Exhibits to Intervenor Cape Wind Associates, LLC's Response to Petition for Review

Exhibit 1

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	
CAPE WIND ASSOCIATES, LLC	Appeal No. OCS 11-01
EPA Permit No. OCS-R1-01	

DECLARATION OF JAMES S. GORDON

I, James S. Gordon, hereby declare:

1. My name is James S. Gordon. I am the President of Energy Management, Inc. and Cape Wind Associates, LLC. My principal place of business is located at 75 Arlington Street, Suite 704, Boston, Massachusetts, 02116.

2. Petitioners in this matter assert claims premised upon the allegation that Cape Wind has changed is construction plan to relocate the proposed staging area for the project from Quonset Point, Rhode Island to New Bedford, Massachusetts.

3. While Cape Wind supports the Commonwealth of Massachusetts' efforts to construct a proposed multi-purpose marine commerce terminal in the port of New Bedford that, if built, could serve as a staging area for the Cape Wind Project and other offshore renewable projects, such proposal remains subject to multiple contingencies and it is unclear whether the terminal would be ready and available to meet Cape Wind's construction schedule. Construction of the proposed marine terminal has not begun.

4. Cape Wind has not altered its Construction and Operation Plan, as currently under review by the Bureau of Ocean Energy Management, Regulation, and Enforcement, to indicate utilization of a potential future site that may be constructed at New Bedford. If at some future time such a proposed facility were to become both completed and available in accordance with

Cape Wind's requirements and Cape Wind proposes to utilize such facility for all or a substantial portion of its staging requirements, Cape Wind would at such time make the appropriate regulatory filings and seek any necessary permit revisions.

5. During EPA's review of the permit, by letter dated November 17, 2010, Cape Wind confirmed to EPA that (1) it is unclear whether the New Bedford facility will be completed and available on a timeline consistent with Cape Wind's project construction requirements; (2) Cape Wind had not altered its project plans to change its staging area from Quonset to New Bedford and therefore had not revised any portion of the air permit application; and (3) if Cape Wind were to amend its project plan to use the New Bedford facility as a staging area in the future, Cape Wind would make any required regulatory filings at that time. (Letter attached). The position stated in the November 17, 2010 letter remains the current position of Cape Wind.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 15th day of March, 2011.

James S. Gordon

Attachment 1

Cape Wind
Energy for Life.

75 Arlington Street
Suite 704
Boston, MA 02116
617-904-3100
Fax: 617-904-3109
www.capewind.org

November 17, 2010

Stephen S. Perkins
Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency
Region 1
5 Post Office Square, Suite 100
Boston, MA 02109

Dear Mr. Perkins,

I am writing in response to your letter of October 29, 2010, in which you state that you have directed EPA staff to put "on hold" the review of our pending air permit application. For the reasons set forth below, we respectfully request that you rescind that directive and allow your staff to complete its review of the application. In response to your request, I also wish to confirm that Cape Wind has not revised its project plan, nor has it altered any portion of the air permit application as filed with your office. There has thus been no change to Cape Wind's proposal that would require EPA or any other agency to modify its review of the project.

Please be further advised that the Commonwealth's referenced proposal to develop a Multi-Purpose Marine Terminal at New Bedford remains subject to several contingencies beyond our control, and it remains unclear as to whether such a facility would be completed and available on a timeline consistent with our project construction requirements. In the event that such a facility were to becomes both completed and available on a timely basis and CWA proposes to use it for all or a substantial part of its staging requirements, Cape Wind would alter its project plans and make the appropriate regulatory filings at that time. As of this time, however, CWA has made no such change to its project or to its pending air application.

We also note that if CWA were to amend its project plans to reflect utilization of a staging area in New Bedford, it is unlikely that such a modification would have a significant impact upon an air permit issued in response to the currently pending application. We note in this regard that (i) Section 55.2 of the EPA's OCS Air Regulations provides that "emissions from vessels servicing or associated with an OCS source shall be considered direct emissions while at the source and while enroute to or from the source when within 25 miles of the source…," and (ii) it is unlikely that any such project modification would indicate a significant alteration to

vessel activity within such jurisdictional area. In any event, the particulars of any such potential or future modification remain speculative at this time.

Please feel free to call if you should have any questions and we respectfully request that you allow your staff to promptly complete the review of the pending application.

Sincerely,

Dennis J. Duffy
VP – Regulatory Affairs

cc: Ira Leighton
Deputy Regional Administrator

Exhibit 2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

OCT 29 2010

Mr. Dennis Duffy,
Vice President Regulatory Affairs,
Cape Wind Associates, LLC
75 Arlington St., Suite 704
Boston, MA 02116

Dear Mr. Duffy,

I read with interest Governor Patrick's announcement that Cape Wind Associates will use the proposed Marine Terminal in New Bedford to stage construction of the Cape Wind Energy Project. As you know, Cape Wind's application to EPA for an Outer Continental Shelf Air Permit under Section 328 of the Clean Air Act was predicated (at least in part) on staging the project from Quonset Point in Rhode Island. This change in staging location likely affects some of the analyses and conclusions presented to EPA in the air permit application, and/or presented to other agencies for the purpose of other federal statutory requirements with which EPA must comply in issuing an air permit.

I am requesting that Cape Wind Associates confirm that it has revised its project plan and provide EPA with any and all appropriate amendments to the air permit application as soon as possible, including a statement of Cape Wind's views regarding which, if any, of the reviews conducted by other federal agencies need to be revised before EPA could issue a final Outer Continental Shelf Air Permit. While EPA will continue to prepare responses to public comments on the proposed permit on matters that would be clearly unaffected by the location of the project's staging area, I have directed my staff to put the remainder of the work on this permit application on hold until we receive the information requested above from Cape Wind.

Ida McDonnell, Chief of our Air Permits Unit, has already reached out to Rachel Pachter to convey this message and she will be available to answer any questions your staff may have. Ida can be reached at 617-918-1653.

Sincerely,

Stephen S. Perkins, Director
Office of Ecosystem Protection

cc: Poojan Tripathi, BOEMRE
Karen Adams, ACOE
Thomas Chapman, USFWS
Julie Crocker, NMFS
Ken Kimmell, Mass EOEEA
Marc Wolman, MassDEP

Exhibit 3

PUBLIC NOTICE OF PROPOSED FEDERAL OUTER CONTINENTAL SHELF AIR PERMIT APPROVAL, PUBLIC COMMENT PERIOD, AND PUBLIC HEARINGS

Cape Wind Energy Project

Offshore Renewable Wind Energy Project

EPA Region I Draft OCS Permit Number OCS-R1-01

United States Environmental Protection Agency - Region I
5 Post Office Square - Suite 100
Boston, MA 02109-3912

The United States Environmental Protection Agency Region 1 office (EPA-Region I) proposes to issue an Outer Continental Shelf (OCS) air permit to Cape Wind Energy, LLC (Cape Wind). Cape Wind proposes to install and operate 130 wind turbine generators (WTGs) and other supporting equipment (The Project) in a grid pattern on or near the Horseshoe Shoal in Nantucket Sound, Massachusetts. On December 17, 2008, Cape Wind filed an OCS air permit application with the EPA-Region 1 office for the project. EPA Region 1 is proposing to approve Cape Wind's OCS air permit application and to issue an OCS air permit to Cape Wind. This action is authorized pursuant to section 328 of the Clean Air Act (CAA) and Title 40 of the Code of Federal Regulations (CFR), parts 55 and 124.

Applicant's Name and Address:	Cape Wind Associates, LLC 75 Arlington St., Suite 704 Boston, MA 02116
Proposed Project Location:	Horseshoe Shoal, Nantucket Sound

OCS Air Permit Requirements:

Section 328(a) of the CAA requires that EPA establish air pollution requirements for OCS sources located within 25 miles of States' seaward boundaries. These requirements are codified in 40 C.F.R. part 55 and apply the same pollution control requirements to an OCS source that would apply to that source if it was locating in the corresponding onshore area (COA). The COA is typically the onshore attainment or nonattainment area that is closest to the source.

Cape Wind OCS Air Permit Application:

On December 7, 2007, Cape Wind submitted an OCS Notice of Intent to EPA Region 1 that identified Massachusetts as the COA, provided information on potential emissions from the construction and operation of the project, and identified the state and federal

requirements that may apply to the project. Among other requirements, the NOI identified the Massachusetts Plan Approval regulations under 310 CMR 7.02 and the Massachusetts nonattainment New Source Review requirements under 310 CMR 7.00: Appendix A as potentially applicable to the project. Both regulations include technology based emission control requirements. EPA codified these regulations and other potentially applicable state regulations into 40 CFR part 55 on September 17, 2008.

On December 17, 2008, Cape Wind submitted an OCS air permit application to EPA Region 1. The application stated that during the construction and operation of the Cape Wind project, Cape Wind will use various types of construction equipment that are powered with diesel compression ignition engines. The engines emit criteria pollutants including nitrogen oxides (NOx), carbon monoxide (CO), particulate matter (PM), sulfur dioxide (SO_2) and volatile organic compounds (VOC). The application provided information to show how Cape Wind would meet the air permit requirements codified in 40 C.F.R. part 55 and all other applicable federal requirements. The application stated that Cape Wind would:

- apply Lowest Achievable Emission Rate (LAER) for nitrogen oxides emissions during the Cape Wind project construction phase (Phase 1);
- obtain NOx emission reductions to offset the Phase 1 NOx emissions;
- apply Best Available Control Technology (BACT) for all emissions during Phase 1 and the Cape Wind project operational phase (Phase 2);
- perform an air quality analysis to ensure that the emission increase from the project would not cause or contribute to a violation of any applicable National Ambient Air Quality Standards (NAAQS), which are maximum concentration "ceilings" measured in terms of total concentration of a pollutant in the atmosphere; and
- comply with all other state and federal regulations.

Summary of Proposed OCS Air Permit Requirements:

(The following is only a summary. For the complete list of proposed requirements and an explanation for their derivation, see the fact sheet and draft permit.)

EPA is proposing to issue an OCS air permit to Cape Wind that would cover the project's construction period (Phase 1) and the operational period (Phase 2). EPA is proposing that Cape Wind control air emissions using the following emission control technologies and operations:

- the use of newer low-NOx engines installed with diesel oxidation catalysts that reduce NOx, PM, CO, and VOC emissions; and
- the use of ultra-low sulfur diesel (ULSD) for all construction equipment that reduces SO_2 and PM emissions.

The proposed air permit would also require Cape Wind to offset its Phase 1 NOx emissions by buying 285 tons of NOx emission reduction credits. These offsets would be purchased through the Massachusetts offset trading bank.

Finally, for Phase 2, to provide Cape Wind the ability to conduct any necessary repair activities without the need to obtain a revised permit, EPA is proposing that Cape Wind limit the Project's Phase 2 NOx emissions to 49 tons per year or less.

Air Quality Analysis:

Cape Wind's air quality analysis showed that the impact from the proposed project is below all applicable NAAQS. EPA reviewed this analysis and agrees that the impact from the proposed project is below all applicable NAAQS.

Public Comment Process:

The public comment period for this proposed action will open June 11, 2010 and close on July 16, 2010. During the public comment period, any interested person may submit written comments on the draft permit itself and/or the analyses in the fact sheet or elsewhere in the administrative record that support the draft permit (including the methodology employed to determine ambient air quality impacts). You may also submit written or oral comments at one of the public hearings (see below).

All persons, including applicants, who believe any condition of the draft permit is inappropriate or that EPA's tentative decision to prepare a draft permit is inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including the public hearings). Any supporting materials which are submitted must be included in full and may not be incorporated by reference, unless they are already part of the administrative record in the same proceeding, or consist of State or Federal statutes and regulations, EPA documents of general applicability, or other generally available reference materials.

If you submit a comment to EPA, please state:

(1) The action you wish EPA to take, including specific references to the portions of the draft permit you believe should be changed, if any; and
(2) The reasons supporting your position, stated with sufficient specificity as to allow EPA to evaluate the merits of your position.

All comments received during the comment period will be included in the administrative record and will be available to the public. The public comment period for the draft OCS permit ends on July 16, 2010. To be considered, written comments should be postmarked no later than July 16, 2010. Comments should be submitted to:

Brendan McCahill, Environmental Engineer
U.S. Environmental Protection Agency – Region 1
5 Post Office Square
Suite 100, Attn: OEP-5-2
Boston, MA 02109-3912

In addition, EPA will hold three public hearings at the following times, dates and locations:

Tuesday, July 13, 2010 – 5 PM
Nantucket High School Auditorium,
10 Surfside Road,
Nantucket, Massachusetts

Wednesday, July 14, 2010 – 5 PM
Martha's Vineyard Regional High School Auditorium,
100 Edgartown-Vineyard Haven Road,
Oak Bluffs, Massachusetts

Thursday, July 15, 2010, - 5 PM
Mattacheese Middle School Auditorium, 400 Higgins-Crowell Road,
West Yarmouth, Massachusetts

Procedure after Public Comment Period:

After the close of the public comment period, EPA will consider all submitted comments, and issue a final permit decision accompanied by a response to comments. Within 30 days after the final permit decision has been issued, any person who filed comments on the draft permit or participated in a public hearing may submit a petition to EPA's Environmental Appeals Board (EAB) in Washington, D.C., to review any condition of the permit decision. Any person who failed to file comments or failed to participate in the public hearing on the draft permit may petition for administrative review only to the extent of the changes from the draft to the final permit decision. The petition shall include a statement of the reasons supporting review, including a demonstration that any issues raised were raised during the public comment period (including the public hearings). Where appropriate, the petition should include a showing that the condition in question is based on:

(1) A finding of fact or conclusion of law which is clearly erroneous, or
(2) An exercise of discretion or an important policy consideration which the EAB should, in its discretion, review.

All data submitted by the applicant is available as part of the administrative record. The administrative record, including copies of the draft OCS permit, original and supplemental OCS permit applications, fact sheet, and other supporting documents may be viewed between 9:00 a.m. and 4:00 p.m., Monday through Friday, at the EPA – Region 1 office at 5 Post Office Square, Suite 100, Boston, MA 02109-3912 or may be obtained on-line at EPA New England's website at http://www.epa.gov/NE/communities/nsemissions.html.

For more information, contact Brendan McCahill at (617) 918-1652 or by e-mail at McCahill.Brendan@EPA.GOV.

Exhibit 4

Cape Wind 1-Hour SO2 and NO2 Modeling

From:Brian Hennessey to Ida McDonnell

Summary

Region 1 EPA has proposed to issue a permit to construct an air pollution source under Section 328 of the Clean Air Act and Massachusetts regulation 310 CMR 7.02 "Plan Approval and Emission Limitations". The state regulation requires that no source be permitted which would violate a National Ambient Air Quality Standard (NAAQS) and to that end allows the reviewing agency to require a demonstration by air quality modeling that construction of the source will not violate any NAAQS. In proposing an air permit for Cape Wind Region 1 relied on air quality modeling prepared in 2008 for the MMS EIS to conclude that the construction would not violate any NAAQS and that no further modeling should be required. (See "Draft Final Cape Wind 6-4-2010.doc"). However, one commentor on the draft asked whether the modeling had examined compliance with the 1-hour SO2 and NO2 NAAQS, which only came into effect in the last year. The modeling had not; and after a review of the 2008 modeling for MMS relative to the level of the new NAAQS (100 ppb for 1-hour NO2, 75 for 1-hour SO2) Region 1 EPA concluded that Cape Wind would need to model against the two new NAAQS before a construction permit could be issued. The table below shows the results from the modeling ESS has submitted to Region 1 in response:

Air Quality Standard/ Source Modelled	Modelled Impact (ppb)*	Background (ppb)	Total (ppb)	Remarks
75 ppb 1-Hour SO2		23		Background 2007-2009 3-year average annual 99%-tile highest daily maximum 1-hour SO2 observed on Long Island, Boston Harbor.**
Construction Horseshoe Shoal - overwater	0.3		**24**	Modelled for the 4th highest daily maximum 1-hour. *Check output - receptor W2913500*
- breach shore				
Cable laying - overwater	1.4		**25**	Used the highest 1-hour SO2 from the model.
Vessel traffic - overwater	0.6		**24**	Used the highest 1-hour SO2 from the model.
100 ppb 1-Hour NO2		47		Background 2007-2009 3-year average annual highest 1-hour NO2 observed at Consentino School, Haverhill.**
Construction Horseshoe Shoal - overwater	44		**91**	Modelled for the 8th highest daily maximum 1-hour *Check output - receptor W281700.*
- breach shore				
Cable laying - overwater	<53		**<100**	No greater 1-hour impact can occur at a receptor on 7 or more days. Therefore with cable installation as planned adding background to the model will yield no violations.
Vessel traffic - overwater	23		**70**	Highest 8th high at any receptor ~ 98 %-tile daily maximum 1-hour.

* As now formulated EPA's guideline models yield concentration impacts in units of of micrograms per cubic meter (µg/m³, below) and do not yield results in the dimensionless levels of parts per volume of the NAAQS for gaseous air pollutants (i.e., O3, NO2, SO2, and CO). In the table above modelled concentrations at ambient conditions of 25º C. and 760 mm were converted as:

1 ppb SO2 = 2.623 µg/m³ and 1 ppb NO2 = 1.884 µg/m³

These estimates originate at on line calculator at http://www.lenntech.com/calculators/ppm/converter-parts-per-million.htm

** Closer monitors have recorded background air quality data than at the Haverhill and Boston locations but length of record, data capture, and nature of local emission sources also matter to the selection of background air quality data. In this case, for example, the closer SO2 monitor in Fall River was not selected because the Brayton Point generating Station has a large local impact which would be unrepresentative of most of the Cape. On the other hand NO2 data from the closer Fox Bottom monitor in Truro was passed over for the Haverhill site with its shorter but more recent record, better data capture, and clearly higher concentrations.

Although ESS used an Appendix W 'guideline' model to develop the tabulated information, the bulleted source types modelled were atypical of the stationary point sources for which Appendix W models are normally employed:

Moving sources (i.e., cable-laying and vessels),

Temporary construction activities rather than constructed operational point sources - Cape Wind's operational emissions will be nil, and

Spatially dispersed activities (i.e., WTG emplacement and vessel traffic).

Notwithstanding the remarks below conservative aspects of the modeling remain - e.g., use of the ARM screening technique which will overestimate NO2 impacts , or representation of dispersed or moving temporary - sporadic - emission sources as point sources. Given the poor fit of Appendix W to modeling Cape Wind's construction, ESS' results should be accepted.

Overview of ESS' Modeling

The NO2 1-hour would be approached more closely than 1- hour SO2 NAAQS so the description of ESS' OCD modeling and EPA comments (in *italics*) will focus on the NO2.

So far three submittals were needed to model compliance with the 1-hour NO2 NAAQS. The submittals share these features:

All depend on the Appendix W ('Guideline') Offshore and Coastal Dispersion (OCD) Model: Air pollutant dispersion in a marine environment differs markedly from pollutant dispersal overland. The model evaluates dispersion in such a setting and also estimates pollutant concentrations in shoreline fumigations which occur when a marine plume passes into an overland boundary layer.

All NO2 concentrations rely on the Ambient Ratio Method (ARM) with a factor of 0.75 to discount NOx emissions (expressed as NO2) to NO2 concentration at each receptor.

The needed meteorology inputs comprised one year of overwater meteorological of 'on-site' surface data from Horseshoe Shoals and concurrent surface water temperature from Buoy # 44018.

Concurrent overland surface meteorology came from Nantucket and upper air data from Chatham. ESS postulated a 500 m. overwater mixing height as was used for 2008 modeling for MMS. *Much lower mixing heights are not unusual overwater and can produce higher air pollutant concentrations. At Ventura and Pismo Beach on the Pacific where the OCD model was validated overwater mixing heights lower than 100 m. occurred about half the time, but at Cameron, site of another validation, such low mixing heights were much less frequent. However, Cameron is on the Gulf which has much*

higher average water temperatures than would be expected in Nantucket Sound. The waters off California, on the other hand, are quite cold.

All pollutant sources or construction activities were aggregated and modelled as point sources as follows:

Construction Activity - Source	Emission rate	Bldg.Ht.	Stack Ht.	Exit Temp.	Exit Diam.	Exit Velo.	Grnd.Level Elevation	Bldg.Width
	(g NO2/s)	(m.)	(m.)	(deg.K)	(m.)	(m/s)	(m.)	(m.)
Each of 14 WTGs	2.12	18.3	10.0	300	1.0	5.0	18.3	91.75
Electric Service Platform(ESP)	8.21	18.3	10.0	300	1.0	5.0	18.3	91.75
6000 Hp vessel ("sea route")	0.492	9.75	10.0	300	1.0	5.0	9.75	91.75
Cable installation	5.49	9.75	10.0	300	1.0	5.0	9.75	91.75

Each WTG point source represents hydraulic ram, crane, and vessel stabilization work activity on one of 14 inner array cables. The "Cable installation" point represents emissions from a 400 Hp crane barge, its 1500 Hp tug, and a 4000 Hp anchoring tug.

It should be noted that OCD input files set the model calculations to ignore transient plume rise and stack tip downwash. Also note in the table above (and the modeling files) ground level elevation has been set to the 'building'- - vessel in this case? - -height. Page 3-4 of the OCD User's Guide states that ground level elevation should be set at the building height for stilted structures like platforms such as the ESP but not for vessels or others in contact with the water.

Description and Remarks on Individual Modeling Analyses

The 14 WTGs and ESP, "sea route", and "cable installation" differ in character and must be modeled differently to show compliance with the new 1-hour NO2 NAAQS:

Modeling the construction activity emissions for the 14 WTG and ESP points which were stationary and longer duration operations was most direct. ESS used a radial grid of receptors sufficiently numerous to require three model runs: The grid origin positioned at the ESP location (appears from figures in the EIS to have coordinates of 70º 20' 00" west and 41º 30' 35" north) was also used to locate the 14 WTG/inner grid cable point sources. No receptors were placed within the Horseshoe Shoal wind farm or within 100 m. of any construction or support site - i.e., the sea route and the cable installation path. Public traffic should not be expected this close to the construction. The highest impacts occurred overwater but the model runs also yielded the locations of highest shoreline concentration.

The vessel used to model traffic associated with construction of the facility within 25 miles of the ESP was assumed to travel 15 km every hour or about 500 m. every two minutes. Vessel concentrations were calculated over a 1 km. Cartesian grid with receptors at 100 m. spacings. The vessel was then modeled for the amount of pollutant it could release while in the grid - that is at one thirtieth of the hourly emission rate in grams per second.

To reach a conclusion with this approach one must assume there will be no interaction among adjacent 500 m. vessel spacings and also that an hour's average total pollutant discharge will have the same air quality impact whether spread over the entire hour or confined to a few minutes. The nonguideline Inpuff model might be used test the first assumption but probably not the second.

Shoreline impacts could not be modelled because the position of the cable-laying operation relative to

the shore was always changing.

"Cable installation" is a transient (300 feet per hour) operation and conducted in two passes. Modeling considered three Cartesian grids centered on the operation: one with 100 m. resolution to 1 km, another with 200 m. spacing from 200 m. to 2.0 km, and the third with 250 m resolution from 250 m. to 2.5 km. ESS examined all the cases in which 1-hour impacts combined with background NO2 could exceed the level of the standard - 100 ppb - and found the furthest such receptor would be 1900 meters from the cable laying activity. From this and the activity's 300 foot per hour movement ESS 3.4 days would be the most any receptor could exceed the level of the standard:

2 X 3800 m / (300 ft/hr X 0.3048 m/ft) = 41.6 hr. or 1.7 days -

And the second pass doubles this.

A violation of the standard would require eight separate days with concentrations above 100 ppb NO2 at the same receptor.

Shoreline impacts could not be modelled because the position of the vessel relative to the shoreline was always changing.

VERIFIED THAT: The spreadsheet shows cable-laying NO2 impacts of interest ranging down from 447 ppb at 100 m. distance (receptor CB0021 on the 1 km grid) to 53 at 1904 m. (receptor CB0365 on the 2.5 km grid)

Extract FY1985 Model CH on STP adjust.pdf

Exhibits

Draft Final Cape Wind 6-4-2010.doc

ESS modeling furnished to Region 1 for Cape Wind:

ESS 11-4-2010.doc

ESS 11-22-2010.doc

ESS 11-30-2010.doc

ESS 12-3-2010.doc

ESS 12-7-2010.doc