

March 18, 2003

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and REGULAR MAIL

Tacoma, WA

Re: Coski Landfill

Dear [REDACTED]

I have reviewed a package of materials submitted by Kevin Foley at Baseline Engineering as well as faxed materials from Rudy Kolar at William Riley & Company concerning the Coski Industrial Landfill.

The "Coski Industrial Dump" is listed on the Washington State Department of Ecology's Hazardous Sites list. The site has gone through Ecology's ranking program and received a "five," the lowest priority on a one to five scale. This means that the chance of Ecology forcing any action soon is remote.

According to the documents I have reviewed, the site was operated as an illegal industrial waste dump from the 1960s until the mid-1980s. In some places waste is at least sixty feet deep. Waste included hazardous waste from Lilyblad Poligen Company, bilge oil from ships, fuel filter clay from U.S. Oil Company, auto fluff from General Metals, demolition debris (including sheet rock and wood debris), and other miscellaneous industrial waste. Recall that there were few environmental laws in place during this period of time and many industrial companies had little regard for what they dumped or where they dumped it.

During an investigation by Ecology in the mid-1980s, significant amounts of methane were discovered. In some areas the ground "was cracked deeply and had hot steam and methane gas rising out of it."

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Ecology's investigation also found PCBs in three of six samples. The soil concentrations were slightly above the residential standard of one part per million but below the industrial cleanup standard of ten parts per million. Sediment concentrations were above applicable sediment standards. Ecology concluded that "it is likely that there is off-site migration of PCBs." Heavy metals, including lead, cadmium, chromium, arsenic, and barium were also detected.

In an August 2001 report by the Tacoma-Pierce County Health Department, it was noted that "any pending [remedial] action [that will be required] as a result of Ecology's ranking this site would have to be completed before any development proposal would be considered." That report also noted that "methane gas migration could potentially pose a problem, especially if any future development occurs at the site."

As a result of this information, I have concluded that there are very significant environmental issues which must be resolved prior to proceeding to purchase the property. At a minimum, these would include an extensive Phase II site investigation and a geotechnical analysis analyzing the ability to develop structures on the abandoned landfill.

PHASE II INVESTIGATION

The data I have reviewed does not come close to adequately characterizing the environmental condition of the site. The problem with any landfill of this nature is that 95% or more of the material dumped there may be "non-hazardous" and not exceed any applicable regulatory limits (except for methane, discussed below). And there could be only one or two 55 gallon drums of really "bad" stuff (e.g. transformer oil containing PCBs). However, without any record of dumping practices or procedures, it is essentially impossible to tell where the "bad stuff" may be located. Therefore, at one level, no matter how comprehensive the Phase II investigation, and no matter how many samples are taken, you can never be assured that the results completely characterize any and all problems that may exist at the site.

Having said that, I believe it is possible to obtain an "adequate" characterization of the site from Ecology's perspective. Assuming that you have the cooperation of Mr. Coski, I think it would be possible to prepare a sampling scheme that would give a comprehensive picture of the environmental conditions at the landfill. Particular attention should be focused to the base of the landfill at the bottom of the ravine or any seeps of outfalls. The landfill has had at least 18 years to settle and hundreds of inches of rainfall have filtered through the mass of refuse. Therefore the base of the landfill should give the best indication of likely problems.

While I am not an expert on sampling protocols, it would seem to me, at a minimum, that you would need fairly extensive borings (which would also serve geotechnical purposes) to

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sample in place refuse at various depths. This will give you cross-sectional information and snapshots of discrete areas.

Prior to initiating the Phase II work, a meeting should be held with Ecology to discuss the sampling plan and to ensure that the amount and quality of data will be sufficient for Ecology review. The sampling plan and resulting data must be adequate to either:

- (1) establish that the site requires "no further action" under Ecology regulations (which would result in Ecology's issuance of a No Further Action letter following submittal of a report); or
- (2) sufficiently characterize the scope and extent of contamination so that a cleanup action plan (CAP) can be prepared that will meet with Ecology approval. The CAP will describe the remedial actions that must be taken. The Phase II must also provide sufficient characterization to provide a detailed cost estimate for remedial action


GEOTECHNICAL STUDY

Separate and apart from an environmental investigation, I would strongly recommend a geotechnical investigation of the suitability of the property for development. Presumably the same firm can conduct this work in conjunction with much of the environmental investigation work.

One area of overlap between the two studies is the possibility that methane generation continues and would have to be accounted for in any development plans. Methane generation may be limited to only certain parts of the landfill. Alternatively it may be fairly widespread, given that there was a significant amount of wood waste deposited in the landfill and wood waste decomposes at a much slower rate than residential garbage.

Methane poses unique problems for development. Methane is an odorless, colorless gas that is flammable at sufficient concentrations. Generally, it ~~must either be~~ vented or captured and destroyed (burned). Additional settling can be expected in areas with significant methane generation.

In short, I would strongly recommend that any potential agreement with the seller incorporate a lengthy feasibility period of as much as 18 months in order to allow you adequate time to perform the above investigations. There should also be language requiring the cooperation of the seller and access to any and all relevant information and data. Once the Phase II and geotechnical investigations are complete, you would still need to have formal discussions


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with Ecology and the City of Tacoma to obtain some level of preliminary approval or assurance that the property can be developed in an economically feasible manner.

I would be more than happy to review any sampling or work plans prepared by your consultants. In the meantime, if you have any questions, please do not hesitate to contact me.

Sincerely,

Bradley B. Jones

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cc: Warren J. Daheim

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