

M

MASSACHUSETTS SCHOOL OF LAW

Environmental Regulation: *Law, Science, and Policy*
Spring 2013 Final Exam – Thursday, May 23, 2013

Write your Student ID numbers (and only your Student ID numbers – no names please) in the space provided below and on the front covers of your bluebooks. When you have completed the exam, insert this exam into the middle of your bluebook. If you use more than one bluebook, insert subsequent bluebooks into the middle of book one.

Both the essay and short answer portions of this examination are Open Book examinations: You may use any material either prepared by you during the course of the semester for the course in Environmental Law & Policy or made available to you during the course of the semester by Professor Olson. You may also use both the casebook and supplemental materials made available in this course. You must work alone and are not authorized to receive assistance from any other person except Professor Olson; you are aware that the Law School operates under an Honor Code. By turning in an answer, you expressly agree that you are bound by the provisions of the Honor Code, as well as all of these instructions.

Your answers to the Essay Questions count for 66 2/3% of your grade on this examination; your answers to the Short Answer Questions count for 33 1/3% of your grade on this examination.

Student ID Number: _____

ESSAY SECTION

Answer *two* of the following three essays. Your answers on this section are worth 66 2/3 of your final exam grade.

Use no more than *nine* sides of a
Bluebook for your answers.

- I. As you know, representatives from 192 nations met in December 2009 in Copenhagen in an effort to negotiate a successor treaty to the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). Approximately 110 heads of state, including President Obama, went to Copenhagen to complete the negotiations at the conference, which opened on December 7. The U.S. is a party to the UNFCCC, with the U.S. Senate having ratified the treaty by a unanimous vote in October 1992. While the U.S. initially signed the Kyoto Protocol, it has never been submitted

to the U.S. Senate for ratification and President George W. Bush repudiated the Clinton's administration's signing of the protocol.

In *Massachusetts v. EPA*, the U.S. Supreme Court held that the U.S. Environmental Protection Agency has the authority to regulate emissions of greenhouse gases (GHGs) under the Clean Air Act if the agency finds that they endanger public health or welfare. On December 7, 2009 EPA Administrator Lisa Jackson announced that the agency had adopted a final rule concluding that GHG emissions from a broad range of sources endanger public health and welfare within the meaning of the existing Clean Air Act. While the rule making the "endangerment" finding does not itself impose any controls on GHG emissions, EPA deliberately timed its announcement to coincide with the opening of the Copenhagen conference.

1. (A) What is climate change and why should we be worried about it? (B) In what respects, if any, is climate change an environmental justice issue? (C) What is the purpose of the Kyoto Protocol and why is the United States now the only developed country in the world to reject it?
2. (A) What were the major issues that were discussed at the Copenhagen conference and why are they so difficult to resolve? (B) How do you think these issues *should* be resolved? (C) How do you think they *will* be resolved?
3. Compare the process of negotiating an effective global treaty to control GHG emissions with the process of negotiating the Montreal Protocol on Substances that Deplete the Ozone Layer. (A) Which was harder to negotiate and why? (B) What lessons can be learned from the experience with the Montreal Protocol that are relevant for purposes of negotiating global limits on GHG emissions?
4. (A) What is the significance of EPA's December 7, 2009 "endangerment" finding? How does this "endangerment" finding relate to the common law v. precautionary approach in other areas of environmental law? (B) Is EPA now required to establish national ambient air quality standards for GHG emissions under the Clean Air Act?
5. (A) How should impacts on climate change be considered when the environmental impacts of projects that emit greenhouse gases are assessed pursuant to the National Environmental Policy Act? (B)

Under what circumstances, if any, could the owner of a coal-fired power plant in the United States be found to be in violation of the Endangered Species Act as a result of the plant's GHG emissions?

- II. The following are the eight major criticisms typically leveled against the "pollution statutes":
- A. Criticism #1: They are media specific.
 - B. Criticism #2: Control, not prevention
 - C. Criticism #3: Command and control, not pricing (cap and trade, etc.)
 - D. Criticism #4: Disregard of economics
 - E. Criticism #5: Excessive reliance on aspirational commands; absence of rules
 - F. Criticism #6: Too human centered; "pests" = all non-human life
 - G. Criticism #7: Gaming strategies – It's all about "process" and finding "sleepers" – laws like the Rivers and Harbors Act ("Refuse Act") of 1899 to apply to modern day problems
 - H. Criticism #8: Environmental justice – though a bunch of laws, many haven't seen benefits

Do you agree that the criticisms are valid? Why? If you don't agree that they are valid, explain why you think they are not. Be sure to discuss each of the criticisms in your answer.

Next, pick any of the major environmental statutes that we've studied this semester, and explain how well you think it does in addressing the problems identified by environmental organizations or others. Also, identify the flaws inherent in the law, and explain how Congress might legislate to make it better. Consider in your answer how common law legal principles would work better or worse than the statutory/regulatory scheme. Finally, explain how cooperative federalism either works or doesn't work with respect to the law you've chosen.

- III. You represent the Darlington Aluminum Door & Fasteners Co., Inc., a multi-million dollar company that manufactures Doors and Fasteners

for business and industry both nationally and internationally. Because of bankruptcies and slowdowns by other companies in the industry, Darlington is planning to open new facilities. The owners have looked at various "Brownfield" sites in urban areas, thinking to take advantage of high unemployment rates in such locations. Darlington's owners and stockholders believe locating in such high-unemployment areas will improve their public relations image, and it will improve their bottom line.

The owners have identified two prime locations: one outside Tupelo City, Mississippi, and the other in a depressed area near the outskirts of Springfield, Massachusetts. The location in Mississippi had previously been the site of a rendering plant for a large industrial meat producer; the previous owner had turned waste animal products into soap and other useful products. The structures had been removed in the 1980's. The location in Massachusetts had previously been owned by a tannery which had supplied leather goods to both industrial and consumer outlets. If the Darlington owners decide on this site, they are considering retrofitting the existing structures.

Both locations have tremendous built-in advantages: These include local skilled work forces, proximity to supply and distribution centers, and either buildable sites or preexisting structures. However, Darlington management has a number of concerns. Manufacturing aluminum doors and fasteners produces a number of sometimes toxic pollutants, fumes, and wastes. Based on evaluations performed by their environmental consultants, the operations could emit as much as 150 tons per year of volatile organic compounds ("VOCs"), 20 pounds per year of toluene, and multiple tons of other byproducts of aluminum processing. Additionally, the plants would produce significant quantities of wastewater containing lead, zinc, and quantities of organic substances with high biological oxygen demand ("BOD").

Finally, processing the aluminum would also produce over 400 kilograms per month of halogenated spent solvents. The owners currently plan to dispose of their organic wastes into a tributary of the Mississippi River at the Tupelo City plant and into the city sewer system in Springfield. The owners have arranged to have their toxic sludges transported to a disposal facility which has a permit to receive hazardous substances.

The company has options to purchase other undeveloped parcels of land in rural areas near the currently proposed sites. Assuming plans

for the current sites fall through, they have contingency plans to begin construction of the new plants in these locations. If the owners decide on the alternative sites, the operations would remain essentially the same except that in Massachusetts, the company would discharge all their wastes into a wetland area which is some distance away from other bodies of water. The same tributary would be used at the Mississippi site.

Darlington's president has asked you to prepare a memo discussing what would be required to comply with any state or federal environmental requirements. She would like you to discuss whether an off-shore facility might be more advantageous to the company. She would also like you to discuss the various advantages and disadvantages of building on the "Brownfields" sites as compared to the rural sites. The president would also like you to fully discuss any environmental issues which might be raised by either the "Brownfields" or rural sites.

Short Answer Section

Answer only *three* of the following six questions.

Your answers on this section are worth $33 \frac{1}{3}$ of your final exam grade. Use no more than *four* Bluebook sides for each question.

- A. Briefly explain what triggers the requirement to prepare an EIS under NEPA, and also explain what someone proposing a project must do to comply with both the statute and any applicable regulations. Don't forget to discuss any exceptions to the EIS requirement that might be built into the statute, regulations, or case law.

- B. The Department of Transportation wants to build a high-speed bullet train in Texas from Laredo to Lubbock, to accommodate daily commuters between those two cities. The Department dutifully prepares an Environmental Impact Statement (EIS), which considers all the environmental effects, possible alternatives, and the costs and benefits of completing the project. There are no clear alternatives for transporting large numbers of people across arid terrain over such great distances. Nevertheless, the EIS concludes that the project will have a devastating permanent effect on the environment of western Texas. An Activist group called Don't Mess with Texas (DMWT) comments litigation under NEPA § 102(2)(c) to force the EPA to stop the plan because its environmental impact outweighs the purported benefits? How would a court respond? Be sure to include discussion of the substantive/procedural debate about NEPA.

- C. Judge Alonzo Surplia is a member of the Federalist Society, and he believes passionately in the rights of the states to govern themselves, unhampered by federal intervention. Judge Surplia's favorite topic of discussion is the Clean Air Act, which he views as an erosion of Constitutional limits on federal power; he believes that every state should be free to make its own pollution laws, without seeking EPA approval. What arguments might you use to counter Surplia's position? Be sure to include a discussion of the common law, laws regarding transboundary pollution, the Commerce Clause of the U.S. Constitution and any policies supporting national sovereignty.
- D. Mr. Messface decides that one way to get easy income is to invite all his friends and neighbors – especially those operating businesses – to dump their garbage on his property, a 500-acre farm in the middle of nowhere. He charges a small fee for each shipment, which he keeps completely confidential to protect the privacy of his customers. A nearby mechanic sends all the used oil, antifreeze, brake fluid, and transmission fluid that he drains from cars, along with dirty grease and other lubricants, to Messface's farm. A narrow ravine running through the back of the property makes an ideal place to dump garbage and other refuse. The county government is delighted because they were already worried about there being little room left in the municipal landfill, and now most of the county's waste is being diverted to Messface's private dump. What potential issues would arise under RCRA and the CWA (Clean Water Act)?
- E. Morocco Corp. produces a specially-formulated, low-toxicity form of DDT for export to tropical countries to help them deal with malarial-bearing mosquitoes (Anopheles). During some remodeling of their facilities, subcontractors threw construction debris, including old floor covering and ceiling tiles, into the dumpster that eventually goes to a private landfill. Small amounts of the "nice" DDT are on the flooring and ceiling tiles. Meanwhile, an Evildone Corp. subsidiary (now defunct) has been sending hundreds of 55-gallon drums of regular DDT to the same landfill for disposal. The Evildone Corp.-owned DDT contaminates the entire site, and soil samples always contain this prevalent contaminant, not the specially formulated "nice" DDT. When the EPA swoops in to do a "Cadillac" cleanup, and Morocco Corp. still be liable, even though they contributed trace amounts of a chemically distinguishable substance? Who else might be liable, and what might have prompted the federal "Cadillac" cleanup in the first place?

- F. Suppose Congress enacts a Global Warming Act that authorizes the EPA to “promulgate and enforce any regulations conducive for the reduction of pollutants and emissions that contribute to global climate change.” Instead of regulating carbon dioxide emissions in the atmosphere, which the legislative history indicates was Congress’s intention, the EPA decides instead to focus exclusively on major pollutants in the ocean (including CO₂ which disintegrates shells of mollusks and indirectly contributes to coral reef bleaching), like crude oil spills, on the theory that the death of ocean plankton contributes more to global warming than do automobile emissions and emissions from tall stacks. When the oil industry challenges the agency’s decision in court, what will the oil and auto industries argue, what will the EPA argue in response, and what will be the likely result and why?



MASSACHUSETTS SCHOOL OF LAW at ANDOVER
Environmental Regulation: Law, Science, & Policy
Spring 2012 – Final Exam – May 10, 2012

Student ID #

*Please also write your
Student ID# on all
Bluebooks.*

- I. Short Answer Questions (10 points each; 60 points total): All students must answer at least six short answer questions using *no more than three* blue book sides for each question. Please remember to provide corresponding letters for each of your answers. If you choose to answer more short answer questions, I will consider your answers for extra credit. However, the first six answers will count towards your final total.
- A. The free-market environmentalist movement contends that markets can take care of environmental problems without government regulation. First, it believes that cooperative organizations interested in environmental protection will be able to solve the free-rider problem, for example, by purchasing conservation easements. Second, it places faith in technological innovations that will make it easier in the future to privatize common resources. Third, it believes that common law courts can play an effective role in protecting private property. What position are free market environmentalists likely to have with respect to marketable permits and effluent fees, and what position will the opposition likely take? Why do free-market environmentalists place trust in common law courts but distrust in the political branches of government, and why would the opposition place more trust in the political branches?
- B. Several bills designed to promote environmental justice were introduced in Congress in the early 1990's, though none passed. For example, the Environmental Justice Act, initially introduced by then Senator Al Gore, defines Environmental High Impact Areas (EHIA) as "the 100 counties or appropriate geographical units with the highest total weight of toxic chemicals present during the course of the most recent 5-year period for which data is available." Any such area in which there are "significant adverse impacts of environmental pollution on human health," would benefit, with

certain exceptions, from a moratorium on the siting of any new toxic chemical facility "shown to emit toxic chemicals in quantities found to cause significant adverse impacts on human health." How would you assess this approach? Consider the burden to the EPA of identifying the 100 EHIA's. What challenges to these determinations do you see? Should the size and population of the county matter? What other problems might arise?

- C. An environmental law professor has written that "[t]he original model that underlay the Clean Air Act . . . was that distinct thresholds existed below which the exposure to pollutants would cause no discernable harm." According to this professor, post-1970 scientific advances have rejected the existence of such thresholds. Even in 1970, however, Congress was aware that thresholds did not exist. For example, in his testimony before the Senate Subcommittee on Air and Water Pollution, which was considering the bill that led to the Clean Air Act of 1970, the highest ranking federal official with responsibility for air quality, stated that it was "virtually impossible to state . . . that there is a no-effects level." Why would Congress have enshrined into the NAAQS the fiction concerning the existence of thresholds?

In setting the NAAQS, should EPA continue to pretend that thresholds exist? If it does not, on what basis should it justify its choice of standards? EPA's experience in setting the NAAQS for lead is instructive. EPA determined that a standard of 30 micrograms of lead per deciliter of blood would protect the most sensitive population (children aged 1-5). It then determined that a target mean concentration of the whole population of 15 micrograms would protect 99.5 percent of the sensitive population. Nonetheless, the approach would leave 25,000 children, mostly in inner cities, inadequately protected. On what basis could EPA have decided not to protect 99.9 percent of the sensitive population?

- D. Another law professor maintains that "[a] state that encourages economic development at the expense of environmental quality may inflict economic loss (in the form of industrial migration or decreased economic growth) on other states that prefer a higher level of environmental quality." A state that seeks to attract industry in this manner is essentially lowering the price for industrial location. Is its decision different from the decision of a manufacturer to lower the price of its product, where the price change has undesirable economic effects on a competitor?

Consider the following distinction between technological and pecuniary externalities:

[N]ot all relationships that appear to involve externalities will produce misallocation. There is a category of pseudo-externalities, the *pecuniary externalities*, in which one individual's activity level affects the financial circumstances of another, but which need not produce a misallocation of resources in a world of pure competition Pecuniary externalities result from a change in the prices of some inputs or outputs in the economy. An increase in the number of shoes demanded raises the price of leather and hence affects the welfare of purchasers of handbags. But unlike a true externality (. . . a *technological externality*), it does not generate a *shift* in the handbag production function.

Is the externality described by the law professor technological or pecuniary?
Does it affect social welfare?

- E. Compare the Clean Air Act's approach to hazardous air pollutants to that of the Safe Drinking Water Act. Under the former, a technology-based standard constitutes the first stage in the regulatory process; a health-based standard is the second step, which does not become effective until years later. In contrast, under the latter, the starting point is the health-based standard; at the second stage in the regulatory process, the enforceable, technology-based standard is promulgated. What factors might account for this different structure?
- F. In addition to the principle of sustainable development, other central maxims of environmental law include the precautionary principle and the "polluter pays" principle. The former prescribes that scientific uncertainties be resolved in favor of environmental controls. Is this principle helpful in determining the content of specific environmental policies? Can all uncertainties ever be resolved in accordance with the precautionary principle? For example, one author writes that the precautionary principle "represents a rejection of 'risk neutrality,' which measures risk purely as the product of the magnitude and probability of harm." In contrast, another author writes that the concept "rejects environmental policies based on the assumptions that science can accurately determine the assimilative capacity of the environment and that, once determined, sufficient time for preventive action will remain." Which definition is more attractive? The Rio Declaration states that "[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." How does this formulation compare with the statements by the two authors' views? Is the precautionary principle

consistent with the maximization of social welfare? What cases have you read this semester that show courts following or refusing to follow the precautionary principle? What motivated the courts that chose some other guiding principle?

- G. What are the policy justifications for regulating all wetlands and endangered species at the federal level? If an endangered frog species is found only in the middle of Nebraska, why should the federal government decide whether and how to protect the frog? Similarly, if there is an isolated wetland in the middle of a large ranch in Wyoming, does the federal government have an interest in regulating it? Even if the federal government has an interest in the protection of such species and wetlands, do states have a greater interest in the protection of such species and wetlands, do states have a greater interest in being able to decide how land within their borders should be utilized? Should these be matters for the states to decide without interference by the federal government?
- H. A review by EPA's scientists in the late 1990s found that groundwater contamination poses a relatively low health risk compared to other environmental hazards. Despite this expert opinion, public opinion polls consistently rate groundwater contamination as near the top of environmental concerns. As a result, a great deal of money and effort flows toward cleaning up contaminated soil instead of other threats that may pose greater risks, such as radon exposure. The money dedicated to addressing environmental threats often reflects the public's (inaccurate) perception of risk far more than the scientific community's. In a democracy, is this the appropriate result, even if it places the public at greater risk?
- I. Should the CWA subject non-point pollution to stronger regulation? If so, how? Should the federal government set technological standards (perhaps in form of "best management practices" or BMPs) for farms, construction sites, parking lots, and other typical sources of non-point pollution? How might the government determine BMPs? Alternatively, should the government require the states to manage non-point pollution by developing plans that will ensure that neither point nor non-point pollution exceeds TMDLs? Are there even better approaches to regulating non-point pollution?
- J. The Food and Drug Administration (FDA) needs to expand its regional offices to have much larger waiting rooms for representatives of pharmaceutical companies that are seeking approval for new, beneficial drugs. Many of the locations will require new construction to add the waiting room space, with undeniable physical effects on the nearby environment. In addition, however, the expansive waiting rooms will mean more automobile traffic and parked

cars around the regional offices, more frustrated company representatives loitering around outside, many more cell phones being used to communicate with representatives to call their home office to check for messages. It is foreseeable that the expanded waiting centers will attract more unattractive snack shops, convenience stores, and newspaper stands to service the growing number of people waiting there. Finally, area residents will become more aware of the chronic delays in approvals for new drugs, which instills a sense of depression, frustration, and fear of contracting a disease for which a cure is known but unavailable. The FDA completes an EIS for the project, but considers only the physical environmental effects of the construction projects. A group of concerned citizens organizes, calling itself ROLFDA ("Resist Overwhelming Lines at the FDA"), and contends in court that the EIS should consider social and psychological effects of the proposed project, not just the immediate physical effects. What is the likely judicial response to this argument?

- K. California decides to lead the nation in reducing water pollution, so it adopts state regulations exactly twice as stringent as the EPA's regulations for point source discharges, which California regulators consider too lenient on polluters. California regulators celebrate their finally having surpassed all other states in the stringency of their standards. The affected industries, which argue that they cannot economically comply with such regulations, hire a PR firm to debate the measure in the court of public opinion. Just to cover all their bases, they also ask the PR dude to hold a press conference at which he announces, "See you in court, California!" What is the likelihood that the regulations will stand up in court? Be sure to discuss issues of cooperative federalism, relevant CWA provisions, and states' rights arguments California will surely raise.
- L. Winifred, who owns an industrial chemical facility, does not want to have to pay toxic waste haulers or other companies to dispose of his waste, so he has a crew dig a big pit in the woods behind his facility. Because they were unsure about the property lines, the crew dug the pit partially on Winifred's property, partially on town property, and partially on his neighbor's property. The neighbor's property borders a stream which flows into the Merrimack River in Methuen; the pit was dug within 120 yards of some depressions in the land which fill with water during mud season – these depressions provide habitat for birds and other wildlife for some portion of each year.

Before Winifred sells his property, he has the crew cover the pit with lime, dirt, and sod, rendering it invisible. He sells the business and property to Jameson, who begins operating the facility. Jameson soon notices a foul stench emanating from the area of the pit when he goes for a walk in the

woods behind the facility on a hot day. He informs counsel that this was not noticeable when he did a walk-through prior to his purchase because it was a windy, cool day. In addition, whenever it rains, Jameson notices that the rainwater seeping into a nearby run-off ditch is discolored and smells terrible. What are the rights of the parties? Be sure to discuss all relevant environmental laws – both claims and defenses.

II. Essay Questions (40 point each): All students must answer *one* essay question *only* using *no more than eight* blue book sides for your chosen question. Be sure to identify your chosen questions by their letter and corresponding numbers.

A. Chemical Company sells a pesticide that it produces by sending various toxic chemicals to another company (Formulator) who mixes them together and then returns the finished product to Chemical Company for distribution and sale. In the course of transferring the chemicals to Formulator, a substantial amount of the toxic chemicals are spilled on property Formulator leases from a commercial real estate investment trust called Clean Properties. The contract between Chemical Company and Formulator provides that the chemicals sent to Formulator remain the property of Chemical Company who pays a fee to Formulator for mixing the chemicals together to produce the finished pesticide. The contract specifies that Formulator will “exercise due care to minimize spillage of the chemicals” and it provides that the amount of compensation Formulator will receive from Chemical Company increases as spillage is reduced and more pesticide is returned to Chemical Company as finished product.

Suppose that the property owned by Clean Properties is placed by the U.S. Environmental Protection Agency (EPA) on the national priorities list for cleanup under the federal Superfund program. EPA uses its authority under §104 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to clean up the site and it then sues Chemical Company, Formulator, and Clean Properties to recover the \$20 million cost of the cleanup.

i. (15 points) (a) Which of the following defendants could be held liable for reimbursing EPA in a CERCLA §107 cost recovery action and why: (1) Clean Properties, (2) Chemical Company, and/or (3) Formulator? (b) Would it make a difference to your answer if instead of retaining ownership of the chemicals, Chemical Company specified that they become the property of Formulator as soon as they are shipped? (c) What is the likely extent of liability of each of these parties?

ii. (15 points) (a) If one of the defendants believes that it has been held liable to EPA for more than its fair share of the cleanup costs, is there any legal action it can take to seek reimbursement for a portion of the share of remediation costs for

which it has been held liable? (b) How likely is it that the defendant will be successful in seeking such reimbursement?

iii. (10 points) If the pesticide is banned by EPA, is Chemical Company entitled to receive compensation from the federal government for a regulatory taking of its property? Why or why not? Would the government be liable for a taking under a different theory if it took title to the company's land to perform a "Cadillac Cleanup"? Would it be more or less likely for the company to win under this scenario than if EPA decided to ban the pesticide?

B. After graduating from law school, you join an environmental advocacy group dedicated to protecting disadvantaged communities from environmental hazards and toxins. Your first client is a neighborhood association whose members include homeowners in Gallegos Oaks, a predominantly Hispanic community located in southeast Houston. They are extremely upset because ChemCorp, a large chemical company, has announced plans to build an entirely new large chemical production facility on abandoned property at the Houston Ship Channel. ChemCorp's new facility lies within a half mile from the neighborhood, and the facility's property line abuts a new high school whose students are drawn almost entirely from Gallegos Oaks.

ChemCorp's new facility will produce artificial rubber, and these rubber products will use feedstocks that include benzene and other organic compounds. Once constructed, the facility will likely include reactor towers that will discharge volatile organic compounds through pipes to a large flare at the facility. Some fumes, including nitrous oxides, will simply escape into the air as fugitive emissions. The facility will draw water from the Houston Ship Channel, use it in its production process, and then discharge the water back into the Houston Ship Channel along with some production effluent. Last, the facility will generate a significant amount of rubber that will not meet strict purity requirements for some customers (e.g., medical devices). ChemCorp plans to either sell the rubber as scrap to other rubber producers with less demanding clients, or will simply burn the rubber on-site for energy recovery.

Last, the proposed production site sits next to the Houston Ship Channel. As a result, the land is frequently wet and marshy, and storm water runoff from the site flows directly into the Houston Ship Channel. The area has a sizable biological community growing onsite. Some of the plants include cat tails and other marshy plants, and migratory birds use the site as a roosting spot during migrations. Some of those birds are listed as either threatened or, in one case, endangered.

i. (10 points) One of the residents believes passionately that ChemCorp's new

facility violates her rights against environmental injustice. Explain what rights the Gallegos residents might have to pursue legal and administrative remedies for environmental justice in this situation, and the difficulties those environmental justice claims would face.

ii. (15 points) Aside from environmental justice issues, list the potential challenges under federal environmental statutes that the Gallegos Oaks residents might raise to the construction and operation of ChemCorp's new facility. Be sure to summarize the major permits that the residents could challenge and the relevant federal or state agencies that might be involved in licensing or permitting. If you lack sufficient information to recommend any particular important action, list the additional key facts that you need to obtain.

Weeks after your meeting with the Gallegos Oaks residents, you get a call from your best friend from law school. She is now the new in-house environmental counsel at ChemCorp, and she has received a letter from the Gallegos Oaks residents. After running through the potential challenges that you helped the residents prepare, your friend amiably warns you that the residents have no chance of succeeding.

iii. (15 points) For each of the challenges that you listed above (aside from environmental justice issues), offer the strongest defenses that ChemCorp can offer to each claim. If you lack sufficient information to assert a particular important defense, describe the item or data that you will need to obtain.



MASSACHUSETTS SCHOOL OF LAW at ANDOVER

Environmental Regulation: Law, Science, & Policy

Spring 2011 – Final Exam – May 12, 2011

Student ID #

*Please also write your
Student ID# on all
Bluebooks.*

**I. Short Answer Questions (10 points each; 60 points total):
All students must answer at least six short answer
questions using *no more than three blue book sides for
each question. Please remember to provide corresponding
letters for each of your answers. If you choose to answer
more short answer questions, I will consider your answers
for extra credit. However, the first six answers will count
towards your final total.***

- A. A review by EPA's scientists in the late 1990's found that groundwater contamination poses a relatively low health risk compared to other environmental hazards. Despite this expert opinion, public opinion polls consistently rate groundwater contamination as near the top of environmental concerns. As a result, a great deal of money and effort flows towards cleaning up contaminated soil instead of other threats that may pose greater risks, such as radon exposure. The money dedicated to addressing environmental threats often reflects the public's (inaccurate) perception of risk far more than the scientific community's. In a democracy, is this the appropriate result, even if it places the public at greater risk?
- B. There is a range of policy approaches to overcome the tragedy of the commons. An easy way to remember these is as the 5 P's: Prescriptive Regulation, Property Rights, Penalties, Payments, and Persuasion. Apply the 5 P's to a local environmental problem such as loss of wetlands or water pollution of a nearby lake or river. Do all 5 P's apply to the case of protecting an endangered species. Why or why not?
- C. A number of the criteria air pollutants actually contain two primary standards. Sulfur dioxide, for example, has an annual standard of 0.03 ppm and a 24-hour standard of 0.14 ppm. Similarly, particulate matter (PM2.5) has an annual standard of 15 micrograms per meter cubed and a 24-hour standard of 35 micrograms. Why do you think EPA promulgated two separate standards – one annual and one over twenty-four hours?

- D. What do you think of the institutional incentives of the NEPA process? Does it make sense, for example, for the “action agencies” to write the EIS for the very actions they are proposing? In Canada, by contrast, the EIS process is directed by an independent agency with no interest in whether the proposed action goes forward or not. What are the pluses and minuses of the U.S. system, and which system makes more sense for environmental protection and why?
- E. Define the following terms in the context of the Clean Water Act: (1) Discharge, (2) Pollutant, (3) Point Source, (4) Navigable Waters of the United States. Now explain what the NPDES permit program is, and why these terms are so important in the context of the permitting process.
- F. A factory can produce its output by emitting between zero and five units of air pollution. Obviously, the lower the emissions, the higher the factory’s pollution control costs. The emissions impose costs on a neighboring laundry, which must employ more costly production processes to achieve the desired standard of cleanliness. For the different possible levels of emissions, the factory’s pollution control costs and resulting costs imposed on the laundry are set forth in the following table. Assume that the parties can bargain costlessly.

Units of Emissions	Factory’s Pollution Control Costs	Laundry’s Costs from Pollution
0	25	0
1	16	4
2	9	8
3	4	12
4	1	16
5	0	20

What level of emissions maximizes social welfare? Assume, initially, that under the prevailing legal regime, the laundry is unable to enjoin the pollution. How much pollution will result if the parties can bargain without cost? What payment will the laundry make to the factory? What happens if one of the parties attempts to capture too much of the surplus from bargaining? Does it matter whether each party to the bargaining knows the costs faced by the other party?

Assume, conversely, that the legal regime gives the laundry the right to enjoin the pollution. Again, assuming costless bargaining, how much pollution will result? What payment will the factory make to the laundry? What happens if it does not have sufficient assets to make the payment? Is the resulting problem, if any, cured by the existence of credit markets?

- G. Sections 110(a)(2)(D) and 126 of the Clean Air Act are the most comprehensive provisions aimed directly at constraining interstate pollution spillovers. Even though Congress adopted these provisions in 1977, indicating in the legislative history that the prior scheme had been largely ineffective at addressing the problem of spillovers, no court has ever constrained upwind pollution. What would be a desirable set of rules for determining when to enjoin

upwind pollution? More specifically, consider the following scenarios, defined by reference to whether an upwind and downwind state meets the NAAQS:

- (a) The downwind state would violate the NAAQS even absent the upwind pollution
- (b) The downwind state violates the NAAQS only as a result of the upwind pollution
- (c) The downwind state meets the NAAQS even despite the upwind pollution, but this pollution reduces the downwind state's margin for industrial growth
- (d) The same as scenario (c), except that the upwind pollution causes the downwind state to violate a state ambient air standard that is more stringent than the corresponding federal standard

In general, should the relative stringency of emissions regulations in the two states matter? In connection with the latter question, should it matter whether the downwind state has a substantial industrial base that will be affected by these standards, or whether, instead, the bulk of the burdens will be borne by the upwind state?

- H. Does the siting of hazardous waste sites in poor or minority areas raise issues that are analytically different from the siting of highways or of homeless shelters? What are the possible differences? Are these differences persuasive? Are the claims of the environmental justice movement simply a subset of claims about unfairness in the siting of any facility that a community might regard as undesirable, even if the effects of the facility are nonenvironmental?
- I. Consider a restriction on the importation of a product on the ground that it was manufactured by a process that harms the global commons. What inquiry should be undertaken to judge the validity of this process-based restriction? Which nation's valuation of the harm on the global commons should be taken into account? In judging the validity of one nation's restrictions, should one consider the possibility that other countries might follow suit, imposing similar restrictions? If one does not, the cumulative penalty on the country manufacturing the product might eventually become disproportionate to the harm that it imposes on the global commons. Such a rule might also lead to a "race to impose the first restriction." Would such a result be desirable? On the other hand, should the inquiry about the validity of a nation's restrictions be dependent on the decision maker's estimate of the probability that other countries might subsequently impose similar restrictions? Can such an inquiry plausibly be undertaken?
- J. What are the policy justifications for regulating all wetlands and endangered species at the federal level? If an endangered frog species is found only in the middle of Nebraska, why should the federal government decide whether and how to protect the frog? Similarly, if there is an isolated wetland in the middle of a large ranch in Wyoming, does the federal government have an interest in regulating it? Even if the federal government has an interest

in the protection of such species and accompanying wetlands, do states have a greater interest in being able to decide how land within their borders should be utilized? Should these be matters for the states to decide without interference by the federal government? Why or why not?

II. Essay Questions (25 points each): All students must answer one essay question using *no more than eight blue book sides* for your chosen question. Be sure to identify your chosen question by its letter.

- A. As you may know, representatives from 192 nations met in Copenhagen in December 2009 in an effort to negotiate a successor treaty to the Kyoto Protocol to the United Nations Framework Convention on Climate Change (FCCC). Approximately 110 heads of state, including President Obama, went to Copenhagen to complete the negotiations at the conference. The U.S. is a party to the FCCC, with the U.S. Senate having ratified the treaty by a unanimous vote in October 1992. While the U.S. initially signed the Kyoto Protocol, it has never been submitted to the U.S. Senate for ratification, and President George W. Bush repudiated the Clinton's administration's signing of the protocol.

In *Massachusetts v. EPA*, the U.S. Supreme Court held that the U.S. Environmental Protection Agency has the authority to regulate emissions of greenhouse gases (GHGs) under the Clean Air Act if the agency finds that they endanger public health or welfare. On December 7, 2009 EPA Administrator Lisa Jackson announced that the agency had adopted a final rule concluding that GHG emissions from a broad range of sources endanger public health and welfare within the meaning of the existing Clean Air Act. While the rule making the "endangerment" finding does not itself impose any controls on GHG emissions, EPA deliberately timed its announcement to coincide with the opening of the Copenhagen conference.

1. (5 points) (A) What is climate change and why should we be worried about it? (B) In what respects, if any, is climate change an environmental justice issue? (C) What is the purpose of the Kyoto Protocol and why is the United States now the only developed country in the world to reject it?
2. (5 points) (A) What were the major issues that were discussed at the Copenhagen conference and why were they so difficult to resolve? (B) How do you think these issues *should* be resolved? (C) How do you think they *will* be resolved?
3. (5 points) Compare the process of negotiating an effective global treaty to control GHG emissions with the process of negotiating the Montreal Protocol on Substances that Deplete the Ozone Layer. (A) Which was harder to negotiate and why? (B) What lessons can be learned from the experience with the Montreal Protocol that are relevant for purposes of negotiating global limits on GHG emissions?

4. (5 points) (A) What is the significance of EPA's December 7, 2009 "endangerment" finding? (B) Is EPA now required to establish national ambient air quality standards for GHG emissions under the Clean Air Act?

5. (5 points) (A) How should impacts on climate change be considered when the environmental impacts of projects that emit greenhouse gases are assessed pursuant to the National Environmental Policy Act? (B) Under what circumstances, if any, could the owner of a coal-fired power plant in the United States be found to violate the Endangered Species Act as a result of the plant's GHG emissions?

- B.** Waste residues from the combustion of coal at coal-fired power plants currently are stored in landfills and surface impoundments at approximately 1,300 sites throughout the United States. The Tennessee Valley Authority (TVA) operates many coal-fired powerplants that generate enormous quantities of such waste. TVA stores much of this waste in surface impoundments where it is mixed with water and held indefinitely in a lagoon sealed off from surrounding waters. After heavy rainfall, on December 22, 2008, a containment structure at TVA's Kingston power plant collapsed and spilled 5.4 million cubic yards of coal ash waste out of a storage lagoon into the Emory River in Tennessee, killing all aquatic life for miles around and causing enormous property damage.

While coal ash waste contains high concentrations of hazardous constituents, it initially was exempted from regulation under Subtitle C of the Resource Conservation and Recovery Act (RCRA) as a "special waste" pending further study by the U.S. Environmental Protection Agency (EPA). In 2000 EPA belatedly completed a study of this waste and, after heavy lobbying by the utility industry, determined not to regulate it as hazardous. As a result of the disastrous spill at the Kingston plant, EPA currently is reconsidering whether to regulate the storage and disposal of coal ash waste.

1. (5 points) (A) Did TVA violate the Clean Water Act (CWA) when its containment structure failed and the coal ash waste spilled into the Emory River because it did not have a permit under §402 of the CWA to discharge the waste into the river? (B) If TVA is required to remediate the contamination by dredging the coal ash waste out of the Emory River and transporting it for disposal into a nearby landfill, will TVA be required to obtain a permit under §404 of the Clean Water Act for disposal of the dredged material?

2. (5 points) Suppose that TVA hires a consultant to advise it on how to dispose of the coal ash waste that will be generated by a new coal-fired power plant it is constructing. The consultant advises TVA that the cheapest method for disposing of the ash is to discharge it into a nearby river. However, suppose that EPA promulgates a new source performance standard under §306(b) of the CWA that prohibits new coal-fired power plants from discharging their coal ash waste into surface waters. (A) Could TVA legally avoid this prohibition by claiming that the ash is so massive that it is "fill material" subject to permitting by the U.S. Army Corps of Engineers under §404 of the CWA instead of the §402 NPDES permit program? (B) If the TVA obtained a §404 permit from the Corps for disposal of the waste as "fill

material” could EPA veto the issuance of this permit?

3. (5 points) Suppose that instead of disposing of the waste in the river, TVA decides to dump it into a wetland area that is located adjacent to the nonnavigable tributary of a navigable river. The U.S. Army Corps of Engineers insists that TVA must obtain a CWA §404 permit for disposing of the waste, but TVA’s consultant claims that the wetlands are too isolated to be subject to federal jurisdiction under the Clean Water Act. If TVA contacts you for legal advice concerning whether to seek the §404 permit, what would you advise them concerning the likelihood that the Corps could successfully assert §404 jurisdiction over the wetlands area?

4. (5 points) Prior to the collapse of the Kingston coal ash impoundment, TVA officials had been warned that the lagoon dam was weakening. But they refused to pursue the disposal option believed to be the safest -- a \$25 million proposal to dry out the sludge and ship it to a properly lined landfill -- because they believed it was too costly. (A) If the discharge of the coal ash waste into the Emory River caused by the collapse of the containment structure violated the Clean Water Act, how likely is it that a successful criminal prosecution could be brought against the responsible officials under the Clean Water Act? (B) If TVA promptly reported the spill and agreed to clean it up, could it avoid all criminal prosecution and gravity-based penalties pursuant to EPA’s Policy on Incentives for Self-Policing? (C) If it could, what would be the minimum penalty TVA would have to pay under the Policy?

5. (5 points) Suppose that EPA issues new regulations under Subtitle D of RCRA that continue to allow coal ash waste to be managed as a nonhazardous waste and that permit it to be stored in the same kind of dangerous surface impoundment as the coal ash containment structure that collapsed at the Kingston plant. An environmental group whose members live near the Kingston site seeks judicial review of EPA’s regulations. Will they continue to have standing to challenge the legality of EPA’s new regulations if the Kingston facility shuts down and coal ash waste no longer is managed near where their members live?

C. Suppose that a large multinational corporation owns vast tracts of land in the United States that contain old growth forest. It plans to clearcut a portion of the old growth forest that includes some of the critical habitat for an endangered species of bird.

1. (5 points) Can the corporation clearcut the forest without violating the Endangered Species Act? What would the U.S. government have to show in order to be able to get an injunction to prevent the clearcutting? If the company clearcuts the critical habitat before the government finds out about it, what would the government have to show in order to be able to hold the company liable for violating the Endangered Species Act?

2. (5 points) Suppose that the U.S. Justice Department succeeds in getting an injunction to prohibit the company from clear-cutting its land. Can the company successfully sue for an uncompensated regulatory taking in violation of the takings clause of the Fifth Amendment to the U.S. Constitution? If the Supreme Court of

the state in which the land is located suddenly changes state common law and declares that private landowners have never had the right to cut trees on their own property, can the company successfully sue the state for a judicial taking?

3. (5 points) Suppose that the land is owned by the U.S. Bureau of Land Management (BLM) instead of the multinational corporation. Would the federal government violate the Endangered Species Act if it clearcut the land? Why or why not? What would an environmental group have to allege to establish standing to sue the BLM to stop the clearcutting?

4. (5 points) Suppose that the company wishes to fill an isolated wetland area on its property in order to build condominiums. The area is adjacent to the nonnavigable tributary of a navigable water. What would the U.S. Army Corps of Engineers have to show in order to be able to require the company to obtain a permit under §404 of the Clean Water Act before filling the wetland?

5. (5 points) Suppose that the Corps of Engineers succeeds in proving that the wetland is subject to regulation under §404 of the Clean Water Act. The company then hires a large group of workers and orders them to fill the wetland area by transferring fill material to it by hand. Have the workers violated the Clean Water Act?

III. Problem Exercise Questions (15 points each): All students must answer one problem exercise question using *no more than five blue book sides* for your chosen question.

Choose *any one* of the following three problem exercises: (1) pp. 53-55, (2) pp. 461-62, or (3) p. 848. You may choose to answer using one of two methods: either (A) respond to the question(s) asked in essay form, or (B) craft an essay using IRAAC based on all the facts and questions presented in your chosen problem exercise.



MASSACHUSETTS SCHOOL OF LAW at ANDOVER

The Practice & Policy of Environmental Law

Thursday, May 13, 2010 – Final Exam

Student ID: _____

This is an open book and open laptop final which you must complete within 3 hours. Answer *all* short answer questions using *no more* than two (2) bluebook pages. Then choose to answer *only one* question from among the three essay questions. Please write your student ID on both this booklet and on all bluebooks. When finished, please slip this booklet inside your bluebook, and hand the entire package to Prof. Sullivan, who has graciously agreed to proctor this exam.

Short Answer Questions (50 points)

1. The federal Administration on Aging wants to build a new regional office building in Boca Raton, Florida. Before beginning construction, the Administration needs to comply with NEPA and prepares the necessary documents for a preliminary review. What is involved in this process, and what happens if the Administration determines that the project will not have a significant impact on the human environment?
2. The Army Corps of Engineers is planning a significant building project (a bypass) that will have undeniable significant effects on the environment and will not cost hundreds of millions of dollars to complete. It has also planned precise mitigation measures to lessen the harm to wildlife and the environment, compensating for it with nearby wildlife preserves, extra protections against other types of pollution and human activity in the area, etc. In fact, some experts believe the wildlife in the area will be better off after the project is complete. As a result, the Army Corps completes an Environmental Assessment (EA) and reaches a Finding of No Significant Impact (FONSI) and refuses to complete a more extensive Environmental Impact Statement (EIS). A few concerned environmentalists organize an opposition group called Against Contaminating the Human Environment (A.C.H.E.), saying that an EIS is necessary because this is a major federal project that will significantly affect the environment. What is the likely outcome of this litigation, and why?
3. Suppose Arizona procrastinates in completing its SIP to the point of missing every federally mandated deadline under the Clean Air Act. An environmentalist watchdog group that calls itself "Hurry Up!" brings suit to compel the agency to compel the state to comply with federal law. What is the consequence of a state failing to adopt a SIP under the Clean Air Act?
4. Vermont decides to lead the nation in reducing pollution from automobiles, so it adopts state regulations exactly twice as stringent as the EPA's regulations for automobile emissions, which Vermont regulators consider "wimpy." Vermont regulators celebrate their

achievement of finally surpassing California as the vanguard of environmentalism, at least with respect to auto emissions. The auto industry, which feels it cannot economically comply with such radical new regs, asks its most eloquent spokesperson to hold a press conference at which the spokesperson says just five words: "See you in court, Vermont!" Will Vermont's bold new regs stand up in court? Why or why not?

5. What do statutes and regulations mean by the phrase "technology-based standard" under the Clean Air Act, and why is this important for companies to understand when trying to comply with such statutes and regulations?
6. Assume that the EPA lists carbon dioxide as a criteria pollutant, promulgates the necessary regulations, and devises an appropriate implementation mechanism. Even so, L.A., Chicago, Houston, and NYC all fail miserably at meeting the standards. What will be the legal consequence of this failure? Consider the "bubble rule," "non-attainment zones," and Federal Implementation Plans in your answer.
7. Jeffrey operates an industrial facility, which occasionally power-washes corroded or encrusted machinery with solvents on an asphalt patio between two of its buildings. The pools of spent solvent are mopped up, but residue remains in the asphalt. When it rains, the rainwater from the patio collects in natural gullies or trenches on-site before draining into a local stream. As lawyer for the corporation that owns the facility, what should you advise Jeffrey that he needs to do to comply with the Clean Water Act?
8. Sherlock Bones suspect a victim's killer is a gardener at Lodgepole Estate who was being blackmailed by the victim, a local factory owner. Attorney Bones finds during his investigation that the state environmental agency has long considered Lodgepole Estate a "nonpoint source." Using his powers of deduction, what can Bones infer about Lodgepole Estate, and what should the Estate have to do about complying with the requirements of the Clean Water Act?
9. *Play it Again, Inc.* recycles commercial study aids dumped by law students after they graduate. Suppose some of the aids contain "listed" substances, either in the paper (to prevent the pages from turning yellow with age) or in the ink (to prevent you from licking the pages in your study aids). After grinding thousands of these used paperbacks into a pulp and producing recycled blank paper to sell back to the original publisher, *Play It Again* assumes that its recycled paper (which contains all the elements of the original) is not "waste" because it has been recycled into a useful product for resale. When the EPA brings an action under RCRA, how will you advise your client about the agency's likelihood of success on the merits? Is it likely that a court will enjoin the activity? Why or why not?
10. Jed Clampett, oil baron and former pig farmer, buried hundreds of barrels of heptachlor (a highly toxic substance) on his property back in the 1960's, long before CERCLA was enacted. He received a handsome sum of fifty dollars from the nearby chemical company for disposing of their wastes. In the 1980's, when Jed's oil wells ran dry and Jethro proved to be a real spendthrift, he sold his land to a developer. Now in his twilight years, he has received a legal notice informing him that he is a defendant in an action to seek contribution for CERCLA cleanup costs. Assume that Jed will argue that he didn't know what was in the barrels he buried, and the barrels he buried were too sturdy to leak more than a miniscule

amount of heptachlor. Further, the other defendants opt to settle with EPA while Jed decides to fight. As counsel for Jed, what will you advise him?

Essays (Choose only one of three.)(50 points)

1. In 1991, the Washington State Department of Ecology proposed sediment-quality standards governing marine, low-salinity, and freshwater surface sediments. The proposed regulations imposed restrictions on the chemical composition of the marine sediments in the Puget Sound. *See* Wash. Admin. Code § 173.204.320 (limiting the arsenic content of the Puget Sound to fifty-seven parts per million, *inter alia*). The EPA approved the state's regulations the same year.

The Native Fish Conservators challenged 1995 amendments to the regulations, which exempted Puget Sound salmon farms from various water-quality standards of general application. *See* Wash. Admin. Code § 173.204.412 (exempting “marine finfish rearing facilities and their associated discharges” from “authority and purpose standards,” “marine sediment-quality standards,” “sediment impact zone maximum criteria,” and “sediment impact zone standards”). The state Department of Ecology proposed the challenged regulations in December 1995, two years after the state legislature passed a law requiring the Department to “adopt criteria . . . for allowable sediment impacts from organic enrichment due to marine finfish rearing facilities[,]” and to “adopt standards . . . for waste discharges from marine finfish rearing facilities.” 1993 Wash. Legis. Serv. ch. 296, *codified at* Wash. Rev. Code § 90.48.220.

Native Fish Conservators, formerly known as Washington Trout, is a statewide, non-profit, nonpartisan organization devoted to protection of fish resources in the State of Washington. Its principal office is located in Duvall, Washington. Since its founding in 1989, NFC has engaged in scientific research, educational, and advocacy activities to further the science and policy supporting conservation of biologically diverse fish resources.

NFCs' members use and enjoy rivers, streams, bays, passages, and other bodies of water throughout the Puget Sound and its basin, for recreational, scientific, aesthetic, and commercial purposes. NFCs' members derive recreational, scientific, aesthetic, and commercial benefits from the existence of healthy aquatic and marine systems and wild salmonids and other fish through water recreation, wildlife observation and study, photography, and fishing. NFC's members' enjoyment of these benefits is being and will continue to be harmed by the EPA's failure to take the action and by the NMFS's violation of the ESA.

The environmental effects of Atlantic salmon net pens are highly controversial. Net pens are floating facilities that contain young and mature salmon in permeable enclosures, such as netting, in open water. Young salmon are placed in these net pens, given feed and antibiotics and other medications and treatments as necessary, raised to marketable size, and harvested for commercial sale. Due to characteristics conducive to commercial success, Atlantic salmon are the primary species raised in net pens. There are scores of Atlantic salmon net pens in British Columbia. Scientific studies have begun to document the extent of the ecological threats presented by the operation of Atlantic salmon net pens. These

threats include: escapement and colonization by Atlantic salmon as exotic species; breeding and transmission to wild fish, including native salmonids, of diseases and parasites, including sea lice; and the smothering of the benthic layer in the vicinity of the net pens by the waste food, fish feces, and other pollutants discharged by the net pens. Due to these concerns, the State of Alaska has banned Atlantic salmon net pens from waters within its jurisdiction. AS 16.40.210.

There are currently eight Atlantic Salmon net pens in the Puget Sound and all of their discharges are authorized by NPDES permits issued by Ecology. These eight net pens are situated at or about the following locations: Clam Bay adjacent to Rich Passage near Manchester, Washington; Fort Ward northwest of Beans Point in Rich Passage near Bainbridge Island; Rich Passage south of Orchard Rocks near Bainbridge Island; Deepwater Bay near Cypress Island; three in Deepwater Bay in the Bellingham Channel near Cypress Island; Skagit Bay near Hope Island; and northeast of Port Angeles Harbor south of Ediz Hook. The exemptions and other provisions of WAC 173-204-412 are incorporated into these NPDES permits.

Sea lice are small marine parasites commonly associated with salmon species. Sea lice latch onto wild salmon in the open ocean to feed on mucus, scales, muscle tissue and blood of the host fish. This can cause osmotic stress and emaciation, leading to mortality to a sufficiently infected host. Adult salmon are able to tolerate a small number of sea lice. However, juvenile salmon migrating from fresh waters to the open ocean are very small, thin-skinned, and therefore particularly vulnerable to sea lice. Sea lice occurrences on adult wild salmon in natural conditions are somewhat common. However, because sea lice cannot tolerate fresh water, sea lice drop off salmon as they return to natal freshwater bodies to spawn. Sea lice occurrences on juvenile salmon in the natural environment are believed to be rare in part because infected adult salmon are not naturally present in the near shore marine environment during times when juvenile salmon are migrating to open sea. Salmon net pens concentrate adult salmon in the near shore marine environment year round, which can increase the number of sea lice present. This can be devastating to juvenile salmon that migrate past the net pens to reach the open ocean.

The EPA failed to approve or reject the 1995 amendments for more than ten years. In November 2007, Native Fish Conservators notified the EPA that it intended to sue under the citizen-suit provision of the Clean Water Act unless the Agency promptly acted. If the EPA refuses to act and the NFC brings suit for injunctive and declaratory relief, what will the parties argue in their memoranda in support of and in opposition to the NFC's Motion for Summary Judgment? Remember to discuss both the ESA and the CWA in your answer.

2. Hobet Mining (dba Patriot Coal) allegedly has violated the effluent limitations for selenium found in the Clean Water Act ("CWA") permit (WV/NPDES Permit 1022911) for Hobet's Surface Mine No. 22, which is located on the border of Boone and Lincoln Counties, West Virginia. WV/NPDES Permit 1022911 was issued by the WVDEP on May 5, 2007. The permit limits discharges from the Company's surface mining operation into Berry Branch of the Mud River-a navigable water of the United States. When issued, the permit only contained monitoring and reporting requirements for selenium.

However, under the terms of a settlement agreement which resolved claims before this Court in *Ohio Valley Environmental Coalition, Inc. v. U.S. Army Corps of Engineers* (3:08-cv-0979), Hobet agreed to effluent limitations for selenium in WV/NPDES Permit 1022911. Consequently, the WVDEP included such limitations on Outfalls 001 and 002 of the permit, by permit modification, on October 28, 2008. These limits restrict the selenium concentration in the Company's effluent to a monthly average concentration of 4.7 µg/l and a daily maximum concentration of 8.2 µg/l. *Ohio Valley Environmental Coalition, Inc.* (OVEC) has complained that Hobet has and continues to violate these effluent limitations.

OVEC issued a notice of intent to bring suit on February 18, 2009. The notice identified alleged violations of the effluent limitations for the “discharge of certain pollutants, including selenium, aluminum and iron, into West Virginia's waters” associated with WV/NPDES Permit 1022991. Selenium is a naturally occurring element, which can be harmful when present in high concentrations. Excess selenium can harm the environment because it can affect the reproductive cycle of aquatic species and may eventually damage gills and other organs. Surface mining may contribute to high selenium levels because it exposes selenium bearing rock and soil to weathering. As a result, selenium is subject to regulation under federal and state versions of the CWA and SMCRA. The discharge of selenium is a persistent problem affecting West Virginia's coal industry, not just Hobet and other operating subsidiaries of Patriot Coal Corporation. Hobet continues to exceed the effluent limits for selenium under Permit WV1022911, sometimes by less than one microgram and sometimes more.

Hobet's consultant, CH2M Hill, has not recommended installation of the VSEP system the OVEC continues to advocate because it simply does not work. The system did not perform reliably in its pilot applications over the summer of 2009. Like other systems, it is subject to fouling which requires frequent chemical cleaning of its filters, creates an effluent of sterile water that can be harmful to aquatic life, and creates a waste stream that itself must be treated before disposal.

The WV/NPDES permit associated with Hobet's Surface Mine No. 22-- WV1022911--was added by WVDEP and Hobet to two paragraphs in the December 10, 2009 Modified Settlement and Consent Order (Doc. # 18-2) in an attempt to thwart citizen enforcement of the selenium limits that Hobet agreed to have added to its NPDES permit as a result of a settlement between OVEC and Hobet in a previous action.

In August 2009, Hobet sought to have the Boone County Circuit Court modify the September 5, 2008 consent decree in *Mandirola v. Hobet Mining, LLC* to extend its final compliance deadline for the selenium limits in the four WV/NPDES permits at issue in that case and in *Hobet I* by more than two years. The Boone County Circuit Court ordered Hobet and WVDEP to negotiate an Agreed Order to resolve Hobet's request. In response to that order, Hobet and WVDEP produced the Modified Settlement and Consent Order.

Without amending or supplementing the pleadings, WVDEP and Hobet improperly expanded the scope of the Boone County Circuit Court action to apply to Hobet's Surface Mine No. 22. The \$4.1 million civil penalty assessed by the September 5, 2008

consent order was not increased at all by the modification, notwithstanding the addition of two new permits and hundreds of additional violations. Under the Modified Settlement and Consent Order, therefore, Hobet will be assessed no penalties for violations of its permit limits in WV/NPDES Permit WV1022911. That is in contrast to the \$4.1 million penalty assessed against Hobet by the September 5, 2008 consent order.

Paragraph 12 of the consent order would impermissibly grant amnesty to Hobet for all of its previous violations of a limit on a toxic pollutant. Moreover, because there are no monthly average selenium interim limits, Paragraph 12 also grants Hobet amnesty prospectively for its future violations of the monthly average limits in its permit. Indeed, as a result of Paragraph 12, Hobet will only face stipulated penalties if its selenium discharges exceed 244% of the permitted daily maximum limit.

The stipulated penalty under the September 5, 2008 consent decree is \$1,000 per daily maximum violation. Hobet samples only twice a month, and only has one outfall on WV/NPDES Permit WV/NPDES Permit WV1022911 with selenium violations, Hobet's maximum exposure to stipulated penalties is \$2,000 per month. Data through September 30, 2009 shows that Hobet has not exceeded the interim selenium limits at Outfall 001 of WV/NPDES Permit WV1022911. It only reported one violation of the daily maximum limit in October 2009. Even assuming that it violates those limits twice monthly each month from November 2009 through June 2012, Hobet will pay \$65,000 in stipulated penalties.

If the Ohio Valley Environmental Coalition, Inc. brings suit for injunctive and declaratory relief, what will the parties argue in their memoranda in support of and in opposition to Hobet's Motion to Dismiss? What role should the West Virginia Department of Environmental Protection (WVDEP) have in this suit, if any?

3. The Court of Appeals for the First Circuit must decide whether defendants (USAF, FAA, & EPA) complied with various federal environmental laws that apply to the conversion of land on Pease Air Force Base (Pease) in New Hampshire to civilian use incident to the base's closure. The United States Air Force entered into a long-term lease of a portion of the base to Pease Development Authority (PDA). Concerned about the resulting effects on the clean-up of hazardous wastes on the base and the air quality in the area, the Conservation Law Foundation (CLF) and the Town of Newington, New Hampshire (Newington) challenged the Air Force's decision to lease the property and the support of that decision by other federal agencies. CLF and Newington contended that the Air Force and the Environmental Protection Agency (EPA) violated section 176(c) of the Clean Air Act(CAA), 42 U.S.C. § 7506(c) (Supp. III 1991), section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332(2)(C) (1988), and section 120(h)(3) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9620(h)(3) (1988). PDA, the State of New Hampshire, and several other interested parties intervened and, along with the Air Force and the EPA, opposed the relief sought.

In 1994 the district court found that the Air Force had violated NEPA and CERCLA and directed it to submit a Supplemental Final Environmental Impact Statement (Supplemental

FEIS), including a remedial design for contaminated parcels covered by the lease. The district court denied injunctive relief, however, and dismissed all remaining claims.

Acting under the Base Closure and Realignment Act of 1988 (the Base Closure Act), the Air Force closed Pease in March 1991. Located adjacent to Newington and Portsmouth, New Hampshire, the base occupies some 4,200 acres and comprises extensive facilities that supported Air Force operations, including a runway. PDA was created as an agency of the State of New Hampshire to acquire certain parcels of land within the base and to develop and implement a plan for their reuse. It ultimately developed a plan envisioning a commercial airport, light industry, various commercial uses, retail space, and open space.

In February 1991, the Air Force published a Draft Environmental Impact Statement (DEIS) on which CLF and the EPA submitted comments mainly addressing air quality concerns. In April 1991, the Air Force entered into a Federal Facility Agreement (FFA) with the EPA and the State of New Hampshire spelling out its environmental obligations incident to the transfer. In June 1991, the Air Force prepared a Final Environmental Impact Statement (FEIS). The FEIS stated that, although development under the plan, including the increased traffic it would generate, would not result in violations of state or federal air quality standards, it would have an impact on New Hampshire's ability to achieve the ozone precursor reductions required by the CAA. To resolve these air quality concerns, PDA, the EPA, and the New Hampshire Department of Environmental Services (NHDES) on August 1, 1991, entered into a Memorandum of Understanding (MOU). The EPA then issued its comments on the FEIS, stating that while the project would reduce New Hampshire's ability to achieve compliance with the CAA, the MOU provided a framework for compliance.

As required by the Base Closure Act, the Air Force then prepared its initial Record of Decision (ROD), documenting its decisions regarding the closure of Pease and the disposition of the property. The ROD addressed, among other things, environmental issues, including the CAA's requirement that the project conform with the New Hampshire State Implementation Plan (SIP) and CERCLA's requirement that the Air Force undertake certain remedial measures to clean up contaminated sites prior to the transfer of those sites to PDA. *See* 42 U.S.C. § 7506(c)(1); 42 U.S.C. § 9620(h)(3).

Because the PDA plan contemplated civilian airport operations, FAA approval was required under the Surplus Property Act of 1944, 50 U.S.C. app. § 1622(g) (1988) (subsequently recodified at 49 U.S.C. §§ 47151-47153 (Supp.1994)). In February 1992, the FAA issued a ROD approving elements of the plan and recommending that the Air Force proceed with its proposed transfer of property to PDA.

In March 1992, CLF filed this action in the district court, alleging that the Air Force and the EPA had violated the CAA and NEPA. In June 1992, Newington filed its action asserting the same claims, as well as a claim under CERCLA. These actions were later consolidated. CLF and Newington also filed petitions in this court for review of the FAA's February 1992 ROD, alleging that the FAA violated NEPA and the CAA. The petitions were stayed pending the outcome of the district court proceedings and are now before us along with the appeals from the judgment below.

While these actions were pending, the Air Force continued to pursue the administrative proceedings preparatory to the transfer. In March 1992, it issued a Memorandum for the Record updating its earlier conformity determination. In April 1992, it issued a Supplemental ROD in which it rendered its final determination concerning the disposal of the Pease parcels, including an acknowledgment that remedial action on contaminated areas had to be completed before it could transfer those parcels by deed. The Air Force then prepared a Preliminary Environmental Survey and, on the basis of the survey, issued its Finding of No Significant Impact (FONSI). In April 1992, the Air Force entered into a 55-year lease and contract of conveyance to PDA covering these parcels.

A letter prepared by an expert for the defendants concluded that Pease development conformed with CAA requirements. This conclusion was based on studies of air emissions completed by NHDES after the FEIS was issued. These studies compared baseline emissions from 1989 (during full-scale military operations at Pease) and 1990 (when the CAA amendments were enacted and some military operations at Pease had already ceased) with projected emissions to 1997. According to this letter, the emissions were not projected beyond 1997 because such projections would be too speculative and because by 1997 New Hampshire would adopt a new SIP to address any increases in emissions.

Based on this letter and other studies, NHDES concluded, with respect to ozone, that by 1997 emissions of HCs, ozone's primary precursor, would likely reach approximately 2.5 tons per day, the same level as Pease emitted in 1990, when military operations were less than full-scale. At full-scale, HC emissions at Pease had been variously estimated at 3.3 to 4 tons per day, which was still in compliance with the existing SIP. Overall ozone levels generated locally were expected to decline because older cars, which produce more HCs, were slowly being replaced and because "stage II vapor recovery at gasoline filling stations" was commencing. For these reasons, projections of overall ozone levels generated by the Pease area were expected to remain below the 1989 and 1990 levels through Phase I of redevelopment.

With respect to CO emission levels, the NHDES studies showed that, comparing 1989 and 1990 to 1997, Pease redevelopment would not result in a significant increase in the air quality region. And improvement of the intersection at Spaulding Turnpike and Gosling Road (Spaulding Turnpike/Gosling Road interchange) would significantly lessen CO levels locally during the period studies. The NHDES studies discussed in the expert's letter and the post-FEIS studies on the Spaulding Turnpike/Gosling Road interchange indicate that Phase I redevelopment activities would conform to the section 7506(c)(1)(B) criteria, as long as New Hampshire improved the Spaulding Turnpike/Gosling Road interchange as required. NHDES studies used 1989 and 1990 emissions estimates as the baseline for performing the conformity analyses. The EPA, Air Force, and the FAA adopted those studies in making their conformity determinations.

New Hampshire is committed to making these improvements because, as noted above, NHDES's conclusion that Pease redevelopment through Phase I meets the conformity criteria was based on the assumption that this interchange would be improved. *See supra* p. 1265 n. 6. Similarly the FAA's conformity determination was based in part on improvement of the Spaulding Turnpike/Gosling Road interchange.

Other air quality studies conducted by NHDES, however, suggest potential violation of the conformity criteria in later phases of Pease redevelopment, absent mitigation measures. With respect to CO emissions, the FEIS indicated that by the year 2010 redevelopment was expected to generate 68,000 daily vehicle trips into the Pease area. The main area of concern for traffic congestion causing emissions increases is the intersection of Spaulding Turnpike and Gosling Road. Post-FEIS air quality studies of that intersection indicated that, while construction of the new Spaulding Turnpike/Gosling Road interchange by NHDOT would bring the area into compliance with NAAQS for CO through the end of the decade, traffic volumes associated with Pease redevelopment and regional growth through the full build-out year 2010 could cause violations unless a second entrance interchange to Pease was constructed. Redevelopment would therefore contribute to new violations of the NAAQS for CO sometime after the turn of the century.

Similarly, an EPA memorandum dated July 24, 1991, indicated that, while Phase I of Pease redevelopment was expected to generate only 2.5 tons per day of HCs (a major ozone precursor), Phase II extending to the year 2002 was estimated to generate 4.8 tons per day. At that level, Phase II would increase existing violations, as well as delay attainment, of the NAAQS for ozone absent some other changes or the institution of mitigation measures.

The plaintiffs contended that section 120(h)(3) prohibited the federal government from transferring contaminated property until it had constructed, installed and is successfully operating clean up procedures and mechanisms that ensure full remediation. Although section 120(h)(3) by its terms applies to deeds, the District Court held that the transfer without an approved remedial design violated section 120(h) of CERCLA, and that the failure to disclose in the FEIS the decision to transfer by way of a long-term lease rather than deed violated NEPA. Although the court declined to hold the leases void, it directed the Air Force to prepare a supplemental FEIS delineating the remedial design. Newington contends that the relief granted is inadequate to secure compliance with section 120(h).

“The requirements of subparagraph (B) [of a covenant warranting completion of all necessary remedial action] shall not apply in any case in which the transfer of the property occurs or has occurred by means of a lease, without regard to whether the lessee has agreed to purchase the property or whether the duration of the lease is longer than 55 years.”

National Defense Authorization Act for Fiscal Year 1996, Pub. L. No. 104-106, § 2834, 110 Stat. 186, 559 (1996).

The District Court for the District of New Hampshire found in favor of the plaintiffs on its cross motion for summary judgment on its NEPA and CERCLA claims, it denied injunctive relief on the NEPA claim, and it dismissed the remaining claims. On defendants' cross motion for summary judgment, the District Court found that the defendants' reliance on the New Hampshire Department of Environmental Services' CAA conformity determinations was reasonable, and the project met CAA conformity requirements. Should the Court of Appeals for the First Circuit affirm, reverse, or affirm in part and reverse in part? Why?

Happy Summer!!!