containing the scope of work, specifications, and boilerplate terms. ITC utilizes a minimum of three bidders, and depending on the scope of the project and classification of work, may send out 4-5 bid packages. The contractors review the specifications and send back bid proposals. ITC then evaluates these bids to determine if they comply with the project specifications and whether the contractor is capable of completing the job as desired. (N. Kelley, Tr. 7082-83).

4.34 On the Deer Park LPG project, CB&I, AT&V, and Matrix bid on the project. PDM was not a bidder. These companies were selected to bid on the project because they are "good reputable contractors that have the capability of building the tank." (N. Kelley, Tr. 7083-84).

4.35 AT&V won the ITC Deer Park LPG project. (N. Kelley, Tr. 7086).

(d) Customer reaction to AT&V performance and price

4.36 AT&V has built several tanks for ITC for about 8-10 years: some regular stainless steel tanks and some regular API 650 tanks. On those projects, AT&V performed well. These previously built tanks by AT&V for ITC are similar to the LPG tank in 2000. (N. Kelley, Tr. 7085-86, 7107-08).

4.37 Despite CB&I's constructing all but one existing structure at the Deer Park facility, ITC selected AT&V to construct the new LPG tank because it felt confident that AT&V could do the job and AT&V's price was the best price. (N. Kelley, Tr. 7088).

4.38 ITC was satisfied with AT&V's price. AT&V completed construction of the field erected LPG tank in Deer Park. AT&V properly designed the tank and completed it on time, according to the customer's plans, and without any major defects or problems. (N. Kelley, Tr. 7088-89).

4.39 In hiring AT&V, ITC looked at AT&V's capabilities and resources to complete the project, reviewed its price, and examined its ability to deliver the project on time. (N. Kelley, Tr. 7111-12). AT&V had built stainless steel tanks for ITC in the past and did an excellent job. (N. Kelley, Tr. 7112).

4.40 AT&V was able to meet the initial construction schedule in terms of fabricating, purchasing, and constructing the tank. (N. Kelley, Tr. 7111). ITC knew it wanted a safe field erected tank, built on time, by people with experience, from a supplier able to pay its bills, on solid financial ground, and with a good reputation. (N. Kelley, Tr. 7127-30). AT&V also has a good safety record and its insurance rating was good. (N. Kelley, Tr. 7133). AT&V met and satisfied all of these requirements. (N. Kelley, Tr. 7127-30).

4.41 Potential buyers of LPG tanks have since contacted ITC regarding AT&V's experience and qualifications. (N. Kelley, Tr. 7118).

4.42 AT&V has an excellent reputation and ITC is satisfied with AT&V's performance. (N. Kelley, Tr. 7130-31).

b. Entry in the U.S. market -- Matrix

4.43 Matrix is capable of building LPG tanks, and intends to pursue LPG opportunities in the future. (Newmeister, Tr. 2180-82).

4.44 Matrix has bid API 650 tanks for ITC. (N. Kelley, Tr. 7085). Matrix is "a large contractor, and quite capable." (N. Kelley, Tr. 7085).

4.45 Matrix is gaining LPG customer confidence. (N. Kelley, Tr. 7090). According to ITC, Matrix runs a professional shop and promptly responds to customer requests. Matrix is able to meet customer requirements, as quickly as overnight, and performs good work. Matrix has performed repair work, replaced some tank bottoms, floating roof repairs, and seal repairs. (N. Kelley, Tr. 7109).

4.46 Since the Deer Park LPG project in 2000, Matrix has completed several tank repairs for ITC. Matrix is "quite capable of building the tank." (N. Kelley, Tr. 7090).

c. Entry in the U.S. market -- Chattanooga Boiler & Tank

4.47 Chattanooga Boiler & Tank ("CB&T") has the capability to construct field erected LPG tanks. (Stetzler, Tr. 6355). CB&T is familiar with how to construct LPG tanks. (Stetzler, Tr. 6354-55). CB&T builds similar API 650 storage tanks, API 620 storage tanks, and ASME pressure vessels. These tanks are both shop and field erected. (Stetzler, Tr. 6356-59, 6308-09; RX 181 at 1-10).

4.48 CB&T has all the necessary equipment to design and construct a field erected LPG tank, such as burning, welding, and forming equipment as well as cranes, experienced labor crews and engineers, and equipment in the field. (Stetzler, Tr. 6355-56). Constructing a field-erected LPG tank is essentially the same process as LNG and LIN/LOX tanks. (Stetzler, Tr. 6354-55).

4.49 CB&T is interested and continues to pursue future LPG tank projects. (Stetzler, Tr. 6365).

d. Entry in the U.S. market -- numerous other tank manufacturers

4.50 If a company has the capability to build a standard API 650 or a standard API 620 tank, they would also have the capability to build a field erected LPG tank: the same skills are used to build an API 650 as an API 620 tank. All you have to do is read the code, find out the differences, use the right metal and welding rods, the right welding procedures, and anybody can build either tank. (N. Kelley, Tr. 7103, 7086).

4.51 Numerous other capable tank manufacturers exist: Matrix, Southwest Tank, and Pasadena Tank have also built tanks for ITC (N. Kelley, tr. 7103-05, 7137); Bay Limited, Pat Tank, Wyatt Field Services, and several others that have been around a long time (N. Kelley, tr. 7104); and Puget Sound Fabricators, Advanced Tank and some 40-50 companies that work locally are capable of building LPG tanks. (Stetzler, Tr. 6367).

e. Entry in the U.S. market -- foreign tank manufacturers

4.52 LPG tanks are built around the world by companies other than CB&I, AT&V and Matrix. (N. Kelley, Tr. 7091; Harris, Tr. 7288-89, 7293-95).

4.53 Foreign tank suppliers currently advertise in U.S. trade journals. (N. Kelley, Tr. 7126).

4.54 Domestic LPG customers would consider foreign suppliers of LPG tanks. In fact, some domestic LPG customers are foreign owned, such as ITC's Japanese ownership. (N. Kelley, Tr. 7111).

C. ENTRY INTO THE LPG MARKET HAS ENSURED SUFFICIENT COMPETITION IN THE RELEVANT MARKETS

1. Customers Are Satisfied With The Prices Received, And Are Not Concerned That The Acquisition Has Affected Their Ability To Obtain Competitive Pricing

a. Pricing in the lpg market post-acquisition

4.55 LPG customers are satisfied with current price levels in the LPG market, and do not believe prices for LPG tanks will increase as a result of the Acquisition. (N. Kelley, Tr. 7090-7091; Stetzler, Tr. 6367).

4.56 ITC believes that there is enough competition for field erected LPG tanks in the U.S. such that ITC will be able to procure those tanks at a reasonable price because "AT&V beat the socks off of CB&I" and can definitely do it cheaper. (N. Kelley, Tr. 7092, 7137).

4.57 Amy Warren, contracts administrator at Fluor, ("Warren") is not aware of any analysis by Fluor after the acquisition of PDM by CB&I on its ability to purchase field erected LPG tanks. (Warren, Tr. 2313-14).

4.58 Tank customers do not believe that the Acquisition has hindered their ability to obtain a competitive price on any tanks in any way. (N. Kelley, Tr. 7135, 7137).

b. Competition in the lpg market post-acquisition

4.59 LPG customers are satisfied with the current level of competition in the LPG market. (N. Kelley, Tr. 7092, 7137).

4.60 At this point, customers have enough competitors on LPG tanks that they do not need to research additional tank suppliers. (N. Kelley, Tr. 7134). The only contractors that ITC deals with are local, not located all over the country. The three contractors that bid the

2000 Deer Park project (Matrix, AT&V and CB&I) give ITC the competition that it needs to obtain a competitive price. (N. Kelley, Tr. 7091).

4.61 Currently, ITC does not have plans to construct a future LPG tank, but hopes to require an additional LPG tank in the future. (N. Kelley, Tr. 7089-90). On a future LPG project, ITC would solicit bids from Matrix, AT&V, and CB&I. (N. Kelley, Tr. 7090). With CB&I, Matrix, and AT&V, ITC felt it had enough bidders on the Deer Park project. Mr. Kelley did not investigate other companies or even if Southwest Tank bid on the project. (N. Kelley, Tr. 7133-34).

4.62 LPG customers believe that the merger between CB&I and PDM has not hindered its ability to obtain any of the types of tanks or structures that customers have purchased in the past or plan on purchasing in the future because there are other competitors in the LPG market. (N. Kelley, Tr. 7137-38).

2. Entry Has Disciplined CB&I's Behavior In The LPG Market

a. CB&I state of mind in the lpg market

4.63 Luke Scorsone ("Scorsone") is President of CB&I Industrial and former President of PDM's EC Division. (Scorsone, Tr. 4770). Mr. Scorsone attended Cornell University in engineering and obtained a masters degree in engineering from Cornell as well. (Scorsone, Tr. 4775-76).

4.64 Mr. Scorsone perceived competition in the LPG market from AT&V, Matrix, TKK/ATV, Skanaska Whessoe, Technigz/Zachry, and any other flatbottom tank manufacturer. (Scorsone, Tr. 4850). LPG tanks are an easy extension from the flatbottom tank market. (Scorsone, Tr. 5043).

4.65 LPG customers also evaluate pressure spheres as an alternative to refrigerated storage tanks. (Scorsone, Tr. 5170-71).

b. Competition on the ABB Lummus project

4.66 CB&I's last LPG project was awarded by ABB Lummus in Port Arthur, TX. The project included four ambient-temperature LPG spheres, one low-temperature LPG tank for butadiene and one flatbottom conventional storage tank. The total value of the project was $8.5 million. The LPG tank alone was $1.5 million. (Scorsone, Tr. 5039-40).

4.67 On the project, CB&I competed against Wyatt and AT&V. On this project, CB&I initially bid a little above a 4 percent margin. ABB came back to CB&I after the initial round of bidding and informed CB&I that it was 3rd out of 3 bidders. (Scorsone, Tr. 5040).

c. Innovation in the lpg market post-acquisition

4.68 As a result, CB&I "sharpened its pencils" and developed an innovation whereby CB&I eliminated the need for one additional support column on each sphere. This innovation lowered the overall cost of the project. (Scorsone, Tr. 5040-41).

d. Price decreases in the lpg market post-acquisition

4.69 In response to other competitive bids, CB&I lowered its profit margin from 4 percent to 2.5 percent. Without competition, CB&I would never have redesigned the spheres or worked to reduce costs. The ABB project occurred post-acquisition. Scorsone was not surprised to see AT&V competing on the front line on the ABB project. (Scorsone, Tr. 5041-42).

4.70 Based on his observations and experiences, CB&I cannot impose a price increase in the future, and if it does, CB&I will lose work to competitors. (Scorsone, Tr. 5043).

D. THERE ARE NO SIGNIFICANT ENTRY BARRIERS IN THE LPG MARKET

1. The Morse Construction Group Story

a. Successful project

i. Morse Construction Group

4.71 Morse Construction Group ("Morse") constructs AWA, API, pulp, paper, chemical, petroleum, and flatbottom tanks. These tanks are atmospheric or ambient, not refrigerated. (Maw, Tr. 6546-47).

4.72 In 1994, Morse's total annual sales were about $12-14 million. Morse had about 20 salaried employees, of those 2 were engineers. Morse did not have any salaried field crews because it contracts with union employees through a collective bargaining agreement. (Maw, Tr. 6551-52).

4.73 Prior to 1994, Morse had never constructed a low-temperature tank. Morse has not constructed a cryogenic tank since 1994. (Maw, Tr. 6547-48). The Ferndale LPG tank is the only LPG tank ever constructed by Morse. (Maw, Tr. 6546).

4.74 Raymond Maw ("Maw") was the Chief Project Manager on the Ferndale LPG project. He was responsible for the management of all Morse projects. While Mr. Maw did not put together the bid, he was involved in the execution of the project. (Maw, Tr. 6548-49). Mr. Maw started working at Maltby Tank & Barge in 1984. Maltby later became Morse. (Maw, Tr. 6544). Mr. Maw started as a project detailer, then purchasing agent, project manager, chief project manager, and today is the President of Morse. (Maw, Tr. 6544-45).

4.75 Morse became an independent subsidiary of CB&I on November 30, 2001. CB&I purchased Morse for $3 million. (Maw, Tr. 6545). Mr. Maw has never owned stock in Morse nor did he receive a portion of the purchase price. (Maw, Tr. 6545-46).

ii. The Ferndale project

4.76 Texaco sought an LPG tank at its Ferndale import facility in Ferndale, Washington, some 80 miles from Seattle. Morse is located in Everett, Washington, some 40 miles from Seattle. Morse's facilities are approximately 85 miles from Ferndale. (Maw, Tr. 6549).

4.77 James Crider ("Crider") retired from Texaco in 1996. (Crider, Tr. 6704). Mr. Crider started working at the Ferndale facility in 1976, when it was owned by California Liquid Gas Corp. Texaco bought the facility in 1985. (Crider, Tr. 6704-05). Mr. Crider managed the Ferndale, Washington facility from 1984 to 1996. (Crider, Tr. 6705).

4.78 Texaco's Ferndale facility consisted of one 350,000 barrel refrigerated tank designed for the storage of propane. (Crider, Tr. 6705). In addition, the facility had a rail and truck rack, six 30,000 gallon high pressure storage tanks, two compressors, one 30,000 gallon storage tank, and a pipeline system. (Crider, Tr. 6705-06).

4.79 The Ferndale Expansion Project was pursued to import and/or export product faster. Most vessels carry from 30 to 45,000 metric tons of product. With a 350,000 barrel tank, a ship could not be completely filled. As a result, the ship had to be held until more product could be transported in off railcars. Product could be transported in via pipelines, but then it would have to be chilled before loaded aboard the ship. In order to compete long term, Texaco needed more storage capacity. (Crider, Tr. 6709).

4.80 The scope of the Ferndale LPG project was expanded to include additional site work. This site work would have increased the initial contract price of $4.3 million. The modification of the existing tank was $1-2 million. Further, change orders would have also increased the total price on the LPG portion of the tank. (Maw, Tr. 6683-85).

4.81 The Ferndale project cost approximately $7.3 million. Without the turn-around project, the LPG tank was just under $5 million. (Maw, Tr. 6560). The tank itself was about 190 feet in diameter. (Maw, Tr. 6575). The LPG tank was designed to store propane at negative 55 degrees Fahrenheit. (Maw, Tr. 6580; RX 675).

iii. The bidding process

4.82 Mr. Crider suggested to Texaco management in Tulsa that Morse be considered. He suggested Morse based on a professional relationship with a salesman at Morse who had been inquiring about potential business for years. When Jim Offutt from Texaco asked if anyone else should be considered on the Ferndale project, Mr. Crider suggested Morse based on its flatbottom tank experience. (Crider, Tr. 6710-11; Maw, Tr. 6549-50).

4.83 Morse was selected to bid on the Ferndale project by Texaco corporate management, not by Mr. Crider or any local Texaco employees in the Washington area. (Maw, Tr. 6550, 6558, 6560, 6673). The Texaco employees at the Ferndale facility were not involved in the bidding or procurement process for the Ferndale LPG project. (Crider, Tr. 6714).

4.84 Morse submitted a bid on the Ferndale project at Texaco's request. Morse bid against CB&I, PDM, and San Luis Tank (owned by Matrix). (Maw, Tr. 6549-50). Morse attended a meeting with Texaco management in Tulsa, Oklahoma. At this meeting, the parties discussed Morse's ability to complete the job on time. (RX 30). Morse and San Luis Tank were brought to Tulsa as the two finalists on the project. Texaco expressed the importance of the Ferndale project and its high-profile nature. (Maw, Tr. 6560-63).

4.85 Morse was awarded the Ferndale LPG project. (Maw, Tr. 6563).

iv. Morse successfully completes the project

4.86 Morse timely completed the Ferndale project, as planned, without any major defects, and no delays. (Crider, Tr. 6714, 6715-16; Maw, Tr. 6585). Texaco imposed time constraints on the project by accelerating the delivery schedule due to increased demand and the need for additional storage as a result of an advanced maintenance schedule on the existing LPG tank. Morse was pressed by Texaco's conditions, but met those demands. (Crider, Tr. 6714-15).

4.87 The Ferndale LPG project was a "highly visible" tank project. (RX 30). On this project, Texaco and Mr. Crider were very satisfied with Morse's performance. In fact, once the tanks were placed into service, Texaco personnel from Tulsa to Houston expressed their satisfaction with Morse's performance. (Crider, Tr. 6716; Maw, Tr. 6585-86) As a result, Texaco awarded Morse additional work on-site. This work included the renovation of an existing 350,000 barrel LPG tank. (Maw, Tr. 6586; Crider, Tr. 6707, 6708).

4.88 Morse made $1,007,556 in profit on the Ferndale LPG project. (Maw, Tr. 6586, 6690; RX 677 at 1). This profit was greater than Morse anticipated because of its performance and the opportunity for change orders. Change orders allow an opportunity to increase margins. (Maw, Tr. 6587).

4.89 Mr. Maw was responsible as project manager in 1994 for bringing the Ferndale LPG project in at a profit. Whenever a project is not profitable, project managers are scrutinized. On the Ferndale project, Mr. Maw never heard from Morse's finance personnel that the project was not profitable. In fact, Morse's finance department always discussed the profitability of the Ferndale project. (Maw, Tr. 6691-92).

b. Specific entry barriers

i. Reputation

4.90 At the time the Ferndale LPG project was bid, Morse had never constructed an LPG tank. In fact, Morse told Texaco that it had no LPG experience. Nonetheless, Texaco asked Morse to bid the Ferndale project. (Maw, Tr. 6550-51).

4.91 Morse's never having built an LPG tank before was not a concern to Texaco because companies hire people to do the job. Morse's personnel sold the project. (Crider, Tr. 6713-14).

ii. Cost of bidding

4.92 On June 4, 1993, Texaco requested Morse to submit a bid on the Ferndale LPG project. (Maw, Tr. 6558; RX 681 at 1-3). Morse submitted a bid package. In so doing, Morse did not incur any additional expenses than it does on any other tank project. No additional salaried employees were hired to prepare the bid. (Maw, Tr. 6556-57).

iii. Engineering

4.93 As part of that bid package, Morse submitted a preliminary design. Duane McMahan ("McMahan"), a professional engineering consultant, was hired to perform the design work. Morse had less than one month to complete its bid package. (RX 130). Prior to this project, Mr. McMahan had never worked on an LPG project before. Texaco was satisfied with Mr. McMahan's designs. After submitting its bid, Morse hired Pressure Sciences, Inc. ("PSI") to consult in the final design. Morse paid PSI about $250,000 for its services. (Maw, Tr. 6557-60; RX 131 at 1-2).

iv. Welding

4.94 The Ferndale LPG tank was welded under the supervision of Morse. Morse developed in-house special procedures required for the LPG tank. These procedures cost Morse about $2,000 to develop by running and testing the coupon. Texaco approved Morse's procedures. (Maw, Tr. 6569-70). Morse then trained its welders individually on these procedures, requiring about one-half hour per person over the course of two days. (Maw, Tr. 6570-72).

4.95 Each welder on the Ferndale project received a certificate of completion, which expires 90 days after the welder has completed use of that process on the project. Therefore, the Ferndale welders would have had to complete another LPG tank within 90 days in order not to have to be re-qualified. (Maw, Tr. 6572).

v. Fabrication

4.96 Morse hired no additional salaried employees to fabricate the LPG tank. (Maw, Tr. 6557). Morse did not have to acquire special equipment, methods, personnel, or procedures for fabricating the LPG tank. (Maw, Tr. 6567).

4.97 Morse's fabrication shop is about 40,000 square feet, some 5 times smaller than CB&I's shop in Houston, Texas. (Maw, Tr. 6567-68; RX 676 at 1).

vi. Construction/field-erection

4.98 Morse hired no additional salaried employees to construct the LPG tank. (Maw, Tr. 6557, 6572). The tank is built in rings. Each ring is a layer of steel plates eight feet high connected by vertical welding seams. (Maw, Tr. 6574). The bottom floor of the tank contains heaters to prevent the soil from freezing around the tank, covered with insulation, sealed with a vapor barrier, and topped off with a steel floor. (Maw, Tr. 6575-76, 6580-81). The roof of the tank is constructed on the floor of the tank, then it is air-raised. (Maw, Tr. 6578). Finally, the tank is insulated and painted. (Maw, Tr. 6579-80; RX 676).

c. Morse did not have a cost advantage on the Ferndale lpg project

i. Morse experienced a labor cost disadvantage

4.99 Morse had a competitive cost disadvantage on the Ferndale project by adhering to the obligations under its union collective bargaining agreement, such as increased wages, benefits and subsistence costs to all field personnel. (Maw, Tr. 6563-64, 6566, 6680).

4.100 In 1994 and today, Morse uses union field crew personnel hired from a union hall. (Maw, Tr. 6552). Morse is obligated to hire such union employees pursuant to a collective bargaining agreement. This agreement does not give Morse a choice as to whether to use union or nonunion employees. (Maw, Tr. 6552).

4.101 This obligation to use union labor applies to any Morse project, whether or not in the local area. (Maw, Tr. 6552). In fact, Morse did not have the option of selecting its preferred union laborers, but rather was assigned field personnel directly off the union list. (Maw, Tr. 6687).

4.102 The Ferndale project was not required to be a union project. CB&I, PDM, and San Luis Tank are nonunion employers, and thus were not subject to these same obligations under a collective bargaining agreement. (Maw, Tr. 6565).

4.103 Mr. Maw is familiar with the costs associated with union and nonunion labor based on his experience competing against nonunion firms, such as CB&I, PDM and San Luis Tank. (Maw, Tr. 6553). Mr. Maw relies upon these experiences and assumptions everyday in performing his normal course of business. (Maw, Tr. 6687-88).

4.104 Union agreements require a minimum salary, mandatory benefits packages, and subsistence costs depending on each worker's location from the job site paid to its laborers. (Maw, Tr. 6554-56). Morse's collective bargaining agreement does not permit it to unilaterally select the wage rate at which union laborers will be compensated on a particular project. (Maw, Tr. 6554).

4.105 Union labor is more expensive than nonunion labor. Union labor pays about $26-27/hour and nonunion laborers receive about $21/hour. There are also fringe benefits required for union employees, such as annuity, health and welfare, and vacation pay that equates to an additional $11/hour for each union employee, as opposed to $5-6/hour for nonunion employees. (Maw, Tr. 6553). On the benefits side, union labor is almost twice as expensive as nonunion labor. (Maw, Tr. 6553). Union labor is about 25 percent more expensive then nonunion labor. (Maw, Tr. 6554).

4.106 Subsistence costs are applicable to Morse's collective bargaining agreement. (Maw, Tr. 6554). On the Ferndale project, all but one laborer received subsistence pay. (Maw, Tr. 6556).

4.107 Subsistence costs apply based on the distance the union laborer lives from the job site, even if they live in state. (Maw, Tr. 6556). Subsistence costs, also known as per diem, are intended to cover costs of food, room and board, and other incidentals. (Maw, Tr. 6555; 6885-87). The actual costs incurred by the worker has nothing to do with the level of subsistence payment specified in Morse's collective bargaining agreement. (Maw, Tr. 6555). Whether or not the worker actually uses the money for its intended purpose does not impact the amount of the subsistence obligation. (Maw, Tr. 6555-56).

4.108 Morse had a competitive disadvantage by adhering to its obligations under the union collective bargaining agreement. (Maw, Tr. 6564, 6566, 6680). Morse has made efforts to quantify this competitive disadvantage as a result of employing union labor. (Maw, Tr. 6566). This disadvantage amounted to about $180,000, which is about 3.5 percent of the project. (Maw, Tr. 6565-66).

4.109 In calculating this cost disadvantage, Morse estimated 180,000 man hours to perform the necessary work, utilizing the sum of $10/hour for the difference of union versus nonunion labor, for a total of a $180,000 cost difference. (Maw, Tr. 6566).

ii. Morse's location advantage, if any, was minimal and offset by Morse's labor disadvantage

4.110 Morse's transportation cost advantage on the Ferndale LPG project, if any, was minimal. (Maw, Tr. 6563-64). Morse's labor cost disadvantage more than offset any slight transportation cost advantage Morse realized on the Ferndale project. (Maw, Tr. 6566).

4.111 Morse made efforts to quantify this potential transportation cost advantage as a result of being 70-80 miles from the Ferndale job site. (Maw, Tr. 6564). Morse's cost advantage as a result of its location to the job site was about $70,000, which was a little over 1 percent of the approximately $5 million price of the LPG tank. (Maw, Tr. 6564-65).

4.112 In calculating this slight advantage, railroad transportation was a realistic alternative to truck and freight transportation. (Maw, Tr. 6682). Morse has experience in transporting materials by railroad on prior tank projects. (Maw, Tr. 6681). Rail transportation is more cost-effective than freight transportation. (Maw, Tr. 6606). The Ferndale site had a rail spur to make it easier to transport via rail. (Maw, Tr. 6681).

4.113 In addition, Texaco scheduled sufficient time on the project to utilize rail transportation as a practical alternative to freight transportation on the Ferndale project. (Maw, Tr. 6681-82).

4.114 As part of his normal job responsibilities, Mr. Maw does not call himself for rail rates. Instead, he calls someone with that responsibility and specialized knowledge and contacts to do so. Mr. Maw then relies on that person's knowledge. (Maw, Tr. 6682-83). This practice occurs in Mr. Maw's normal course of his job responsibilities. (Maw, Tr. 6682-83).

4.115 In 1994, San Luis Tank's fabrication site was in San Luis Obispo, CA. (Maw, Tr. 6685). PDM's West Coast fabrication site was in Provo, UT. (Maw, Tr. 6685). CB&I had fabrication shops in Fontana, CA and Houston, TX. (Maw, Tr. 6606, 6685).

4.116 San Luis Tank's fabrication site in San Luis Obispo, CA and PDM's Provo, UT facility were closer to Ferndale, WA than Fontana, CA. (Maw, Tr. 6685).

4.117 Morse, however, never quantified any of these potential locational advantages in any correspondences to Texaco. In a letter to Texaco discussing the proximity advantage, Morse never indicated its disadvantage of using union labor force or that Morse had never built an LPG tank before. (Maw, Tr. 6679, 6680-81; CX 1482 at 1-2).

4.118 Morse has constructed similar sized water and flatbottom tanks, namely a 190 foot water tank for the Rose Hill Water District. (Maw, Tr. 6581). On the Rose Hill project, the same amount of steel was used, but the project only cost $2 million due to less structural components as required on a cryogenic tank. (Maw, Tr. 6584-85). Therefore, the transportation advantage Morse had of $70,000 would have been 3.5 percent of the total cost of the Rose Hill project, as compared to 1 percent on the Ferndale LPG project. (Maw, Tr. 6583-84).

4.119 Transportation costs are a larger percentage of the total cost of a flatbottom tank project, projects on which Morse predominately competes, then a low-temperature, cryogenic tank project. (Maw, Tr. 6584-85).

2. Customers Do Not Believe That Entry Barriers Exist In The LPG Market

a. Experience/expertise

4.120 The same skills are used to build an API 650 as an API 620 tank. All you have to do is read the code, find out the differences, use the right metal and welding rods, the right welding procedures, and anybody can build either tank. (N. Kelley, Tr. 7103).

4.121 A tank supplier would be considered to bid on an ITC project if it had built an API 620 tank. But, such cryogenic tank experience is not required. (N. Kelley, Tr. 7117-18). If a company had never built a cryogenic tank before, but had experienced personnel who had, then that company would get a chance to prove it could build the tank. (N. Kelley, Tr. 7131-32).

4.122 Tank construction is simply welding shell plates together and putting a roof on it. (N. Kelley, Tr. 7086).

4.123 Tank companies are really the people that you deal with, not the number of years in business. The people you deal with everyday are the company, the ones to believe. (N. Kelley, Tr. 7108-09).

4.124 Decisions to sole source are made by the client -- often times the costs of prequalfiying and bidding the project are outweighed by the savings of being able to move forward with the project. (Warren, Tr. 2309-11).

b. Materials discounts

4.125 No customers or competitors complain that CB&I receives volume discounts for steel or purchases directly from the steel mill. (N. Kelley, Tr. 7122). Labor prices are where there is a lot of difference on tank bids, not steel. (N. Kelley, Tr. 7122-23).

c. Safety

4.126 The safety risks with LPG tanks are no different then LNG tanks. In fact, the difference is in the temperature at which the product is stored. (N. Kelley, Tr. 7132).

d. Equipment

4.127 Generally, the same type of equipment is needed to construct an LPG tank as any field-erected tank -- welding machines, cranes, and rigging equipment. Further, the same people that build API 650 tanks also build API 620 tanks. If a company has the capability to build a standard API 650 or standard API 620 tank, they would also have the capability to build a field erected LPG tank. (N. Kelley, Tr. 7091-92).

e. Engineering

4.128 AT&V performed the engineering design of the ITC Deer Park LPG tank in-house, without the help of consultants. (N. Kelley, Tr. 7120).

f. CB&I cost disadvantages

4.129 CB&I has to cut its jobs to the very minimum because they have so much overhead and so many engineers that it is hard for them to be competitive on all jobs. (N. Kelley, Tr. 7122).

g. Local advantages

4.130 A local contractor does not hold a competitive advantage as compared to another domestic supplier. For instance, AT&V is ITC's most competitive supplier and it is located in Alabama, and that includes shipping steel plates from Alabama to Texas. (N. Kelley, Tr. 7121).

4.131 Tank construction is only guaranteed for one year after completion, so using a local contractor is not a preference. (N. Kelley, Tr. 7114-15).

h. CB&I problems and mistakes in the lpg market

4.132 CB&I notoriously did not meet their schedules on time for LPG customers. AT&V's scheduled delivery is much more accurate than CB&I. (Cutts, Tr. 2510-11). In one instance, CB&I was significantly late on multiple API 650 tanks for ITC where scheduling and timing were very important. (Cutts, Tr. 2512).

4.133 In the industry, CB&I has a good reputation for innovation, but over the years they make mistakes just like everybody else. They do not always perform like would like to or on time. (N. Kelley, Tr. 7124).

4.134 Over time, CB&I has had flaws. For example, CB&I misdesigned vents on some 160,000 barrel tanks for ITC. To correct the mistakes, ITC used a small, local tank roofing company that did a great job fixing CB&I's antiquated designs. (N. Kelley, Tr. 7124). Moreover, CB&I used the wrong steel on the propylene tank. (N. Kelley, Tr. 7125).

4.135 Mistakes on other projects can be a selling point by demonstrating how readily and capably the company corrects its mistakes and handles the situation. An error on a project can really become a benefit. (Cutts, Tr. 2506-10).

4.136 Despite a supplier's flaws, LPG customers would be willing to accept bids in the future once the problems have been corrected. (N. Kelley, Tr. 7126-27).

i. PDM problems and mistakes in the lpg market

4.137 Fluor had problems with PDM's performance on the Tampa Sea-3 project related to schedule and resources available to PDM and the costs associated with those delays. (Warren, Tr. 2308).

4.138 On the Sea-3 LPG project, there was a $400,000 piece of equipment that was left out of the estimate, which had ramifications in terms of the cost of the equipment and the attenuated associated construction costs. (Scorsone, Tr. 4826).

4.139 In addition, PDM had very poor performance by its engineering group, which resulted in late procurement of equipment and materials thereby extending the project's schedule and driving up costs in the field. (Scorsone, Tr. 4826).

4.140 Finally, PDM had a difficult time with labor stability in the field of almost 300 percent turnover, which resulted in inefficiencies and poor quality. (Scorsone, Tr. 4826).

4.141 PDM hired and processed three times as many field personnel as needed. (Scorsone, Tr. 4827).

4.142 The project was delivered late by two months. This delay caused the customer problems. As a result, the customer withheld $2 million in payments from PDM and eventually settled with PDM for $1 million. (Scorsone, Tr. 4827-28).

4.143 After the Sea-3 project, a PDM employee was asked to leave the company for performance reasons on that project. (Scorsone, Tr. 4915-16).

E. COMPLAINT COUNSEL WITNESSES AND EVIDENCE

1. Complaint Counsel's Only LPG Witness Lacks Knowledge Of Competition In The LPG Market

a. Background of the Sea-3 Projects and Fluor, Inc.

4.144 Amy Warren is a contracts administrator with Fluor. (Warren, Tr. 2274). She has been with Fluor for the past 7 years, and has held the position of project manager on two separate LPG projects. (Warren, Tr. 2274-75). Ms. Warren graduated from Texas A&M and holds an MBA as well as a Masters in Accounting from St. Thomas University in Houston, TX. (Warren, Tr. 2279).

4.145 Fluor does not build LPG tanks, but provides supervision and construction management services. (Warren, Tr. 2276, 2279-80). Fluor was responsible for preliminary design and management of tanks and all associated control systems on the Sea-3 Newington, NH (1998) and Tampa, FL (2000) LPG projects. (Warren, Tr. 2275-76, 2298). Fluor's prequalification process was not utilized on the Sea-3 projects because CB&I and PDM were already pre-qualified. (Warren, Tr. 2281).

4.146 On the Tampa project, Ms. Warren was involved in coordinating Fluor's technical review of the bid proposals. (Warren, Tr. 2276-77, 2278-79).

4.147 On both Sea-3 projects, CB&I and PDM bid -- with PDM winning and constructing both projects based on a lower price (roughly 4% lower). (Warren, Tr. 2298-2300, 2302-04, 2305, 2306).

b. Amy Warren lacks knowledge of the current LPG market

4.148 Ms. Warren's current knowledge of field-erected LPG tanks is based on her involvement in the bidding process for Sea-3 in 1998, the last time Ms. Warren had any involvement in the procurement of an LPG tank. (Warren, Tr. 2284, 2318).

4.149 On the Sea-3 project, the client for both projects was Sea-3 and not Fluor. (Warren, Tr. 2275, 2280). Sea-3 was actually responsible for selecting a contractor to build the LPG tanks. (Warren, Tr. 2316).

4.150 The individual responsible for selecting an LPG contractor was Bill Cornell, the president of Sea-3, not Ms. Warren or Fluor. (Warren, Tr. 2316, 2317). At Fluor, the person responsible for determining which companies would bid on the Sea-3 projects was George King, not Ms. Warren. (Warren, Tr. 2317-18).

4.151 Ms. Warren is not aware of any field erected LPG tanks currently planned by anyone anywhere. (Warren, Tr. 2309).

4.152 Ms. Warren is not aware of any company other than PDM and CB&I that has built a field erected LPG tank anywhere in the world. (Warren, Tr. 2309).

4.153 Ms. Warren is not familiar with Graver, Iteq, BSL, CB&T or AT&V, and only knows that Matrix constructs tanks. (Warren, Tr. 2311-13).

4.154 Other than the Sea-3 projects, Ms. Warren is not aware of any other projects that Fluor has done involving field erected LPG tanks in the U.S. (Warren, Tr. 2315-16).

4.155 Fluor has no plans to procure a field erected LPG tank in the U.S. in the future. (Warren, Tr. 2316).

4.156 Ms. Warren has no current knowledge of companies that have the ability to construct LPG tanks. (Warren, Tr. 2318).

4.157 Ms. Warren has no knowledge of companies Fluor would qualify to build LPG tanks. (Warren, Tr. 2318).

4.158 Ms. Warren did not know why Fluor and Sea-3 received a lower price as a result of the bidding process and cannot truly say if the price was competitive. (Warren, Tr. 2299-2300, 2302, 2303-04, 2307).

2. Respondents' Norman Kelley Is Actively Involved In The LPG Market And Familiar With Current Competition

4.159 Norman Kelley ("Kelley") is currently Vice-President of Engineering at ITC. He is responsible for capital budgets and engineering as well as the construction of new facilities and systems. (N. Kelley, Tr. 7077). Mr. Kelley has been VP of Engineering for 7-8 years. (N. Kelley, Tr. 7078). Mr. Kelley received his mechanical engineering degree from the University of Texas at Arlington in 1971. He was first hired as an engineer at

ITC 25 years ago. Mr. Kelley managed jobs and budgets and took over all engineering functions. (N. Kelley, Tr. 7078, 7079).

4.160 During his 25 years at ITC, Mr. Kelley has procured LPG tanks for over 23 of those 25 years. Tank procurement is Mr. Kelley's area of responsibility, including ITC's LPG tank project at its Deer Park, TX facility in 2000. (N. Kelley, Tr. 7079-80).

THE FOLLOWING IS SECTION FIVE

I. LIN/LOX FINDINGS OF FACT

A. LIN/LOX/LAR BACKGROUND

1. Definition And Characteristics Of LIN/LOX/LAR Tanks

5.1 LIN is an industry expression for liquid nitrogen. A LIN tank is a special tank that stores liquid nitrogen at atmospheric pressure. Similarly, LOX is the industry expression for liquid oxygen. A LOX tank stores liquid oxygen. (Kamrath Tr. 1982-83); (V. Kelley Tr. 4596). LAR is the industry expression for liquid argon and a LAR tank stores liquefied argon. (Patterson, Tr. 340-41). Tanks to hold LIN, LOX or LAR are commonly referred to as LIN/LOX tanks.

5.2 LIN/LOX tanks are double-walled tanks made of stainless steel which store liquid oxygen and nitrogen at very low, even cryogenic, temperatures which allows them to be stored in a liquid form. (Stetzler, Tr. 6312).

5.3 LIN/LOX tanks are constructed in a specified manner. A LIN/LOX tank consists of an outer carbon steel shell and an inner tank, most commonly made out of stainless steel. There is insulation in between the two shells to keep the temperature at minus 320 degrees. (Stetzler, Tr. 6312); (Kistenmacher Tr. 833-34).

5.4 The outer shell of a LIN/LOX/LAR tank is generally made from A-36 carbon steel. (Stetzler, Tr. 6315). The inner shell of a LIN/LOX/LAR tank is generally made from 304 stainless steel. (Stetzler, Tr. 6315). The inner tank of some LIN/LOX/LAR tanks have been be constructed from aluminum, however, most are made out of stainless steel because aluminum is not very economical today. (Stetzler, Tr. 6312).

5.5 Other than what substance is stored in a LIN/LOX/LAR tank, there are no differences in the structures. (Patterson, Tr. 340-41).

2. LIN/LOX/LAR Tanks Are Used For Air Separation Facilities

5.6 LIN/LOX/LAR tanks are most commonly incorporated into the infrastructure of a functioning air separation facility. There are no viable substitutes for storing liquid oxygen or nitrogen produced by such a plant. (Hilgar, Tr. 1386).

5.7 An air separation plant is a plant that liquefies ambient air, then distills the air into its component parts/ The component parts of air are the industrial gases oxygen, nitrogen, and argon. The liquefied gases are later cooled and stored in cryogenic storage tanks. Subsequently, the gases are delivered to the marketplace either in a gaseous form or liquid form. (Kamrath Tr. 1980); (V. Kelley Tr. 4592); (Kistenmacher Tr. 824-25).

5.8 When air is distilled into component parts it is cooled to temperatures in the order of minus 300 degrees Fahrenheit. Once the ambient air is cooled, pressure is used as a driving force to separate the different components that comprise air. (Kistenmacher Tr. 824-26).

5.9 The cost to design and fabricate LIN/LOX tanks typically represents five to ten percent of the total cost of an air separation facility. (Hilgar, Tr. 1507). Construction of an air separation facility may cost $18 million. LIN/LOX/LAR tanks used at such a facility may cost from $1 to $1.5 million. (Kistenmacher Tr. 836); (Hilgar, Tr. 1507-08).

3. Design And Construction Process

5.10 CB&I uses the same construction steps when it builds LIN/LOX tanks as it does when it builds any ambient-temperature flat-bottom tank. (Scorsone, Tr. 4885).

5.11 First, the project is engineered and drawings are developed in connection with the procurement of materials. Second, materials including the raw steel and steel components are procured. Third, steel materials are fabricated in fabrication shops. Next, tool and equipment lists are created and everything including the fabricated materials are shipped to the construction site. The structure is then erected on the project site and tested. (Scorsone, Tr. 4885-86).

a. Engineering

5.12 The engineering phase involves the performance of calculations and an analysis to determine the size and shapes of the various components to be placed in the structure. This phase entails writing the specifications for the various materials and welding processes that will be used. Drawings are created to be used by fabrication shops, construction crews, and subcontractors. (Scorsone, Tr. 4886-87).

5.13 CB&I does not have an engineering staff that solely works on LIN/LOX projects. CB&I uses its engineers across several product lines. Engineers who design flat-bottom tanks also have the capability to design LIN/LOX tanks. CB&I's engineers are located in Pittsburgh, Pennsylvania; Plainfield, Illinois; Houston, Texas; Canada, the Middle East, Philippines, and Australia. (Scorsone, Tr. 4887-88).

b. Procurement

5.14 The bill of materials contains a list of materials that are sent to the procurement group. The procurement group then procures these materials from a wide variety of vendors. (Scorsone, Tr. 4889-90).

c. Fabrication

5.15 The metal materials are fabricated in a fabrication shop by the same personnel and using the same equipment that is used to fabricate other types of tanks. (Scorsone, Tr. 4885; 4892-93).

d. Field erection

5.16 The field erection process for an industrial tank involves: (1) receiving the material from the fabrication source and the steel mills; (2) establishing a site office; (3) establishing a tool and equipment management system; (4) employing the field labor; (5) erecting the structure in accordance with the plans and contract specifications; and (6) testing the work quality. (Scorsone, Tr. 4895-96).

5.17 The field construction process used to field erect a LIN/LOX tank is exactly the same process that is used to erect any type of ambient-temperature flat-bottom tank. (Scorsone, Tr. 4885).

e. Welding

5.18 The welding processes used on a cryogenic tank are precisely the same as the processes used for an ambient temperature tank. (Scorsone, Tr. 4899) The welding methods used for cryogenic tanks are an open art. (Scorsone, Tr. 4899)

B. CB&I'S ACQUISITION OF THE PDM EC DIVISION HAS NOT SUBSTANTIALLY LESSENED COMPETITION FOR THE SALE OF FIELD ERECTED LIN/LOX/LAR TANKS

1. There Is Little Demand For LIN/LOX/LAR Tanks

5.19 Currently, there is overcapacity in the LIN/LOX market. Moreover, there will not be air separation plants requiring LIN/LOX tanks constructed in the next few years. (Hilgar, Tr. 1541-43). Demand for field-erected LIN/LOX tanks is not high. (Stetzler, Tr. 6382-83).

2. LIN/LOX/LAR Tanks Constitute A Small Portion Of CB&I's Business And Are Of Little Significance

5.20 CB&I does not regard LIN/LOX/LAR work as an important part of its business because it is so small. (Scorsone, Tr. 5016). The total revenue realized in the LIN/LOX market in the last two years for all construction vendors amounted to only approximately $5 million. (Glenn, Tr. 4088).

5.21 CB&I's CEO does not generally become involved in the LIN/LOX portion of CB&I's business due to the small size and infrequency of the projects. (Glenn, Tr. 4155). CB&I does not have any salespersons dedicated to the LIN/LOX market. (Scorsone, Tr. 5017).

3. Three Competitors Have Entered The LIN/LOX/LAR Market

5.22 CB&I's believes that it competes for LIN/LOX projects against Matrix, AT&V, and CB&T. (Scorsone, Tr. 4849-50) (state of mind).

5.23 Graver was a long-time competitor in the LIN/LOX market, however Graver was acquired by ITEQ. (Patterson, Tr. 458). CB&I's state of mind is that Graver/ITEQ went out of business due to poor management by ITEQ and an overall lack of demand in the market. (Scorsone, Tr. 4876-77) (state of mind). Moreover, the view that Graver, after it was acquired by ITEQ, exited the market due to deteriorating performance is also held by Air Liquide. (Kamrath, Tr. 1988-1989; 2004-2005).

5.24 CB&I believes that AT&V and CB&T have hired experienced personnel that previously worked for Brown Minneapolis Tank and Graver Tank. As a result, CB&I perceives that Brown Minneapolis Tank's and Graver Tank's "know-how" moved on to AT&V and CB&T. Matrix is another recent player in the LIN LOX market, so there are three competitors now in addition to CB&I. (RX 208) (Scorsone, Tr. 5029-30) (state of mind).

5.25 Some of the companies that CB&I perceives as competitors in the LIN/LOX market today are new entrants and were not competitors until shortly before the Acquisition. (Scorsone, Tr. 4877) (state of mind). Scorsone's perceptions of the LIN/LOX market have changed over time due to entry that has occurred from Matrix, AT&V, and CB&T. (Scorsone, Tr. 4878) (state of mind).

a. AT&V

i. Began efforts to enter the LIN/LOX market in the late 1990s

5.26 AT&V is a tank contractor which had primarily constructed ambient-temperature, flat-bottom storage tanks. (Cutts, Tr. 2458-59). Cryogenic tank sales used to make up 0 percent of AT&V's sales, today they have increased substantially to 3-10 percent of its total sales. (Cutts, Tr. 2393).

5.27 AT&V spent approximately $100,000 on research and development that went into AT&V's efforts to build cryogenic tanks. (Cutts, Tr. 2336; 2405-06).

5.28 Despite never having estimated a LIN/LOX tank before, AT&V has produced estimates that were very accurate. In order to provide an estimate for LIN/LOX projects, AT&V created its own design for LIN/LOX tanks. (Cutts, Tr. 2519-21).

5.29 Specifically, AT&V has developed its own technical specifications for LIN/LOX tanks which enabled AT&V to successfully construct its first LIN/LOX project to the satisfaction of BOC. (Cutts, Tr. 2563-64). AT&V has also dedicated a clean bay in Lucedale, Mississippi, to the fabrication of stainless steel for cryogenic projects. (Cutts, Tr. 2331-32).

5.30 AT&V worked to build customer confidence in AT&V's cryogenic capabilities by answering numerous questions, giving tours of their facilities, and showing customers AT&V's capabilities and achievements in other product lines. (Cutts, Tr. 2506-07). AT&V believes LIN/LOX contracts are very difficult to win because "customers are demanding." (Cutts, Tr. 2398).

ii. AT&V has won all three LIN/LOX projects it has bid on

5.31 AT&V was awarded its first contract for the field-erection of a LIN/LOX tank at Midland, North Carolina by BOC in 2000. (Cutts, Tr. 2397-98; 2436-37). AT&V had never constructed a LIN/LOX tank prior being awarded the project in 2000 by BOC. (Cutts, Tr. 2501). AT&V successfully completed construction of one LIN and one LOX tank in Midland, North Carolina. (Cutts, Tr. 2418-19; 2321-22; 2330; 2436).

5.32 After the construction of the Midland project, BOC told AT&V that their "quality was exceptional, the schedule was good, and that the safety was exceptional." (Cutts, Tr. 2453). BOC "was satisfied with the price" it received on the field erected LIN/LOX tanks at Midland and "BOC is satisfied with the work that AT&V did at Midland." (V. Kelley, Tr. 5285). BOC "was quite satisfied [with AT&V] in all aspects." (V. Kelley, Tr. 5287). The turnover package, which was provided at the conclusion of the Midland contract, by AT&V was good. (V. Kelley, Tr. 5283-84). AT&V's "turnover package was quite good." (V. Kelley, Tr. 5289).

5.33 In order to win it's initial BOC LIN/LOX project, AT&V developed standards that were specifically applicable to BOC applications and had several meetings with BOC where AT&V promoted their abilities. (Cutts, Tr. 2501-02).

5.34 Since the completion of construction on the BOC Midland project, AT&V has been awarded two additional LIN/LOX projects. (Cutts, Tr. 2504-06). AT&V has been awarded a LIN/LOX project in Freeport, Texas by Air Liquide. (Kamrath, Tr. 2006; Cutts, Tr. 2504-06; Scorsone, Tr. 5017). AT&V has also been awarded a LIN/LOX project for BOC Edwards in Hillsboro, Oregon. (Cutts, Tr. 2504-06; V. Kelley, Tr. 5291-92; RX 813).

iii. AT&V has dedicated resources to the LIN/LOX market and is ommitted to competing for projects

5.35 AT&V is committed to pursuing LIN/LOX project in the United States. (Cutts, Tr. 2332). AT&V is currently in the process of bidding numerous LIN/LOX projects in the

United States. AT&V has submitted budget pricing for approximately six customers and has formally been pre-qualified as a bidder by one customer and informally pre-qualified by several others. (Cutts, Tr. 2452-53).

5.36 AT&V believes it is making a long-term investment in entering the LIN/LOX market and did not expect to recoup all of its expenditures on its first LIN/LOX project. AT&V believes that future work from BOC will enable them to recoup their initial expenditures in the LIN/LOX market. (Cutts, Tr. 2429-30). AT&V has not had a net income loss on any of its cryogenic projects to date. (Cutts, Tr. 2462).

5.37 AT&V believes that BOC has spoken to other LIN/LOX tank customers and recommended AT&V's construction abilities. As a result of this recommendation, AT&V believes that at least one customer has accepted a bid on a LIN/LOX project from AT&V. (Cutts, Tr. 2453-54).

iv. AT&V believes it has competitive advantages over CB&I

5.38 Although AT&V believes that CB&I's reputation exceeds AT&V's reputation and marketing abilities, AT&V believes that in a "detailed battle of the facts" AT&V would come out in front. AT&V believes that its quality in construction, as illustrated by AT&V's extremely low x-ray weld rejection rate, is far superior to CB&I and other tank vendors in the industry. (Cutts, Tr. 2491-93).

5.39 AT&V believes it has the best project completion schedule in the industry due to the fact that last year they completed 163 of 164 projects on time. AT&V believes that its scheduling is much better than CB&I on non-cryogenic applications. AT&V believes that whenever schedule is a critical component of a project, it can and will deliver the project on time (Cutts, Tr. 2510-12).

5.40 AT&V believes it has an advantage over CB&I and can sell LIN/LOX tanks at a lower price. (Cutts, Tr. 2572). As has been demonstrated on recent projects, AT&V has offered pricing that "is below [CB&I's] flat cost." (RX 273).

v. Past difficulties are positive selling points for AT&V

5.41 AT&V believes that its past difficulties on a few projects, such as pressure spheres, are actually positive selling points for the company. AT&V encountered a few difficulties on a pressure sphere project for Black & Veatch but was able to correct the problems and deliver a successful product. AT&V believes these examples show AT&V's strength as a company, not its weaknesses. (Cutts, Tr. 2508-10).

5.42 AT&V received very high ratings on the Black & Vetch pressure sphere project and has used that project as a reference for future projects. There were numerous issues that occurred on the project, but Cutts believes that AT&V ultimately performed well since Black & Vetch gave AT&V many other projects after its completion of the Westlake project. (Cutts, Tr. 2535-50).

b. Matrix

i. Matrix has entered the LIN/LOX market

5.43 Matrix has hired employees who have experience building cryogenic storage tanks. Specifically, a project manager, foreman, and a crew. (Newmeister, Tr. 2188). This has allowed Matrix to increase customer confidence in its qualifications and demonstrate to buyers that it can met the requisite API specifications. (Newmeister, Tr. 2189-90).

5.44 Matrix has undertaken numerous steps to enter the LIN/LOX market. For example, Matrix has found and hired experienced employees, tested materials, established welding procedures, and created engineering standards. (Newmeister, Tr. 2213-14).

ii. Matrix began constructing LIN/LOX tanks in 1997

5.45 Matrix designed and constructed its first cryogenic storage vessel for Praxair in 1997. Praxair awarded Matrix a liquid oxygen and liquid nitrogen "cluster tank" project over CB&I. The tanks were built in Rossford, Ohio. Matrix finished the work on time and to the satisfaction of Praxair. (Newmeister, Tr. 2174-75).

5.46 After Matrix's successful completion of its first cryogenic tanks, Matrix sought additional opportunities in the cryogenic market. In 1998, Praxair again hired Matrix to build a LIN/LOX tank in Delaware City, Delaware. Matrix was awarded the Delaware City tanks in 1998 over CB&I and completed the project on time. Praxair was again satisfied with Matrix's performance. (Newmeister, Tr. 2176-77).

iii. Matrix successfully constructed four LIN/LOX tanks and other types of cryogenic tanks

5.47 Matrix has successfully constructed four LIN/LOX tanks in the United States. (Newmeister, Tr. 2213-14).

5.48 Matrix built two LIN/LOX tanks for Praxair in Delaware City, Delaware, in 1998. (Newmeister, Tr. 2173; 2176-77). Matrix was awarded the Delaware City LIN/LOX project in 1998 over CB&I and it completed the project on time. Praxair was satisfied with Matrix's performance. (Newmeister, Tr. 2176-77).

5.49 In 2000, Matrix was awarded a LAR tank for Praxair in East Chicago. Once again, Matrix successfully completed construction of the project to the satisfaction of Praxair. Praxair was satisfied with the construction and the project was erected on schedule. (Newmeister, Tr. 2173; 2176-77).

5.50 Also in 2000, Matrix was awarded a LIN tank by Air Products for a project in Kingsport, Tennessee. Matrix completed the Kingsport project on schedule and to the satisfaction of

Air Products. Air Products awarded the tank to Matrix over CB&I and PDM, despite the fact that Matrix had never built a tank for Air Products before. (Newmeister, Tr. 2173-74).

iv. Matrix is a serious competitor in the LIN/LOX market

5.51 Matrix is a competitive force in the LIN/LOX market and has current work experience with Praxair and Air Products. With experience and good recommendations from its customers Matrix believes it can become an even stronger competitor in the market. (Newmeister, Tr. 2166-67).

5.52 Matrix believes that the Acquisition of PDM has given it opportunities in the market for low temperature and cryogenic storage tanks. (Newmeister, Tr. 2182-83). Matrix currently has three bids outstanding on LIN/LOX tanks for two different customers. (Newmeister, Tr. 2178).

v. LIN/LOX customers believe Matrix is a viable competitor

5.53 Air Liquide has solicited bids from Matrix on at least two projects, Freeport and Longview, Texas. Air Liquide is unaware of any failure or problems in LIN/LOX tanks constructed by Matrix. (Kamrath, Tr. 2005-06).

5.54 Air Products has informed CB&I that they consider Matrix to be "a player in the [LIN/LOX] market" and certainly consider them to be a "viable competitor." (RX 273).

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c. Chattanooga Boiler

i. CB&T is an experienced tank construction company capable to building LIN/LOX tanks

5.56 CB&T has constructed tanks and structures significantly more difficult to build than LIN/LOX tanks. CB&T estimates that some of the structures they have built are 20 times more difficult than a LIN/LOX tank. (Stetzler, Tr. 6337-39). CB&T builds flat bottom, API 650 storage tanks, API 620 storage tanks, and low pressure tanks. They also build ASME pressure spheres which are vacuum tanks. (Stetzler, Tr. 6308-09). CB&T has built smaller LNG tanks for customers such as Lotepro and Nikkiso. (Stetzler, Tr. 6331-34). CB&T has also been awarded a contract to build an entire hydrogen plant by BOC. (Stetzler, Tr. 6347-49).

5.57 CB&T's experience building LNG tanks translates to CB&T's ability to build LIN/LOX tanks. For example, the ability to fabricate components in a clean environment and the ability to weld materials of certain quality are skills used in the fabrication of both types of tanks. (Stetzler, Tr. 6336-37).

5.58 There is no question CB&T has the ability to design and build a field-erected LIN/LOX tank because constructing a field-erected LIN/LOX tank is not particularly difficult (Stetzler, Tr. 6312-13).

ii. CB&T has the facilities, equipment, and personnel necessary to construct LIN/LOX tanks

5.59 CB&T has its own fabrication facility with all the necessary equipment to fabricate a field-erected LIN/LOX tank. (Stetzler, Tr. 6314-16). CB&T purchased "quite a bit of equipment" from ITEQ/Graver when it went out of business in 1999. (Stetzler, Tr. 6317-18). CB&T has also hired two former Graver employees and opened an office in Houston, TX in order to expand into the oil market as well as the LIN/LOX market. The office is also positioned to promote CB&T in the Houston area. (Stetzler, Tr. 6318-19; RX 273). Specifically, Rex Robinson was a senior Graver project manager with experience in building LIN/LOX tanks and dealing with LIN/LOX tank customers. (Stetzler, Tr. 6317-19; *see also* RX 273). Robinson now works for CB&T as Manager of Texas Operations. (Stetzler, Tr. 6320). Robinson's past experience as a LIN/LOX project manager and familiarity with LIN/LOX sales has enabled CB&T to use much of Graver's experience with LIN/LOX tanks in order to promote CB&T's experience in the cryogenic tank market. (Stetzler, Tr. 6319-20).

5.60 CB&T currently employs individuals who are capable of building a LIN/LOX tank. In fact, those individuals have specific experience building LIN/LOX tanks. (Stetzler, Tr. 6319). CB&T has 8-10 people who have LIN/LOX experience as salesmen, project managers, welding superintendents, and welders and have constructed LIN/LOX tanks. (Stetzler, Tr. 6320-21).

5.61 Thirty to 40 percent of CB&T employees have worked for CB&I at some point. (Stetzler, Tr. 6322). Twenty-five to thirty individuals who work for CB&T have worked for PDM. (Stetzler, Tr. 6322-23).

5.62 CB&T has the requisite field crews to construct a field-erected LIN/LOX tank. (Stetzler, Tr. 6323). CB&T has access to welders who can fabricate a LIN/LOX tank. (Stetzler, Tr. 6325-27). CB&T opened its Houston, TX sales and construction office in 1999 to expand its presence into markets such as LIN/LOX. (Stetzler, Tr. 6380).

5.63 CB&T has a fabrication facility which has equipment such as plate-burning equipment, plate-forming equipment, machining equipment, welding equipment for field-erected tanks, turning rolls, positioning devices, etc. (Stetzler, Tr. 6384-85).

5.64 CB&T has bonding capacity which exceeds tens of millions of dollars and is more than adequate to bond and build field-erected LIN/LOX tanks.. (Stetzler, Tr. 6385-87; 6391).

5.65 CB&T's employees are knowledgeable about how to build tanks to withstand low temperatures and involve insulation. (Stetzler, Tr. 6388-90). CB&T has sufficient equipment and technical expertise to compete for jobs involving field-erected LIN/LOX tanks, vacuum chambers, or field-erected LPG tanks. (Stetzler, Tr. 6393).

iii. CB&T believes that it has competitive advantages over CB&I

5.66 CB&T has superior quality crews with productivity as good as or better than most of CB&T's competitors. Reasons for this conclusion include CB&T's high retention rate, good safety record, good quality record, and reputation. (Stetzler, Tr. 6324:20-6325:17). CB&T competes with CB&I for industry safety awards and has beaten CB&I in several different years. (Stetzler, Tr. 6329).

5.67 CB&T has competitive advantages over CB&I. CB&T is a smaller company better able to respond to certain jobs, CB&T has a lower overhead structure, and CB&T can respond to immediate market conditions more quickly and efficiently than CB&I. Moreover, CB&T may be able to purchase materials closer to market price than CB&I. (Stetzler, Tr. 6369). Further, CB&T has more experienced personnel than CB&I. (Stetzler, Tr. 6370-73).

iv. CB&T has been actively competing for LIN/LOX projects

5.68 CB&T believes it has new opportunities created by CB&I's Acquisition of PDM. CB&T plans to take advantage of these opportunities. For example, PDM was removed from customers' suppliers lists and that gives a new company, such as CB&T, the opportunity to take PDM's place. (Stetzler, Tr. 6367-68).

5.69 CB&T bid on LIN/LOX tanks for BOC in Midland, North Carolina, because CB&T is interested in winning contracts in the LIN/LOX market and it saw a potential opportunity in light of the Acquisition. (Stetzler, Tr. 6347; 6350-51; 6368).

5.70 CB&T also submitted a budgetary proposal to MG for a field-erected LIN/LOX tank in Johnsonville, TN. (Stetzler, Tr. 6351). The bid submitted to MG for Johnsonville was a budgetary figure or an estimate in the range of plus or minus 10 percent. (Stetzler, Tr. 6351-52). In order to give a firm fixed price a supplier would have to be familiar with site conditions, site access, soil conditions, etc. CB&T did not review these factors for the Johnsonville bid. (Stetzler, Tr. 6352-53)

5.71 CB&T has also been visiting LIN/LOX customers such as Air Products to discuss future LIN/LOX opportunities. (RX 273).

4. CB&I Believes The New LIN/LOX Entrants Are Formidable Competitors

5.72 CB&I believes that AT&V, Matrix, and CB&T are all capable of designing, executing, and offering competitive pricing on LIN/LOX projects. CB&I takes this into account when it prices LIN/LOX projects. (Scorsone, Tr. 4878-79) (state of mind). CB&I believes that CB&T, Matrix, and AT&V are competitors because LIN/LOX customers believe that these companies are "viable competitors in the LOX/LIN market." (RX 273).

5.73 CB&I believes that CB&T is very capable of building LIN/LOX tanks as a result of their ability to work with stainless steel. (Scorsone, Tr. 4877-78) (state of mind). CB&T has picked up enough experienced LIN/LOX personnel from Graver to give them "credibility" in the LIN/LOX market. (RX 273).

5.74 CB&I first became aware that AT&V had entered the LIN/LOX market and was a competitor when AT&V was awarded a LIN/LOX project by BOC in Midland, North Carolina. (Scorsone, Tr. 4878) (state of mind).

5.75 Matrix has already performed well for LIN/LOX customers and is definitely "a player in the [LIN/LOX] market." (RX 273).

5. CB&I Has Lost All Three Of The Post-Acquisition Projects It Has Bid Against To AT&V

5.76 CB&I attempted to compete against AT&V on three of the competitively bid projects and lost to AT&V each time. CB&I has yet to win a LIN/LOX project when AT&V was a competitor bidding on the project. Every time CB&I has gone up against AT&V for a LIN/LOX project, it has lost. (Scorsone, Tr. 5018).

5.77 Since CB&I's Acquisition of PDM in 2001, only five LIN/LOX projects have been awarded by LIN/LOX customers. Only two of those projects have been awarded to CB&I. (Scorsone, Tr. 5015-16). The five LIN/LOX projects that have been awarded since the Acquisition are Midland, North Carolina (BOC), Hillsboro, Oregon (BOC), Freeport, Texas (Air Liquide), New Johnsonville, Tennessee (MG Industries), and Kirkland, New Mexico (Praxair). (Scorsone, Tr. 5017).

5.78 Only four of the five post-Acquisition LIN/LOX projects were competitively bid. (Scorsone, Tr. 5017). Of the four competitively bid projects, AT&V bid on three and won all three. (Scorsone, Tr. 5018).

6. LIN/LOX Customers Actively Involved In The LIN/LOX Market Today Are Satisfied With The Prices Received And Available Competitive Options

5.79 There are six customers that purchase LIN/LOX tanks: Air Liquide, Air Products, BOC, Linde, MG Industries and Praxair. (V. Kelley, Tr. 4591; Patterson, Tr. 342-43).

5.80 Air Liquide, BOC, MG Industries and Praxair have been active in the post-Acquisition LIN/LOX market and have each awarded a project. (Scorsone, Tr. 5015-16). Air Products and Linde have not awarded a LIN/LOX project since 1998 and 1999 respectively, do not have any current plans for LIN/LOX projects and do not forsee any in the near future. (Kistenmacher, Tr. 827-28; Hilgar, Tr. 1505-07; 1532-33).

5.81 LIN/LOX tank customers are sophisticated consumers. BOC is an experienced purchaser of LIN/LOX tanks and has the expertise to help develop new suppliers of LIN/LOX tanks. For example, BOC hired engineering consultants to assist it and AT&V in working through the Midland project. (V. Kelley, Tr. 4619-20).

5.82 MG Industries is also a sophisticated customer. MG has experience purchasing LIN/LOX tanks in the past; it purchased 14 such tanks during the 1990s. (Patterson, Tr. 478-79). MG also uses aggressive negotiation tactics in order to manipulate vendors into dropping tank prices. For example, during the 1990s, MG would often drive tank costs down by informing vendors that they were higher-priced (even though they were not). (*See* Patterson, Tr. 350).

5.83 Air Liquide is also a sophisticated customer. As the U.S. subsidiary of a large French corporation, Air Liquide is experienced at purchasing LIN/LOX tanks both domestically and overseas. (*See* Kamrath, Tr. 1979-80, 1983-85). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

5.84 Air Products is a sophisticated customer. Air Products purchased several field-erected LIN/LOX tanks during the 1990s, both in the U.S. and overseas. (*See* Hilgar, Tr. 1390-91).

5.85 Linde is a sophisticated customer, although not currently active in the LIN/LOX market. Linde is a U.S. subsidiary of a large German corporation and has extensive experience with LIN/LOX tanks in the U.S. and overseas. (*See* Kistenmacher, Tr. 822-23; 830).

5.86 Praxair is a sophisticated customer. At one time, Praxair owned CB&I in its entirety. (*See* Glenn, Tr. 4062-63). Praxair negotiated a sole-source partnership agreement with PDM which was renewed by CB&I prior to the Acquisition. (*See* Scorsone, Tr. 5018-19).

i. BOC

(a) Midland, North Carolina

5.87 In 2000, BOC solicited bids for the Midland, North Carolina, LIN/LOX project from PDM, CB&I, AT&V and Chattanooga Boiler & Tank. (V. Kelley, Tr. 4598; Scorsone, Tr. 5024-25; RX 273). BOC awarded the contract for both tanks at Midland to AT&V. (V. Kelley, Tr. 4599; Scorsone, Tr. 5024; RX 273).

5.88 The BOC Midland project was a gas supply site for a Corning plant located adjacent to the BOC property. The Midland site also produced liquid gases for sale to the open market. The project included the construction of one LIN and one LOX tank that are typical in terms of the size of tanks that BOC usually purchases. (V. Kelley, Tr. 4596-97).

5.89 There were many other components to the Midland project other than the LIN/LOX tanks. (V. Kelley, Tr. 4633). The LIN/LOX tanks on the Midland project represented approximately 3 percent of the total cost of the entire project. (V. Kelley, Tr. 4665). The Midland facility was constructed in 20-22 months and the LIN/LOX tanks were built in approximately 12 months. (V. Kelley, Tr. 4633-34).

(1) Pre-qualification and bid process

5.90 Victor Kelley was the manager of construction contracts for the Midland project. Kelley directed the project manager, Scott Colby, to solicit bids for the LIN/LOX tanks. (V. Kelley, Tr. 4597-98).

5.91 BOC performed its due diligence for all tank suppliers in order to ensure that the provider they selected was a safe company. (V. Kelley, Tr. 5282). Scott Colby led the team in charge of pre-qualifying AT&V as a tank supplier for BOC. (V. Kelley, Tr. 5282-83). BOC's technical team on the Midland project took a concerted effort to interview AT&V and determined that AT&V was capable of constructing the project. (V. Kelley, Tr. 4666-67). There is no one factor that would cause BOC to reject a potential tank supplier, BOC collected all of the information and reviewed each piece when making a decision on a new supplier. (V. Kelley, Tr. 4661-62).

5.92 BOC solicited bids for the Midland LIN/LOX tanks in 2000 from PDM, CB&I, AT&V, and Chattanooga Boiler & Tank. (V. Kelley, Tr. 4598-99). BOC used historical records in order to select the companies to solicit bids from. (V. Kelley, Tr. 4598-98).

5.93 When soliciting bids for the Midland project, BOC determined who it would solicit bids from by looking at its historical records. Those companies that had worked for BOC recently were not required to fill out any additional paperwork. Those companies that had not worked for BOC recently were required to complete a standard AIA (American Institute of Architects) form (V. Kelley, Tr. 4604-06). BOC uses the AIA form to determine if a company is financially stable. (V. Kelley, Tr. 4629-30).

5.94 BOC believes that it can get a competitive price for a LIN/LOX tank with two bidders. (V. Kelley, Tr. 5285). It does not want as many as practical because it would flood the bid process and some contractors would chose not to bid because there were too many bidders. BOC believes that the four bids it had on the Midland project was a good number of bidders. (V. Kelley, Tr. 4674-75).

(2) BOC awarded the project to AT&V and was satisfied with the price

5.95 BOC awarded the contract for both tanks in Midland to AT&V. (V. Kelley, Tr. 4599). AT&V was awarded the project on a turn-key basis. (V. Kelley, Tr. 4608-09).

5.96 BOC awarded the Midland project to AT&V because of "low cost." (V. Kelley, Tr. 4599-600). BOC was satisfied with AT&V's price on the Midland LIN/LOX tanks because it was below BOC's budget. (V. Kelley, Tr. 5272; 4600-01). AT&V's selection for the Midland LIN/LOX project was "based on low price." (V. Kelley, Tr. 5282).

(3) AT&V built LIN/LOX tanks to BOC's satisfaction

5.97 BOC was satisfied with AT&V's performance in correcting problems on the Midland project in a timely manner. (V. Kelley, Tr. 5287). BOC's project manager on the Midland project specifically mentioned that he was satisfied with AT&V's efforts in correcting a problem that occurred during the project. (V. Kelley, Tr. 5268).

5.98 There were a few minor scheduling problems on the project due to rescheduling that occurred by BOC, BOC's construction of the foundation, and other problems from BOC. However, there were no schedule delays as a result of any work performed by AT&V. (Cutts, Tr. 2520-21).

5.99 AT&V experienced an issue with some plate buckling on the project site, but the problem was corrected to BOC's satisfaction. (V. Kelley, Tr. 4600). AT&V was "very accommodating in correcting" the problem that occurred with the plate buckling. (V.

Kelley, Tr. 5284). The plate buckling that occurred on the Midland project is something that can easily happen on a tank project. (V. Kelley, Tr. 5287-88).

5.100 The pipe looping is located in the interstitial space, or the space between the liquid storage tank and the outer shell. (V. Kelley, Tr. 5277). The design of the piping is done by the tank supplier but requires specifications and information from the customer. (V. Kelley, Tr. 5277-78).

5.101 BOC was satisfied with AT&V's performance of the pipe looping. (V. Kelley, Tr. 5290-91). BOC does not know who was responsible for the pipe looping difficulties, BOC or AT&V, but cited the problems as an example of how the project team worked together to solve the problems. (V. Kelley, Tr. 5269-71; 5293-94). BOC was satisfied with AT&V's performance in correcting the pipe lopping issue and believes it is an example of "strength in terms of the two companies working together to overcome an issue." (V. Kelley, Tr. 5293-94).

5.102 AT&V believes that someone began a rumor that there were problems with the AT&V's piping in Midland, North Carolina. AT&V testified that BOC changed its mind during the process and AT&V had to redesign a few things but when it was done the piping was "flawless." (Cutts, Tr. 2380; 2490-91). AT&V believes that the rumors about its alleged difficulty with pipe looping began as a result of questions that were being asked by the FTC in depositions with its customers and competitors. (Cutts, Tr. 2526-28).

5.103 AT&V does not believe that the rumors about problems with its piping on the BOC project are true due to the fact that the rumor began very recently, did not come from BOC, and since BOC has not requested that AT&V perform any repair or modifications on the tanks. Additionally, BOC has asked AT&V to replicate its piping on a future project, so AT&V does not believe there were any problems with its piping. (Cutts, Tr. 2553-55).

5.104 AT&V believes that the piping the BOC project was flawlessly performed. There were a few problems with the insulation that BOC installed that had to be corrected by AT&V. (Cutts, Tr. 2529-30).

5.105 At the conclusion of the project, BOC did not tell AT&V that there were any problems with the pipe looping. There were no safety issues, no leaks and no problems on the BOC project that have caused other customers to not consider AT&V for LIN/LOX construction. (Cutts, Tr. 2532-33).

5.106 AT&V successfully re-engineered the LIN tank during the project because BOC had changed the pressure requirements. AT&V had to go back to the early calculations and perform some adjustments. BOC gave AT&V $70,000 in order to cover the additional cost as a result of the pressure change. (Cutts, Tr. 2409; 2515-16; 2531-32). Other than accommodating the change in pressure, AT&V did not need to re-engineer any other specific portion of the project. (Cutts, Tr. 2409-10).

5.107 The Midland facility was functioning on time, passed the hydro test and is currently in operation. (V. Kelley, Tr. 4609).

5.108 BOC "was satisfied with the price" it received on the field erected LIN/LOX tanks at Midland and "BOC is satisfied with the work that AT&V did at Midland." (V. Kelley, Tr. 5285). BOC "was quite satisfied [with AT&V] in all aspects." (V. Kelley, Tr. 5287).

5.109 The turnover package, which was provided at the conclusion of the Midland contract, by AT&V was good. (V. Kelley, Tr. 5283-84). AT&V's "turnover package was quite good." (V. Kelley, Tr. 5289).

5.110 BOC "was satisfied with both [AT&V's] execution of the contract and the execution of their schedule" and "was satisfied with the approach that they took and to meeting the various time lines that they had stated." (V. Kelley, Tr. 5288).

5.111 BOC did not make any negative comments regarding the equipment or materials used by AT&V, or the supervision on the project. (V. Kelley, Tr. 5288-89). AT&V "adequately supervised the job." (V. Kelley, Tr. 5289). AT&V used its traditional site supervision of one field supervisor, one construction manager, one pusher, and one foreman on site at the BOC Midland project. (Cutts, Tr. 2513-14). BOC does not have any negative comments with respect to AT&V's on-site supervision. BOC believes that AT&V adequately supervised the project. (V. Kelley, Tr. 5269).

5.112 AT&V's estimates on the BOC project fell within a few percent of its actual costs on the project. (Cutts, Tr. 2517-18).

(4) BOC would and is using AT&V again

5.113 Based upon AT&V's performance on the Midland project, BOC would hire AT&V again on its next LIN/LOX project. (V. Kelley, Tr. 4601). BOC would certainly use AT&V again and testified that "[i]n terms of another job if BOC was going to procure a LIN/LOX tank, certainly they [AT&V] have distinguished themselves as being capable LIN/LOX tank providers." (V. Kelley, Tr. 5281-82). BOC did not place any conditions or restrictions on its opinion that it would certainly use AT&V again. (V. Kelley, Tr. 5292-93).

5.114 BOC Process Plant provided a reference for AT&V to Tony Bradshaw from BOC Edwards and "stated that [BOC] would use AT&V again." (V. Kelley, Tr. 5289-90).

5.115 AT&V believes that they were awarded a LIN/LOX project by Air Liquide as a result of BOC's satisfactory comments. (Cutts, Tr. 2523). BOC has indicated a desire to work with AT&V in the future and has used BOC as a reference. AT&V believes that BOC's reference has aided AT&V in securing additional LIN/LOX projects. (Cutts, Tr. 2552-53).

(b) Hillsboro, Oregon

(1) BOC Edwards division solicited pricing for a project in Oregon

5.116 BOC Edwards solicited pricing for a LIN tank in Hillsboro, Oregon, and awarded the project to AT&V. (V. Kelley, Tr. 5291-92; RX 813). BOC Edwards Division, a branch of BOC that works in the electronics industry, solicited bids for a LIN tank in Hillsboro, Oregon. (V. Kelley, Tr. 4601). CB&I submitted budget pricing for a BOC LIN/LOX project in Hillsboro, Oregon. (Scorsone, Tr. 5031).

5.117 The LIN tank for BOC Edwards is planned to be constructed in Hillsboro, Oregon, and will be of similar size to the tanks AT&V previously built in Midland. The Edwards division believed they could achieve a cost savings by duplicating the engineering from the Midland LIN tank. (V. Kelley, Tr. 4602-03).

(2) BOC Edwards awarded the project to AT&V

5.118 BOC Edwards has selected AT&V to construct a LIN tank in Hillsboro, Oregon. (V. Kelley, Tr. 5291-92; RX 813). BOC Edwards signed a letter of intent with AT&V for the construction of a LIN tank in Hillsboro, Oregon. (V. Kelley, Tr. 4603-04; RX 813). BOC Edwards signed the letter of intent with AT&V for the Hillsboro LIN tank because "AT&V had the low bid." (V. Kelley, Tr. 5292; RX 813).

5.119 AT&V believes that BOC will request that AT&V perform the Hillsboro project on more of a turnkey basis because BOC managed certain aspects of the Midland project which had problems or caused delays. (Cutts, Tr. 2407).

5.120 CB&I never had an opportunity to submit a firm fixed bid to BOC for the Hillsboro job because BOC decided to award the project to AT&V. (Scorsone, Tr. 5031). CB&I believes that CB&I was not solicited additional pricing for the Hillsboro BOC project because AT&V and BOC negotiated some type of deal between themselves. (Scorsone, Tr. 5032) (state of mind).

5.121 Since AT&V has been awarded a second LIN/LOX tanks by BOC, CB&I believes that BOC was pleased with AT&V's performance on the first project. (Scorsone, Tr. 5032) (state of mind).

ii. Air Liquide

(a) Freeport, Texas

5.122 In 2001, Air Liquide solicited bids for a LIN/LOX project in Freeport, Texas. AT&V, CB&I, Matrix and BSL bid on the project. (Cutts, Tr. 2569; Scorsone, Tr. 5032; RX 627 at 2). AT&V was awarded the project. (Kamrath, Tr. 2006; Scorsone, Tr. 5017).

(1) Air Liquide awarded AT&V the project because they were the low bidder

5.123 Air Liquide used the competition between the bidders on the Freeport project in order to apply pressure to the tank companies and receive better pricing. (Kamrath, Tr. 1993; RX 627 at 2).

5.124 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX**

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5.125 **[XXXXX XXXXX]**

(2) Air Liquide awarded the project to AT&V as a result of their earlier success with BOC

5.126 Air Liquide told AT&V that they would not be awarded any work unless AT&V could establish a track record in the construction of LIN/LOX tanks. (Cutts, Tr. 2354). Air Liquide told AT&V that they would need to construct one LIN/LOX tank in order to be considered by Air Liquide for a LIN/LOX project. (Cutts, Tr. 2466).

5.127 Air Liquide specifically looked at AT&V's first project with BOC and told AT&V that if they successfully constructed the LIN/LOX tanks for BOC, they would be considered by Air Liquide for future projects. AT&V believes their success on the BOC Midland project lead to them being awarded the Freeport project by Air Liquide. (Cutts, Tr. 2467-68; 2523).

(3) CB&I lost project to AT&V despite lowering its price to 0% margin

5.128 CB&I originally bid the Freeport, Texas project at a 2% profit margin. (Scorsone, Tr. 5032-33). Scorsone received an email from Steve Knott indicating that CB&I would need to lower its price in order to have a chance at being awarded the project. (Scorsone, Tr. 5033-34) (RX 627 at 2).

5.129 CB&I was told by Air Liquide that it was in a "competitive situation" on the Freeport project and was competing against three other bidders for the project. (RX 627 at 2). Air Liquide was "attempting to soften [CB&I] up in order to extract better pricing" by telling CB&I about the other tank vendors competing for the project as well as proving CB&I with "negative feedback" about some problems that Air Liquide had with CB&I's recent performance on another project for Air Liquide. (RX 627 at 2).

5.130 Scorsone was informed that "in order to get both jobs, it may be necessary to go to 0% margin" on the project. (RX 627 at 2). As a result of the email, Scorsone authorized Knott to drop the margin on the Freeport project to 0%. (Scorsone, Tr. 5033-35) (RX 627 at 2). Despite going to a 0% margin on the Freeport project, CB&I lost the job to AT&V. (Scorsone, Tr. 5034-35).

(4) Air Liquide and AT&V business dispute

5.131 CB&I learned that Air Liquide is dissatisfied with AT&V's performance on the Freeport project thus far. (Scorsone, Tr. 5036) (state of mind). Scorsone believes that AT&V is dealing with the contractual issues with Air Liquide and may in the end decide that this is a project they do not want to pursue. (Scorsone, Tr. 5038) (state of mind).

5.132 Business disputes on tank projects are common practice in this industry. (Scorsone, Tr. 4834). Often, business disputes associated with field-erected tanks stem from the interpretation of specifications, schedule delays, and the contractor's performance. (Scorsone, Tr. 4834-35). Misunderstandings over specifications can also be the source of a business dispute during projects. (Scorsone, Tr. 4835).

5.133 It is not an uncommon occurrence for a customer to demand that a company perform work in a manner that was different than what was assumed at the time of a bid.

(Scorsone, Tr. 4836). PDM had disagreements with customers relating to the type of pricing requested by customers. (Scorsone, Tr. 4835). PDM also had arguments with customers over the scope of specifications. This is a common occurrence. (Scorsone, Tr. 4835-36).

5.134 The price is the most important factor to a customer when evaluating a bid for a tank. (Scorsone, Tr. 4837). In fact, customers are still likely to award future work to a company after disputes over the performance of a project if they bid the low price. (Scorsone, Tr. 4837). Business disputes are typically resolved either by agreement or through dispute resolution. (Scorsone, Tr. 4836).

5.135 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

(i) Air Liquide is a demanding customer

5.136 CB&I believes that Air Liquide is a very difficult and demanding customer, therefore, if they awarded a project to AT&V, it certainly adds credence and credibility to the fact that AT&V is a capable LIN/LOX tank supplier. (Scorsone, Tr. 5035-36) (state of mind).

5.137 CB&I believes that in comparison to other LIN/LOX customers, Air Liquide is a difficult company to work with because they ask for more appurtenances, they require specific standards for their piping systems, and at times have difficulty defining exactly what they want and therefore make changes during the project. (Scorsone, Tr. 5037) (state of mind).

5.138 **[XXXXX XXXXX]**

(ii) Even CB&I had difficulty with the specifications on the project

5.139 CB&I's salespeople were frustrated with the specifications provided by Air Liquide during the bidding process on the Freeport project due to Air Liquide's inability to define exactly what they wanted to be priced. (Scorsone, Tr. 5037). CB&I's salespeople requested a meeting with Air Liquide to discuss the details of the Freeport project to insure that CB&I was bidding the appropriate scope of the project. (Scorsone, Tr. 5038). Scorsone does not believe that Air Liquide ever met with CB&I to discuss the details of the project. (Scorsone, Tr. 5038).

(iii) Air Liquide has asked if CB&I would be interested in taking over the contract

5.140 CB&I learned of Air Liquide's dissatisfaction with AT&V because Air Liquide called CB&I to inquire if it would be willing to take over the Freeport project. (Scorsone, Tr. 5036). CB&I informed Air Liquide that is currently unwilling to take over the Freeport contract because due to the risk and difficulty that is involved in assuming a contract. (Scorsone, Tr. 5036). CB&I generally does not take over contracts from another company due to the problems that can occur. (Scorsone, Tr. 5036).

(iv) AT&V is technically capable of constructing LIN/LOX tanks

5.141 **[XXXXX XXXXX**

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5.142 Air Liquide's dissatisfaction with AT&V's performance on the Freeport project does not effect CB&I's state of mind regarding AT&V's ability to compete against CB&I because even CB&I was confused by the Freeport project specifications so it was only natural that AT&V was having difficulties as well. (Scorsone, Tr. 5038) (state of mind).

5.143 The current business dispute between AT&V and Air Liquide will not inhibit Air Liquide from accepting bids from AT&V in the future because Air Liquide allowed Graver/ITEQ to continue to bid on LIN/LOX projects despite its deteriorating track record and performance. (Kamrath, Tr. 2004-05).

b. Cleve Fontenot has no knowledge of the post-acquisition lin/lox market

5.144 Fontenot left Air Liquide on July 1, 2001. (Fontenot, Tr. 2012). Fontenot has not kept up to date current or potential suppliers on LIN/LOX tanks in the United States. (Fontenot, Tr. 2032). Fontenot is not aware of current market conditions. (Fontenot, Tr. 2032). Fontenot has no knowledge of which companies Air Liquide has currently pre-qualified or permits to bid for the supply of field-erected LIN/LOX tanks. (Fontenot, Tr. 2033).

c. MG Industries

i. Low price is the overarching consideration

5.145 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

5.146 **[XXXXX XXXXX**

XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]

5.147 MG purchasing theory holds that if a buyer "gets at least three bids for a LIN/LOX tank that supplier has a very good chance of getting the lowest or getting a competitive low price." (Patterson, Tr. 348). MG uses aggressive negotiating tactics to receive lower prices on its tanks. (Patterson, Tr. 350).

5.148 **[XXXXX XXXXX]**

ii. New Johnsonville, Tennessee

5.149 **[XXXXX XXXXX]**

5.150 The only competitively bid LIN/LOX project that CB&I has been awarded since the Acquisition is a project for MG Industries in New Johnsonville, Tennessee. (Scorsone, Tr. 5022-23). CB&I competed against Matrix and CB&T for the MG Industries project in New Johnsonville, Tennessee. AT&V did not compete for this project. (Scorsone, Tr. 5023).

(a) CB&I lowered its original bid price after receiving pressure from MG Industries

5.151 CB&I originally bid the MG Industries project at a 4 percent profit margin. (Scorsone, Tr. 5023). After discussions with the MG Industries where CB&I was informed that its price was too high, CB&I reduced their margin on their price submission. (Scorsone, Tr.

5023). CB&I lowered its price on the MG Industries project in response to their perception of the competition on the project as well as the customers comments made during negotiation. (Scorsone, Tr. 5023-24).

5.152 CB&I believed MG Industries when it told CB&I that its price was high and subsequently lowered its price because CB&I knew that if it did not respond, MG Industries would have gone and negotiated with another supplier. (Scorsone, Tr. 5024).

5.153 **[XXXXX XXXXX]**

5.154 **[XXXXX XXXXX]**

5.155 **[XXXXX XXXXX**

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5.156 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

(b) MG was pleased with the price it received

5.157 **[XXXXX XXXXX]**

5.158 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

(c) It is difficult to make any conclusions regarding higher initial bids submitted by other competitors

5.159 **[XXXXX XXXXX]**

5.160 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

iii. Westlake, Louisiana

5.161 **[XXXXX XXXXX]**

5.162 **[XXXXX XXXXX]**

5.163 **[XXXXX XXXXX]**

5.164 **[XXXXX XXXXX]**

iv. Praxair - Kirkland New, Mexico

5.165 CB&I was awarded a LIN/LOX project by Praxair in Kirkland, New Mexico pursuant to the partnering agreement. (Scorsone, Tr. 5019-20).

5.166 PDM entered into an alliance agreement with Praxair which obligated Praxiar to awarded non-union LIN/LOX tank projects to PDM, and PDM was obligated to construct the projects at a 4 percent margin level. (Scorsone, Tr. 5018-19; RX 87 at 4). In 2001, PDM and Praxair agreed to renew the agreement for another three years. (RX 87 at 2). The partnering agreement between Praxair and PDM was transferred to CB&I after the Acquisition. (Scorsone, Tr. 5019).

v. Air Products

(a) Air Products has not bid a LIN/LOX tank since 1998

5.167 Air Products has not competitively bid a LIN/LOX tank since 1998 in Baytown, Texas, and has no need in the foreseeable future for a LIN/LOX tank. (Hilgar, Tr. 1505-07; 1532-33).

5.168 Due to a lack in demand, Air Products has admitted to not being up to date on the companies currently capable of constructing a field erected LIN/LOX/LAR tanks. (Hilgar, Tr. 1505-07; 1532-33). Air Products is only generally aware of tanks awarded by its competitors, BOC, Praxair, and MG. (Hilgar, Tr. 1509-10).

(b) Air Products believes they there are a sufficient number of competitors in the LIN/LOX market to receive a competitive price

5.169 Air Products believes there are a sufficient number of competitors in the market to ensure that it will receive reasonable prices on its next project. (Hilgar, Tr. 1540-41). Air Products testified that although it an obtain competitive pricing with only two bids, it believes it has more potential bidders for pre-qualification today than it has had in the past. (Hilgar, Tr. 1531-32, 1540).

5.170 Air Products believes entry into the LIN/LOX market is easy because any company in the business of constructing industrial storage tanks would require only minimal investment to have the capability to construct LIN/LOX/LAR storage tanks. (Hilgar, Tr. 1538-39). If market conditions change and a substantial demand for LIN/LOX/LAR tanks reemerges, existing tank construction companies could easily seek out opportunities to enter into the LIN/LOX field erected tank construction market. (Hilgar, Tr. 1543-44).

5.171 Air Products is aware that LIN/LOX personnel from Graver are now working for Chattanooga Boiler. If Air Products needed a LIN/LOX tank, it would seek to pre-qualify Chattanooga Boiler. Air Products has no reason the believe the Chattanooga would not pre-qualify. (Hilgar, Tr. 1513).

5.172 Air Products has not sought to pre-qualify AT&V because it currently does not have any need for a LIN/LOX tank. (Hilgar, Tr. 1509-11). If it needed a LIN/LOX tank, Air Products would consider calling BOC for a reference on AT&V and would seek to pre-qualify AT&V. However, Air Products has no reason to believe that AT&V would not qualify under its pre-qualification process and it would likely solicit a bid from AT&V. (Hilgar, Tr. 1509-11).

5.173 Air Products awarded Matrix a LIN/LOX project in 1997 as the low bidder. Matrix successfully completed the project and Air Projects would seek a bid from them if they had another project. (Hilgar, Tr. 1511-13).

5.174 It is beneficial to include a higher priced tank vendor in the bidding process because it places disciplinary pressure on the other bidders. (Hilgar, Tr. 1533-34).

(c) Air Products believes that a break-up of CB&I would harm competition

5.175 Air Products has also commented that if the FTC were to break up CB&I it "would inhibit -- that would be bad for Air Products in the industrial gas business in general." (Hilgar, Tr. 1539-40). Hilgar believes there is some benefit to CB&I and PDM being combined. (Hilgar, Tr. 1540).

vi. Linde

(a) Linde has not competitively bid a LIN/LOX project since 1999

5.176 The most recent LIN/LOX tanks purchased by Linde were in Bozarah, Connecticut and Lincoln Nebraska in 1999. CB&I, PDM, and Graver bid on the tanks in Bozrah and

Lincoln. (Kistenmacher, Tr. 869-70). This was the last time that Linde awarded a LIN/LOX project to a tank contractor. (Kistenmacher, Tr. 827-28; 868-69).

5.177 The total cost of all three tanks at the Lincoln, Nebraska air separation plant was approximately $1 to $1.5 million. (Kistenmacher, Tr. 836).

(b) Linde solicited budget pricing for a proposed project in New Mexico

5.178 In 2002, Linde requested budget pricing for a proposed project located somewhere in New Mexico. (Scorsone, Tr. 5020-21; RX 860 at CB&I 071847). CB&I, AT&V and Matrix each submitted pricing for Linde's proposed New Mexico. (Kistenmacher, Tr. 854). There has been pressure within Linde to use AT&V because "the low price make[s] it very interesting." (Fan, Tr. 1016-18).

5.179 Linde lost the air separation to Praxair, therefore Linde did not pursue the pricing for its proposed project any further than the budget pricing stage. (Scorsone, Tr. 5020).

(c) Dr. Kistenmacher has no knowledge of current LIN/LOX pricing

5.180 Kistenmacher does not personally get involved in reviewing the prices submitted for LIN/LOX tanks. (Kistenmacher, Tr. 926). In fact, when recent pricing was received by Linde, Kistenmacher was in Puerto Rico and was even more disconnected from any knowledge of the prices than usual. (Kistenmacher, Tr. 926-27). Kistenmacher has no personal knowledge of the prices that Linde has received for its proposed LIN/LOX project. (Kistenmacher, Tr. 927).

5.181 Kistenmacher does not know if any of the companies that have purchased a LIN/LOX tanks since the Acquisition have paid higher prices than before the Acquisition. (Kistenmacher, Tr. 928-29). Kistenmacher testified that as a result of a merger, Linde is now a part of BOC. (Kistenmacher, Tr. 921-22; V. Kelley, Tr. 4649-50:7; 4650-51).

However, Kistenmacher was unaware of the fact that BOC has awarded AT&V two LIN/LOX tanks projects in Midland, NC and Hillsboro, OR. (Kistenmacher, Tr. 922).

7. There Is No Evidence Of Post-Acquisition Price Increases On LIN/LOX Tanks

a. [XXXXX XXXXX XXXXX XXXXX XXXXX]

5.182 **[XXXXX XXXXX]**

5.183 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

b. [XXXXX XXXXX XXXXX XXXXX]

5.184 **[XXXXX XXXXX]**

c. Linde - proposed New Mexico project

i. Chung Fan testified that he does not believe CB&I has increased prices

5.185 Chung Fan does not believe that CB&I has raised its prices and stated from what he has seen "their price has been consistent and has not changed . . . ." (Fan, Tr. 1006). Fan told the FTC that he had a "feeling" CB&I's price went up, but was "not sure" and "said that's personal opinion, it doesn't have much value, it's hearsay." (Fan, Tr. 1004). Fan stated that his method was not accurate enough to determine if CB&I's prices went up because he did not have CB&I's metal pricing. (Fan, Tr. 1056).

ii. CB&I submitted a budget price which is not an accurate predictor of actual price

5.186 Fan agreed that CB&I provided him with a budget price. (Fan, Tr. 1063). Fan asked for pricing that was +/- 5% and assumed that CB&I's quotation met his requirements, but he was "not sure" and in fact doubts that CB&I's budget price was within 5 percent of what the actual price for the project would be. (Fan, Tr. 987-88; 1002-03; 1046-47).

5.187 Although Fan requested a plus or minus 5 percent price and received a budget price from CB&I, he did not call CB&I and tell them that they did not submit the price he requested. (Fan, Tr. 1064). Since Fan never spoke with CB&I, the budget price that Fan received from CB&I was not the result of any negotiation and does not take into account any reductions that CB&I may have made as a result of the negotiation process. (Fan, Tr. 1039-40).

5.188 Fan agreed that in submitting a price for a proposed future project CB&I is required to guess at possible material price fluctuations that may occur between the time it submits its price until the project is awarded. (Fan, Tr. 1052).

5.189 Fan stated that approximately 5 months time passes between the time that he requests pricing until a project is awarded. (Fan, Tr. 1051). Fan agreed that materials prices can fluctuate during the time period between when he first receives prices to when he would award a project. (Fan, Tr. 1051). However, Fan stated that it is CB&I's job, not his, to speculate forward on the prices of materials. (Fan, Tr. 1055). Fan stated that it is not his responsibility to account for future fluctuation in materials prices, but rather the job of the vendor and stated "that's their job." (Fan, Tr. 1052).

iii. Chung Fan's analysis is irrelevant

(a) Fan is not qualified to analyze LIN/LOX prices

5.190 Fan does not posses the requisite knowledge, skill, experience, training or education to conduct an analysis of LIN/LOX tank prices. Fan has "never [been] in charge or had responsibility to purchase the LIN/LOX tanks." (Fan, Tr. 951).

5.191 Fan has a masters degree in food technology and chemical engineering. (Fan, Tr. 949; 1028). Fan does not have a degree in statistics or economics. (Fan, Tr. 1028). Although Fan does not have a degree in statistics, Fan determined the statistical significance of his analysis using a statistical method found in a statistics book published by the U.S. Government. (Fan, Tr. 1031).

(b) Fan's analysis was outdated and incomplete

5.192 Fan's analysis was not the product of reliable principles and methods. Prior to April 2002, the time of the New Mexico estimate, Fan had not updated his estimating spreadsheet for approximately two years. (Fan, Tr. 973). Fan stated that he uses the year 1998 as a baseline for his spreadsheet. Fan agreed that the further away from his baseline year of 1998 he gets, the less accurate his estimating attempts become. (Fan, Tr. 1069). Fan stated that his calculations do not account for price changes between the time the project is bid and the time it is awarded because that is not the purpose of his spreadsheet. (Fan, Tr. 1055-56).

5.193 Fan admitted that he is primarily comparing CB&I's New Mexico budget price to a firm fixed price submitted in 1999 by PDM on a tank in Bozarah, Connecticut. (Fan, Tr. 1069-70). Fan admitted that he is attempting to compare the CB&I price, which was not the result of any negotiation, to a PDM price which was the result of significant negotiation. (Fan, Tr. 1069-70).

(c) Fan did not provide CB&I with numerous important details when requesting pricing

5.194 Fan did not tell CB&I where in the state of New Mexico the project was going to be constructed. (Fan, Tr. 1061). Fan did not provide CB&I with the construction schedule. (Fan, Tr. 1073). Fan did not tell CB&I what city the project would be constructed in. (Fan, Tr. 1075). Fan did not tell CB&I the time of the year that the tank would be constructed. (Fan, Tr. 1076). Fan did provide CB&I with any details about the conditions of the project site. (Fan, Tr. 1077). Fan did not provide CB&I with the identity of the end-user. (Fan, Tr. 1078). Fan only provided CB&I with a preliminary nozzle list. (Fan, Tr. 1060). Fan also requested that the pricing for the New Mexico project be submitted within two weeks time. (Fan, Tr. 1062).

5.195 Fan admitted that he did not give CB&I as much information as he would provide during a firm final bid stage. (Fan, Tr. 1078). As a result, the CB&I budget price submission did not contain the following: CB&I's material prices, CB&I's labor prices, the number of estimated labor hours that would be required, their proposed construction schedule, the time of year the tank would be constructed, what city the tank was being built in. (Fan, Tr. 1064-65).

(d) Fan's analysis was not based on sufficient facts or data containing actual cost or quantity information

5.196 Fan admitted that other than the final lump-sum prices, there are no actual numbers in his spreadsheet. (Fan, Tr. 1071-72).

5.197 For all of the other projects listed in his spreadsheet, Fan stated that he has never received LIN/LOX tank drawings that detail the actual quantities of perilite or foamglass. (Fan, Tr. 1034). The drawing provided to Fan by PDM for the Bozrah, Connecticut, project did not include quantities of perilite, foamglass, or concrete. (Fan, Tr. 1036-37). CB&I

did not provide Fan with a drawing when it submitted its budget price for the New Mexico LIN/LOX project. (Fan, Tr. 1043-44).

5.198 In order to perform his analysis when a LIN/LOX tank supplier submits a drawing with its estimate, Fan must calculate for himself the volume or quantity of Perlite (Fan, Tr. 1033), quantity of foamglass (Fan, Tr. 1033-34), and the quantity of concrete (Fan, Tr. 1035-36).

5.199 Fan does not know the quantity of perlite used for any of the tanks in his spreadsheet. (Fan, Tr. 1045). Fan stated that it is very difficult to calculate the amount of Perilite required for a project because it shrinks when the tank is filled with cryogenic fluid. (Fan, Tr. 1045). Fan also stated that it is difficult to geometrically calculate the space between the inner and outer tank and therefore difficult to accurately estimate the amount of perlite insulation required. (Fan, Tr. 1045). In addition to calculating the actual amount, Fan also had to calculate the thickness of the perilite needed for the New Mexico tank. (Fan, Tr. 1047). Despite all of the difficulties in calculation the quantity of perlite, Fan attempts to calculate the quantity of perlite. (Fan, Tr. 1045).

5.200 In order to analyze CB&I's budget price for the New Mexico LIN/LOX project, Fan also had to calculate the thickness of the perlite required for the dome. (Fan, Tr. 1044). However, Fan did not know how to calculate the top radius of the outer tank. (Fan, Tr. 1046).

5.201 Although he attempted to estimate, Fan did not know the actual amount of perlite that CB&I estimated it would need to purchase for the project. (Fan, Tr. 1045).

5.202 Rather than investigating the actual cost of items required in the construction of a LIN/LOX tank, Fan made educated guesses at the prices. Fan did not call up perlite suppliers to determine the current rate for perlite. (Fan, Tr. 1049). Fan did not call the foamglass supplier to determine the current rate for foamglass. (Fan, Tr. 1050). Fan did not call the concrete supplier to determine the current rate for concrete. (Fan, Tr. 1050).

5.203 Fan also did not know the thickness of the metal CB&I intended to use for the New Mexico project and attempted to calculate the metal thickness based upon drawings from other non-CB&I tanks. (Fan, Tr. 1047). In order to calculate the thickness of the metal CB&I planned on using for the New Mexico project, Fan used non-CB&I drawings from a past 300,000 gallon tank and a 400,000 gallon tank and used a number that fell in between because the New Mexico tank was 350,000 gallons. (Fan, Tr. 1047). Fan agreed that not all 400,000 gallon tanks have the same annular space between the inner and outer tanks, therefore he used an old drawing which claimed to have a similar boil-off rate as the tank design quoted by CB&I. (Fan, Tr. 1048).

5.204 Fan does not know what prices CB&I pays for steel. (Fan, Tr. 1051). In order to determine the price of steel, Fan called some "guy" whose name was given to him and asked about the current steel prices. (Fan, Tr. 1050-51).

(e) Linde has not been successful in being awarded air separation projects

5.205 Fan stated that Linde is not very successful in being awarded air separation facilities. (Fan, Tr. 1040-41). One possible reason why Linde has not been successful for air separation facilities is because Fan may be providing incorrect prices when creating a budget for the project. (Fan, Tr. 1042).

5.206 Fan stated that Linde's lack of success in competing for air separation facilities is not due to its prices on equipment which would include LIN/LOX tanks. (Fan, Tr. 1042-43).

iv. Linde/Praxair - Farmington, New Mexico

5.207 CB&I submitted a budget price to Linde for the construction of a LIN/LOX project at the same location as the Praxair project, although CB&I did not know where the Linde project was located when it submitted the budget price. (Scorsone, Tr. 5020). The price that CB&I submitted to Praxair for the LIN/LOX project in Kirkland New Mexico was a firm fixed price. (Scorsone, Tr. 5020).

(a) It is improper to compare the Praxair firm fixed price and the Linde budget price

5.208 It is impossible to compare the budget price that CB&I submitted to Linde for its proposed New Mexico project to the firm fixed price that CB&I submitted to Praxair for the Kirkland project because the budget price did not include significant details for the project including the actual location of the project. (Scorsone, Tr. 5020-21).

(b) The pricing provided to the two companies was for very different tanks with very different specifications

5.209 There are numerous differences between the proposed Linde New Mexico project and the actual Praxair New Mexico project which makes it unable to compare the two prices. (Scorsone, Tr. 5020-21). In contrast to the Linde budget request, Praxair requesting pricing on a more slender tank which resulted in an additional horizontal weld seam as well as required thicker steel throughout the tank. (Scorsone, Tr. 5021).

5.210 The Praxair pricing request also included a full-time welding supervisor, a 50 hour work week, additional subsistence in order to attract field labor, and a more complex nozzle structure. (Scorsone, Tr. 5021-22). As opposed to Praxair who specifically defined the complex nozzle structure they wanted for their tank, Linde did not request pricing on their nozzles to the degree of Praxair. (Scorsone, Tr. 5022).

5.211 Although there are some items, such as perlite insulation, that are not included in the Praxair pricing that are included in the New Mexico, there is approximately $60,000 worth of additional cost items included in the Praxair pricing that were not included in the Linde budget price. (Scorsone, Tr. 5022).

C. COMPETITION ON POST ACQUISITION PROJECTS HAS INFLUENCED CB&I'S STATE OF MIND REGARDING COMPETITION

1. Competition In The LIN/LOX Market Is Intense

5.212 Scorsone state of mind regarding the competition in the LIN/LOX market is that it is very intense and that there are a variety of well established contractors that compete against CB&I. (Scorsone, Tr. 5038-39) (state of mind). CB&I believes that it has "a very hard time competing on [LIN/LOX] tanks." (RX 208) (state of mind).

5.213 The information that Scorsone has received in various emails from his personnel has made Scorsone perceive that the competition in the LIN/LOX market is "intense." (Scorsone, Tr. 5029-30; RX 208; RX 273 at 2) (state of mind).

5.214 "Apparently, these competitors [AT&V and CB&T] have hired expertise that used to work for Brown Minneapolis Tank and Graver Tank. Graver used to be very competitive in these LIN LOX tanks and it sounds like their 'know-how' moved on to another company. Matrix is another recent player in the LIN LOX market, so there are three competitors now to CB&I." (RX 208; Scorsone, Tr. 5029-30) (state of mind).

5.215 Chattanooga Boiler and Tank also believes there are an adequate number of suppliers to ensure competitive prices for LIN/LOX tanks. (Stetzler, Tr. 6366).

2. CB&I Cannot Increase Its Prices On LIN/LOX Tanks

5.216 CB&I does not believe that its Acquisition of PDM has enabled it to increase prices in the LIN/LOX market because it continues to be a "robust competitive environment." (Scorsone, Tr. 4881-82; 5030) (state of mind).

5.217 CB&I believes that if it increases its prices on LIN/LOX tank, it will lose work to its competitors. (Scorsone, Tr. 5030-31) (state of mind). CB&I believes it needs to find ways to cut its prices on LIN/LOX tanks in order to win LIN/LOX projects. (Scorsone, Tr. 5031) (state of mind).

5.218 Chattanooga Boiler and Tank believes that the prices for field-erected LIN/LOX tanks will not be affected by the Acquisition of PDM by CB&I. (Stetzler, Tr. 6366).

D. THERE ARE NO BARRIERS TO ENTRY IN THE LIN/LOX MARKET

1. Subcontracting Is Not A Barrier

5.219 Construction of a LIN/LOX tank does not require a significant number of subcontractors. At most, 10 subcontractors would be required on a project. One area that always requires the use of a subcontractor involves the instillation of the perlite insulation required for a LIN/LOX tank. (Cutts, Tr. 2480-81). AT&V used only three subcontractors for the BOC LIN/LOX project. (Cutts, Tr. 2521-22).

5.220 The engineering, fabrication and field erection of a LIN/LOX tank can be easily subcontracted to an outside company and supervised by a field supervisor. (Hilgar, Tr. 1526-27). A contractor providing turnkey services does not itself build every phase of the project. Many portions can be subcontracted out to other companies for economical reasons and still be categorized as a turnkey project. A turnkey contractor can subcontract parts of the construction process. Subcontracting is often more economical. (Hilgar, Tr. 1537-38).

2. Welding Is Not A Barrier

5.221 People who are able to weld standard flat bottom storage tanks are capable of building LIN/LOX tanks. (Hilgar, Tr. 1520-21). AT&V was able to hire experienced welders merely by placing newspaper ads. (Cutts, Tr. 2427-28).

3. Hiring Of Experienced Sales Staff Is Not A Barrier

5.222 AT&V has been able to easily hire experienced sales personnel. AT&V's current sales staff enabled it to sell the LIN/LOX projects to BOC and Air Liquide. (Cutts, Tr. 2568-69). At present AT&V does not have any salespersons dedicated to the sale of cryogenic tanks, but has three employees who do technical cryogenic sales. (Cutts, Tr. 2424). AT&V has hired former CB&I and Graver employees with cryogenic experience. (Cutts, Tr. 2570-71). AT&V has also employed former CB&I hourly personnel. (Cutts, Tr. 2426-27).

4. Engineering Is Not A Barrier

5.223 AT&V was able to successfully engineer its first LIN/LOX tank for BOC and has engineers on its staff that have experience designing LIN/LOX tanks. (Cutts, Tr. 2454). AT&V stated that it currently employs some former Graver employees who have experience working on LIN/LOX tanks. (Cutts, Tr. 2454).

E. DOCUMENT AUTHORED BY DAN KNIGHT ENTITLED "THE BENEFITS OF COMBINING PDM WITH CB&I" IS INACCURATE AND DOES NOT REPRESENT THE THOUGHTS AND IDEAS OF CB&I OR PDM MANAGEMENT

1. Dan Knight Is Not An Executive

5.224 Dan Knight is not an executive at CB&I not was he an executive at PDM. (Scorsone, Tr. 4774). No one at CB&I currently reports to Dan Knight and during his time at PDM, Dan Knight did not have any one reporting to him. (Scorsone, Tr. 4775).

5.225 Dan Knight is approximately 50 years old and works for CB&I in an entry level position as a first level salesperson. Knight does not manage or supervise anyone at CB&I and did not have any supervision or management authority at PDM. (Scorsone, Tr. 4809). Knight is a "big talker" and not a "very deep thinker." He is a salesmen focused on selling his products. (Scorsone, Tr. 4809-10).

2. Scorsone Did Not Request That Dan Knight Prepare His Thoughts And Opinions Regarding The Acquisition

5.226 Scorsone did not request that Dan Knight prepare his thoughts on the benefits of CB&I's Acquisition of PDM. (Scorsone, Tr. 4799-4800; CX 652).

5.227 After the Acquisition was publicly announced, Scorsone was walking around his offices at PDM to talk to his employees and hopefully relieve some of the anxiety that some employees may have been feeling. (Scorsone, Tr. 4799). Scorsone stopped into the office of Sean Doyle, a project manager employed at PDM. Mr. Doyle was on speakerphone with Dan Knight discussing some issue. (Scorsone, Tr. 4799).

5.228 Mr. Scorsone said hello to Dan Knight who inquired about the Acquisition and commented that he had a few ideas. Mr. Knight asked if Mr. Scorsone would like to see some of his ideas. (Scorsone, Tr. 4799-4800). Mr. Scorsone agreed to accept Mr. Knight's ideas merely in order to indulge Mr. Knight who was is a low level, first-line sales person. (Scorsone, Tr. 4800).

5.229 Mr. Scorsone did not believe that Dan Knight's opinions on the Acquisition would have any great insight on the Acquisition, but he agreed to look at them so as to not insult Dan Knight. (Scorsone, Tr. 4800). A few days after Mr. Scorsone spoke with Mr. Knight in Mr. Doyle's office, Mr. Knight sent his opinions to Mr. Scorsone via email. (Scorsone, Tr. 4800; CX 651-52).

3. Scorsone Does Not Agree With Any Of The Opinions Expressed By Dan Knight

5.230 Mr. Scorsone did not agree with any of the opinions that Mr. Knight expressed in his email. In fact, most of Mr. Knight's opinions were completely inaccurate. (Scorsone, Tr. 4801-10).

5.231 Knight was incorrect in his opinion that "both firms benefit from additional field crews and equipment" because as a result of the Acquisition the combined organization had too much equipment and had to auction off some of the equipment. (Scorsone, Tr. 4803; CX 652).

5.232 After reviewing Knight's opinions, Scorsone believes that Knight mistakenly was under the impression that PDM was acquiring CB&I when in fact it was the exact opposite. (Scorsone, Tr. 4801-10; CX 652).

4. Dan Knight Does Not Have The Foundation To Make The Statements He Made

5.233 Dan Knight had absolutely no role in CB&I's Acquisition of PDM. (Scorsone, Tr. 4800). Dan Knight has no responsibility for selling LNG tanks. (Scorsone, Tr. 4804-05). Knight does not have an overall knowledge of the LIN/LOX market. While at PDM he focused on a few regional customers around the New Jersey area. (Scorsone, Tr. 4805).

5.234 Mr. Knight is not a person that PDM or CB&I management consulted with in order to determine the benefits of the CB&I/PDM Acquisition. (Scorsone, Tr. 4808). Mr. Knight does not have basic knowledge required to provide accurate and meaningful opinions regarding CB&I's Acquisition of PDM. (Scorsone, Tr. 4808).

VI THERMAL VACUUM CHAMBER FINDINGS OF FACT

A. TVC BACKGROUND INFORMATION

6.1 A field-erected thermal vacuum chamber ("TVC") is a stainless steel pressure vessel used to test satellites and satellite components prior to launch. (Gill, Tr. 179-83; Neary, Tr. 1423-24).

6.2 A TVC simulates the atmospheric and thermal conditions found in space. (Gill, Tr. 183; Proulx, Tr. 1722-23; Thompson, Tr. 2039-40; Higgins, Tr. 1264).

6.3 In addition to commercial satellite testing, TVC's are often used for government projects. (Gill, Tr. 184; Neary, Tr. 1424).

6.4 A TVC is composed of a large vacuum envelope (or chamber) constructed of stainless steel shaped roughly like a horizontal cylinder with a front door that may swing on a hinge or slide laterally on a rail. (Scully, Tr. 1098-99).

6.5 A "thermal vacuum system" is the process equipment that goes inside a thermal vacuum chamber to simulate extreme heat and cold. (Higgins, Tr. 1263). The thermal vacuum system is comprised of one or more shrouds, vacuum insulated pipe, and cryo pumps or other pumping equipment, which are all controlled by a thermal control unit. (Higgins, Tr. 1263).

6.6 The stainless steel used on a TVC can have steel that ranges in thickness from one inch to one and one-fourth inch. (Gill, Tr. 188-89).

6.7 The TVC is outfitted with two or three different types of vacuum pumps that are used collectively to achieve the vacuum conditions found in space. (Scully, Tr. 1099).

6.8 The thermal shroud turns the vacuum chamber into a thermal vacuum chamber. (Scully, Tr. 1099). This thermal shroud is a black wall found inside the vacuum envelope that cools or heats the contents of the chamber through radiation. (Scully, Tr. 1099-1101).

6.9 The extreme temperatures required inside a TVC are created by blowing nitrogen through tubes connected to the thermal radiator. (Scully, Tr. 1100; Thompson, Tr. 2039-40).

6.10 TVC's require field-erection at the facility site. Field-erection is required when the chamber or its pieces become too large to transport to the site. (*See* Gill, Tr. 187). This field-erection includes transporting the fabricated pieces of the stainless steel chamber to the site, using cranes and riggers to align the pieces, and using welders to weld the chamber pieces together. (Gill, Tr. 186, 268-69; Hart, Tr. 407; *see also* Newmeister, Tr. 2188-89).

B. DEMAND IS VIRTUALLY NON-EXISTENT IN THE TVC MARKET

1. Demand For Commercial And Government Satellites Is Nearly Non-Existent

6.11 Demand in the TVC market is extraordinarily thin. (Harris, Tr. 7325).

6.12 Already thin demand is decreasing for large, field-erected TVC's as the result of consolidation in the aerospace business, the miniaturization of electronic components in satellites, and the change in the economy since the 1990's. (Scully, Tr. 1199-1204; RX-204 (state of mind)).

6.13 The decline in demand for satellites is expected to last at least for a few years into the future. (Scully, Tr. 1205-06).

6.14 Only one new field-erected TVC is projected to be built in the next 4-5 years. (Neary, Tr. 1471-73; Thompson, Tr. 2103-04). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

6.15 Satellite programs that require new TVC's are frequently delayed or canceled. (Neary, Tr. 1471-73; Gill, Tr. 262). Thus, TVC projects that are planned for the future are unlikely because of frequent delays and cancellations. (*See* Neary, Tr. 1472-73; *see also*

Thompson, Tr. 2104). For example, the Spectrum Astro project has been canceled due to "government action." (Thompson, Tr. 2097; 2103).

6.16 TVC projects are speculative and long range in nature. Customers and vendors are generally not personally involved in the discussions at the Department of Defense concerning their satellites appropriation plans for five years into the future. (*See* Neary, Tr. 1473-74; Gill, Tr. 261-62).

2. Customers Have Overcapacity In Field-Erected TVC's

6.17 The satellite industry has excess capacity in its existing TVC's. (*See* Scully, Tr. 1203-04).

6.18 Most satellite manufacturers already have one or more of these chambers, which have long lifespans and can be reconditioned. (Gill, Tr. 263-64).

6.19 Boeing already owns five field-erected TVC's (as well at least 30 shop-fabricated TVC's at the El Segundo facility). (Proulx, Tr. 1725-26).

6.20 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

6.21 TRW currently owns and operates five field-erected TVC's and approximately 15 shop-erected TVC's. (Neary, Tr. 1422). Of the five existing field-erected TVC's at TRW, two were built in the 1960's and the other three were built in the 1980s. (Neary, Tr. 1423).

3. Satellites Are Getting Smaller As A Result Of Miniaturization Of Electronics

6.22 The predominant number of satellites built in the future will be small enough to be tested in existing TVC's. (Scully, Tr. 1203-04).

6.23 Satellite sizes are shrinking, rendering the large, field-erected TVC's obsolete, because smaller satellites can be tested in smaller shop-erected chambers. (*See* RX 204 (state of mind)).

6.24 These smaller satellites that are built as the result of miniaturization are just as expensive as their larger predecessors. (Scully, Tr. 1204). Existing large, field-erected TVC's and smaller shop-erected TVC's should be adequate to test these satellites in the future. (*See* Scully, Tr. 1203-04).

6.25 Neither CB&I nor ex-PDM made shop-erected TVC's. (Thompson, Tr. 2105).

C. CB&I IS A FRINGE FIRM IN THE TVC MARKET

1. CB&I Lacks Experience In Building TVC's

6.26 CB&I has not built a TVC since 1984. (Scorsone, Tr. 5055-56; Glenn, Tr. 4089, 4160; Scully, Tr. 1187-89, 1193; Higgins, Tr. 1276-77).

6.27 CB&I has never built a mailbox-shaped field-erected TVC. (Scully, Tr. 1193; Neary, Tr. 1467; Scorsone, Tr. 5056; Higgins, Tr. 1277-78).

6.28 Customers today are demanding mailbox-shaped TVC's, which are more complex structures than non-mailbox-shaped TVC's. (Higgins, Tr. 1277; Scully, Tr. 1106-07). It is more difficult to build a mailbox-shaped TVC than it is to build a horseshoe-shaped TVC. (Neary, Tr. 1467; Scully, Tr. 1107).

6.29 The industry is moving toward using the mailbox shape for every TVC project. (Scully, Tr. 1193).

6.30 The Hughes Seal Beach field-erected TVC is horseshoe-shaped, and not a mailbox-shaped chamber. (Neary, Tr. 1464-66; CX-153).

6.31 CB&I's current marketing materials refer to and advertise TVC's constructed by PDM. For example, the picture of a mailbox-shaped TVC on the CB&I website, the Hughes chamber, was built by PDM prior to the Acquisition and placed on the CB&I website after the Acquisition. (Scorsone, Tr. 5057).

6.32 The Grumman TVC at Beth Page, Long Island was neither mailbox-shaped nor field-erected. The Beth Page chamber was horseshoe-shaped, which is distinct from a mailbox-shaped chamber. (Scorsone, Tr. 5056-57). CB&I actually subcontracted the fabrication of that shop-fabricated chamber to another company. (Scorsone, Tr. 5056-57).

6.33 CB&I's promotional document that trumpeted its "proven performance in space-related structures and systems" is carefully worded to include more than just field-erected TVC's, because CB&I builds other non-relevant structures, such as acoustical chambers. (Scully, Tr. 1208).

6.34 CB&I's welders have not welded a field-erected TVC since 1984. (Scully, Tr. 1198). There is a great deal of turnover in welders in the industry. (Scully, Tr. 1198). If CB&I had to use their welders today to build a field-erected TVC, the welders would need to be completely re-trained if any with experience even remain, because the welders have not done this type of work in a long time if at all. (Scully, Tr. 1199).

6.35 A large number of CB&I's TVC-experienced personnel are currently retired or have left the company. (Scully, Tr. 1208-14). Only seven out of the nineteen names listed on the experience list contained in RX-301 are still CB&I employees. (Scully, Tr. 1208-14; RX-301 at CB&I 036925).

6.36 The combined experience level of CB&I-PDM today is not as high in TVC's as it was for each of the two independent companies prior to the merger because of the number of employees that opted for early retirement at PDM. (Scully, Tr. 1214).

6.37 Mr. Dave Lacey had no role in CB&I's last TVC project in 1984. (Scully, Tr. 1245-46).

6.38 The only revenue that CB&I has had in the TVC market has been from small study projects or front-end work since the Acquisition. (Glenn, Tr. 4089). CB&I has not earned any revenue from project awards since 1984. (Glenn, Tr. 4089).

6.39 CB&I has generated "very close to zero" revenue in the TVC business in 2002. (Glenn, Tr. 4404-05).

6.40 CB&I had already exited from the TVC market in 1984, which left PDM as the only competitor for field-erected TVCs in the U.S. from 1984 until 1997. (Scully, Tr. 1189). **[XXXXX XXXXX XXXXX XXXXX XXXXX]**

6.41 CB&I lost the capability it had developed to build thermal vacuum systems when it left the marketplace in 1984. (Scully, Tr. 1189-90).

6.42 When CB&I attempted to re-enter the market in 1997, it did not have the same capability that it had in 1984. (Scully, Tr. 1189-90).

6.43 Due to CB&I's lack of experience, Lockheed refused to do business with CB&I prior to the Acquisition. Mr. Ron Scully made sales calls to Lockheed on behalf of CB&I and XL Systems ("XL Systems") in 1997 in an attempt to solicit TVC business. (Scully, Tr. 1190). Lockheed employees refused to work with CB&I, because Lockheed believed PDM to be dominant in the industry and the technological leader. (Scully, Tr. 1190-91).

6.44 Boeing sought to build a large field-erected TVC in 2000, but Boeing had no intention of ever bidding out that project. (Scully, Tr. 1214-15). Instead, Boeing simply informed CB&I and XL that Boeing was going to sole-source the procurement from PDM without a bidding. (Scully, Tr. 1215). Thus, CB&I was disqualified from bidding from the beginning of the process for procuring this TVC. (Scully, Tr. 1215). **[XXXXX XXXXX XXXXX XXXXX XXXXX]**

6.45 CB&I has an uneven track record in its TVC work. It's second-to-last field-erected TVC, the East Windsor, Long Island TVC built in 1981, was defective and never went into operation. (Thompson, Tr. 2113; Scully, Tr. 1188).

2. Prior To The Acquisition, CB&I Purchased XL Systems ("XL") To Bolster Its Experience And Capability In This Market

6.46 CB&I purchased XL on September 30, 1999 with the hope that XL's technology would help CB&I re-enter the field-erected TVC market. (Scully, Tr. 1123-30, 1178, 1189; *see also* Glenn, Tr. 4161).

6.47 CB&I paid $500,000 for XL in 1999 and CB&I sold XL back to its original owners for $500,000 on February 28, 2002. (Scully, Tr. 1130, 1194-95).

6.48 The purchase of XL in 1999 improved CB&I's competitiveness in the TVC market. (Gill, Tr. 257). Spectrum Astro's decision to award their TVC project was based almost entirely on the differences between XL's and Chart's thermal systems technology. (Scully, Tr. 1169, 1177-78; *see also* Thompson, Tr. 2083-84). As part of the competitive bidding process for the Spectrum Astro TVC, several innovations were designed by XL (not CB&I). (Thompson, Tr. 2100-01). Spectrum Astro's source selection document mentions the exceptional thermal control systems expertise as one of CB&I/XL's strengths. (*See* CX-317 at 5/7). CB&I's partnership with XL was a significant factor in CB&I's winning the source selection for this project. (Thompson, Tr. 2103; Scully Tr. 1226).

6.49 When Mr. David Thompson found out that CB&I had sold XL, he was concerned about this sale, and he wanted CB&I to confirm that XL was still part of the team. (Thompson, Tr. 2083-84). Mr. Jeffrey Steimer's response stated, "The divestiture of XL should not have a significant impact on the price of the thermal vacuum facility." (Thompson, Tr. 2088).

6.50 CB&I sold XL because it was losing money. (Scully, Tr. 1195, 1130-31; Glenn, Tr. 4162). This financial loss was the result of a total lack of TVC work in the marketplace. (Scully, Tr. 1195).

6.51 CB&I determined that it would be more profitable to subcontract out thermal systems work as needed in the future. (Scully, Tr. 1195-96).

6.52 Prior to the sale of XL back to the its original owners, discussions occurred between Mr. Scully, Mr. Stephen Crain, and Mr. Rich Goodrich regarding the re-sale. (Scully, Tr. 1131). During those conversations, the FTC's investigation was never discussed nor did they discuss any potential interest that CB&I had in fixing any competitive problems in the TVC market. (Scully, Tr. 1131-32).

6.53 After the sale of XL, CB&I did not retain any technical knowledge, licenses or rights to the technology owned by XL, and XL is not required to work with CB&I in the future, nor is CB&I required to use XL's technology in the future if CB&I bids for a TVC. (Scully, Tr. 1227). In short, selling XL returned CB&I to its pre-Acquisition capability level in terms of thermal vacuum systems. (Scully, Tr. 1225).

3. CB&I Does Not Build Thermal System Components, Which Are The High-Tech Portion Of A TVC

6.54 The thermal systems component is the complicated, high-tech portion of a field-erected TVC. (Scully, Tr. 1224; Hart, Tr. 406).

6.55 The stainless steel chamber is the lower-tech portion of a field-erected TVC. (Scully, Tr. 1224).

6.56 CB&I currently has no ability to design or make the higher-tech thermal system components that XL produces. (Scully, Tr. 1225).

4. CB&I Would Likely Have Withdrawn From the TVC Market Had It Not Acquired PDM And Will Not Actively Pursue TVC Projects In The Future

6.57 CB&I planned to exit the field-erected TVC business entirely. (Thompson, Tr. 2075-76).

6.58 PDM bid the G-1 project in 1997 at below cost with the intention of keeping CB&I completely out of the market. (Scully, Tr. 1193-94, 1166). **[XXXXX XXXXX]**

6.59 Preparing TVC bids is expensive and these projects often do not end up being built. (Scorsone, Tr. 5054).

6.60 CB&I's employees with relevant TVC experience are dwindling as they age, and they will not be replaced as they retire. (Scorsone, Tr. 5054-55). Likewise, PDM did not replace aging employees with TVC experience. (Scorsone, Tr. 5055).

6.61 Currently, CB&I does not have an engineering staff that is dedicated solely to building thermal vacuum chambers. (Scorsone, Tr. 4887).

6.62 In the future, CB&I will not continue to invest in marketing for TVC opportunities, nor will CB&I actively engage and pursue these projects. (Scorsone, Tr. 5053).

6.63 CB&I has taken steps to cut spending on its marketing in the TVC business, including reassigning Dave Lacey to a project construction role. (Scorsone, Tr. 5053-54).

6.64 Spectrum Astro was concerned that this litigation might hasten CB&I's exit from the TVC market. Mr. Thompson's letter to Mr. Steimer asked whether the FTC investigation into the Acquisition would affect CB&I's future interest in maintaining a presence in the construction of large facilities, and whether it would affect CB&I's ability to perform the yet-to-be negotiated contract. (Thompson, Tr. 2084). Mr. Steimer's response stated, "The FTC investigation should not affect CB&I's future interest in the design and construction of thermal vacuum test facilities in general, nor our ability to perform work for your facility." (Thompson, Tr. 2088).

D. SUBSTITUTES FOR NEW FIELD-ERECTED TVC'S EXIST

6.65 **[XXXXX XXXXX]**

6.66 **[XXXXX XXXXX]**

6.67 Spectrum Astro has been able to survive for years by finding alternatives to testing its satellites in its own field-erected TVC. (Thompson, Tr. 2131-32).

E. CUSTOMERS IN THE TVC MARKET ARE SOPHISTICATED

1. Boeing Is A Sophisticated TVC Customer

6.68 Boeing is a large aerospace company. (Scully, Tr. 1092).

6.69 Mr. Proulx works for a division of Boeing, Boeing Satellite Systems (hereafter, "Boeing"), in Segundo, California. (Proulx, Tr. 1717-18). Mr. Proulx previously worked for Hughes prior to Boeing's acquisition of Hughes in the last few years. (Proulx, Tr. 1719).

6.70 Mr. Proulx's job title is product manufacturing factory planning manager and he is responsible for recommending procurements at Boeing. (Proulx, Tr. 1720).

6.71 In 2000, Boeing acquired its competitor in the satellite business, Hughes Space & Communication. (Proulx, Tr. 1718).

6.72 Boeing manufactures and sells satellites. (Proulx, Tr. 1718).

6.73 Boeing typically sells satellites that range in price from $60 to $250 million. (Proulx, Tr. 1719).

6.74 Boeing has five field-erected TVC's and 30 shop-fabricated TVC's. (Proulx, Tr. 1725-26).

6.75 Boeing's TVC's are very large structures, including one that is 50 feet by 50 feet by 45 feet. (Proulx, Tr. 1740-41).

6.76 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

6.77 **[XXXXX XXXXX]**

2. TRW Is A Sophisticated TVC Customer

6.78 Mr. Patrick Neary is the manager of the environmental test organization at TRW Space & Electronics. He is responsible for providing the space simulation of TRW's satellites. (Neary, Tr. 1419-20).

6.79 Approximately 95% of TRW's contracts are with the federal government, and the remaining 5% are commercial projects. (Neary, Tr. 1420).

6.80 TRW has five field-erected TVC's and approximately 15 shop-fabricated TVC's. (Neary, Tr. 1422).

6.81 Mr. Neary has been involved with three previous procurements for field-erected TVC's. (Neary, Tr. 1422-23).

6.82 TRW has been able to competitively bid their TVC projects in the past, even without PDM. (Neary, Tr. 1442-43).

3. Spectrum Astro Is A Sophisticated TVC Customer

6.83 Mr. Thompson is president and CEO of Spectrum Astro, a satellite manufacturer. (Thompson, Tr. 2036).

6.84 Spectrum Astro contracts almost exclusively with the U.S. government, specifically the Department of Defense and NASA, to construct satellites. (Thompson, Tr. 2038). Spectrum Astro has 99% of its contracts with the federal government with 70% of those contracts with the Department of Defense and the remainder with NASA. (Thompson, Tr. 2037).

6.85 Spectrum Astro was able to generate competition in the procurement of its now canceled TVC. (Thompson, Tr. 2040-42, 2114-15).

6.86 Spectrum Astro is more sophisticated today than in 2000. (Thompson, Tr. 2062).

6.87 Most of Spectrum Astro's competitors are large defense contractors like TRW and Boeing. (Thompson, Tr. 2130).

4. Raytheon Is A Sophisticated TVC Customer

6.88 Mr. DeVon Hart is the subcontracts manager at Raytheon Systems who selects vendors to supply Raytheon with its TVC's. (Hart, Tr. 380-81, 400).

6.89 Raytheon possesses a database of suppliers of field-erected TVC's from which it is able to target potential bidders. (Hart, Tr. 400, 405).

6.90 Raytheon was able to generate competition in the procurement of its new TVC's. (Hart, Tr. 383-84, 401-02).

F. CB&I'S REMEDY PACKAGE IS MORE APPROPRIATE THAN COMPLAINT COUNSEL'S REQUEST FOR DIVESTITURE

1. Complaint Counsel's Proposed Remedy Will Not Be Effective In Its Goal Of Creating A High Quality, Low Cost TVC Competitor

6.91 The customers do not know whether a divested PDM would be allowed to bid on TVC projects because of its unknown financial circumstances. (Neary, Tr. 1471, 1498-99).

6.92 Customers do not know whether an independent PDM with $150 million in sales would be allowed to bid on TRW's jobs if it were in existence today. (Neary, Tr. 1471, 1498-99).

6.93 Even if PDM had been sold to a foreign competitor, it is doubtful that the resulting company would have been allowed to bid on U.S. projects. (Scully, Tr. 1197; Neary, Tr. 1470).

6.94 If PDM had been sold to a smaller firm than CB&I, the resulting company would not have been able to compete as effectively in TVC's as PDM did, because of a lack of financial strength and engineering capability that such an acquisition would have created. (Scully, Tr. 1196-97).

6.95 If a company other than CB&I had acquired PDM, and that purchaser had needed to take out debt to finance the transaction, that debt could impact on the resulting company's ability to obtain a bond to perform work for a large field-erected TVC. (Gill, Tr. 271; Neary, Tr. 1471).

6.96 A breakup would result in two smaller companies that would each be substantially weaker than the current CB&I-PDM. (Scully, Tr. 1239-40).

6.97 The market for TVC's is not large enough to support the existence of two suppliers in the U.S. (Scully, Tr. 1226-27).

6.98 In the end, customers benefit from having a merged CB&I-PDM because it combined the wisdom of CB&I and PDM employees. (*See* Scully, Tr. 1240).

2. CB&I's Remedy Offer

6.99 Respondents have proposed a package of behavioral constraints in the form of a proposed Consent Decree in an effort to alleviate any competitive concerns created by its acquisition of PDM assets on the TVC market. (Glenn, Tr. 4162-66). There are several components:

6.100 First, this offer includes CB&I's promise to build TVC's for the government at cost. (Glenn, Tr. 4165).

6.101 Additionally, if a commercial customer would like CB&I to build a TVC, CB&I is willing to build it on a cost plus 4 percent profit basis, or at any other profit that is deemed reasonable by the court. (Glenn, Tr. 4165).

6.102 CB&I will license its Red Book engineering standards for building a TVC and any additional necessary licenses on a royalty-free basis, as well as provide specific training for the fabrication process, procurement, design, field installation, and welding. (Glenn, Tr. 4165-67).

6.103 CB&I will joint venture with another tank company on its next TVC project and mentor it through each phase of development and construction. (Glenn, Tr. 4165-67).

6.104 The door seal and the flat walls are the most complicated parts of a TVC in terms of design and construction. (Scully, Tr. 1192). CB&I will assist third party vendors in their design of these TVC features on a royalty-free, perpetual basis. (Glenn, Tr. 4165-67).

6.105 CB&I would agree to not act as an EPC contractor for any TVC project for a period of seven years, as well as committing to not purchase any company that has thermal shroud technology. (Glenn, Tr. 4166).

3. Customer Reactions To CB&I's Remedy Offer Have Been Positive

6.106 Divestiture of CB&I's Red Book engineering standards would benefit competition. (Scully, Tr. 1228-30; Higgins, Tr. 1275-76; Proulx, Tr. 1755; Cutts, Tr. 2391-92).

6.107 It would benefit competition if CB&I were to mentor an existing large tank construction company like Matrix, Nooter or Puget Sound Fabricators ("PSF") on CB&I's next field-erected TVC project by integrating that company's engineering, fabrication and field-erection crews into the entire process. (Scully, Tr. 1230-31; Higgins, Tr. 1275-76). In fact, the newly mentored company would possibly have more current experience in constructing a field-erected TVC than CB&I. (Scully, Tr. 1231).

6.108 There are companies in the marketplace that can build field-erected TVC's if they are given some training and instruction, such as Matrix, Nooter, and PSF. (Scully, Tr. 1229-30).

6.109 Boeing would consider using a TVC supplier that had gained its experience by working as a joint venture partner with CB&I on each phase of the construction process of a future field-erected TVC project. (Proulx, 1756-57).

6.110 If CB&I were to offer customers in this market a firm fixed bid price with a 4% profit margin on any project that arose for the next 7-10 years, these customers would be receiving a good price. (Scully, Tr. 1231-32; Gill, Tr. 261; Neary, Tr. 1482). Howard Fabrication, for example, normally attempts to bid out at a 7-10 profit margin, which is still a good value for the customer. (Gill, Tr. 260-61).

6.111 CB&I is acting responsibly in offering the 4% deal. (Neary, Tr. 1482).

6.112 CB&I's sale of XL benefits competition in the TVC market. (Proulx, Tr. 1757-58; Gill, Tr. 258).

6.113 CB&I was planning to exit the field-erected TVC market just prior to the Acquisition. (Scully, Tr. 1227; 1256-59). The sale of XL was one part of that plan. (Scully, Tr. 1227).

6.114 Because CB&I no longer owns XL, XL and other thermal system vendors are free to compete for business, and CB&I can force these thermal systems companies to compete against each other as subcontractors for future TVC jobs. (Neary, Tr. 1490). This competition would benefit customers like TRW, since the thermal systems are an expensive part of a TVC. (Neary, Tr. 1490-91).

6.115 It would also help competition in the TVC market if CB&I were to promise not to purchase another company such as XL for a period of 5-7 years. (Gill, Tr. 259-60).

4. Mentoring By CB&I Would Allow Firms To Enter The TVC Market

6.116 Boeing would consider using a TVC supplier that had gained its experience by working as a joint venture partner with CB&I on each phase of the construction process of a future field-erected TVC project. (Proulx, Tr. 1756-57).

6.117 There are companies in the marketplace that can build field-erected TVC's if they are given some training and instruction. (Scully, Tr. 1229). Those companies include Matrix, Nooter, and Puget Sound Fabricators. (Scully, Tr. 1229-30).

6.118 Matrix is a cryogenic tank fabricator in the U.S. (*See* Higgins, Tr. 1273-75; *see also* Newmeister, Tr. 2182-83; RX-273). Matrix has a substantial field-fabricated tank capability. (Higgins, Tr. 1274-75). This capability includes significant numbers of people who can weld and build field-erected structures. (Higgins, Tr. 1275).

6.119 It would benefit competition if CB&I were to mentor a company like Matrix, Nooter or PSF on CB&I's next field-erected TVC project by integrating that company's engineering, fabrication and field-erection crews into the entire process. (Scully, Tr. 1230-31). The newly mentored company would possibly have more current experience in constructing a field-erected TVC than CB&I, since CB&I has not actually built one since 1984. (Scully, Tr. 1231).

6.120 If CB&I were to mentor Matrix on a future field-erected TVC project, at the end of the mentored project Matrix could possibly be in a position to compete for field-erected TVC jobs, and this remedy is something that could help competition in the market. (Higgins, Tr. 1276).

6.121 If Matrix were given a cost-free license to the combined technological know-how of CB&I and PDM as it relates to TVC's, this transfer of knowledge would help Matrix become a properly qualified field fabricator of TVC's. (Higgins, Tr. 1275). Furthermore, if CB&I offered to train the welders at Matrix on the particular methods for welding a field-erected TVC, it would help Matrix compete for these projects. (Higgins, Tr. 1275-76).

G. COMPLAINT COUNSEL HAS NOT BEEN ABLE TO SHOW THAT ANTI-COMPETITIVE EFFECT IN THE TVC MARKET IS LIKELY

1. TVC Pricing Has Not Been Affected By The Acquisition

6.122 CB&I has not raised its prices above pre-acquisition levels since the Acquisition. (Scorsone, Tr. 5062).

6.123 CB&I will not be able to raise its prices after the Acquisition. (Scorsone, Tr. 5062). For example, since the Acquisition, CB&I has offered to the Court to sell the TVC to Spectrum Astro at a 4% margin. (Scorsone, Tr. 5064).

6.124 The Acquisition has not given CB&I any greater freedom to increase prices on TVC's. (Scorsone, Tr. 4881-82).

6.125 Pre-Acquisition, extremely low prices (e.g. below margin) that result from vigorous competition were a problem for an industry with such low demand. (Scully, Tr. 1179-81).

6.126 The mere presence of Howard Fabrication in a bidding situation provides competition in pricing, and thus, lower prices. (Neary, Tr. 1444, 1478-79).

2. CB&I Did Not Attempt To Coordinate Bidding With Howard Fabrication On The TRW Project

6.127 A CB&I salesman, Mr. Mike Miles, called Mr. John Gill of Howard Fabrication in mid-October, 2002 to set up a meeting to discuss a new opportunity to work together. (Gill, Tr. 242-44). Mr. Miles did not indicate the nature of the opportunity during the initial phone call. (Gill, Tr. 242-44, 251-52).

6.128 Neither man knew at the beginning of their meeting that they had both provided very rough order of magnitude pricing on the TRW project separately. (Gill, Tr. 252-53, 274; Scorsone, Tr. 5059-60).

6.129 During the meeting, Mr. Miles mentioned the possibility of Howard serving as a partner or subcontractor with CB&I for purposes of an unnamed proposed TVC project, since Howard Fabrication has worked with PDM as a subcontractor in the past. (*See* Gill, Tr. 246-248, 251-56; *see also* Scorsone, Tr. 5059-60). In the middle of the meeting, Mr. Miles slid an engineering diagram of the TRW TVC across the table to Mr. Gill. (Gill, Tr. 244-45).

6.130 At that point, Mr. Gill told Mr. Miles that he had submitted rough pricing for the work. (Gill, Tr. 274). Thus, Mr. Miles and Mr. Gill were not aware until mid-way through the meeting that both CB&I and Howard Fabrication were already in the process of submitting separate budget pricing on the TRW project. (Gill, Tr. 252-53; Scorsone, Tr. 5059-60).

6.131 Mr. Miles did not make this offer with the consent or knowledge of management at CB&I. (Scorsone, Tr. 5059-62).

6.132 Mr. Miles is an entry-level salesperson, and not a CB&I executive. (Scorsone, Tr. 5061-62). Mr. Miles does not have the authority to set contract prices, set bidding strategy, or determine who subcontractors are on a project of that size. (Scorsone, Tr. 5062).

6.133 CB&I was unaware that Howard Fabrication had submitted budget pricing on the TRW project prior to Mr. Miles' meeting. (Scorsone, Tr. 5060).

6.134 A subcontracting arrangement between Howard Fabrication and CB&I could provide TRW with lower costs, and ultimately with a lower price. (*See* Neary, Tr. 1480). There could be cost advantages with using Howard Fabrication as a subcontractor because Howard Fabrication has lower overhead than CB&I. (Neary, Tr. 1480).

6.135 At the end of the day, TRW could benefit by both having Howard Fabrication as a competitive bidder and then using Howard Fabrication as a low-cost subcontractor with CB&I. (Neary, Tr. 1480).

6.136 If Howard Fabrication acts as a subcontractor for field-erected TVC jobs with CB&I or PDM, it allows those companies to save the customer money with lower costs. (Gill, Tr. 254-55). PDM has used Howard Fabrication as a subcontractor on TVC projects in the past. (Scorsone, Tr. 5060-61).

6.137 CB&I is still considering using Howard Fabrication as a subcontractor, but would seek the prior approval of the customer before doing so. (Scorsone, Tr. 5060).

3. CB&I and PDM Did Not Coordinate Their Pricing On The Spectrum Astro Project Prior To The Acquisition

6.138 PDM-EC's President, Mr. Luke Scorsone, was asked to give a presentation to CB&I's management in early August, 2000 regarding the proposed Acquisition. (Scorsone, Tr. 4794). Several CB&I and PDM executives and a representative from PDM's investment bank, Tanner Associates, were in attendance at the presentation. (Scorsone, Tr. 4795).

6.139 Steps were taken to ensure that sensitive or confidential information was not exchanged at the meeting. (Scorsone, Tr. 4795).

6.140 During the course of the meeting, a joke was made by CB&I executive Mr. Bob Jordan that the Spectrum Astro job would probably be "DOA." (Scorsone, Tr. 4796). This joke referred to Spectrum Astro's financial condition. (Scorsone, Tr. 4796). The Spectrum Astro project was not on the agenda for the meeting -- the joke was a mere off-the-cuff comment. (Scorsone, Tr. 4798). The joke "lightened the tone of the meeting." (Scorsone, Tr. 4798).

6.141 No price discussion or bidding coordination occurred at the August meeting between CB&I and PDM representatives. (Scorsone, Tr. 4797). Pricing information, bidding strategy, and coordinated bidding were not discussed at any time. (Scorsone, Tr. 4796-97, 5045-46; Scully, Tr. 1221-22).

6.142 Indeed, PDM wanted to win the Spectrum Astro project bidding, and used it's best efforts to win it. (Scorsone, Tr. 4797).

6.143 PDM pursued this bid vigorously, but ultimately failed to win the letter of intent. (Scorsone, Tr. 5044, 5046).

6.144 In fact, PDM bid this work at a zero percent profit margin, because PDM's shops were operating under capacity at that time and they needed work. (Scorsone, Tr. 5044). The work was needed for PDM to cover its overhead costs. (Scorsone, Tr. 5046).

6.145 PDM's total price was higher than CB&I's because of the price offered by its thermal technology partner, Chart Industries. (Scorsone, Tr. 5045).

6.146 CB&I lowered its original price in order to win the job, and the price came in under Spectrum Astro's budget estimates. (Thompson, Tr. 2119-21).

6.147 One of the lower level employees involved in the Spectrum Astro re-pricing effort was Mr. Lacey. (Scully, Tr. 1216-18).

6.148 Mr. Lacy is not part of CB&I management, and in fact, he is a fairly lower-level marketing and salesperson at CB&I. (Scully, Tr. 1217).

6.149 Mr. Scorsone and Mr. Lacey never discussed pricing on this project prior to the Acquisition. (Scorsone, Tr. 5045).

6.150 Mr. Lacey was an entry-level marketing person at CB&I who worked primarily in the aerospace business during the time that XL was owned by CB&I. (Scully, Tr. 1125; Scorsone, Tr. 5045). Mr. Lacey was CB&I's contact person with Spectrum Astro. (Thompson, Tr. 2043). Meanwhile, Mr. Scorsone had final authority at PDM over the price offered to Spectrum Astro. (Scorsone, Tr. 5046).

6.151 Mr. Lacey generated a large volume of ideas for management to consider with regard to the TVC business, but only part of these ideas were ever acted upon. (Scully, Tr. 1218; CX-242).

6.152 Mr. Lacey typically presented both the extreme case as well as the moderate case in his proposals, and his extreme suggestions were ignored by his superiors. (Scully, Tr. 1219-21).

6.153 Mr. Lacey's ideas were ignored. Mr. Lacey's proposal that both CB&I and PDM should bid high on Spectrum Astro prior to the Acquisition was never implemented. (Scorsone, Tr. 5045-46; Scully, Tr. 1221).

4. Boeing (Hughes)[1] Seal Beach ROM Pricing Was Not A Post-Acquisition Price Increase

6.154 **[XXXXX XXXXX]**

6.155 **[XXXXX XXXXX]**

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[1] In 2000, Boeing acquired Hughes Space & Communication. (Proulx, Tr. 1718).

6.159 **[XXXXX XXXXX]**

6.160 **[XXXXX XXXXX]**

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6.162 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

6.163 **[XXXXX XXXXX]** Such information would have been necessary for producing a firm fixed bid price. (*See* Scorsone, Tr. 5000-02).

6.164 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

6.165 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX**

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6.168 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]**

5. The November, 2001 Spectrum Astro Re-Pricing Was Not A Post-Acquisition Price Increase

6.169 Spectrum Astro sought to build a field-erected TVC in 2000. In November, 2000, both CB&I and PDM submitted best and final offers to Spectrum Astro as part of their bids for the "Factory of the Future" TVC. (Scorsone, Tr. 5115-16).

6.170 CB&I won the source selection for Spectrum Astro's TVC project. (Thompson, Tr. 2061). The source selection that Spectrum Astro gave to CB&I in December, 2000 was not a contract, rather it was a letter of intent to negotiate a final contract with CB&I. (Thompson, Tr. 2064-5).

6.171 At this point, only some pre-contract engineering work had been completed on the job. (Scully, Tr. 1171). Spectrum Astro paid PDM and CB&I each $75,000 to perform pre-contract design studies in which the information received by Spectrum Astro allowed it to prepare an RFQ ("request for quote") for a TVC. (Scully, Tr. 1167-68; Thompson, Tr. 2066-67).

6.172 After the source selection was announced, Spectrum Astro did not proceed immediately to a contract because Spectrum Astro was having difficulty securing financing for the project. (Thompson, Tr. 2065-66).

6.173 On more than one occasion, Spectrum Astro told CB&I that it thought that they were close to securing financing, and he turned out to be wrong every time. (Thompson, Tr. 2105).

6.174 In fact, CB&I offered to provide Spectrum Astro with the financing for the Spectrum Astro project in November, 2000, but Mr. Thompson refused. (Thompson, Tr. 2106). In order for CB&I to offer financing, CB&I reviewed Spectrum Astro's financial condition. (Thompson, Tr. 2106).

6.175 CB&I was so concerned about Spectrum Astro's cash flow that it required Spectrum Astro to pay CB&I in advance for some post-award engineering work. (Thompson, Tr. 2107-09).

6.176 CB&I's price expired 90 days after the source selection, in February, 2001, and Spectrum Astro did not request updated pricing until 10 months later in November, 2001. (Scorsone, Tr. 5047; *see also* Thompson, Tr. 2069). For almost one year, the project remained dormant. (Scorsone, Tr. 5048).

6.177 Prices expire because the materials costs and labor rates change over time. (Thompson, Tr. 2069; Scully, Tr. 1183).

6.178 The project was re-priced subsequently at CB&I's expense. (Scorsone, Tr. 5048). At the time of the re-pricing, Spectrum Astro and CB&I were negotiating. (Thompson, Tr. 2071).

6.179 CB&I's first re-pricing in November, 2001 came nearly one year after the original price was submitted and was in the amount of $12,019,000. (Scorsone, Tr. 5116; Thompson, Tr. 2074).

6.180 Extra profit was included in the November, 2001 re-pricing as a means of recovering some of the pre-contract costs, which was consistent with CB&I's policy at the time. (Scorsone, Tr. 5049). CB&I has not received compensation for all of the pre-contract work that it has done for Spectrum Astro. (Thompson, Tr. 2108-09).

6.181 Only some of the pre-contract costs associated with the Spectrum Astro job were included in the initial price, while others were not included. (Scorsone, Tr. 5117, 5235).

6.182 Changes to the work scope also account for the price increase. After the original price expired, Spectrum Astro added some items to the work scope and deleted others. (Thompson, Tr. 2071, 2121-22). The costs on the project increased on this re-pricing, according to CB&I's documents. (Scorsone, Tr. 5116-17). Spectrum Astro never had access to CB&I's estimated costs for the new additions to the work scope. (Thompson, Tr. 2122). Since Spectrum Astro was not provided with any cost information, their estimators had to guess at the results of the price increase. (Thompson, Tr. 2122-23).

6.183 Another reason for the extra profit was the perceived need to mitigate some of the risks of moving forward with the project. (Scorsone, Tr. 5049). CB&I was trying to account for several risks including the risks associated with the relocation of the chamber site and any costs that would be associated with moving the vessel into the building. (Scorsone, Tr. 5049-50).

6.184 Additionally, the risk of delay causes prices to increase. Satellite programs awarded by the Government are sometimes delayed. (Thompson, Tr. 2129). As a result, vendors of satellites must take account of the risk that these programs might be cancelled or delayed. (Thompson, Tr. 2129). The delay of the SBIRS Low satellite program affected Spectrum Astro's need for a field-erected TVC. (Thompson, Tr. 2129-30).

6.185 The November, 2001 price increase also reflected changes in material costs and labor rates. (Scully, Tr. 1222). These costs had to be completely re-evaluated each time the project was re-priced. (Scully, Tr. 1222-23).

6.186 Some of the extra profit was also the result of posturing in the negotiation with Spectrum Astro, because the final terms of the contract were never set. (Scorsone, Tr. 5049-51).

6.187 Spectrum Astro knew the price was going to go increase, but hoped it would only increase by less than $1.2 million. (Thompson, Tr. 2138-40). But Spectrum Astro admitted that it had no basis for that hope. (Thompson, Tr. 2123). Spectrum Astro does not have access to CB&I's labor rates, for example. (Thompson, Tr. 2118-19).

6.188 The Acquisition had no influence on the decision to add profit into the new price, because the project had already been awarded. (Scorsone, Tr. 5048-49; *see also* Scully, Tr. 1223-24).

6.189 Even if PDM was still in existence at the time of the Spectrum Astro re-pricing, CB&I's lower-level and mid-level employees working on that project would still have tried to pass on the $500,000 in pre-contract costs to the customer. (Scully, Tr. 1223).

6.190 Mr. Scorsone was personally responsible for determining the new price for Spectrum Astro on its re-submitted bid and included extra profit into the new price. (Scorsone, Tr. 5048).

6.191 CB&I prepared a document with a cost breakdown for its own internal use. (Scorsone, Tr. 5236-37). CB&I does not disclose its costs or margin to its customers. (Thompson, Tr. 2120). Mr. Scorsone reviewed it and asked someone to add money for pre-contract costs. (Scorsone, Tr. 5236-37). Mr. Scorsone did not tell that person which line item to add money to, and as a result, that person chose to add the money to the margin. (Scorsone, Tr. 5235-37).

6.192 CB&I attempted to recover pre-contract costs from Spectrum Astro that amounted to approximately $500,000. (Scully, Tr. 1215-16, 1223). This amount accounts for the 4% increase in margin that was included in the re-pricing. (Scully, Tr. 1216).

6.193 Spectrum Astro did not like CB&I's November, 2001 price for the TVC project, but this situation was a pretty common business dispute. (Thompson, Tr. 2117). It is not unusual for a contractor to stuff more profit into a proposal when they have an opportunity as part of a negotiation. (Thompson, Tr. 2121).

6.194 Business disputes with customers are common occurrences. (Scorsone, Tr. 4834-36). It's also not uncommon for a situation to arise in which a customer demands that the contractor perform the work in a manner different from what was assumed when the bid was initially submitted. (Scorsone, Tr. 4836). Such changes can impact the costs of a project, and this typically result in dispute resolution elements of the contract being activated. (Scorsone, Tr. 4836-37). Such disputes have no impact on the contractor and the customer working together in the future on other projects. (Scorsone, Tr. 4837). The price changes has nothing to do with competition; rather, the change is related to change orders requested by the customer. (Scorsone, Tr. 5049; Scully, Tr. 1172-73, 1222, 1224).

6.195 The November, 2001 price expired again after 90 days without Spectrum Astro acting on the new price. (Scorsone, Tr. 5051). After the second price had expired, Spectrum Astro waited six or seven months before requesting an updated price from CB&I. (Scorsone, Tr. 5051). The companies did not have a contract or financing at that point. (Scorsone, Tr. 5051-53).

6.196 In May, 2002, Spectrum Astro responded to the November, 2001 price asking CB&I to try again. (Scorsone, Tr. 5051). On June 25, 2002, CB&I provided Mr. Thompson with an updated price in the amount of $11,553,790, a decrease of roughly $500,000 from the previous price update. (Thompson, Tr. 2091-92).

6.197 CB&I lowered its price in June, 2002, because Mr. Scorsone was aware that the customer was having difficulty obtaining financing, and he wanted to assist them by making the project more viable with a lower price. (Scorsone, Tr. 5051-53).

6.198 When CB&I offered its re-pricing in June, 2002, Scorsone was completely unaware that Spectrum Astro's CEO was having his deposition taken in connection with this proceeding. (Scorsone, Tr. 5053). The price was not lowered as a result of anything that was happening in the deposition. (Scorsone, Tr. 5053). Rather, the updated pricing was provided in response to Spectrum Astro's May, 2002 request for pricing. (Thompson, Tr. 2124-25). In other words, CB&I was working on the re-pricing weeks before Mr. Thompson's deposition took place. (Thompson, Tr. 2124-25).

6.199 Spectrum Astro does not plan to proceed with the field-erected TVC project for Spectrum Astro. (Thompson, Tr. 2097, 2103-04). The decision is the result of "government action." (Thompson, Tr. 2097). The lack of financing also influenced the decision. (Thompson, Tr. 2105). It will be a long time before the Spectrum Astro job is actually built, if at all. (Scully, Tr. 1225-26).

6.200 Instead, Spectrum Astro intends to build a smaller shop-fabricated chamber, a product which CB&I does not build. (Thompson, Tr. 2104-2105).

6.201 The current proposed price (the June, 2002 re-pricing) has expired, and Spectrum Astro does not have a currently valid price for the TVC job. (Thompson, Tr. 2103; Scully, Tr. 1186).

6.202 Two years have elapsed since the project was awarded to CB&I/XL, and the Spectrum Astro TVC job was never built, nor was CB&I ever released to begin work on that project. (Scully, Tr. 1182). **[XXXXX XXXXX XXXXX XXXXX XXXXX]**

VII COMPLAINT COUNSEL'S FAILED EFFORT TO CARRY ITS BURDEN OF PROOF

A. COMPLAINT COUNSEL'S EFFORT TO USE BUDGET PRICING TO SHOW ALLEGED ANTICOMPETITIVE EFFECTS HAS FAILED

1. Budget Pricing Is Different From Firm Fixed Bid Pricing

7.1 A budgetary estimate, also known as rough order of magnitude pricing ("ROM"), is different from a firm fixed bid price. (Glenn, Tr. 4126; Neary, Tr. 1432, 1438; Hall, Tr. 1867; Carling, Tr. 4472). Budget prices are more imprecise than firm fixed bid prices. (Carling, Tr. 4472; Scorsone, Tr. 4999).

7.2 Customers use budget prices for a variety of purposes. A budget price is often developed for planning purposes for a project which may or may not be built. (Hall, Tr. 1863, 1868-69; Neary, Tr. 1439; Stetzler, Tr. 6351; Carling, Tr. 4472). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXX]** Sometimes, budget prices are numbers that are being used by a client to set up an investment budget. (Kistenmacher, Tr. 925). Budget pricing are also used by customers for forecasting. (Patterson, Tr. 373-74; Price, Tr. 601; Scorsone, Tr. 5250; Stetzler, Tr. 6351). A supplier will sometimes provide a preliminary price estimate to a customer for the purposes of verifying that the customer's budget is within the realm of what the customer can afford. (Glenn, Tr. 4125-26; Carling, Tr. 4472).

7.3 Budget prices are prepared with less detailed information provided by the customer. (Hall, Tr. 1866; Carling, Tr. 4472; Fan, Tr. 1078). By contrast, a fixed firm bid price is based on very detailed designs. (Carling, Tr. 4472; Scorsone, Tr. 5003). The company providing the firm price is expected to "stand up to their price and do the work for that price." (Carling, Tr. 4472).

7.4 Budget pricing for LNG tanks is "more conservative" than firm fixed bid prices. (Price, Tr. 604). In other words, customers are not expecting the lowest number that they can conceive of at that point. (Price, Tr. 604). Customers are just creating a budget, and thus would not expect that the number would be very precious at that point, since it is not based upon engineering information from the site. (Price, Tr. 604; *see also* Carling, Tr. 4472).

7.5 In preparing project proposals, customers will sometimes use their own budgetary prices as an estimate, rather than asking a supplier to provide them. (Fan, Tr. 948).

7.6 The supplier typically bears the expense for providing a budget price to a customer. (Cutts, Tr. 2449).

7.7 Budget prices are "scientific wild assed guesses," accurate only to plus or minus 40%. (Hall, Tr. 1863-65).

7.8 A budget price is developed under the assumption that it will eventually be negotiated down after the initial submittal, so the budget prices are generally high. (Scorsone, Tr. 5002). Once the competitive process begins, the prices will decrease from the high budget prices. (See Scorsone, Tr. 5002).

7.9 Budget prices are not used to select a contractor. (Stetzler, Tr. 6380). Budget prices are not used to purchase anything; rather, budget prices are "best efforts guesstimates." (See Carling, Tr. 4472).

7.10 However, suppliers and customers do not assume any competition when they provides a rough order of magnitude or budget price. (Simpson, Tr. 5379; Hall, Tr. 1869-70). Customers expect budget prices to be high. (Hall, Tr. 1869-70). However, some customers will play vendors off of one another when requesting budget pricing. (Patterson, Tr. 362-63).

7.11 Line item listing of prices for a budgetary estimate is purely for internal use. (Scorsone, Tr. 5252-53). These documents are never prepared with the expectation that someone outside of the company will ever see them. (Scorsone, Tr. 5253).

7.12 A budget price is not an offer to sell. (Glenn, Tr. 4126; Simpson, Tr. 5380). LNG tanks are not awarded or purchased at a budget price estimate. (Glenn, Tr. 4126-27; Carling, Tr. 4472-73). A budget price will not be the price a customer pays for a tank. (Patterson, Tr. 374).

7.13 Budgetary estimates are not serious bid proposals. (Stetzler, Tr. 6352; Carling, Tr. 4472). In contrast, firm fixed bid prices are serious bid proposals. (See Carling, Tr. 4472).

2. Budget Prices Are Not Accurate Because They Are Based Upon Imperfect Information

7.14 Budget prices are based upon imperfect information. (*See* Carling, Tr. 4472). As a result of the these deficiencies, a budget price is not a detailed price. (Price, Tr. 603-04). The costs formulated in a budget price are based upon the supplier's costs on previous projects only. (Price, Tr. 605-06; *see also* Fan, Tr. 969-70).

7.15 When creating budget pricing, estimators do not use an actual tank design. (Fan, Tr. 1077; Scorsone, Tr. 4999; Hall, Tr. 1868). Estimators use off-the-shelf tank designs of a similar size volume to develop a budget price. (Scorsone, Tr. 4999; Fan, Tr. 1069-70). This practice reduces the accuracy of the final number in a budget price. (See Scorsone, Tr. 4999-5000).

7.16 CB&I does not call dozens of materials suppliers and ask for their current, binding materials prices when developing a budget price. (Fan, Tr. 1056; Scorsone, Tr. 4999). This lack of information creates potentially inaccurate budget pricing information. (Fan, Tr. 1056; *see* Scorsone, Tr. 4999-5002).

7.17 Subcontractors are not consulted when developing a budget price. (Scorsone, Tr. 5000; Fan, Tr. 1065). Specifically, their current prices are not used when developing a budget price. (Scorsone, Tr. 5000).

7.18 CB&I does not attempt to accurately estimate the amount of engineering labor required to design a tank when developing a budget price. (Fan, Tr. 1064; Scorsone, Tr. 5000). Those hours are not calibrated as part of the budget price. (Scorsone, Tr. 5000; see also Fan, Tr. 1064).

7.19 When developing a budget price, a supplier does not check to see whether subcontracting fabrication of an LNG tank might be more economical than self-performing the fabrication. (Scorsone, Tr. 5000; Fan, Tr. 1065).

7.20 A project's construction schedule is unknown when developing a budget price. (Fan, Tr. 1065, 1073; Scorsone, Tr. 5000). Knowing the construction schedule in advance is important, because it can influence the amount of indirect costs, tool and equipment costs, and mobilization and demobilization costs. (Scorsone, Tr. 5000-01; Glenn, Tr. 4126).

7.21 Costs can increase depending on when the work is done. (Scorsone, Tr. 5001). The time of the year of the construction is generally unknown when developing a budget price. (Fan, Tr. 1065; Scorsone, Tr. 5001). Price can be affected if productivity is impaired by weather that is either too cold or too hot. (Fan, Tr. 1076; Scorsone, Tr. 5001).

7.22 The exact location of the project site is unknown when developing a budget price. (Fan, Tr. 1065, 1075; Scorsone, Tr. 5001). Price can be affected by the site location based upon costs associated with movement of materials, accommodations for the field craft labor, storage, access roads, limitations on bridges, and limitations on tunnels. (Fan, Tr. 1075-76; Scorsone, Tr. 5001-02).

7.23 A determination as to whether traveling labor or local labor is used on a project is not included when developing a budget price. (Scorsone, Tr. 5002; Fan, Tr. 1065, 1075). The accuracy of the budget price is affected without such information. (*See* Fan, Tr. 1075).

7.24 Budget pricing does not require a customer to provide the supplier with information about the site conditions, as well as allowing someone from the bidding company to tour the job site to examine the access to the site and soil conditions. (*See* Stetzler, Tr. 6353; *see also* Glenn, Tr. 4126; see also Fan, Tr. 1065).

7.25 Relatively little time or effort is spent by a tank supplier in order to provide a budget price. (Patterson, Tr. 374; Stetzler, Tr. 6352-53; Fan, Tr. 969).

7.26 Budget prices include assessments of risk and contingency. (Price, Tr. 608-09; Scorsone, Tr. 5252; Simpson, Tr. 5366). Projects that involve an excessive amount of risk or unknown contingencies will receive higher budget prices. (Scorsone, Tr. 5003).

7.27 Years sometimes elapse between the time when a budget price is submitted and the time when a firm fixed bid price is actually requested. (Scorsone, Tr. 5004). In the interim, material and labor costs change. (Scorsone, Tr. 5004). A budget price does not attempt to account for the changes in costs over time, and as a result, budget prices often assume a high profit margin level. (Scorsone, Tr. 5004).

3. Firm Fixed Prices Are Prepared Differently And Are More Accurate

7.28 In contrast to budget prices, firm fixed bid prices are very detailed. (Carling, Tr. 4472). Relatively more time and effort is spent in developing a firm fixed bid price than in preparing a budget price. (*See* Stetzler, Tr. 6352-53).

7.29 When creating a firm fixed price, estimators use an actual tank design. (*See* Fan, Tr. 1077; *see also* Scorsone, Tr. 4999).

7.30 Dozens of materials suppliers are contacted and asked for their current, binding materials prices when developing a firm fixed price. (*See* Carling, Tr. 4472; *see also* Scorsone, Tr. 4999-5002).

7.31 Subcontractors are consulted when developing a firm fixed price. (*See* Carling, Tr. 4472; *see also* Scorsone, Tr. 4999-5002).

7.32 Suppliers attempt to accurately estimate the amount of engineering labor required to design a tank when developing a firm fixed price. (*See* Carling, Tr. 4472; *see also* Scorsone, Tr. 4999-5002).

7.33 When developing a firm fixed price, a supplier checks to see whether subcontracting fabrication of an LNG tank might be more economical than self-performing the fabrication. (*See* Carling, Tr. 4472; *see also* Scorsone, Tr. 4999-5002).

7.34 A project's construction schedule is known when developing a firm fixed price. (*See* Fan, Tr. 1073; *see also* Carling, Tr. 4472; *see also* Scorsone, Tr. 4999-5002). Knowing the construction schedule in advance is important, because it can influence the amount of indirect costs, tool and equipment costs, and mobilization and demobilization costs. (Scorsone, Tr. 5000-01; Glenn, Tr. 4126).

7.35 Costs can increase depending on when the work is done. (Scorsone, Tr. 5001). The time of the year of the construction is generally known when developing a firm fixed price. (*See* Carling, Tr. 4472; *see also* Scorsone, Tr. 4999-5002).

7.36 The exact location of the project site is known when developing a firm fixed price. (*See* Carling, Tr. 4472; *see also* Scorsone, Tr. 4999-5002). Price can be affected by the site location based upon costs associated with movement of materials, accommodations for the field craft labor, storage, access roads, limitations on bridges, and limitations on tunnels. (Fan, Tr. 1075-76; Scorsone, Tr. 5001-02).

7.37 A determination as to whether traveling labor or local labor is used on a project is included when developing a firm fixed price. (*See* Carling, Tr. 4472; *see also* Scorsone, Tr. 4999-5002).

7.38 Firm fixed bid prices require that a customer give the supplier information about the site conditions, as well as allowing someone from the bidding company to tour the job site to examine the access to the site and soil conditions. (Stetzler, Tr. 6353; Glenn, Tr. 4126).

B. CB&I INSTITUTED A "CLEAN TEAM" TO AVOID EXCHANGE OF COMPETITIVE INFORMATION

7.39 CB&I and PDM created a "clean team" of individuals who were not current employees of CB&I or PDM to perform due diligence of current projects and to present results to CB&I on an aggregated basis. (*See* Glenn, Tr. 4405-07; Scorsone, Tr. 5246-47).

7.40 The parties to the Acquisition made this effort to address antitrust concerns related to due diligence between the companies. (Scorsone, Tr. 5246-47). The parties did not try to exchange current sensitive information. To the contrary, they made good faith efforts to put in place procedures to avoid such an exchange of information. (Scorsone, Tr. 5246-47).

7.41 Neither CB&I nor PDM intended to have sensitive information exchanged during the due diligence process, and in fact intended to avoid such exchanges. (Glenn, Tr. 4405-07; Scorsone, Tr. 5246-47).

C. ECONOMIC FINDINGS OF FACT

1. Foundation For Economic Opinions

7.42 Barry Harris is employed by Economists, Inc. in Washington D.C., and has been working there since 1985, except during 1992-1993 when he was the Deputy Assistant Attorney General at the Department of Justice. (Harris, Tr. 7152-53).

7.43 While in this position Dr. Harris was in charge of 80 or 90 professional economists, including financial analysts, had broad policy responsibilities, reported to the head of the Antitrust Division of the Department of Justice, and participated in decision making regarding Acquisitions and enforcements. (Harris, Tr. 7153).

7.44 Dr. Harris has authored eight to ten articles relating to Acquisitions. (Harris, Tr. 7156-57).

7.45 Dr. Harris has analyzed roughly 200 Acquisitions, both in private practice and for the government, and has testified in between 15 and 20 Acquisition cases, seven of which specifically involved a governmental challenge to a Acquisition, including Baker Hughes. (Harris, Tr. 7160-61, 7163).

2. Methodology

7.46 Dr. Harris believes that the Baker Hughes case is very similar factually, insofar as the products at issue were customized but made from a known technology, the market was very thin, shares were affected by individual jobs, other firms did the same work worldwide, and the government contended this did not mean these worldwide competitors could compete in the United States. (Harris, Tr. 7166-67).

7.47 Dr. Harris analyzed the competitive effects of the Acquisition of CB&I and PDM using the Merger Guidelines and using empirical data, by reading deposition and trial testimony, by looking at publicly available information such as websites, and by talking to CB&I people. (Harris, Tr. 7171-81).

7.48 Dr. Harris reviewed the entire record in connection with this case; Dr. Simpson, by contrast, read approximately 80% of the record. (Harris, Tr. 7172; Simpson, Tr. 3624-26).

7.49 It is economically significant that each project is designed for each customer because there is individualized bidding for each project. (Harris, Tr. 7189-90).

7.50 Although there is individualized bidding for each project, broadly, that a customer chooses a particular supplier indicates the ability of that supplier to compete. (Harris, Tr. 7190-91).

7.51 Dr. Harris examined the market since the Acquisition and looked to see what producers are doing and where they've bid, where they've won jobs, what they say they can do, what they've said publicly about their plans; similarly, he looked at what customers have done, what they say about the Acquisition and what they have done in terms of awarding jobs and accepting bids and qualifying producers to bid. (Harris, Tr. 7181-82, 7191).

7.52 Dr. Harris' examination of the post-Acquisition activity is commonly called an analysis of the "natural market experiment" by economists. (Harris, Tr. 7182-84).

7.53 Dr. Harris used the natural market experiment as a significant part of his analysis in this case. (Harris, Tr. 7185-86).

7.54 Dr. Harris used the natural market experiment to look at what happened after the Acquisition and see if predictions regarding the effects of the Acquisition have come true; additionally Dr. Harris used past natural market experiments to make and test future predictions. (Harris, Tr. 7183).

7.55 Economic testimony establishes that not all aspects of a particular natural market experiment need be identical to the features that exist in the market being analyzed. (Harris, Tr. 7183-84).

7.56 Economic testimony further indicates that the concept of the natural market experiment has been embraced by the FTC. (Harris, Tr. 7184-85).

7.57 However, Dr. Harris does not believe that Complaint Counsel took into account post-Acquisition markets. (Harris, Tr. 7187).

7.58 Economic testimony regarding the natural market experiment reveals that that domestic U.S. customers in the relevant tank markets are turning to worldwide producers who in large part were not selling in the United States prior to the Acquisition; these are not new firms but new sellers in the U.S. (Harris, Tr. 7188-89).

3. Application Of Economic Theories

a. Critical loss

7.59 Competitive constraint was calculated by Dr. Harris using critical loss analysis, a calculation which Dr. Harris created. (Harris, Tr. 7256, 7258). Dr. Simpson used critical loss analysis to determine relevant markets. (Simpson, Tr. 3525).

7.60 Critical loss analysis is done to ascertain, either for purposes of market definition or for purposes of unilateral action, whether or not market power can be exercised. (Harris, Tr. 7256).

7.61 To calculate critical loss, the first step is to identify the entity to be tested. (Harris, Tr. 7259).

7.62 The second step is to ask whether a price increase would be profitable based on how much the entity could lose before a particular price increase would become unprofitable. (Harris, Tr. 7259).

7.63 It is then necessary to identify which costs are variable and figure out the variable contribution margin; the larger the contribution margin, the lower the critical loss, i.e. the level at which a price increase becomes unprofitable. (Harris, Tr. 7259).

7.64 Once the critical loss has been identified, the next step is to look at the market at test the likelihood that the level of sales will actually be lost. (Harris, Tr. 7259).

7.65 Dr. Harris believes that this critical loss calculation makes the standards of the Merger Guidelines operational. (Harris, Tr. 7257).

7.66 Dr. Simpson did a critical loss analysis, but came to a different conclusion with respect to contribution margin. (Harris, Tr. 7260).

7.67 Dr. Simpson assumes that CB&I's fixed costs as a percentage are no more than 15%, and he bases this on his assumption that engineering, drafting, fabrication, project management and field erection are all entirely variable. (Simpson, Tr. 3003-17; CX-1641).

7.68 Record evidence reveals that Dr. Simpson's critical loss calculation was incorrect because he estimates an incorrect contribution margin based on his own notion of which costs at CB&I are variable and which are fixed, without finding out how CB&I actually runs its business. (Harris, Tr. 7341-42).

7.69 Dr. Simpson admits that CB&I is going to behave in accordance with its perceptions of the costs of the company. (Simpson, Tr. 3874).

7.70 Gerald Glenn, CEO of CB&I, stated that CB&I would not reduce the size of its engineering department, its project manager force, or its fabrication facilities if it lost 25 percent of its business in the relevant product markets. (Glenn, Tr. 4159-60).

7.71 Luke Scorsone, President of CB&I Industrial, corroborated Mr. Glenn's testimony and stated that engineers are simply reassigned to different contracts when other jobs are lost, even if half of jobs are lost in the relevant product markets, that engineering and drafting are considered the same at CB&I, that salaried field erection personnel are redeployed and not fired even if half of jobs are lost in the relevant product markets, that he would not shut down a fabrication shop or fire employees if half of the jobs in the relevant product markets were lost, and that he would not sell equipment if he lost half the work in the relevant product markets. (Scorsone, Tr. 4902-11).

7.72 Mr. Scorsone instead fires people based on performance; not based on downturns in business in the relevant product markets. (Scorsone, Tr. 4912-17).

7.73 Mr. Scorsone also indicated that fabrication is variable since 9% nickel steel is imported pre-fabricated. (Scorsone, Tr. 4891).

7.74 Mr. Glenn explained that sales in the relevant product markets are small in the scheme of CB&I's overall sales. (Glenn, Tr. 4211-12).

7.75 CB&I trains its workforce across all its products, and does not have employees who specialize in a product. (Glenn, Tr. 4058, Scorsone, Tr. 4887, CX-497 at 363-65 (Leventry deposition)).

7.76 Dr. Harris found that a five percent increase in price would be unprofitable for CB&I if it were to lose one in seven jobs. (Harris, Tr. 7342).

7.77 By contrast, Dr. Simpson's calculation indicates that a 5 percent price increase becomes unprofitable if CB&I loses one in four jobs. (Harris, Tr. 7342).

7.78 Ultimately, however, economic testimony indicates that regardless of whose calculation is correct, CB&I has already lost 18% of the post-Acquisition dollars that were available, thus at this point any price increase and subsequent loss of sales would be unprofitable. (Harris, Tr. 7342-43).

7.79 CB&I's state of mind is important to critical loss, and is important across all four product markets, because the important question is whether CB&I will behave in a certain manner. (Harris, Tr. 7260-61).

7.80 It is economically significant that CB&I has already lost projects since the Acquisition, which means that CB&I has already lost more business than it can afford to lose under critical loss analysis. (Harris, Tr. 7261-63).

7.81 This suggests that CB&I was not trying a price increase, but was rather getting out competed. (Harris, Tr. 7263).

b. CB&I's imperfect knowledge of its competitors' costs

7.82 Economic testimony reveals that under the FTC's theory that CB&I knows its competitors costs and is the low cost supplier, CB&I should be winning every job, but CB&I has not won every job and has instead already lost its "critical loss" as calculated by Dr. Simpson. (Harris, Tr. 7264, 7273, 7358-59).

7.83 Dr. Simpson admits that CB&I has imperfect knowledge of its competitors because products are sold through a sealed bid process; bidders must guess who the other bidders are, estimate their costs, and then predict what their bidding behavior will be. (*See* Simpson, Tr. 3073, 3771).

7.84 Dr. Simpson agrees that CB&I can draw the inference from the fact that foreign tank companies are winning projects that that foreign tank companies have competitive prices. (Simpson, Tr. 3784).

7.85 Dr. Simpson admits that the knowledge that AT&V beat CB&I twice would have an effect on CB&I's pricing in the LIN/LOX tank market. (Simpson, Tr. 3829).

7.86 Dr. Simpson believes that the level of information available to CB&I will determine whether it is likely CB&I would impose a price increase. (Simpson, Tr. 3844-47).

7.87 Record evidence indicates that competitors may know the rankings of competitors who submitted bids on a project, but in the industry the actual prices submitted are almost never disclosed. (Jolly, Tr. 4761-62; Patterson, Tr. 350-60).

7.88 A rare instance of actual bids being made available to the competitors is where the customer is a public utility required to eventually make the bids public. (*See* Scorsone, Tr. 5010).

4. Economic Opinions In LNG Market

a. General conclusions

7.89 Economic testimony supports the view that there has not been any harm to competition in the U.S. LNG market as a result of CB&I's Acquisition of PDM. (Harris, Tr. 7194).

7.90 Further, economic testimony supports the view that the level of competition in the U.S. LNG market is robust; there are numerous bidders and prices have not risen. (Harris, Tr. 7195).

7.91 In addition, economic testimony supports the conclusion that entry in the LNG domestic tank market is easy. (Harris, Tr. 7248).

7.92 Further, economic testimony supports the conclusion that under the Merger Guidelines, entry is competitively significant in the LNG market in the U.S.. (Harris, Tr. 7254-56).

7.93 Finally, economic testimony supports the conclusion that there are entrants who are serious, qualified international producers and that they either already compete in the United States or have the ability to compete in the United States. (Harris, Tr. 7213).

5. Support For Conclusions

7.94 These economic conclusions are supported by the fact that customers in the U.S. LNG tank market are large, sophisticated energy companies, and are often assisted by construction or consulting firms. (Harris, Tr. 7206-07).

7.95 Additionally, these economic conclusions are supported by customer testimony indicating a belief that there is sufficient competition and that the competition in the U.S. LNG tank market is not harmed by the Acquisition. (Harris, Tr. 7297-7308).

7.96 That there are presently numerous suppliers, i.e. TKK with AT&V, Technigaz with Zachry, Daewoo with S&B, and Tractebel/Entrepose, available supports these economic conclusions. (Harris, Tr. 7209-13).

7.97 An economic evaluation of Skanska Whessoe indicates that because it now has both "brains and brawn", has been accepted as a bidder and the EPC for Dynegy, and is viewed by customers as a good supplier, it is a good competitor. (Harris, Tr. 7239-7240).

7.98 An economic evaluation of the TKK/AT&V alliance indicates that because customers have said good things about TKK, because of TKK's reputation, and because TKK won the Trinidad job, TKK is a viable entrant. (Harris, Tr. 7241-42).

7.99 An economic evaluation of the Technigaz/Zachry alliance indicates that because of its worldwide experience, its clear intent to enter the market, its experience in concrete, customer testimony, and Zachry's strength as a construction firm, it is a viable potential entrant (Harris, Tr. 7242-43).

7.100 An economic evaluation of competition in LNG market indicates that there are also potential entrants, which include Daewoo/S&B, Tractebel/Entrepose, MHI and IHI. (Harris, Tr. 7245-47).

7.101 The economic conclusions reached by Dr. Harris are supported by natural market experiments, including Dynegy and Trinidad. (Harris, Tr. 7263-64, 7267-73).

7.102 Dynegy represents a natural market experiment indicating that the FTC's theory that CB&I has market power and can successfully exert market power is wrong. (Harris, Tr. 7263-64).

7.103 Trinidad represents a natural market experiment indicating that CB&I's competitors can offer the same prices as CB&I did pre-Acquisition and that they may have similar cost structures since CB&I's pricing was roughly 5 percent higher than their pricing had been on the earlier Trinidad project and the winning price was roughly 5 percent lower than the CB&I price; that suggests to Dr. Harris that if CB&I was 5 percent higher than they had been earlier in Trinidad, if they were 5 percent higher, but the winning bid was 5 percent lower, what that means is within a small margin of error that the winning bid in Trinidad post-Acquisition was almost identical to the winning bid in Trinidad pre-Acquisition. (Harris, Tr. 7351).

7.104 The economic conclusions are supported by the fact that there are no examples of post-Acquisition price increases; Memphis is not an example of a post Acquisition price increase because the comparison is between an old price and a budget estimate nearly a decade later; such a comparison is not appropriate. (Harris, Tr. 7274-7275).

7.105 Economic testimony indicates that Cove Point is not an example of a price increase because the negotiations occurred before the Acquisition. (Harris, Tr. 7382).

7.106 **[XXXX XXXX]**

7.107 Economic testimony indicates that Fairbanks does not represent a price increase because it was a budget estimate for a tiny job. (Harris, Tr. 7278-79).

7.108 That the LNG tank market has changed in the last decade insofar as demand has changed, that there is a shift to double and full containment tanks, and that the competitors have changed supports the economic conclusions reached in this case. (Harris, Tr. 7219-21).

7.109 The economic conclusions reached in this case are supported by the fact that CB&I has won only 17-18% of the dollar amounts available, which means that CB&I is not able to profitably increase prices if that is what it is doing, and likely does not have better costs than its competitors. (Harris, Tr. 7223, 7264, 7358).

7.110 Dr. Harris' expert economic conclusions are supported by the Merger Guidelines, which state that a structural analysis is only valid if it is predictive (§§ 1.41 & 1.32). (Harris, Tr. 7227-32).

7.111 Economic analysis of the record indicates that entry is easy; which is supported by the fact that entrants already have sufficient engineering staffs and skills, it is not necessary to own a fabrication plant since often steel is prefabbed and imported anyhow, field labor can be hired easily, and subcontracting is not a competitive disadvantage. (Harris, Tr. 7249-54).

7.112 Further, that entry is easy is supported by the fact that the entrants are worldwide tank producers who can and have competed in the U.S.. (*See* Harris, Tr. 7249, 7251-52).

7.113 Expert testimony indicates that the omission of market changes affects Dr. Simpson's HHI analysis. (Harris, Tr. 7221-22).

7.114 Dr. Simpson, however, does not account for these changes in his structural analysis. (Harris, Tr. 7221).

7.115 For this reason, as well as due to Dr. Simpson's failure to consider changes in the market, Dr. Simpson's structural analysis is not useful. (Harris, Tr. 7227-29).

7.116 Economic testimony indicates that the 1994 Memphis project says nothing about the ability of those entrants to bid today because circumstances have changed; namely joint alliances have been formed and Skanska now owns Whessoe. (Harris, Tr. 7233-34).

6. Economic Opinions In LPG Market

7.117 Economic testimony supports the view that the Acquisition of PDM by CB&I has not harmed competition or reduced competition in the U.S. LPG tank market. (Harris, Tr. 7281).

7.118 This economic testimony is supported by the fact that there are additional firms who could enter the LPG market; any of the worldwide LNG tank suppliers. (Harris, Tr. 7287-94).

7.119 Economic testimony indicates that Dr. Simpson's structural analysis in the LPG market fails to reflect the current level of competition because it fails to consider that CB&I had not won a job between 1993 and the Acquisition, and it fails to consider entry. (Harris, Tr. 7286-87).

7.120 Economic testimony indicates that the issues regarding barriers to entry are the same as with LNG. (Harris, Tr. 7295).

7.121 That entry is easy is supported by the Morse tank story, which represents a natural market experiment. (Harris, Tr. 7295-97).

7.122 The economic conclusion that competition has not been harmed in the LPG market is supported by customer views that prices have not risen since the Acquisition. (Harris, Tr. 7299-7300).

7. Economic Opinions In LIN/LOX Market

7.123 Economic testimony indicates that it is inappropriate to include spheres in the LIN/LOX market. (Harris, Tr. 7301-02).

7.124 Economic testimony supports the view that the Acquisition will not harm competition in the LIN/LOX market. (Harris, Tr. 7302).

7.125 That the skills needed to make an LNG tank are the same to make a LIN/LOX tank supports this view. (Harris, Tr. 7303).

7.126 An economic analysis of the Freeport job combined with the MG Industries job indicates that if CB&I can both be the lowest and the highest bidder on a project, it must not have good information about its competitors' costs and is trying to be competitive. (Harris, Tr. 7389-91).

7.127 That AT&V has won three of the five post Acquisition LIN/LOX projects supports the view that competition has not been harmed by the Acquisition in the LIN/LOX market. (Harris, Tr. 7308).

7.128 An economic analysis of Matrix indicates that its sale of Brown Steel will not affect its ability to compete in the LIN/LOX market. (Harris, Tr. 7308-10).

7.129 **XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXXX XXXXX** are common and others have testified favorably about AT&V such as BOC. (Harris, Tr. 7387-88).

7.130 An economic analysis of the LIN/LOX market indicates that Dr. Simpson's structural analysis in LIN/LOX is not useful because it does not reflect the current competitive situation and fails to consider entry and changes in the market since 1990 since such as Praxiar spinning off CB&I and Graver. (Harris, Tr. 7311-13).

7.131 Economic testimony indicates that the analysis regarding entry barriers is the same as in LNG and LPG. (Harris, Tr. 7313-14).

7.132 An economic analysis of market behavior in the LIN/LOX market indicates that competition has not been harmed. (Harris, Tr. 7314-15).

7.133 Economic testimony supports the view that recent entrants constrain CB&I's pricing, as illustrated by the Freeport job. (Harris, Tr. 7315-17).

7.134 Economic testimony indicates that Dr. Simpson's belief that prices have risen in the LIN/LOX market, which is based on the testimony of Chung Fan, does not hold water because Fan's model contains too many erroneous assumptions, and the evidence (emails and testimony) contradicts Dr. Simpson. (Harris, Tr. 7318, 7383-92).

7.135 **[XXXX XXXX]**

8. Economic Opinions In TVC Market

7.136 Economic testimony supports the view that the Acquisition will not harm competition in this market because there is no business to speak of in this market, and the offer made by CB&I could remedy any problems created by the Acquisition. (Harris, Tr. 7325-28).

9. Economic Testimony Regarding Vertical Effects

7.137 Economic testimony indicates that CB&I's Acquisition of PDM did not result in vertical anticompetitive effects because CB&I does not have market power in the tank markets, and the EPC market is very competitive, as evidenced by Skanska/Whessoe at Dynegy and Black & Veatch and KBR. (Harris, Tr. 7329-30).

7.138 That CB&I sometimes tries to supply the entire facility is irrelevant to an economic analysis of the Acquisition since it is a business decision predating the Acquisition. (Harris, Tr. 7330-31).

10. Economic Testimony Relating To Exiting Assets

7.139 Economic testimony indicates that it is important for an economist to consider whether the acquired firm would have remained in the market but for the Acquisition. (Harris, Tr. 7331-32).

7.140 This economic testimony is supported by record evidence that PDM was going to liquidate it's EC division absent the Acquisition, Matrix was not a viable purchaser, and Dr. Simpson ignores this entirely. (Harris, Tr. 7332-38).

11. Economic Testimony Does Not Support Break-Up Of CB&I

7.141 Economic testimony supports the position that relief requested by the FTC is unnecessary because there is no anticompetitive result from the Acquisition and the requested remedy may actually harm competition. (Harris, Tr. 7366).

7.142 This is supported by the fact that the FTC failed to consider whether two new companies would meet the same level of viability Dr. Simpson requires of entrants. (Harris, Tr. 7367-68).

7.143 There is support for the view that a break up is unsupported and unnecessary in the customer testimony regarding a break-up of CB&I and testimony of Gerald Glenn which indicates that remedy is not desired by customers and would be disruptive. (Harris, Tr. 7368-72).

7.144 Economic testimony indicates that in LNG bonding is an issue to be considered since it may be impossible for a break-up to restore any loss of competition. (Harris, Tr. 7372-73).

7.145 Economic testimony indicates that Dr. Simpson failed to do a thorough analysis with regards to remedy. (Harris, Tr. 7373-75).

12. Dr. Simpson Lacks Foundation

a. Generally

7.146 Dr. Simpson has never, in his professional career as an economist, had a job outside of an antitrust enforcement agency. (Simpson, Tr. 3616).

7.147 Dr. Simpson has never testified on behalf of a private business as an economist. (Simpson, Tr. 3616).

7.148 Dr. Simpson had not read approximately 20 percent of the trial testimony at the time he gave his expert opinions, and did not know whether that trial testimony would have influenced his opinion. (Simpson, Tr. 3626).

b. LNG

7.149 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Simpson, Tr. 5640-41).

7.150 Dr. Simpson believes that the costs of foreign LNG competitors put them at a competitive disadvantage, however Dr. Simpson has never seen the costs of the foreign competitors. (Simpson, Tr. 3919-22). Dr. Simpson has not seen evidence permitting him to quantify differences between CB&I and foreign firms in terms of field erection costs, labor costs, Acquisition, project management personnel rates, engineering personnel rates, fabrication costs, administrative overhead, or costs relating to owning versus renting equipment. Simpson, Tr. 3921-37).

7.151 Dr. Simpson does not know whether CB&I decided to import the steel for the Cove Point project fully fabricated because it was cheaper than fabricating it itself. (Simpson, Tr. 3924-25). However, Dr. Simpson believes this information would be useful to developing his opinions. (Simpson, Tr. 3925).

7.152 Dr. Simpson could not quantify the cost advantage CB&I has over its competitors in terms of fabrication. (Simpson, Tr. 3929-30).

7.153 Dr. Simpson does not know whether CB&I has a cost advantage or disadvantage based on its engineering rates, charges for project management staff, drafting rates, field erection rates, or hourly wages. (Simpson, Tr. 3930-31).

7.154 Dr. Simpson has not studied the economics of owning field construction equipment rather than renting it for the construction of a single LNG job. (Simpson, Tr. 3931).

7.155 Dr. Simpson does not know whether CB&I's foreign competitors have better materials Acquisition contracts with suppliers than CB&I. (Simpson, Tr. 3933).

7.156 Dr. Simpson does not know whether the selling, general and administrative overhead of CB&I is higher or lower than CB&I's foreign competitors. (Simpson, Tr. 3937).

7.157 Dr. Simpson admits that foreign companies can build or engineer to API standards. (Simpson, Tr. 3954; 3955).

7.158 Dr. Simpson would not concede that hourly workers are free to work for companies other than CB&I because he "does not know the behavior of CB&I's hourly work force in intimate detail." (Simpson, Tr. 3964).

7.159 Dr. Simpson does not know whether Brian Price ever saw any bids for Dynegy. (Simpson, Tr. 5484).

7.160 Even if Dr. Simpson knew that Brian Price had never seen pricing for Dynegy, that would not change his view of Mr. Price's qualifications to testify about CB&I's pricing for Dynegy. (Simpson, Tr. 5485).

7.161 Dr. Simpson admitted that it was his "belief" that Mr. Carling cannot give an opinion about the effects of the Acquisition without having seen the Dynegy bids, but that Mr. Price and Dr. Simpson could give opinions regarding the effects of the Acquisition without having seen the Dynegy bids. (Simpson, Tr. 5498-99).

c. LIN/LOX

7.162 Dr. Simpson is not aware that AT&V was awarded the Hilsboro, Oregon LIN/LOX tank job. (Simpson, Tr. 3691-92).

7.163 Dr. Simpson admittedly did not study Chung Fan's analysis in great detail. (Simpson, Tr. 5592).

7.164 Dr. Simpson would not vouch for Chung Fan's analysis. (Simpson, Tr. 5593).

d. LPG

7.165 Dr. Simpson did not know whether Morse paid subsistence to its workers and did not know whether Morse was a union shop. (Simpson, Tr. 5555-56).

7.166 Dr. Simpson did not know that Morse used union labor on the Ferndale project even though it was a merit job. (Simpson, Tr. 5555-56).

7.167 Dr. Simpson could not recall whether Amy Warren, whose testimony he relied upon, was actually the person at Fluor who determined who the bidders would be for the SEA3 project. (Simpson, Tr. 5573).

e. TVCs

7.168 Dr. Simpson does not know that CB&I has not built a thermal vacuum chamber since 1980. (Simpson, Tr. 5609).

7.169 Dr. Simpson was not aware that the second to last thermal vacuum chamber CB&I built in Windsor, New Jersey, failed and can never be used. (Simpson, Tr. 5609).

7.170 Dr. Simpson does not know whether CB&I ever built a field-erected mailbox-shaped thermal vacuum chamber. (Simpson, Tr. 5610).

f. Dr. Simpson's reliance on documents about which he knows nothing

7.171 **[XXXXX XXXXX]** (Simpson, Tr. 4036-38).

7.172 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Simpson, Tr. 4037).

7.173 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Simpson, Tr. 4042).

7.174 **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Simpson, Tr. 4043).

7.175 **[XXXXX XXXXX]** (Simpson, Tr. 4044).

7.176 Despite testifying regarding a chart based on CX-460, a chart which Dr. Simpson admittedly did not prepare or ask to be prepared, Dr. Simpson does not know whether the information contained in the underlying document was accurate, and despite having access to the actual underlying information (i.e. AT&V's financial statements), Dr. Simpson chose to rely on Dan Knight's assessment of AT&V rather than AT&V's own data. (Simpson, Tr. 3944-49).

7.177 On this chart, Dr. Simpson does not know whether the engineering capability is global or domestic. (Simpson, Tr. 3949).

7.178 On another chart based on the same underlying Dan Knight document (CX-460), Dr. Simpson does not know how many of the crews of U.S. tank companies are involved in the United States. (Simpson, Tr. 3951).

7.179 Dr. Simpson does not know how many of CB&I's crews are part of Howe Baker. (Simpson, Tr. 3952).

7.180 Dr. Simpson believes Dan Knight is a CB&I executive, however Dr. Simpson does not know where Mr. Knight falls on the CB&I organizational chart. (Simpson, Tr. 3941-43).

7.181 Dr. Simpson does not know whether Dan Knight had any responsibilities with respect to the Acquisition. (Simpson, Tr. 3952).

7.182 Dr. Simpson bases his view that steel prices have not changed between 1996 and 2002 based on the Producer Price Index (PPI), even though the PPI does not indicate the price for nine percent nickel steel. (Simpson, Tr. 5399).

7.183 Dr. Simpson relied on the PPI for "plates and structurals" but did not know what "plates and structurals" referred to. (Simpson, Tr. 5400-01).

7.184 Even though Dr. Simpson thought it would be more accurate to use CB&I's actual Acquisition costs than the PPI, and even though Dr. Simpson could have asked for this information, Dr. Simpson relied on the PPI. (Simpson, Tr. 5407).

7.185 With regards to CX-1160, a document from Jeff Steimer to Luke Scorsone regarding the Williams estimate, Dr. Simpson does not know what Mr. Steimer's foundation was for his comments. (Simpson, Tr. 5427).

7.186 Dr. Simpson did not know that CX-1160 was in the context of a bid review meeting. (Simpson, Tr. 5429).

7.187 Dr. Simpson did not know why CX-364, a sales document claiming that CB&I was a leader in building full containment tanks, was prepared. (Simpson, Tr. 3742).

g. Budget pricing

7.188 Dr. Simpson admitted that he does not know the details about all of the budget prices that CB&I prepared. (Simpson, Tr. 5368-69).

7.189 Dr. Simpson admitted that despite having used the word "bid" on CX-1648 to describe the estimates given to Fairbanks Natural Gas and BC Gas, he knew that both were budget estimates. (Simpson, Tr. 5380-82).

7.190 Dr. Simpson does not know how the BC Gas budget estimate was derived. (Simpson, Tr. 5385).

7.191 Dr. Simpson did not recall having read the deposition of Lee Presley, and did not know whether having read Mr. Presley's deposition would have given him an understanding of how estimating is done. (Simpson, Tr. 5387).

7.192 Dr. Simpson does not know what the budget estimate given to Memphis Light and Gas was in 1994. (Simpson, Tr. 5452).

7.193 [Dr. Simpson does not know that a rough order of magnitude price is even less accurate than a budget estimate.] (Simpson, Tr. 5654-55).

7.194 Dr. Simpson does not know that a margin put on a budget estimate is for internal purposes only. (Simpson, Tr. 5631).

h. Remedy

7.195 Dr. Simpson had not considered the issue of whether the remedy of a company break up would be appropriate if the Court found a violation in only one small market of the four, and that the issue "would actually require quite a bit of thought." (Simpson, Tr. 5586).

i. Critical loss

7.196 Dr. Simpson does not know whether PDM and CB&I had differences in the way they calculated variable versus fixed costs. (Simpson, Tr. 3875-76).

7.197 Dr. Simpson believes CB&I would vary its field erection costs if it lost 25% of its domestic LNG sales based, in part, on a 10-K talking about VROs, even though Dr. Simpson admittedly does not know anything about a VRO or how it is structured. (Simpson, Tr. 3880-81).

7.198 Dr. Simpson relied on testimony from Sam Leventry to support his theory that CB&I fires engineering personnel when work decreases in the relevant markets, yet Dr. Simpson does not know whether Mr. Leventry was talking about people being fired based on performance or a downturn in work. (Simpson, Tr. 3905).

7.199 Dr. relied on a document from Steve Owens to Luke Scorsone, attachment 6 to his expert report, to support his argument that field manager personnel is fired if work slows in the relevant product markets, but Dr. Simpson does not know if the people listed in the document upon which he relies were ever fired. (Simpson, Tr. 3905-09). Dr. Simpson admitted that this would be relevant information to know. (Simpson, Tr. 3909).

7.200 Dr. Simpson does not know what foreign entrants are going in terms or training or in terms of money spent on entry. (Simpson, Tr. 3909-10).

7.201 Dr. Simpson does not know how long a period critical loss is measured over. (Simpson, Tr. 3868-69).

7.202 Dr. Simpson relies on Dr. Harris' notes from an interview with Luke Scorsone to determine fixed versus variable costs, however Dr. Simpson does not know whether the "significant decline" referred to in the notes was for more than 25% of U.S. LNG work or less than 25% of U.S. LNG work. (Simpson, Tr. 3887).

7.203 Dr. Simpson does not know what the current or past capacities of CB&I's fabrication facilities are. (Simpson, Tr. 3889).

7.204 Dr. Simpson does not know whether CB&I subcontracted the inner tank for the Salley, South Caroline peak-shaving plant because it was at capacity or because it got a better price in Japan for pre-fabricated material. (Simpson, Tr. 3889).

7.205 Dr. Simpson does not know whether they varied the employees in its fabrication shops as a result of subcontracting. (Simpson, Tr. 3889-90).

7.206 Dr. Simpson uses auction theory, but did not read all of the articles he relied on or test the mathematics contained therein. (Simpson, Tr. 3077, 3085-90, 3831-38).

13. Dr. Simpson's Incomplete Presentation Of Record Evidence

7.207 Dr. Simpson cited to Mr. Yowell's declaration in support of his assertion that buyers think that the Acquisition is likely to reduce competition, but failed to mention Mr.

Yowell's deposition where he explicitly stated that he no longer believed the statement in his affidavit regarding reduced competition was true. (Simpson, Tr. 3633-38).

7.208 Dr. Simpson nonetheless testified that he was objective when he identified Mr. Yowell as supporting the conclusion that buyers believed that the Acquisition reduced competition. (Simpson, Tr. 3639).

7.209 Dr. Simpson cited to Mr. Carling's deposition testimony regarding Whessoe to suggest that Whessoe has a poor current reputation for building LNG tanks, even though Mr. Carling testified that the problem Enron had at the Dhabol, India project was related to Kavaerner, not Whessoe, and that Whessoe, under the ownership of Skanska, is a very professional organization. (Simpson, Tr. 3639-50). Nonetheless, Dr. Simpson did not tell the court that Mr. Carling actually views Whessoe has having a good reputation (Simpson, Tr. 3648-49).

7.210 Dr. Simpson testified that he did not think Mr. Carling's statement that Whessoe is now a "very professional organization" was relevant. (Simpson, Tr. 3650).

7.211 Dr. Simpson testified that the only piece of evidence that he could think of that was inconsistent with his theories regarding the Acquisition of PDM-EC was Mr. Izzo's statement that he was not concerned about the Acquisition. (Simpson, Tr. 3656). Dr. Simpson simply did not "agree" with Mr. Izzo. (Simpson, Tr. 3656).

7.212 Dr. Simpson believes Cove Point represents an attempt to exercise market power even though it was awarded before the Acquisition and was awarded to PDM not CB&I. (Simpson, Tr. 5468-69).

7.213 Dr. Simpson used bid model theory to predict that firms who were not competing had no probability of winning jobs. (Simpson, Tr. 3393-94, 3400, 3663-65, 5753, CX-1645).

14. Dr. Simpson's Admissions

a. General

7.214 Dr. Simpson believes that he knows better than the management of the foreign competitors how successful they will be in their entry. (Simpson, Tr. 4016).

b. LNG

7.215 Dr. Simpson admittedly only knows a "little bit" about the regulations in the United States that govern LNG tanks. (Simpson, Tr. 3854).

7.216 Dr. Simpson admits that he believes that "the majority of customers believe that Whessoe can build an LNG tank in the U.S." (Simpson, Tr. 3993).

7.217 Dr. Simpson admits that even if the attempt by CB&I to get the Dynegy job in its entirety was an attempt to exercise market power, it failed. (Simpson, Tr. 5466-67).

7.218 Dr. Simpson admits that CB&I had a labor advantage in Trinidad. (Simpson, Tr. 3851).

7.219 Dr. Simpson admitted that full containment tanks require additional skill sets to single containment tanks. (Simpson, Tr. 3726).

7.220 Dr. Simpson believed that the Dynegy facility would use full containment tanks (Simpson, Tr. 3729).

7.221 Dr. Simpson believed that the Yankee Gas tank will be full containment. (Simpson, Tr. 3729-30).

7.222 Dr. Simpson believed that the Cove Point phase two expansion was leaning towards being a full containment tank. (Simpson, Tr. 3732).

7.223 Dr. Simpson is aware that full containment and double containment tanks require a significant amount of concrete work, and that CB&I contracts out concrete work. (Simpson, Tr. 3736).

7.224 Dr. Simpson believes that the concrete represents 30-40% of the cost in these tanks, which is a sizeable percentage of the job. (Simpson, Tr. 3737; 3738).

7.225 Nonetheless, Dr. Simpson believed CB&I had an advantage in building these tanks based on a single sales document, CX-364. (Simpson, Tr. 3741-42).

7.226 Dr. Simpson stated that we would take the fact that there would be more full containment tanks in the future into account in computing market shares. (Simpson, Tr. 3743).

c. LIN/LOX

7.227 Dr. Simpson concedes that Matrix has been able to enter and successfully engineer LIN/LOX tanks in the United States. (Simpson, Tr. 3952-53, 5605).

7.228 **[XXXXX]** (Simpson, Tr. 4034-35). **[XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX]** (Simpson, Tr. 4035-36).

7.229 Dr. Simpson admits that the knowledge that AT&V beat CB&I twice would have an effect on CB&I's pricing in the LIN/LOX tank market. (Simpson, Tr. 3829).

d. LPG

7.230 Dr. Simpson admitted that he relied on the testimony of Amy Warren, even though she did not even know who AT&V was and did not select the bidders on the projects she worked on, rather than Norman Kelly who had greater experience in this area. (Simpson, Tr. 5578-80).

e. TVCs

7.231 Dr. Simpson admitted that "there is probably some level at which the amount of commerce affected would be de minimus, and if you're asking me would it make sense to get a remedy to preserve some de minimus level of competition, I can see instances where it would not be." (Simpson, Tr. 5585-86).

7.232 Dr. Simpson could not "emphatically say" that CB&I and PDM coordinated their bids on the Spectrum Astro job. (Simpson, Tr. 5617).

7.233 Dr. Simpson agrees that the fact that somebody says something "stupid" like what Dave Lacey said does not mean that management has acted on the stupid idea. (Simpson, Tr. 5619).

7.234 Dr. Simpson testified that with regards to whether CB&I and PDM coordinated bids in the thermal vacuum chamber market, the "evidence is mixed" and that it is hard to draw a strong inference from the mixed evidence. (Simpson, Tr. 5619-20).

f. HHI

7.235 Dr. Simpson did not know whether there would be a change in the HHIs in any of the markets if he went back to 1989 rather than 1990. (Simpson, Tr. 3705-06). Dr. Simpson admitted that in LIN/LOX, CB&I being spun off of Praxair changed CB&I's competitive stregnth. (Simpson, Tr. 3753).

7.236 Dr. Simpson agreed that for LNG if you calculated HHIs from 1996 to 2001, the change would be zero. (Simpson, Tr. 3744).

7.237 Dr. Simpson admitted that he chose 1990 as the beginning date for his HHI analysis because 1990 was the cut-off date for discovery and thus his information only dated to 1990. (Simpson, Tr. 3704-05).

g. Natural market experiments

7.238 Dr. Simpson believes that "natural experiments are among the most useful analysis in assessing potential competitive effects of a Acquisition." (Simpson, Tr. 3761).

7.239 Dr. Simpson admits that for a natural experiment to be used it does not have to be exactly a twin to the hypothesis being tested. (Simpson, Tr. 3855).

h. CB&I's state of mind

7.240 Dr. Simpson believes that firms try to choose their best bidding strategy with less than complete information. (Simpson, Tr. 3771).

7.241 Dr. Simpson admits that "CB&I's beliefs about its competitors will guide its behavior." (Simpson, Tr. 3771).

7.242 In the case of CB&I and PDM, Dr. Simpson believes that CB&I perceived PDM EC as an equally capable competitors and therefore had to price accordingly. (Simpson, Tr. 3773).

7.243 Dr. Simpson agrees that CB&I can draw the inference that that foreign tank companies have competitive prices. (Simpson, Tr. 3784).

7.244 Dr. Simpson believes that the level of information available to CB&I will determine whether it is likely CB&I would impose a price increase, but does not believe the knowledge that Dynegy was satisfied with the bids it received from foreign competitors would matter to whether CB&I is likely to impose a price increase. (Simpson, Tr. 3844-47).

i. Critical loss

7.245 Dr. Simpson admits that state of mind is important in determining critical loss. (Simpson, Tr. 3865).

7.246 Dr. Simpson agrees that the ultimate point of critical loss is to predict behavior, and that ultimately whether the company views costs as variable or fixed determines whether they should be treated as such. (Simpson, Tr. 3872-74).

7.247 Dr. Simpson admits that there is a threshold for variability which is whether that cost would be varied in response to a loss of the amount of sales equal to the critical loss. (Simpson, Tr. 3870-71). Thus if analyzing a 5% price increase within a 15% contribution margin, costs must be considered fixed if they would not be varied if 25% of the business is lost. (Simpson, Tr. 3871-72).

7.248 Dr. Simpson admitted that the critical loss is essentially the same before and after the Acquisition. (Simpson, Tr. 3820).

7.249 Dr. Simpson agreed that if CB&I had no LNG work for several years it would deploy its engineering force to other projects. (Simpson, Tr. 3900-01).

7.250 Dr. Simpson does not know what percent of the engineering department's time is spent on LNG in the U.S.. (Simpson, Tr. 3901; 3902).

j. Entry

7.251 Dr. Simpson agrees that to the extent that foreign competitors have submitted bids for projects, they have chosen to pursue work in the U.S. despite Dr. Simpson's purported barriers to entry. (Simpson, Tr. 3913-19).

7.252 Dr. Simpson does not know whether entry is profitable for foreign entrants. (Simpson, Tr. 3919).

7.253 Dr. Simpson admits that the fact that the executives of these foreign firms are entering the market suggests they believe doing so will be profitable. (Simpson, Tr. 3919).

k. Exiting assets

7.254 Dr. Simpson agreed that as an economist, whether a business would be liquidated is something to be taken into account. (Simpson, Tr. 5680).

7.255 Dr. Simpson admitted that the proper comparison for evaluating the Acquisition is the comparison between the post-Acquisition world and the world as it would have been had the Acquisition not occurred. (Simpson, Tr. 5701).

VIII EXITING ASSETS FINDINGS OF FACT

A. PITT DES MOINES, INC. BACKGROUND AND HISTORY

1. PDM Background

8.1 PDM was founded in 1892 by the Jackson Family. PDM went public in 1965 on the American Stock Exchange. In 1999-2000, the Jackson Family was the primary stockholder of PDM, owning approximately 30 percent of the stock. (Byers, Tr. 6731-32; Scorsone, Tr. 4791). PDM's Board consisted of a majority of the Jackson Family and its friends and acquaintances. (Byers, Tr. 6734).

8.2 PDM operated four lines of business with five divisions -- PDM Strocal, Water, EC, Bridge, and Steel Distribution. PDM was very decentralized with operations in the fabrication business, steel buildings, steel bridges, water tanks, and miscellaneous tanks like LOX/LIN, LNG, and petrochemical tanks. (Byers, Tr. 6731; Scorsone, Tr. 4778-79; G. Glenn, Tr. 4075-76).

8.3 PDM stock was thinly traded, meaning that there was very little activity on any given day -- some days no stock was traded, other days 100-200 shares moved. Being thinly traded, shareholders had difficulty selling large blocks of shares because the demand was not visible on the public market. (Byers, Tr. 6732-33; Scorsone, Tr. 4791-92).

2. PDM Organizational Structure

8.4 PDM was very decentralized. Each business unit or division had a president who reported to the CEO of PDM, Bill McKee ("McKee"). Each operating unit had its own accounting staff. (Byers, Tr. 6734).

8.5 PDM EC shared resources with PDM Water, such as equipment, tools and fabrication facilities. (Scorsone, Tr. 4779; Byers, Tr. 6731).

8.6 In May 1997, Mr. Scorsone became President of PDM EC and had responsibility for all storage projects both domestic and international. (Scorsone, Tr. 4778).

8.7 The EC Division benefited from being part of an aggregate division structure because PDM could use the aggregate revenues of all operating units to obtain larger insurance values and bonding capabilities. If PDM EC had tried to obtain funding on its own, it would have had to provide letters of credit or personal guarantees, as evidenced by the difficulties PDM Bridge has experienced in attempting to bond projects on its own. (Byers, Tr. 6734-38).

3. Richard A. Byers, PDM Vice-President Of Finance

8.8 Richard A. Byers ("Byers") is retired as the former Vice-President of Finance at PDM. Mr. Byers was with PDM for 23 years. (Byers, Tr. 6727-28). Mr. Byers graduated from Geneva College in 1969 with a BS in accounting. Mr. Byers then spent 2 years as a sergeant in the U.S. Army. Next, Mr. Byers spent 10 years with Ernst & Young on its audit staff. (Byers, Tr. 6728-29).

8.9 Mr. Byers joined PDM in 1979. At PDM, Mr. Byers was manager of financial reporting, assistant controller, controller, and VP of Finance (equivalent of CFO). As VP of Finance, Mr. Byers was responsible for all accounting functions, treasury functions, mergers and acquisitions, and credit functions. (Byers, Tr. 6729-30).

8.10 Mr. Byers was actively involved in the purchase or sale of business units while at PDM at least 12 times. (Byers, Tr. 6730). While not an investment banker, Mr. Byers has worked extensively with them and is familiar with the lending environment for purposes of selling a business both in 2000 and today. (Byers, Tr. 6730-31).

B. DELIBERATIONS OVER THE FUTURE OF PDM

1. PDM Considerations Regarding The Future Of The Business

8.11 Reducing or eliminating the Jackson Family stock was a goal of PDM. The Jackson family owned 2.8 million shares throughout their family, roughly 29-30 percent of the company. A fear in the marketplace was that W.R. Jackson, the patriarch of the family and founder of the company was 92 years old at the time -- the fear being that when he died, the family might liquidate its stock and 2.8 million shares would hit the market at the same time. That would have a pretty significant negative impact on PDM's stock price. (Scheman, Tr. 6909-10, 2916-17; Scorsone, Tr. 4791; RX 158 at 18).

8.12 PDM's Board asked PDM management to consider potential options for the strategic direction of the company's future in Summer 1999. Mr. Scorsone prepared a presentation to the PDM Board in August 1999 about strategies for going forward with the PDM EC Division. (Scorsone, Tr. 4781-82).

8.13 A strategic planning meeting was held at Nemoclin in Pittsburgh, PA to devise a list of options to provide to the Board. This laundry list included making a major acquisition, buying something unrelated, taking the company private, and selling the company. The motivation behind this decision was to increase shareholder value and focus the Jackson Family. Mr. Jackson was elderly and PDM management was concerned over the future of the business. (Byers, Tr. 6738-40; Scorsone, Tr. 4791).

8.14 This laundry list of options was presented to the PDM Board in Summer 1999, but no hard decisions were made at that time. (Byers, Tr. 6740). The various options presented to the PDM Board were to maintain the status quo, pursue acquisitions, declare a special dividend, conduct a stock repurchase, split into two separate companies, and the sale of the company. (Scheman, Tr. 2917-19).

2. PDM Decision To Sell The Company

a. PDM board evaluates alternatives

8.15 In November or December 1999, the PDM Board indicated to management that it wanted to pursue taking the company private. Here, the Jackson Family would make a tender offer and buy back all shares of PDM except for management's ownership. This plan was never implemented. (Byers, Tr. 6740-41).

8.16 At the February 2000 Board meeting, the Jackson Family indicated that it wished to take the company private. It was decided that the Family should hire its own investment banker. Polly Townsend, Bill Jackson, Sr.'s daughter, contacted a partner at Tanner &Co. ("Tanner") for an interview. As a result, Tanner was hired by the Jackson Family. (Byers, Tr. 6741-42; Scheman, Tr. 2911, 6907).

b. Tanner & Co. background

8.17 Tanner is an investment banking boutique, started in 1987, focusing on middle-market mergers and acquisition anywhere from $25 million to $400 million. (Scheman, Tr. 2910, 6906).

8.18 Peter Scheman ("Scheman") is a principal at Tanner. He has been at Tanner for 14 years, starting in 1988. (Scheman, Tr. 2910, 6906). Mr. Scheman has been an investment banker for 14 years. He graduated from Stanford University in 1988. Mr. Scheman has done over 100 deals, ranging in size from $5 million to $6 billion. He started with Tanner as a financial analyst, and now is the youngest principal with the firm. (Scheman, Tr. 6941-43).

8.19 Mr. Scheman first became involved with PDM at the end of February 2000 or beginning of March 2000 when Tanner was retained as an advisor to the Jackson Family in March 2000. (Scheman, Tr. 2911-12, 6907-08).

c. PDM board decides to sell the company

8.20 The decision to take PDM private was ultimately changed. In May 2000, Mr. Jackson, Sr. announced that the company were sellers, not buyers. This meant that PDM was for sale. (Byers, Tr. 6742).

8.21 Mr. Scorsone first learned that PDM's Board was intending to sell his EC Division in early May 2000. At that time, Mr. Scorsone learned that the Board had decided to sell the entire corporation. (Scorsone, Tr. 4790-91). Mr. Scorsone was told about the Board's decision to sell by Bill McKee. Mr. Scorsone was also told that he would have nothing to do with selling PDM EC or negotiating the sale. (Scorsone, Tr. 4792-93).

8.22 Investment bankers were interviewed in a "beauty-contest." The participants were Goldman Sachs and Tanner. Both firms made presentations to the Board. (Byers, Tr. 6742-43; Scheman, Tr. 2912, 6908).

3. PDM Board Directives And Constraints

8.23 The PDM Board and the Jackson Family wanted to create liquidity in PDM stock. That decision placed additional constraints on the ability to sell PDM because it eliminated an alternative form of consideration: stock. (Scheman, Tr. 6948-49).

8.24 The PDM Board gave PDM Management a directive that the consideration for such a deal had to be cash. Cash was important to increase shareholder value and be as liquid as possible. With the help of an investment banker, PDM felt that value would be returned to shareholders through a tender offer at the time the last division was sold, so as to avoid any assets being left in the company. (Byers, Tr. 6759-61).

8.25 PDM's Board also imposed a directive on PDM Management to complete a sale as quickly as possible to prevent the public viewing PDM as being in play and shopping the various divisions as part of a desperate "fire sale." (Byers, Tr. 6762-63).

C. GOLDMAN SACHS

8.26 Goldman Sachs ("Goldman") made a presentation to the PDM Board in June 2000. (RX 23 at 4). Goldman's ultimate advice was that PDM should be sold entirely to a private equity group, and done relatively quickly. In other words, PDM should not be sold as individual units. Goldman expected that such as sale would earn $28 per share. PDM management was concerned and felt that Goldman's estimate was too low. (Byers, Tr. 6743-45; RX 23 at 13).

8.27 Book value is a mathematical calculation of simply total assets less total liabilities, based on historical information. Goldman estimated that the book values of EC was $51.2 million and Water was $17.4. Book values, however, are not accurate estimates of what businesses would be sold on the open market because book values are not used for valuation purposes. (Byers, Tr. 6745-46; RX 23).

8.28 Goldman predicted that the EC Division would sell for a range of $51.2-$26 million based on different valuation methods. Goldman's figures were based on book value calculations. In Mr. Byers' experience with similar transactions, EBITDA is a more likely basis for determining the value of a business on the open market. (Byers, Tr. 6746-48).

8.29 A month after Goldman's presentation, the lending market because tighter and it became more difficult to borrow money. Thus, Goldman's multiples and assumptions were not accurate reflectors of lending conditions at the time. (Byers, Tr. 6750-51; RX 23 at 12).

D. TANNER AND ITS EFFORTS TO MARKET PDM

1. Tanner Retained By PDM Board

a. Tanner's representation

8.30 Tanner' presentation occurred at the same Board meeting as Goldman on June 1, 2000. Shortly after this meeting, Tanner was retained by PDM. (Scheman, Tr. 2914-15, 7911-12, 6907-08; RX 25 at 2).

8.31 Day to day responsibilities at Tanner were handled by Mr. Scheman, Robert Fullerton, an associate, Michael Stanfield, and Harold Tanner, a named partner. Mr. Scheman coordinated and led the representation. Harold Tanner went to Board meetings. Mr. Fullerton assisted Mr. Scheman. (Scheman, Tr. 2912-13, 6908-09).

8.32 Tanner's contacts at PDM were Mr. McKee, Mr. Byers, Travis Stricker, Phil Elbert, Mike Braden (Water) and Mr. Scorsone (EC). (Scheman, Tr. 2914).

b. Tanner recommendations

8.33 Tanner, based on its combined years of experience, recommended that PDM sell off pieces, viewing the pieces as worth more than the whole. Tanner estimated revenues per share in the mid-thirties. (Byers, Tr. 6754-55).

8.34 From a practical as well as financial and timing standpoint, it was much more attractive to sell both the EC and Water Divisions together. The two divisions were intertwined and shared multiple facilities. (Scheman, Tr. 6912, 2926-30; RX 159 at 15).

8.35 Tanner's conclusion would not be any different if there was a possibility of strategic buyers acquiring one of the divisions. (Scheman, Tr. 6915). The reason being that there were a lack of adequate resources by potential buyers to purchase the Water Division. The other competitors in the EC and Water Divisions were small. (Scheman, Tr. 6915-16).

8.36 Tanner concluded that there were "few other strategic buyers with adequate resources to acquire both Divisions." (RX 159 at 15). This conclusion was based on information concerning the industry, the companies identified by PDM, EC and Water managements, Tanner's growing knowledge of the industry, and phone calls from people expressing interest. (Scheman, Tr. 6913-14).

8.37 Due to historical connections between the EC and Water Divisions, the cost of separating these divisions may be as high as $5-10 million. (Scheman, Tr. 6922-23, 2959-60; RX 163 at 27).

8.38 The Board also adopted Tanner's recommendation to sell PDM in pieces. (Byers, Tr. 6755, 6757-58; Scheman, Tr. 2919). PDM management was instructed by the Board to work with Tanner in implementing the Board's directive at the June 1, 2000 meeting. (Byers, Tr. 6758).

8.39 Tanner informed the Board of its 6 month time frame to complete the sale. Mr. Byers did not believe such a time frame was possible, but had to proceed with due speed. (Byers, Tr. 6761-62).

c. Tanner responsibilities

8.40 Tanner assumed the responsibility of contacting potential purchasers and securing their level of interest, not the PDM Board or management. Any and all inquiries were directed to Tanner. (Byers, Tr. 6758-59).

8.41 Today, Tanner is no longer retained by PDM. Tanner's assignment concluded in the middle of March 2002 when PDM was acquired by Iron Bridge Holdings. (Scheman, Tr. 6909).

2. Tanner's Incentive To Maximize Shareholder Value

8.42 Tanner's compensation was structured such that it had an incentive to do the best work for the shareholders. (Byers, Tr. 6881-82).

8.43 Tanner was paid for its efforts on a commission, a percentage of the value of funds received. Therefore, Tanner had every incentive to get the highest purchase price possible: for selfish motives and professional pride. (Scheman, Tr. 6946-47).

8.44 In addition, Tanner had a fiduciary obligation to PDM and its shareholders. (Scheman, Tr. 6947; Byers, Tr. 6881-82).

3. Tanner's Efforts To Sell PDM

a. Tanner's representation

8.45 Tanner was hired to maximize the benefit and shareholder value. In so doing, Tanner was responsible for finding prospective purchasers. PDM and Mr. Byers relied upon Tanner's statements and investment banking experience in determining that there were or were not prospective purchasers. (Byers, Tr. 6878-81).

8.46 Mr. Scheman believes that he conducted himself consistent with a similarly situated investment banker in relation to his representation of the PDM EC and Water Divisions. (Scheman, Tr. 6943-44).

b. Tanner's marketing efforts

8.47 Investment bankers do not typically pick up the phone and start calling potential buyers when selling a public company. A lot of thought and strategy goes into selling a business, from marketing materials to limiting damage of the existing business of the company. (Scheman, Tr. 6944-45).

8.48 Tanner's decisions to market PDM EC and Water were based on the years of experience of Mr. Scheman and all of his partners. (Scheman, Tr. 6945).

i. Press release

8.49 Mr. Scheman made efforts to sell PDM. These efforts included issuing a press release in July 2000 announcing that PDM had hired Tanner to explore a sale of the whole company and various companies. (RX 160 at 1). Such a press release is a curse and blessing for a public company because the process is now in the open, but disclosure requirements are triggered more quickly. However, it is a blessing because it is an advertisement in whatever publications run the news release to the world that you are selling your assets, so anyone who reads that and might be interested knows who to call. (Scheman, Tr. 6910-11, 2921-22).

8.50 Mr. Byers was also involved in issuing the press release. PDM and Tanner wanted to let the public know of PDM's intent to sell. Such releases help companies find interested purchasers. (Byers, Tr. 6884-85).

8.51 PDM was forced to use a press release issued under expedited circumstances imposed by the PDM Board. However, PDM benefited tremendously from early disclosure and interest. (Scheman, Tr. 6944-45).

8.52 Tanner ensured that the press release got into the hands of all relevant trade journals that deal with PDM's EC and Water Divisions. It was not that hard to get the word out -- in PDM's market, it was big news. (Scheman, Tr. 6945). In fact, the Jackson Family's decision to sell PDM and liquidate its assets was published in the Wall Street Journal. (Scheman, Tr. 6945-46).

ii. Inquiries and materials

8.53 Mr. Scheman and Tanner also answered inquiries as a result of this press release. Further, they called people to see if anyone was interested. Tanner developed materials to describe to potential buyers the various major asset groups, the divisions. Tanner developed lists of potential buyers and worked over the summer to learn about the various divisions. Tanner did what investment bankers do -- over the summer of 2000 they prepared to market PDM and prepared lists of people who might or should be interested. (Scheman, Tr. 6911, 2922; RX 164; RX 165; RX 166).

8.54 Investment bankers would agree that it is a bad business decision to send marketing materials when you know that you will not be able to speak with potential suitors because of entering negotiations and a quiet period with another purchaser. It would damage your ability to sell something if one day you tell a potential buyer you can talk, and the next day you cannot. (Scheman, Tr. 6912-13).

8.55 PDM management represented to the Board that as of December 19, 2000, there was a thin market and no other serious potential purchasers identified. Tanner expressed its opinions and explained that the lending standards had tightened considerably. (Byers, Tr. 6776-77; RX 28 at 2). PDM was only looking for serious purchasers given the time and expense associated with the selling process. PDM did not have the time to wait and look around. (Byers, Tr. 6777-78).

4. Potential Purchasers Of PDM's EC And Water Divisions

8.56 In the EC industry, substantial companies existed but that does not mean that they were appropriate buyers. (Scheman, Tr. 6916).

8.57 It is typical for investment bankers not to waste their time chasing down potential purchasers who are unlikely to be able to consummate a transaction. (Scheman, Tr. 6948).

8.58 Adequate resources are an important consideration to prevent going down a road with one company and be left with nothing, saving an embarrassment and damaged property. (Scheman, Tr. 6916).

8.59 In attempting to maximize shareholder value, Tanner is not concerned with keeping assets within the same industry as currently utilized. In fact, if a potential purchaser wished to make entirely different types of tanks than PDM and offered the largest amount of money, Tanner would have been satisfied. (Scheman, Tr. 6951-52).

8.60 There are two types of potential purchasers: strategic buyers and financial buyers. A strategic buyer is someone who operates a business that would be somehow related to the business for sale. A financial buyer is someone who offers money and is in the business of buying businesses, not operating within the industry of the business for sale. (Scheman, Tr. 6914).

a. Nassau Point investors ultimately were not an interest purchaser

8.61 Nassau Point Investors ("NPI") are a private equity firm, a financial buyer. They had previously bought a company in the tank maintenance and repair business, and had seen the Tanner press release. NPI called to express a potential interest at the same time as Tanner was preparing marketing materials. NPI later followed up, but Tanner judged them to be very unlikely to have the means to effect an acquisition. After discussion with NPI, both parties walked away from a potential deal. It is almost unheard of that a financial buyer is going to buy into a business that is losing money, especially in the environment that existed in the lending community two years ago, and even today. (Scheman, Tr. 6929-31).

b. Enron was not an interested purchaser

8.62 PDM approached Enron about purchasing the EC Division but Enron was exiting the fabrication business to move in a new direction. (Byers, Tr. 6764).

c. Matrix was not a viable purchaser

i. Matrix lacked interest

8.63 Bradley Vetal ("Vetal") is currently CEO and Chairman of the Board of Matrix Service Company. He has held these titles for a little over three years. Prior to holding those titles, Mr. Vetal was general manager of the above-ground storage tank division. Mr. Vetal has been with Matrix since 1987. (Vetal, Tr. 416-17). Matrix went public in 1984. (Vetal, Tr. 417).

8.64 Mr. Vetal did not have an interest in purchasing PDM's Water Division because Matrix had just exited the municipal water division by selling one company and closing down two other companies. The water industry was not a good fit for Matrix. (Vetal, Tr. 419, 442).

8.65 If during due diligence a $10 million loss was projected for the following fiscal year, Mr. Vetal admits that would have been a factor influencing whether Matrix would have continued to pursue PDM EC. (Vetal, Tr. 421-22, 439).

8.66 In 1999-2000, the industrial tank industry was not robust. Mr. Vetal stated that there were opportunities, but not projects of size. (Vetal, Tr. 433).

ii. Matrix was not viable given pdm's directives

8.67 Based on his experience, Mr. Scheman does not know how Matrix could have done a deal for PDM because Matrix had a market capitalization or stock market value of $50 million. Mr. Scheman does not feel that Matrix had the earnings or balance sheet to finance such a transaction. Second, an offer to purchase with stock did not fit into PDM's plan to liquidate because Matrix stock was smaller than that of PDM. (Scheman, Tr. 6931-33; RX 163 at 37).

8.68 Matrix would not be able to offer stock because PDM stock was illiquid. The Jackson overhang would have had a disastrous effect on the price of stock, as much as a $5 decrease in price in a given day. The PDM Board and shareholder goal was to increase the liquidity of stock. One way to do so would be to sell the whole company. Another method would be to sell in pieces. Therefore, Tanner believed that a stock deal would not fit into the overall plan. Plus, PDM shareholders would have been better positioned with PDM stock than with Matrix stock given Matrix's stock's poor performance. (Scheman, Tr. 6934-38).

8.69 Matrix wanted to purchase PDM's fabrication facilities in Clive, IA and Warren, PA, but not PDM's Provo, UT facility. (Vetal, Tr. 441-42). The Clive, IA and Warren, PA facilities were under the direction and control of PDM Water. (Byers, Tr. 6782). The Provo, UT shop was under the direction and control of PDM EC. (Byers, Tr. 6781).

8.70 PDM EC and Water Divisions were being sold together because they shared many services, human resources, physical plants, and it was considered impossible at the time to split them apart. Mr. Byers personally believed based on his experience that it was not practical to split the two divisions apart. Further, there was a consequence in switching the assets of the two divisions around. For example, the Water Division could not have performed all of its work at the EC fabrication plant in Provo, Utah. Therefore, PDM would not have consummated a transaction that included only the EC Division and certain assets of the Water Division. (Byers, Tr. 6780-82).

iii. Matrix lacked financing

8.71 Based on the financials, Mr. Scheman believes that the largest transaction Matrix could have financed was $20 million, maybe less depending on the downturn felt by Matrix similar to PDM EC. (RX 163 at 37). This figure is based on Matrix's financials and the assumption that it would have to borrow money -- Matrix's borrowing capacity might have been zero at the time given a combined (Matrix and PDM EC) EBITDA of $1 million. (Scheman, Tr. 6933-34, 6938-39).

8.72 In 2001, the net worth stated that Matrix assets were $83.7 million and liabilities were $63.1 million. (Vetal, Tr. 424-25). Matrix would have financed the PDM purchase through bankers, as opposed to private equity or multiples of cash flow. (Vetal, Tr. 438-39).

8.73 Matrix knew that PDM had many businesses unrelated to Matrix. Mr. Vetal had not put together a formal financing package. (Vetal, Tr. 421). Mr. Vetal had no idea of the amount of financing Matrix could have obtained, especially in light of the poor performance of the EC Division. (Vetal, Tr. 439, 444).

8.74 Mr. Vetal never asked its bankers when discussing possible financing for a PDM acquisition whether the bankers would finance the purchase of a division that had lost $30 million the previous year. (Vetal, Tr. 441).

iv. Matrix lacked knowledge of PDM's EC and water divisions

8.75 Mr. Vetal did not know anything about PDM's shared assets or the PDM asking price. (Vetal, Tr. 423, 440).

8.76 Mr. Vetal did not know whether the Clive and Warren facilities were apart of the PDM EC or Water Divisions, and if PDM would have sold those facilities without the entire divisions. (Vetal, Tr. 435-36, 444).

8.77 Mr. Vetal did not know if the liquidation value of the company was higher than its value as a going concern. (Vetal, Tr. 441).

8.78 Mr. Vetal based his opinion on only publicly available information, such as the consolidated balance sheet. (Vetal, Tr. 420).

d. Pasadena Tank was not a viable purchaser

8.79 Corporate Finance Associates contacted Tanner relating to their client Pasadena Tank and expressed an interest in looking at the EC Division alone. Tanner expressed PDM's intent to sell EC and Water together. (Scheman, Tr. 6939-40; RX 166 at 2).

8.80 Pasadena Tank had two fatal strikes against them. Pasadena was a smaller company than Matrix and privately held. While Matrix at least had stock to trade, Pasadena did not. Its only option was debt financing, and Tanner felt that Pasadena was very unlikely to obtain enough financing to offer an attractive price. Second, PDM wanted to sell both divisions together. (Scheman, Tr. 6940-41).

8.81 It is damaging to selling prospects and to the business itself if offering memorandum and books are sent to everybody. As a result, only viable candidates should receive such materials. Therefore, Pasadena Tank was not sent these materials. (Scheman, Tr. 6940-41).

e. No foreign tank contractors were interested or viable purchasers

8.82 **[XXXXX XXXXX] XXXXX XXXXX XXXXX XXXXX]**

E. PDM EC DIVISION'S POOR PERFORMANCE

1. PDM EC Division Experiences Substantial Losses And Is "Troubled"

8.83 After Tanner was retained, it was realized that PDM EC was going to have a substantial loss for 2000. At the same time, the credit markets tightened and the availability of borrowed money was difficult. These factors affected the salability of PDM's divisions. (Byers, Tr. 6763-64; RX 163 at 4).

8.84 While some competitors might be interested in the EC Division, it was unlikely that financial buyers would consider an acquisition due to the EC Division's recent performance. (RX 163 at 7). As of February 7, 2001, Tanner felt that a potential buyer for the EC Division alone might be at a negative price. (Scheman, Tr. 6920).

8.85 AT&V decided not to pursue a purchase of the PDM EC Division prior to the merger because AT&V saw the EC Division "consistently losing money" in the industrial tank business and wanted no part of it. (Cutts, Tr. 2458, 2534).

8.86 Potential investors only saw the consolidated financials. Companies expressing interest did not know PDM's profitability and would have been surprised by the lack of profitability of the EC Division, and likewise their ability to finance a transaction. (Scheman, Tr. 6950-51).

8.87 In 2000, the EC Division lost $9 million after making $10 million in 1999. (Scheman, Tr. 6920-21; RX 163 at 4). After the date of closing, PDM and CB&I ultimately determined that PDM EC's losses approximated $30 million in fiscal year 2000. (Scheman, Tr. 6917, 6921, 6926; Byers, Tr. 6789).

8.88 The EC Division was profitable in 1996-1999. Yet, the EC Division was troubled because in 2000, the profitability had dropped 80 percent and later went below zero. A business does not have to go below zero in terms of earnings to be troubled. A company whose earnings are projected to decline by 80 percent would be described as having trouble. (Scheman, Tr. 6916-18, 2922-23, 2950-51).

8.89 PDM Water, on the other hand, had a history of making a 10 percent profit yearly. (Byers, Tr. 6786).

2. Reasons Behind PDM EC's Substantial Losses

8.90 The year 2000 was a weak sales year for PDM EC, and EC had 2 jobs not performing well -- the Sea-3 LPG project and the Puerto Rico LNG import terminal. (Scorsone, Tr. 4825-26, 4828; RX 163 at 4).

8.91 On the Sea-3 LPG project, there was a $400,000 piece of equipment that was left out of the estimate, which had ramifications in terms of the cost of the equipment and the attenuated associated construction costs. In addition, PDM had very poor performance by its engineering group, which resulted in late procurement of equipment and materials thereby extending the project's schedule and driving up costs in the field. Finally, PDM had a difficult time with labor stability in the field of almost 300 percent turnover, which resulted in inefficiencies and poor quality. (Scorsone, Tr. 4826). PDM hired and processed three times as many field personnel as needed. (Scorsone, Tr. 4827). Consequently, the project was delivered late by two months. This delay caused the customer problems. As a result, the customer withheld $2 million in payments from PDM. (Scorsone, Tr. 4827). The contract value was $13 million, and eventually settled for a $1 million. (Scorsone, Tr. 4827-28).

8.92 PDM had problems on an LNG import terminal in Puerto Rico. (Scorsone, Tr. 4827-28). This project was completed in 2000, and was the only LNG project that PDM constructed that year. (Scorsone, Tr. 4831).

8.93 The Puerto Rico LNG import terminal suffered from late engineering, which again pushed back procurement and certain deliverables of drawings to construct the facility. PDM had large owner-directed changes at the final months of the project. The PDM final plans did not schedule any extra time, so the customer directed PDM had to hire additional field labor. For reassurance reasons, the client insisted air lifting fabricated pieces of the tank to the site. All of these reasons were costs to PDM. (Scorsone, Tr. 4828-29). There was a business dispute over these issues, which PDM ultimately settled through management meetings. The client withheld monies on the project. (Scorsone, Tr. 4830-31; Izzo, Tr. 6482).

8.94 AT&V was very suspicious of PDM, believing that PDM was very poor at estimating, coordination, and marketing. (Cutts, Tr. 2534).

8.95 These problems occurred in 2000 right up to the eve and even post-Acquisition by CB&I. (Scorsone, Tr. 4831).

3. Projections Regarding PDM EC Division

8.96 The EC Division offering memorandum stating that the Division was expected to return to profitability was created before the EC Division turned downward. (Byers, Tr. 6875). Likewise, in a marketing document, Tanner predicted that the EC Division would return to profitability in 2001. However, the market changed unexpectedly and turned a lot worse than expected. (Scheman, Tr. 6918-19, 2952-54; RX 160 at 9-10).

8.97 Mr. Scorsone made projections for the PDM EC Division's performance for 2002: $212 million. Of that figure, only $120 million were products now being sold at CB&I. Today, the actual numbers are about $112 million. That forecast has not proven to be accurate. Nor does Mr. Scorsone regard his projection for PDM EC's sales from 2000 to 2002 to be accurate either. (Scorsone, Tr. 5242-45).

8.98 As President of the EC Division, Mr. Scorsone's compensation and responsibilities were tied to the financial performance of that division. EC's most profitable year was in 1999. The profit margin that year was 4 percent, and total revenues were about $188 million. The year 2000 was very difficult, and not a good year for the EC Division. In 2000, the EC Division did not make any money. (Scorsone, Tr. 4823-24). For the year, EC lost $8 million despite that number at one time approaching $30 million. (Scorsone, Tr. 4824-25).

8.99 Mr. Byers, in his regular course of business, reviewed performance projections of each division in order to create a consolidated projection for the Board. Mr. Scorsone predicted PDM EC would earn a profit in 2001. Mr. Byers felt Mr. Scorsone's projection was optimistic, typical of Mr. Scorsone's tendency to overstate profitability of his division. Mr. Byers altered Mr. Scorsone's projection to a break even year for 2001. (Byers, Tr. 6752-54, 6876).

8.100 Even with the EC Division's dire losses and poor performance in 2000, Tanner's best estimate for 2001 was that the company would make $4.8 million. (RX 163 at 6). Given these facts, Mr. Scheman, relying on his years of experience in the industry as an investment banker, believed it would have been very difficult to convince a buyer that EC would make $5 million after losing $9 million the year before under those market conditions. (Scheman, Tr. 6926-27, 2961-63).

F. CB&I ACQUISITION

1. CB&I State Of Mind Regarding The Acquisition Of PDM

8.101 Prior to 2000, CB&I never considered purchasing the assets of PDM. (G. Glenn, Tr. 4076). Investment bankers approached CB&I with various combinations that might make business sense. (G. Glenn, Tr. 4076-77). CB&I never considered PDM because it was a public company and not for sale. Also, the overall company was larger than the resources CB&I had to purchase it. Finally, there were businesses PDM operated that did not appeal to CB&I and were not complimentary. (G. Glenn, Tr. 4077).

8.102 Mr. Glenn received a call in 2000 stating that the Jackson Family had made a decision to sell the company for cash and go out of business. Specifically, at that time, the EC and Water Divisions were offered to CB&I. (G. Glenn, Tr. 4077-78). Then, PDM's reputation in the two lines of business was very good -- they did good work and were recognized in the marketplace by being on everyone's bid lists. (G. Glenn, Tr. 4078). CB&I competed against PDM in the United States, but not internationally. (G. Glenn, Tr. 4078).

8.103 After receiving this call, CB&I hired an investment banker for a fairness opinion. CB&I ultimately purchased PDM's EC and Water Divisions on February 7, 2001. (G. Glenn, Tr. 4079). CB&I's advice from its investment bankers was to buy with consideration in a form sufficient to afford the transaction and keep the Jackson Family happy -- thus stock versus cash. (G. Glenn, Tr. 4254-55).

8.104 CB&I purchased the PDM Divisions as a major opportunity to utilize the resources to supplement CB&I's resources to compete in the global LNG business. Second, it would make CB&I larger for purposes of credit lending, financing, and insurance premiums. (G. Glenn, Tr. 4080-81). CB&I also sought efficiencies in terms of duplication -- thus the elimination of fabrication capacity, equipment, personnel, best practices, and cost reduction. (G. Glenn, Tr. 4081).

2. CB&I And PDM Relations And Negotiations

a. Letter of intent

8.105 CB&I signed a letter of intent ("LOI") with PDM in August 2000. After signing the LOI, CB&I performed its due diligence. A projected November 2000 closing date was set. The actual closing date was extended several times before finally closing February 7, 2001. (Byers, Tr. 6764-66).

b. CB&I substitution of stock for cash

8.106 The initial form of consideration specified in the LOI was $94 million, all cash and no stock. CB&I later approached PDM and stated that it was not able to provide all cash consideration. CB&I wanted to substitute half of the initial purchase price for stock. CB&I's offer was not well accepted by PDM because stock inhibited the ultimate tender offer transaction. (Byers, Tr. 6766-67).

8.107 At the time of the PDM acquisition, CB&I was in the process of purchasing Howe Baker, a process contractor namely operating in gas refining and processing. (G. Glenn, Tr. 4086). This transaction was consummated in December 2000, approximately two months before the PDM deal. (G. Glenn, Tr. 4087).

8.108 CB&I and PDM developed a contentious relationship as a result of the substitution of stock for cash. In fact, PDM management was prepared to walk away from the deal if CB&I did not meet management's terms in December 2000 and January 2001. (Byers, Tr. 6767). Mr. Byers expressed to CB&I and Rich Goodrich that PDM was "about ready to throw in the towel on a deal with CB&I, and just start over . . . Time is running short." (Byers, Tr. 6768-69; CX 1474).

8.109 As part of a deal, CB&I offered to repurchase with a "collar" the stock used as consideration for the deal with PDM prior to the final tender offer. This measure gave PDM the protection against stock price fluctuation that had been feared. (Byers, Tr. 6775-77).

8.110 Mr. McKee was authorized to agree to payment from CB&I for EC and Water of $93.5 million: $44 million cash, $25 million stock, and $24.5 million letter of credit. (Byers, Tr. 6788; RX 28 at 4). However, CB&I was not willing to close the transaction on these terms because of the financial deterioration of the EC Division. (Byers, Tr. 6789). The deal was eventually struck at $84 million on December 22, 2000. (Byers, Tr. 6789-91; CX 388 at 2).

c. PDM pressure to close the transaction

8.111 Six weeks passed between the authority to close by the Board and the closing. PDM again applied pressure to close by February 8, 2001. On that date, PDM was to hold a Board meeting. (Byers, Tr. 6792-93).

3. Post-Closing Circumstances

8.112 Once CB&I got into the PDM financials, PDM had projects not performing well and accommodations had to be made. (G. Glenn, Tr. 4255-56). After the closing, CB&I sought and obtained a price adjustment of $6.5-7 million after the discovery of substantial losses from PDM's foreign subsidiary in Venezuela during a year-end audit. (Byers, Tr. 6793-94).

8.113 The final purchase price ended at $76-77 million. (Byers, Tr. 6794). Based on his experience, Mr. Byers does not believe that CB&I paid a premium for PDM EC. (Byers, Tr. 6794).

8.114 CB&I never attempted to negotiate downward the purchase price of the Water Division. CB&I's $93.5 million was at the high end of Tanner's projections, but the purchase price eventually fell by $22 million. (Byers, Tr. 6873-75).

G. LIQUIDATION

1. Tanner Recommended Liquidation

8.115 Tanner believed that had the CB&I deal fallen apart, there was a "high probability" that PDM would have liquidated the EC Division. (Scheman, Tr. 6952; RX 163 at 29).

8.116 Had the deal with CB&I not closed on February 7, 2001, and given the state of the industry, PDM EC would have been liquidated -- most likely at the low end of the liquidation range due to deteriorated financing conditions. (RX 163 at 7, 28). The potential buyers who would have been contacted had the deal not gone through would not have paid more than the liquidation value. (Scheman, Tr. 6924-26).

8.117 The uncertainty associated with liquidation does not necessarily provide a seller like PDM an incentive to conduct a thorough search before liquidating the EC Division if you could get more money elsewhere. The time spent in failing to sell may be very harmful to the already lower liquidation value. (Scheman, Tr. 6923-24).

2. PDM Management Recommended Liquidation

8.118 PDM management began looking for alternatives on how to sell PDM EC and Water. Management considered selling PDM Water to Mike Braden, president of PDM Water, in an LBO and liquidating PDM EC. (Byers, Tr. 6769-70). This alternative was studied with the help of Tanner, and discussed with Bill McKee. Mr. Byers and Mr. McKee decided to present this recommendation to the PDM Board. (Byers, Tr. 6770, 6773).

8.119 PDM did not have time to pursue another potential purchaser and still comply with the Board's directives. Moreover, finding another potential purchaser would have been difficult given the financial performance and continued deterioration of the EC Division. (Byers, Tr. 6773-74).

8.120 PDM threatened to liquidate the company if CB&I did not close the deal. (G. Glenn, Tr. 4079-80).

8.121 In fact, Mr. McKee told Mr. Scorsone in December 2000 that if the deal fell through with CB&I, EC would be liquidated. (Scorsone, Tr. 4839) (state of mind).

8.122 Mr. McKee stated on December 19, 2000, some three weeks after the November 28th Board meeting, that there was a thin market and no other serious potential purchaser was identified. As of the November Board meeting, liquidation scenarios had not been run by Tanner. In fact, Mr. McKee's statements at the December Board meeting were after Tanner and PDM management began looking at alternatives to the CB&I deal. (Byers, Tr. 6872-73; RX 28 at 2).

8.123 The fairness opinion presented in February 2001 was really the written work product of December 2000 liquidation scenarios performed by Tanner. These documents were prepared for purposes other than as backup for a fairness opinion. (Byers, Tr. 6877-78).

3. Byers Recommended Liquidation

8.124 Mr. Byers believed based on his experience that PDM Water could have obtained a higher price sold as part of an LBO than could the EC Division sold as part of liquidation. Mr. Byers was prepared to act on this knowledge in December 2000 had the CB&I deal fallen through. (Byers, Tr. 6786).

8.125 Mr. Byers and executives make decisions based on probabilities, not certainties. (Byers, Tr. 6887-88). Based on Mr. Byers' years of experience and discussions with Mr. McKee, a decision as to the best approach to proceed if the CB&I deal fell through had to rely on probabilities. (Byers, Tr. 6889-90).

8.126 As an officer of PDM, Mr. Byers had a fiduciary duty to the shareholders of PDM to maximize shareholder value. Mr. Byers felt he was acting within his duty to recommend liquidation of the EC Division if the CB&I deal fell through. (Byers, Tr. 6774-75).

4. Graver Liquidation Evidences A Natural Market Experiment

8.127 Graver was a competitor selling tanks. (Cutts, Tr. 2391). Graver was a tank manufacturer with decades of experience in the LIN/LOX market from 1997-2001. Graver professed to having 120 field crews and being the biggest tank manufacturer. (Cutts, Tr. 2571).

8.128 Graver was sold to a new company, Iteq, when Graver was a strong and financially sound company. After that sale, Graver squandered and eventually went out of business. (Scorsone, Tr. 4875-77; Kamrath, Tr. 2026-27).

8.129 After Iteq acquired Graver, Graver's performance deteriorated. Graver had trouble executing projects, experienced financial difficulties, and finally went out of business. (Kamrath, Tr. 1991).

8.130 Prior to going out of business, Graver was marketed to be sold in 1999 and early 2000. (Simpson, Tr. 5673; Harris, Tr. 7312-13).

8.131 Graver, however, was unable to locate a viable purchaser. (Simpson, Tr. 5672-74; Kamrath, Tr. 1991). Consequently, Graver was liquidated and went out of business, but left the remnants of its fabrication facility to wind down business for awhile. (Cutts, Tr. 2425).

8.132 Mr. Vetal was aware that Graver's equipment was auctioned off in a liquidation sale. In fact, Matrix purchased heavy press and fabrication equipment from Graver in that sale. (Vetal, Tr. 442-43).

8.133 AT&V attempts to hire former Graver employees every year. (Cutts, Tr. 2570). In fact, AT&V employs former Graver foremen with cryogenic experience, and any others that AT&V would be interested in have retired. (Cutts, Tr. 2570-71).

IX. REMEDY FINDINGS OF FACT

A. COMPLAINT COUNSEL'S PROPOSED REMEDY SEEKS TO BREAKUP CB&I INTO TWO COMPETING ENTITIES

9.1 Complaint Counsel's proposed remedy seeks a breakup of CB&I. Complaint Counsel's Notice of Contemplated Relief included within its Complaint seeks the "[r]establishment by CB&I of two distinct and separate, viable and competing businesses . . . ." (RX 79 at 8).

9.2 During opening statements, Complaint Counsel stated that "[r]elief in this matter must re-establish two independent viable and competitive entities." (Krulla, Tr. 101).

B. COMPLAINT COUNSEL FAILED TO PRESENT ANY RECORD EVIDENCE SUPPORTING ITS PROPOSED REMEDY

9.3 The only "testimony" supporting Complaint Counsel's requested remedy was provided by its expert economist Dr. John Simpson. Dr. Simpson is not a fact witness, he has no background in breaking-up companies, and did not have any fact evidence available to him to offer any opinions regarding remedy. (Simpson, Tr. 5715).

9.4 Dr. Simpson was unable to cite any evidence that the customers in any of the relevant product markets favored a breakup of CB&I. (Simpson, Tr. 3611). When asked to identify any customers that favor a breakup Complaint Counsel's expert stated "[n]one come to mind." (Simpson, Tr. 5718).

9.5 Complaint Counsel's expert also does not even know how the remedy proposed by Complaint Counsel would be implemented and that he is not qualified to oversee such a breakup. (Simpson, Tr. 5715).

C. NO REMEDY IS NECESSARY

1. CB&I's Acquisition Of PDM Did Not Cause Any Competitive Harm

9.6 There is no need to institute a remedy because of the competition that exists and the entry that has occurred in each of the relevant product markets. (Harris, Tr. 7375-76).

9.7 The relevant product markets are "robust" competitive environments where CB&I has a difficult time competing. While CB&I wins some projects in the relevant products markets, it faces strong competition that continually takes projects away from CB&I due to their competitive strength. (Scorsone, Tr. 4881-82) (state of mind).

2. Customers Do Not Favor A Breakup Of CB&I

9.8 Complaint Counsel's expert witness was unable to identify one customer who supports the remedy proposed by the FTC. (Simpson, Tr. 5718).

9.9 CB&I's acquisition of PDM has given LNG customers additional "comfort" in the bidding process because CB&I is now a larger company with more financial assets. (Bryngelson, Tr. 6154). LNG customers have "some real concerns" about Complaint Counsel's proposed remedy and believe it would be a disadvantage to breakup CB&I. (Sawchuck, Tr. 6077; J. Kelly, Tr. 6265; Bryngelson, Tr. 6155).

9.10 LIN/LOX customers also believe that there is benefit to CB&I's acquisition of PDM. LIN/LOX customers believe a breakup would harm the industrial gas industry. (Hilgar, Tr. 1540).

D. A BREAKUP WOULD CAUSE MORE HARM THAN GOOD TO THE RELEVANT PRODUCT MARKETS

1. A Breakup Is Not Feasible

9.11 CB&I's customers and competitors alike have each recognized that "it would be pretty difficult" to breakup CB&I into two separate and competing entities. (Outtrim, Tr. 808-09).

9.12 Complaint Counsel's expert witness does not "know exactly how [the proposed remedy] would be implemented." (Simpson, Tr. 5715).

9.13 There is insufficient evidence in the record to support the governments suggested remedy of a breakup. (Harris, Tr. 7375-76).

2. A Breakup Would Have A Significant Impact On CB&I's Other Non-Relevant Product Markets

9.14 The relevant products are not the only products that are made by CB&I's Industrial Tank Division. (Scorsone, Tr. 4843). In fact, the relevant products constitute a very small percentage of sales from CB&I's Industrial Tank Division. (Scorsone, Tr. 4844). CB&I performs a majority of its work in markets and product areas other than the relevant product markets. (Glenn 4168).

9.15 CB&I's Industrial Tank Division also constructs standard flat bottom storage tanks, pressure spheres, pressure vessels, specialty plate structures, bins, hoppers, aqueducts, wind tunnels, and essentially any other type of structure that if constructed from metal plate. (Scorsone, Tr. 4843-44).

3. A Breakup Would Require CB&I To Re-Negotiate Or Breach Key Personnel And Non-Assignability Clauses

9.16 Many of CB&I's contracts have non-assignability clauses which require CB&I to maintain control of the contract and prohibit it from assigning it to any other company or entity. In order to provide a new company with sufficient work, these clauses would have to be waived by the customer, re-negotiated, or breached by CB&I. (Glenn, Tr. 4168-69).

9.17 Many of CB&I's contracts also contain key personnel clauses which require CB&I to maintain the same personnel for the duration of a project. Removing or replacing those employees would create numerous contractual issues. (Glenn, Tr. 4168-69).

4. A Breakup Would Not Create A Low Cost Producer

9.18 Any remedy imposed must create two low cost companies, the remedy proposed here may actually harm competition if it fails to produce two lost cost competitors but rather creates two high cost competitors. (Harris, Tr. 7367-68; 7375-76).

9.19 Instituting a breakup as a result of a finding of competitive harm in one market will likely cause significant harm in each of the other markets because it will remove a competitor and replace it with a high cost competitor. (Harris, Tr. 7375-76).

9.20 The potential of any separated company to compete in the relevant product markets must be evaluated with the same standards that are used to evaluate any other competitor seeking entry into the market. Since the FTC has not performed such an analysis, it is unclear if a breakup of CB&I will help competition more that it would harm it. (Harris, Tr. 7375-76).

5. Both Companies Created From A Breakup Of CB&I Would Be Unable To Satisfy Customer's Financial Guarantees

9.21 CB&I in its current state is often to small to qualify for the financial guarantees on some projects. If CB&I were forced to breakup, the two newly formed companies would certainly be even smaller and therefore even less likely to qualify for projects. Both companies created from a breakup would be unable to provide the financial guarantees required for projects in the relevant product markets. (Glenn, Tr. 4168). **[XXXXX XXXXX]** Prior to the acquisition CB&I was struggling in terms of letters of credit, financing and insurance premiums. (Glenn, Tr. 4080).

9.22 LNG customers believe that both companies that emerge from a breakup of CB&I would suffer a significant disadvantage with respect to required financial guarantees as compared to the other large LNG tank suppliers in the market. (Izzo, Tr. 6511-12; Bryngelson, Tr. 6155-56; Sawchuck, Tr. 6077-78). For example, shortly before the Acquisition, Enron determined that PDM was too small to qualify for its LNG project in Dabhol, India. (Carling, Tr. 4471).

9.23 LNG customers are concerned that if CB&I were split up into two separate companies, the size of the separated companies would be insufficient to qualify for LNG projects. (Bryngelson, Tr. 6155-56). LNG customers believe that a broken-up company would not be large enough to meet their needs. (Sawchuck, Tr. 6077-78).

9.24 LNG customers are concerned that the companies created from a breakup of CB&I would be too small to qualify for LNG projects. LNG customers are "concerned about whether either of the two residual companies would have the bonding or guarantee ability to make [their] bid list." (Izzo, Tr. 6511-12). LNG customers "seriously doubt" that a broken-up company would be large enough to qualify for LNG projects. (Izzo, Tr. 6511-12). For many customers, financial viability of a prospective bidder is important to a pre-qualification process. (Rapp, Tr. 1313).

9.25 Association with a larger company can assist a particular division because the larger financial size will enable the division to qualify for larger projects. For example, PDM's Bridge Division benefited from its association with the Water and EC Divisions by being able to bond larger projects. After the sale of the Water and EC Division, much of PDM Bridge's bonding capacity was lost. (Byers, Tr. 6738).

9.26 CB&I's acquisition of PDM has benefited LNG customers because CB&I is now a larger company with more financial assets to go against in the event of a problem. CB&I's acquisition of PDM, and as a result its larger financial size, is a benefit to LNG customers. (Bryngelson, Tr. 6154).

6. A Breakup Would Significantly Disrupt Ongoing Projects

9.27 CB&I has over 300 ongoing projects at any given point in time over a number of product markets. A breakup would certainly cause disruption to most if not all of the ongoing projects, regardless of the product market, due to shared personnel and resources. (Glenn, Tr. 4170).

9.28 LNG customers with ongoing projects being constructed by CB&I believe that a breakup would cause disruption to their project and they would suffer a disadvantage by losing personnel that are currently working on their project. (J. Kelly, Tr. 6265).

7. A Breakup Would Leave Both Companies With Insufficient Personnel

9.29 CB&I employees are not dedicated to one project or one market, but rather work simultaneously on numerous projects across numerous market. Separating the company in two and therefore removing those people would disrupt a large number of projects. (Glenn, Tr. 4168).

9.30 Within PDM the EC Division and Water Division shared resources, personnel, equipment, and facilities. Due to the intermingling of resources, PDM decided to sell the two divisions together because it was impossible to sell one without the other. (Beyers, Tr. 6780-6781).

9.31 LNG customers are concerned with the prospect of splitting up CB&I personnel. LNG customers " have some real concerns about" the possibility of CB&I's engineering department being divided between two companies. (Sawchuck, Tr. 6077-78). Due to the small number of people within CB&I who work on engineering the projects in the relevant product markets, it would be " real difficult to split one person in half" when the entire group consists of a total of only one or two people. (Sawchuck, Tr. 6077-78).

E. NO EVIDENCE HAS BEEN PRESENTED TO DETERMINE IF A BREAKUP IS APPROPRIATE IF A VIOLATION IS FOUND IN SOME BUT NOT ALL OF THE RELEVANT PRODUCT MARKETS

9.32 Complaint Counsel's expert witness did not consider what the appropriate remedy would be if a violation is found in only some but not all of the relevant product markets. If a violation is found in only one market, Complaint Counsel's expert stated that it would "require quite a bit of thought" in order to determine what a proper remedy would be. (Simpson, Tr. 5586).

9.33 Complaint Counsel has failed to conduct an analysis to determine the effect of a breakup would have on all of the markets if it is determined that a remedy is required for only one market. Attempting to institute a remedy for the benefit of one market could harm competition in the remaining markets. (Harris, Tr. 7375-76).

F. OTHER REMEDIES ARE AVAILABLE

1. CB&I Has Made An Offer On The Thermal Vacuum Chamber Market

9.34 CB&I's CEO, Gerald Glenn has presented an offer on the thermal vacuum chamber market. (*See supra* Part VI) (Glenn, Tr. 4164-65).

2. CB&I Could Divest Technology, Know How, Equipment And Target Personnel

9.35 American Tank & Vessel ("AT&V"), one of the recent entrants into the relevant product markets, provided a list of CB&I's assets that it would like to have. Although ATV believes that can "effectively compete with CB&I," it provided a "wish list" of items that any competitor would like to acquire from its competition. (Cutts, Tr. 2371-73; 2374; 2391). A potential alternative remedy could involve CB&I using this "wish list" as a guide to mentor ATV or another recent entrant in the relevant product markets.

9.36 ATV provided a "wish list" of assets that it believed would be beneficial to assisting ATV when competing against CB&I. ATV would like to acquire the following items from CB&I: CB&I's customer lists, technical specifications of LNG applications, cryogenic welding systems, CB&I's name and reputation, and a few of CB&I's cryogenic marketing employees, employees and equipment for four additional field crews, more financial strength and bonding capacity, and CB&I's red book or standard operating procedures. (Cutts, Tr. 2371-74; 2391).

9.37 ATV believes that acquiring the above assets from CB&I would enable it to overcome any customer concerns about ATV's capabilities, which it believes is the final step in competing equally with CB&I in all the relevant markets. (Cutts, Tr. 2374, 2389-90).

9.38 Another remedy option could include CB&I assisting new entrants to locate or become acquainted with the correct customer contacts in the relevant product markets. Some new entrants are familiar with the companies that purchase the relevant products in the U.S., but do not necessarily know how to locate the correct contact person at each customer. (Cutts, Tr. 2559-60).

9.39 Another option could include CB&I selling some of its assets to its competitors. At one time, ATV was interested in purchasing some of PDM's assets including the Provo plant and certain automated welding equipment from CB&I after the acquisition. (Cutts, Tr. 2411-12). ATV was interested in acquiring some of PDM's assets in order to increase some market share. (Cutts, Tr. 2533).

Dated: March 27, 2003

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Greg J. Miarecki, hereby certify that on this 27th day of March, 2003, I served a true and correct copy of Respondents' Corrected Proposed Findings of Fact and Conclusions of Law, by hand delivery upon:

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