

MEMO

TO: Toby

FROM: Debbie

DATE: September 21, 1981

RE: Hooker - Telephone Interview with Consulting Company

Before I called the company, I went over some of the questions that you gave me with Jeff Rathbone. Most of the more scientific questions he did have answers to. The following are his responses to the questions which you gave me:

1. What quantities of waste (cubic yards)?

Jeff told me that the Hooker site was ^{500,000}400,000 cubic yards or 15 acres, and that it was between 0 and 25 feet below the surface. He said that in all of the case studies that he did, the sites were quite a bit smaller than the Hyde Park site. It seems from what he said that Hyde Park was really the largest site, and that no matter what, there will probably be an issue made of it. So in trying to cut down the questions to a manageable list, I decided that it wasn't worth while to ask exactly what quantities of waste were in the site being studied because it was sure to be less than Hyde Park.

2. What types of waste (eg. organic, highly toxic)?

Jeff said all of the sites that he studied were organic or highly toxic. He didn't always ask specifically if there were just dioxin. Sometimes he did ask though, and they didn't always know. I decided that this question would probably have to be asked.

3. Where are excavated materials taken to? (eg. removed to clay vaults; incinerated?)

This question would probably be a very difficult one to ask in the general sense. Chances are where the excavated material was taken to would depend on which site it was. The question would probably have to be asked in a site specific way.

4. Were precautions taken re. workers - health and safety (eg. protective clothing, other measures re. air emissions from the chemicals); how did they monitor - what criteria?

Jeff said that a lot of sites just didn't monitor. He said he has more information on the air monitoring equipment, in particular a machine by Siex called "Tagga". Jeff said that the Goose Farm case study he did would be the most helpful in this respect because they did do air monitoring, and because contamination levels were high at times. Jeff said they always use standard precautions: ① acid resistant suits, ② machinery have specially enclosed cabs, ③ long arms on tractors so that if a drum explodes the worker is further away; ④ a plexiglass screen also shields the worker in the cab; ⑤ burillium materials are used to prevent sparking.

In answer to the question "what criteria?", Jeff's case study says that benzene and toluene were used as indicators.

5. Cost of removal (unit cost - eg. per cubic yard)?

Jeff's written report dealt with this point. He says all of the case studies used as a demonstration of exhumation technology have smaller quantities of waste. The largest truly excavated site is the Picci|||o Site in Rhode Island; it contained 32,000 barrels. The total excavation and disposal cost of this site was about 3.5 million dollars or approximately 1 million dollars per 10,000 barrels. He extrapolated this figure and arrived with a clean-up cost for Hyde Park of 26 million dollars. However, he added that extra preventions necessary for this large volume, and the above ground portion of the site could raise the clean-up cost substantially.

6. ^{Why} How was the site excavated? (eg. result of a court action; if so, what details?) *No response*
7. What if any, was EPA's involvement? (i.e. if in New York, did New York issue a permit for the excavation?) (Find out details.) *No response*
8. Does EPA have a policy re. excavation that you know about? *No response*
9. What is the geology of the site (eg. clay, bedrock)? (Hyde Park is dolomite.) Location of waste with respect to geologic formations? Any aquifers under the site? *No response*
10. Were the wastes above or below ground?

Jeff says that he didn't study any case examples where wastes were above ground. All the cases he studied involved waste stored below ground.

11. Were other remedial strategies considered? Why were they ruled out in favour of excavation? (Purge wells, grout curtains, tappings?) *No response*
12. What equipment was used for excavation?

Jeff said that he dealt with this question in his report. He said that in most cases, ^{backhoes} were used. In some cases ^{backhoes} with a long arm were used if the material was volatile. The long arm helped protect the worker against explosions. In other cases of volatiles, he said roll-back sheets were used.

Questions 6,7,8, 9 and 11 were the questions which I concentrated ^{on} in the telephone interview. I also questioned extensively ^{on} the grout curtaining. The questions that you gave me were:

1. Does your company have experience using grout curtains as a remedial measure?
2. If so, what are the details (i.e. geology cost, quantity, etc.)?

2 contd. (eg. where, what type of site re. waste, quantity, composition, does it work for toxics, etc.?) Grout curtains can be made of bentonite clay, cement, or gels (asphalitic emulsions).