

**From:** Bo Pham  
**To:** gbur1@comcast.net  
**Date:** 09/01/2006 2:37:08 PM  
**Subject:** Fwd: Questons regarding the EIS

Dear Ms. Gbur:

I am writing on behalf of Dr. Masnik in reply to your email on 8/30/06. Below, you'll find our responses for each question stated in your email. Please let us know if you would like additional information regarding this matter. Thank you.

Questions regarding the McLaren/Hart 2000 documents on cobalt 60 and Cesium 137 releases in several locations at OCNGS:

1. Why some, not all removed?

The McLaren/Hart report describes the existing conditions of radionuclide concentrations in soil at the site as of February 2000. Soil contamination in limited areas of the site is the result of historical spills or leaks from pipes and tanks containing contaminated water. Depending on the extent, nature, and location of the spills, some of these areas have been excavated and the soil removed. The McLaren/Hart report states that radionuclide activity in the soils at the Oyster Creek Plant are not impacting the offsite environment.

Limited areas of on site soil contamination have been left in place for the following reasons: (1) a very limited extent of radionuclides is actually in the soil, (2) the concentrations are decreasing over time due to radioactive decay, (3) groundwater is not being impacted, and (4) access to the area is controlled and limited. In addition, the McLaren/Hart report notes that in many cases far greater radiation doses would be accumulated by the plant workers if they were to remove the soils, as a consequence of being within proximity to contained radiation sources nearby. This exposure far exceeds the resulting dose that could be avoided by the removal of the soil. Consequently, delaying the cleanup of these areas until the plant is decommissioned has the benefit of reducing overall worker radiation doses, while still not impacting off-site areas.

2. Why wasn't it discovered earlier.

As stated above, the McLaren/Hart report describes the existing conditions of radionuclide concentrations in soil at the site as of February 2000, and was based on existing and well documented information. The report summarizes historical spills, releases, and soil sampling results as far back as 1981 and did not identify previously unknown areas of contamination. In general, soil sampling was conducted soon after spills or releases were identified. Therefore, findings in the McLaren/Hart did not represent any new discoveries; the report merely summarizes known and recorded historical conditions.

3. Will there be a followup study?

See next question.

4. Was there or will there be an NRC investigation of the bioaccumulation of Cs-137 and Cobalt in marine life in Barnegat Bay and Oyster Creek as well as our wells.

As part of preparing the Environmental Impact Statement for OCNGS's license renewal request, the NRC is analyzing and investigating the impact of any potential bioaccumulation of radionuclides in the Barnegat Bay & Oyster Creek. The issuance of the OCNGS draft SEIS documents our preliminary findings on this matter.

All nuclear plants were licensed with the expectation that they would release radioisotopes to both the air and water during normal operation. The releases were, and are, controlled releases so that the amount of radioactive material released to the environment during normal operations is precisely known. The fate of

the released materials in the environment is known based on the results of many studies. The movement of these materials through the environment is predicted by models that have gone through extensive field verification.

Additionally, licensees, including Oyster Creek, are required to sample various trophic levels in the environment as a check on the model's predictions. As stated in Section 2.2.7 of the Draft SEIS, AmerGen has conducted a radiological environmental monitoring program (REMP) around the OCNGS site since 1966, with the results presented annually in the OCNGS Annual Radiological Environmental Operating Report. Elevated levels of radioactive contamination above what is expected in marine life in Barnegat Bay and Oyster Creek due to the operation of Oyster Creek have not been found. Furthermore the licensee's program to substantially reduce liquid releases to the discharge in recent years will reduce contamination of aquatic organisms. There is no evidence that indicates that elevated levels of radioactive contamination from nearby groundwater wells is in any way related to Oyster Creek. Wells with elevated levels of radioactive contamination in the Toms River area have been shown to be the result of naturally occurring radioisotopes.

5. In this assessment, radionuclides were documented in groundwater and soil sediments. What is considered background levels?

The site radiological environmental monitoring program (REMP) includes monitoring of the concentrations of beta and gamma emitters, iodine, and strontium in the air; concentrations of gamma emitters in surface water, well water, fish, clams, sediment, and vegetation; concentrations of tritium in surface and well water; and direct radiation. Sampling locations are chosen based on meteorological factors, preoperational planning, and results of land-use surveys. In order to establish a baseline to distinguish between background and plant releases, a number of locations, in areas very unlikely to be affected by plant operations--such as upwind, up river, and upgradient--are selected as control points. The sampling results for these control locations are considered to be background levels. These levels vary, depending on environmental media as well as radionuclide.

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>>> OysterCreekEIS 9/1/06 1:57 PM >>>

>>> "Edith" <gbur1@comcast.net> 8/30/06 3:30 PM >>>  
To Donnie Ashley and Dr Masnik,

Your response to help me in preparing comments.

The following questions regards the radiological impacts from OCNGS gasous and liqud relese harmful to people and marine life.

Part 2 -25-1-7

Mclaren/Hart 2000 documents cobalt 60 and Cesium 137 releases in several locatons , -some of which was excavated, 1. Why some, not all removed? Is it possible/

2. Why wasn't it discovered earlier?(Espcially if it was released before 1989)?

Cesium137 has a half life of 35 years and is harmful to the ovaries. Cobalt 60, a half life of 5 years.and is harmful to the liver .3. Will there be a followup study? 4. Was there or will there be an an NRC investigation of the Bioaccumulation of Cs 137 and Cobalt in marine life in /Barnegat Bay and Oyster

Creek as well as our wells? 4. , 4. In this assessment Radionuclides were documented in groundwater and soil sediments. What is considered background levels?

SEIS Part 2, 33, lines 1-12 „OCNGS claims to have stopped releasing radionuclides and low level isotopes and radioactive waste discharges during the 80's. The DEP found no compliance issues or toxicity. However, McLaren/Hart 2000 documents Cs 137 and Cobalt 60 releases.' Edith Gbur, Jersey Shore Nuclear Watch

CC: Ashley, D.; Masnik, Michael; OysterCreekEIS

**Mail Envelope Properties** (44F87DCF.F7E : 6 : 34874)

**Subject:** Fwd: Questons regarding the EIS  
**Creation Date** 09/01/2006 2:37:03 PM  
**From:** Bo Pham

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**Recipients**

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