

**Final Examination**  
**Environmental Law and Policy**  
**Professor Ramo**  
**Fall 2007**

**INSTRUCTIONS**

1. You will have a total of three **(3) hours** to complete this exam.
2. This is an open book exam. The only restriction is you may not bring in a secondary text not used for class. The Percival text, the West statute book, the Supplemental Reader, your notes, print out of the slides are all acceptable.
3. This exam consists of two essay questions with multiple sub-questions at the end of each essay question text:
  - a. The first question is worth 40% of the grade. An estimated time of one **(1) hour and fifteen (15) minutes** is provided.
  - b. The second question is worth 60% of the grade. An estimated time of one **(1) hour and forty five (45) minutes** is provided.
  - c. **You may want to and are free to spend more or less time on each essay so long as you do not go over the three hour limit.** Please be sure to fully answer *all parts* of the essay question.
4. Please answer the essay question in the blue books provided to you, unless you are using a computer. Write only on the right hand side of the page (skipping a page each time) and double-space your work. Please write legibly.
5. Write your exam number on your exam envelope. Put your student **exam #** at the top of this page, each page of questions and each blue book. **Do not** use your name, student ID number or Social Security Number on any exam materials.
6. At the conclusion of the exam, return all exam materials to the exam envelope and submit it to the proctor. **Do not** seal the envelope. Students who do not return all exam materials at the end of the exam may not be graded.

**GOOD LUCK!**

## Essay Questions

### Three hours

#### Essay # 1 (1 hour fifteen minutes)

Petrolco, an oil company, operates a refinery alongside San Francisco Bay. Its air emissions include 100 tons of carbon per day.

EPA has adopted a National Ambient Air Quality Standard (NAAQS) for greenhouse gas emissions, including carbon emissions. The standard required each state to reduce its mass emissions by 20%.

California then adopted a new State Implementation Plan (SIP) requiring each stationary source to reduce its emissions by 25% throughout the state so long as it is consistent with best available control technology requirements. Petrolco has not reduced its emissions.

One day, a citizens group composed of residents living along the shore across the Bay 20 miles from the refinery sues Petrolco in the proper federal district court under the Clean Air Act, sixty-one days after serving a 60 day notice as required under the Act. The complaint alleges the facts described in the three paragraphs above regarding EPA, California and Petrolco actions. It further alleges the location of the plaintiffs and that climate change as a result of the world's greenhouse gas emissions may increase sea levels that will encroach upon their property by one to twelve feet.

Petrolco states the following in its answer. It admits it had not reduced its pollution at the time of the complaint but has voluntarily reduced operations pending the outcome of the case, at a great loss of profits to the company. It alleges, however, that EPA improperly adopted a carbon standard as a matter of law because:

(1) climate change is not a proper subject for a NAAQS as a matter of law; (2) Even if it were, the carbon NAAQS is arbitrary because: a) there remains some uncertainty as a matter of fact whether the US by reducing emissions by 20% will reverse climate change; there remains some uncertainty in the science as a matter of fact as to the exact amount of reductions that are necessary to reverse climate change; and (3) as a matter of fact the independent actions of significant polluting nations like India and China will more than offset any emission reductions resulting from the carbon NAAQS. Petrolco also alleges as a matter of fact that while there are technically feasible controls that would reduce its carbon emissions, the controls are so costly that it would have to raise prices so the controls should not be considered Best Available Control Technology (BACT). Finally, Petrolco alleges in its affirmative defenses that as a matter of law the citizens group on these facts had no standing to sue, or in the alternative, the case is now moot.

The citizens group and Petrolco eventually move for summary judgment establishing the above alleged facts (not issues of law, which is for the District Court to decide). Assuming the District Court has jurisdiction, subject to standing and mootness, to decide all of the issues, how should the Judge rule on:

1. The authority of EPA to adopt a NAAQS for carbon air emissions;
2. The authority of EPA to adopt a NAAQS for carbon given the three bases for uncertainty as to whether the US reductions will reverse climate change.
3. Whether the application of California's SIP requirement is consistent with BACT for Petrolco.
4. The standing of the Citizen group and whether the case is now moot.

### **Essay #2 (1 hour 45 minutes)**

Petrolco's refinery, described in question 2 above, has for years treated its refinery wastewater naturally. The refinery is located near a pond, that is separated from San Francisco Bay by a 10 foot wide strip of land and an artificial concrete dam built by the refinery decades ago, and is fed by rainwater and the refinery wastewater discharged by a pipe into the pond. The refinery believed the pond over time naturally breaks down the waste into harmless substances. Indeed, the pond expanded as a result of the wastewater discharge from historical levels, vegetation seemed to prosper near the pond and an endangered species, the salt marsh harvest mouse, thrived in the vegetation, expanding its numbers over the years above historical levels at the site, though the mice, located only in San Francisco Bay, were still at endangered levels. The pond was never used for recreation because it was too shallow for any boat to navigate or for human swimming.

Unknown to Petrolco until a few months ago, natural treatment was not entirely successful. The pond water toxicity exceeded state water quality standards and actually seeped through the dam separating the pond from the bay. Local fish were poisoned by the wastewater that seeped into the Bay.

Petrolco discovered that its current treatment system was not working when the California Regional Water Quality Control Board (Water Board), the local water pollution agency delegated authority to issue NPDES (National Pollutant Discharge Elimination System) permits, found the poisoned fish. The Water Board told Petrolco that it was not in violation of the Federal Clean Water Act, but urged it to treat its wastewater.

Because of this discovery, and due to increased demand for California's specially required gasoline mix, Petrolco decided it wanted to stop discharging its wastewater into the pond and instead treat its wastewater to the extent required by law and discharge directly to the Bay. Petrolco believed that once its wastewater was diverted from the pond, the pond would shrink back to historical levels, and it could modernize its existing operations and expand its operations upon the part of the pond that would be drained. The cost of modernizing the facility would be \$100 million, of which \$10 million would involve the expansion into the pond area. The modernizing and expansion would be

subject to a county building and land use permit. The cost of the new wastewater treatment system would be \$5 million.

Petrolco has applied to the Water Board for a permit to discharge its wastewater directly into San Francisco Bay with treatment meeting all legal requirements. It has also applied to the Army Corp. of Engineers for a permit to fill what would be the drained portion of the pond (due to the termination of the discharge into the pond) so it could expand its facilities on the pond site. Petrolco points out that the new plan would provide additional assurance no untreated toxic contamination would reach the San Francisco Bay. It further pointed out that finding another site for a refinery in the San Francisco Bay Area was not feasible, given a lack of space, and would be prohibitively expensive. Expanding its other refineries in other states would not be useful for the California market as they produce a different mix of gasoline for the national market.

Please discuss your answer to the following questions:

1. Is the Water Board correct that Petrolco's current operations are not in civil or criminal violation of the Clean Water Act?
2. Should the Water Board grant an NPDES permit for Petrolco's discharge of treated wastewater into San Francisco Bay?
3. Should the Corp. of Engineers grant a permit for filling in the pond?
4. Assuming the Corp permit process is not categorically exempt under the National Environmental Policy Act, should the Corp require an Environmental Impact Statement before issuing the permit? Should the scope of its review in making that determination include the impacts from the NPDES permit and/or the modernizing of the facility as well as the expansion into the pond area?

**END OF ESSAY QUESTIONS**

**END OF EXAM**