EXHIBIT 13

MOVE TO STRIKE HIGHLIGHTED
TESTIMONY BELOW AND
EXHIBIT DELNG-3-B, ATTACHED

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

IN THE MATTER OF

CALAIS LNG PROJECT COMPANY LLC	)
LNG Receiving, Storage and Vaporization Terminal, Calais, Maine	)
Send-Out Pipeline, Calais, Baileyville, Baring, and Princeton, Maine	)
	)
Air Emissions Application #A-1029-71-A-N,	)
Site Location of Development Application #L-24843-26-A-N,	)
Natural Resources Protection Act Applications #L-24843-TG-B-N,	)
#L-24843-IW-C-N, #L-24843-L6-D-N, #L-24843-4P-E-N	)
Waste Discharge Application #W-9056-5O-A-N	)

Exhibit DELNG-3

PRE-FILED DIRECT TESTIMONY AND EXHIBITS OF GARY J. NAPP

regarding

- **Potential for the Calais LNG project to cause an adverse impact on the air quality related values of nearby Class I areas due to visibility impairment and deposition of sulfates and nitrates.**

- **Failure of Calais LNG to analyze air quality impacts associated with LNG truck traffic as required by the Site Location of Development Law.**

May 28, 2010

QUALIFICATIONS OF WITNESS

My name is Gary J. Napp. I am employed by EnviroMet, LLC as a Senior Consulting Scientist and am responsible for managing and conducting air quality permitting and air quality impact analysis projects for EnviroMet. I received a Bachelor of Science degree in Environmental Resource Management from the Pennsylvania State University in 1979 and a

Master of Engineering Administration degree from George Washington University in 1989.

I have been in the air quality field since 1979. Previously, I have worked on the EcoElectrica LNG Import Terminal and Cogeneration Project, currently operating in Penuelas, Puerto Rico. My experience also includes conducting air quality permitting and analysis projects for a number of facility types, including coal-fired electric generating stations, combined-cycle electric generating stations, oil refineries, natural gas transmission facilities, and chemical weapons incineration facilities. Attached hereto as Exhibit DELNG-3-A is my CV.

PURPOSE AND SCOPE OF TESTIMONY

The purpose of my testimony is 1) to document the potential for the Calais LNG project to cause adverse impacts on the air quality related values (AQRVs) in nearby Class I areas; and 2) to document that Calais LNG has failed to provide evidence that increased traffic from LNG trucks will not significantly affect ambient air quality as required by the Site Location of Development Law.

SUMMARY OF TESTIMONY

Calais LNG has applied for an air emissions license as a new minor air emission source under Department of Environmental Protection (DEP) regulations. Although not specifically required by the DEP staff, Calais LNG voluntarily conducted an air dispersion modeling analysis in support of its license application. According to Calais LNG, because the terminal site will be a minor source, the nearby Class I areas are unlikely to be adversely impacted and DEP has made the preliminary determination that a visibility analysis is not required. However, screening modeling analyses of the Calais LNG project performed by DELNG indicate that visibility may

be impaired in nearby Class I areas due to air emissions from Calais LNG's terminal and vessels and that the deposition of sulfates and nitrates from the Calais LNG project may adversely impact AQRVs in these Class I areas. Under 06-096 CMR 115(7)(C)(2) the level of air quality analyses for any new minor source must be determined on a case-by-case basis. The Board should consider the potential adverse impacts discussed in my testimony when deciding whether to grant Calais LNG an air emissions license.

Additionally, Calais LNG proposes to include a dual truck-loading bay system for LNG truck loading. Details of the types of trucks, the number of trucks, and the frequency of truck arrivals at the terminal have not been provided and no analysis of the additional traffic associated with these trucks was provided to DEP, as required by the Site Law.

Based on these deficiencies, my conclusion is that the Calais LNG project as proposed does not meet the air licensing requirements in Chapter 115 of the DEP's rules, and that Calais LNG has not demonstrated that the development will not adversely affect air quality in the municipality or neighboring municipalities, in that it could adversely impact AQRVs in the nearby Class I areas.

ANALYSIS

On January 27, 2010, Calais LNG Project Company, LLC and Calais Pipeline Company, LLC (collectively, "Calais LNG") filed applications with the DEP for a Site Location of Development permit and a new minor source air emissions license. Calais LNG voluntarily conducted an air dispersion analysis in support of its minor source air emissions license

application, and an air modeling report was submitted to DEP in February 2010.[1] An air dispersion modeling protocol for the air dispersion analysis was submitted to DEP on November 17, 2009.[2]

Calais LNG's air dispersion modeling analysis was performed for emissions from the terminal's submerged combustion vaporizers (SCVs) and emergency generators to demonstrate compliance with Maine Ambient Air Quality Standards (MAAQS), Class II increments, and Class I increments. In the modeling protocol,[3] Calais LNG describes the nearby Class I areas and then states the following:

> "Because the Terminal Site will be a minor source, the Class I areas are unlikely to be adversely impacted and MEDEP has made the determination that a visibility analysis is not required."

Downeast LNG is in the process of performing an analysis that was requested by the Federal Energy Regulatory Commission (FERC) as a condition of DELNG's draft Environmental Impact Statement (DEIS). FERC requested that Downeast LNG perform a "cumulative air impact analysis to assess impacts on air quality (NAAQS and Maine AAQS) in both Class I and Class II areas, and AQRVs within the Class I areas," and the analysis was to "include both stationary and mobile emissions, and vessel emissions along the transit route, as well as the primary and secondary emissions from other existing or proposed pollution sources in

[1] Air Dispersion Modeling Analysis, Calais LNG Project Company LLC, February 11, 2010.
[2] Air Dispersion Modeling Protocol, Calais LNG Project Company LLC, November 11, 2009, enclosed with a letter from Thomas E. Stoughton (Woodard & Curran, Inc.) to Kevin Ostrowski (Maine DEP) dated November 17, 2009.
[3] Air Dispersion Modeling Protocol, Calais LNG Project Company LLC, November 11, 2009, , p. 2-3)

the region."[4] Downeast LNG has included the proposed Calais LNG project in the cumulative analysis, as FERC requested.[5] The preliminary analysis indicates the potential for Calais LNG project emissions to cause visibility impairment in the nearby Class I areas and to cause adverse impacts on AQRVs in those areas, due to sulfate and nitrate deposition.

Attached hereto as Exhibit DELNG-3-B is a summary of the methodology and results of the visibility and deposition analyses performed by DELNG for the Calais LNG project emissions. These analyses used "screening" tools that are purposely designed to produce conservative results, but the magnitude of the results from these analyses indicate that the potential exists for the Calais LNG project to cause visibility impairment and adverse AQRV impacts due to sulfate and nitrate deposition.

Downeast LNG discussed the technical approach to conducting such an analysis with the National Park Service and the U.S. Fish and Wildlife Service (NPS/FWS) technical air consultants to the Federal Land Managers (FLMs) of Roosevelt Campobello and the Moosehorn National Wildlife Refuge (NWR).[6] This approach was used to produce the results in Exhibit DELNG-3-B, and it is a reasonable approach to address the air impacts from the Calais LNG project.

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[4] Downeast LNG Draft Environmental Impact Statement, Section 4.11.1.4.5, May 2009.

[5] Downeast LNG requested Calais LNG to provide data for the assessment screening and modeling (see Exhibit DELNG-3-C). As of the date of this testimony, DELNG has not received the information requested of Calais LNG. DELNG incorporated the Calais LNG emissions information into the analysis in a manner similar to that used to incorporate its own terminal and transit emissions information.

[6] Conference calls held June 2009 and May 2010 with NPS and FWS.

The NPS/FWS personnel directed Downeast to examine visibility and deposition impacts in three mandatory Class I areas (Roosevelt Campobello International Park, Moosehorn NWR Baring Division, and Moosehorn NWR Edmunds Division). The NPS/FWS personnel also directed Downeast LNG to include the St. Croix Island International Historic Site (St. Croix Island) in the analysis and to treat it as a Class I area for purposes of the analysis.

Calais LNG included information on emissions from its terminal air pollution source, emissions from vessel activities at berth, and emissions from transit of its LNG vessels in its application to FERC, which was submitted on December 18, 2009.[7] Calais LNG did not include vessel emissions in the air dispersion modeling analysis submitted to DEP – whether at berth or from transit. Downeast LNG extracted the emissions information for the terminal stationary sources and the vessel sources from the FERC application for use in its screening analysis of the Calais LNG impacts.

Downeast LNG recognizes that Calais LNG is proposing that its terminal site be classified as a minor air emissions source and that the air modeling submitted by Calais LNG to DEP in February 2010 was voluntary. However, the results presented in Exhibit DELNG-3-B indicate the potential for adverse impacts on nearby Class I areas. The NPS/FWS personnel provided Downeast LNG thresholds against which to compare the estimated visibility and deposition impacts. Because the results indicate that the CLNG project exceeds these thresholds – and exceeds them by a very large margin in several Class I areas, principally at St. Croix Island – it is reasonable to conclude that emissions from the Calais LNG project could result in adverse

[7] Resource Report 9 – Air and Noise Quality, Calais LNG Project Company LLC, December 2009.

impacts.

DEP regulations (06-096 CMR 115(7)(C)(2)) state that for a minor source, the level of air quality analyses for any new minor source shall be determined on a case-by-case basis considering various factors, including proximity to Class I areas integral vistas and the results of previous air quality analyses. Accordingly, the results presented in Exhibit DELNG-3-B should be considered in determining whether to grant Calais LNG an air emissions license.

In its application to FERC,[8] Calais LNG describes LNG trucking facilities that include a dual truck-loading bay system for LNG truck loading. This facility is also briefly described in Section 11 of Calais LNG's Site Law application. However, Downeast LNG is not aware of any publicly available information on the type, numbers, and frequency of trucks associated with the LNG unloading facility.

The Site Law regulations at 06-096 CMR 375(1)(C) dictate that Site Law applications must include evidence that affirmatively demonstrates that there will be no unreasonable adverse effect on air quality, including evidence that increased traffic generated by the project will not significantly affect ambient air quality. Calais LNG has failed to provide such evidence.

Calais LNG should be required by DEP to address the effect on air quality of the increased truck traffic due to the proposed LNG truck loading facility.

[8] Resource Report 1 – Overview of Resource Reports, Calais LNG Project Company LLC, December 2009, Section 1.1.2.5.

CONCLUSION

Modeling conducted by Downeast LNG that uses an approach recommended by the FLM NPS/FWS technical air personnel indicates that the potential exists for emissions from the Calais LNG project to cause visibility impairment and adverse impacts to AQRVs in nearby Class I areas and the St. Croix Island International Historic Site. Accordingly, DEP should consider these results when deciding whether to grant Calais LNG an air emissions license. In addition, DEP should require Calais LNG to address the effect on air quality of the increased traffic resulting from the proposed LNG truck loading facility as required by the Site Law regulations.

Based on these deficiencies, my conclusion is that the Calais LNG project as proposed does not meet the air licensing requirements in Chapter 115 of the DEP's rules, and that Calais LNG has not demonstrated that the development will not adversely affect air quality in the municipality or neighboring municipalities, in that it could adversely impact AQRVs in nearby Class I areas.

Gary J. Napp

Gary J. Napp

Date: May 28, 2010

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CHESTER

Personally appeared before me the above-named Gary J. Napp and made oath that the foregoing is true and accurate to the best of his knowledge and belief.

Dated: 5/28/10

NOTARIAL SEAL
CARRIE E KEESEY
Notary Public
WILLISTOWN TWP, CHESTER COUNTY
My Commission Expires Dec 27, 2011

C Keesey

Notary Public

My commission expires:

12/27/11

DELNG-3-B

EXHIBIT DELNG-3-B

SCREENING OF VISIBILITY AND DEPOSITION IMPACTS AT CLASS I AREAS

CALAIS LNG PROJECT

The National Park Service and the U.S. Fish and Wildlife Service (NPS/FWS) have provided guidance on appropriate modeling techniques to be used for Level 2 visibility screening analyses and deposition screening analysis. That guidance applies to four areas of interest within 50 km of the Calais LNG project site. These four sites include the three mandatory Class I Areas of Moosehorn Wilderness Area Baring Unit (hereafter "Moosehorn Baring"), Moosehorn Wilderness Areas Edmunds Unit ("Moosehorn Edmunds"), and the Roosevelt Campobello International Park ("Roosevelt Campobello"), as well as the Saint Croix Island International Historic Site (St. Croix Island), located approximately 2.7 km to the southeast of the CLNG project location. The NPS/FWS treat St. Croix Island as a Class I Area.

Using these modeling techniques, Downeast LNG conducted a Level 2 visibility screening analysis and a deposition analysis of the impacts of the Calais LNG project emissions on the four areas of interest. For this analysis, Calais LNG terminal and vessel emissions were obtained from the Resource Report 9 submitted to the Federal Energy Regulatory Commission (FERC) in December 2009. Annual air quality impacts needed for the deposition analysis were taken from the air dispersion modeling submitted to Maine DEP in February 2010.

Visibility Screening Analysis

The visibility screening methodology provided by the NPS/FWS involves utilizing the EPA-approved plume visual impact screening model (VISCREEN), and performing a Level 2 screening analysis at each of the four areas of interest for two separate emission scenarios (worst case transit emissions and site/berth emissions).

Utilizing the NPS/NWS methodology, the pollutant hourly emission rates for the Calais terminal and ship berthing operations were conservatively modeled as a single emission point and were based upon worst-case one-hour emission rates from the combined site and berthing pollutant sources. The determination of the distance to each area of interest was also assumed using this single terminal/berthing location.

Determination of distance from the ship transit was done from the nearest "waypoint" to the area of interest as determined from the Calais LNG transit route shown in the December 2009 Resource Report 9. The NPS/FWS has stated that the pollutant emission rate determination for transit emissions should be based upon the maximum hourly ship emissions, pro-rated by the amount of time needed to transit from one waypoint before the nearest waypoint to one waypoint beyond the nearest waypoint. An average transit speed of 8 knots was used for the Calais transit sources. Distances used for input to VISCREEN can be found in Table 1, while the emission rates used for VISCREEN modeling can be found in Table 2.

For the Level 2 VISCREEN analysis the use of the 1% cumulative worst dispersion characteristics for each source/area of interest combination was calculated based on the 5-year Domtar meteorological database and the methodology detailed in the *VISSCREEN Users Guide*. Each scenario was evaluated for visibility impact versus the default VISCREEN thresholds of 2.0% delta-E, and +/- 0.05 for contrast as recommended by the NPS/FWS.

The results of the Calais LNG Level 2 VISCREEN analyses are provided in Table 3. The results indicate that the plumes from the Calais LNG site and ship transit exceed the 2.0% delta-E criterion for each area of interest with the exception of the Moosehorn Edmunds and Baring Units for the ship transit scenario. The delta-E criterion is exceeded by a large margin at St. Croix Island. Results for the plume contrast indicate that the plumes from the Calais LNG site and ship transit are below the 0.05 criterion.

Deposition Screening Analysis

The methodology for performing the deposition screening analysis provided by the NPS/FWS for the areas of interest can be found on page 5-6 of the *Interagency Workgroup on Air quality modeling (IWAQM) Phase 1 Report: Interim Recommendation for Modeling Long Range Transport and Impacts on Regional Visibility* (EPA-454/R-93-015, April, 1993). This guidance provides a conservative approach for quantifying total deposition (in units of kg/hectare/yr) of both SO_2 and NO_2 (as HNO_3). As described in more detail in Table 5, this analysis takes the maximum predicted annual concentration of both SO_2 and NO_2 at the desired location, converts the compounds via molar ratios (if necessary), computes total annual mass at the receptor, then, using default deposition velocities and conversion factors, calculates a total mass deposited at that receptor based upon the annual average concentration (given by AERMOD modeling in this case). The NPS/FWS indicated that the threshold of acceptability for deposition should be 0.01 kg/hectare/year.

The NPS/FWS states that the modeled annual SO_2 and NO_2 impacts used for the deposition screening analysis should be prorated to account for total annual SO_2 and NO_2 emissions from both the site (terminal and Berthing operations) and transit operations using the conservative assumption that the predicted annual impacts can be simply prorated by comparing the modeled emission rate (in tpy) versus the overall site and transit combined emission rate (in tpy). The annual emission rates for deposition screening modeling of the Calais LNG site are shown in Table 4.

Calais LNG recently performed an AERMOD analysis for the Maine DEP that predicted maximum annual SO_2 and NO_2 impacts for each Class I area as well as in the vicinity of St. Croix Island from the operation of the SCV and emergency generator units alone. The maximum impacts from this modeling analysis were adjusted to account for total SO_2 and NO_2 emissions from both the terminal, berthing operations and transit operations.

The results of the deposition screening analysis are presented in Table 5 and show that deposition impacts for SO_2 and NO_2 are well in excess of the threshold of acceptability as

provided by the NPS/FWS, especially deposition impacts for NO_2 at St. Croix Island – which are a factor of 3,000 times the acceptable threshold.

Table 1
Distances for VISCREEN Modeling of Sensitive Areas

Sensitive Area	Calais LNG Site		Calais Ship Transit	
	Near Distance (km)	Far Distance (km)	Near Distance (km)	Far Distance (km)
Moosehorn Baring Unit	10.6	16.4	12.7	17.7
Moosehorn Edmunds Unit	32.8	36.4	18.0	23.6
Roosevelt Campobello	33.8	39.4	3.9	9.7
St. Croix Island	2.7	2.7	0.6	0.6

Table 2

Emission Rates for VISCREEN Modeling of Sensitive Areas

Calais LNG Emissions	NOx (lb/hr)	PM10 (lb/hr)
Terminal/Berth Emissions:		
SCVs (7):	23.9	1.3
Emer. Gen. (3):	9.5	0.6
Tugs (Berthing or Unberthing):	158.4	0.6
USCG (Patrol):	3.5	0.01
LNGC Tankers:	123.2	4.4
Total:	**318.48**	**6.91**
Transit Emissions:		
Tugs (Transit):	81.9	0.3
USCG (Transit):	0.6	0.001
LNGC SSD Tankers (Transit):	112.1	3.27
Total:	**194.56**	**3.58**

Pro-Rated Waypoint Emission Rates

Sensitive Waypoints	Time (min)	NOx (lb/hr)	PM10 (lb/hr)
Calais Transit Point 8	9.5	30.6	0.56
Calais Transit Point 9	13.1	42.6	0.78
Calais Transit Point 15	22.5	73.0	1.34

Table 3

Calais LNG VISCREEN Level 2 Screening Results

Class I Area / Area of Interest	2.0% threshold		+/- 0.05 threshold	
	VISCREEN LNG Site Delta-E impact (%)	VISCREEN Transit Delta-E impact (%)	VISCREEN LNG Site Contrast	VISCREEN Transit Contrast
St. Croix Island	7.908	9.685	-0.018	0.008
Roosevelt Campobello	2.118	2.770	-0.010	-0.012
Moosehorn (Baring)	4.864	0.871	-0.023	-0.004
Moosehorn (Edmunds)	2.009	0.364	-0.010	-0.002

= Acceptable visibility impacts

= Unacceptable visibility impacts

Table 4

Annual Emission Rates for Deposition Screening

Included Emissions:	SO2 (tpy)	NOx (tpy)	SO2 (g/s)	NOx (g/s)
7 SCVs and 3 Emergency Generators:	1.86	146.59	0.0535	4.217
LNGC Tankers ("Unloading"):	36.88	35.32	1.061	1.016
Tugs (Transit):	0.50	65.54	0.01438	1.885
USCG (Transit):	0.02	4.14	0.000477	0.119
LNGC Tankers (Transit):	13.29	28.70	0.3822	0.826
Total:	**52.54**	**280.29**	**1.51**	**8.06**

Table 5
Results of IWAQM Phase I Deposition Screening for Calais LNG

IWAQM Phase 1 Deposition Procedure		Class I Area / Area of Interest			
		St. Croix Island	Roosevelt Campobello	Moosehorn Baring Unit	Moosehorn Edmunds Unit
Steps 1 and 2:					
Run appropriate model (AERMOD), assuming no conversion of SO_2 or NO_2. Report Impact[a] (ug/m^3).	SO_2	0.446	0.016	0.092	0.013
	NOx	2.011	0.079	0.398	0.061
Step 3 and 4:					
Multiply the concentrations of primary emissions by MW ratio of secondary species (NO2 = 63/46 for HNO_3), SO2 = 1.	SO_2	0.446	0.016	0.092	0.013
	NOx	2.754	0.109	0.546	0.083
Step 5:					
Multiply the concentrations of SO2 and HNO3 by the number of seconds in the averaging time to obtain a total rate. (3.1536 x10E7 sec/yr).	SO_2	14,058,658	516,731	2,913,296	409,821
	NOx	86,835,371	3,432,189	17,203,888	2,622,866
Step 6:					
Multiply Step 5 result by deposition velocity of pollutant. (0.005 m/s for SO_2, 0.05 for HNO_3)	SO_2	70,293	2,584	14,566	2,049
	NOx	4,341,769	171,609	860,194	131,143
Step 7:					
Unit conversion to kg/hectare/yr, multiply Step 6 by 7 x 10E-5.	SO_2	4.92	0.18	1.02	0.14
	NOx	303.92	12.01	60.21	9.18
Results:					
Results over threshold of 0.01 kg/hectare/year?	SO_2	YES	YES	YES	YES
	NOx	YES	YES	YES	YES

Notes:

[a] Maximum annual impacts adjusted to account for total annual emissions from site (terminal and berthing operations) and transit operations.