DEWEY & LEBOEUF

April 9, 2008

BY ELECTRONIC FILING

Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Re: *Broadwater Energy LLC*, Docket No. CP06-54-000
Broadwater Pipeline LLC, Docket Nos. CP06-55-000 & CP06-56-000

Dear Ms. Bose:

Enclosed for filing in the referenced proceedings is a copy of:

1. December 20, 2006 correspondence from Broadwater Energy LLC and Broadwater Pipeline LLC (collectively, "Broadwater") to the New York State Department of State ("NYSDOS");
2. August 23, 2007 documents provided by Broadwater to the NYSDOS;
3. September 14, 2007 correspondence from Broadwater to NYSDOS; and
4. November 21, 2007 correspondence from Broadwater to the NYSDOS.

Please do not hesitate to contact me with any questions regarding this submission.

Respectfully submitted,

/s/ Brett A. Snyder

Brett A. Snyder

Enclosures

cc: Mr. James Martin, FERC

December 20, 2006 Affidavit of Publication

LeBoeuf, Lamb, Greene & MacRae LLP

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December 20, 2006

VIA USPS FIRST CLASS MAIL

Kathleen L. Martens
Senior Attorney, Office of Counsel
State of New York Department of State
41 State Street
Albany, New York 12231-0001

Re: Broadwater Long Island Sound Project
Affidavit of Publication of Public Notice

Dear Kathleen:

On behalf of Broadwater, enclosed please find the original Affidavit of Publication Public Notice – F-2006-0345, as it appeared in *Newsday* on November 27, 2006 and December 3, 2006.

Please contact me should you have any questions regarding this matter. Thank you for your continuing attention to this project.

Very truly yours,

Bob

Robert J. Alessi

Enclosure/96459
cc: Mr. Steve Resler, NYSDOS
Mr. Jeffrey Zappieri, NYSDOS
Broadwater Energy LLC (via Electronic Mail)

AFFIDAVIT OF PUBLICATION

STATE OF NEW YORK)
) ss.:
COUNTY OF SUFFOLK)

I, Maryanne Sandt

of Newsday, Inc. ("Newsday") being duly sworn, says that such person is, and at the time of publication of the annexed Notice was, a duly authorized custodian of records of Newsday, Inc., the publisher of *Newsday*, a newspaper published in the Counties of Suffolk, Nassau, Queens, and elsewhere in the State of New York and other places, and that the Notice (a copy of which is annexed hereto), was published in the following editions/counties of Newsday, as indicated by the initial in the box:

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Published on the following date(s):
December 15, 2006

Legal Notice#14987940
LeBouf, Lamb, Greene & MacRae

SWORN to before me this
15th day of December, 2006

Guy P. Wasser
Notary Public, State of New York
No. 01WA6045924
Commission Expires 08/07/2010
Qualified in Suffolk County

Legal Notice 14987940

New York State Department of State

Public Notice - F-2006-0345

The New York State Department of State (NYSDOS) is required by Federal law to provide timely public notice for the activity described below, which is subject to the consistency provisions of the Federal Coastal Zone Management Act of 1972, as amended. In F-2006-0345, Broadwater Energy LLC and Broadwater Pipeline LLC of 889 Harrison Avenue, Riverhead, NY, 11901, have applied to the Federal Energy Regulatory Commission (FERC) [docket numbers: CP06-54-000, CP06-55-000, CP06-56-000] and to the United States Army Corps of Engineers (COE) [application number: 2006-00265] for the construction and operation of an offshore liquefied natural gas (LNG) facility within New York State waters of Long Island Sound, approximately 9 miles from the nearest shoreline of the north shore of Long Island. The facility would consist of a floating storage and regasification unit (FSRU) attached to a yoke mooring system (YMS) that includes a mooring tower embedded in the seafloor and connected to a new 21.7 mile subsea pipeline. LNG would be delivered to the FSRU by LNG carrier vessels, and temporarily stored, regasified, and transported in the new subsea natural gas pipeline from the seafloor beneath the FSRU, westward to an offshore connection with the existing Iroquois Gas Transmission System (IGTS) pipeline in Long Island Sound. Natural gas would travel from the FSRU, through the new subsea natural gas pipeline, and into the IGTS pipeline for delivery into New York City, Long Island and southern Connecticut at an average flow rate of about 1.0 billion cubic feet per day. An average of 2 to 3 LNG carrier vessels per week would make deliveries to the FSRU entering and exiting the Sound through The Race at the eastern end of Long Island Sound. The United States Coast Guard (USCG) completed a Waterway Suitability Report (WSR) on safety and security issues for the proposal and provided its analysis and recommendations to FERC. Among other mitigation measures, the USCG would require a safety and security exclusion zone around both the FSRU and around the LNG carrier vessels, within which non-project related vessels would not be permitted. The safety and security zone around the FSRU would be a circle with a radius of 1,210 yards centered on the YMS, and for the LNG carrier vessels the zone would extend 2 nautical miles in front, 1 nautical mile behind, and 750 yards to either side as they transit the Sound. More information on this project can be found at the FERC website (www.ferc.gov) by visiting the eLibrary under Documents and Filings, referencing the above listed docket numbers. The USCG WSR can be found at http://www.uscg.mil/d1/units/sedis/broadwater/broadwater.html. Any interested parties and/or agencies desiring to express their views concerning the above proposed activity may do so by filing their comments, in writing, no later than 4:30 p.m., January 23 , 2007. rd Comments should be addressed to the Consistency Review Unit, Division of Coastal Resources, New York State Department of State, 41 State Street, Albany, New York 12231. Telephone (518) 474-6000. Fax (518) 473-2464. FERC intends to hold two public meetings on Long Island to receive comments on the Draft Environmental Impact Statement for the Broadwater proposal in January, 2007. NYSDOS will be a participant in these meetings. Interested parties may express their views regarding this proposal at these meetings. The dates and locations for these meetings will be announced on the FERC website and in pending public notices issued by FERC. This notice is promulgated in accordance with Section 306(d)(14) of the Federal Coastal Zone Management Act of 1972, as amended.

NEWSDAY PROOF

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August 23, 2007 Meeting with NYSDOS

Notice to Mariners Process

1.0 Preamble

The New York State Department of State (NYSDOS), a cooperating agency in the FERC proceedings for the Broadwater LNG Project ("Project"), has further engaged the applicant, Broadwater Energy LLC and Broadwater Pipeline LLC (jointly "Broadwater"), during the coastal zone consistency review process. This engagement has included information requests and exchanges between Broadwater and NYSDOS. This response answers NYSDOS' request on July 24, 2007 to provide additional information on the Notice to Mariners process for LNG carriers.

2.0 Notice to Mariners Process

Section 2.3 of the Coast Guard's Waterway Suitability Report (WSR) outlines the regulatory requirements for vessel operation and transit within Captain of the Port ("COTP") Long Island Sound Zone.[1] Section 2.3.1.1 outlines the process for Advance Notice of Arrival (ANOA). As the report indicates, ANOAs must be submitted at least 96 hours prior to entering a port or place of destination.

As described on page 39:

> "Upon receiving a request for entry into a U.S. port through the ANOA process, the cognizant COTP has the ability to conduct reviews of the vessel's history with regards to safety, law enforcement and previously collected intelligence data. The decision process for authorizing the vessel's entry into the port is conducted and a formal entry or denial decision is made. Action can be taken to mitigate any potential risk that the vessel may pose to the port. The COTP has several operational tools that can be utilized to initiate action on the pending vessel."

This section of the WSR also covers the following issues:

- Port State Control Program – allows the Coast Guard to verify that foreign flagged vessels in U.S. waters comply with applicable international conventions, U.S. laws and regulations.
- Vessel Security Plans – a vessel security plan is required for foreign flagged vessels and for U.S. flagged ships.[2]

[1] U.S. Coast Guard, Waterways Suitability Report for the Proposed Broadwater Liquefied Natural Gas Facility, September 2006, pp. 39-43.

[2] Further discussions on the Vessel Security Plan are provided in Broadwater's FERC application, Volume V, Resource Report 11, pp. 11-47 to 11-48.

- Tank vessel exams – each foreign tank vessel undergoes a full safety examination at its initial U.S. port of call and at least annually thereafter. All LNG carriers must have a Certificate of Compliance in order to operate the vessel in the navigable waters of the United States.
- State pilotage requirements – all foreign and U.S. vessels under register transiting to ports or places within Long Island Sound must utilize a New York or Connecticut licensed marine pilot while transiting Long Island Sound.

The WSR also discusses a number of potential strategies that could reduce the interaction between commercial vessel traffic and commercial fishing and recreational traffic. These could either include a vessel traffic routing scheme[3] or a Vessel Traffic Service for the waters of Block Island Sound and Long Island Sound.[4] Each of these approaches were recognized as having a moderate to significant effect on reducing risks that could contribute to navigation safety accidents associated with LNG carrier movements. Toward this end, one of the actions identified in the WSR was the conduct of a Port Access Route Study (PARS) to evaluate the recommendation for a Vessel Traffic Service.[5]

Broadwater met with U.S. Coast Guard personnel in New Haven on August 8, 2007 to discuss general matters related to the Broadwater project. The issue of the Notice to Mariners process was raised at this meeting. Broadwater was informed that the specific details of the Notice to Mariners process is based upon a situational assessment that is made on a case-by-case basis, which includes consideration of other related activities on the waterway that the Coast Guard is aware of. The precise details concerning a standard procedure for Long Island Sound when LNG carriers transit the area are not yet defined.

Broadwater notes, however, that 24 hour advance notice of arrival to mariners is the normal practice at other LNG terminals currently operating in the U.S.

[3] WSR, Section 4.6.1.6, pp. 130-131.
[4] WSR, Section 4.6.1.7, pg. 131.
[5] WSR, Section 8.4.2, pg. 164.

FSRU Vessel Color Choice

1.0 Preamble

The New York State Department of State (NYSDOS), a cooperating agency in the FERC proceedings for the Broadwater LNG Project ("Project"), has further engaged the applicant, Broadwater Energy LLC and Broadwater Pipeline LLC (jointly "Broadwater"), during the coastal zone consistency review process. This engagement has included information requests and exchanges between Broadwater and NYSDOS. This response has been prepared in response to a request on July 24, 2007 to provide additional information on the proposed color choice of the vessel by Broadwater.

2.0 FSRU Vessel Color Choice

Broadwater filed a Coastal Zone Consistency Determination application with the NYSDOS in April 2006 which included, as Appendix K, a Visual Resource Assessment. This assessment was performed by Saratoga Associates and included viewshed mapping, identification of sensitive resources, selection of key receptors, simulation of project appearance, and an evaluation of the degree and character of project visibility. Based on this analysis, considerations for mitigation of any remaining perceived visual impacts were identified and included the camouflage/disguise of the facility by vessel color choice.

The proposed LNG terminal has been sited near the center of the Sound at its widest point, in part, to maximize the distance from any coastal vantage point and minimize potential visual impact on coastal resources. The LNG terminal will be approximately 9 miles from the nearest coastal vantage point. There is no location within the Sound where the project would be substantially farther from the nearest coastal observer.

The principles of camouflage are to alter the form, shadows, texture, colors and silhouette of an object to hinder its recognition, and to make the object blend into the background or the surrounding landscape. The most important techniques of camouflage are countershading and disruptive coloration.

While the color of the FSRU/YMS structure has not been determined by the certifying regulatory agencies, there are options available that Broadwater is proposing for use at the facility. As presented in the VRA, borrowing from the camouflage techniques of the U.S. Navy, shades of gray can be used to minimize contrast between the LNG terminal and the washed out distant blue - gray colors of the background as well as the foreground waters of the Sound. These factors combine to minimize visual distinction and perceived importance of the Project within the context of the regional landscape (waterscape).

FSRU Vessel Color Choice

Final color selection may be influenced by FERC and U.S. Coast Guard requirements that have not yet been determined. However; Broadwater is proposing the use of a blue-gray color scheme for the facility and will implement this color choice for the construction of the vessel as long as other vessel color requirements are not made by FERC and the U.S. Coast Guard during the final certification process.

Literature Search – Offshore Facilities' Effect on Aesthetic Enjoyment

1.0 Preamble

The New York State Department of State (NYSDOS), a cooperating agency in the FERC proceedings for the Broadwater LNG Project ("Project"), has further engaged the applicant, Broadwater Energy LLC and Broadwater Pipeline LLC (jointly "Broadwater"), during the coastal zone consistency review process. This engagement has included information requests and exchanges between Broadwater and NYSDOS. This response has been prepared in response to a request on July 24, 2007 to provide available articles and primary literature that describes or evaluates the potential effect that offshore facilities may have on aesthetic enjoyment in a coastal area.

2.0 Literature Search on the Potential Affects of Offshore Facilities on Aesthetic Enjoyment in a Coastal Area

Broadwater filed a Coastal Zone Consistency Certification package with the NYSDOS in April 2006 and October 2006 that included, as Appendix K, a Visual Resource Assessment. This assessment was performed by Saratoga Associates and included viewshed mapping, identification of sensitive resources, selection of key receptors, simulation of project appearance, and an evaluation of the degree and character of project visibility. Based on this analysis, NYSDOS has raised questions during technical meetings about the quantification of visual impacts from the Broadwater facility and examples of how offshore facilities in other locations affect the aesthetic enjoyment in a coastal area. Broadwater performed a search on the available literature or studies on this topic and provides the following summary of studies performed by the Minerals Management Service, National Oceanic and Atmospheric Administration – Coastal and Ocean Resource Economics division, and articles from the primary literature.

Minerals Management Service

Since the 1980's, the Minerals Management Service (MMS) has been studying and evaluating in detail the effects of Outer Continental Shelf (OCS) development in the context of environmental and socioeconomic impacts. These evaluations have generally focused on the geographic areas where OCS development is most prevalent including the coastal areas of Southern California, the Gulf of Mexico and the coastal areas of Alaska. In the literature search performed by Broadwater, information on the coastal areas of Southern California were considered the most representative for drawing conclusions about effects that could potentially occur on the north shore of Long Island based on their similarities as coastal areas containing numerous beaches and coastal public access areas for recreation and tourism coupled with significant commercial vessel use and offshore oil platforms (Long Island Sound and the OCS of southern California contain offshore oil terminals).

Literature Search – Offshore Facilities' Effect on Aesthetic Enjoyment

In the initial phases of the process that MMS embarked upon to evaluate potential impacts, a modeling evaluation was performed to understand what factors must be considered in this type of analysis and what characteristics of the areas' physical and economic structure could be positively or negatively impacted by OCS development. This modeling analysis was presented in the project document:

> *Impacts of Outer Continental Shelf Development on Recreation and Tourism, prepared for the MMS, U.S. Department of the Interior Los Angeles, California Contract No. 14-12-0001-30166 by David M. Dornbusch Company, April 1987.*
> *Volume 1: Executive Summary*
> *Volume 2: Final Report and Case Studies*
> *Volume 3: Detailed Methodology*
> *Volume 4: User's Manuel*
> *Volume 5: Program Logic Manual*

The project was intended to provide the Minerals Management Service with an analytical tool to evaluate possible economic impacts from OCS development. In particular, the study was designed to provide MMS staff who worked on the lease sale EIS' with an objective technique for estimating the impacts to coastal communities from events that occur as a result of lease sales, oil spills, onshore construction, and construction of platforms offshore. To achieve the overall goal, the project had several specific objectives:

- Provide profiles of 1982 socioeconomic conditions in coastal communities, including an analysis of the relative tourist industry in each coastal county;
- Develop a methodology for determining the effects of OCS development on coastal recreation
  - Provide an estimation of not only the construction and operation impacts from normal OS development, but also the potential impacts from an oil spill.
  - Provide assessment of impacts on beach activities, boating and recreational fishing.
  - Provide estimation of changes in recreation trips, changes in recreational spending and changes in economic value to recreationists;
- Recommend mitigation measures that may reduce the negative effect of OCS development on coastal recreation

The final report for this project is comprised of five volumes as noted above. The study results indicate that impacts from offshore facilities are based on assumed changes in beach attendance and that "beach attractiveness" is a very subjective concept. The study

assumed two principles that (1) the impact is greater when the platforms are closer to shore and (2) that the impact is greater when more platforms are visible.

Based on a cross sectional regression analysis of 111 beaches in California the study established six variables that explained beach attendance: beach frontage length, urban versus rural beach location, pedestrian access, beach aesthetic rating, state versus local administration, and a composite proximity variable. The composite proximity variable included population of origin counties, and those counties' recreation participation rates, distance to the beach in question, and distance to substitute beaches. The variables were statistically significant at the 90% level of confidence or greater, and together explained 68% of the variance in beach attendance.

The analysis in this study, which identified factors that influence beach attendance and "water dependent" and "water enhanced" uses, provides guidance for mitigating potential adverse impacts. Factors that directly affect beach attendance and may contribute more to its attractiveness than potential visual impacts from offshore structures include adding adjacent parking facilities, and increasing the length of the beachfront area. It is noted that these measures can't completely negate any possible impacts due to offshore development, but the study results indicate that they make a beach more appealing in other ways such that overall effects on beach attendance from the presence of an offshore facility would be reduced.

The complete study is provided as Attachment 1 to this document.

A second document that was reviewed, which was also developed by MMS, is:

> *Outer Continental Shelf, Oil and Gas Leasing Program: 2002-2007 Final Environmental Impact Statement April 2002 Volume I*

This Environmental Impact Statement (EIS) contains an evaluation of potentially affected resources including visual impacts resulting from the U.S. Department of the Interior (USDOI) proposal of 20 lease sales in eight of the Outer Continental Shelf (OCS) planning areas in the Gulf of Mexico and offshore Alaska during the period 2002-2007.

Areas identified as potentially affected resources included recreation and tourism including the use of coastal areas for sightseeing, wildlife observations, swimming, diving, surfing, sunbathing, hunting, fishing, and boating. Of particular concern was the "visual impact" of offshore OCS facilities.

The areas of the Gulf of Mexico and offshore Alaska contain similar levels and types of recreational and commercial use as Long Island Sound, including recreational and commercial fishing and commercial vessel traffic associated with oil and gas transports.

The potentially affected environment and impacts associated with visual and aesthetics are described below.

Gulf of Mexico

The northern Gulf of Mexico coastal zone is one of the major recreational regions of the United States, particularly in connection with marine fishing and beach-related activities. The shorefronts along the Gulf coasts of Florida, Alabama, Mississippi, Louisiana, and Texas offer a diversity of natural and developed landscapes and seascapes. The coastal beaches, barrier islands, estuarine bays and sounds, river deltas, and tidal marshes are extensively and intensively utilized for recreational activity by residents of the Gulf South and tourists from throughout the Nation, as well as from foreign countries. Publicly owned and administered areas (such as national seashores, parks, beaches, and wildlife lands), as well as specially designated preservation areas (such as historic and natural sites and landmarks, wilderness areas, wildlife sanctuaries, and scenic rivers), attract residents and visitors throughout the year. Commercial and private recreational facilities and establishments (such as resorts, marinas, amusement parks, and ornamental gardens) also serve as primary interest areas and support services for people who seek enjoyment from the recreational resources associated with the Gulf of Mexico.

Recreation and tourism are major sources of employment along the Gulf Coast. It can generally be deduced that almost 40 million residents of the Gulf Coast States have a major interest in water-related and water-enhanced recreational activity, with approximately two-thirds of the Gulf shorefront composed of beach; also, there is one motorboat for about every 20 people living in the Gulf region. In an attempt to narrow the scope of this information to the coastal zone, approximately 14 million people, or 35 percent of the Gulf States' population, live in coastal counties/parishes or the area most directly affected by Gulf activity, and about one-third of the two million registered motor boats are likely candidates for use in association with marine recreational activity.

The greatest concentration of tourism related employment occurs in Florida. The Miami and Panama City commuting areas have the highest percentages of tourism employment with 20 percent. Ft. Myers and Sarasota also have relatively high concentrations (18%) of tourism-related employment. In the Central Gulf of Mexico Planning Area, New Orleans and Houma are also high (18%).

Offshore Alaska

Recreation and tourism are two primary components of the Pacific Region's socioeconomic and sociocultural fabric. Recreational activities conducted in the coastal zone include sightseeing, camping, clam digging, hiking, biking, beachcombing, picnicking, boating, swimming, diving, wading, sunbathing, surfing, and sportfishing. Many of the national parks, reserves, sanctuaries, State parks, and marine protected areas are preferred destinations for residents and visitors. Tourism activities represent an important revenue source to local and State economies. Recreational activities depend

upon an accessible and unpolluted marine environment. Most of these activities occur at established shoreline park, recreation, beach, or public access sites. Other recreational activities closely associated with the coastal and offshore environment of the region are water-enhanced; that is, the ocean provides a setting that enhances the enjoyment of activities. The most intense use of available recreational resources is generally found near the major coastal population centers. Recreational boating is an especially important activity for both Oregon and Washington. It is estimated that 25 percent of Oregon's population participates in some form of boating activity. Approximately 10 percent of the users are from out of State. Water-dependent marine recreation along the California coast includes such activities as boating, fishing, whale watching, diving, skin diving, surfing, and wind surfing. These activities tend to occur near established shoreline parks, beaches, recreational sites, and public access areas.

Recreational use along the beaches of southern California is the most intense of all areas on the West Coast. Santa Monica Bay has the highest frequency of use, with beach attendance exceeding 75 million per year. Other areas of high use are the Orange County and the San Diego beaches, with combined attendance of over 50 million per year. Tourism is one of the major industries in California and has been an important element in the regional economy. Tourism has been defined by the California Office of Tourism as "nonroutine visits to an area for pleasure, business, meetings, or other purpose." This means that any trip of a nonroutine nature will be included in the total value of the tourist industry, as opposed to only the vacation/pleasure trips that are considered the more traditional tourist forms. California's coastline is an outstanding visual resource of great variety, grandeur, contrast, and beauty and contributes to the economic success of the tourist industry. Most of the coastal region is a highly sensitive natural resource area and is an important recreational asset to the residents. Water-dependent marine recreation includes such activities as boating, fishing, surfing, swimming, and diving. Each of these recreational activities is dependent upon an accessible and unpolluted marine environment. Most of these activities occur near established shoreline park, recreation, beach, and public-access sites. Sightseeing and beachcombing are enjoyed along the entire coast and are mainly dependent on the aesthetic aspect of the coastline and ocean view.

Visual Impacts

Gulf of Mexico - Routine outer continental shelf activity may adversely impact the activities listed above through increased trash and debris fouling beaches, noise pollution associated with increased helicopter traffic, and boat traffic. Esthetic degradation of beach areas, estuaries, and ocean views may be associated with pipeline landfall and offshore platforms. Further, temporary closings of beaches and sightseeing areas associated with pipeline construction may affect tourism and recreational opportunities in specific areas. However, various studies have also demonstrated positive impacts associated with offshore oil platforms, such as benefits to recreational fishing and diving around the reef-like habitats provided by oil and gas platforms.

Continued OCS leasing in the Gulf of Mexico over the next 40 years under the proposed action evaluated in the EIS is assumed to result in an additional installation of new offshore platforms off Louisiana, Texas, Alabama, and Florida. Drilling rigs and production platforms placed in the first two tiers of Federal lease blocks off major recreation and tourist destination areas like Padre Island National Seashore and Galveston Island in Texas may be barely visible from shore under very clear weather conditions, but are not expected to affect use and appreciation of coastal beaches and parks. Most of the platforms and associated drilling operations estimated for installation in waters off Texas, Louisiana, Mississippi, Alabama will occur far from shore and have no direct effects on coastal park and recreation areas. A few platforms and drilling rigs may be situated in currently unleased nearshore tracts within 3-10 miles from shore where they will be visible and recognizable as oil and gas operations. Some tourists and recreation users on coastal beaches along Louisiana, Mississippi, and Alabama will be affected by the sight or sound (helicopter and boat traffic) of OCS oil and gas operations but few, if any, are expected to forego their visits because of these routine operations.

Offshore Alaska - Given the limited development in the Norton Basin area of Alaska, it is unlikely that any sites having recreational or tourism values will be affected. In contrast, most of the potential effects of routine OCS activities on tourism and recreation in Alaska will be felt in the Cook Inlet area. This area is closest to Alaska's centers of population, and has the most developed commercial tourist industry. Anchorage is located at the head of Cook Inlet. The area west of Cook Inlet is roadless. Much of the west coast of the Kenai Peninsula (the east shore of Cook Inlet) is accessible by a road that connects a series of various-sized communities. These communities, in turn, are access points for water-based and land-based activities. The road system notwithstanding, much of the Kenai Peninsula is relatively undisturbed, with abundant scenery and wildlife. Changes in visual quality would be expected to be local and would be concentrated in periods of high industry activity, such as drilling and laying pipe. The proposed action would add new platforms to those that currently exist in Cook Inlet. Any closure of areas to water-oriented recreational activities would be only for short periods of time. Additional population, crowding, or competition effects due to the proposed OCS activities would be possible, because much of the population and employment increases would occur in the

Anchorage/Kenai Peninsula area. Given the relatively small magnitude of these changes in relation to the overall population and economy of that area, however, these effects are expected to be minor.

Conclusions
Based on the analysis presented in the EIS for visual impacts, potential direct and indirect impacts of the proposed action on sociocultural systems due to noise, visual, and traffic disturbances as a result of operations in the Gulf of Mexico and offshore Alaska for the proposed action are expected to be minor. In reviewing the information presented above, these areas present numerous similarities with the level and type of commercial and recreational activity that exists in Long Island Sound that is water-dependent or water enhanced. Broadwater concludes that other areas where offshore energy development have occurred and will continue to expand have not experienced any major or significant effects to their aesthetic quality and based on those existing trends and information, therefore significant effects on aesthetic quality would not be expected for the coastal areas around Long Island Sound based on the presence of the Broadwater facility.

For further detail, the complete EIS is provided as Attachment 2 to this document.

National Oceanic and Atmospheric Administration

As part of on-going study efforts conducted by researchers from several institutions and regulatory agencies including National Oceanic and Atmospheric Administration, and the University of California at Los Angeles, the Southern California Beach Valuation Project for Los Angeles and Orange County Beaches was conducted starting with a research team that was established in 1998. This program has included beach use surveys conducted by telephone and diary surveys and applied these results to the IMPLAN input-output model used for estimating economic impacts, which is the same model utilized by Broadwater in our economic benefits analysis for the project presented in Resource Report 5 - Socioeconomics.

Research was conducted in two phases. Phase I was a preliminary analysis focused primarily on diary data from June – July, 2000. Phase I included a variety of reports detailing survey sampling methods and descriptive statistics of the collected data. Phase I also included preliminary estimates of the market economic impact (e.g., sales/output, income and employment) associated with beach recreation. Estimates of nonmarket economic use values as they relate to user and site characteristics or beach attributes, were made using preliminary models. Phase II of the study included all six two-month waves of the diary data collection, and explored many alternative methods of modeling the data for estimating nonmarket economic use values and how they might vary with changes in beach attributes (e.g., water quality, parking availability, quality of beach sand, etc.) and user characteristics.

Los Angeles and Orange Counties were the first two counties included in the Southern California Beach Valuation Project. Fifty-one separate beaches were identified in the two-county area. The research team conducted an inventory of all beaches in the study area and created a database with beach attributes and attendance information.

These study conducted evaluations in the context of three major scenarios occurring off the southern California coast that could affect these beach areas; improvement or degradation of beach water quality and beach closures.

These scenarios were related to the presence of the offshore oil platforms in that beach closures were a potential outcome in the event of an oil spill. In the context of the evaluation, the visual and aesthetic impacts of the presence of the approximately 26 existing platforms were not directly evaluated but there mere presence less than 5 miles in many instances from the shoreline and high visibility is a passive indicator that these high use beaches of southern California have not been aesthetically impacted by their presence; beach use or recreation patterns are affected by other more prominent factors such as water quality, proximity to residences, demographics including household income and employment status, and the opportunity to engage in activities such as swimming, jogging, walking and entertainment such as dining and shopping.

For more detailed results and technical information regarding the survey, the complete project summary is provided as Attachment 3 to this document.

Primary Literature

As part of a study into the impact of offshore facilities on beach visits and coastal enjoyment; the team of Earl Baker, Stephen West, Dennis Moss and James Weyant, authored the following article:

Impact of Offshore Nuclear Power Plants: Forecasting Visits to Nearby Beaches, Environment and Behavior 12 (September 1980), pp 367-407.

The study was intended to specifically address if a nuclear power plant were located off the coast near a beach community whose economy depended on tourism, would the plant have a major impact on tourism and beach visitation. The primary focus of the study was to provide an assessment of this risk by estimating the potential magnitude of beach avoidance associated with a floating nuclear plant. A secondary focus was to investigate beach attributes and visitor characteristics which may affect the decision to visit a beach near a floating nuclear plant. Four beach attributes including proximity to home, crowding, cleanliness, and quality of facilities have been identified in previous studies as typically being the most important to an individuals evaluation of beaches for recreation.

This study used the evaluation of analogous sites in which a offshore energy facility was already located near a coastal area and beach interviews in specific areas to assess impacts. Most importantly, the study included evaluation of the Millstone Plant in Millstone, Connecticut which borders the same body of water that would contain the Broadwater facility and additional data was collected on visual impacts from parks in the surrounding area. Part of this study included pilot investigations to verify findings from other research and did conclude that the beach attributes listed above were valid and that individuals do evaluate the attractiveness of a beach relative to that of other beaches and that even if a floating facility were present, and potential undesirable affects from the facility might be offset by other physical attributes of the beach itself.

Analogous Sites
Surveys at the Millstone Plant were conducted at Rocky Neck State Park on Long Island Sound, approximately 5-miles from the plant. The plant is not visible from the park and attendance at the park continued to increase after construction and operation of the plant and indicate that its presence did not have an impact on attendance at nearby beach state parks. Interviews conducted at the three beaches within 5 miles of the Millstone Plant did not reveal any respondents that said they had avoided the beach because of the Millstone Plant. In addition to beachgoers, interviews were conducted with beachfront motel and cottage managers, the director of a nearby beachfront amusement park, the owner of the largest charter boat fishing operation in the area, local tax assessor, planners and tourism officials. None of the individuals contacted reported decreases in tourism or beach recreation resulting from the Millstone Plant.

Beach Interviews
As part of the beach interviews participants were asked if a nuclear generating station were located 3 miles offshore would it affect their decision to come to the beach. Initial responses ranged from 22.8% to 26.5% indicating they would not return. But this number decreased sharply as the distance to the facility increased as depicted on Figure 3 of the article. The sharpest decline was evident in the distance of 5-10 miles offshore which is the distance range for the Broadwater facility, which will be located 9-miles offshore. Interview participants were also questioned about onshore vs. offshore preference. Those who expressed a preference preferred the offshore location (over 75% at all sites). Distance to home vs. distance to the reactor was also part of the survey and results indicate these are significant determinants of beach desirability and that distance of a beach from a person's home is much more important than proximity of the beach to an offshore nuclear power plant. In addition, the survey data support the conclusion that the further the distance to the plant (regardless of type), the higher the desirability ratings give to the beach.

Overall, cleanliness, crowding, quality of facilities and distance to a floating nuclear plant were all significant determinants of the rating of the desirability of the beach. A final point made in the study that is most applicable to Broadwater is that in terms of

percentage of variance accounted for, the distance to a floating nuclear plant was clearly the least important of the four beach factors that were investigated.

The complete journal article is not provided here as an attachment due to copyright restrictions. For the complete article, access the citation listed above.

Conclusions

Based upon the studies and resulting data presented above several conclusions can be drawn that are directly applicable to the evaluation of potential impacts to aesthetic enjoyment in coastal areas.

Primarily, beach attendance and the "water dependent" and "water enhanced" uses of coastal areas for recreation has a strong relationship with many physical beach factors and a weak relationship with the mere presence of an offshore energy facility. The factors or variables that are the most prominent include beach frontage length, urban versus rural beach location, pedestrian access, beach aesthetic rating, State versus local administration, proximity to the user and their home, crowding, cleanliness, quality of facilities, water quality, and availability of parking. None of the studies reviewed above indicate or support a direct conclusion that an energy facility such as Broadwater located several miles offshore would have an impact on the aesthetic enjoyment of a coastal area.

References:

1. Minerals Management Service (MMS) - *Outer Continental Shelf, Oil and Gas Leasing Program: 2002-2007 Final Environmental Impact Statement* April 2002.
2. Minerals Management Service (MMS) – *Impacts of Outer Continental Shelf Development on Recreation and Tourism*, Prepared for the MMS, U.S. Department of the Interior Los Angeles, California Contract No. 14-12-0001-30166 by David M. Dornbusch Company, April 1987. Volume 1: Executive Summary, Volume 2: Final Report and Case Studies, Volume 3: Detailed Methodology, Volume 4: User's Manuel, Volume 5: Program Logic Manuel.
3. National Oceanic and Atmospheric Administration (NOAA) – *Southern California Beach Recreation Valuation Project: Summary*, June 2007.
4. Baker, Earl, Stephen West, Dennis Moss and James Weyant, "Impact of Offshore Nuclear Power Plants: *Forecasting Visits to Nearby Beaches*, Environment and Behavior 12 (September 1980) pp 367-407.

September 14, 2007 BW Letter to NYSDOS

BROADWATER

Broadwater Energy
c/o TransCanada Corporation
450 – 1st Street S.W.
Calgary, Alberta, Canada
T2P 5H1

September 14, 2007

George R. Stafford, Director
New York State Department of State
Division of Coastal Resources
41 State Street
Albany, New York, U.S.A.
12231-0001

Dear Mr. Stafford:

Subject: Broadwater LNG Project - Information Request Responses

In response to requests for additional information relating to the proposed Broadwater Energy project from our recent meetings on July 24 and August 23, 2007, please find enclosed the following responses:

(1) Atlantic Alternatives – Open Issues

Enclosed are responses NYSDOS A-1 (Collision Risk), A-3 (STL Buoy) and A-6 (Transco Pipeline). This completes the responses to the list of issues provided by NYSDOS on August 9, 2007.

(2) Information Request – July 24, 2007

Enclosed is a response relating to the financial capacity of the Broadwater project sponsors.

Broadwater anticipates providing additional responses by the end of September. If there are any questions concerning the attached information, please feel free to contact me at 403-920-2046.

ORIGINAL SIGNED

_____

Murray Sondergard
Project Director

Cc: Robert Alessi (LeBoeuf, Lamb, Greene & MacRae)
John Hritcko (Broadwater)

NYSDOS A-1

Preamble:

As part of its consistency review process for Broadwater's proposed LNG project in Long Island Sound (LIS), staff at the NYS Department of State (DOS) met with representatives of Broadwater to exchange information, address outstanding issues and examine potential alternatives to Broadwater's proposed project.

DOS initiated a dialogue with Broadwater about potential alternatives in the Atlantic Ocean, south of Long Island. Broadwater has provided DOS with materials regarding the alternatives. The following are open issues with these materials, as well as additional points for clarification regarding potential sites.

Collision Risk

Request:

Broadwater has stated that some of the proposed Atlantic alternative sites would be at a greater risk of collision from ship traffic than the proposed Long Island Sound site. DOS has not seen compelling evidence that any of the Atlantic alternatives would create a collision risk or that any potential risk could not be sufficiently managed. Please provide documentation from the U.S. Coast Guard or similar authoritative source to support Broadwater's contention that navigational safety would be compromised such that the project could not be sited at Atlantic locations.

Response:

Broadwater assumes the DOS request pertains to the deployment of Shuttle Regasification Vessels (SRVs) in Atlantic locations. Broadwater has indicated in its FERC application and in other data responses, that to be considered a viable alternative, three Submerged Turret Loading (STL) buoys would be required for this alternative to provide the 1 bcf/d throughput proposed by Broadwater. Issues pertaining to the viability of other offshore regasification technologies have been addressed in other responses.[1]

Broadwater further assumes that DOS is aware from the record before the FERC that the Coast Guard has concluded that risks of collision can be properly managed at the proposed Broadwater location in Long Island Sound.

The key issues discussed below with respect to collision risk associated with Atlantic alternatives are the following:

[1] Refer to FERC Application Resource Report 10 (Alternatives) and responses NYSDOS A-7 and NYSDOS A-8.

(1) The volume of ship traffic associated with the Port of New York/New Jersey in the Atlantic is much greater than that for Long Island Sound;
(2) Collisions documented on the Atlantic side of Long Island have been between large vessels striking fixed and well lighted navigation object in the precautionary area, which suggests a similar risk potential for a moored SRV;
(3) A review of other Deepwater Port approvals suggests that the impacts to surrounding traffic will be significantly larger than just the safety and security zone around a SRV vessel, which may impact the adjacent Traffic Separation Scheme; and
(4) There has been experience with other Traffic Separation Schemes that suggest these schemes are not always heeded by mariners, due to a combination of weather, inexperience and other factors. This must be taken into account in any analysis of risk for a facility with a proposed operation of 30 or more years.

1.0 Ship Traffic Using the Port of New York/New Jersey

Broadwater has noted that the overall level of ship traffic in the Port of New York/New Jersey is significantly greater than that observed in Long Island Sound. Key facts, as noted in a fact sheet issued by the U.S. Coast Guard, Sector New York, give the following information about the Port of New York/New Jersey:[2]

- Third largest U.S. port and has the largest civilian population contained within a U.S. port area;
- The 2005 total value of cargo through the Port was US$132 billion;
- 12 percent of all the international goods arriving into U.S. come through this Port. This equates to 85 million metric tons of general cargo, which in turn serves 80 million people or 35% of the entire U.S. population.
- NY/NJ is the largest port in the U.S. for the movement of petroleum (aviation fuel, gasoline and home heating oil);
- NY/NJ is also ranked as the largest port in the U.S. as an ocean-borne auto-handling port, moving 722,000 vehicles;
- NY/NJ is the third largest U.S. port in terms of containerized cargo shipments, with 4.8 million Twenty-foot Equivalent Units (TEUs) of containerized cargo (equivalent to 7,300 containers each day).

The Vessel Traffic Service, with its 14 remote radar sites and 20 cameras throughout the Port, monitors 1400 *daily* commercial vessel movements in the Port of NY/NJ.[3]

[2] Available at http://homeport.uscg.mil – refer to Sector New York.
[3] Further validation of these statistics is available from the Port Authority of New York and New Jersey http://www.panynj.gov/ .

NYSDOS A-1

These figures can be contrasted with those reported in the Waterway Suitability Assessment for the Broadwater project, where the following traffic details were identified: [4]

> "As outlined in Table 2-1, for the years 2003 through 2005, ports within Long Island Sound experienced an average of 2,300 commercial vessel arrivals per year. For those years, there was an average of approximately 462 foreign-flagged vessels arrivals annually at port facilities within Long Island Sound located in both Connecticut and on the north shore of Long Island. These vessels take one of two routes into Long Island Sound; either north of Block Island, or through Montauk Channel to the west of Block Island and then through The Race. Additionally, for the years 2003-2005, there was an average of 1,840 U.S. flagged vessel arrivals annually at ports in Long Island Sound, consisting primarily tug and barge combinations. These vessels arrive from both the eastern entrances and the western end of the sound."

Table 2-1: 2003-2005 Long Island Sound vessel arrival data

	2003		2004		2005	
Vessel Type	**U.S.**	**Foreign**	**U.S.**	**Foreign**	**U.S.**	**Foreign**
Barge	1131	28	1438	63	1779	112
Bulk Carrier		105		116	1	
Fishing Vessel	3		5		1	1
General Dry Cargo Ship		39	3	70	10	54
Miscellaneous Vessel	1	3	3		8	
Passenger Ship	79	1	97	3	140	
Refrigerated Cargo Ship		62		33		56
Recreational	4		2	4	1	44
RO-RO Cargo Ship	1	1			1	2
Tank Ship	200	228	225	184	225	166
Towing Vessel	16		30	1	71	2
Other	17	3	12		17	6
Total	**1452**	**470**	**1815**	**474**	**2254**	**443**
Year Totals	**1922**		**2289**		**2697**	

Source: Coast Guard MISLE (Marine Information for Safety and Law Enforcement) Analysis and Reporting System (MARS);
Note: Appendix D details the process which was used to derive the arrival information.

[4] U.S. Coast Guard, Waterway Suitability Report for the Proposed Broadwater Liquefied Natural Gas Facility, September, 2006, page 21.

Thus, commercial ship traffic, which tends to be comprised of larger vessel sizes, is more than an order of magnitude greater for the Port of NY/NJ than it is for Long Island Sound where the vessels are also calling at a multitude of ports, some of which do not require the passing of the proposed Broadwater FSRU (for example. New London). While a Traffic Separation Scheme is used in the Port of NY/NJ, increased levels of traffic are generally associated with increased collision risk. Further to this, the volume of traffic to the Port of NY/NJ appears to be increasing with time, which suggests greater traffic volumes than those that have been observed historically.[5]

It should further be noted that there are a wide variety of other marine terminals whose transportation details are not captured by the port authority website itself, including many of the oil berths located around the Kill Van Kull channel.

As part of the Deepwater Port application recently submitted by Safe Harbor Energy, a Marine Vessel Traffic Study[5] was conducted. Excerpts from that report are provided below[6]:

4.1 SHIP TRAFFIC TO NEW YORK

"New York Harbor is a major port on the east coast of United States, handling a diverse range of ship types, which include container carriers, tankers, bulk carriers, cruise, and general cargo vessels. These ships arrive and depart to the majority of the ports of the world, and to assist the safe movement of these ships a Traffic Separation Scheme (TSS) is in operation in the outer approaches to New York. Navigation in the area is governed by the International Regulations for the Prevention of Collisions at Sea (1972). In addition to setting out the action of vessels for collision avoidance in confined and open waters, the regulations also specifically address vessel actions in TSS.

Traffic Separation Schemes are intended to make navigation in congested waters safer for shipping, by designating one way routes for ship transit and thus reducing the probability of head-on collisions. A TSS consists of two one-way traffic routes with a separation zone between to maintain a safe distance between the routes. The areas outside the TSS and the space between adjacent TSS are open waters where shipping can transit in any direction.

TSSs are internationally recognized by the International Maritime Organization (IMO) and inbound and outbound ships should follow the TSS as a matter of navigational prudence. However, vessels are not constrained to use the TSS and may navigate in the adjacent coastal or open waters. Vessels of less than 20

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[5] See, for example, a press release entitled "*Port Of New York And New Jersey Sets Cargo Record In 2006*" dated March 20, 2007 from the Port Authority
http://www.panynj.gov/AboutthePortAuthority/PressCenter/PressReleases/PressRelease/index.php?id=924

[6] Safe Harbor Deepwater Port License Application, Docket No. 28535, Appendix N (Marine Vessel Traffic Patterns), Section 4.1 to 4.4 and Section 4.6.

meters (which would include the majority of leisure craft) and fishing boats are required not to impede the passage of any vessel following a traffic lane.

Any shipping that is required to join or leave a traffic route is required to do so at as small an angle to the general direction of traffic flow as practicable. This will apply to the LNG carriers when they approach and depart from the Terminal. Vessels crossing the TSS should do so at a right angle or as nearly at a right angle as practicable.

4.2 THE APPROACHES TO NEW YORK

"The TSS in the approaches to New York consists of three individual schemes, each with two routes, which converge at a precautionary area off Ambrose Light. These routes approach/depart from east/west (to and from the U.S. east coast, Canadian east coast, and Europe), southeast/northwest (to and from Africa and South America), and south/north (to and from Southern United States, Caribbean, and Panama Canal for the Pacific and Far Eastern Ports). These six routes are shown in the Figure N-1 and Safe Harbor is located between two of these routes shown as route 2 and route 3 on Figure N-1. Note that the traffic routes narrow as they lead from the open sea to the precautionary area off Ambrose Light. As vessels proceed inbound or outbound in the routes the vessels will bunch together as the routes narrow, and spread apart as the routes widen.

The approximate position of the Safe Harbor site is shown in Figure N-8 between east outbound Ambrose to Nantucket route (route 2) and the inbound Hudson Canyon to Ambrose route (route 3). Safe Harbor is about 0.5 nm south of the southern edge of route 2 and 1.4 nm north of the northern edge of route 3. This position is outside of the traffic routes and in an **area where shipping is permitted to make passage in any direction, provided that it does not interfere with traffic in the TSS**. (emphasis added)

Inbound traffic to New York will follow route 3 to the semi-circular precautionary area and then proceed to the pilot boarding area to the west of Ambrose Light. Vessels departing from New York will disembark the pilot near Ambrose Light and then proceed through the precautionary area to the start of the route 2 and then depart the area ..."

4.3 SHIP TRAFFIC ANALYSIS

"The ships arriving and departing from New York will be using one of the six numbered traffic lanes identified in Figure N-1. Data on ship traffic numbers in the area was sought from the U.S. Department of Transportation Maritime Administration, who advise 4,902 port calls, or 9,804 ship movements, of vessels greater than 10,000 tons deadweight; their source is reported as Lloyds Marine Intelligence Unit (LMIU). New York pilots advise that the approximate annual number of ship movements is about 11,000 to 12,000 per year.

The data used for the ship traffic flow analysis was obtained from LMIU for the period November 2005 through October 2006 and covers ships inbound to and outbound from New York. These data were selected because they includes not

only the number of vessels but also the previous port and next port and this allows analysis of vessel routes. The data also contain information on the vessels themselves such as vessel type, length, summer deadweight, and summer draft, and these parameters allow analysis of vessel distributions on the routes. The data do not include leisure craft, fishing boats, naval, or USCG vessels.

The LMIU data showed 11,690 in total number New York inbound and outbound movements for this period; these were allocated to the six lanes to give movements on each route as shown in Table N-2. The movement numbers have not been inflated for future trade. The route used by each of the vessels was derived from the previous and next ports for each ship and knowledge of courses used in deep sea and coastal navigation.

Routes 2 and 3 that pass respectively north and south of Safe Harbor are highlighted in Table N-2 and show the traffic numbers on the two routes adjacent to Safe Harbor. Route 2 had 1,754 ship movements outbound and 15 percent of the total movements in the area. Route 3 was much less travelled and had 378 ship movements and 3 percent of the total movements in the area. Of the other, more distant, routes the north/south routes 5 and 6 have the densest traffic with a combined total of 58 percent ..."

4.4 SHIP TRAFFIC ON ROUTES 2 AND 3

"The distribution of vessel transits by ship type on routes 2 and 3 is shown in Figure N-10; both routes have a mix of different ship types, with about half the vessels on route 2 and a fifth of vessels on route 3 being tankers carrying hydrocarbon products or in ballast, and the balance of the vessels carrying dry cargoes. The most common vessel subtype on both routes is a container carrier. Cruise liners anticipated to carry high numbers of passengers transit on both routes ..."

4.6 COLLISION HISTORY

"Data on worldwide collision for the 5-year period 2001 through 2006 show five collisions in the general area of Safe Harbor Energy. The same data also show one allision plus there were two further incidents of striking the Ambrose Light in 1996 and 2001. The locations of relevant collisions are shown in Figure N-18 and details of the collisions are shown in Tables N-13 and N-14. Four of the incidents were in New York Harbor itself and are not considered further here.

The remaining four incidents, two collisions and two allisions, are discussed below:

- Case 4: collision between a bulk carrier and a fishing vessel about 45 nautical miles east of Safe Harbor Energy and in the outbound safety fairway of the Nantucket to Ambrose route.
- Case 5: collision between a tug and a fishing vessel in the open navigation waters of the inshore zone west of the outbound TSS route 6.
- Case 6: allision by an oil tanker striking the Ambrose Light Tower.

- Case 7: allision by a freighter striking the (recently repaired) Ambrose Light Tower.

The records show no collisions between two large ships navigating in the TSS, and indicate the benefits of separating those traffic flows. Both collisions involved fishing vessels. **Both allisions involved a large vessel striking a fixed and well-lighted navigation mark within the precautionary area."**(emphasis added)

Table N-2 Ship Movements by Route (LMIU November 2005 through October 2006)

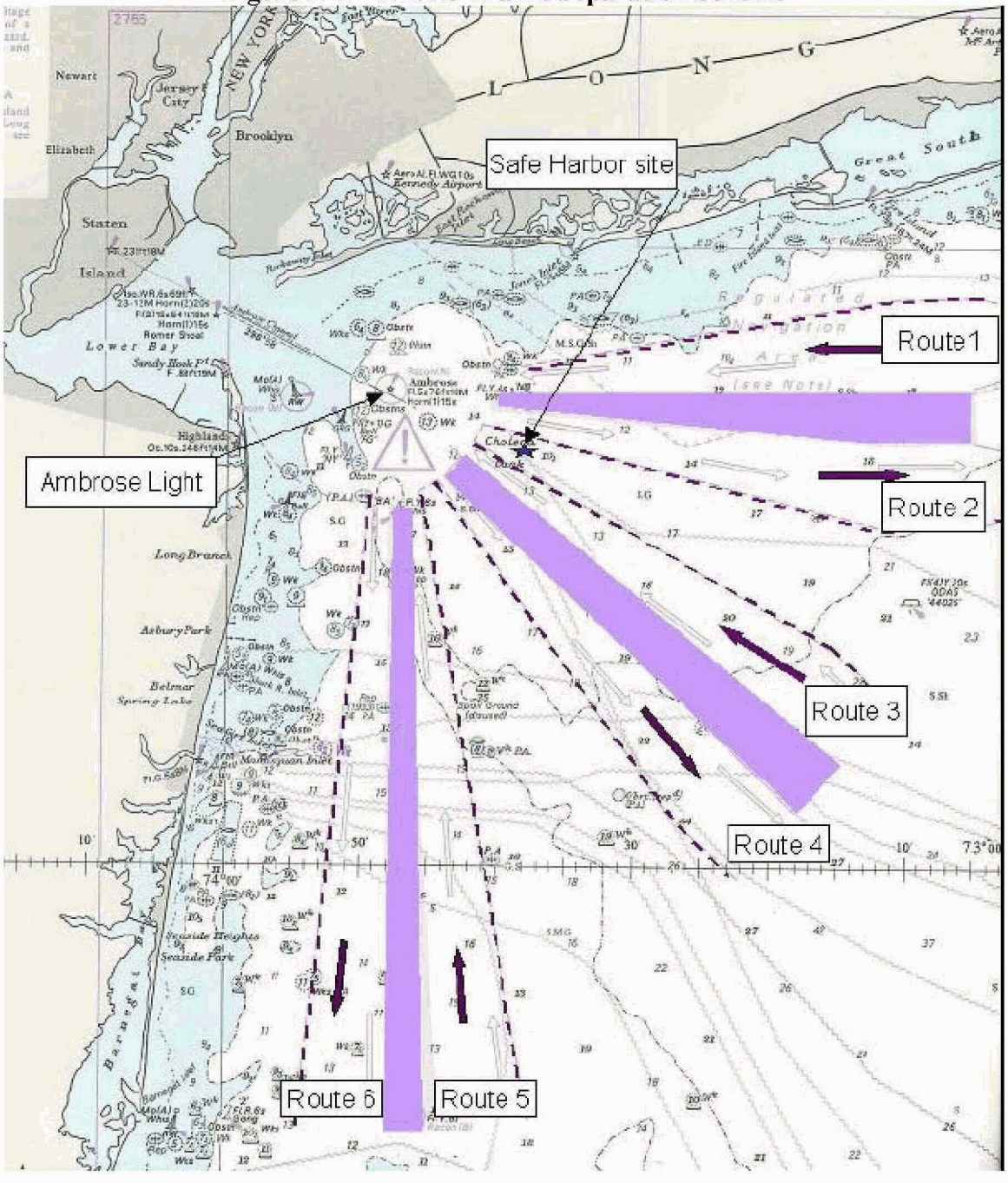
Traffic Direction	*Route*	*Number of Ships*	*Percentage of all Ships*
West bound	*Route 1 (inbound)*	*2548*	*22*
East bound	*Route 2 (outbound)*	*1754*	*15*
Northwest bound	*Route 3 (inbound)*	*378*	*3*
Southeast bound	*Route 4 (outbound)*	*252*	*2*
North bound	*Route 5 (inbound)*	*2919*	*25*
South bound	*Route 6 (outbound)*	*3839*	*33*
Total		*11690*	*100*

In summary, the data from the Safe Harbor marine traffic study confirms Broadwater's assertions:

- Vessel traffic, particularly ships greater than 10,000 tons deadweight, is much greater for the Port of NY/NJ than for Long Island Sound. As stated above, the figures quoted by Safe Harbor do not account for growth in the volume of vessel traffic. However, as noted above by the Port of NY/NJ, vessel traffic and the volume of cargo transported continues to grow.
- Historical collisions have been experienced between large vessels and fixed navigation marks in the precautionary area. Siting two or more SRVs in this area in the sites proposed by NYSDOS would introduce additional fixed vessels in the area.
- As will be discussed below in Section 2.4, Traffic Separation Schemes are not always obeyed by passing vessels. All other things being equal, locating adjacent to an area with frequent ship traffic increases the exposure to those ships who may disregard the TSS and this will result in increased collision risk.

NYSDOS A-1

Figure N-1 – NY/NJ Traffic Separation Scheme



2.0 Affected Areas Around SRV Buoy Locations

The assertion that the only area affected by the installation of a set of STL buoys associated with an SRV operation is the safety and security zone around the SRV when it is discharging natural gas is incorrect. A larger area must be set aside in order to conduct operations and to avoid damage to the STL buoys from other marine traffic. This is evident from a review of the recommendations associated with approved SRV installations.

2.1 North East Gateway Deepwater Port

The North East Gateway (NEG) project intends to use two STL buoys located 1 mile apart. The Final Environmental Impact Statement (FEIS), Section 2.1.1.2 (NEG Port Operations) notes the following:[7]

> **"Safety Zone** – Pursuant to the regulations of the DWPA, the USCG is authorized to establish a permanent mandatory Safety Zone around the deepwater ports whether a vessel is present or not. The NEG Port Safety Zone would extend approximately 800 yards from the centre of each buoy in order to maintain distance from a moored EBRV [Energy Bridge Regasification Vessel] as it weather vaned (rotated) around the buoy. The combined area of both buoy Safety Zones would be 415 acres. All unauthorized vessels would be prohibited from anchoring or transiting the Safety zone at any time. The USCG would have primary jurisdiction for the NEG Port Safety Zone.
>
> **No Anchoring Area (NAA)** – if a License is granted, the USCG would designate a mandatory NAA to further facilitate Port operations, safety and security that would encompass an area within a 1100 yard radius from the centre point of the each buoy. In total, the NAA would restrict 776 acres around each buoy, or a total area of about 1200 acres (considering the overlap of the zones between the two buoys) from access. The NAA is necessary to prevent vessels from anchoring (or bottom trawl line) within the port mooring system and either damaging the mooring system, the vessel itself or its equipment. Restrictions within the NAA include the following:
>
> - No deep draft vessel anchoring or bottom trawl fishing.

[7] Final Environmental Impact Statement, Northeast Gateway Project, Docket #22219, Volume 1, Section 2.0, pages 2-9 to 2-10

- Transiting allowed with pre-approved simultaneous operations management system
- Fishing/lobstering allowed with pre-approved simultaneous operations management systems
- Speed restrictions may apply
- Possible restricted access during LNG carrier movement.
- Possible restricted access during higher terrorist threat levels.

A simultaneous operations management system (or protocol) would ensure coordination between port operations and other vessels in the area and address such areas as:

- Communications
- Identification systems
- Safety and security briefings/procedures
- Emergency notification/evacuation/response plan and procedures

Areas to be Avoided (ATBA) The applicant is recommending an area to be avoided of 1367 yards radius around each buoy or an additional 267 yards beyond the NAA. Restrictions within this area would be as follows.

- Same restrictions as NAA would apply
- Movement or activities would not be restricted but reduced speed in transit may be required.

It may be determined that additional areas in the vicinity of the Port have this designation as well.

These areas would normally be marked on the relevant navigational charts along with their designation and purpose.

2.2 Gulf Gateway Deepwater Port

In the case of the existing Gulf Gateway Deepwater port located in the Gulf of Mexico, the USCG has established the following zones around the port:[8]

> The Gulf Gateway Deepwater Port (DWP) is located approximately 116 miles off the Louisiana coast at West Cameron Area, South Addition Block 603 ``A", 28[deg]05'16" N, 093[deg]03'07" W. The DWP operator plans to offload liquefied natural gas (LNG) vessels by regasifying the LNG on board vessels. The regasified natural gas is then transferred through a submerged loading turret buoy (STL), to a flexible riser leading to a seabed pipeline to a metering platform. From the platform the natural gas feeds into two separate downstream seabed pipelines to connect with the Southeastern United States natural gas network. In order to improve safety and security at the port while regasification and transfer operations are occurring, several routing measures have been implemented. In July 2004, the Coast Guard forwarded a proposal to the International Maritime Organization (IMO) requesting the establishment of an Area To Be Avoided (ATBA) and a mandatory No Anchoring Area for the Excelerate Gulf Gateway (formerly the El Paso Energy Bridge) deepwater port. These two routing measures will promote safety, security, and vessel traffic management in the vicinity of the DWP.
>
> The ATBA has a radius of 2 nautical miles, is recommendatory in nature and does not restrict vessels from transiting the area. However vessel operators are strongly urged to seek alternate routes outside the ATBA and away from the DWP. The No Anchoring Area has a radius of one and one half nautical miles from the STL buoy and compliance is mandatory. It is required to protect the anchoring system securing the port and vessels from potential damage by sub-surface fishing operations (e.g., trawling). These routing measures were adopted by IMO in December 2004 and will be implemented on July 1, 2005. A safety zone is an additional measure, intended to augment the routing measures cited in the previous paragraph. The safety zone is needed to protect the deepwater port, and other vessels and mariners from the potential safety hazards associated with LNG operations while an LNG vessel is moored at the port.
>
> The Coast Guard is establishing an interim safety zone 500 meters around the Gulf Gateway Deepwater Port described above. All unauthorized

[8] 33 CFR Part **§ 150.940** Safety zones for specific deepwater ports and 33 CFR Part 150 [USCG-2005-21111 FR Doc 05-9432].

vessels are prohibited from entering into or moving within this safety zone.

This rule is effective upon publication in the Federal Register.

Regulatory Evaluation

This rule is not a ``significant regulatory action'' under section 3(f) of Executive Order 12866 and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. The Office of Management and Budget has not reviewed it under that Order.

This safety zone is encompassed within a circle that extends out only 500 meters from the center point, and is located approximately 116 miles off the coast of Louisiana, so the impacts on routine navigation are expected to be minimal.

As can be seen from the foregoing, the USCG requested a large Area To Be Avoided (2 mile radius), for the Gulf Gateway Deepwater Port, despite the location being 116 miles offshore and in an area which has very few traffic concerns. This would lead to a conclusion that at least an equivalent zone would be enforced for potential sites with such large quantities of passing traffic.

2.3 Potential Interference Associated with Multi-Buoy Submerged Turret Loading Buoy Installation and the Traffic Separation Scheme for the New York/New Jersey Harbor

Broadwater believes that the locations proposed by NYSDOS are in the following locations:

Table 1 - Coordinates for Atlantic Alternatives

Location	Longitude	Latitude
S1A	-73.63074	40.38762
S1B	-73.48079	40.34890
S2	-73.28824	40.30811
S3	-72.68343	40.44326

Refer to Figure 2, which was provided to Broadwater by NYSDOS.

Locations S1A, S1B, S2 and S3 are shown on Figure 3 (attached), relative to the Traffic Separation Scheme (TSS) in the area. Locations S1A, S1B and S2 are located within a sector separating the inbound and outbound lanes of the TSS located off Ambrose Light.

NYSDOS A-1

The purpose of a Traffic Separation Zone is defined in the Federal Regulations as:

> "(b) *Traffic separation scheme* (TSS) means a designated routing measure which is aimed at the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes."[9]

Broadwater had previously submitted that in order to provide a comparable gas send-out utilizing SRV technology, three STL buoys would be required to ensure reliability of the supply, and that at least two of these buoys would be in constant use.

Accordingly the buoys would need to be positioned 2 miles apart from each other to ensure adequate maneuvering room. This is comparable to other proposed STL proposals, as summarized in Table 2 below.

Table 2 – STL Buoy Deployment

Project	Buoy Separation	Reference
Northeast Gateway	2 buoys - 1 mile	Northeast Gateway Final Environmental Impact Statement, Section 2.0, page 2.4.
Neptune LNG	2 buoys – 2.3 miles	Neptune LNG Deepwater Port License Application, Volume II, page 1-2.
Port Dolphin Energy	2 buoys - 3.1 miles	Port Dolphin Deepwater Port License Application, Volume I, Introduction, page 2.

If the DOS-proposed positions (S1A, S1B, S2 and S3) were utilized and 3 STL buoys were located around these positions to minimize the impact to the surrounding TSS, either the Safety Zone, the No Anchoring Area or the Area to be Avoided would (if using the same criteria as that identified above for the only operational U.S. offshore deepwater port [the Gulf Gateway Deepwater port]), in three of four cases shown in Figure 3, would encroach significantly upon the TSS lane. The only location for which this would not be the case is the S3 location, which encroaches to a lesser extent. However, other issues with the S3 location, relating to the additional environmental impact associated with the connection pipeline, potential shoreline impacts and the unsuitable metocean conditions, are detailed in Broadwater's FERC filing of June 20, 2007.

Encroachment on a TSS is contrary to 33 CFR 148.720 in that it will affect and restrict vessels transiting in and out of New York Harbour.[10] It is a reasonable assumption that

[9] 33 CFR 167.5 (b).

[10] 33 CFR 148.720, which outlines the general siting criteria for a Deepwater Port, indicates that the proposed and alternative sites for a deepwater port will be evaluated based on how well each site "*(e)*

this Safety Zone could be further expanded because of the proposed location(s) and the increased passing traffic that the location is subjected to, to ensure that the safety for both the "terminal" and arriving/departing vessels is not compromised.

2.4 Additional Issues for Atlantic Locations

Location S1A is located 3 nautical miles to the southeast of the TSS Precautionary Area – this is defined as:

> (e) *Precautionary area* means a routing measure comprising an area within defined limits where ships must navigate with particular caution and within which the direction of traffic flow may be recommended.[11]

This is an area where arriving and departing vessels will be on high alert, as vessels will be proceeding in a variety of directions to maintain safe passing distances from other vessels navigating in the area. Accordingly, a simple mistake in this area would lead to serious consequences. Siting an SRV facility at S1A will add to the complexity of the maneuvering required by the vessels. It should be further noted that arriving vessels, many of them foreign flagged, will not have a pilot on board until they transit at least 7 miles past the proposed location.

Historically there have been numerous collision incidents in areas which utilize Traffic Separation Schemes – the main purpose for the TSS is that the port or channel is a busy waterway and the TSS reduces the number of incidents by regulating the traffic flow direction. While the adoption of a TSS has reduced collision and allision events, they do still occur. For example, Appendix 1 provides an excerpt from a report by the Marine Accident Investigation Branch of the United Kingdom's Department for Transport. The report documents issues in the English Channel, another high volume vessel traffic area, where a number of collisions have occurred in the TSS off the Dover straits resulting in fatalities.

Some of the conclusions and recommendations from this report were:

> The problem of traffic bunching in the south-west lane of the Dover TSS is well known. The guidance given on Admiralty chart 5500 "Mariners Routing Guide, English Channel and Southern North Sea" warns that:
>
> •• many vessels keep too close to the north side of the west-bound between South Falls and Dungeness; and,

---

Minimizes the potential for interference with its safe operation from existing offshore structures and activities."

[11] Refer to 33CFR167.5.

- vessels should make use of the full width of the traffic lanes and open waters to reduce collision risks.

It is apparent that this advice is not being heeded. The fact that four collisions in overtaking situations have occurred in this area in the past 13 months may be indicative of a worsening situation.

The MAIB believes that a possible explanation lies with the increasing use of Global Positioning Systems (GPS) and electronic chart systems for forming, and then storing, passage plans. Where stored plans are being executed by reference to the GPS navigator, electronic chart system and/or track control system, watchkeepers can be reluctant to stray from the planned track. Further, where circumstances force a deviation, there appears to be a tendency to return to the original track instead of revising the passage plan. This serves to cause and maintain the bunching of traffic, the danger of which is enhanced when the vessels involved have markedly different speeds.

Locations S1B and S2 are again located between two traffic lanes, the outbound Ambrose to Nantucket lane and the inbound Hudson Canyon to Ambrose channel. These lanes are separated by a distance of 2 miles at the NW end (S1A position) and 6 miles apart at position S2. Unlike other parts of the TSS, this "separated quadrant" is not marked by a formal Separation Zone. CFR 33 Part 167 states that

(d) Separation zone or line means a zone or line separating the traffic lanes in which ships are proceeding in opposite or nearly opposite directions; or separating a traffic lane from the adjacent sea area; or separating traffic lanes designated for particular classes of ships proceeding in the same direction.

Accordingly, this allows the quadrant to be used by all vessels proceeding in any direction. It is likely that smaller, slower craft, including coastal tow units would use these routes due to their own speed and limited maneuverability it keeps them clear of larger, faster ocean-going craft.

These craft are harder to spot both visually and electronically in poor weather. Enforcement of the safety and security zones would be more onerous and the alerts more frequent because of the offshore nature of the proposed site, weather and traffic conditions. Many vessels are going to "close with the facility" before finally giving way and maneuvering clear, and the weather conditions will likely make the task of enforcement of the zones more difficult for the local patrol craft.

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In the case of the SRVs there would always need to be, if the weather conditions allow, two SRV vessels connected to the buoy system in order to maintain the base send out requirement. Accordingly, this increased risk, due to the number and type of passing traffic, will exist for the duration of the project.

By siting the facility in the proposed position(s) the safety and associated zones will force vessels to bunch together, reducing the passing and overtaking distances and increasing the risk of collisions between vessels. This will be particularly true in the case of vessels under commercial pressure to make their scheduled arrival time and which may proceed at a speed not considered prudent. With the number of oil tankers serving the NY/NJ market, there is the increased consequential risk of a pollution incident if a collision was to occur.

Location S3 lies between two safety fairways linking the Nantucket lane to New York. The northerly fairway runs Westbound while the Southerly fairway runs Eastbound, location. Location S3 sits equidistant (approximately 2.5 nautical miles) from each of the fairway extremities. The fairways themselves are 2.4 nautical miles wide.

33 CFR 166.105 states:

a) Shipping safety Fairway or Fairway means a lane or corridor in which no artificial island or fixed structure, whether temporary or permanent, will be permitted. Temporary underwater obstacles may be permitted under certain conditions described for specific areas in Subpart B. Aids to navigation approved by the US Coast Guard may be established in a fairway.

As above it is likely that smaller coastal craft will use the area between the fairways in order to proceed to and from the New England coast in order to remain clear of the ocean going and transatlantic traffic using the fairways. These would include tug and barge units, which are less maneuverable than conventional vessels, especially in heavy weather conditions.

Enforcement of the safety and security zones would be more onerous and the alerts more frequent due to the offshore nature of the proposed site, its associated weather and traffic conditions. Many vessels are going to "close with the facility" before finally giving way and maneuvering clear, and the weather conditions will likely make the task of enforcement of the zones more difficult for the local patrol craft.

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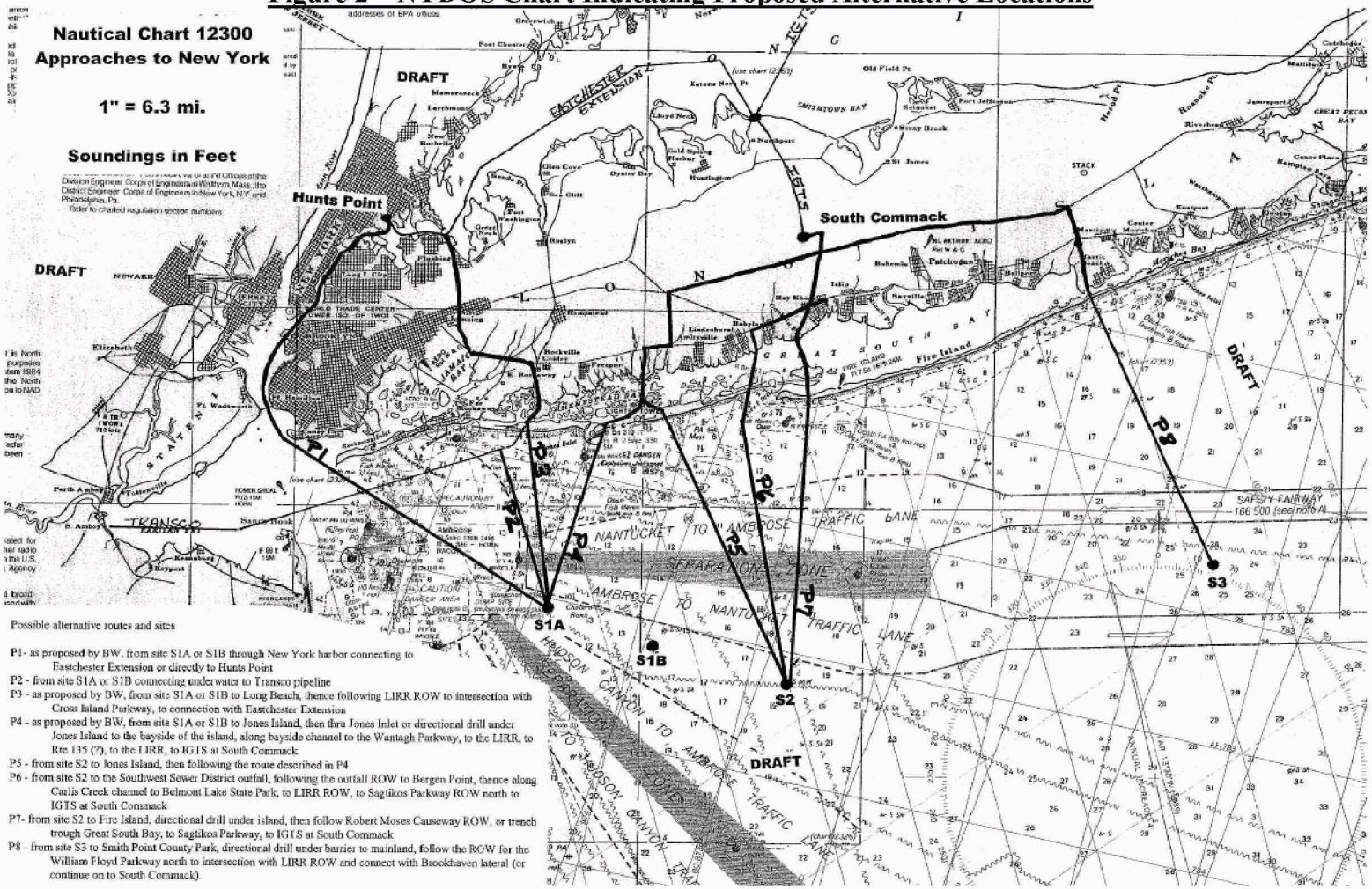
Figure 2– NYDOS Chart Indicating Proposed Alternative Locations



MAIB SAFETY BULLETIN 2/2001

Collision between

Ash* and *Dutch Aquamarine

south-east of Hastings

in the Dover Traffic Separation Scheme

with the loss of one life

9 October 2001

MAIB SAFETY BULLETIN 2/2001

This document, containing Safety Recommendations, has been produced for marine safety purposes only on the basis of information available to date.

The Merchant Shipping (Accident Reporting and Investigation) Regulations 1999 provide for the Chief Inspector of Marine Accidents to make recommendations at any time during the course of an investigation if, in his opinion, it is necessary or desirable to do so.

The Marine Accident Investigation Branch (MAIB) is carrying out an investigation of the collision on 9 October 2001 between the motor vessels *Ash* and *Dutch Aquamarine,* which resulted in the foundering of *Ash* and the death of her master. The MAIB will publish a full report on completion of the investigation.

This accident is the latest and most serious of four similar collisions which have occurred in the south-west lane of the Dover Traffic Separation Scheme in 13 months. The MAIB believes that modern navigational methods and equipment may be contributing to overcrowding in the traffic lanes, and this Safety Bulletin is issued to alert the Maritime and Coastguard Agency (MCA), owners and masters to the potential hazards involved.

J S Lang
Rear Admiral
Chief Inspector of Marine Accidents

Press Enquiries: 020 7944 4691 / 3387; out of hours: 0207 944 5925
Public Enquiries: 0207 944 3000
INTERNET ADDRESS FOR DTLR PRESS NOTICES:
http://www.dtlr.gov.uk

SAFETY RECOMMENDATIONS

Background

On 9 October 2001 the 1,009 gross tons (gt) motor vessel *Ash* was en route from Odense, Denmark, to the Spanish port of Pasajes with a cargo of steel coils. She had six crew on board and was making a speed of about 6.25 knots in the south-west traffic lane to the south-east of Hastings. The 4,671gt chemical tanker *Dutch Aquamarine* was also on passage in the same traffic lane en route from Antwerp to Swansea and was making about 12.5 knots over the ground. She had a mixed chemical cargo and a crew of 12 on board. There were a number of other vessels in the vicinity, all of which were bunched towards the northern edge of the lane. Close passing was commonplace.

Although the investigation into this accident is still underway, it has been established that *Dutch Aquamarine* had been the overtaking vessel, and her watchkeeper did not notice the developing collision situation until it was too late. *Ash* took no effective last minute avoiding action. The subsequent collision caused *Ash* to founder with the loss of her master.

As part of its investigation the MAIB studied the tracks taken by all vessels on passage in the south-west traffic lane of the Dover traffic separation scheme (TSS) during a six-hour period. This showed that most vessels hug the northern edge of the lane with only two or three choosing to pass to the south of the Varne. Where traffic is bunched in this way, close passing is commonplace. It only requires a brief lapse of concentration to lead to a collision; especially when the speeds of vessels are very different.

This is the latest in a number of collisions that have recently occurred in the Dover TSS. The circumstances in each have been very similar.

In September 2000, *Kinsale* collided with the stern of *Eastfern*. *Kinsale* was the overtaking vessel, with a speed about 6 knots faster than that of *Eastfern.* In January 2001 the overtaking vessel *Unden* collided with the stern of *Star Maria,* causing substantial damage to both ships. In June 2001 the larger and much faster *Atlantic Mermaid* collided with the stern of the smaller cargo ship *Hampoel.* *Hampoel* was substantially damaged. The MCA has successfully prosecuted those in charge of the overtaking vessels in two of these accidents.

The problem of traffic bunching in the south-west lane of the Dover TSS is well known. The guidance given on Admiralty chart 5500 "Mariners Routing Guide, English Channel and Southern North Sea" warns that:

- *many vessels keep too close to the north side of the west-bound lane between South Falls and Dungeness*; and,

- *vessels should make use of the full width of the traffic lanes and open waters to reduce collision risks.*

It is apparent that this advice is not being heeded. The fact that four collisions in overtaking situations have occurred in this area in the past 13 months may be indicative of a worsening situation.

The MAIB believes that a possible explanation lies with the increasing use of Global Positioning Systems (GPS) and electronic chart systems for forming, and then storing, passage plans. Where stored plans are being executed by reference to the GPS navigator, electronic chart system and/or track control system, watchkeepers can be reluctant to stray from the planned track. Further, where circumstances force a deviation, there appears to be a tendency to return to the original track instead of revising the passage plan. This serves to cause and maintain the bunching of traffic, the danger of which is enhanced when the vessels involved have markedly different speeds.

Safety Recommendations

1. **Ship owners and masters** should:
   - i. consider carefully whether their passage planning strategy is adding to congestion in the Dover TSS;
   - ii. consider whether the way electronic navigation aids are used on their vessels could be reducing the flexibility of watchkeepers to use the whole traffic lane in areas of congestion;
   - iii. remind themselves and watchkeeping officers of the advice contained on Admiralty chart 5500, in particular, to make use of the full width of the traffic lanes to reduce collision risks.

2. **The Maritime and Coastguard Agency** is recommended to:
   - i. conduct research into the extent to which modern navigational practices, together with electronic navigation equipment, is contributing to bunching of traffic in the south-west traffic lane of the Dover TSS; and,
   - ii. on completion of the research, seek to ensure that effective measures are put in place to mitigate the problem.

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Preamble:

As part of its consistency review process for Broadwater's proposed LNG project in Long Island Sound (LIS), staff at the NYS Department of State (DOS) met with representatives of Broadwater to exchange information, address outstanding issues and examine potential alternatives to Broadwater's proposed project.

DOS initiated a dialogue with Broadwater about potential alternatives in the Atlantic Ocean, south of Long Island. Broadwater has provided DOS with materials regarding the alternatives. The following are open issues with these materials, as well as additional points for clarification regarding potential sites:

SRV Depth Restrictions

Broadwater characterizes the depths needed for use of Shuttle Regasification Vessel (SRV) technology to be a minimum of 40 meters. However, Advanced Production and Loading, Inc., the company that engineers and constructs the Submerged Turret Loading (STL) buoy for the SRV technology, has stated that they can design a system to work in 30 meters of water. The Port Dolphin Energy project proposed for Tampa, Florida plans to utilize SRV technology and will be located in approximately 30 meters. In light of the Port Dolphin proposed depth, it appears that a range of locations and depths in the Atlantic, beginning at 30 meters depth, would be suitable alternative locations for the SRV and STL technologies. What data or documentation can Broadwater provide that shows a minimum 30 meter depth would not be feasible for these technologies in the Atlantic Ocean south of Long Island?

Response

As will be explained in the discussion that follows, the primary issues associated with a 30 meter STL installation in the Atlantic Ocean are the following:

(1) There are no installations currently in operation at this water depth. A review of the Port Dolphin Deepwater Port application suggests that proposal of a 30 meter water depth is an economic decision dictated by the length of the connecting pipeline, and not an optimal use of STL buoy technology;
(2) Use of an STL buoy in 30 meter water depths would pose a potential collision risk, considering the height of the buoy and the volume of deep draft vessels that transit the area en route to the Port of New York/New Jersey;
(3) The operability of a STL buoy would be reduced in comparison with greater water depth;
(4) Installation of a STL buoy at this depth would result in a very large footprint for the mooring equipment; and

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(5) There are questions about the hydraulic performance of the buoy at these water depths.

The company Advanced Production and Loading, Inc (APL) have been manufacturing the STL buoy concept since 1993, primarily for offshore oil off-take and recently to provide an offshore LNG regasification option. The STL buoy options currently in service are installed in water depths varying from 85 to 350 meters and designed to cater for a significant wave height of up to 16.4 meters.

A summary of these installations is provided Table 1 below (water depth for each installation highlighted). It should also be noted that Shell, one of the project sponsors of Broadwater, is the operator of the Fulmar installation in the North Sea, and is therefore familiar with actual STL buoy technology and its limitations.

The Port Dolphin application is based upon utilizing similar technology to that already in service in deep water and applying it in

> *"water depths at the proposed north buoy location measures 100-feet (30-meters) and 111- feet (33-meters) at the south buoy site. Along the specific pipeline route the water depths range between a maximum of 100-feet (30-meters) at the start of the proposed pipeline route,"*[1]

It is Broadwater's understanding that Advanced Production and Loading, Inc (APL), a company which has been manufacturing the STL buoy concept since 1993, primarily for offshore oil off-take and recently to provide an offshore LNG regasification option has been approached by the Port Dolphin project sponsors to determine if a shallow water application of the STL technology is feasible.

[1] Port Dolphin Deepwater Port Application, Docket No. 28532, Volume I, pages 39-40.

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Table 1 – Summary of STL Buoy Installations

Field	North East Gateway	Banff	Bayu Undan	Heidrun	Volve
Operator	Excelerate Energy	Conoco	ConocoPhillips	Statoil	Statoil
Field Location	Massachusetts Bay, USA	North Sea (UK)	Timor Sea, Australia	Haltenbanken (N)	Central North Sea (NO)
Water depth	90 meters	90 metres	80 metres	350 meters	90 meters
Application	LNG	FSO	FSO	DSL	FSO
Mooring legs/anchor	8 / Suction	8 / piles	12 / piles	8 / drag	9 / suction
Design condition Hs	11 meters	12.8 meters	7.23 meters	15.5 meters	14.3 meters
Tanker characteristics	138.000 Deplacement	T/T Nordic Apollo 130.000 DWT	FSO Liberdade	3 purpose built shuttletankers DP	Navion Saga 149.000 dwt
Field Production (bpd)	69 MMscg/d	90,000	TBA	250,000	60,000
Installed	2007	2001	2002	1994	2006

Field	Njård	Åsgård	Fulmar	Harding	Yme
Operator	Norsk Hydro	Statoil	Shell	BP	Statoil
Field Location	Haltenbanken (N)	Haltenbanken (N)	North Sea (UK)	North Sea (UK)	North Sea (NO)
Water depth	330 meters	290 meters	83 meters	110 meters	95 meters
Application	FSO	FSO	FSO	OLT	FSO
Mooring legs/anchor	8 / suction	8 / suction	8 / piles	8 / suction	8 / suction
Design condition Hs	16.2 meters	15.7 meters	9,8 meters	10 meters	12,5 meters
Tanker characteristics	Purpose built, unmanned, passive	Std. STL shuttle tanker	Conv. Aframax, passive	Std. STL Shuttle tanker, DP	Conv. Suezmax, passive
Field Production (bpd)	70,000	60,000	120,000	77,000	30,000
Installed	1997	1999	1993	1995	1995

Data Source: Advanced Production and Loading website, www.apl.no

The project's focus upon a shallow water STL application may be further explained by Section 2.8.1 of the Port Dolphin application (Preferred Location and Route) which states the following:[2]

> "The Northern Location and Route Alternative is not a feasible or practicable alternative because it would involve the pipeline's crossing major shipping fairways and the Gulfstream pipeline offshore. The Southern Location and Route Alternative involves placement of the offshore terminal buoy array at a further distance from the landfall location than the Proposed/Preferred Alternative. ***As stated above in Section 2.7.3, the determining factor for siting the offshore LNG terminal is the location of the pipeline landfall. The terminal location should be located either directly offshore or some reasonable distance north or south of the shore landing; otherwise, the length of pipeline required from terminal to shore can become uneconomical and/or result in unjustifiable impacts to the marine environment. The Proposed/Preferred Alternative is located the shortest distance offshore and most directly from the landfall location."*** (emphasis added)

It is apparent that the Port Dolphin sponsors have approached APL to see if a "shallow water option" is feasible, as the economics of building the additional span of pipeline will significantly impact the viability of the project.

As evidenced by the current installations shown in Table 1, a shallow water installation is a deviation from previous applications and as such cannot be accepted as "proven technology". Additionally while it is apparent that APL has indeed conducted modeling scenarios to ascertain the equipment required, there are still outstanding questions regarding feasibility of the final design. It is evident that the applicant has chosen to trade off risk with the shallow water installation in order to shorten the length and associated cost of the connecting pipeline. It should be emphasized that this decision was specific to the area chosen for the Port Dolphin project and it does not follow that the same decisions concerning the use of this technology would be applicable in the Atlantic Ocean off Long Island Sound. In fact, as the discussion that follows clearly indicates, there are a number of issues that would directly impact the feasibility of such an installation.

Broadwater also notes that on August 10, 2007 a "Stop Clock" letter was issued to the applicant seeking more information on the project. The key issue pertains to the selection

[2] Port Dolphin Deepwater Port Application, Docket No. 28532, Volume II, Section 2 (Alternatives Analysis) page 2-35.

of a pipeline route. Changes to the pipeline route could potentially affect the location of the STL buoy installation.

Four other considerations relevant to use of STL technology in shallower water are discussed below.

1. Buoy Location

The STL buoy is approximately 35 feet high and consists of a fixed lower segment that is connected to mooring lines and an articulating upper segment that can rotate around a central annulus through the buoy. When deployed in deeper water, once the SRV has completed the vaporization process for its cargo, the STL buoy is released, re-submerging to a depth of approximately 80 to 90 feet – well below the draft of any ship traffic that might inadvertently stray into the area. As such, the buoy remains suspended in the water column and does not impact or rest upon the seabed following disconnection. This is demonstrated in Figure 1 and 2 below taken from Northeast Gateway (NEG) Final Environmental Impact Statement (FEIS).

Figure 1 – SRV Unloading Example

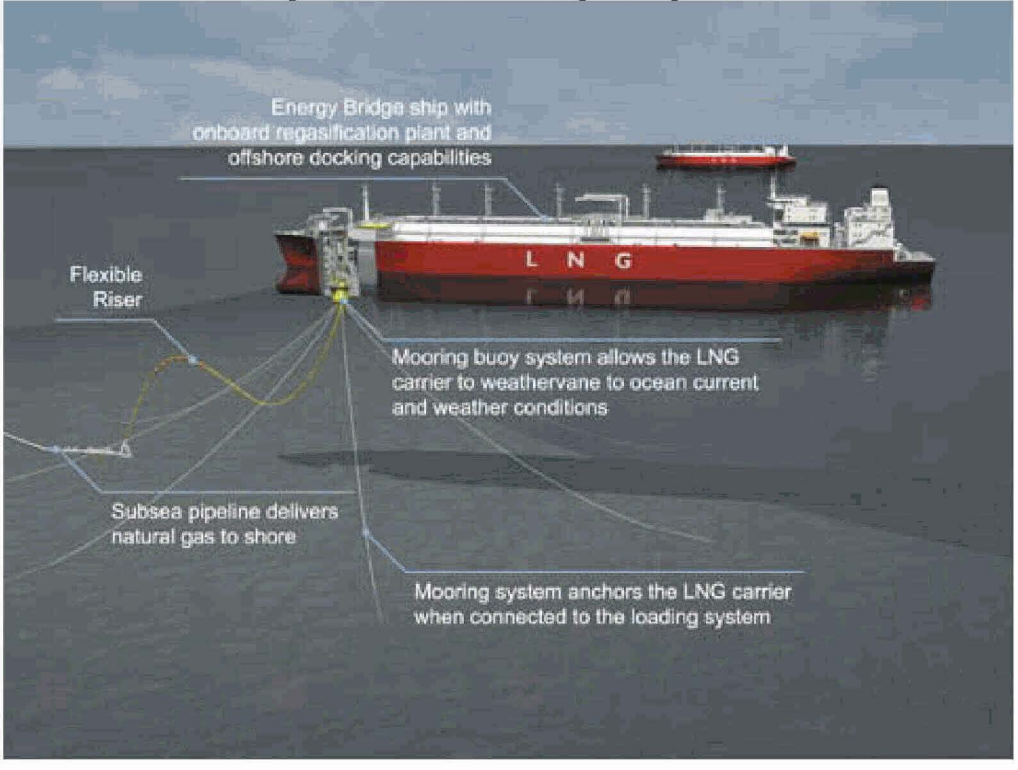

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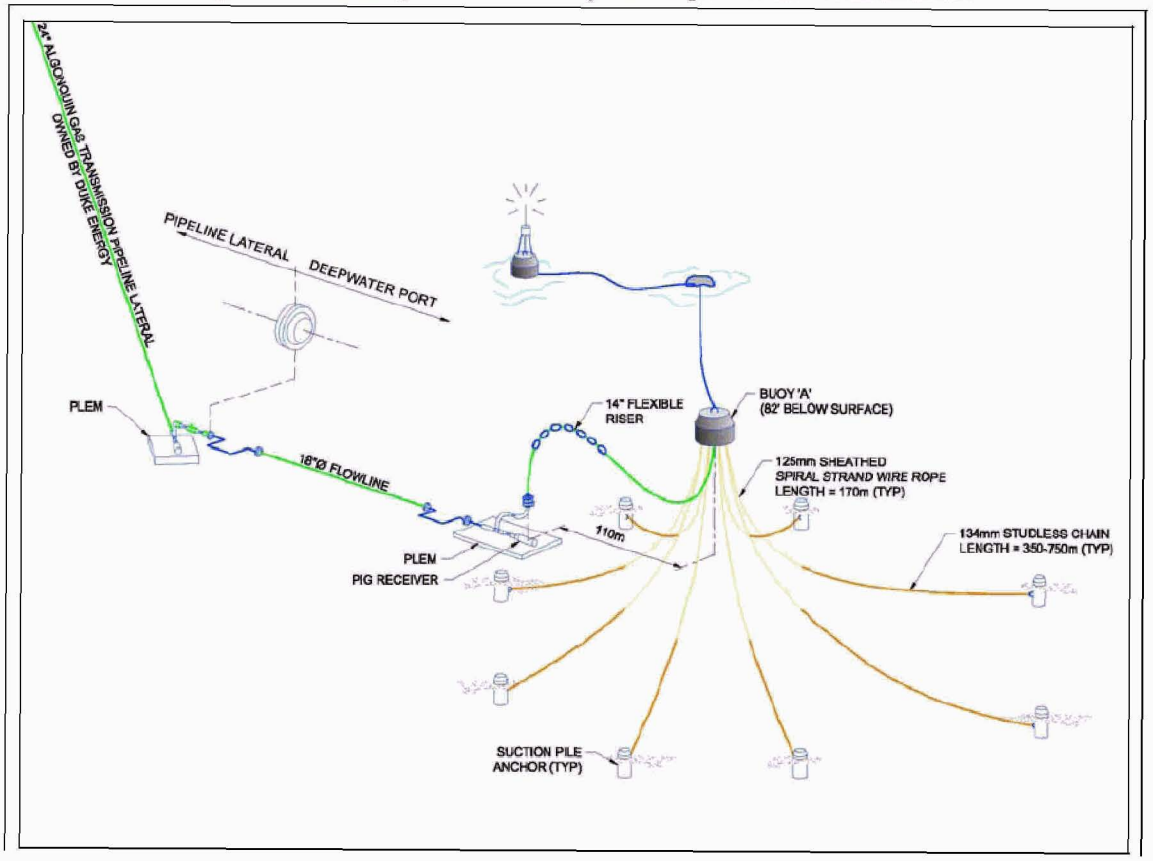
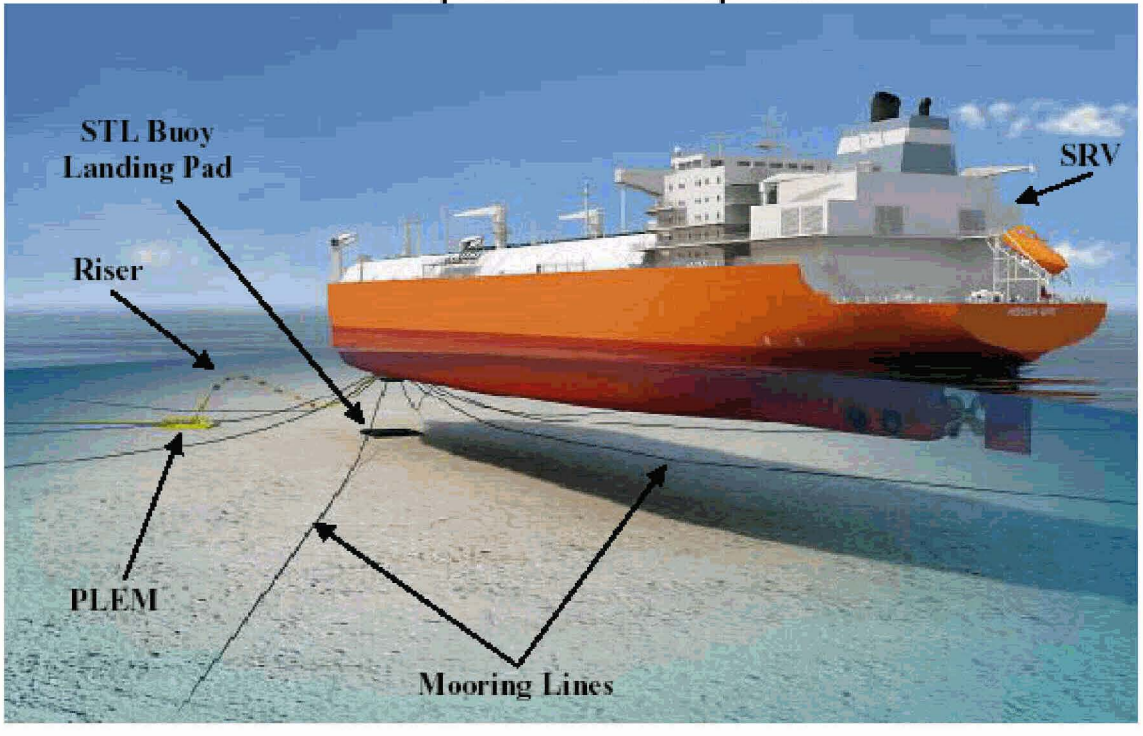
Figure 2 – Example of STL Buoy in Deeper Water Installation



Port Dolphin have proposed that, due to the shallow depth of water at the location, the STL buoy, when released from the SRV sits upon a STL buoy landing pad. This will result in some environmental impact to the sea bottom, which the applicant must define. See Figure 3.

Figure 3
Port Dolphin Subsea Components



Further, the "protrusion" sitting on the sea-bed will have to have a permanent "Area To Be Avoided" which must be maintained around the location due to the danger it could pose to navigation. The protrusion is indicated in Figure 4 below

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Figure 4 – Port Dolphin - STL Buoy Disconnected from SRV

It needs to be recognized that although SRVs have large dimensions, due to the specific gravity of LNG, the actual ship's draft (i.e. the distance between the waterline and the bottom of the vessels keel), is relatively small in relation to other similar sized vessels. Therefore, an SRV may have enough clearance to operate in shallow waters. Crude oil tankers, refined product tankers, bulk carriers and container vessels, all of which routinely transit the Port of New York/New Jersey, have significantly deeper drafts.

The Deep Water Port Application (Docket #28535) by Safe Harbor Energy included as Appendix N - Marine Vessel Traffic Patterns, which highlights that over 900 vessels departing or arriving through the Ambrose to Nantucket and the Hudson Canyon to Ambrose Traffic Separation Schemes (TSS) evidenced drafts of greater than 42 feet. These TSS schemes run on either side of the NYSDOS proposed Atlantic alternatives S1A, S1B and S2.

Further, the prevailing weather conditions at the Atlantic locations offshore Long Island, with a 3-6 foot swell being considered normal (data obtained from NOAA Buoy 44025), this additional reduction in underwater clearance between passing vessels and the STL buoy landed on the seabed, it can be easily seen what a danger to passing traffic a shallow water STL buoy could pose.

2. Operability

The Port Dolphin Deepwater Port Application details the following weather-related design criteria for connecting the SRV to the STL buoy:[3]

> **18.2 § 148.105(q)(2) Design Criteria**
> Overall design requirements for the floating offshore components:
> - The passive SRV is weathervaning
> - Built for 40-year design life
> - Survive the 100-year non-hurricane condition for the connected STL Buoy scenario
> - Survive the 100-year hurricane condition for the disconnected STL Buoy scenario
> - Connect Conditions
>   - Significant wave height (H_s) 11.5 feet (3.5 m)
>   - Wind speed (U_w; 1 hour mean) 30 knots (15 m/s)
>   - Current speed (U_c) 3 knots (1.5 m/s)

Excelerate Energy's operational Gulf Gateway terminal is located in significantly deeper water, 300 feet (91.4m) but in the same general location (the Gulf of Mexico) and, this, is subjected to similar weather patterns. Examination of the Gulf Gateway Deepwater Port FEIS[4] reflects the following:

> The STL buoy and mooring system can operate effectively in water depths of approximately 40 m (131 ft) to greater than 150 m (492 ft). At North Sea locations, connections have taken place at a buoy during 5.5 m (18.0 ft) sea states, and loading can be accomplished with sea states at 13 m (42.7ft). For the EPEBVs, El Paso Energy Bridge GOM has established a 5.0 m (16.4 ft) sea state maximum connection and 12.0 m (39.4 ft) sea state maximum discharge (unloading) design criteria.
>
> Based on GOM weather data, an EPEBV would be able to connect to the buoy more than 98 percent of the year.

It should be noted that despite proposing the same system for Port Dolphin as Gulf Gateway, there is a reduction of permissible operating conditions allowed for connecting the SRV to the STL buoys at the Port Dolphin site.

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[3] Port Dolphin Deepwater Port Application, Docket No. 28532, Volume I, pages 63.
[4] Final Environmental Impact Statement of the El Paso Energy Bridge Gulf of Mexico LLC Deep Water Port Application page 2-26.

The obvious differentiator between the two terminals is the prevailing depth of water at the locations. This factor obviously was taken into account when Port Dolphin submitted its Deep Water Port Application, trading off a reduced operability window against the additional pipeline cost incurred if they sited the terminal further offshore in deeper water more suitable for the STL buoy.

The prevailing weather expected at the proposed Atlantic Alternative sites is, not surprisingly, worse than that expected for the Port Dolphin location of Tampa, Florida. This is evidenced by comparing the met-ocean buoys operated by the National Buoy Data Centre.[5] (refer to data from Station 44025 (33 nautical miles south of Islip, New York) against NDBC Station 42036 (106 nautical miles west-northwest of Tampa, Florida)).

In summary, assuming technical feasibility as discussed above, a shallow water SRV option placed in any of the Atlantic Alternative locations will have lower permissible environmental conditions for all operational phases in a location suffering from poorer year round weather. This will affect the reliability of gas deliveries from any proposed terminal using a shallow water STL installation.

3. Footprint of a Shallow Water STL Buoy Installation

In a typical application, there are eight (8) to ten (10) mooring lines attached to the STL buoy which are anchored to the sea floor using wire rope and chain segments. The design of the mooring system is site- and application-specific to ensure optimum performance and availability for the weather and other environmental conditions in a specific project area. These mooring lines keep the buoy stationary and the vessel on station.

The Port Dolphin Deepwater Port intends to separate the two STL buoys by some 3.1 miles as indicated in Figure 5 below. As can be seen in the pictorial representation the mooring system, due to the depth of water, is stretched out at an acute angle to the perpendicular, resulting in a substantial footprint required for this particular location. Recall that to deliver the same volume of gas as Broadwater proposes, three or more STL buoys would be required, rather than two. Thus, the footprint of an Atlantic location STL installation would be even greater.

Port Dolphin has indicated the following information concerning safety zones and precautionary areas around the proposed terminal[6]:

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[4] Final Environmental Impact Statement of the El Paso Energy Bridge Gulf of Mexico LLC Deep Water Port Application page 2-26

[5] Buoy data can be retrieved at **www.ndbc.noaa.gov** .

[6] Port Dolphin Deepwater Port Application, Docket No. 28532, Volume I, pages 34-35.

Safety Zone
The Safety Zone is proposed to extend 1641-feet (500-meters) in addition to the length of the SRVs around each STL Buoy. Based on this formula, the Safety Zone radius will be approximately 2790-feet (850-meters) from the center location of each STL Buoy. (Slightly varying with the length of each SRV)

No Anchoring Area (Precautionary Area)
The No Anchoring Area is defined by avoidance of entanglement of any vessel's anchors with the STL Buoy mooring system. Accordingly, for Port Dolphin, the No Anchoring Area is proposed to be an area defined by the outer bounds of each STL Buoy anchor pile (plus 821-feet (250-meters)) and having a radius of 4925-feet (1500-meters). Additionally, an area between the STL Buoys defined by a 4925-feet (1500-meters) boundary extending on both sides of a straight line between the buoys shall be part of the No Anchoring Area. Separately, the No Anchoring Area for the pipeline route is proposed to be defined by a line parallel on both sides of the pipeline centerline with a distance of 656-feet (200-meters).

Area To Be Avoided
The proposed Area To Be Avoided is identical to the No Anchoring Area described for the mooring site. The proposed Area To Be Avoided does not include the gas transmission pipeline route. Aside from the areas described above, the proposed Port Dolphin does not require areas to be designated that would potentially impact other vessels' routing. Nor does the proposed port require special routing measures for SRVs arriving at the port.

Figure 5 – Port Dolphin STL Buoy Deployment
Aerial View (to scale)

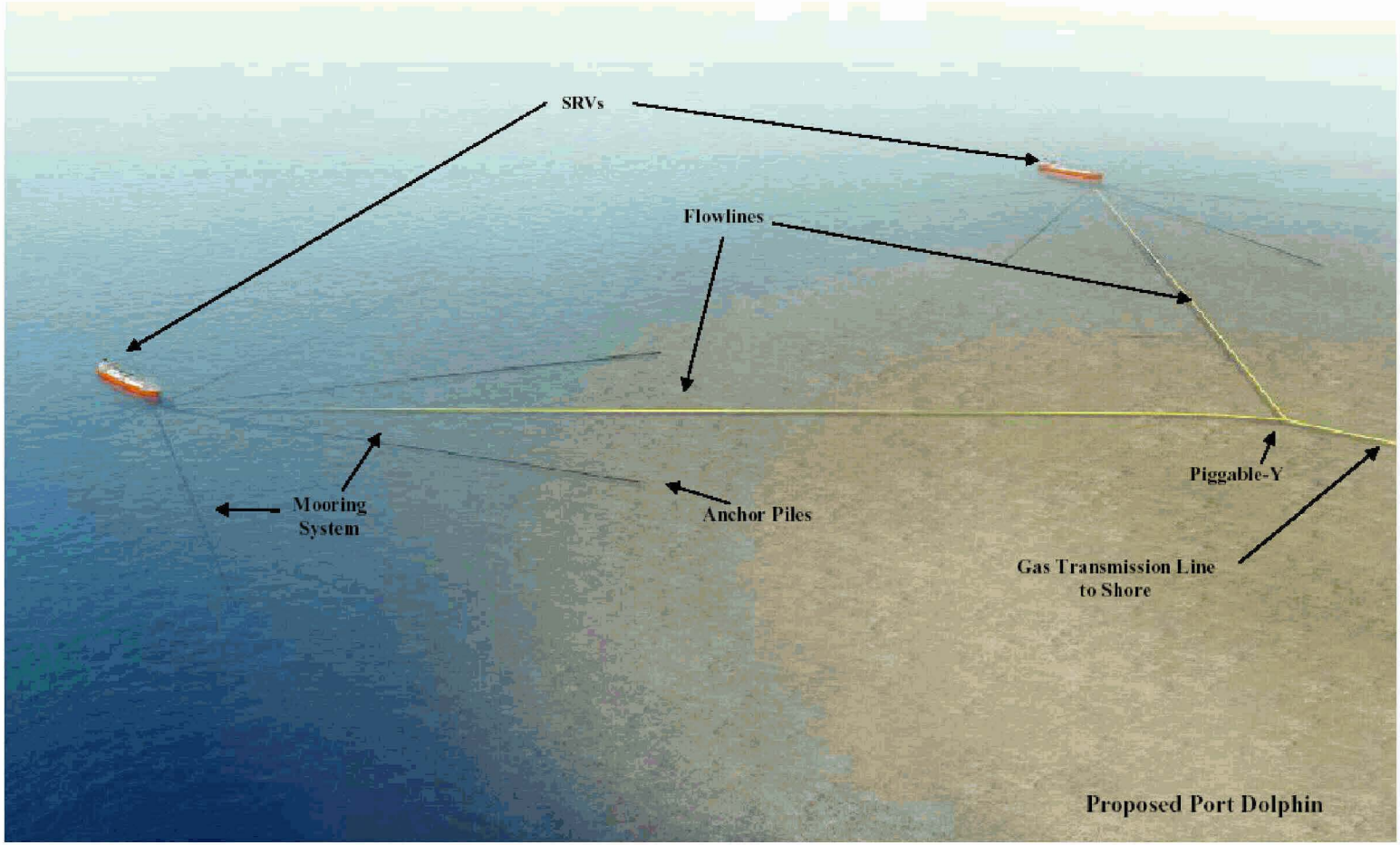

Figure 6
Port Dolphin Location Diagram with Special Use Areas

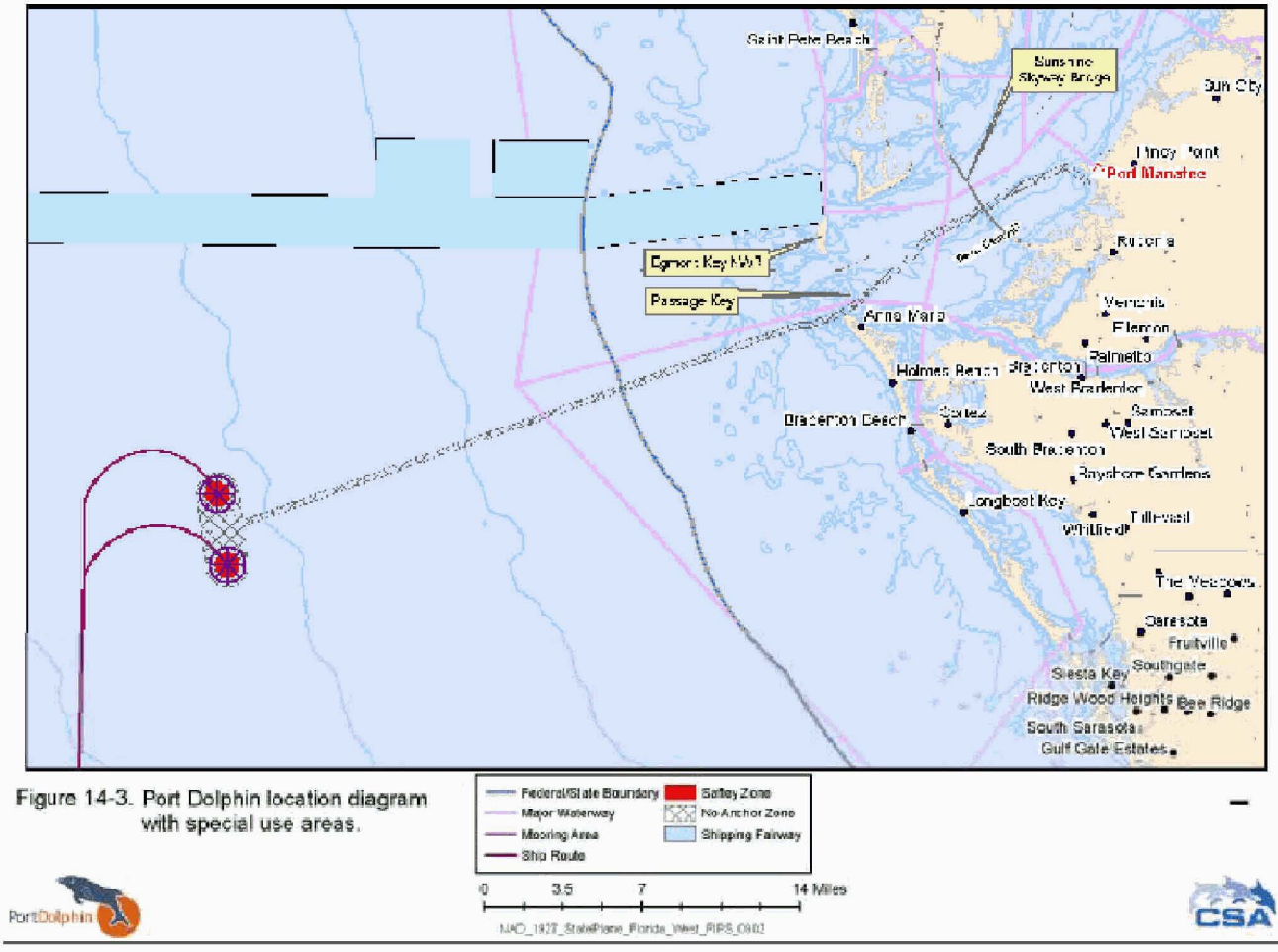

Figure 14-3. Port Dolphin location diagram with special use areas.

Because of its location offshore Tampa, it is uncertain as to what effect this would have on arriving and departing traffic in the region.

In identifying a potential site for deepwater LNG ports, each applicant is required to utilize the USCG siting criteria identified in 33 CFR § 148.720, which necessitates the consideration of how well the proposed site and each alternative site:

> "(a) Optimizes location to prevent or minimize detrimental environmental effects;
> (b) Minimizes the space needed for safe and efficient operation;

(c) Locates offshore components in areas with stable sea-bottom characteristics;
(d) Locates onshore components where stable foundations can be developed;
(e) Minimizes the potential for interference with its safe operation from existing offshore structures and activities;
(f) Minimizes the danger posed to safe navigation by surrounding water depths and currents;
(g) Avoids extensive dredging or removal of natural obstacles such as reefs;
(h) Minimizes the danger to the port, its components, and tankers calling at the port from storms, earthquakes, or other natural hazards;
(i) Maximizes the permitted use of existing work areas, facilities, and access routes; (emphasis added)
(j) Minimizes the environmental impact of temporary work areas, facilities, and access routes;
(k) Maximizes the distance between the port and its components and critical habitats including commercial and sport fisheries, threatened or endangered species habitats, wetlands, floodplains, coastal resources, marine management areas, and essential fish habitats;
(l) Minimizes the displacement of existing or potential mining, oil or gas production or transportation uses; (emphasis added)
(m) Takes advantage of areas already allocated for similar use, without overusing such areas;
(n) Avoids permanent interference with natural processes or features that are important to natural currents and wave patterns; and
(o) Avoids dredging in areas where sediments contain high levels of heavy metals, biocides, oil or other pollutants or hazardous materials and in areas designated as wetlands or other protected coastal resources."

If an SRV/STL concept was used in the shallow water as proposed in the Atlantic Alternative sites, and the same footprint was required as that being proposed by Port Dolphin, the various zones around the terminal, combined with the large spacing between the STL buoy locations, would encroach upon the passing Traffic Separation Schemes on either side of the location. This would appear to be contrary to the USCG's siting considerations identified in (i) and (l) above. The potential size of the Area To Be Avoided would cause passing traffic to deviate from their planned route in order to avoid the area around the terminal. This is a significant issue in view of impacts to the Traffic Separation Scheme and the volume to ship traffic entering and exiting the Port of New York/New Jersey, as discussed in NYSDOS A-1.

4. Hydraulic Performance of Shallow Water STL Buoy

It is unknown whether the riser from the STL buoy to the pipeline interconnect will restrict the gas throughput when compared to the natural catenary of the riser hoses in STL applications based in deeper, more conventional locations. APL reportedly is considering fitting some sort of tank unit between the vertical and horizontal portions of the riser unit. This is likely to add some restriction and reduction to the planned send-out. Broadwater is unaware of the extent to which this could impact the hydraulic performance of the buoy, but this issue must be clarified.

NYSDOS A-6

Preamble:

As part of its consistency review process for Broadwater's proposed LNG project in Long Island Sound (LIS), staff at the NYS Department of State (DOS) met with representatives of Broadwater to exchange information, address outstanding issues and examine potential alternatives to Broadwater's proposed project.

DOS initiated a dialogue with Broadwater about potential alternatives in the Atlantic Ocean, south of Long Island. Broadwater has provided DOS with materials regarding the alternatives. The following are open issues with these materials, as well as additional points for clarification regarding potential sites:

Connection with Transco Pipeline

Request:

Broadwater has stated that its target market is New York City, Long Island and Connecticut, and that a direct connection to Transco's Lower Bay Extension could effectively only serve markets in New Jersey and points further south. DOS is aware of at least one project proposed for offshore of New York Harbor that would put 1.15 bcfd into the Transco pipeline. Given that some upgrades would likely be needed on the Transco pipeline in New Jersey and the Keyspan Long Island distribution system, what additional analysis (e.g. analyses and statements from Transco, Keyspan LI, and Con Edison) can Broadwater provide to demonstrate that adequate gas to meet demand could not reach Long Island and New York City markets through use of the Transco system?

Response:

On August 15, 2007 Broadwater filed on the FERC docket (*Broadwater Energy LLC*, Docket No. CP06-54-000, and *Broadwater Pipeline LLC*, Docket Nos. CP06-55-000 & CP06-56-000) a letter in which Broadwater provided information to clarify additional questions raised by NYSDOS in its July 3, 2007 letter filed with the FERC. In the August 15, 2007 letter Broadwater included a discussion of its position on the concept of connecting a send-out pipeline from an Atlantic LNG terminal location with Transco's Long Beach Pipeline (i.e. Lower New York Bay Extension).

As Broadwater has advised in the past, Broadwater's 1 Bcf/d nominal send-out would not be able to reach Broadwater's intended New York City, Long Island and Connecticut markets from an Atlantic LNG terminal connected to Transco at a subsea tie-in off Long Beach. These are markets that are served by the Iroquois Gas Transmission System through ConEd Hunt's Point, NYC and KeySpan Northport and South Commack, Long Island meter stations. The Transco pipeline does not connect to those points. Broadwater's position has not changed.

NYSDOS A-6

Broadwater notes that the project proposed for offshore of New York Harbor that would put 1.15 bcfd into the Transco pipeline alluded to by the NYSDOS is in fact the Atlantic Sea Island Group LLC, Safe Harbor Energy project for which a Deep Water Port Act filing is currently before the United States Coast Guard.

Broadwater has reviewed Volume Three, Part One, Topic Report One, Attachment 1-1 "Market Area Access for Supply Sendout" of Safe Harbour's project application. The Safe Harbor Energy Attachment 1-1 comprises a letter report dated March 31, 2007 from Energy Market Decisions, Inc. and is attached to this response.The observations and conclusions in Attachment 1-1 are consistent with information Broadwater has presented to the NYSDOS regarding the realities of market access from an Atlantic LNG terminal connected to Transco at a subsea tie-in off Long Beach.

Energy Market Decisions state that its has completed a detailed analysis of the Transco system in New York and New Jersey including flow analyses evaluating multiple cases. It concludes that the existing Transco pipeline should be able to receive up to 1.15 bcfd from Safe Harbor Energy; however, flow reversal on Transco's Lower New York Bay Extension line would be needed to take away a large portion of Safe Harbor Energy's sendout and it is assumed that Transco's new compressor at Middlesex Co. New Jersey (part of the Leidy to Long Island expansion) would be re-piped for reverse flow. Access to markets connected by Transco in New York City (ConEd's Manhattan and Central Manhattan meter stations; and KeySpan's The Narrows (Brooklyn) meter stations), as well as Long Island (KeySpan's Long Beach meter station, Nassau County) would be constrained by customer's downstream systems and take away capability. The balance of Safe Harbor Energy's send out would need to be consumed in New Jersey and Pennsylvania, and points further south (upstream of Milltown, New Jersey) along Transco's long haul pipeline from the Gulf of Mexico. There would be reliance on backhaul arrangements on Transco for this to work in order to market significant displaced volumes on the Transco system.

Attachment 1-1

Market Area Access for Supply Sendout

EMDEC ENERGY MARKET DECISIONS, INC.
32 Alexander Road • P. O. Box 225 • Hopkinton, MA 01748-2425
Tel: 508-435-0400 • Fax: 508-435-5998 cjmeeske@earthlink.net

March 31, 2007

Mr. William VanHerwarde
Atlantic Sea Island Group, LLC
405 Lexington Avenue, Floor 26
New York, NY 10174

Dear Bill:

Subject: Safe Harbor Energy Project – Transco Market Area Access for Supply Sendout

As part of the Safe Harbor Energy Project, Atlantic Sea Island Group LLC proposes to construct a 12.8 mile pipeline system consisting of two 36-inch pipe segments to connect the Safe Harbor terminal to Transcontinental Gas Pipe Line Company's existing 26-inch Lower New York Bay Pipeline extending from Morgan, New Jersey to Long Beach, New York (the Transco Pipeline).

For gas flowing eastward from the connection point into the Transco Pipeline, Safe Harbor Energy can deliver all of the supply to satisfy market requirements up to the maximum takeaway capacity from the Long Beach Meter Station (located onshore in the Town of Long Beach), which is determined to be approximately 530 million cubic feet per day (MMcfd) based on the Transcontinental Gas Pipe Line Corporation FERC Gas Tariff and the system upgrades recently approved by FERC. To the extent that additional take away capacity can be developed downstream of the Long Beach Meter Station, the Transco Pipeline has design capability to deliver additional volumes eastward from Safe Harbor Energy to the Long Beach Meter Station.

For gas transported westward on the Transco Pipeline flowing from the connection point to the Milltown Regulator Station, the maximum capacity is estimated at 619 MMcfd. This estimate is based on detailed analysis of the Transco Pipeline system in the New York and New Jersey region where flow analyses evaluating multiple cases were performed. This flow is calculated assuming the existing 10,000 horsepower of compression at the Morgan Compressor Station is reconfigured for bi-directional flow. This reconfiguration can be performed by Transco under its FERC blanket certificate.

Table A shows the direction of gas flows from Milltown.

- All forward hauls to delivery points are limited to the shippers' existing firm capacity to downstream points. Any increases in deliverability to those downstream delivery points will require an increase in facilities.

- Backhauls or Deliveries by displacement to locations upstream of Milltown are limited only by lateral capacity and/or meter station capacity.

- Deliveries to and from Leidy flowing from Milltown through Compressor Station 505 will either be forward hauls or backhauls depending upon seasonal operations.

Conclusion

The Transco Pipeline should be capable of receiving up to approximately 1.15 billion cubic feet per day of natural gas at the proposed interconnection point and transporting those volumes through the existing pipeline infrastructure without requiring additional downstream facilities.

If you have any questions regarding the information above, please advise.

Sincerely yours,

C. John Meeske
President

EMDEC

Table A

TRANSCO MARKET AREA SYSTEM

Potential Available Market Access for Incremental Gas Supply at Milltown, NJ

NE in A & E lines to Linden Regulator Station	F
South in Narrows Lateral to Brooklyn	F
NE in A line into Northern NJ and Manhattan	F
Displacement back to Princeton Junction	D
North to Compressor Station 505 (Centerville):	D/F
East through Northern NJ & into Manhattan	F
West through PA to Leidy hub & Storage	D/F
SW to Trenton-Woodbury Lateral junction:	D
South into Philadelphia & Camden area	F
West to CS200 and any point upstream	D

F = Forward haul within customers' firm capacity

D = delivery by displacement

D/F = varies depending on storage activity

Financial Capacity – Broadwater Owners

1.0 Preamble

The New York State Department of State (NYSDOS), a cooperating agency in the FERC proceedings for the Broadwater LNG Project ("Project"), has further engaged the applicant, Broadwater Energy LLC and Broadwater Pipeline LLC (jointly "Broadwater"), during the coastal zone consistency review process. This engagement has included information requests and exchanges between Broadwater and NYSDOS. This response has been prepared in response to a request on July 24, 2007 to provide additional information on the financial capacity of the Broadwater owners in the event of a significant environmental event associated with the project.

2.0 Financial Capacity

Exhibit B of Broadwater's FERC application provides a statement of financial and corporate relationships between Broadwater and its owners:

> Broadwater Energy LLC, a Delaware corporation, is owned by TransCanada PipeLines USA LNG Ltd. and Shell US Gas & Power LLC. TransCanada PipeLines USA LNG Ltd. is a wholly owned subsidiary of TransCanada PipeLine USA Ltd., which is a wholly owned subsidiary of TransCanada PipeLines Ltd. TransCanada Pipelines Limited is a wholly owned subsidiary of TransCanada Corporation. Shell US Gas & Power LLC is an indirect wholly owned subsidiary of Shell Oil Company.

As evidence of the financial capacity of the parent companies, reference can be made to the credit ratings of each of the owners.

2.1 Royal Dutch Shell plc

Refer to Form 20-F filed with the Securities and Exchange Commission for Royal Dutch Shell plc for the fiscal year ended December 31, 2006.[1] Shell Oil Company is a wholly owned U.S. subsidiary of Royal Dutch Shell plc. Page 57 of this report notes the following:

> On June 12, 2006, Moody's Investors Services (Moody's) affirmed the Aa1 long term issuer rating of Royal Dutch Shell plc, and of the guaranteed programmes/outstanding debt securities of its issuance

[1] Available from Shell's website :http://www.shell.com/home/content/investor-en/publications/20f/dir_publication_index_secform20f_1001.html

subsidiaries Shell International Finance B.V., Shell Finance (Netherlands) B.V. and Shell Finance (U.K.) P.L.C., and changed its outlook on the credit from negative to stable. Standard & Poor's Ratings Services (S&P) continues to rate the Group "AA" and to maintain a stable outlook on the credit. Short term credit ratings of the commercial paper programmes remain unchanged at "Prime-1" and "A-1+" from Moody's and S&P respectively.

2.2 TransCanada Corporation

TransCanada's credit ratings are available from the company's 2006 Annual Information Form dated February 27, 2007.[2] The credit ratings summarized on page 15 of the report are summarized in the table below.

	Moody's	**S&P**
Senior Secured Debt First Mortgage Bonds	A2	A
Senior Unsecured Debt Debentures Medium-term Notes	A2 A2	A- A-

3.0 Additional Information

Further details can be addressed, if needed, by reference to the public financial statements of each parent company, available from the respective company websites.

[2] Available at http://www.transcanada.com/investor/financial_regulatory.html

November 21, 2007 BW Letter to NYSDOS

BROADWATER

Broadwater Energy
c/o TransCanada Corporation
450 – 1st Street S.W.
Calgary, Alberta, Canada
T2P 5H1

November 21, 2007

George R. Stafford, Director
New York State Department of State
Division of Coastal Resources
41 State Street
Albany, New York, U.S.A.
12231-0001

Dear Mr. Stafford:

Subject: Broadwater LNG Project – Minutes of Meeting with Fishermen

In a response to an information request dated October 8, 2007, Broadwater indicated that it was unable to provide minutes of a meeting held with fishermen from the Mattituck area on August 27, 2007, until such time as the minutes were approved by those in attendance. As these minutes have now been approved, Broadwater is forwarding them for your review. As has been the convention in the past, these minutes are redacted in order to keep the names of the meeting participants confidential.

If there are any questions concerning the attached information, please feel free to contact me at 403-920-2046.

ORIGINAL SIGNED

Murray Sondergard
Project Director

Cc: Robert Alessi (Dewey & LeBoeuf)
John Hritcko (Broadwater)

Broadwater Fisheries Advisory Sub-Committee Meeting Minutes

Date: August 27th 2007
Location: Broadwater Office, 889 Harrison, Riverhead, NY
Attendees: Commercial fishermen from the port of Mattituck, NY (See sign in sheet)
Agenda: See Appendix I
Objectives:

1) To understand current commercial fishing activities of those from Mattituck port.
2) To understand current use conflicts, if any, commercial fishermen have with other users of the local area i.e. Northville oil terminal and associated vessel traffic.
3) To agree on the process going forward

Meeting Minutes

The meeting was specifically called for the sub-committee comprised of commercial fishermen including both lobstering and fishing, who fish out of the port in Mattituck, NY.

Introductions were made including additions to the Broadwater team Jimmy Culp- Shell and Jim Ray-marine biological consultant (Oceanic Environmental Solutions).

The group provided Broadwater with a map of the Mattituck fishing area and it was used to describe where the main fishing activities take place. The map will be digitized by the Broadwater GIS team for sign off by the group. They included information on the different kinds of fishing that occur in each zone.

Broadwater outlined the need to further develop the Fisheries Advisory Committee (FAC) structure and governance. The Sub- Committee understood the objective of the FAC is to provide a forum for ongoing communication between Long Island commercial fishing groups and Broadwater to discuss issues, concerns and coordination on operational activities to minimize potential use conflicts. The FAC (subject to approval and agreement) would potentially work with specifically impacted parties to develop the mutually agreed compensation process and in the future could assist with management and filing of gear damage claims and compensation as well as being a conduit of information and record keeper.

It was agreed that within the wider FAC there would be a need, initially, for Sub- Committees, to enable robust discussion for particular areas in the Sound and with potentially differing impacts. There may also be a need for a Sub-Committee representative to act for the group in wider FAC discussions/ decisions.

It was pointed out that minutes will be kept of the meetings, and forwarded to each fishing groups representatives for review and comment. [redacted] agreed to be the focal point for the Mattituck fisherman.

There was a request by the fishermen to have more detailed information on the frequency and timing of LNG deliveries per week (comings and goings). They would also like to have more detailed information on the headings they would take entering and leaving Long Island Sound (LIS). It was explained that at this time the final vessel transit plans were not complete, however, the proposed navigational tracks from the entrance of the Sound to the Broadwater facility were indicated on the chart.

Concern was expressed around the uncertainty of the actual area needed for approach and maneuvering at the mooring station depending on wind, wave, and current conditions, as this could displace fixed trawl lines outside the security zone. The group asked whether or not the moving security zone would be required for LNG carriers leaving LIS once they've offloaded their cargos. It was agreed that Broadwater would invite Captain Nichols in for the October meeting to describe current LNG carrier operations and provide and overview on the process to develop the vessel transit plans.

The group was asked to provide an overview of current operations in the designated area and how the commercial operations around the Northville oil terminal impact fishing activities, and what procedures, if any, are available to resolve use conflicts / disputes/ loss claims.

They mentioned that the petroleum offloading area has resulted in substantial gear being damaged. The group estimated that they lose up to 20% of the gear in an average year. To try and minimize the gear damage, they will align their trawl buoys across navigational headings so that if there is interference, only the buoy at one end of the trawl line will be snagged (for example that caused by North/South traffic across LIS). It was suggested that estimated gear costs include: $70 for a lobster trap with a possible additional $20-30 for lines and floats. Fishing pots were approximated at $15-20 more per trap. Conch (whelk) pots at about $40.

Based on discussions with the fisherman, there is no gear compensation program in LIS. When they lose gear, it is their own expense. It is up to them to put their pots and traps in areas where their gear loss will be minimal. Sometimes the lobsterman will lose trawl lines due to bottom fisherman dragging across their gear and tearing it up. The number of lobster traps on a single trawl vary between to 3-5 pots on a trawl line on average, but there are some with up to 20 pots on a single trawl line.

Concern was expressed as to how Broadwater operations could affect the historical traffic patterns within LIS that they've become used to. Would it be such that local traffic is diverted to areas that historically contained fixed gear?

It was mentioned that although certain fisherman and gear types have their "own" fishing areas, there are some areas that are considered open and fished by numerous fishermen. The types of fish are dictated in part by the seasons.

It was noted that timing of fishing trawls is often timed with a combination of time of day and slack water. He said that if they were pulling their gear during these small (and best) windows of time, and had to break off because a ship was coming, it could cause them to miss part of the days catch. In discussion, it was agreed that if more was known about the approaching ships schedule, they could time it so that they aren't on the northern part of their trawl when the ship was passing.

There was some discussion of the V-notch program for marking females. It was mentioned that Maine has a voluntary program. One of the fisherman commented, "If it is good for the future, why not do it." However, it was also commented that it is the State and fishermen's responsibility to pay for the V-notch program.

It was anecdotally noted that many years ago, the average lobster size was going to be 2 lbs/lobster. In recent years, the average size has been closer to 1 lb/lobster, or slightly over. There was some group discussion and speculation on the causes for the crash of the lobster population. Some seem to think that it is related to various pesticides and chemicals running off into the Sound. They also

mentioned a summer where instead of a strong thermocline at the surface (warm water on the surface, and colder water near the bottom), there was a complete reversal, with bottom temperatures as high as 75 degrees Fahrenheit.

One fisherman indicated that he's only been in fishery for five years and is concerned about the combination of the poor health of the lobster stocks, and the possible unknowns of the new LNG project. Another concern was around the reinvestment the lobstermen have made into their businesses to build equity and what the long-term effects will be. It was agreed by the group that there was a need to develop a base line understanding (supported by data) of current activities on which to overlay Broadwater operations before a full demonstrable evaluation of the impacts could be made.

In conclusion, Broadwater provided an update on the regulatory timeline and would ensure all the Sub- Committee members were notified of the release of the FEIS due in the fall.

Agreements

- It was agreed to keep the group (see sign in sheet) and any other commercial fishermen who fish out of Mattituck as a separate Sub- Committee of the wider FAC
-
- It was agreed that [redacted] would sign off on the minutes on behalf of the Mattituck commercial fishermen Sub- Committee
- It was agreed that Broadwater would invite Captain Nichols (Shell) to the October meeting to provide more detail on LNG carrier operations.
- It was agreed that the Sub-Committee would work with Broadwater to develop a base line of current operations, fishing areas and frequently used vessel routes.

Next Steps

- Broadwater to arrange next meeting after start of October
- Broadwater to provide Sub–Committee with outline of Fisheries Advisory Committee structure and governance for discussion/ approval at next meeting

Appendix 1
Proposed Agenda for Mattituck Sub Set of Fisheries Advisory Committee

Date: Wednesday 22ne August 2007
Location: Broadwater Office, Riverhead, New York
Time: 3pm

1) Objectives of the Meeting
Both parties have an understanding of current fishing operations (geography and gear) and use conflict resolution with other existing users. Discuss data inputs for developing the base line for demonstrable gear damage from LNG carrier transits. Outline a way forward to develop formal structure on Mattituck sub set of Fisheries Advisory Committee.

2) Introductions
- Broadwater Team
- Commercial Fishermen
- Review of Agenda – Additional Items?

3) Current Operations
- Map of who fishes where, number of Traps
- Existing traffic areas
- Existing process for gear damage
- Carrier routs and operation

4) Data inputs to develop process for demonstrating gear damage and processing possible claims.

5) Next steps
- Develop structure and governance outline for Fisheries Advisory Committee
- Keep Mattituck as a sub set of the Committee with focal point
- Circulate minutes of this meeting

6) Any Other Issues and Date of Next Meeting?
- Meeting
- Media

Appendix 2
Sign In Sheet.

Meeting Minutes Sign Off

Sub Committee Representative

[redacted]

Broadwater Representative

Sign: _____

Print Name: Froydis Cameron

CERTIFICATE OF SERVICE

I hereby certify that, I have this day caused to be served by First Class Mail or electronic mail the foregoing documents upon the parties to the official service list compiled by the Secretary for this proceeding.

Dated at Washington, DC this 9th day of April 2008.

/s/ Claire M. Brennan
Claire M. Brennan
Paralegal Manager
Dewey & LeBoeuf LLP
1101 New York Avenue, N.W., Suite 1100
Washington, D.C. 20005
202-986-8000

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