

## Questions for Hyperion Resources, Inc. from Save Union County Committee

12.11.07

### AIR Emissions

Your website states: “All refineries produce emissions.” These questions seek to determine all **air** emissions and their annual amounts.

1. Your website calls this project “green.” All the residents in this area assume you will work hard to meet all the requirements of the law. Will you go above and beyond those requirements, as your website implies? How? Using what technologies?
2. Specifically, how many tons of the following criteria pollutants will your refinery emit into the air each year?

<u>Criteria Pollutant</u>	<u>Tons Emitted</u> (add a range if specific amount unknown)
CO	_____
Lead Pb	_____
NOx	_____
Particulate Matter	_____
TSP	_____
PM 10	_____
SO 2	_____
VOC's	_____

3. Greenhouse Gases: Because refining processes require heaters and boilers, your refinery will emit a great deal of carbon dioxide, CO<sub>2</sub>, which is the primary greenhouse gas. As far as I know, there are no salt domes, coal seams or depleted oilfields in the area, and other carbon sequestration processes are still experimental and very expensive per ton of carbon captured and sequestered.
  - a. Without these technologies, how will you minimize the emission of greenhouse gases?
  - b. Without carbon sequestration, how much CO<sub>2</sub> do you expect this refinery will emit per day assuming a 400,000 barrel throughput?
  - c. There are 6 greenhouse gases of concern. How much of each will the entire project generate?
4. BACT:
  - a. Isn't it true that Best Available Control Technology (BACT) is *required* for all emission points at all new refineries?
  - b. Your website is fuzzy about what BACT technologies you will use. What BACT technologies will you use?
  - c. Will you be open to negotiating them in the Title V air permitting process?
5. Heavy Metals and other Emissions:
  - a. Sour crude contains many heavy metals. What are these heavy metals, and how will you dispose of them?

- b. What other air pollutants (including all SARA III pollutants) will your refinery emit, and in what amounts each year?
- 6. Measuring Air Emissions:
  - a. Will you agree to use DIAL, SOF, or TCT technology to measure all air emissions, rather than limiting yourself to “sniffer” and Method 21 technologies that only estimate air emissions?
  - b. If so, which company and technologies will you use, and why?
- 7. What air pollutants will be emitted by the evaporation ponds? (quantity of each)
- 8. Will the air smell like other refineries? If so, for how far away from the plant?
- 9. Will you commit to have the flare operations covered by the permit limitations?
- 10. Have you researched the effect of these air emissions on farm land?
  - a. Will these emissions enter the food chain through crops?
  - b. State the research sources you use to assure yourself that air emissions will not pollute farmland, crops, gardens, and other food sources downwind from the refinery?
- 11. Will Hyperion promise South Dakota and EPA permitting authorities in writing that this refinery will be the cleanest refinery in the world for air emissions?
  - Yes \_\_\_\_\_
  - No \_\_\_\_\_

## **WATER**

1. Your website isn't clear about water sources. According to your timeline, you must apply for permits soon, so your plans must be nearing completion. Will the 9 to 12 million gallons per day your project requires be drawn from groundwater or from surface water? (Give the breakdown if both) If surface water, which river will it be drawn from: the Big Sioux or the Missouri? If surface water, how will you clean and treat it for use in refinery processes? How will the pipelines be configured and where will they be located? Where and how will the wetlands you indicated in the application be configured?
2. The Lower-Vermillion Missouri Aquifer is shallow and susceptible to contamination as a result. Your facility will overlie this aquifer, which provides drinking water to many local citizens. What measures will you take to protect the quality of our groundwater? Can you guarantee that, if your facility is responsible for contaminating it, you will clean it up to safe drinking water levels and in a timely way?
3. Will your refinery project include barge-loading facilities? Will you bring crude in, ship products out, or both? If you are planning for barge facilities, where will they be located—on the Missouri, I assume, and will you implement processes to protect the river in compliance with the 1990 Oil Pollution Act (OPA)?
4. To which body of water will you discharge wastewater and in what quantities per day? What specific hazardous and/or toxic metals and/or chemicals will be in the waste water?

5. If you plan to recycle process waters within the refinery, how will you clean and treat them before reuse?
6. What area of wetlands will be affected and where and at what rate will the mitigation take place?

## **WASTE**

1. Your proposed cogeneration plant will produce a large amount of slag, which will likely be classified as hazardous because of heavy metal contaminants. Where and how will you dispose of that slag?
2. Will Hyperion or its agents apply for an on-site and/or off-site hazardous and/or toxic waste disposal permit?
3. Will there be any solid waste land fill operations and or incorporation with soil?
4. Will you commit to having all storage totally contained including covers over all lagoons?

## **PROCESS AND OPERATION**

1. Will Hyperion actually build this project (using subcontractors, of course) and operate it? Or is Hyperion simply a development company that will hand over construction and operation to another company once permits are obtained? Who might that be?
2. Does your refinery design contain an alkylation unit? If so, what catalyst will you use? Sulfuric acid ( $H_2SO_4$ ) or hydrogen fluoride (HF)?
3. The process flowchart on your website shows no products heavier than diesel fuel. Since you'll be processing heavy, sour Alberta crude, won't you also produce heavy products like asphalt?
4. Much has been said about the great jobs this project will provide for local and regional residents. Will Hyperion import operators to start up the refinery for the first time, or will they train new operators from the local labor pool to do so? If you draw primarily from local labor, which will have no experience with refineries, how can we be confident that area residents will stay safe, both at startup and for the life of the plant?
5. How will you bring crude into the refinery? By pipeline? Have you started the permitting process for that? What route will the pipeline follow? What is the source of the oil?
6. Will you transport products out of the refinery by pipeline? By truck? By rail? Have you started the pipeline permitting process, and what is the pipeline's final destination? How many loading bays will your truck rack contain? How many rail-loading stations? Which products will be shipped by which means, and what percentage of products do you expect to sell in local and regional markets?
7. How will Hyperion and/or its agents use coal and/or coke in the process?
8. Will ethanol or any other bio-fuels be blended at the facility?
9. What are the specifics of the power plant? What is your definition of the IGCC process?
10. Will you commit to add the flair emissions to the air permit limits?

11. How will the vibrations be controlled to not affect a house 1/8<sup>th</sup> of a mile away?
12. How will the site lighting be designed and controlled?
13. How will CO2 sequestration be accomplished?
14. When will you furnish a complete flow chart of inputs/outputs for each vessel?

## **PLANNED DEVELOPMENT**

1. How does Hyperion define the “buffer zone”?
2. Why was the plan submitted not complete per current Planning and Zoning requirements?
3. Where are the pipelines, natural gas pipeline, water supply lines, rail lines, waste water discharge points to be located?
4. Where are all the air emission points located that will be required for the air permit application?
5. What is the intended timing of all the permit applications and expected review and approval schedules?
6. Why has the EIS (Environmental Impact Statement) that would that would be required by the pipeline (if not other items, not been completed and submitted)?
7. Why should the County give you carte blanche to set up the PD and make changes and/or expand without further County review and approval?
8. Why should you be able to create and sell parcels without County approval?
9. Why did you not maintain the 1-2 mile buffer zone previously proposed?

## **INFRASTRUCTURE AND SOCIAL SERVICES**

1. How many road changes will be required and who will pay for such and maintain them?
2. Won't this project increase taxes in adjacent counties?
3. Outline the required on-site fire protection systems, equipment, staff, and facilities. What effect will there be on the adjacent volunteer departments?
4. Has a traffic study been completed? If not, why not? If so where is it and/or how will the stated 100 trucks per day impact the present road system? How will an over-length truck make the turns off I-29 and make the subsequent corners on the way to the construction access?
5. What effect will this project have on the courthouse facilities? Who is to pay for such?
6. What effect will this project have on the required size of the jail and related sheriff staff and operating costs?
7. What increase do you expect for both the construction period as well as the permanent jobs/operation period on all surrounding school facilities (individually and collectively)?
8. How will the rail access be configured and negotiated?
9. What will be the lighting system(s) on site and how will they be controlled?
10. How will dust both during construction and operation be controlled?

11. What taxable valuation are you guaranteeing with this application?
12. What other social services will be impacted and will you commit to cover all cost increases required by your project for both facilities and staffing/operating costs?
13. Please outline the proposed housing facility.

## **GENERAL MISCELLANEOUS**

- 1.** What is new in your 193-page request for rezoning thousands of acres of prime South Dakota agricultural land for heavy industrial use? Please point out the features of your application that describe in specific detail what will make the Hyperion refinery “green,” that is, substantially different in design and operation, from existing modern refineries.
- 2.** Hyperion’s refinery will be powered by an “integrated gasification combined cycle” [IGCC] electric utility plant. Explain the use of this descriptor for a plant that will burn coke, and why you don’t use the term “coke” in your description.
- 3.** How does coke compare to natural gas as a clean, low-emission fuel?
- 4.** Since you have announced your intention to build in Union County, why do you persist in conveying the diversionary assertion that you have other sites under consideration? Why not list specifically where they are?
- 5.** Your application notes that “Best Available Control Technology” is mandated by the Environmental Protection Agency for all refineries. Thus, isn’t BACT actually the “worst available technology” that will meet federal regulations, and since you persist in asserting that your refinery will be “green,” and “environmentally friendly,” how will your technology be different from that employed by other comparable modern refineries?
- 6.** You use the word “minimize” frequently. You will “minimize” water use, light, noise and odor. Where are the specifics? For example, what will be the maximum decibels of noise at your boundary? What odors can we expect, and how far away will people smell them? How far away from the plant will the night sky be polluted with the refinery glare?
- 7.** The refinery will require “multiple pipelines coming into the facility.” These include a crude oil pipeline, a refined products pipeline and a natural gas pipeline. Where will these pipelines be constructed?
- 8.** The application says that Hyperion “intends to consider” alternative energy sources such as wind and solar. If this is a serious consideration instead of a public relations ploy, why is this statement so weak—intends to consider—instead of “will employ,” the phrase employed elsewhere in the application?
- 9.** Hyperion intends to discharge treated waste water back to the Missouri River through a wetland built along the Missouri River. How will this “wetland” differ from a waste-water lagoon, and exactly what will be in the water when it leaves that refinery that wasn’t there when it enters the plant?
- 10.** Will all polluted water be disposed of in the Missouri River, or will there be other on-site disposal or injection wells?
- 11.** “Surrounding roadways... will need to be upgraded in cooperation with state, county and township authorities.” Is Hyperion promising to pay for any and all infrastructure improvements required, including roads, and interstate highway interchange, railroads and other infrastructure enhancements? Will county and/or state or federal taxpayers foot any of the bill?

- 12.** Your site map shows that you intend to turn Brule Creek and the riparian zone on both sides of the creek into an industrial zone. How will this impact Brule Creek, its water quality and its flora and fauna? How is this consistent with current law?
- 13.** Your proposal calls for no height restrictions in the industrial zone. What will be the maximum height of buildings, emissions stacks and other protrusions from the facility?
- 14.** You propose that “no requirements or restrictions applicable to the refuse or waste contained within the zoning ordinance shall apply to (i) any solid, hazardous or other waste produced by permitted industrial operations; and (ii) the storage or disposal of any waste in accordance with state and federal approvals.” What “solid, hazardous and other waste” with the refinery produce, how will it be handled, and why should the citizens of Union County and of South Dakota allow you to pollute in ways that are otherwise prohibited by Union County ordinance?
- 15.** In section 702, you expect to retain the right to sell off any portion of the permitted industrial zone to “any person or entity.” This leaves the citizens of Union County and South Dakota open to any kind of “development” you might choose, doesn’t it, including a nuclear power plant, hazardous waste disposal, or whatever Hyperion might be able to turn a profit on?
- 16.** Isn’t it a bit arrogant and presumptuous of Hyperion to actually rewrite the county zoning ordinance and expect county officials to rubber-stamp it for you?
- 17.** It appears that what you really want is to be self-governing, above local law. Section 804 would actually mandate that “all ordinances or parts of ordinances in conflict with this ordinance are hereby repealed.”