BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS,,	)	
	)	
Complainant,	)	
	)	
v.	)	PCB No. 03-191
	)	
COMMUNITY LANDFILL COMPANY, INC., an Illinois Corporation, and CITY OF MORRIS, an Illinois Municipal Corporation,,	)	
	)	
Respondents.	)	

RESPONSE TO RESPONDENT, COMMUNITY LANDFILL COMPANY, INC.'S MOTION TO CANCEL HEARING AND COMPLAINANT, STATE OF ILLINOIS' RESPONSE IN OPPOSITION TO MOTION TO CANCEL HEARING

NOW COMES the CITY OF MORRIS, an Illinois Municipal Corporation, by and through its attorneys, HINSHAW & CULBERTSON LLP, and for its Response to both the Motion of Respondent, Community Landfill Company, Inc.'s, Motion to Cancel Hearing and the Complainant, State of Illinois', Response in Opposition to same, states as follows:

1. As indicated in oral arguments presented to Hearing Officer Bradley Halloran earlier today, the City has and continues to maintain that it is essentially a putative, ancillary Respondent in this matter, essentially caught in a "cross-fire" between the Complainant State of Illinois and Respondent Community Landfill Company, Inc. (the entity which, even by this Honorable Board's admission at Page 14 of its February 16, 2006 Interim Order, conducted the day to day waste disposal activities at the facility in question. In turn, the City has made its position clear that it vigorously objects to having been found a party that "conducted a waste disposal operation" in this Honorable Board's Interim Order of February 16, 2006.

2. The City believes that actual prejudice will result to its position in this matter if this hearing is not continued until such time as Edward Pruim can be compelled to testify. The City has included Edward Pruim on its Witness List for the hearing in question (copy of such

witness designation being marked Exhibit A and attached hereto and incorporated herein by this reference and hereby served upon the parties).

3. Since (as established by the record in this matter) the cost of complying closure, post-closure financial assurance requirements runs literally in the millions of dollars, obviously since the State is claiming that the City is potentially responsible for such costs and expenses, it is essential that a full hearing be afforded to all parties, with all witnesses and all material evidence being received at that hearing.

4. As indicated in oral arguments presented to Hearing Officer Halloran earlier today, based upon its review of other depositions and other testimony given by the Pruim Brothers in other related matters, it fears that if only one corporate representative (i.e., Robert Pruim) is called in this matter that corporate representative will simply demurrer and defer to knowledge possessed by Mr. Edward Pruim (who is presently medically unavailable to testify in this matter at the hearing which is now scheduled). In turn, since Mr. Edward Pruim was the Treasurer and Chief Financial Officer of the corporation, and since closure post-closure matters by their very essence relate to financial issues, the City submits that it is absolutely essential that it be allowed to question Mr. Edward Pruim in detail as to why the parties find themselves in the present situation they do before this Honorable Board.

5. The City respectfully submits that its position in this matter is entirely consistent with this Honorable Board's Supplemental Order of June 1, 2006, which clarifies and expands upon the Board's Initial Interim Order of February 6, 2006. The text of that Order makes clear that (pursuant to Section 33(c) and 42(h) of the Illinois Environmental Protection Act), not only Board Member Melas, but the entire Board expects a full, complete and detailed explanation as to: (1) how the landfill facility in question found itself in the condition it did as of the initiation

of this enforcement action; (2) who was responsible for the condition of the landfill; (3) what (if any) further steps have been taken to address concerns raised by the State during the course of this action.

6. In response to the State's allegation that a "hearing" on the "proposed remedy" is necessary in this matter, the City notes that at Page 4 of the Board's order of June 1, 2006, the Board notes that the purpose of the Act (and the financial assurance obligations set forth therein), are to ensure that neither health nor the environment is harmed from the operation of a municipal solid waste landfill. The Board's June 1, 2006 goes further in noting that the Board must interpret the Act as it applies "...**in each individual instance.**" (Emphasis added). As indicated in oral arguments had before Hearing Officer Halloran earlier today, in his 106 page deposition, expert witness Devin Moose has indicated that based upon the current status of activities which have been undertaken at the facility in question, no eminent and substantial threat to the human health and the environment is posed by the facility in question. (See pp. 70-75). As noted by Mr. Moose in his deposition, the site is essentially closed, and for the past two years, site characterization and preliminary closure activities have been undertaken by the City (pending final resolution of the City's alleged status as a party responsible for the posting of closure, post-closure financial assurance) to assure that the human health and/or the environment are not harmed. (See pp. 76-80 and Moose Deposition Exhibit 8). As such, (and as noted by Mr. Moose in his deposition testimony), the purpose of the financial assurance provisions of the Act have been squarely met. In turn, accordingly, there is no immediate need for the conducting of a remedy hearing in this matter, and the more paramount concern is affording all parties a complete hearing on all issues and factors noted by the Board in its June 1, 2006 order.

7. In summary, the City wishes to again make clear that it does not take sides with or support one part or the other in this matter. Rather, the City's sole and controlling concern is that it be afforded a full and fair hearing on all the evidence which exist in this case.

8. In turn, it is the City's fear that if it is not allowed to examine the Treasurer and Chief Financial Officer of the Co-Respondent, Community Landfill Company, Inc. in this matter, it could be substantially prejudiced, and the tax payers of the City could face exposure for literally millions of dollars of closure, post-closure obligations without having been afforded the opportunity to fully and completely present its case. Put a different way, this Honorable Board has consistently held in hearings such as this that for its own benefit (as well as the benefit of each party to such an action) a complete and full hearing on all relevant evidence should be conducted, and that the needs of all parties for a complete and full hearing should be satisfied. The City would submit that the basic precepts of fundamental fairness established by this Board required nothing less.

WHEREFORE, the City of Morris respectfully requests that the hearing in this matter be continued until such time as both Edward and Robert Pruim are physically and medically able to testify in this matter.

Dated: 9/28/06

Respectfully submitted,

On behalf of the CITY OF MORRIS

Charles F. Helsten
One of Its Attorneys

Charles F. Helsten
Hinshaw & Culbertson LLP
100 Park Avenue
P.O. Box 1389
Rockford, IL 61105-1389
815-490-4900

AFFIDAVIT OF SERVICE

The undersigned, pursuant to the provisions of Section 1-109 of the Illinois Code of Civil Procedure, hereby under penalty of perjury under the laws of the United States of America, certifies that on 4-28, 2006, she caused to be served a copy of the foregoing upon:

Mr. Christopher Grant
Assistant Attorney General
Environmental Bureau
188 W. Randolph St., 20th Fl.
Chicago, IL 60601

Mark LaRose
Clarissa Grayson
LaRose & Bosco, Ltd.
200 N. LaSalle, Suite 2810
Chicago, IL 60601

Ms. Dorothy Gunn, Clerk
Pollution Control Board
100 W. Randolph, Suite 11-500
Chicago, IL 60601

Bradley Halloran
Hearing Officer
Pollution Control Board
100 W. Randolph, Suite 11
Chicago, IL 60601

A copy of the same was enclosed in an envelope in the United States mail at Rockford, Illinois, proper postage prepaid, before the hour of 5:00 p.m., addressed as above.

Danita Healy

HINSHAW & CULBERTSON
100 Park Avenue
P.O. Box 1389
Rockford, IL 61105-1389
(815) 490-4900

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS,,	)	
	)	
Complainant,	)	
	)	
v.	)	PCB No. 03-191
	)	
COMMUNITY LANDFILL COMPANY, INC., an Illinois Corporation, and CITY OF MORRIS, an Illinois Municipal Corporation,,	)	
	)	
Respondents.	)	

WITNESS LIST AND EXHIBIT LIST

NOW COMES the Respondent, City of Morris, by and through its attorneys, Hinshaw & Culbertson, LLP, and files its Witness List and Exhibit List, as follows:

WITNESS LIST

1. Devin Moose
2. William Crawford
3. John Enger
4. J.P. Pelnarsh Sr.
5. Robert Pruim
6. Edward Pruim
7. R. Michael McDermont
8. Joyce Munie
9. Blake Harris
10. Cristina Roque
11. Ellen Robinson

EXHIBIT
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12. Mark Retzlaff

13. Brian White

14. The City also reserves the right to call any other witness in rebuttal of any position taken by the State or Community Landfill Company in presentation of their respective cases.

EXHIBIT LIST

1. Any and all exhibits and/or information attached to any pleadings, motions or other documents filed for the record in this case;

2. Any and all documents, records, reports, information, and/or other tangible things referred to in all depositions taken and all discovery requests (and responses thereto) made in this matter;

3. Any and all documents on file concerning the Morris Community Landfill with the Illinois Environmental Protection Agency.

4. Any and all documents produced by any party in response to information riders attached to depositions notices or discovery requests (including, but not limited to all documents produced by the City of Morris in connection with the depositions of John Enger, William Crawford and Devin Moose).

5. The City also reserves the right to call any other exhibits in rebuttal of any position taken by the State or Community Landfill Company in presentation of their respective cases.

Dated: SEPTEMBER 25th, 2006

Respectfully submitted,

On behalf of the CITY OF MORRIS

Charles F. Helsten
One of Its Attorneys

Charles F. Helsten
Hinshaw & Culbertson LLP
100 Park Avenue
P.O. Box 1389
Rockford, IL 61105-1389
815-490-4900

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS,)
)
Complainant,)
)
vs.) PCB No. 03-191
) (Enforcement-Land)
COMMUNITY LANDFILL COMPANY, INC.)
an Illinois corporation, and the)
CITY OF MORRIS, an Illinois)
municipal corporation,)
)
Respondents.)

The deposition of DEVIN A. MOOSE, P.E., DEE taken before Linda A. Lance, C.S.R, R.P.R., a Notary Public in and for the County of McHenry, State of Illinois, taken at the offices of Shaw Environmental, Inc., 1150 N. Fifth Avenue, St. Charles, Illinois, on Wednesday the 2nd of August, A.D., 2006, scheduled at the hour of 1 o'clock but commencing at 1:10 p.m.

PRESENT:

STATE OF ILLINOIS ATTORNEY GENERAL
BY: MR. CHRISTOPHER J. GRANT,
Assistant Attorney General
188 W. Randolph Street, 20th Floor
Chicago, IL 60601
(312) 814-5388
appeared on behalf of Complainant;

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BY: MR. BRUCE A. KUGLER, Assistant Counsel
1021 North Grand Avenue
P.O. Box 19276
Springfield, IL 62794-9276
(217)-782-5544
appeared on behalf of Illinois EPA;

LaROSE & BOSCO, LTD.
BY: MS. CLARISSA CUTLER GRAYSON
200 North LaSalle Street, Suite 2810
Chicago, IL 60601
(312) 642-4414
appeared on behalf of Respondent Community Landfill Company, Inc.;

HINSHAW & CULBERTSON LLP
BY: MR. CHARLES F. HELSTEN
100 Park Avenue
P.O. Box 1389
Rockford, IL 61105-1389
(815) 490-4906
appeared on behalf of Respondent City of Morris.

PRESENT VIA SPEAKERPHONE:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
Ms. Christine Roque, Bureau of Land

- - -

INDEX OF EXAMINATION
WITNESS: DEVIN A. MOOSE, P.E., DEE

INDEX OF EXHIBITS

(Witness Sworn.)

DEVIN A. MOOSE, P.E., DEE,

having been first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. GRANT:

Q Mr. Moose, my name is Chris Grant and I'm with the Attorney General's office. I'm the attorney representing the State in this case. First, let me ask you, have you given a deposition before?

A Yes.

Q Approximately how many times?

A I'm not sure, six, eight, ten, twelve, something like that.

Q Have you ever testified in court?

A Yes.

Q And can you tell me in what cases you've testified?

A I've been in front of the Pollution Control Board. I have been in front of the City of Chicago in their, I think it's Administrative Law judge, I'm not sure if that's correct, and I have been in front of some other venues having to do with pollution control facilities that I don't recall at this time.

Q Do you remember if any of those were enforcement proceedings, in other words, enforcement action under the Environmental Protection Act, for example?

A Some of them probably were. I don't recall the specifics of them.

Q Were some of them also permitting types of hearings?

A Yes.

Q And in each case did you testify for the person who was seeking the permit as opposed to a government agency?

A No.

Q In what cases have you testified on behalf of a government agency?

A Although not part of a lawsuit, I represent many units of government. I've worked for nearly 60 counties in the State of Illinois, currently employed by over 20 municipalities in the State of Illinois. And some of them that come to mind as far as working for the jurisdiction as opposed to the applicant or the landfill owner, I include the City of Chicago where I was the City of Chicago's expert. I developed the City of Chicago's landfill regulations, trained all of their

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initial inspectors, and was an expert for the City of Chicago on numerous landfill siting issues, operational violations or alleged violation issues. And one that comes to mind was the Land and Lakes 122nd Street, Land and Lakes 130th. I have worked for other counties representing their interest also for probably dozens of different disputes.

(Exhibit No. 1 was marked for identification on 8-2-06.)

Q I am going to show you what's marked as Exhibit Number 1. And I believe you've identified this as your CV or curriculum vitae; is that correct?

A It is.

Q Why don't you hold onto that. I want to ask you about your education and experience and you've sort of started on that. So, why don't you generally tell me about your post-secondary school education?

A I have a Bachelor's in Science degree from the University of Missouri-Rolla. I have been involved in -- and that is a focus in and double major in geological and geotechnical engineering. Those are having to do with the study of soils and groundwater. I worked for a geotechnical engineer on and off from '77 through '83. Beginning in '83 I started working for --

Q Was that your first professional job out of college?

A Yes.

Q And just to clarify, was your degree in engineering?

A Yes, I have a Bachelor's of Science degree in civil engineering. I'm a Registered Professional Engineer in Illinois and nine other states. I've been awarded the level of Diplomat by the American Academy of Environmental Engineers with emphasis in solid waste engineering.

Q Can you explain what that means?

A It's a higher level of accreditation. It requires that you become a Registered Professional Engineer. It requires that you -- in all the things that entails. It requires, I think it's seven or eight years of experience as a Registered Professional Engineer, and then it also requires a passing of another written examination, extensive written examination in a particular area of expertise. It also then requires you to pass an oral examination by a panel of your peers. A nationwide panel of peers are assembled and you have a day long deposition like asking you different questions about your particular area of the industry. It also has

a continuing education requirement that I'm required to maintain. So, it's just a higher level of accreditation in the area of solid waste engineering.

Q How old are you?

A I'm 49 on the 22nd of August.

Q I was going to say, it's an awful lot of stuff. Are you from Illinois originally?

A Yeah, grew up in this area, lived here my whole life.

Q And where do you now reside?

A In St. Charles just outside of town.

Q Can you describe briefly your involvement with landfills specifically, permanent waste disposal facilities?

A Probably beginning in about the early '80's, I'm going to say '83 or '84, I became involved working on landfills predominately from a constructability and geotechnical aspect. At the time there were not very extensive regulations involved in landfills and my early landfill client was Waste Management, Incorporated. I had been retained by them on a more increasingly basis to help them with issues of construction dewatering, slope stability analysis, constructing liners and so forth. And some of my early assignments were the

Woodman Landfill, Settler's Hill Landfill, and a landfill in Danbury, Connecticut which was a big valley fill that I worked on.

Over the years I got more involved in landfills just because of the increasing scrutiny that they received, increased regulatory requirements. And I got involved in groundwater monitoring, hydrogeological evaluations of new sites. All of that delved really good with my educational background in geological and geotechnical engineering. And as I continued to get more involved, I'd say somewhere in the late '80's, probably '87, '88, somewhere along those lines, I pretty much converted full-time to environmental engineering. And the environmental engineering focuses in two areas, solid waste landfills and remediation type projects. And I participated in the development of the landfill regulations in Illinois in commenting and working with the scientific panel on that.

Q Who was your client at the time you were commenting on the development of the solid waste regulations?

A Solid Waste Agency of northern Cook County.

Q Were you involved in the case, the Balefill case?

A I am the senior project manager for that case. That's my project.
Q And you're currently employed with Shaw Environmental, Incorporated?
A Yes.
Q How long have you been with Shaw?
A We were acquired by Shaw approximately two and a half years ago.
Q When you say "we"?
A We were before that Envirogen. So, with Shaw two and a half years and its predecessors probably for nearly ten. So, I haven't quit work and moved. I just changed business cards, if you will.
Q And your business card says Director of Shaw Environmental. What are your responsibilities as director?
A My job is really to run the St. Charles, Illinois office. We have 30 employees here. We focus on solid waste and environmental remediation type projects. I'm also national director of solid waste planning for Shaw Environmental nationwide, and we're also the, if you will, go-to office for siting and development of new landfills or expanding landfills nationwide. We're currently working probably on six or

eight states including the Bahamas.
Q Out of this office?
A Yes.
Q Okay. You say you were involved in commenting on solid waste regulations. I assume that you're familiar with the solid waste regulations in Illinois?
A Yes.
Q And with the Environmental Protection Act --
A Yes.
Q -- and the requirements of it? Are you familiar with financial assurance requirements --
A Yes.
Q -- pertaining to landfills?
A Yes.
Q Have you ever assisted, either with Envirogen or in your professional experience, ever assisted in obtaining financial assurance for a landfill client or for a governmental agency or something like that?
A Yes.
Q Can you describe your experience with, specifically with obtaining financial assurance for landfills?
A Our experience, my experience in obtaining

financial experience[sic.] or financial performance or financial guarantees begin at the very beginning which in other genres is called an engineer's cost estimate. An engineer's cost estimate is used to develop projections of construction costs. In the landfill regulations that engineer's cost estimate is used predominantly in posting financial assurance for landfills and more specifically premature closure and post-closure care for landfills.
Q Let me separate my question a little bit because I guess there's two things I'm thinking of. One would be developing a cost estimate for -- that would be in compliance with financial assurance regulations, in other words, something that it essentially estimates closure and post-closure care, and the second -- the second part of that would be in actually working with the various mechanisms for planning financial assurance. So, let me split the question up.
A I understand the question.
Q Okay.
A And that is a necessary precursor for obtaining an appropriate instrument for financial assurance.
Q When you say that, you mean in coming up with

an engineering cost estimate?
A Yeah. The State requires that a professional engineer be involved in the process. So, that process of developing the cost estimate is done by a professional engineer and has to be certified by a Registered Professional Engineer. Nobody else has the authority in the State of Illinois to do that.
The second part is actually getting the financial institution, the bonding company, for whatever other mechanism of there which are ten, which is the financial part, to accept and use that engineer's cost estimate to get financial assurance. As far as the second part, we consult with financial institutions and I'll just go back to the Balefill example for example. In that case I think we issued fifty, fifty some million dollars worth of public debt for that project. I worked closely with the bonding agencies to verify the costs and revenue projections for those facilities and the issue of land comp. That's a public agency. On private type agencies, like a land comp, which it was at the time a greenfield landfill site owned by a small private developer, he seeked --
Q Where was that?
A That was in LaSalle County, Illinois. He

seeked two different types of financing. One is private institution financing as well as some municipal guarantees and we worked on those issues also closely with the financial institutions in posting that money and getting the financial assurance that he needed. So, the process kind of changes whether you're talking public or private. And with the large publicly traded companies we generally are involved in the, besides the engineer's cost estimate or estimating the cost, is working inside their internal pro forma. Each one of them have a separate model that they use so we work with them individually.

Q Is it fair to say that you really have an in-depth knowledge of the financial assurance process as far as post-closure, closure and post-closure care?

A Well, I understand how the cost estimates are put down. I understand the different mechanisms. I'm not an economist. I'm not an accountant but I clearly understand and I have a lot of experience in dealing with different institutions in getting through that regulatory hurdle.

Q Based on your experience as a consulting engineer, is arranging for financial assurance for landfills, in other words, with coming up with a cost

estimate and then looking for the best or maybe something that's a compliant way of meeting the regulations, is that normally the sort of thing a consulting engineer does for a landfill client?

A It's the type of thing we do but, you know, I can't speak for other consulting engineers. Some consultants have more capabilities and expertise than others.

Q Just -- I would like to quickly go through the process, based on your experience, of how -- of coming up with a cost estimate and in providing financial assurance. What I am thinking of specifically is your interface with, in Illinois, with Illinois EPA in coming up with a cost estimate that everybody agrees on. How does that process work?

A Normally it's fairly straight forward in Illinois. Illinois requires a premature closure cost estimate and that is, simply put, that point in time when the landfill would be most costly to close prior to its closure. And the engineer that's designing the facility, in this case it would be somebody like ourselves, estimates when that would be generally. It's at some relatively early point in the landfill's life when there is -- when the excavation and waste is below

grade. And we have to secure safe contours, close the facility with an engineered cap and potentially develop additional storm water related facilities. We come up with quantity estimates. We use a unit cost type method to come up with an estimated construction cost for a third party to come in and implement that work. We then do the same for post-closure care. After the facility is closed, the owner or operator are required to maintain closure care for a period of up to 30 years or more and that is monitoring costs, erosion repairs, repairs to the top cap and sedimentation basins. We then develop a cost estimate for a third party to perform that work and submit all of that to the IEPA for review, and we have always gotten our permits and got through that process.

Q I wonder if -- did we skip a step? Because the first thing you mentioned was premature closure cost estimate and then a post-closure care estimate. How about, you know, say a planned closure cost estimate, would that be the same as a premature closure or is that a number that you have to generate as well?

A A planned closer cost estimate?

Q In other words, just coming up with closure costs. And the only reason I ask is because you just

mentioned a premature closure cost estimate that would probably be the most expensive option.

A We talked about --

Q So, let me -- do you also have to -- do you also come up with a closure cost estimate?

A Well, I don't think it's necessarily something you interact with the agency on because facilities are closed as they're constructed normally.

Q How do you mean?

A There's a financial incentive and good operating practice standard that landfills should be closed as soon as practicable. You are required to post closure cost estimates -- I'm sorry, you are correct, and get some of that money back if you close the facility quickly. I mean for every piece that you close, you receive that money out of it, the closure cost care.

Q When you say closure, you mean like final closure, in other words, that portion of the landfill would have everything in place that it would need for closure?

A Yes.

Q Now as far as working with Illinois EPA and getting the numbers approved, and that's part of the

process, isn't it? In other words, you can't just come up with a number. It has to be submitted to the Illinois EPA for approval?

A Yes.

Q And for all -- for, say, premature closure, for closure costs and for post-closure care?

A Yes.

Q How is that done? Is it done always in a permit application?

A Umm, you know, I think it's also done under a, by a consent decree type process, but I think normally it's through a permit application.

Q So, for example, a landfill would be seeking a development permit or to open up a brand new landfill and in its permit it would, it would in that permit application process would have gone through this, estimating these costs for closure and post-closure? Is that accurate?

A Yeah, I think that's predominately the way it's done.

Q Okay. I am going to get a little more specific of what we are here for which is the Morris Community Landfill case. You are familiar with the ongoing or with the case that the State has against

Morris[sic.] Community Landfill -- for Community Landfill Company and the City of Morris?

A I believe I am.

Q And you've been asked to testify at the hearing in this case?

A Yes.

Q Are you aware that the liability has already been found by the Pollution Control Board in favor of the State?

A On certain aspects.

Q Are you aware that -- well, first off, are you aware of the hearing that's scheduled for October of this year?

A No.

Q Okay.

MR. HELSTEN: I haven't had a chance to tell him that. Why don't you tell him when it starts. I can't even remember.

MR. GRANT: I can't remember either. I think it's the last week in October. I think Tuesday through Friday are the dates to be kept open, the last week of October.

MS. GRAYSON: Maybe the 23rd.

MR. KUGLER: 24th.

BY MR. GRANT:

Q 24th through 27th. Are you planning on testifying at that hearing or have you been asked to testify at the hearing in the case?

A I have not.

Q Okay.

A If I had -- did, I forgot.

Q Okay.

A I don't recall as I sit here.

MR. HELSTEN: He will be asked. He was asked to testify when he thought it was earlier. I gave him earlier dates.

BY MR. GRANT:

Q Oh, okay. And are you aware that's -- that the purpose of that hearing is for the Pollution Control Board to decide what, if any, relief to grant the State?

A Um-hum.

Q Are you aware that the State's case has to do with the failure to provide adequate financial assurance for the Morris Community Landfill?

A Yes.

Q And you're familiar with the Morris Community Landfill?

A Yes.

Q I'll ask you a little bit about your familiarity with the Morris Community Landfill. You can just tell me when, and I'm done looking at the period from 2000 to the present, when you first became aware of potential problems or when you first became involved with the Morris Community Landfill?

A Being in the business I think I'll take liberty and maybe go beyond 2000 because I don't know exactly what recollections were before 2000 and what were after.

Q That's fine.

A I'm in the business every day and have some awareness of every facility in the state. Morris Community Landfill is well known to me before I was employed by the City of Morris. I understand who their customer base was. I understand that they were being operated by CLC and the, for lack of a better term, I'll call them the Pruim brothers. And I was in the late '80's writing the solid waste plan for Grundy County so I became aware of not only the facility but its volumes, its general compliance record. I knew that it was owned by the city. I knew it was operated by a private entity. So, there was probably more than a general awareness of precisely what was going on at that

facility. I may have even been asked, and I don't recall as I sit here, I may have even been asked by a private company to do an environmental audit of this site to take waste. We do a lot of work for large corporations that ask us to look at facilities before they direct waste to them. And I've looked at most of the facilities in the state in that respect and I just don't recall whether we did that in the '80's or not as I sit here. I was with another company at the time and I wouldn't have those records with me.

Q How long were you working with Grundy County on their solid waste plan? Do you recall?

A You know, I don't recall precisely. Developing a solid waste plan is usually about an eighteen month, at that time a two year exercise. So, I would say it was probably along those lines.

Q Would you have, would you have been aware of, say while you were doing that solid waste plan, about projecting capacity for waste disposal at the Morris Community Landfill?

A I probably was at the time, yeah.

Q How about permit applications, would you have taken a look at permit applications filed for the Morris Community Landfill during that period?

A Probably not, you know, it's not really a part, a necessary integral part of the planning.

Q As far as working on behalf of the City of Morris for the Morris Community Landfill, at what point did you become involved, not necessarily specifically for this case but say retained by the City of Morris, to do estimates or to do any work at the Morris Community Landfill?

A My real work at the Morris Community Landfill as it pertains to this case really occurred in December of 2004. I got a call from, a joint call from the Mayor and Mr. Helsten that they had been notified of an inspection that revealed some problems at the landfill, called me and wanted to retain me to help address or investigate those problems I think would probably be a better way to put it.

Q At the time was this, was Shaw Environmental the company at that time?

A Yes, I was with Shaw Environmental and specifically I got a letter now from Chuck Helsten dated December 14, 2004. I sent them a professional services agreement right about that time, so it was in December of 2004 that I was retained.

Q What specifically were you retained to do?

A I was to investigate the inspection that was done by the State, which was in October I think of that year, and to evaluate whether there's validity to it, how serious was it, and what the operator needed to do.

Q Do you remember what that inspection was about?

A Yeah, I have it right here if I may refer to it.

Q Oh, sure. And if you can identify the date of it.

A This is an attachment to our work proceeding letter which is dated December 14 from Hinshaw Culbertson who asked us to look at the attached production by the State of Illinois which included inspection reported photos by the inspector and that is what we received and were asked to look at. It's an inspection that's dated October 20, 2004, and it included violations for failure to take remedial action under a landfill post-closure care, maintenance, and inspection of the final cover and vegetation, and it had an ongoing list of violations, which I'll refer to, that included leachate monitoring, groundwater monitoring, gas monitoring, and closure, post-closure care financial assurance.

Q Can you -- can we take a look at this? I don't want to take a look at your letter but as far as the inspection?

MR. HELSTEN: Let me see what the cover letter says. The only thing -- well, this one is -- here's my dilemma with keeping the cover letter on unless everybody waives any claim that if I give you this letter I waive the attorney/client privilege.

MR. GRANT: No, I'm most curious about who the inspector was.

MS. GRAYSON: Make copies of the report maybe.

MR. HELSTEN: As Mr. Moose's cover letter simply says the mayor is requesting that Mr. Moose initiate a study as to what matter -- what steps need to be taken but I'll give Mr. Moose back the letter.

MR. GRANT: I mean this isn't really what the deposition is about so we don't want to spend too much time on it. Clarissa, if you want, I can find a copy of that and send it to you later on.

MS. GRAYSON: Maybe we can make a copy.

THE WITNESS: We can just make them here.

MR. GRANT: I don't need to attach it as an Exhibit or anything.

MR. HELSTEN: Well, it's relevant. It is the threshold of his involvement. The mayor was extremely concerned when he saw the report. Do you want to make copies of that?

MS. GRAYSON: That would be great if you don't mind.

(Exhibit No. 5 was marked for identification on 8-2-06.)

BY MR. GRANT:

Q I've got what's been marked as Exhibit Number 5. Is this the inspection report you're talking about?

A Yes.

Q And can you just generally describe what sort of problems or what problems were disclosed by the inspection report that you were asked to be involved with or to look into?

A I was asked to take a look at the alleged violations in the inspection report, get up to speed and then ultimately I was asked to advise the city whether there was any relevance or health and safety concerns attached to these alleged violations. And the alleged violations, I think I mentioned before, is failure to monitor gas, water, and this was under the post-closure care category, 22.17. And then it had an attachment

with what I think they referred to as ongoing violations which is in the back of the report after the photographs. And it had to do with contouring, cover materials, erosion gullies. It had to do with leachate monitoring, groundwater monitoring, gas monitoring, and financial assurance.

Q I think you said that you got the letter in December of 2004. When did you accept or when did you become retained by the city?

A We became retained in December of 2004.

Q What did you do after you became retained?

A We had to get the file. We had to get the file in its complete package. We visited the site. Obviously, we met with the people at the site. We met with the city. The city was basically unaware, in my opinion, of what was going on at the site. The operator, at least the person operating the site at that time, appeared to just lack the resources to implement all of the things and, you know, we ended up ultimately obtaining every 35 feet of historical records on the site.

Q When you say 35 feet, do you mean a 35 foot --

A The files put in file folders constitute

nearly 35 feet in length.

Q Where did you get the files from?

A The Illinois EPA. We had some of the files already in-house because we had FOI'd, F-O-I, filed a Freedom of Information Act request sometime earlier for another reason, and we refiled that request at some point, probably in December or January, December of 2004 or January of 2005. I don't recall when.

Q Did you meet with anybody from, any engineers who were working for Community Landfill Company?

A I personally did not. I sent representatives down there and we may have met them but not purposefully. We didn't schedule a meeting with their engineering firm.

Q Was their engineering firm Andrews Environmental Engineering at that time? Do you recall?

A I don't know if it was Andrews. The individual project manager is a man by the name of McDermott. For awhile he was with Andrews and then at some point he left and I didn't know exactly when he left, so.

Q Was Mr. McDermott the one who you met with or representatives of Shaw met with?

A I don't recall any of us meeting with him.

We may have met him just briefly but we never met him in the purpose of obtaining a lot of information that I recall. I never did.

Q Did you meet with anybody from Chamlin & Associates?

A I don't recall whether we did or not. I did not.

Q Do you recall meeting with Richard Schweickert?

A I know the name but I never -- I don't recall meeting with him for this purpose.

Q After you reviewed the file, what action did you take?

A We eventually made the conclusion that in certain instances the IEPA had valid concerns in the area of --

Q You're referring to Exhibit 5?

A Yes. In the area of leachate monitoring, I think that they for the most part were right that the leachate monitoring was not being conducted in accordance with the permit. In the area of groundwater monitoring, I agreed with the IEPA that they were in fact not doing all the groundwater monitoring that they are required to do as well as the gas monitoring. In

the areas of erosion control, what I saw and what we saw out there, there was some work that needed to be done but all in all it wasn't that critical. It wasn't a significant issue and none of it posed any real threat to the public health in my feeling. And in the area of financial assurance, I thought that the financial assurance estimate was completely off base.

Q Okay, let's -- now that inspection report that was provided to you, the 10-20-04 inspection report, did that have any, set any violations for financial assurance?

A It said under page four of the attachment, Roman numeral IX, right near the back if you will, second to the last page.

Q Oh, okay. I've got it.

A So, yes, it did.

Q And just going to that under Roman numeral IX, I see condition IX.1, Roman IX.1, I assume that's a permit condition but I'm not sure. It requires removal of excess waste, revision of the cost estimate for the removal of waste, and then in the next paragraph it says requires respondents to adjust the cost estimates for closure, post-closure and corrective action. Is that what you're talking about when you're talking about

financial assurance?

A Yes.

Q So, it doesn't specifically mention failure to provide financial assurance but really just talks about issues that would be related to financial assurance?

A Well, the last sentence says no application has been filed since the issuance. I guess you're correct in that but under the heading it says closure, post-closure care and financial assurance.

Q Sure. I guess this is a good time to get into the estimates of financial assurance. I think you testified or stated that you're familiar with the financial assurance requirements, how they're generated, how they're coordinated with the Illinois EPA permits, and that sort of thing. Prior to, say, 2004 were you aware of the amount of financial assurance required for the Morris Community Landfill?

A No.

Q And did you have any familiarity with the permitting process in the '90's where the financial assurance numbers were generated?

A Yes.

Q And how did you know about that?

A Just through my work on other landfills, not on this particular landfill that I recall, and I was doing work in and out of Grundy County. But as far as this particular issue, I just didn't have any recollection of previous knowledge of the site and specifically the financial assurance I don't recall.

Q So, prior to 2004 you didn't know the amount of financial assurance that was required?

A No. I mean if I did at one time, I don't recall it. There are publications that sometimes you can see it in different reports, but I may have seen it and not recalled it.

Q I assume that when you -- when you say you reviewed the file that you reviewed the permits, the Sigmot(phonetic) permits for the landfill?

A Um-hum.

Q And the closure and post-closure tier requirements that are contained in those permits?

A Yes.

Q And when I talk about the permits, I've got them here if you want to take a look at them, but it's 2000 -- I think it's 2000-155-LFM. As a matter of fact, let me not guess the permits I am talking about because these are the only ones really I think may be involved

with --

A Are you talking about the current permitted financial assurance?

Q Yes. Yeah, the two permits that I'll be talking about are 2000-156-LFM -- let's see.

A I think these are it. I just took the liberty to copy what I believe are the permitted premature post-closure care cost estimates for parcels A and B.

Q Okay. And what I'll be talking about is the one I just mentioned which is permit number, just for shorthand purpose I'll call it 156 is for Parcel B, and permit No. 2000-155-LFM, which I'll refer to as 155, for Parcel A, or maybe I'll just say the permit for Parcel A or Parcel B.

A Okay.

Q But since there's been a number of permits there, this is the one that I'm referring to. Anyway, did you review the two permits, the one for A and the one for B in 2004 when you were looking at the file?

A It probably was in 2005 by the time I reviewed it but yes.

Q And the closure and post-closure requirements that were contained in the permits?

A Yes.
Q And then also the amount of financial assurance that was contained in the permits?
A Yes.
Q Not getting back to what you said, you say it was your opinion at the time that the amount of financial assurance was higher than needed to be or --
A Well, I thought that the approach that was used to develop the engineer's cost estimate was (a) if it was implemented, would not necessarily be protective of public health, safety and welfare; (b) was really not a practical approach to the engineering challenges at the site, and in fact there were much better ways to approach securing the site then were proposed and ultimately approved in those permits. And I think it was really just a result of regulation interpretation that drove them as opposed to doing what was best for that particular piece of ground.
Q I wonder if you can tell me what specifically you thought maybe was improper as far as I mean the amount of financial assurances slightly in excess of 17 million dollars for both Parcel A and Parcel B and that's both closure financial assurance and post-closure financial assurance. What elements in that, if you

recall, were you specifically disagreeing with?
A Virtually every component. But I'll give you a couple of examples of not only did I disagree with the quantity of materials that were estimated but the actual work that was to be conducted. I'll just give you a couple of examples. The permit for closure required that the overfill in parcel, and I hope I get this right --
Q It's Parcel B.
A Parcel B would need to be relocated and the only space on this facility that had capacity to accept Parcel B overfill was in Parcel A. Interestingly enough, the agency reviewed the groundwater impact model for Parcel B and it passed. The agency reviewed the groundwater impact model for Parcel A and it failed. So, they were asking us to remove excess fill, just height not area, from Parcel B in an area that passed the model, pick it up and move it to Parcel A to an area that doesn't pass the model. It would be completely intuitive[sic.] to protection of the public health, safety, and welfare.
Q It --
A Counter intuitive I should say.
Q Yeah. Help me out with the groundwater

model. Please tell me what that is.
A The regulations require that the engineer develop a groundwater impact assessment, and that groundwater assessment is a computer model that is a valuable tool for an engineer. Too often times the tool is misused and misinterpreted and it becomes a little bit of wag the dog. In this particular case I think that happened. The model is meant to take the precise design of the facility and insert that design into the precise hydrogeologic regime at that site and model the behavior of the landfill over time. We do that on every site we work on and we're modeling every day. What has happened is some people have gotten, have lost sight of it as a tool. In this particular case, I don't think the model -- let's go back to what the modeling is. So, that's really what it's meant to do. In Parcel A the model failed which means the engineer or the operator's engineer was unable to get the model to pass. I don't know if that's necessarily a component of his resources, his capability, or the natural conditions. I have not checked that.
Q When you say "pass"--
A But --
Q I'm not going to interrupt you but maybe you

can explain.
A When it passes, it shows generally that you're not impacting groundwater within the zone of attenuation which is 100 feet from the waste at 100 years time. That's what we consider passing, simply put. The issue becomes if you're required to do inputs or a sensitivity analysis that takes on more emphasis than it ought to and those inputs no longer represent anything close to real world conditions.
Now let's go back to this particular site. In this particular site the owners -- I'm sorry, the operator's engineer was unable to get the model to pass. Why, I don't know. I did look at several input perimeters for the model, and I don't believe that the model in any way represents the conditions on the ground out there. Because he was unable to get it to pass, and although I did not participate in those negotiations with the State, my experience tells me that they pretty much just defaulted or some people might say threw up their hands and said, well, if you agree to, in this particular case, pump the groundwater and treat the groundwater, not the leachate, around the site for 100 years, we'll give you your permit. So, there are a lot of compounding in my belief and many more throughout the

site that we need to talk about. One is just the model. Does the model represent real world conditions out at the site? No, I don't believe it does. Is it the State's responsibility to model it for the operator? No. Why the operator chose to do what they did, I don't know. I wasn't there.

Having said that, I've also read some of the PCB decisions, and the PCB decisions seemed to be focused on pumping leachate. But if you go all the way back to the model and where this comes from, it's not actually *pumping* leachate. It's *pumping* groundwater and treating groundwater that are the big numbers in these closure cost estimates.

Q You're talking about --

A I'll give you just one example of why the model is not reflective of reality. The groundwater that flows under the model -- or I'm sorry, under the landfill is represented as one particular number in the permit application. That one parameter I have measured in the last year since my involvement and that one particular number that I was able to check is off by a factor of forty thousand times.

Q Are you talking about direction or volume of flow or --

A Rate, seepage rate under the landfill. So --

Q You think --

A -- changing one factor is an inappropriate way to look at the model. The entire model needs to be reevaluated if that were going to be necessarily protective of the public health, safety, and welfare. But I think that at this point it's just more of an academic exercise than solving the real problem.

Q When you first mentioned the model, you were talking about waste relocation. And I'm assuming that you thought the idea of waste relocation from a place where the model was suggested it would be in compliance or would pass versus moving it to someplace that was -- where it was questionable was not a good idea. I assume that's what you were talking --

A Well, I don't think moving the waste in this particular instance, knowing what I know now, I don't think moving the waste is going to protect the public health, safety, and welfare. Remember what I said is that what we are talking about here is an overheight issue and not a lateral spread because we're not increasing the footprint of the landfill as a result of that overfill, if you will. And really that landfill footprint doesn't present any increased risk to the

groundwater below. It has to do -- one of the components that you look at is the footprint or the *exposure* to the *ground* beneath. And because we're not increasing the footprint as a result of that overfill, I don't believe there is any measurable difference in the two. Moreover, exhuming waste and moving it is not without its issues also.

Q Do you recall when we started this way you were talking about the total amount of financial assurance at the landfill and why you thought it may be excessive, and the first example that you used was the overheight. Do you recall what component of the total financial assurance requirement was? And if you can just tell us what you are referring to.

A I am referring to what I believe is the current repermitted premature and post-closure care cost estimates for Parcel A and Parcel B, and I can't find it right now.

MR. GRANT: Do you know Chuck?

MR. HELSTEN: I know how much it is.

MR. GRANT: I do too. I'm wondering if we can save you some time.

THE WITNESS: I can't find it.

MR. GRANT: It's $950,000 I think.

MR. HELSTEN: It's around 950, 950 to 975.

MR. GRANT: And I think it was like $2 a yard to move it was put in the permit application.

MR. HELSTEN: If we're making statements, my recollection from my knowledge in this case --

THE WITNESS: I still can't find it.

MR. HELSTEN: -- is that there was an estimate of 300,000 plus cubic yards of overfill and there was a removal, exhumation and removal cost figure of $2 per cubic yard attached to that, slightly over that, ergo, you come up with 950, $975,000.

MR. GRANT: I think the amount of override we've always talked about is 475,000 cubic yards. That was in a permit app. from about 1996 on, so that's probably --

MR. HELSTEN: That would be the math then.

BY MR. GRANT:

Q Let's just assume that it was $950,000. So, going back to the total financial assurance amount, if your opinion was, for example, the overheight did not need to be *moved* or was a bad idea to *move* it that that would reduce it by $950,000?

A If you assume that I agree with the two bucks cubic yard. I've just done this within the last four years at three sites and it's ranged from $3.50 to $5.50.

Q I think at the time everybody was asking about it, but I think, I believe it's true that everybody, we just sort of settled on that and that was accepted even though there was, if I recall, a dispute as far as the adequacy of the $2 per cubic yard to meet it. But I believe, I think we can pretty much agree that the component that was put into the financial assurance total was $950,000.

A I recall that. I just for *some* reason don't have it in front of me.

Q So if, for example, if that was reduced, if that was removed from the total amount of financial assurance, it would be something in slight excess of 16 million dollars?

A If you were to accept those cost estimates, yes.

Q Sure. As far as -- let me ask you, what other elements in that cost, in the financial assurance amount do you believe are wrong?

A The groundwater pump and treat system for a

hundred years. I mean that's the big cost and I don't think it provides any measurable protection to the public health. I think that is simply a residual effect of the engineer incapable of producing a model that passed. So, let's assume -- and I think I do have that cost around in here. I saw it a minute ago. $101,000 a year or according to them 10.1 million dollars, I can think of probably a hundred things as I sit here that would be better to spend 10.1 million dollars on than pumping the groundwater at that site and treating it. The groundwater is very poor quality groundwater now. It is in a heavily industrialized area. It's surrounded by existing permitted landfills. It's got an area, an old coal mined area that has historical dumping on it since the 1940's. It's at best a Class IV groundwater. If the -- the water that we're measuring and monitoring in my opinion is not potable. There are no groundwater users in the vicinity of the site. Other areas on the site, if there is new development, can be served by municipal water which goes right by the front of the site. So, pumping and treating poor quality groundwater is a poor way to go.

Q Okay. Well, let's talk about treating leachate because the regulations require that leachate

be pumped and treated as well. If you're talking about treating -- about collecting and putting an effective leachate collection system, monitoring that -- or not monitoring it but collecting leachate and treating that for a hundred years, how would that change the cost as opposed to groundwater outside of the -- there were only -- let me back up a little bit. When you're talking about groundwater, you're talking about groundwater outside of the landfill?

A Yes.

Q Okay. How far outside of, say, the waste boundary, the waste disposal boundary was the plan?

A The design is a little ambiguous on that. I can tell you from how I interpret what they're proposing to do is to pump and create a cone of depression around the landfill so that groundwater will always flow in 360 degrees towards the landfill, which normally would require you to be within that zone of attenuation within a hundred feet or so of the landfill. I don't think that's a good idea at all. I don't think it's -- you know, I look at this as, I guess, much different than some of the decisions and proceedings that I've read. I think the most important thing to do is take whatever money is available and from who, that's something the

court will decide, but let's take that money and spend it in the most efficient, practicable way that has the best, biggest, largest positive impact for the environment. And as far as my client is concerned this is taxpayers' money.

Q Okay. Let me just ask you about the specifics. I understand -- hopefully we'll get into that. But as far as -- let me first ask you, when you say a hundred feet outside the landfill, do you mean a hundred feet outside the waste boundary?

A Again, I don't think the design was real specific about that but that's normally what I would see.

Q Okay. So, it could be within the actual property of the landfill but still be, but outside of the waste boundary?

A But you'll also be inducing a flow from the landfill at the same time.

Q I understand. Now is it uncommon to require a landfill owner to create a zone of attenuation so that the leachate doesn't have the possibility of flowing out?

A No, but I don't think that's consistent with what we just talked about. We're talking about apples

and oranges.

Q I thought -- that's what I thought you were describing and I'll ask you. When I say it's not uncommon, I mean for leachate treatment systems, long-term leachate treatment systems, isn't it generally preferred to have, to prevent a negative pressure so that the leachate will not -- will be flowing inward towards the leachate collection system as opposed to outward?

A Leachate collection systems, removing the leachate from the landfill and treating the leachate safely once it's removed from the landfill, is an appropriate, safe thing to do but that's not the same as treating groundwater around the perimeter of the landfill. And there's a significant difference, especially when you assume that a good cap is applied, in the volume of leachate treatment. Moreover, I think the board got that wrong also. I think there is a misunderstanding of the facts on the ground of what is being done where and by whom when it comes to leachate treatment.

Q The leachate treatment is really the largest single portion of the, of the closure cost, isn't that true, the 10.1 million I think?

A If you were to implement the plan that's permitted.

Q Yes.

A It's groundwater treatment at 10.1 million.

Q Okay. And for a hundred years, correct?

A Yes.

Q I may have asked this question but I don't know that we really got to it. As opposed to pumping and treating leachate if it was done appropriately as opposed to groundwater outside the landfill, and when I say the landfill let's talk about the waste boundary, as far as groundwater outside the waste boundary, as far as pumping and treating the leachate -- and maybe we better define terms here. When I'm talking about leachate, I'm talking about water that's run down through the waste itself or close enough to the waste itself that it's impacted by particulate matter or some sort of dissolved substance that might be in the waste in collecting that, is that pretty much -- is that how you describe leachate?

A Yes.

Q Whereas, groundwater would just be whatever is in either the shallow or the deep aquifer around the landfill?

A I agree.

Q In general it's a requirement that landfills in both closure and post-closure not impact the groundwater outside of the waste boundary; is that accurate?

A Outside of the zone of attenuation.

Q The zone of attenuation.

A Which is a hundred feet from the waste boundary in three dimensions.

Q So, what you're saying is the regulations require that outside of the zone attenuation groundwater may not be impacted and that's the purpose of the leachate treatment?

A Well, it's more than just impact because everything we do impacts but let's just say does not materially degrade. You can impact it at a level that's so slow it's unmeasurable but you might still be technically impacting it. But there are requirements within the regulations that demonstrate what level that, for lack of a better term, impact is allowed. But you have to meet that point at a hundred feet from the landfill.

Q If -- as opposed to collecting groundwater that is outside of the zone of attenuation as far as

treating, collecting and treating the leachate within the zone of attenuation for a hundred years, do you have an estimate of what that cost would be?

A Again, I think we've got a mix-up of terms.

Q I think we do.

A The leachate that's within the landfill cocoon. Groundwater is any water whether it's in the zone of attenuation and surrounded by soil particulate or whether it's groundwater that's outside the zone of attenuation and still surrounded by soil particulate. The area of groundwater within the hundred foot zone or the zone of attenuation has the regulatory ability to be -- have a higher level of impact than that groundwater outside of the one hundred foot zone. So, I think, I hope that helps with what my understanding of the different terms are.

Q Well -- right.

A Water and soil particulate within the zone of attenuation is not leachate.

Q Okay. And the plan that was submitted that you think was not --

A Usual.

Q -- was not well thought out, in other words, the one that's referenced in the permit and has the

financial assurance, the 10.1 financial assurance, I think you referred to it as a groundwater treatment?

A That's what it's called. That's not what I refer to, that's what it's called.

Q Okay. Based on your understanding of the currently permitted post-closure care plan, what would it be treating? In other words --

A I'll be honest with you, the volumes of documents that I have are less than perfectly clear and consistent. But, again, based on looking at them and based on my own experience, it appears to me that the IEPA said you can't get your model to pass. And this is -- I'm speculating here, you cannot get your model to pass, so you can't get your permit. If you want to get your permit with this particular design the way you're running your particular model, we want you to treat, pump and treat groundwater and that would give the IEPA the ability to say you're not impacting groundwater beyond a hundred feet because you're pumping the groundwater before or somewhere around that zone in order to prevent that. Is that clear?

Q Yeah. Did you see a diagram of the plans of where the wells would go, the collection wells?

A I don't recall a comprehensive design. I

might have seen a sketch or two but inadequate and with insufficient data to really warrant construction or conclusions from it.

Q Based on your understanding of that plan, the one that's currently permitted, how far off from the landfill is it collecting groundwater?

A I don't recall.

Q But you say that, and I guess this is where I'm confused, because what you're saying is you're saying that it required the collection of groundwater as opposed to leachate?

A Correct.

Q I still don't think we've come to a common understanding of what liquid we're talking about is treated under the current permitted plan versus what you're saying really is what should have been looked at.

A Well, the current permitted plan also includes leachate, includes leachate and groundwater.

Q Okay.

A But the big 10.1 million dollars is groundwater treatment.

Q But it's, they're all, they're both included in the same, the same figure?

A They're both in the currently permitted

post-closure care costs for Parcel A specifically.

Q Okay. And do you have an understanding of what groundwater as opposed to leachate is to be treated under the current plan?

A Yeah, it's going to be installing, and I'll try this again, it's -- leachate is liquid that's in contact with waste. Once leachate is defused or is deluded by and enters groundwater, which is water that's within a particulate soil mass, it may be contaminated or impacted groundwater, but I don't think it's fair to call that leachate anymore. So, that zone that needs to be -- leachate needs -- or, I'm sorry, groundwater needs to be withdrawn from, I think in order to be compliant with the regulations you would have to put those wells in at a spacing, at a depth, and at a distance from the landfill at some point so that you're pulling the groundwater out of the soil matrix so that when you get to a hundred foot away you can show there's no impact at that point.

Q And --

A And I don't know precisely what that is.

Q But one of the things that we talked about is creating a negative pressure or creating a zone of attenuation, in other words, so that there's no chance

or there's a limited chance that leachate is going to be migrating out because the pressure from the well system is going to be pulling it in?

A That's the currently permitted well system I assume you're referring to?

Q Yes, yeah. And one of the questions I asked was is it uncommon for that to be a requirement of landfills?

A Let's I guess stay with the State of Illinois because I think that was your desire previously. I don't think there are many facilities that I'm aware of in the State of Illinois. None of the facilities that I'm working on are doing that, maybe one or two. So, is it a standard remedial technique? Yeah. Is it common for operating landfills to employ that? I don't know what the 52 operating landfills in the State of Illinois that are doing it. There might be a half a dozen, or six, or eight, or ten. I don't know.

Q I don't know a lot of them myself but I know in Congress they do that.

A Well, there's a difference I think between Congress. Congress is trying to create a new more gradient facility. That's different. That's where you're trying to keep the leachate level below the

surrounding groundwater level, and that's a very common technique and a very proven technique. And I think it has a similar, similar physics behind it but I think there's a big difference between pumping leachate out and pumping groundwater.

Q One other question. Are you aware that at least in Parcel A of the landfill that that site was previously used for a municipal waste disposal?

A I just assumed it was but I don't really know who used -- who utilized the facility. Are you talking about what customers went there or was it --

Q No, about its actual use prior to, prior to the permitting, the 2000 permitting procedure. I mean to give you my understanding of it, it was -- would have been closed down for quite a period of time but it was formally a municipal solid waste landfill, in other words, garbage, municipal garbage was dumped.

A It's my understanding that it's been used for various kinds of dumping, including dumping and burning activities since the forties.

Q And do you know anything about the liner that may have been in place for that dumping, in other words, the dumping before 2000?

A Well, it was an old abandoned coal mine, coal

mined it since, since abandonment of the coal. There's an underclay layer that lies under the coal. We see that in virtually all coal bearing zones. So, that underclay that underlies the coal has no economic value, and that underclay is a fairly impermeable unit. What we see in this area and what we saw also over at Streeter not far from here is that underclay was left in place because it doesn't have any economic value and that the coal mine subsequent to extraction of the minerals backfilled with water, became some kind of local pond/quarry. And indeed my own interviews with local people confirm that in fact it did have water in it at one time. They pumped the water out and they started placing garbage of municipal solid waste. It was burned occasionally. None of that surprises me.

So, I doubt and I'm confident that there was no -- let me rephrase. I would be awful surprised if there was any compacted clay liner, manmade engineered type liner under it. My belief is it's probably underlain by the underclay of the coal which is there and the empirical evidence and the boring data that we have support this. And at some point in the '80's a liner was constructed over that previously filled area and meant to, I guess, make some type of an engineered liner

at that point.

Q When you say liner, you mean what was put at the top for that cap or a liner? How would you define that?

A I think it was really a liner. It was orbicul. Conversely, it would have been a cap for the old landfill. But it was compacted clay and synthetic liner over the old facility. Now separating the, if you will, non-regulatory disposed waste from the regulatory permitted waste might be one way to refer to it as.

Q Can we take a quick break? Can you give us a minute so that we can talk to Chris a little bit?

(A brief recess was taken.)

BY MR. GRANT:

Q We'll go back on. We were discussing the leachate and groundwater issues and that sort of stuff. Do you have an estimate, have you estimated or do you have an opinion on what the cost would be, the third-party cost, for treating leachate at the landfill for a hundred years?

A No.

Q Do you have an estimate or conclusion as to what the cost would be to treat leachate for 30 years?

A That I think I do have. For leachate

management which includes operations and treatment, $809,400.

Q And for what period of time is that?

A That's for 30 years.

Q So, that's treating all leachate facility --

A Monitoring the leachate and there's some other associated activities with that.

Q And in coming up with that estimate who did you use as the treatment facility?

A City of Morris, POTW.

Q Are you aware that the city -- about the regulations requirement for a third party, for the cost for a third party to treat the leachate, in other words, not an owner or an operator? I know I am saying that poorly, but not someone directly involved with the landfill.

MR. HELSTEN: Object to the form of the question, the assumption. It assumes facts not in evidence. With that, Mr. Moose, I've made my objection. You may answer.

THE WITNESS: I think part of the rigid interpretations of the regulations on this is probably what got us to this point to begin with. We have a sanitary line that's in the public right of way outside

of our facility that's currently accepting leachate from the facility. And to estimate the cost for something other then that seems completely illogical not only because it would be bad for the environment but it would take, theoretically if we were going to post financial assurance, money from putting it into the ground and giving it to some kind of financial institution. So, although the regulations do speak to that, I think there is -- I think there's a capability for the agency to interpret those differently.

Q Are you aware that the board has already ruled on the issue of whether a third party treatment estimate is required?

MR. HELSTEN: Also I'll object. I think it assumes facts not in evidence. But with that you may answer, if you know, Mr. Moose.

THE WITNESS: I have the board decision of February 16th. Is that the one you're referring to?

BY MR. GRANT:

Q Of this year?

A Yes.

Q No, it was a 2001 decision.

A Oh. No, I'm not aware of that.

Q In coming up with your estimate of $809,000

for leachate treatment, how much did you or what cost did you use, what charge did you use for the City of Morris to treat the leachate?

A We used, I don't know if I have that with me here. Sorry, I should speak up. I think it's .086 cents per gallon which is the contracted -- what I used is the contracted rate that they were going to charge CLC if they exceeded their amount. So, I got that out of their contract for operations to CLC.

Q Did you use that for the entire volume of leachate?

A Yes.

Q So, you didn't give them credit for any pretreatment?

A No.

Q You have -- do you have any knowledge about what other landfills pay for leachate treatment charges?

A Generally.

Q And in general terms how does, how does that .086 per gallon compare?

A It's probably less than they charge private sector operators but it's probably very close to what their actual costs are.

Q Do you know what the City of Morris charges

private sector operators for leachate treatment?

A I don't recall as I sit here.

Q Did you take a look at that number? Did you review that number?

A I've looked. I may have. I don't recall it as I sit here. My own experience is it can be anywhere from as low as a penny and a half per gallon to -- or less to, I've seen up to five to six cents a gallon.

Q Okay. And just so I have this written down right, you said -- I have .086 per gallon. Is that .086?

A Let me find it.

Q In other words --

A Less than a penny a gallon.

Q Okay. Did you -- just so that I understand it, you did not come up with an estimate based on a third-party cost, in other words, for somebody else besides the City of Morris to treat it?

A No, it seems not practical or impracticable to me. It also seemed like --

Q It was really just a yes or no. Were you able or have you come up with an estimated cost of closing Parcel A and B of the landfill?

A I've come up with my own estimate, yes.

Q And what is your estimated cost of closing the landfill?

A I hadn't quite broken it down that way. I had it really broken into four different tasks.

Q I'm going to get into the details on the tasks themselves, so.

A What do you want by closure?

Q An estimate of the cost of closing the landfills in conformance with their permit and let me modify that a little bit.

A Okay.

Q Because we've already sort of identified that there's some issues with waste relocation, but assuming no waste relocation from Parcel B to Parcel A, the cost of performing the closure tasks that are called for in the two permits.

A No. I thought they were completely impracticable and unprotective of the public health.

Q The closure costs themselves?

A Yeah, the whole approach.

Q Have you come up with an alternative plan or an alternative closure plan, in other words, not necessarily what's in the permit, and have you come up with the costs for that plan?

A Yes.
Q What's your estimated cost of closing Parcels A and B?
A Total cost is right around 10 million dollars.
Q Okay. That's not post-closure?
A Including post-closure.
Q Okay. Taking out the post-closure aspect, post-closure care aspect of it?
A Be about 8.4 million.
Q And I'm going to assume that the post-closure is the balance of that. So, what do you calculate as far as post-closure care?
A Roughly 2.6 million.
Q And the post-closure care, was that done from -- on a third party basis?
A Yes.
MR. HELSTEN: 2.6 or 1.6 Mr. Moose? I'm doing the math.
THE WITNESS: 2.6. So, I must have been off by -- it must be 7.4.
BY MR. GRANT:
Q Okay, about 7.4. So, the total closure, post-closure you believe to be about approximately 10

million dollars?
A Correct.
Q And of that 2.6 million is post-closure care?
A Correct.
Q Okay. You're going to -- I'm going to -- we're going to give you the opportunity to discuss some of the things and I want to know about what you think needs to be done. I think that was in your disclosure as far as the tasks that need to be done at the landfill. But at this point let me just ask you about financing the total of the 10 million dollars, the 7.4 and 2.6 million dollars. Your client is the City of Morris. Have you discussed the various tasks and especially the amount of money that's required to do these tasks?
A Yes.
Q Does the City -- can the City of Morris afford to do closure at a, say, 7.4 million dollars and 2.6 million -- well, the two, the post-closure care we can talk, we'll talk about that seperately. But as far as doing closure at 7.4 million dollars, can the City of Morris afford to do that?
A They tell me no.
Q Did they give you an idea about how much

money they could afford to spend?
A No.
Q As far as the post-closure care, then let's assume 2.6 million dollars of post-closure care, have you discussed that separately with them, in other words, can the City of Morris afford to put up 2.6 million dollars of -- to assure post-closure?
A No, I did not discuss it separately with them.
Q You're familiar with the regulations. Can you tell me how with, with the current financial assurance that's in the permit of 17 plus million dollars, if you wanted to, as you obviously think that's incorrect, how would you change the required amount of financial assurance?
A I would implement a plan that focused on instead of financial assurance a series of tasks that go to the --
Q Before you -- no, I understand. Before we get into that, and I'm sure we will, I mean you'll agree that currently the permits for the landfill require at least 17 million dollars of --
A I agree.
Q -- closure, post-closure financial assurance?

If you disagreed with that number and you wanted to legally, in other words, in conformance with the regulations in the Act, how do you change that number to a number that you think is --
A File a significant modification to the permit and try and change that number.
Q Has the city filed a significant modification permit application?
A Yes.
Q And when was that filed?
A Around November of 2005.
Q And can you tell me the current status of that?
A Currently we have a denial letter from the Agency on it for some numerous issues.
Q Denial letters up front are common in a permit application, aren't they?
A Yes.
Q Did it request modifications to it?
A You know, we just got the letter this week. I haven't had a chance to really dig into it. Again, that's not unusual. There's a denial letter in the interpretive process with the Agency is developed to resolve the outstanding issues.

Q Did you in your permit application submit a recommended number for financial assurance?
A Yes.
Q And was that the 10 million dollar number that you --
A For Parcel A I'm at 5.7.
Q And as you're going through those if you can split out the closure and post-closure that would be great.
A Parcel A I'm at closure at 2 million and post-closure at 3.7. And Parcel B I'm at closure of 5.1 and post-closure at 1.4. That puts the total of the two at around 10. This is not the same as the 10 million I referred to earlier.
Q And why isn't it the same number?
A Because on this particular number we were bound by the model and a few other things, but the scope of work for this particular one is more congruent I think with the regulations and not as protective as what I'll call our practical approach.
Q As far as -- just let me ask the question, as far as being protective of the environment, isn't it really the responsibility of the Illinois EPA?
A It's also the responsibility of every

Registered Professional Engineer in the State of Illinois. That's our first responsibility.
Q But it's also the responsibility of both landfill owners and engineers to conform with the regulations in the Environmental Protection Act; isn't that true?
A Well, certainly --
MR. HELSTEN: Objection. It's argumentative and I object to the form. You may answer Mr. Moose.
THE WITNESS: I think, you know, it's certainly an engineer's responsibility. As far as whether it's landfill owners or operators is another issue. I think that depends on who's responsible for what.
BY MR. GRANT:
Q The landfill operator does not have the choice of picking and choosing what regulations it can conform with; isn't that true?
A A landfill operator I agree.
Q And I mean it's a business and if you're going to be in the landfill business you have to follow the rules?
A If you're a landfill operator, you have to

follow the rules, that's correct.
Q Or if you're a permitted landfill owner as well?
A You know, let's take the case in front of us. I think clearly Morris contracted that responsibility to another party and then I think it's an issue of the law versus engineering.
Q But Morris has a permit that's issued to it as owner of the landfill?
A Morris is a -- all permits are co-issued between the operator and the owner. It's interesting that the permits specifically lists the owner separate then the operator as opposed to just requiring the owner. I read the PCB decision that indicated that Morris was an operator and I think that there's some material fact that they've misinterpreted, and I think they're quite wrong in their interpretation, respectfully speaking.
Q No, I understand. But -- I mean the simple answer is that the permit has a number of conditions which bind the City of Morris; isn't that correct?
A Well, you know, that's a legal question. I think it binds the operator and/or operator as I read the regulations. It doesn't say operator and owner. It

says operator or owner as I recall the regulations. So, I think it really has to do with who's responsible for what. The aspects of operation in my mind are clearly the responsibility of the operator, and what responsibilities the owner has I think is, if you have an operator is -- if they're different parties, I think is not necessarily the same.
Q But if the permit has a requirement that specifically says the owner or operator or the owner or the permittee, wouldn't that bind the owner of the landfill as well?
A If a contract is specifically executed that delegates all of that responsibility to another entity, I think it goes to that entity, otherwise, the contracts are of no value.
Q Is it your belief that a person can contract away their, with a private party, their permitted obligation under an Illinois EPA issued term permit?
A I don't know. I think that's a legal question.
MR. GRANT: Can you a give me a minute? You guys can sit. Let's go outside.
(A short break was taken.)
(Exhibit No's. 2 and 3 were marked

for identification on 8-2-06.)

BY MR. GRANT:

Q Let's get back on. I'd like to put in a couple of Exhibits. Let's get these out of the way. I have got Exhibits 2 and 3 which are copies of interrogatory responses from the City of Morris. Looking at Exhibit Number 2 which are interrogatory responses from -- I'm sorry, I mean Number 3. I want the supplemental ones which are interrogatory responses, Supplemental Answers to State's Interrogatories submitted on May 18, 2006. It says in disclosure "Interrogatory No. 3: Mr. Moose may also testify as to closure/post closure actions he proposes to be implemented going forward." Do you see that?

A Yes.

Q Have you developed an opinion about what closure and post-closure actions should be done at the Morris Community Landfill?

A Yes.

Q Let's talk about this. Essentially before getting into a lot of detail about it, if you could, is there a way to split the tasks out into separate things, maybe we can talk about them separately, in other words, leachate is one?

A Yes.

Q What general types of closure and post-closure activities do you think need to be done at the Morris Community Landfill?

A Well, as I indicated to the City of Morris, first we need to assess whether there's an immediate threat to the public health, safety, and welfare. And based on my visual inspection of the site and record review, I recommended to the City of Morris a series of actions that be initiated as soon as possible to better ascertain whether there is any potential public health threat. Those resulted in Morris retaining us to produce the three documents that I produced for you earlier.

The first was completed in July of 2005. The State alleged that monitoring of the landfill was not occurring in accordance with the permit, and after close evaluation of the facility not only was the monitoring not being completed in accordance with the permit, really the sanctity or the worthiness of the monitoring system was in question by me. And I asked for permission and received permission by the City of Morris to go out and evaluate the monitoring system. We looked at each monitoring well, located it. We purged the

well. We measured the depth. We wanted to make sure that it was still functioning. We compared that depth to existing geologic and hydrogeologic data to really assure ourselves that if we did obtain samples from these wells that the wells would be -- yield valid results or to the degree we were able to assure ourselves that they were. That report was given to the city in July of 2005 and since approximately that time the city has granted us permission to go in there and monitor those wells. It's important for me to understand the impacts from the facility, which the monitoring wells measure, in order to assess that potential threat.

Q Let me just for identification, is that the document that's titled Landfill Monitoring System Evaluation Report dated at the bottom July 2005?

A Yes.

Q And a copy of this has been presented to all parties today?

A Yes. And since that time we've been monitoring the landfill and now we've had four quarters of recent data, and prior to that I think our last data was in 2000 or 2001 so there is a significant data gap.

Q Is that being done by Shaw Environmental?

A Yes.

Q And as far as the monitoring parameters, are those the same parameters that are contained in the landfill permits?

A Yes. The second thing I wanted to do is evaluate the presence of the leachate in the landfill and the effectiveness of the collection system. That report was -- that request was approved by the City of Morris and that report was produced in September of 2005. And it evaluates from a leachate collection standpoint what has actually been constructed and how it functions and its functionality versus what was permitted. And that was important for me to understand the ability to withdraw leachate, how it was being leached -- handled at the site.

Q Can you describe generally the leachate collection system at Parcel A and Parcel B because I know that B was operated as a municipal solid waste landfill for a long time and it was an older landfill? So, if you could just give us an idea of one parcel versus the other.

A Parcel A -- well, let me kind of start with an overall statement. Leachate collection at the facility, both parcels, doesn't really meet today's

current operating standards. And what was permitted versus what was constructed there's a disparity and there's a lack of comprehensive as-built diagrams for us to figure out precisely what was constructed at each. Having said that, we did go, and it's explained in detail in the report what we did, to try and identify what was constructed. Understanding that some of the stuff is still underground and some of the evidence was based on less than total comprehensive understanding we did make our best guess of what was actually constructed. So, between what our opinion is, and this is set forth in the report, and what actually might be there, there's probably going to be some divergence.

Right now the leachate collection system at Parcel A is really pumping leachate out of several vertical manholes and putting it into the gas extraction manifolds to a central point where a simple contractor's pump is used to pump the leachate into a municipally owned sanitary line out front.

And Parcel B, its -- and there's paragraphs and so forth within this report. Parcel B they had some vertical extraction points and it has an overliner and perimeter collection system around three sides or maybe two and a half sides that appears to be constructed and

it gets incrementally increased over time. You know, without getting into more detail, I think that's generally it.

Q Yeah, I wasn't looking for detail, I was just curious about the issues from one to the other.

A The third thing I asked to do is in order to address the public health issues is to look at the landfill gas system. That report was put together and submitted in April 2006 on Parcel B. Parcel B is the west side facility. Based on our evidence that we had at the site, I didn't think landfill gas was much of a concern on the east side or Parcel A. So, we really looked at a couple of immediate things. First, we obtained the information as quickly as possible and ramped up on the site. Second, we received -- we recommended and ultimately received approval from the city to focus on the public health, safety and welfare in the area of monitoring, which is a critical factor to know, leachate collection and gas collection issues. From there we then developed a recommendation of what we would do to close the facility in the most productive, i.e., least cost, highest impact manner.

Q Did you investigate continuing to operate the facility? In other words --

A I didn't understand the question.

Q Was one of the options that you looked at in evaluating the problems out there continuing to operate Parcel A, which I think has remaining waste to full capacity?

A By CLC?

Q By anybody. Did you look at as one of your options continuing to dispose of waste at Parcel A? I don't mean today or tomorrow but as an option --

A Well, there was volume available but I didn't evaluate several things I think that are all part of that question. I didn't evaluate whether we had the contractual capability to do that. I didn't evaluate who might be best to do that, and I didn't evaluate precisely what the cost/benefit ratio of that might be over time, if that answers your question.

Q Sure. So, basically all of the conclusions that you have were based on closing the facility as opposed to continuing to operate it?

A I assumed closing the facility.

Q Okay. Did you -- how about in closing the facility, how about the standard closure tasks of putting in a final cover and grading and those sorts of things? We've talked about leachate and gas in sort of

assessing the immediate threat. Did you take a look at --

A Yes.

Q -- what would be required?

A We developed a closure approach that fell into five categories. One was the groundwater monitoring network. We wanted to do work on the groundwater monitoring network to make it more comprehensive and more reliable. We had recommendations under leachate management and monitoring -- let me back up. What we call groundwater monitoring network were tasks in the 100 series and all tasks connected to that we had sub 100 numbers. Series 200 numbers were leachate management and monitoring. Series 300 were final cover system and final land form. Series 400 were landfill gas and monitoring, and series 500 were post-closure care activities for 30 years.

Q And these were recommendations that -- I'm sorry, were these recommendations that you had come to conclusions of what needed to be done with all those where you developed a plan to deal with these?

A Yeah, these are my recommendations at least initially of what needs to be implemented at the site recognizing when you enter a project like this there's

going to be changes and surprises probably along the way.

Q Before you talked about closure costs, 7.4 million dollars. I think that's accurate, isn't it, your estimate of closure costs?

A Yes.

Q And also recognizing I think your two numbers were -- one was, and I asked you what your estimate of the cost of closure, it was 7.4 million dollars, and I think also you -- what I've got written down is that in your permit application that you submitted to the Illinois EPA you had closure costs of 2 million for Parcel A and for Parcel B 5.1 million. But I mean basically with the conclusion, your conclusions that you reached on what needs to be done in those five areas, is that where you came up with the 7.4 million dollar cost estimate?

A Yes.

Q So, a completion of these five tasks your estimate was 7.4 million?

A You're correct.

Q Right.

A No, I'm sorry. No, it was five tasks go to just over 10 million because it includes task five which

is post-closure.

Q Okay. That's funny, I didn't write that one down. Okay. Well, one through four is 7.4 million?

A Correct, and change.

Q Did you -- in coming up with these recommendations did you attempt to make sure that you were complying with the existing permit requirements?

A No.

Q I'm not talking about financial assurance so much as the listed closure requirements.

A Yeah. I think that's what we attempted to do in the permit application that's currently pending. For example, just to select one thing in part, the current application that's pending, it includes waste relocation. I don't believe that is a wise endeavor. That's not included in we'll call it the alternative closure plan.

Q As far as the groundwater monitoring network, what sort of work would have to be done to --

A Got it broken out in five general categories. We have to expand the groundwater monitoring network, increase the number of monitoring wells. Some of the monitoring wells that we found were damaged, unusable. We have an insufficient amount of up-gradient wells in

my opinion. So, we have about $28,000 worth of work for monitoring well installation.

Q And that's just closure, that's not post-closure?

A That's closure.

Q Yeah.

A I mean it's important for us to continually monitor the groundwater for us to make sure that our assumptions on public health, safety are always consistent. We have approximately $15,000 for groundwater well abandonment. We have wells that are damaged that could be a potential pathway. We want to abandon those wells and seal them up and do the appropriate permitting with the IEPA to do that.

There are repairs that are needed to existing wells, wells that can be brought back to life with some minor work with about a thousand dollars for the repairs.

And we want to establish a groundwater management zone around the landfill versus the current no groundwater attenuation area. In this particular area, because it's an old abandoned coal mine, that it's got a long history of dumping that in certain constituents the up-gradient parameters or constituents exceed the

down gradient because we have a land use that's in and around a facility of highly industrial, because we're not using the groundwater and because the groundwater is not potable anyway, this is I think a perfect application for utilization of a groundwater management facility. And then we've got ongoing groundwater monitoring during the period of closure. So, that groundwater monitoring work is right about $69,000. The task two work --

Q Let me just -- as we go through these I'd like to get an estimate about how long you would think you would estimate it would take to complete these tasks too. I don't know if this is maybe the right one to ask on.

A I think probably we have a schedule of implementation but you wouldn't necessarily do all the groundwater monitoring and then do the next. It's all done at different times.

Q Right.

A So, we have a year to year schedule of what we would do each year and what the costs would be for each year. For example, you would want to -- well, let's get into the next one. Task 200 level is leachate management.

Q Sure, let's move on to that topic.
A That's task 201 is to complete the leachate collection system. We need to develop a system where we can extract the leachate from the facility. Leachate is one of the primary potential threats, and that's about $701,000.
Q What's the current status of the leachate collection system in your opinion at the landfill?
A It's set forth in our report which you have a copy of. I don't believe it meets today's operating standards. I think currently I saw no evidence that it poses an immediate risk to the public health but it needs significant work. You can tell by the dollar figure alone. There's a significant amount of infrastructure that needs to be invested in the landfill in order to efficiently and comprehensively extract the leachate from the facility.
And then prepare a construction quality assurance report, again, we have in this reporting responsibilities and costs to report to the IEPA the completion of each activity to demonstrate that the activities were done in accordance with the approved approach. So, we've got about $746,000 worth of leachate infrastructure investment.

Q You previously mentioned $701,000.
A That was just for the collection system. I've got another $45,000 of other tasks here that are minor.
Q Okay.
A Final cover system and the final land form, the issue out there right now is nobody knows precisely how much soil cover is on top of specifically the west side portion. Based on visual evidence at the site, there are some fairly deep erosion gullies. But those deep erosion gullies, although they pose an issue of lack of maintenance, what I'm able to tell from them is that there is a fairly thick cover of soil over that facility right now which is a good thing. And the areas that I've looked at, I've seen certain areas where there's over two to three feet of soil existing over that site. But nobody knows what's there, and in order for us to design a cover system that is respectful of the taxpayers' money, which I'm assuming Morris is spending the money, we should evaluate what's on that cover system and utilize whatever we can of that cover system as opposed to just the assumption would be that it's not there at all. So, we have $50,000 to go out and probe the cover system at fairly tight intervals to

identify what's out there. Now we have seven, $7,500 to design a cover system after we know what's there, and then design the final land form and storm water management system, which is really tying in all the contours of the site, of about $10,000. For actual construction of the final cover, storm water management system, all the earth work if you will, we have 5.6 million dollars. So, the final cover system we're running just about 5.7 million dollars.
Q And these numbers including both A and B, right?
A Yeah, A and B.
Q So, of the 7.4 million, 5.6 is what you estimate to be the cost of putting in the final cover?
A Yep. We have landfill gas management monitoring that includes evaluating the gas on Parcel A, design Parcel A gas management system, complete the installation of Parcel B gas management system, install and construct the landfill Parcel A gas management system, and then repairs to gas probes, and then conduct ongoing landfill gas monitoring. So, we have about $841,000 worth of landfill gas construction work that's necessary.
Q How does that $841,000 compare to other gas

management systems at other landfills based on your experience?
A We do a lot of other landfills so I think acre for acre it's similar. We've got about 85 acres of footprint here. So, it's not, it's not a small closure activity, if you will. And then the final is post-closure activity.
Q Let me stay on the gas management just for a minute. What control device were you contemplating?
A The first task is actually landfill gas evaluation. We'll actually go out and do a study of the landfill and identify how much gas is there, the quality of the gas, and then make a recommendation on what's the best way to treat the gas.
Q So, you haven't decided yet which control mechanism?
A We just made assumptions. My assumption is that the west side is probably on the downhill side of the curve and there's probably not much on the east side. We could be wrong by that but you really need to go in and, you know, put a probe in and see what we got, see what the quality and quantity of the methane is and then do a pro forma and see whether or not it makes sense to just flare it, incinerate it, or go to gased

energy.
Q Let me get you mad and back you up a little bit.
A Sure.
Q There's a question I wanted to ask you.
A It takes a lot to get me mad.
Q I only got three hours. Maybe I can do it.
A You can take all night, fine with me.
Q I just wanted to ask how long you thought, based on the findings that you came up with for the leachate collection system, how long would it take to construct the leachate construction collection?
A Well, it's really not necessarily a question of how long it's going to take. There's a series of events and approvals that have to occur. So, it doesn't make any sense for us to design a cap until we go out and do the probes and figure out what's there. We had scheduled beginning with this fall -- well, we've got this summer ongoing which is complete, the routine groundwater monitoring, complete the leachate monitoring, continue the landfill gas monitoring, and then the annual reporting that's required under our permit.
Beginning in the fall, if we were going to

implement our alternative plan, we recommended another roughly a hundred thousand dollars work this fall which included establish the groundwater management zone. If we don't get that established and agreed upon with the agency early on, it changes all other factors. So, it doesn't make any sense for us to rush out there and start plunking dirt in the ground until we understand what we're doing. We've got the groundwater monitoring work to do this fall, the gas monitoring probe repair. And then, like I said, probe the landfill to figure out what we have out there.
Q Right.
A Then we have work scheduled for the winter of 2006 and 2007 and we broke this into seasons purposefully. There are certain activities that don't lend themselves very well to summer work and there are certain activities that don't lend themselves very well to winter work. So, we tried to stage things in a logical order and then have earth moving activities occur in the spring and summer versus starting it in October.
Q Um-hum.
A We're looking to get the lay of the land. And that really has us beginning work this fall and

going on for a period of six years until ultimate closure.
Q Can you just -- you may have done so, but can you clarify what work has been done as of today?
A We have done annual reporting. We've gone out and assessed the groundwater monitoring network. We have implemented groundwater monitoring. We've gone out and assessed the landfill gas system including the landfill gas monitoring system and implemented landfill gas monitoring.
Q Can you explain, and I hate to keep interrupting, but can you explain what you mean by landfill gas monitoring?
A We are required under the permit to monitor landfill gas in the landfill and around the perimeter of the landfill on a monthly basis.
Q Is that the surface scans?
A It's surface as well as subsurface.
Q So, it's like oxygen content, methane content, and those sorts of things of the gas itself in the wells?
A In the wells, right. And that had not been done reportedly or allegedly by the IEPA. We went out and looked at the probes and found them, figured out

which ones we could use, which ones we couldn't, and began the monitoring system. We began monitoring what we could.
Q Your monitoring is monitoring of the gas probes themselves?
A Correct.
Q Not of the wells?
A Well, there's gas probes around. Wells are monitoring wells. Now we also started monitoring of the gas -- or the groundwater monitoring wells.
Q Okay.
A And then we've also evaluated the leachate collection system, what's there and what needs to be done to the best of our ability to understand that.
Q Have you done any construction out there or installed any, anything at the landfill, any wells or any --
A No, we have not participated in any construction activities. We have not participated in any cover repair. We have not had any city employees other then maybe the mayor or something standing at the gate, entering the site and doing any of the activities. I was instructed to go look at that inspection report, identify what's there and report back as quick as

possible on health and safety issues, and my recommendation that these were areas that I needed to understand before I could make an opinion on health and safety.

Q As you know, obviously, Community Landfill Company is the operator of the landfill pursuant to an agreement with the city?

A Yes.

Q Does the agreement permit the city to come in and do any construction work? In other words, does the city have access to the site to do any construction work or any major work at this point?

A You know, I know what the intent is. If you're asking me for an interpretation of the contract between the two, I think that's probably beyond the scope.

Q If the city, for example, the city wanted to go in and install a new gas system today could they, based on your understanding, could they go in and do it?

A I don't know.

Q Did you deal with that whole access issue, or the contract issue, or the lease issue in your recommendations?

A I wouldn't say the lease issue. There was an

access issue at the beginning of whether we did have permission to get on the site and do that. In my recollection there was a little jousting of whether we had permission to go on the site and do our observations.

Q Were you denied access at any point?

A I don't recall specifically. I know there was some discussion about it.

Q So, I think as far as I'm concerned you discussed the groundwater monitoring network and the leachate management system, the final cover, the cost on it, and the landfill gas. How about -- is there anything specific as far as post-closure activities.

A Yes. We recommended -- well, we categorized them into four large areas of activities including routine inspections and maintenance, this is for the entire 30 years, of about a little over $401,000; routine groundwater monitoring at 1.3 million; routine leachate management and monitoring at $809,000; and routine --

Q I wonder if we can start over because you're giving the numbers I was going to ask about.

A Too fast. The routine inspections and maintenance, $401,000; routine groundwater monitoring at

1.3 million.

Q Okay. Yeah, I think you said 3 million.

A Okay, sorry.

Q Okay.

A Conduct routine leachate management and monitoring, $809,000; and conduct routine landfill gas management and monitoring at $110,000, for a total of a little over 2.6 million.

Q Okay. Now the current permit calls for the groundwater treatment and leachate treatment for a hundred year period but you -- and you've used 30 years as your estimate?

A Right.

Q Why 30 versus 100?

A Because I don't believe there's any scientific evidence that warrants (a) pumping groundwater for a hundred years; (b) pumping and treating leachate for a hundred years. I'm not seeing the evidence to do that. I think, you know, the way that those numbers came about I think you have to understand the permitting process and specifically the groundwater modeling process. And I think if you go back and look at how the model was put together and the iterations that went back and forth, I think they just

defaulted and said we'll do that just to get the permit. That doesn't necessarily make sense from a public health, safety and welfare.

Q Are the two periods, the 30 years and 100 years, in the regulations someplace? I mean I really don't know myself.

A Yeah, the evolution of the regulations are interesting in and of themselves. The 30 years, there's a lot of debate about what the magic number is. The regulations in Illinois were written in that area pretty closely to Subtitle D, and what it says to the effect is that you're going to have to maintain this landfill for at least 30 years after you close it. The agency may require you to monitor it for longer than 30 years if we think it's still a threat. We haven't had Subtitle D facilities out there that long so we don't know, exactly know what that constitutes at some point. But we do get information from empirical evidence at older landfills, and we know that some of the older pre-Subtitle D landfills really do become relatively innocuous after somewhere close to that. The Subtitle D facility, I think we have all had the opinion and we're really short on evidence, empirical evidence, the hundred years comes from the groundwater impact model which is, which is

not required in many many many states. In Illinois they decided to adopt regulations that were much more strict than Subtitle D, Federal Subtitle D regulations, and require us to demonstrate via this modeling that the facility is safe, meaning that it won't impact the groundwater one hundred years after closure within one hundred feet of the footprint. And I think the modeling is a very very useful tool. I'm afraid that the modeling has gotten a little bit out in front of rational decisions and I think this is a good example where the modeling has kind of lost the forest for the trees what the real purpose of it was to begin with. I think that's where the regulator was at this point. They had to demonstrate some way if they were going to issue a permit that the facility would not impact the groundwater a hundred years, and the way they did it is by just pumping the groundwater and treating it which is, you know, kind of like an old Soviet Union type approach, well, we'll just put a bigger engine on the back of the thing, not a very elegant engineering solution.

Q Is -- when we talked about it earlier, the waste relocation I think, when we were talking about waste relocation, you were saying that Parcel A passed

the model or the model suggested that it would pass and Parcel B suggested it would not pass?

A I get those two confused all the time so I have to go back. But, yes, the essence was that the closure plan had a fairly low unit cost of waste relocation of some two bucks a yard or something on that order. The only way you could come anywhere close to meeting that is assuming that the waste is relo -- assuming that the waste is relocated legally is that it was relocated in the same facility. You wouldn't be able to load it up and take it to a truck and take it to another landfill at two bucks a yard. So, the only assumption you can get to is that it was actually disposed of within that same facility. If you were going to take it off of A, the only other place was the other unit which failed the model.

Q So, I guess what -- where I'm going is that Parcel A or Parcel B -- Parcel B is where the overheight is at.

A Go ahead, I'm listening.

Q And that passed the model which essentially I took to mean that the groundwater impact was not so much a problem on Parcel B.

A Well, that's what the IEPA's opinion must

have been. They passed the model and issued a permit for it and the other parcel they did issue a permit but they required this remediation system to be implemented before they would issue the permit. And if you look back at the permit and pour into it, it's because the model as presented to the agency didn't meet that 100 foot, 100 year criteria. So, I guess it's a semantic issue and I don't want to get into that. Simply put, it didn't meet that burden and they defaulted to this other approach.

Q But it almost sounds like if Parcel A had never been opened none of us would be talking about this hundred year leachate treatment; is that a fair conclusion?

A I want to make sure I've got the right one. Parcel A does not have the overfill, right?

Q Right.

A You know, there's a lot of different ways. You could have maybe modeled it differently, maybe you could have designed it differently. I didn't go back and remodel the facility. We could do that but I don't think that changes the facts of how we close the facility. I think that would be an exercise in academics. I mean really what we want to do now is be

able to withdraw the contaminants from the facility that pose the threat, put a cover on the facility so that the contaminants are isolated from the environment, and monitor the facility after those features are in place so we can tell how successful we're managing this. And at this particular site for several reasons that's altogether a good solution. First, it's the presumptive solution that the agency uses. It's the presumptive solution that the U.S. EPA uses. And it makes sense in a lot of cases because certainly it's the most economical, and if we're talking about expending taxpayers' money, that cannot be forgotten. The taxpayers don't profit from the facility. They use any income they got for other public needs but they also have the unique capability to treat leachate cheaper than anybody. And when you look at the surrounding land use around this facility, this is a more -- even a more appropriate approach. When you look at the existence of city water, when you look at the water that we're monitoring, the water of concern that we're modeling to, you can't drink anyway. But there are no wells around the site. It seems to me that we ought to, you know, start really focusing on how to put the real facts in front. And I'm concerned when I read the Pollution

Control Board's decision that they misunderstood all of the facts. For example, they said that the city participated in operating because they operated ancillary facilities on site. Well, in fact, they did not. So --

Q Well, when you're talking about the Board's decision, you're definitely talking about a legal decision.

A Well, I know what operated ancillary facilities on site are.

MR. HELSTEN: I object Mr. Grant. He can go to the facts. He can discuss the facts without going to the legal conclusion.

MR. GRANT: I'll be happy to go through it but they, you know, they decided what they decided. I mean I try not to be argumentative on the issues.

MR. HELSTEN: But it goes to what's practical here and what's necessary and realistic here which is the heart, in my opinion, of the Board's June 1, 2006 order. In several instances they say we should focus on what's practicable, feasible and realistic here. To do that you have to look really at underlying facts upon which they base their opinions, both the --

MR. GRANT: Oh, yeah, and I understand

that and you were clear enough in your disclosure and that's one of the reasons we've gone -- we've sort of allowed you to go into the amount of detail you have about these things as opposed to, you know, being really technical on it because that is certainly the case. But, you know, as we've talked about Chuck, our job is to enforce the regulations. I mean if they're not being met, then it's a violation or you change it.

MR. HELSTEN: Sure.

MR. GRANT: Those are really the options. But if you're talking about legitimately his going to the 33(c) factors --

MR. HELSTEN: Right, that's what we think, which the Board said go to the 33(c) factors and any facts that hinge upon those determinations and I think that's what Mr. Moose is doing.

THE WITNESS: That's, you know, clearly what I'm doing. I think the 33(c) factors are consistent with my obligation as an engineer.

MR. GRANT: Yeah, it's -- okay, we don't have to talk on the record. I do want to talk with him one more time. I'll be back in a minute.

(A short break was taken.)

MR. GRANT: That's all I have at this

point.

EXAMINATION

BY MS. GRAYSON:

Q I have a couple of questions. I was wondering if you could, and maybe you could use this, draw a very basic diagram, I'm a visual person, and in terms of the zone of attenuation that you're talking about. I kind of visualize it as a bull's-eye, that the center area may be where the waste is and then it kind of goes out like that. If you could, just do something that's real simple.

(Witness marking on blackboard.)

A Kind of like a pot pie, if you will. If you imagine a pot pie with the crust as the landfill and the metal as the liner, the landfill in cross section, although ours may not look exactly like this. It looks like this. One hundred feet from the edge of the waste we have to show compliance at this point. This area in here is called the zone of attenuation. We have to prove that anything that might come from the landfill does not measurably impact the groundwater on the other side of that line. In three dimensions this would be the ground surface. Let's do it like this. That's the landfill in three dimensions if you're following me, it

would be a zone that would still go like that.

Q Okay. The other question that I had was when you were referring to all the different aspects of the closure and post-closure care it seems as if you had a piece of paper that you were looking at that had some figures on it and I was wondering if maybe you would like to mark that as an Exhibit and get a copy of it.

A For the existing permitted facility on Parcel A and Parcel B, they're simply copies out of the -- oh, this is not it, out of the existing permit. And then I have copies of the revised permit application that's currently pending and I can certainly do that. And I'll make four copies of each of these?

MR. GRANT: That would be great.

MR. KUGLER: Off the record.

(A discussion was had off the record.)

BY MS. GRAYSON:

Q I was referring to when you were going through items one through five, one being groundwater, two, leachate management, the latter part of your deposition after the break.

A That was a document that I prepared at the request of Mr. Helsten.

MR. HELSTEN: Yeah, I don't have a

problem with this. It was going to the State anyway, eventually it was going to be submitted to you guys. It was done at my instruction to submit to the State, so.

MR. GRANT: Let's go off until he gets back.

(A short break was taken.)

BY MS. GRAYSON:

Q One other question. At one point when you were talking about the overheight you said that exhuming and moving is not without issues. What would some of those issues be?

A Well, when you exhume waste there is an odor issue. So, you're going to have a significant increase in potential for odors. You can mitigate that by doing it during the winter months, but in this particular case, you know, that would affect schedule also, limiting that to a particular window of time. If you were to -- when you move waste, you expose the construction workers to the leachate, sharp material, so that material and the construction work, you have to develop a construction worker safety plan to protect the workers. You also have residual leachate that may be as part of that, and in this particular case if we're going to be taking the garbage, loading it on vehicles and

taking it into the, at least for a short period of time, onto the public road or across the public road, it creates another potential safety or nuisance issue that needs to be resolved and addressed.

MS. GRAYSON: That's all I have. Thank you.

MR. HELSTEN: I have nothing.

(Exhibit No's 6, 7, and 8 were marked for identification on 8-2-06.)

MR. GRANT: We're finished. I would like to attach three exhibits. Exhibit Number 6 is titled Premature Closure Cost Estimate and was referred to by Mr. Moose during the deposition. Exhibit 7 -- I'm sorry, Exhibit 6 is Parcel B. Exhibit 7 is Premature Closure Cost Estimate - Parcel A, on the first page, and was also referred to and used by Mr. Moose. And Exhibit No. 8 is --

THE WITNESS: Maybe alternative closure approach.

MR. GRANT: Right. It's another document, at the top Shaw Environmental, Inc. Alternative, how would you describe it?

THE WITNESS: I'd call it the alternative closure approach.

MR. GRANT: This was also used and referred to during the deposition.

MR. HELSTEN: Mr. Moose, you have the opportunity to review the deposition --

THE WITNESS: Yes, I would like to.

MR. HELSTEN: -- for accuracy. So, you'd like to, okay. So, we reserve signature.

MR. GRANT: I'll order it up.

(Exhibit No. 4 was marked for identification on 8-2-06.)

MR. GRANT: Also, we would like to add as an exhibit, Exhibit No. 4 which is an outline of the topics that Mr. Moose discussed of the closure tasks and discussed during the deposition.

THE WITNESS: That was actually discussed with Mr. Child on June 13, 2006. It's basically an agenda for the meeting.

MR. GRANT: Okay.

MR. HELSTEN: It touches upon issues discussed today.

MR. GRANT: Sure.

- - -

(The deposition ended at 3:55 p.m.)

- - -

STATE OF ILLINOIS)
) SS.
COUNTY OF McHENRY)

I, LINDA A. LANCE, Certified Shorthand Reporter No. 84-1565, Registered Professional Reporter, a Notary Public in and for the County of McHenry, State of Illinois, do hereby certify that DEVIN A. MOOSE, P.E., DEE, previous to the commencement of his examination, was duly sworn by me to testify to the truth and nothing but the truth.

I FURTHER CERTIFY that the deposition was taken at the time and place in the caption specified and that there were present those persons and parties as indicated on the appearance page of said transcript.

I FURTHER CERTIFY that I reported in shorthand the foregoing proceedings and thereafter caused to be transcribed the foregoing transcript, pages 1 through 103, which is a true and correct transcription of my shorthand notes.

I FURTHER CERTIFY that I am not counsel for nor in any way related to any of the parties to this suit nor am I in any way interested in the outcome thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal this 14th day of August A.D. 2006.

Linda A. Lance
Certified Shorthand Reporter
Registered Professional Reporter
Notary Public McHenry County

OFFICIAL SEAL
LINDA A LANCE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES:08/15/06

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS,)
)
Complainant,)
)
vs.) PCB No. 03-191
) (Enforcement-Land)
COMMUNITY LANDFILL COMPANY, INC.)
an Illinois corporation, and the)
CITY OF MORRIS, an Illinois)
municipal corporation,)
)
Respondents.)

I, DEVIN A. MOOSE, P.E., DEE, hereby certify that I have read the foregoing transcript of my deposition given at the time and place aforesaid, consisting of pages 1 through 103, inclusive, and I do again subscribe and make oath that the same is a true, correct and complete transcript of my deposition so given as aforesaid, as it now appears.

_____
DEVIN A. MOOSE, P.E., DEE

Subscribed and sworn to before me
this _____day of _____, 2006.

MY OFFICIAL SEAL:

_____
NOTARY PUBLIC

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O

Shaw Environmental, Inc.
1150 N. Fifth Avenue, Suite C
St. Charles, IL 60174-1231
630.762-1400
Fax: 630.762.1402

Shaw® Shaw Environmental, Inc.

June 7, 2006

INSERT NAME
INSERT ADDRESS
INSERT ADDRESS

Subject: Morris Community Landfill

Dear ***INSERT NAME***:

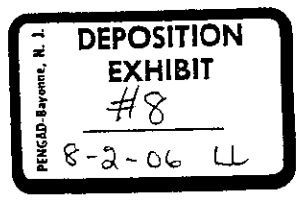
Shaw Environmental, Inc. (Shaw) proposes the following scope of service to close the Morris Community Landfill Parcels A and B in accordance with the requirements of the Illinois Pollution Control Board and the Illinois Environmental Protection Agency permits.

As you may already know, due to the difficult history and negligent performance on the part of the Community Landfill Company (the Operator), the City of Morris assumed at their own expense the responsibility for the IEPA required landfill monitoring activities. The City of Morris hired Shaw to perform these activities on their behalf beginning with the third quarter 2005 monitoring period.

In order to resolve the outstanding IEPA and IPCB compliance issues with the Morris Community Landfill, the City of Morris will also assume at their own expense the responsibility of completing the required installation / construction of the leachate management and monitoring systems, the landfill gas management system, the final cover system, and the stormwater management system. Also, the City of Morris will assume at their own expense executing all of the required closure and post-closure activities.

In order to close the Morris Community Landfill in a timely, cost effective manner while still being protective of the environment, and public health, welfare, and safety, the City of Morris respectfully requests from the IEPA an allowance for the modification of the permitted requirements that address the removal of the waste overfill on Parcel B, and installation of the Parcel A groundwater treatment system. If the IEPA agrees to these allowances, the City of Morris will take the following actions:

- ☐ Stop the receipt of waste in Parcel A and begin immediate closure of the landfill;
- ☐ Redesign the final landform to coincide with the lower waste height / waste volume across Parcel A, and the higher waste height / volume due to the overfill on Parcel B;
- ☐ Redesign the stormwater management systems for Parcels A and B to account for the modified final landform;
- ☐ Construct the final cover system which will exceed federal and state regulations;



- Complete the installation of all required facility systems including leachate management and monitoring systems, and landfill gas management and monitoring systems;
- Expand the groundwater monitoring system with six (6) new wells; and
- Develop a Groundwater Management Zone pursuant to 35 Ill. Adm. Code Part 620.250 to address the potential on-site groundwater contamination.

The following scope of service provides in detail the activities outlined above.

SCOPE OF SERVICE

Tasks 100: Groundwater Monitoring Network

Task 101 - Expand Groundwater Monitoring Network. Shaw recommends that an additional five (5) groundwater monitoring wells be installed to more appropriately monitor and characterize the groundwater quality upgradient and downgradient from the facility. These additional wells will be used to establish the Groundwater Management Zone as described later in Task 103. Shaw proposes one (1) additional well upgradient to the facility, and four (4) additional wells downgradient from the permitted facility property. Locations of these five additional wells are presented on Figures 1 and 2, contained in Attachment 1.

Additionally, Shaw recommends that the nine (9) non-permitted wells that were identified in the field (G-13E, G109S, P-13W, P-17D, P20S, P-21D, R-109S, R110S, and R111D) located adjacent to Parcels A and B be added to the groundwater monitoring program as piezometers. The piezometers would only be monitored for groundwater elevations every quarter at the same time as the groundwater monitoring wells are sampled. The non-permitted wells to be added as piezometers are shown on Figure Nos. 1 and 2, contained in Attachment 1.

Task 102 - Groundwater Monitoring Well Abandonment. Shaw recommends that the six (6) groundwater monitoring wells identified in the field that could not be correlated to existing boring logs, as-built diagrams, or any other documentation, be abandoned in accordance with the standards in 35 Ill. Adm. Code 811.316, and decommissioning and reporting procedures contained in the Illinois Department of Public Health's (IDPH) Water Well Construction Code, 77 Ill. Adm. Code, Part 920. The proposed wells to be abandoned are shown on Figure Nos. 1 and 2, contained in Attachment 1.

Task 103 - Repairs to Existing Permitted Groundwater Monitoring Wells. Shaw will make the following necessary repairs to the existing wells as listed below:

- Install bumper posts at groundwater monitoring well G128; and
- Install Well Caps at groundwater monitoring wells G131, G132, G133, and G136.

Task 104 - Establish Groundwater Management Zone. Shaw recommends establishing a Groundwater Management Zone (GMZ) pursuant to 35 Ill. Adm. Code Part 620.250 — in lieu of the permitted groundwater treatment system. A GMZ is defined as a *three-dimensional region containing groundwater that is being managed to mitigate impairment caused by the release of contaminants from a site.* The goal of the GMZ will be to remediate the groundwater to the level of standards applicable to Class IV groundwater (35 Ill. Adm. Code Part 620.430).

A GMZ cannot be established without prior approval from the IEPA. A written report must be submitted and evaluated by the Illinois EPA to determine whether the controls and management of the GMZ are adequate. Following their review, the IEPA will issue a letter in regard to the: (1) adequacy of the GMZ; (2) the continued management of the GMZ; and (3) conditions necessary to ensure that the requirements of 35 Ill. Adm. Code Part 620 will be met.

The written report must include the following information:

- ☐ Identification of specific units (operating or closed) present at the facility for which the GMZ is proposed;
- ☐ A USGS topographic showing the location of the site
- ☐ A detailed scaled map of the facility clearly delineating the location of each waste management unit;
- ☐ A description of the geology and hydrogeology within the proposed GMZ and the surrounding area;
- ☐ Groundwater classification at the site;
- ☐ Information regarding the release, including:
  - Identification of the chemical constituents detected in groundwater that are above the applicable standard in 35 Ill. Adm. Code Part 620;
  - A description of how the site has been investigated to determine the source or sources of the release;
  - A description of how groundwater has been monitored to determine the rate and extent of the release;
  - A description of the groundwater monitoring network and groundwater sampling protocols in place at the facility;
  - The schedule for monitoring of the groundwater; and
  - A summary of the results of the groundwater monitoring associated with the release;
- ☐ Scaled drawings identifying the horizontal and vertical boundaries of the proposed GMZ;
- ☐ Information regarding the approved remedial action including:
  - A description of the approved remedial action;
  - A description of how the approved remedial action has impacted the release;
  - A description of how the approved remedial action is operated and maintained;
  - A projected schedule for completion of remediation;
- ☐ A description of how groundwater at the facility will be monitored following the future completion of the remedy to ensure that the groundwater quality standards have been attained; and
- ☐ A discussion addressing the adequacy of the controls and management of the proposed GMZ at the site.

Shaw will prepare the written report as outlined above requesting IEPA approval to establish a GMZ.

Task 105 - Conduct Groundwater Monitoring. Shaw will continue to conduct routine quarterly groundwater monitoring at the Morris Community Landfill. Groundwater monitoring will include measurement of groundwater elevations, sampling and laboratory testing of groundwater, analysis of laboratory test results, and IEPA reporting.

Tasks 200: Leachate Management and Monitoring

Task 201 - Complete Leachate Collection System. Shaw proposes to complete the installation of the leachate collection systems for Parcels A and B with the system features that have been permitted by IEPA but not yet installed. The following list represents these features:

Parcel A

- Perimeter leachate collection piping, drainage layer, and associated manholes (L305, L306, and L307), leachate collection trench sumps (L313, and L314), and leachate extraction wells (L311, and L312);

Parcel B

- Leachate conveyance lines for the perimeter manholes, and leachate extraction wells (L303, L309, and L310); and

Parcel A & B

- Leachate storage tank to store leachate collected from both Parcels A and B and conveyance piping to the existing sanitary sewer line.

Task 202 - Complete Leachate Monitoring System. Shaw proposes to complete the installation of the leachate monitoring system which includes the installation of the following leachate monitoring points:

Parcel A:

- Leachate Collection Manholes (Task 201): L305, L306, and L307 for environmental sampling / testing;
- Leachate Collection Trench Sumps (Task 201): L313 for measuring leachate head elevations, and L314 for measuring leachate head elevations and for environmental sampling / testing;
- Leachate Extraction Wells (Task 201): L311 and L312 for measuring leachate head elevations; and

Parcel B:

- Leachate Extraction Wells (Task 201): L303, L309, and L310 for environmental sampling / testing.

Task 203 - Construction Quality Assurance Report. Shaw will prepare the Construction Quality Assurance Report upon completion of Tasks 201 and 202 as required by the IEPA and the IPCB for the leachate management and monitoring system.

Task 204 - Conduct Leachate Monitoring. Shaw will continue to conduct routine quarterly leachate monitoring at the Morris Community Landfill. Leachate monitoring will include measurement of leachate head elevations, sampling and laboratory testing, analysis of test results, and IEPA reporting.

Task 300: Final Cover System and Final Landform

Task 301 - Verification of Existing Permitted Final Cover. Shaw will inspect the landfill to verify areas that have had the permitted final cover system installed. Shaw will lay out a grid system, based on the site coordinate system and the existing site topographic survey, with 25 to 50

probe points (1 probe point for every 2-4 acres) to obtain field measurements of the final cover system thickness. Assuming that appropriate thicknesses are confirmed of the low permeability soil layer at the various probe points, Shaw will next collect soil samples at 2 - 4 locations for laboratory testing of moisture content, and soil classification. Assuming the thickness and quality of soil material are appropriate as permitted, Shaw will then push several tubes into the final cover soils to obtain undisturbed samples for hydraulic conductivity testing. Based on the results of this investigation, Shaw will prepare a report with the findings and conclusions.

Task 302 - Design of Alternate Final Cover System. Shaw will prepare the design for an alternate final cover system for Parcels A and B that will tie into areas of the landfill having permitted final cover. The final cover system will consist of a low-permeability layer to prevent precipitation from entering the landfill, and a protective soil layer to prevent erosion and maintain the long-term integrity of the landfill cover system.

The low-permeability layer will include a 40-mil LLDPE geomembrane and a one (1) foot layer of recompacted low permeable clay soil. The permeability of the 40-mil LLDPE combined with the recompacted clay soil will meet or exceed the IEPA required 3-foot clay liner having a permeability of $1x10^{-7}$ cm/sec. A geocomposite drainage net will overlay the geomembrane to drain precipitation away from the low-permeability layer. The protective layer will be placed over the geocomposite and will include a minimum of three (3) feet of protective soil, with the upper six (6) inches being a vegetative layer.

Task 303 - Design Final Landform and Stormwater Management System. Shaw will modify and design the permitted final landform and stormwater management systems for Parcels A and B. The redesigned final landform will take into account the lower waste height and waste volume in Parcel A, and the overfill volume left in place in Parcel B. The final landform will be designed to promote drainage of surface water runoff away from the landfill in order to minimize infiltration into the waste mass.

Shaw will redesign the stormwater management system taking into account the revised final landform and the resulting final grades. The stormwater management system will be designed to do the following:

- ❒ Facilitate drainage and reduce the potential for erosion of the final landform;
- ❒ Detain, manage, and control the release of a 25-year, 24-hour storm event; and
- ❒ Facilitate sedimentation of collected runoff thereby improving water quality.

Task 304 - Install Final Cover and Stormwater Management System. Shaw will oversee the installation / construction of the final cover system and stormwater management system. Shaw will prepare the required construction quality assurance and quality control documentation to be submitted to the IEPA as part of the final cover certification.

Task 400: Landfill Gas Management and Monitoring

Task 401 - Parcel A Landfill Gas Evaluation. Shaw proposes to conduct a test program to evaluate and characterize the landfill gas production from Parcel A in order to assess whether an active or passive gas collection system is required for Parcel A. Since historical records indicate that only construction and demolition debris was landfilled in Parcel A, the landfill gas

production may be such that only a passive collection system is needed. However, field testing will need to be done to accurately characterize gas production rates prior to developing a system design.

Task 402 - Design of Parcel A Landfill Gas Management System. Shaw will design the Parcel A landfill gas collection system based on the results of field testing and evaluation performed in Task 401.

Task 403 - Complete Installation of Parcel B Landfill Gas Management System. Shaw will oversee the completion of the Parcel B landfill gas management system installation. The following activities will occur during the installation and startup of the landfill gas management system:

- Installation of the landfill gas blower / flare station and connection to the existing landfill gas collection system;
- Evaluation of the existing landfill gas collection system to determine vacuum distribution, individual cell flow, gas quantity and quality, and header function;
- Any necessary repairs and/or modifications that were identified from the evaluation will be performed to optimize the performance of the landfill gas management system. Also, a system calibration will be done to optimize the efficiency of the system.

Task 404 - Install Landfill Gas Management System. Shaw will install the landfill gas management systems for Parcel A and B, and will prepare all required construction quality assurance and quality control documentation for submittal to the IEPA. For purposes of estimating costs it is assumed that a passive landfill gas collection system will be required for Parcel A, and the IEPA permitted Parcel B landfill gas collection system will not require modification.

Task 405 - Repairs to Existing Landfill Gas Probes. Shaw will install bumper posts at landfill gas probes X-125, X-126, X-126, X-128.

Task 406 - Conduct Landfill Gas Monitoring. Shaw will continue to conduct routine monthly landfill gas monitoring and reporting at the Morris Community Landfill. Landfill gas monitoring will included field sampling and testing of landfill gas probes, ambient air sampling and testing, analysis of test results, and IEPA reporting. (Note that the budgeted costs for Task 404 cover only 1 year of monitoring — the time estimated to close the landfill. Budgeted costs for Task 504 cover the monitoring costs for the 30 year post closure care period).

Task 500: Post Closure Care Activities

Task 501 - Conduct Routine Inspections and Maintenance. Shaw will conduct the routine facility inspections: quarterly from post closure years 1 through 5, and annually from post closure years 6 through 30. These inspections will be conducted to identify and document any areas of the final landform / final cover system that have been compromised requiring repair or maintenance, and any facility systems that require repair or maintenance. Costs budgeted for Task 501 will include the costs for the following routine maintenance and operations: repair of cover system, and mowing of vegetation.

Task 502 - Groundwater Monitoring. Shaw will continue to conduct routine quarterly groundwater monitoring at the Morris Community Landfill. Groundwater monitoring will include

measurement of groundwater elevations, sampling and laboratory testing of groundwater, analysis of laboratory test results, and IEPA reporting.

Task 503 - Leachate Management and Monitoring. Shaw will continue to conduct routine quarterly leachate monitoring at the Morris Community Landfill. Leachate monitoring will include measurement of leachate head elevations, sampling and laboratory testing, analysis of test results, and IEPA reporting.

Task 504 - Landfill Gas Management and Monitoring. Shaw will continue to conduct routine landfill gas monitoring at the Morris Community Landfill: monthly from post closure years 1 through 5, and quarterly from post closure years 6 through 30. Landfill gas monitoring will include field sampling and testing of landfill gas probes, ambient air sampling and testing, analysis of test results, and IEPA reporting.

BUDGET

The proposed budget for implementing Tasks 100 through 500 is presented in Attachment 2 and is based on our 2006 Fee Schedule.

SCHEDULE

The proposed schedule for completing Tasks 100 through 400 is presented in Attachment 3.

If you should have any questions, please contact Jesse Varsho or me at (630) 762-1400.

Very truly yours,

Shaw Environmental, Inc.

Devin A. Moose, P.E., DEE
Director

SCHEDULE OF CLOSURE ACTIVITIES AT THE MORRIS COMMUNITY LANDFILL - PARCELS A & B

The proposed schedule assumes that the following on-going tasks will be completed on a monthly or quarterly schedule, as noted:

- ❑ Complete routine quarterly groundwater monitoring (Task 105);
- ❑ Complete routine quarterly leachate monitoring (Task 204);
- ❑ Complete routine monthly landfill gas sampling (Task 406); and
- ❑ Annual Reporting (Annual Report, Tasks 105, 204, and 406).

Fall 2006 ($96,900)

- ❑ Establish Groundwater Management Zone (GMZ) report and submit to IEPA for review and approval (Task 104);
- ❑ Abandon six groundwater monitoring wells (Task 102);
- ❑ Repair existing groundwater monitoring wells (Task 103);
- ❑ Prepare permit modification request regarding groundwater monitoring network for IEPA review and approval (Tasks 101);
- ❑ Repair existing landfill gas monitoring probes (Task 405); and
- ❑ Verify the installation of any existing final cover for Parcels A and B. This includes collecting Shelby tubes for hydraulic conductivity analysis and determining thickness with probe points within a grid. Complete report of findings (Task 301).

Winter 2006-2007 ($70,700)

- ❑ Respond to IEPA comments on revisions to groundwater monitoring network and GMZ (Tasks 101);
- ❑ Install five groundwater monitoring wells (Task 101);
- ❑ Add nine non-permitted wells into groundwater monitoring network as piezometers (Task 101);
- ❑ Design alternate final cover system (if required), including tie-ins to existing final cover and revision to waste boundary based on existing waste limits for Parcels A & B (Task 302); and
- ❑ Design final landform, stormwater management system, and perimeter leachate collection system for Parcel A (Task 303).

Spring 2007 ($186,500)

- ❑ Submit permit modification request to IEPA regarding alternate final cover, final landform, stormwater management system, and perimeter leachate collection system (Tasks 302 and 303);
- ❑ Install landfill gas blower/ flare station at Parcel B. Connect with the existing gas collection system (403);
- ❑ Begin evaluation of existing landfill gas collection system for Parcel B to determine vacuum distribution and individual cell flow, gas quantity and quality, and header function (Task 403); and
- ❑ Respond to comments regarding permit modification request to IEPA regarding alternate final cover, final landform, stormwater management system, and perimeter leachate collection system (Tasks 302 and 303).

Summer 2007 ($186,500)

- ❑ Complete evaluation of existing landfill gas collection system for Parcel B (Task 403);
- ❑ Complete any necessary repairs to the Parcel B landfill gas collection system to optimize performance of landfill gas collection (Task 403); and
- ❑ Prepare and submit CQA documentation report to IEPA for Parcel B landfill gas management system (Task 403).

Fall 2007 ($701,600)

- ❑ Install leachate storage tank for Parcels A and B (Task 201);
- ❑ Construct Parcel A perimeter leachate collection system and associated manholes (Tasks 201 and 202);
- ❑ Install Parcels A and B leachate extraction wells (Tasks 201 and 202);
- ❑ Install leachate conveyance piping for Parcels A & B (Task 201);
- ❑ Prepare and submit CQA documentation report to IEPA for Parcel B leachate conveyance system (Tasks 203 and 304); and
- ❑ Respond to IEPA comments on Parcel B landfill gas management system report (Task 403).

Winter 2007-2008

- ❑ Respond to IEPA comments on CQA report of Parcel B leachate and landfill gas collection systems (Task 203 and 404).

Spring 2008 ($15,000)

- ❑ Field test the Parcel A landfill gas collection system to determine whether gas is passively or actively collected (Task 401); and
- ❑ Begin construction of Parcel B final cover (Task 303).

Summer - Fall 2008 ($902,900)

- ❑ Construct 15 acres of Parcel B final cover system and submit CQA Report (Task 304); and
- ❑ Design Parcel A landfill gas collection system based on results of field testing and evaluation and feedback from the IEPA on the alternate final landform. Submit permit modification request to IEPA for Parcel A landfill gas collection system (Task 402).

Winter 2008

- ❑ Respond to IEPA comments regarding the design the Parcel A landfill gas collection system (Task 402).

Spring - Fall 2009 ($1,905,000)

- ❑ Construct 25 acres of Parcel B final cover system and submit CQA Report (Task 304); and
- ❑ Construct Parcel A landfill gas collection system and submit CQA report (Task 404).

Spring 2010 ($887,900)

- ❑ Construct final 15 acres of Parcel B final cover system and submit CQA Report (Task 304); and
- ❑ Begin excavating any required stormwater control features and stockpiling soils as necessary for Parcel A final cover construction (Task 304).

Summer - Fall 2010 ($592,000)

- ❑ Begin excavating any required stormwater control features and stockpiling soils as necessary for Parcel A final cover construction (Task 304); and
- ❑ Construct 10 acres of Parcel A final cover system and submit CQA Report (Task 303).

Spring - Fall 2011 ($592,000)

- ❑ Construct 10 acres of Parcel A final cover system and submit CQA Report (Task 303).

Spring - Fall 2012 ($592,000)

- ❑ Construct 10 acres of Parcel A final cover system and submit CQA Report (Task 303).
- ❑ Complete Parcel A final cover system and associated stormwater controls such as downchutes (Task 304).

Spring - Fall 2013

- ❑ Respond to IEPA comments regarding CQA report to Parcel A final cover (Task 203).

Post-Closure Period (30 Years) ($2,662,400 or 88,700 per year)

- ❑ Conduct Routine Inspections and Maintenance (Task 501);
- ❑ Conduct routine groundwater monitoring (Task 502);
- ❑ Conduct routine leachate monitoring (Task 503); and
- ❑ Conduct routine landfill gas monitoring (Task 504).

Shaw® Shaw Environmental, Inc.

Agenda June 13, 2006

I. Introduction

II. Site Background
- A. Key Facts
- B. Site History
- C. Permitted versus Constructed Design
  1. Overliner System
     - i. Design
     - ii. Constructed
  2. Leachate Collection System
     - i. Design
     - ii. Constructed
  3. Final Cover System
     - i. Design
     - ii. Constructed (3.75 acres certified closed)
  4. Landfill Gas Collection System
     - i. Design
     - ii. Constructed
     - iii. Landfill Gas Exceedances
  5. Groundwater Monitoring Network
     - i. 19 Existing/Permitted Groundwater Monitoring Wells and 2 Piezometers (G136 used for both Parcels A & B)
     - ii. Groundwater Flow
     - iii. Groundwater Quality/Exceedances

III. Recommended Closure Tasks
- A. Exemptions from Permit Conditions
  1. **STOP** accepting waste and initiate closure activities
  2. Overfill of Parcel B
     - i. Leave in-place
     - ii. Overfill volume is approximately 475,000 cubic yards
     - iii. Parcel A remaining volume is approximately 759,400 cubic yards
  3. Parcel A Groundwater Remediation System
     - i. Pump and Treat system
     - ii. Not installed, propose not to install
     - iii. Permit requires 100 years of operation

B. Proposed Closure Tasks
   1. Groundwater Monitoring Network
      i. Expand Existing Groundwater Monitoring Network
      ii. Abandonment of Non-permitted Groundwater Monitoring Wells
      iii. Repairs to Existing Permitted Groundwater Monitoring Wells
      iv. Establish Groundwater Management Zone
      v. Conduct Groundwater Monitoring
   2. Leachate Management and Monitoring
      i. Complete Leachate Collection Systems for Parcels A & B
      ii. Complete Leachate Monitoring Systems
      iii. Complete Construction Quality Assurance Report
      iv. Conduct Leachate Monitoring
   3. Final Landform and Final Cover System
      i. Design of Alternate Final Cover System
      ii. Verification of Existing Permitted Final Cover
      iii. Design of Final Landform and Stormwater Management System
      iv. Construct Final Cover and Stormwater Management System
   4. Landfill Gas Management and Monitoring
      i. Parcel A Landfill Gas Evaluation
      ii. Design of Parcel A Landfill Gas Management System
      iii. Complete Installation of Parcel B Gas Management System
      iv. Install Landfill Gas Management System
      v. Repairs to Existing landfill Gas Probes
      vi. Conduct Landfill Gas Monitoring
   5. Post-Closure Activities
      i. Conduct Routine Inspections and Maintenance
      ii. Groundwater Monitoring
      iii. Leachate Management and Monitoring
      iv. Landfill Gas Management and Monitoring

C. Schedule

IV. Questions

SHAW ENVIRONMENTAL, INC. BUDGET
TO PROVIDE SERVICES TO THE CITY OF MORRIS
FOR THE MORRIS COMMUNITY LANDFILL

Task Description	Cost
Tasks 100: Groundwater Monitoring Network	
Task 101 - Expand Groundwater Monitoring Network	$28,154
Task 102 - Grounwater Monitoring Well Abandonment (includes preparation of IEPA significant permit modification application)	$14,700
Task 103 - Repairs to Existing Monitoring Wells	$1,080
Task 104 - Establish Groundwater Management Zone	$25,000
Task 105 - Conduct Groundwater Monitoring (cost included in Task 502)	--
Subtotal:	**$68,934**
Tasks 200: Leachate Management and Monitoring	
Task 201 - Complete Leachate Collection System	$701,567
Task 202 - Complete Leachate Monitoring System (cost included in Task 201)	--
Task 203 - Prepare Construction Quality Assurance Report	$45,000
Task 204 - Conduct Leachte Monitoring (cost included in Task 503)	--
Subtotal:	**$746,567**
Tasks 300: Final Cover System and Final Landform	
Task 301 - Verification of Existing Permitted Final Cover System	$50,000
Task 302 - Design Alternate Final Cover System	$7,500
Task 303 - Design Final Landform and Stormwater Management System	$10,000
Task 304 - Install / Construct Final Cover and Stormwater Management Systems (includes CQA documentation and Final Cover Certification)	$5,623,671
Subtotal:	**$5,691,171**
Tasks 400: Landfill Gas Management and Monitoring	
Task 401 - Parcel A Landfill Gas Evaluation	$15,000
Task 402 - Design Parcel A Landfill Gas Management System	$25,000
Task 403 - Complete Installation of Parcel B Landfill Gas Management System (includes CQA documentation)	$372,900
Task 404 - Install / Construct Parcel A Landfill Gas Management System (includes CQA documentation)	$425,000
Task 405 - Repairs to Existing Landfill Gas Probes	$3,000
Task 406 - Conduct Landfill Gas Monitoring (costs included in Task 504)	--
Subtotal:	**$840,900**
Tasks 500: Post Closure Care Activities (30 years)	
Task 501 - Conduct Routine Inspections and Maintenance	$401,300
Task 502 - Conduct Routine Groundwater Monitoring	$1,341,700
Task 503 - Conduct Routine Leachate Management and Monitoring Operations	$809,400
Task 504 - Conduct Routine Landfill Gas Management and Monitoring Operations	$110,000
Subtotal:	**$2,662,400**
TOTAL:	**$10,009,972**