1 BEFORE THE

2 UTILITIES AND TRANSPORTATION COMMISSION

3

4

5 THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,	)	
6	)	
7 Complainant	)	
vs.	)	DOCKET NO. TG-920234
8 U.S. ECOLOGY, INC.,	)	
9	)	
10 Respondent	)	

11 DEPOSITION UPON ORAL EXAMINATION OF

12 DR. CHARLES E. OLSON

13

14

15

16 10:00 a.m.

17 Wednesday, May 27, 1992

18 711 Capital Way South

19 Evergreen Plaza Building

20 Olympia, Washington 98501-1231

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1 A P P E A R A N C E S

FOR U.S. ECOLOGY, INC.:	JAMES M. VAN NOSTRAND and ELIZABETH A. ALANIZ Attorneys at Law Perkins Coie One Bellevue Center, Suite 1800 411 108th Avenue N.E. Bellevue, Washington 98004
FOR PORTLAND GENERAL CORPORATION:	J. JEFFREY DUDLEY Attorney at Law One World Trade Center 121 S.W. Salmon Street Portland, Oregon 97204
FOR TELEDYNE WAH CHANG ALBANY;	RICHARD H. WILLIAMS Attorney at Law Lane Powell Spears Lubersky 520 S.W. Yamhill Street, Suite 800 Portland, Oregon 97204-1383
FOR PRESTON CASTPARTS, CORPORATION:	JAMES C. PAINE Attorney at Law Stoel Rives Boley Jones & Grey 900 S.W. Fifth Avenue Portland, Oregon 97204-1268
FOR WASHINGTON PUBLIC POWER SUPPLY SYSTEM:	MELVIN N. HATCHER Attorney at Law P.O. Box 968 3000 George Washington Way Mail Drop 396 Richland, Washington 99352-0968
FOR WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION:	ANNE E. EGELER Assistant Attorney General 1400 S. Evergreen Park Drive S.W. P.O. Box 40128 Olympia, Washington 9504-0128
ALSO PRESENT:	Mike Nolan Robert Young Ed Nikula

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

001336

I N D E X

WITNESS:	Page No.
DR. CHALES E. OLSON	
Examination (Mr. Paine)	5
Examination (Mr. Williams)	40
Examination (Mr. Hatcher)	53
Examination (Mr. Dudley)	61

NO EXHIBITS

001337

1 BE IT REMEMBERED, that the deposition upon oral
2 examination of DR. CHARLES E. OLSON was taken on the 27th day
3 of May, 1992, at 10:00 a.m., at Evergreen Plaza Building, 711
4 Capital Way South, Olympia, Washington, before Victoria
5 Wright, Notary Public in and for the State of Washington.
6 WHEREUPON, the following proceedings were had:
7 * * * * *
8
9 MR. VAN NOSTRAND: In the deposition of
10 Charles Olson, appearing on behalf of the applicant,
11 U.S. Ecology, James M. Van Nostrand, of the law firm of
12 Perkins Coie, Bellevue, Washington.
13 MR. DUDLEY: Appearing on behalf of Portland
14 General Electric Company, Jay Dudley, with the legal
15 department of Portland General Electric, 121 S.W. Salmon
16 Street, Portland, Oregon 97204.
17 MR. NOLAN: Also on behalf of Portland General
18 Electric, Mike Nolan, N-O-L-A-N, same address.
19 MR. WILLIAMS: Richard Williams, with Lane,
20 Powell, Spears, Lubersky, in Portland, appearing on
21 behalf of Teledyne Wah Chang Albany.
22 MR. HATCHER: Melvin Hatcher, on behalf of the
23 Washington Public Power Supply System.
24 MR. YOUNG: Robert Young, with Robert Young
25 and Associates, on behalf of Washington Public Power

001338

1 Supply System.

2 MR. PAINE: James Paine, I'm with Stoel,

3 Rives, Boley, Jones and Grey, appearing on behalf of

4 Precision Castparts, Inc.

5 MS. EGELER: I'm Anne Egeler, Assistant

6 Attorney General, appearing on behalf of the Commission.

7 MR. PAINE: Are we ready to proceed?

8

9 DR. CHARLES E. OLSON, having been first duly sworn on oath

10 by the Notary Public to testify the truth, the whole truth and nothing

11 but the truth, deposed and said as follows:

12

13 EXAMINATION

14 BY MR. PAINE:

15 Q Dr. Olson, my name is James Paine, and as you know, I'm

16 representing Precision Castparts Corp in this matter.

17 You have had your deposition taken before, I assume; is

18 that correct?

19 A That is correct.

20 Q You are aware of the fact that your testimony is taken

21 -- it can be used before the Washington Utilities and

22 Transportation Commission in the U.S. Ecology docket?

23 You're aware of that, are you not?

24 A Yes, I am.

25 Q Let me begin by just asking you a few questions on your

001339

1 rate of return and capital structure issues. First of
2 all, U.S. Ecology, the sole source of their financing,
3 is it not their parent, American Ecology?
4 A That's correct.
5 Q For example, American Ecology loaned U.S. Ecology money,
6 did it not, for financing of the Needles, California
7 project?
8 A That's my understanding.
9 Q Why is it not reasonable, then, to assume that that
10 should reflect the cost of capital for U.S. Ecology?
11 A What should reflect the cost of capital?
12 Q The loans and the cost thereof, made by the parent to
13 U.S. Ecology.
14 A Well, I think what you have to follow when you're
15 looking at rate of return is the fundamental tenet that
16 the return is driven by risk, and I think if you look at
17 these projects, any reasonable financial assessment
18 would bring the conclusion that stand-alone financing --
19 in other words, financing without a guarantee of some
20 sort -- would be impossible. You couldn't issue bonds.
21 No bank would lend money for such a project, and if
22 that's the conclusion, then the result is that you have
23 to have a return that's based on a capital structure
24 that's got 100 percent common equity.
25 Q Did you consider assessing the cost of capital of

001340

1 American Ecology and using that to represent the cost of
2 capital for U.S. Ecology?
3 A I considered it, and I evaluated that alternative, but I
4 could find no analysts' reports that covered American
5 Ecology, and I could find in the IBES data base no
6 projections for American Ecology's earnings. Based on
7 that review, I concluded that there simply wasn't a lot
8 of information.
9 In addition to that, it seemed inappropriate
10 to get into American Ecology, when you could wind up
11 with a situation where the cost of capital from one
12 project could be cross-subsidizing cost of capital from
13 another project.
14 Q You're not -- you indicated that the return is driven by
15 risk. Can we assume that the loans and the interest
16 rate thereon from American Ecology to U.S. Ecology was
17 established based on an evaluation of risk?
18 A I don't think you can, but as far as I'm concerned, I
19 simply don't know. That's not something I've evaluated.
20 Q You indicated that you studied American Ecology's 1990
21 Annual Report prior to preparing your testimony; is that
22 correct?
23 A Yes.
24 Q In that report, isn't there an indication that they were
25 able to obtain long-term debt financing?

001341

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1 A Who is "they"?

2 Q American Ecology.

3 A Could you give me a page reference?

4 Q Page 22 of the 1990 Annual Report, Note 5.

5 A There is reference in that note to a five-million-dollar
6 short-term loan that BFI made to the company, due in
7 October '89, and some additional amounts there. There's
8 also reference to some convertible preferred stock and
9 convertible secured debentures, but those are
10 economically the equivalent of equity financing.

11 Q BFI loaned American Ecology some money, didn't it -- is
12 that not correct -- that was converted into -- had the
13 potential of being converted into equity; is that
14 correct?

15 A Yes.

16 Q Was that done, do you know?

17 A I don't know.

18 Q At Page 24 of the Annual Report for 1990, Note 8 at the
19 bottom of the page, American Ecology designates the
20 debentures issued to BFI as debts, do they not?

21 A Yes, they do.

22 Q Similarly, the 12.75 percent five-year-term loan is
23 classified as long-term debt; is that correct?

24 A That's classified as long-term debt. There's hardly any
25 of that, and it's apparently directly secured by

001342

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1 equipment.
2 Q You indicated some of the data on which you based your
3 recommendations came from IBES; is that correct?
4 A Yes.
5 Q And could you explain to the court reporter what IBES
6 stands for?
7 A IBES stands for Institutional Brokers Estimate System.
8 Q And you used data from that source, did you not, to
9 estimate projected earnings growth for U.S. Ecology in
10 your DCF formula; is that correct?
11 A Not directly.
12 Q All right.
13 A I used proxy companies.
14 Q In other words, as you indicated earlier, IBES data did
15 not contain anything with regard to American Ecology or
16 U.S. Ecology; is that correct?
17 A That's right. American Ecology is a small company; its
18 shares are traded over the counter, and apparently it's
19 not followed, or at least closely followed, by any
20 analysts.
21 Q Would the 1990 Annual Report indicate, though, that
22 American Ecology was capable of attracting debt -- that
23 is, capable of entering into transactions whereby it
24 incurred long-term debt obligations?
25 A Well, there's an indication that they were able to

001343

1 obtain some short-term debt, and they also were able to
2 get some convertible securities issued to another party,
3 and those convertible securities, economically speaking,
4 are a form of equity capital.
5 Q With regard to IBES, that data is compiled by a company
6 in New York; is it not?
7 A Yes, the company in New York is Lynch, Jones and Ryan,
8 and I believe they have been a subsidiary of Citibank,
9 but I saw sometime back in the newspaper, that Citibank
10 had either put them up for sale or sold them. But I
11 don't know today what the standing of that relationship
12 is.
13 Q All right. As I understand the process in gathering
14 this data, Lynch, Jones and Ryan solicit information or
15 data from security analysts around the country; is that
16 correct?
17 A That's correct.
18 Q Who are these security analysts employed by?
19 A For the most part, these security analysts are employed
20 by brokerage firms.
21 Q And it's true, is it not, that brokerage firms make
22 money on commissions by buying and selling of stock,
23 through stock activity?
24 A That's true.
25 Q If I could refer you to Page 30 of your initial

001344

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1 testimony, you state at that page of your testimony that
2 the IBES earnings growth projections for your comparable
3 companies ranges from 15 to 25 percent, and the median
4 is 20 percent; is that correct?
5 A Yes.
6 Q If you'll look at your Schedule 11, where you set forth
7 your comparable companies, there are five companies
8 listed; is that right?
9 A Yes.
10 Q And the number in the right-hand column, does that
11 represent a mean or an average, an arithmetic average,
12 of the various security analysts' earnings growth
13 projections?
14 A It's my recollection that those are medians that are set
15 forth, and that the figure at the bottom is the median
16 of the medians.
17 Q All right. Let's take Line 1, Browning Ferris
18 Industries, the median is 15 percent. How many
19 analysts, security analysts submitted a projection for
20 Browning Ferris Industries?
21 A I can't tell you offhand. If I can find in my papers a
22 copy of the IBES report on that company, I should be
23 able to tell you that from there. If you have it, I'll
24 be glad to take it subject to check.
25 Q I do not, Dr. Olson.

001345

1 A Okay. All right, I found it, and I apologize for the
2 delay. I should have been prepared for that. I have 21
3 long-term estimates for Browning Ferris Industries.
4 Q And the range there was from . . .
5 A The lowest estimate is 8.60 percent, and the highest
6 estimate is 22.0 percent. The median is 15.0, as was
7 pointed out, and the mean is 14.3 percent.
8 Q I don't want to take up a lot of time here this morning,
9 but if I asked you the same questions with regard to the
10 other four companies you list as comparable, could you
11 determine that information at a break and perhaps we
12 could get it on the record at that time? Or do you have
13 it readily available?
14 A I have it, and I could read them off.
15 Q All right, please.
16 A Chambers Development, there were 13 estimates. The mean
17 was 25.8; the lowest estimate was 17.5; the highest
18 estimate was 30.0.
19 The next one is Chemical Waste Management,
20 Inc., 21 estimates; the mean, 20.4 percent; the low
21 estimate, 15.0; the high estimate, 25.0.
22 The next one is Laidlaw, Inc., L-A-I-D-L-A-W,
23 seven estimates; the mean was 15.1; the lowest estimate,
24 11.0; the highest estimate, 22.0.
25 Q I'm sorry, I missed the low, excuse me.

001346

1 A 11.0.

2 Q All right.

3 A The high, 22.0.

4 Q Go ahead.

5 A Finally, Rollins Environmental Services, Inc., 15

6 estimates; the mean was 19.3; the lowest estimate, 15.0;

7 the highest estimate, 25.0.

8 Q Thank you. Browning Ferris Industries, that's a

9 significant range, is it not, from 8.60 to 22 percent?

10 A Yes.

11 Q And Laidlaw, you indicated there were seven estimates

12 upon which the 15 percent basis -- or percentage was

13 based; is that correct?

14 A Yes.

15 Q What do these security analysts consider when they are

16 attempting to estimate earnings growth projections? Can

17 you give us a thumbnail sketch of what they might

18 consider for these five companies?

19 A As a general matter, they would consider all information

20 available. They would have access to annual reports,

21 SEC filings, or any other public information on these

22 companies. They might have access to economists that

23 could project likely trends in waste volumes, waste

24 activity, waste consulting. They would have access to

25 interviews -- or access to management through

001347

1 interviews. So what they try to do is use all of that
2 information to forecast the likely short-term earnings
3 and the five-year growth rate in earnings per share.
4 Q As a part of that exercise, would they have to make some
5 assumptions with regard to future revenues, expenses and
6 investment?
7 A They might get their forecast that way. They might do
8 it another way. There are some analysts, I think, that
9 just start out with the earnings per share number and
10 look at factors that might impact that, and project that
11 forward without going through the exercise of projecting
12 revenues, expenses, investments and so on, and frankly,
13 when you get 21 estimates, you don't know what the
14 thought processes of all these analysts are going to be.
15 In that the analysts move around from
16 brokerage house to brokerage house to some extent, you'd
17 probably find that there are going to be some common
18 features of their estimating techniques, but there are
19 also cases of individual analysts that take unique
20 approaches, so it's really hard to say what they do.
21 Q The actual investments made by these companies for -- to
22 be made by these companies, would impact earnings per
23 share; is that true?
24 A The actual estimates?
25 Q Investments.

001348

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1 A The investments in plant and equipment made by these
2 waste companies definitely should have an impact on
3 earnings per share, yes.
4 Q Here, however, we are applying DCF analysis to a
5 company. We are not considering -- at least, your
6 testimony's not considering actual investment made by
7 the company: is that not correct?
8 A My testimony does not consider specific investments made
9 by American Ecology and the impact of those investments
10 on what its company-specific DCF cost of capital would
11 be, that's correct.
12 Q Should any sort of an adjustment be made to a DCF
13 analysis of these nonregulated companies that make
14 actual investments, to accurately reflect the regulated
15 nature -- potential regulated nature of U.S. Ecology's
16 operations originally?
17 A If regulation reduces risk, then some adjustment should
18 be made. I haven't seen any indication that regulation
19 is going to reduce risk for this company. For example,
20 I don't see the likelihood of there being long-term
21 contracts, which in effect partially guarantee the
22 revenue flow, and that's of course the central feature
23 that you find with regulated public utilities.
24 Regulation creates a structure in which there is a
25 reasonable guarantee of revenue flow, and to a lesser

001349

1 degree, therefore, the profit flow. And you just don't
2 have that here, as far as I can tell.
3 Q If these operations are to be regulated, does not volume
4 adjustment as proposed, and does not inflation
5 adjustment as proposed by applicant, diminish the risk
6 that applicant faces with its operations?
7 A It may. I don't see any great likelihood that that
8 would necessarily happen. If you have technological
9 change or some other factor that reduces volume rather
10 substantially, and the price goes up very significantly
11 on the residual volumes, it could well be that that
12 business will get driven away. It may turn out that
13 over time, when there's some experience with this volume
14 adjustment, that there'll be an indication that there is
15 some risk reduction, but right now I can't see that, and
16 more importantly, I don't think investors would have any
17 particular confidence that something like this was going
18 to work to reduce risk.
19 What you really need in order to reduce risk
20 is some sort of captive customer base, and in order to
21 get that, it seems to me you've got to have some sort of
22 contractual arrangement that locks in your revenue flow,
23 at least partially.
24 Q Isn't it accurate to state that the proposed set of
25 rates of applicant in this matter locks in an assured

001350

1 flow of revenues, for the next several years, anyway, if
2 it were accepted by the Commission?
3 A I don't think that's the case.
4 Q Why not?
5 A There's nothing that forces any of the users to tender
6 volumes under these rates. If there was a contract
7 arrangement with a take-or-pay clause, I think that
8 would work very well, but there isn't anything. All
9 you've got is a set of rates that the users can take or
10 leave.
11 Q Are you familiar with the volume adjustment as proposed
12 by the applicant?
13 A Yes.
14 Q Wasn't -- for example, if 100,000 cubic feet is accepted
15 by the Commission as the base amount, say test year
16 amount of waste that will be disposed of, and in
17 subsequent months if there is a marked reduction in the
18 waste being deposited, won't the applicant be paid for
19 and won't rates rise due to the adjustment through the
20 volume mechanism, to assure that revenue?
21 A What you say is half true; the rates will rise. But
22 that doesn't mean the revenue will go up, because you
23 have to have some tenders there. An attorney or a
24 consultant can have a billing rate. That doesn't mean
25 that that client, or that that consultant or that

001351

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1 attorney, will have revenues. They have to find the
2 client that's willing to pay that rate, and in the case
3 of U.S. Ecology, they can have their rates out there,
4 but as I understand it, there is nothing to force anyone
5 to tender any volumes.
6 Q So elasticity may be a factor here in the ability of
7 generators to store and compact; is that what you're
8 saying?
9 A Price elasticity, cross elasticities, yes. Potential
10 for technological change, potential for competition
11 being a factor, again.
12 Q And that would be alternative sites that were available
13 to the generators; is that correct?
14 A Alternative sites, compaction, forms of remediation not
15 yet available, or perhaps not yet publicized, whatever.
16 Q I'm not sure I followed your last statement. Forms of
17 remediation, what do you mean?
18 A Well, forms of -- some way of process, some other way of
19 processing this waste.
20 Q Okay. One of the comparable companies is Browning
21 Ferris Industries; is that correct?
22 A Yes.
23 Q Are they a significant shareholder in American Ecology?
24 A Well, they have been, yes.
25 Q Are they currently?

001352

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1 A I think they still are.

2 Q Are they a majority shareholder, do you know?

3 A I don't know.

4 MR. PAINE: Mr. Van Nostrand, could a response

5 to that question be supplied at a later date?

6 MR. VAN NOSTRAND: Whether BFI is a majority

7 shareholder?

8 MR. PAINE: Reflecting the number of shares

9 held by BFI, compared to number of outstanding shares?

10 Would that be possible?

11 MR. VAN NOSTRAND: I think so. I'm not sure

12 if it would be in exactly that form, but something that

13 would identify who the large shareholders are.

14 MR. PAINE: Thank you.

15 Q (By Mr. Paine) Your initial testimony, Dr. Olson,

16 sponsors a method or methodology for the applicant to

17 determine capital structure, rate of return; is that not

18 correct?

19 A It's a broader methodology than that. Essentially, it's

20 a revenue requirement methodology.

21 Q I'm curious about how the applicant contemplates this

22 methodology will operate or be operative in the future.

23 I do assume, for example, that if the company's proposed

24 rate base is approved by the WUTC, and if in two years

25 for some reason the Commission has to revisit the

001353

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1 revenues enjoyed by U.S. Ecology, can you tell us
2 whether your proposal will contemplate depreciation
3 being -- or excuse me, will contemplate subjecting the
4 adopted rate base for two year's depreciation prior to
5 the Commission visiting this matter again?
6 A As I see it, it would. I obviously cannot speak for the
7 company; I'm a consultant working for the company at
8 this time, recommending that rate methodology. I don't
9 know what the company would do as far as consultants,
10 attorneys and that type of thing in a future rate case,
11 but as far as I contemplate this, there would be
12 declining rate base over the 12-and-a-half year period
13 that I referred to in my testimony.
14 Q And could we talk a little bit about your initial
15 valuation.
16 A Do you have a page reference?
17 Q Starting on Pages 6 through 8 of your pre-filed
18 testimony. You described the undesirable economic
19 consequences of pricing either below or pricing above
20 marginal costs, do you not?
21 A Yes.
22 Q Is it fair to state that these pages describe a
23 relationship between producers and customers?
24 A Yes.
25 Q What do you mean by producers in this analysis? Is it

001354

1 not the entity that actually purchases the raw materials
2 prior to developing -- manufacturing the finished
3 product?
4 A Well, a producer is an economic term and it's equivalent
5 to talking about the firm, and of course, in our
6 economy, we have companies and corporations that do
7 that.
8 Q But I assume that by analogy, U.S. Ecology is the
9 producer, but this testimony is applicable; is that
10 correct?
11 A That is correct.
12 Q And what is it that U.S. Ecology produces?
13 A They provide a service -- they produce or provide a
14 service, and that is to take care of low-level
15 radioactive waste.
16 Q And do they incur all of the societal costs of
17 production when they are rendering this service?
18 A Probably not. I'm not sure that anyone knows what all
19 these costs might be.
20 Q Is it fair to state that your proposal does not envision
21 paying U.S. Ecology for costs they actually incur?
22 A It does envision it.
23 Q It does?
24 A Yes.
25 Q It does envision what?

001355

1 A The costs that they actually incur are recouped by this
2 revenue requirement. Assuming that the rates that are
3 made and go into effect actually produce that level of
4 business, and generate that amount of revenue.
5 Q Will they enjoy revenues significantly above costs that
6 they actually incur?
7 A Probably.
8 Q More so than, for example, an 18-and-a-half percent
9 return on an established rate base?
10 A Say that -- did you say "more so"?
11 Q More than.
12 A No, it shouldn't be more than that. It should be equal
13 to that. There are always differences between what's
14 authorized and what's earned.
15 Q Would you envision utilizing this kind of cash flow
16 analysis and using comparable companies in future years,
17 if you have to revisit determination of an authorized
18 rate of return to U.S. Ecology?
19 A I would, yes. As far as using discounted cash flow, I
20 think it's the best available methodology for estimating
21 rate of return in almost any situation. There can be
22 situations in which there's debt capital issued and it's
23 hard to get up the cost of equity capital, and you could
24 use an interest premium approach, but that isn't too
25 common.

001356

1 And as far as using proxy companies, unless
2 the ownership has changed at American Ecology, and
3 unless that change encompasses a bigger company that is
4 doing the same thing that U.S. Ecology is doing at the
5 Richland site at a lot of other sites, I would envision
6 the use of proxy companies.
7 Q What is the situation with regard to ownership of U.S.
8 Ecology and of American Ecology? Are you familiar with
9 whether there's been any effort to acquire significant
10 amounts of stock of American Ecology?
11 A That there -- well, first of all, U.S. Ecology is owned
12 by American Ecology. American Ecology is a publicly
13 traded company, but while there are shares in a lot of
14 hands, the ownership is fairly concentrated in that
15 company, and so you might describe the situation in
16 which -- you might describe the situation as one in
17 which there is a controlling interest.
18 Q But it's not the Browning Ferris Industry, that we
19 discussed earlier?
20 A I don't think so.
21 Q Do you know whether there's been any activity recently,
22 in an effort to acquire control of American Ecology?
23 A Well, I understand there has been a change in the
24 ownership, but that isn't something that I've been
25 following in any detail. And the reason I haven't

001357

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1 followed it is that once I made the initial
2 determination that I couldn't use American Ecology for
3 purposes of arriving at a DCF based cost of capital, I
4 didn't put my time into following what was going on in
5 the company, as far as changes in management, changes in
6 control and so on.
7 I think, frankly, there's been a fair amount
8 of interest and speculation involving the company, but
9 that's not the sort of thing that ought to drive the
10 cost of capital in a case such as this. So I just
11 haven't really been following it in any detail.
12 Q Even out of a concern, to assure yourself you will be
13 paid for your services by --
14 A Well, I've always done well in that regard in the past,
15 and I don't -- there's always a danger of that.
16 Q Let me ask you about the use of the Needles, California
17 Industry as a proxy for establishing a rate base for the
18 Richland facility. Is it not true that the company's
19 engaged in development of a low-level radioactive waste
20 disposal facility in Nebraska?
21 A Yes.
22 Q Is it making investments in that disposal facility?
23 A I don't know if there's any brick-and-mortar investment,
24 as of this date, but certainly to the extent there's
25 activity going on, those costs are capitalized, and for

001358

1 accounting purposes they would be defined as an
2 investment.
3 Q Why did you not look at the Nebraska facility as a proxy
4 for establishment of a rate base for the Richland
5 facility?
6 A As I understand it, the Nebraska facility uses a
7 different technology than the Richland facility, whereas
8 the Needles technology is comparable.
9 Q Can you explain the difference in technologies to us,
10 please?
11 A Not very well, but I'll give it an economist's shot.
12 Essentially, at Richland, and for the planned facility
13 at Needles, there will be a -- there's a pit that's
14 lined with adequate safeguards and the waste is buried.
15 At the Nebraska facility, I understand it's going to be
16 an above-ground facility, using what could probably be
17 described as concrete bunkers for storage purposes. So
18 it's a different technology. And I understand from what
19 I've heard, and Mr. Sauer would know more about this
20 than I would, that the Nebraska facility would have
21 higher costs than the Needles facility.
22 Q Okay. Your revenue requirements methodology, have you
23 studied that to determine what the likely revenues
24 enjoyed by the applicant will be in subsequent years?
25 A What I am aware of is that if there are no significant

001359

1 new investments in the Richland facility, that the rate
2 base will decline and the revenue requirements should
3 decline accordingly.
4 Q Well, there are other factors involved in this
5 application, are there not, such as inflation adjustment
6 and volume adjustment, that we mentioned previously?
7 A Well, but I thought you asked me about revenue
8 requirement, and the volume adjustment would go to
9 rates, but not revenue requirement. And as far as
10 inflation, all inflation would really do would be to
11 keep the revenue requirement the same in real terms, so
12 with the driving factor, with other things essentially
13 equal, recognizing the volume change and recognizing the
14 inflation thing, would be the declining rate base that
15 would result in depreciation. So that should take the
16 revenue requirement down.
17 Q Do you have an opinion as to how long, assuming the WUTC
18 adopts the methodology as proposed by applicant, that
19 those rates and adjustment mechanisms should be in place
20 before we visit it again to see how the applicant is
21 doing?
22 A Somebody asked me that question a couple of weeks ago,
23 and it's one of the few really new questions I've had in
24 the last few years. But essentially, the question --
25 Q I feel badly.

001360

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1 A Well, you were close. The real question is how should a
2 regulatory commission regulate, and on the one hand you
3 have the California model and the Wisconsin model, where
4 the Commission says every company's going to be in every
5 year for rate base. And Washington State is pretty
6 close to that, in terms of what they do.
7 On the other hand, you have other commissions,
8 primarily in the southeast, where a company might not be
9 in for years; five years, eight years, ten years, and
10 there are some people that think that's a particularly
11 good approach. That it provides an incentive for the
12 utility to be efficient, to be able to stay out for a
13 long period of time.
14 And then you have the FERC with its regulation
15 of gas transmission companies, where they have them in
16 about every three years.
17 My feeling is that it's better for the
18 customers and for the regulated company to be in on some
19 periodic schedule, and I would say about every three
20 years would be a good figure. That's strictly a
21 judgment. Certainly, if you've got a lot of inflation,
22 as there was in the late '70s and early '80s, you're
23 going to see the company in every year.
24 You might not see this one in because of the
25 inflation adjustment, but that wouldn't necessarily

001361

1 cover rate base, so you might see them, anyway. And
2 then you could have the opposite situation where there's
3 very little inflation and costs are coming down,
4 especially for fuel and capital investment, and you
5 might not see them for a long time.
6 But I think periodically the regulators, in
7 order to do a responsible job, have to know what's going
8 on, and have to see these companies for a full-blown
9 review of their cost expenses, rates, revenues, et
10 cetera, and three years is probably a good number. Five
11 is too long, I think. Two years, on the other hand,
12 doesn't give them much incentive to try to keep their
13 costs down.
14 Q All right. You indicated to let the regulators know
15 what's going on, one of the reasons for periodic visits
16 was examination of the company's financies. If we assume
17 that there will be economic regulation put in place in
18 the State of Oregon -- that is, if we assume that the
19 monopoly issue will be answered yes, U.S. Ecology will
20 have a monopoly. Can you explain to us why economic
21 regulation is necessary?
22 A You meant Washington State, not Oregon?
23 Q Excuse me, did I say Oregon.
24 A You need economic regulation whenever the producer -- in
25 this case, U.S. Ecology, has monopoly power, and you

001362

1 need that in order to get the correct price signals.
2 You don't want rates that are too high, that discourage
3 consumption of the service. You also don't want a
4 situation in which the producer is able to be too
5 comfortable, in terms of not having adequate incentive
6 to develop new technologies, new cost-efficient ways of
7 doing things, and a real incentive to hold expenses
8 down. And regulation can be a very valuable thing in
9 that regard.
10 Q In the first part of your testimony, I think we
11 mentioned -- discussed marginal cost pricing. Do you
12 recall that?
13 A Yes.
14 Q Is that generally applicable to all regulated
15 industries, or is it unique to this particular
16 proceeding?
17 A It's not unique. Most commissions, including the
18 Washington Commission, have espoused marginal cost
19 pricing in theory, at least when it comes to the
20 regulation of gas and electric rates. In practice,
21 however, they have abandoned it in favor of demand side
22 management.
23 In other words, commissions say they believe
24 in marginal cost pricing in pricing those, but they
25 don't anymore. They've decided that the customer really

001363

1 can't take the price signal and optimize his or her own
2 situation, and they've decided that the utility, through
3 their supervision, has to do it for the customer. That
4 they've got to help them insulate and change their
5 appliances and do all this sort of thing. That the
6 price signal doesn't do it anymore. That's an
7 unfortunate thing, but it's not a good thing to
8 editorialize about it in this state.
9 Q And your proposal, I assume you believe, gives the
10 correct price signals to generators of low level waste;
11 is that correct?
12 A That's the attempt, yes.
13 Q In recent years, has the U.S. Ecology operations at
14 Richland been subjected to competition?
15 A Yes.
16 Q Would the rates and the return realized by the company
17 during those competitive years, then, be reflective of
18 appropriate rates driven by competition?
19 A The rates would reflect competition; they should reflect
20 competition, yes.
21 Q Would those rates reflect, as you used the term, the
22 proper price signals to generators of wastes?
23 A They should. There's certainly some indication that
24 I've gotten, going through this process with the
25 personnel at U.S. Ecology, that there's been something

001364

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1 learned about what constitutes good price signals. In
2 other words, having to take a look at the costs and the
3 rates for purposes of this filing has been useful to the
4 company people, I think, as far as taking a hard look at
5 what the proper rate design ought to be.
6 Q I assume, then, that your proposal, in addition to
7 giving the correct price signals to the customers,
8 produces the appropriate revenues for U.S. Ecology as
9 well; is that correct?
10 A In my opinion, it does, yes.
11 Q Does it make any difference to you whether the producer
12 in your marginal cost analysis happens to be a lessee or
13 an owner?
14 A No.
15 Q All right. The company owns the facility at Needles,
16 California; is that correct?
17 A I don't know what the current standing is. All that's
18 really happened at Needles is that a lot of studies have
19 been done, but as far as I understand, no ground has
20 been broken, and I don't believe that there has been any
21 land transfer, so other than some office equipment, I
22 don't know if they own anything.
23 Q Their contemplated investment in Needles would certainly
24 be owned by U.S. Ecology, though; is that correct?
25 A I believe that's the case, but again, remember that most

001365

1 of this investment is for studies, legal fees, that type
2 of thing. It's very little as far as actual facilities.
3 Q Well, to the extent that the costs in California
4 represent acquisitions of lands, is it appropriate to
5 use that particular cost as a proxy in the State of
6 Washington?
7 A For the raw land itself, no, it wouldn't.
8 Q The land is available, owned by the federal government,
9 leased in the State of Washington and subleased to the
10 operator; is that not correct?
11 A Right. In place of land, you'd have a lease payment.
12 Q What is depreciation, from an economic standpoint, Dr.
13 Olson?
14 A From an economic standpoint, it's the decline in value
15 that takes place with an asset with the passage of time.
16 For rate-making purposes, depreciation is based on the
17 accounting concept of recovery of cost.
18 Q So you're making a distinction between the accounting
19 concept and rate-making or economic concepts; is that
20 correct?
21 A Well, the rate-making concept generally is an accounting
22 concept, and I wanted to make that distinction so there
23 wasn't any confusion. But from the economic
24 perspective, it's the decline in value that takes place
25 in an asset with the passage of time. And there were so

001366

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1 many arguments early in the history of regulation about
2 using an economic concept, that you really couldn't
3 quantify it, that the NARUC committee on accountants
4 decided that it had to be simplified, and they then went
5 to a strictly accounting concept, where it's the write-
6 off of costs based on some pattern, usually straight
7 line, over a period of years.

8 Q Why not establish the marginal costs of a facility at
9 the time U.S. Ecology entered into a lease for the
10 Richland facility, then utilize depreciation to reduce
11 that to reflect the current decline in value and the
12 current value of the Richland facility?

13 A The reason that that's not appropriate is that when the
14 facility was first leased there was no need for
15 regulation, because the company was going to operate in
16 a competitive market. We have one of these transition
17 cases here, where we're not starting out with a new
18 entity that's going to be regulated from its inception.
19 Rather, we're taking an entity that has operated in a
20 competitive market for a long period of time, and
21 changing over to a regulated situation, because of
22 changes in legal requirements.

23 Q U.S. Ecology will not be making new and -- strike that.
24 If the lease is renewed, do you anticipate
25 U.S. Ecology to be making significant investments in the

001367

1 Richland facility?

2 A Personally, I don't, but I really have no idea whether

3 that will be required or not, and there'd be another

4 witness who'd be, I'm sure, better qualified to answer

5 that question than I would.

6 Q All right. At Page 16 of your initial testimony,

7 towards the bottom, you indicate that the appropriate

8 rate of return should be based on the risk of investing

9 in a low-level radioactive waste facility; is that

10 correct?

11 A Yes.

12 Q What do you mean by the term, the phrase, "risk of

13 investing in a LLRW facility"?

14 A I don't know if I can say it any other way than it's

15 stated here. We talked earlier about the concept that

16 return is a function of risk; the higher the risk, the

17 higher the required return; the lower the risk, the

18 lower the required return, so in this particular case,

19 because the risk is largely investment related, that's

20 what should drive the return requirement.

21 Q But U.S. Ecology is not investing significant monies in

22 the Richland facility; is that correct?

23 A Not in that specific facility, but given that we've got

24 a starting point with new regulation, and given that if

25 they were to have to start again, that's the cost and

001368

1 the risk which should be assessed.

2 Q Okay.

3 A It's fortuitous that this facility is already here, but

4 if it weren't, it would be a starting over again

5 situation, and that is what should drive the price

6 signals, in my opinion.

7 Q So it's not a significant factor that the facility is

8 already there, in determining the risk; is that correct?

9 A Yes.

10 Q So one could say that the operators in America of the

11 low-level radioactive waste facilities, are facing these

12 risks, whether they also faced the investment or not; is

13 that correct?

14 A Yes.

15 Q Dr. Olson, to what extent does federal legislation,

16 federal statutes, affect your analysis on rate of

17 return?

18 A It affects it to the extent that there is an impact on

19 risk.

20 Q How is that manifested in your recommendations?

21 A Well, let me ask you, are you speaking generally, or are

22 you speaking about this particular case, or . . .

23 Q Let's talk in particular about federal legislation

24 establishing compacts within the United States for low

25 level waste deposits. There are a number of compacts in

001369

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1 this country now, where waste disposal facilities are
2 contemplated; is that not correct?
3 A Yes.
4 Q And to the extent that waste transported between the
5 compact states is not contemplated, does that impact
6 your analysis with regard to risk, rate of return, or
7 even reliability of generated waste that will be
8 available to this site?
9 A Yes, it does.
10 Q And how did you incorporate that into your analysis?
11 A Well, based on federal legislation, as it was explained
12 to me by counsel, it's my understanding that there will
13 now be regional monopolies, at least to some extent, for
14 purposes of handling this waste. Some of the waste may
15 be able to go to other facilities, but as a general
16 rule, there will be one site within each compact. To
17 the extent that that's the case, it will eliminate the
18 competitors for that waste. It won't stop technological
19 change, such as compaction. It probably won't slow down
20 limited storage on site by the generators.
21 The other major factor that I took into
22 account in looking at this, is the fact that in spite of
23 this federal legislation, there is not a lot of interest
24 in investing in and developing these sites. For
25 example, in the case of California, there was only one

001370

1 taker, and that was U.S. Ecology. No one else was
2 interested, so the conclusion that I arrive at, based on
3 those set of facts, is that this is still a high risk
4 business.
5 Q Did you quantify the incremental risk of compaction, due
6 to technology that may reduce volumes?
7 A No. There's no way I could do that. As you understand,
8 Mr. Paine, I'm sure, what happens in these kinds of
9 cases is that you start out with the conceptual, and you
10 look at the situation generally, and then you have to
11 get down to making rates. And the two main parts of
12 making rates are rate base and a rate of return, and the
13 rate base can either be original costs or it can be
14 something that's tied to marginal cost.
15 The rate of return is generally obtained using
16 the DCF approach, and so, the leap we make is going from
17 the conceptual evaluation of risk to the DCF approach,
18 to the use of comparable companies in implementing that
19 DCF approach, to the estimate of the growth rate in the
20 DCF approach. That's more or less the chain we follow
21 along in starting out from the point of addressing the
22 problem to actually getting down to dollars and cents.
23 Q One last area, then, and that is, could you tell me how
24 one determines the adequacy of rates for U.S. Ecology?
25 And I mean to give you this question -- I know that you

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1 would indicate that as proposed, that the prior
2 application would be a means to determine the adequacy.
3 What would be the proper means to determine the adequacy
4 of rates in two years?
5 A As you also know, Mr. Paine, the way in which this is
6 usually done for a regulated public utility, such as an
7 electric utility, is to evaluate the change in rates
8 relative to the impact on the bond rating of the
9 electric utility and its market-to-book ratio.
10 What we have to do in a situation like this,
11 where we're starting out fresh, is to see in two years
12 what the financing capability of this particular
13 operation is. We have to see if it can obtain some debt
14 capital on a stand-alone basis, and we have to determine
15 if there's any other means of finding that its credit
16 quality is higher than it was.
17 Q Then if the answer is no, then rates may go up? Is that
18 your response?
19 A Well, if the answer is no, and the rates have been set
20 with that kind of situation in mind, then the rates
21 should stay the same conceptually. In other words, they
22 should generate the same kind of returns that they did
23 previously. If, however, there's an indication that the
24 financial condition is better, that's an indication
25 there is less risk and there should be a lower return.

001372

1 If it's worsened, then it would be the opposite.

2 Q But you would utilize normal accounting procedures to
3 determine the return realized by the company; is that
4 not correct?

5 A Well, the return that's generated probably doesn't mean
6 very much. That's just accounting convention; that's
7 just a numerator and a denominator. What really matters
8 is financial impact. And so, what you really have to
9 look to is what the financial community is thinking, and
10 perhaps at that point what you need is an investment
11 banker, or a commercial banker, to evaluate the
12 situation between the two points in time, now and then.

13 Q So you're saying in two years it would be important to
14 determine whether this company can obtain debt; is that
15 right?

16 A Right, you want to know in a couple of years -- let's
17 take the three years we were talking about before.

18 Q All right.

19 A With the three years, is going to be the accepted
20 regulatory cycle, you want to know what the financial
21 impact of what was done the first time is, and if it
22 looks as if there's been a method of regulation that's
23 going to reduce risk, there should be a reduced return.

24 Q I understand.

25 A And vice versa.

001373

1 MR. PAINE: Okay, should we take a break? Is
2 that permissible? Five minutes, is that all right?
3 (Brief recess taken)
4
5 EXAMINATION
6 BY MR. WILLIAMS:
7 Q Dr. Olson, my name is Richard Williams. I'm
8 representing an intervenor, Teledyne Wah Chang Albany,
9 which is a generator of wastes which are disposed of at
10 the facility. I have just a few questions to follow up,
11 and I'm going to particularly try to understand some
12 points about your recommendation for rate base
13 methodology.
14 First, does your recommendation on rate base
15 methodology assume elasticity of demand. In other
16 words, the generators do have alternatives?
17 A Yes, it does. And I assume, when you say "elasticity of
18 demand," you mean price elasticity of demand?
19 Q Yes.
20 A Yes.
21 Q It does make that assumption?
22 A It's implicit. In other words, if I were to assume that
23 there was no price elasticity of demand, what would the
24 price signal matter? There'd be no concern over the
25 price signal, because the price signal would have no

001374

1 impact on demand, so I am assuming that, yes.

2 Q What would be your recommendation as to rate base
3 methodology, if there were no price elasticity of
4 demand?

5 A I don't know. That's -- you're asking a dichotomous
6 question. It has as a premise throwing away one of the
7 fundamental tenets of economics, and really getting me
8 beyond my profession. If price didn't matter, I just
9 don't know what the right setter rates would be, or what
10 the right methodology would be.

11 Q Could you discuss degrees of price elasticity of demand
12 as varying degrees may bear on this issue?

13 A Well, there are three categories for price elasticity of
14 demand. Very inelastic, which means not very responsive
15 to price; unitary elasticity, which means that for a
16 given percentage change in price there'll be about the
17 same percentage change in the quantity sold; and highly
18 elastic, which means that a price change will trigger
19 substantial changes in quantity.

20 And I simply would not be in a position to
21 tell you what the elasticity of demand would be in any
22 precise sort of way in this situation.

23 Q Does your recommendation about rate base methodology
24 assume that the elasticity falls into one or another of
25 these three categories you've described?

001375

1 A No, the only thing it assumes is that there will be a
2 response, that the price will produce response in the
3 quantity of waste that's tendered. And to amplify on
4 that a little bit and to be complete in my answer, I
5 assumed that within some limits that there are
6 alternatives available to the generators.
7 Q Are there commonly accepted definitions from the
8 economics profession that define in a quantitative way
9 the three categories you've described?
10 A Yes. Yes, you would find reference to that terminology
11 in any basic microeconomics textbook.
12 Q Are you familiar with the operations of my client,
13 Teledyne Wah Chang Albany?
14 A No.
15 Q Have you conducted any study to determine whether
16 Teledyne Wah Chang's Albany demand for disposal services
17 at Hanford are not very elastic, unitary or highly
18 elastic?
19 A No, I haven't.
20 Q Have you --
21 A I haven't conducted any studies. The only thing that I
22 have heard about your client is that the waste that you
23 tender has a relatively low level of activity compared
24 to the waste that comes from the supply system and PGE.
25 Q Have you conducted a study of the operations of any user

001376

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1 of the Hanford facility, to determine the price
2 elasticity of demand for that user?
3 A No.
4 Q In response to Mr. Paine's questions, you mentioned some
5 factors which you believe -- and correct me, if I'm not
6 recalling your testimony correctly -- could affect price
7 elasticity of demand, and I believe you mentioned
8 possibly compaction, storage, alternative sites, and
9 perhaps a couple of others. Have you conducted a study
10 of compaction possibilities for any user of the Hanford
11 facility?
12 A No.
13 Q Have you conducted any study of storage possibilities
14 for any user of the Hanford facility?
15 A No.
16 Q Have you conducted any study of possible alternative
17 sites for any user of the Hanford facility?
18 A No.
19 Q Have you conducted a study of any other factor which you
20 think may bear on price elasticity of demand as they
21 apply to any user of the Hanford facility?
22 A No.
23 Q The next questions I want to ask are designed to help me
24 better understand how you arrived at the 19 million
25 dollars, approximately, that you recommend as a rate

001377

1 base. Can you explain, just in general terms, how you
2 arrived at that number?
3 A Yes. The starting point for that cost estimate was the
4 estimate of the cost of completing the low-level
5 radioactive waste facility at Needles, California. From
6 that amount was subtracted costs that were expected to
7 be California specific. I think that brought the number
8 from somewhere in the mid-50s to about 46 million
9 dollars.
10 Then I was told that the Richland facility has
11 12-and-a-half years to go on its lease, and that the
12 expected life of the Needles facility was 30 years, so I
13 multiplied the fraction 12-and-a-half over 30, times
14 that 46 million dollars, to get an investment base for
15 the Richland facility.
16 Q When you use the term "investment base" of 19 million
17 dollars, that is not an amount of money that U.S.
18 Ecology has actually invested at the Hanford facility?
19 A That's correct.
20 Q Do you know how much U.S. Ecology has invested over the
21 course of its operations at the Hanford facility?
22 A No.
23 Q Did you make any effort to determine that number?
24 A I didn't consider the number to be relevant, and based
25 on that, I didn't ask any questions regarding what that

001378

1 investment was.

2 Q So you believe the investment by U.S. Ecology over the

3 term of its operations at the Hanford facility to be

4 irrelevant?

5 A Yes.

6 Q Can you explain why you used the estimate of the cost of

7 the Needles facility as a starting point in calculating

8 the rate base?

9 A Generally, when you are applying a long-run marginal

10 cost concept, the cost estimate that you use is the cost

11 of a new facility, and that's commonly done in electric

12 utility marginal cost studies. And it's been done in

13 gas distribution marginal cost studies, so I used that

14 because it's a technique that I have seen applied in

15 other long-run marginal cost studies.

16 Q So the starting point of your analysis is the cost of a

17 new facility, and you used the Needles as an example of

18 a new facility?

19 A Yes, as a proxy.

20 Q Can you discuss the concept of replacement cost and how

21 that concept relates to your starting point in your

22 methodology?

23 A Replacement cost is the cost of replacing an existing

24 facility with the most technologically up-to-date

25 alternative facility.

001379

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1 Q Does your starting point for your rate base methodology
2 represent replacement cost of the Hanford facility?
3 A Yes.
4 Q Why was the 30-year term significant in your calculation
5 of rate base?
6 A Well, in addition to knowing how much the facility is
7 going to cost, you have to know how long it's going to
8 last, so that you can amortize the cost of the facility
9 over its estimated useful life. The 30 years was
10 important, because that was the estimated life for the
11 Needles facility.
12 Q So essentially, you are looking at a 30-year
13 depreciation period for a new facility; is that correct?
14 A Yes.
15 Q And what is the significance to your recommendation of
16 the fact, that the Hanford lease has 12.5 remaining
17 years?
18 A Well, the significance is that in doing the analysis, I
19 assumed that in order to make the cost comparable of
20 Richland and Needles, that it was appropriate to take
21 into account that 12-and-a-half-year remaining life, and
22 I did that by taking the Needles cost and writing off
23 17-and-a-half-years worth of that amount, so as to put
24 the two on a comparable economic basis. In other words,
25 on a per-year of remaining life basis, the annual

001380

1 depreciation amount would be the same.

2 Q Is it fair to say that your methodology hypothesizes a
3 46 million dollars investment, 17.5 years ago, and then
4 amortizes that 46 million dollar investment over a 30-
5 year period?

6 A Conceptually, that's not the way it was thought of, but
7 the result is the same. It's as if we had an investment
8 that had a cost of 46 million dollars, 17-and-a-half
9 years ago. It was now written down by the fraction 17-
10 and-a-half over 30, and that we were making rates for
11 that facility on a perspective basis.

12 Q How would your recommendation change if the lease were
13 to be extended by, let's say -- hypothetically, say 20
14 years -- strike that question.

15 Let me re-ask it. Please assume that instead of
16 having 12.5 remaining years, that the lease had 30
17 remaining years. How would that affect your
18 recommendation?

19 A I'm not sure, because on the one hand, you can think in
20 terms of starting out fresh with 30 years. On the other
21 hand, we have got a facility at Richland that has been
22 in operation for a period of time, and I really am not
23 sure, just sitting here now, what I would recommend in
24 that case.

25 Q All right. Now, please assume that the lease at the end

001381

1 of its term, 12.5 years from now, is extended for an
2 additional 20 years. How does that fact affect your
3 recommendation, that assumed fact?

4 A I don't think it would affect it.

5 Q So, a lease extension at the end of the current term
6 would not affect your current recommendation?

7 A Well, I have to make some recommendations based on the
8 facts as we see them, and I just can't really tell you
9 how some hypothetical would change that. I suppose it's
10 something I could grapple with and perhaps come up with
11 an answer on -- given time and thought on the subject,
12 but frankly, getting to the point I was at when I
13 prepared my testimony today, a lot of the time and
14 thought, as it was, and to get into this extension sort
15 of thing, I don't think I could do it, just based on
16 that. I would assume that I would have to talk to the
17 company people in terms of what that meant, as far as
18 changes at the facility and so on. I just don't really
19 know what the answer would be.

20 Q Going back to my last previous hypothetical, instead of
21 having 12.5 remaining years the current lease has 30
22 remaining years, and I believe that you testified that
23 you could not say how that assumed change in the facts
24 would affect your recommendation.
25 Why would you not amortize the 46 million dollars

001382

1 over the assumed term of this lease? Again, it --

2 A Well, that's probably the correct answer, but I simply

3 don't know if there would be other factors that would

4 have to be taken into account. I'm quite sure, for

5 example, that space in the facility is not an issue, and

6 so you wouldn't have to be concerned that you have only

7 got 12-and-a-half years of space left, but I don't know

8 if there are other considerations that would dictate

9 higher expenses at Richland beyond that 12-and-a-half

10 years, that you wouldn't have to worry about at Needles

11 because somehow they had been provided for.

12 I just wouldn't be comfortable without some further

13 discussion with people that have more experience in

14 running that facility and more knowledge of the

15 engineering and operation than I do. So I just don't

16 know, is where I'm at.

17 Q I was next going to ask you about the space issue, and I

18 believe you said that space is not an issue at the

19 Hanford site?

20 A That's my understanding, yes.

21 Q Can you explain what you mean by that?

22 A Well, what I mean is that there is enough space at that

23 facility to handle the volume of waste that has been

24 coming in for a very long period of time, much longer

25 than 12-and-a-half years, I believe, longer than 30

001383

1 years, perhaps longer than 100 years, but it's a very
2 long period of time. It's comparable to asking the
3 question, when is the United States goes to run out of
4 coal. Well, maybe in 600 years or 800 years or 1,000
5 years, but it's so long that it's not a number that can
6 really be contemplated.
7 Q Going back to what I understand to be your fundamental
8 point, which is that a rate base of 19 million dollars,
9 using the methodology that you have described as
10 appropriate to send the right price signal to users of
11 the facility, would you agree that a price signal to a
12 user of a facility is a function not only of the rate
13 charged by U.S. Ecology, but in addition to the rate
14 charged by U.S. Ecology, the fees and other taxes that
15 users must pay in addition to the rate?
16 A Yes, as long as those fees and taxes are tied to the
17 rate. In other words, the taxes, some percentage of the
18 rate and the fees or some percentage of the rate, they
19 are -- all of those amounts are reflected by the volume.
20 Yes, that would be correct.
21 Q Is one of the purposes of rates in the context of
22 regulated public utility rates to compensate the
23 provider of the service for the investment made and to
24 allow recovery of costs?
25 A That's the purpose, yes.

001384

1 Q Does your methodology have the result -- let me back up.

2 Assume that U.S. Ecology's investment at the

3 Hanford site is zero. Does your methodology result in

4 an overcompensation to U.S. Ecology?

5 A Well, if you assume that the investment is zero, then

6 the question answers itself, that then the rates would

7 overcompensate.

8 Q Assume that U.S. Ecology's investment is something less

9 than 46-million dollars. Does your methodology result

10 in overcompensation of U.S. Ecology?

11 A Do you mean 46 or 19?

12 Q I'll start with 46.

13 A If you assume the investment is less than that, then it

14 follows that there's overcompensation, and of course,

15 investment can take a variety of forms, and you have to

16 recognize that the managers and the investors had other

17 opportunities to do things, and just because there are

18 not booked amounts in the sum of 46 million or 19, or

19 however many millions of dollars, just because there are

20 not booked amounts equal to that, doesn't mean that

21 there weren't foregone opportunities equal to those

22 amounts.

23 Q But if the amount actually invested is less than 46

24 million dollars, your recommendation results in

25 overcompensation to U.S. Ecology?

001385

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1 A Well, under that hypothetical, yes, and as I took the
2 question, it is only a hypothetical.
3 Q I take it we have established that U.S. Ecology -- we've
4 established that you don't know how much U.S. Ecology
5 has invested at the Hanford facility; is that correct?
6 A I do not know. That is correct. We haven't established
7 that.
8 Q Would our methodology result in overcompensation if U.S.
9 Ecology had invested 19 million dollars or less in the
10 Hanford facility?
11 A Well, at 19 million, it clearly would not. At less than
12 19 million, under the same hypothetical scenario you
13 gave me before, the answer would be yes.
14 Q So is it fair to say that your methodology, assuming
15 U.S. Ecology has invested less than 19 million dollars
16 at the Hanford facility, on that assumption, that your
17 methodology results in overcompensation of U.S. Ecology,
18 in order to send a correct price signal to users of the
19 facility?
20 A Well, under that hypothetical, yes.
21 Q I have a question about your recommended rate of return.
22 As I understand it, the projected growth rates stated on
23 your Schedule 11 are projections in earnings over the
24 next five years?
25 A That's correct.

001386

1 Q Those percentages on Schedule 11 are not historic rates
2 of return for those companies?
3 A That's correct.
4 Q Going back to your rate base methodology, would it be
5 accurate to say that your methodology charges current
6 users at rates which are designed to fund replacement
7 costs for the Hanford facility?
8 A That wasn't the purpose, but that would be the result.
9 MR. WILLIAMS: That's all I have.
10
11 EXAMINATION
12 BY MR. HATCHER:
13 Q My name is Melvin Hatcher. I represent the Supply
14 System. I just have a few in-between questions for you,
15 and I kind of hope we understand what you have done and
16 what you are -- what you've been asked to do on behalf
17 of the company.
18 Are you the company's rate design expert, or
19 are you limited primarily just to the rate base itself?
20 A As far as my testimony and exhibits are concerned, I'm
21 limited to revenue requirement methodology.
22 Q When you were talking earlier about the analysts, were
23 the analysts' rates of return on Schedule 11, were those
24 based on accounting costs or marginal costs?
25 A What those percentage growth rates represent is the

001387

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1 average compound increase over a five-year period of
2 time. I think from the end of 1990, when I got these --
3 when I prepared this, either from the end of 1990 or
4 1991, so if, for example, one of these companies that
5 earned a dollar a share in 1990, and the growth rate was
6 15 percent, that analyst would in effect be saying that
7 if you took 15 -- took that dollar and compounded that
8 out by a 15-percent rate over five years, that would be
9 earnings per share at the end of that five year period.
10 That's all it really represents.
11 Q I guess what I'm trying to understand, though, you're
12 looking at the rate of return on the basis of what those
13 companies actually invested, as distinguished from
14 what -- you're looking at what those companies actually
15 invested to get to what their rate of return would be?
16 A Well, you're not looking at it directly. What an
17 analyst is doing is looking at the whole company, which
18 includes its investment. But it also includes its
19 personnel and its markets and everything else, and
20 saying, I think the compound rate of increase in
21 earnings is going to be equal to this. It might be a
22 function of investment, but it might be a function of an
23 idea.
24 For example, if you look at a company such as
25 Microsoft, which is a well-known company in this area,

001388

1 presumably the growth rate in earnings is not driven by
2 investment. It's driven by the analyst's perception of
3 what kind of new ideas they're going to come up with as
4 a company.
5 Now, it's true, you have to pay people a
6 salary in order to get them to come up with the ideas,
7 but the ideas can generate dollars that are far out of
8 proportion to the salary of the person that came up with
9 them.
10 Q The Needles facility at 19.2 million dollars are a
11 hypothetical estimate of what the cost to replace, or to
12 put in service a comparable facility at Hanford would
13 be?
14 A That's correct.
15 Q Why didn't you analyze what it would actually cost a
16 company to put in -- to construct and put in service a
17 facility at the Hanford site, as distinguished from
18 going down to California?
19 A Well, the people at U.S. Ecology tried to customize the
20 estimate for the Needles facility to make it Richland
21 specific, as much as they could. In other words, they
22 took out California specific items, items that they knew
23 wouldn't be applicable in this state.
24 Q Did you look at site characterization costs?
25 A No, I didn't, but they did. But, essentially, they felt

001389

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1 that it was -- the use of the Needles facility was a
2 good proxy for Washington, and starting over with just
3 making an estimate for Washington, would have cost a lot
4 more money, and it probably would have relied heavily on
5 what they were doing at Needles, anyway, because that's
6 the only comparable experience that's available.
7 Q What data do you have available to compare the Needles
8 facility to the Hanford facility? What are -- and I ask
9 you that, because you indicated that you relied on
10 individuals within U.S. Ecology to tell you that the
11 Needles facility costs are comparable to those that
12 would be incurred at Hanford, and I'm asking you to
13 explain what your knowledge of the comparison features
14 of the two facilities are.
15 A I don't have any specific knowledge. That's much more
16 technical, and I simply am not the witness to be asking
17 that information of.
18 Q Is it fair to say that you took at face value U.S.
19 Ecology's representation that its estimate, 46 million
20 point one dollars -- you took that at face value to
21 reflect what it would cost to develop a facility at
22 Hanford?
23 A Yes.
24 Q Did you make any estimates of the likely return that
25 would be earned by U.S. Ecology at the Richland

001390

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1 facility, using this proposed rate?

2 A I did not estimate that.

3 Q Would that have -- would that type of analysis have

4 focused on the accounting costs of the Hanford facility?

5 A Well, the way you would get the return would be simply

6 to multiply the rate base times the return. So, that

7 would be in the first year 19 million dollars times

8 roughly 18 percent, so the return would be in the high

9 three millions. It would be between three-and-a-half

10 and four million dollars. That would be the return.

11 Q Okay, let me try to cut through the maze of -- this 19.2

12 million dollars is a hypothetical cost associated with

13 the Richland facility?

14 A It's an estimate of long-run marginal costs, that's

15 correct. It is hypothetical. It's not an accounting

16 cost.

17 Q Right. So when you look at the accounting cost of the

18 Richland facility, and then you factor in the proposed

19 rates, based on your rate making methodology, did you

20 look at how much, in fact, in terms of the accounting

21 costs, U.S. Ecology would be making at the Richland

22 facility?

23 A Well, I don't want to say that that would be like

24 comparing apples and oranges. That's what it would be

25 like, but you simply can't mix accounting cost concepts

001391

1 and economic cost concepts and come up with anything
2 that's meaningful. I mean, you can always play this --
3 you can always do this exercise of providing a large
4 return by a small rate base, but that doesn't mean
5 anything. All you really know, as far as return, is
6 what you're going to get is going to be in the high
7 three millions.
8 Q When -- are you familiar with commissions that operate
9 on the replacement cost rate making methodology? Or are
10 you familiar with commissions or states or jurisdictions
11 that use that methodology?
12 A Well, my understanding is that states say they like to
13 base rates on marginal cost, but that in fact the
14 prevailing practice virtually everywhere that I'm
15 familiar with, and I am quite familiar with rate making
16 in this country, is that they base rates on original
17 cost and not replacement cost.
18 Q How do they make -- in your experience, how is that
19 adjustment or modification made? You say that they pay
20 lip service, I take it, to marginal cost, yet they base
21 the rate on the original cost. How do they make that
22 type of transition?
23 A There's a term for it, but it just isn't coming to mind,
24 but what they do is they start out with the marginal
25 cost estimate, and then they bring it back to the

001392

1 revenue requirement, and I just can't -- it's not
2 normalizing. It's some other term that's used, that
3 essentially means you take the dollars that you've got,
4 using the marginal cost approach, and you factor them
5 down to the dollars that were there using the original
6 cost approach, but the term just escapes me. You might
7 ask Mr. Paine during the break. He might remember it.
8 Q Okay. You took -- your marginal cost rate of return in
9 this case is in the 18 percent range?
10 A Well, that's the rate of return. The return on equity
11 is always the marginal cost to capital. Whether you're
12 using an original cost approach or whatever, the return
13 on equity is always the marginal cost. The difference
14 in my methodology in this case, is that I applied that
15 to a replacement cost type of rate base that represents
16 long-run marginal cost to investment.
17 Q Should you make any adjustment to that rate of return,
18 given the fact that U.S. Ecology has not, in fact, made
19 that 19.2 million dollar investment?
20 A No, there should be no adjustment made to the rate of
21 return. The rate of return is the return investors
22 require to invest in a comparable risk facility.
23 Q How familiar are you with low-level radioactive waste,
24 in terms of its characteristics?
25 A I'm not an engineer. I'm a lay person when it comes

001393

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1 to -- or I have the knowledge of a lay person when it
2 comes to those technical things. I'm very familiar with
3 rates, rate making, economics, but I'm not familiar with
4 the technical composition of that waste at all.
5 Q You indicated -- did you -- what federal legislation,
6 aside from compact related legislation, did you consider
7 in preparing your testimony? Specifically, in terms of
8 the risk that is undertaken or faced by U.S. Ecology?
9 A Well, I was informed about that legislation by counsel,
10 and from time to time, when there were court cases
11 involving this issue reported in the Wall Street
12 Journal, I read the reports in the Wall Street Journal
13 about those cases, but I'm not familiar with the
14 legislation in any detailed sort of way, and I can't
15 think of any legislation other than the legislation
16 involving these compacts that I took into account.
17 Maybe there was something else discussed, but nothing
18 comes to mind right now.
19 MR. HATCHER: Thank you very much.
20 I don't have any other questions right now.
21 MR. DUDLEY: It's 12:20, shall we push on or
22 shall we break for lunch?
23 MR. VAN NOSTRAND: It depends on what you
24 have. Do you have any questions, Anne?
25 MS. EGELER: No, or very few.

001394

1 MR. DUDLEY: Off the record.

2 (Discussion off the record)

3 MR. DUDLEY: Back on the record.

4

5 EXAMINATION

6 BY MR. DUDLEY:

7 Q Dr. Olson, my name is Jay Dudley. I represent Portland

8 General Electric Company.

9 In your testimony at Page 4, Exhibit T-19, you

10 make a reference to rate making methodology, on Line 9;

11 that was your assignment in this case, to develop a rate

12 making methodology?

13 A Yes.

14 Q Do you see that? And just to paraphrase, the

15 development of the rate making methodology entails a

16 determination of a proper level of operating expenses,

17 annual depreciation expense, an appropriate rate base

18 and a rate of return applied to that rate base; is that

19 a correct paraphrase of what you write there?

20 A Yes.

21 Q Now, I take it your assignment was to do the latter of

22 those two, and that is to determine an appropriate rate

23 base and to determine a rate of return to be applied to

24 that base; is that correct?

25 A Well, I came up with the overall methodology.

001395

1 Q Oh, I see.

2 A And others are responsible for the expense part of this,

3 but as far as conceptualizing the methodology, that was

4 my assignment.

5 Q Okay. Have you independently determined whether the

6 numbers provided by the other witnesses here -- that is

7 level of operating expense and annual depreciation

8 expense, are proper for use in rate -- for rate making

9 purposes, Dr. Olson?

10 A I spent a lot of time with those witnesses, looking at

11 those numbers, and there was a time that I was quite

12 familiar with them and reasonably satisfied that those

13 were appropriate numbers, but I did not go so far as to

14 do an independent audit, to determine what each invoice

15 was for and whether it was appropriate or not

16 appropriate. But as far as general categories, I spent

17 a lot of time discussing those issues with Mr. Ash, so

18 that items that were not related to the Richland

19 facility did not creep into this cost of service.

20 Q And what direction did you give Mr. Ash to assure that

21 his operating expenses would be appropriate?

22 A Well, I told him two things. I told him, first of all,

23 that as much as possible he should try to determine what

24 items could be directly assigned to the Washington

25 facility. So, for example, if there were employees that

001396

1 worked at Richland and only at Richland, that those
2 costs could be directly assigned, and I urged him to try
3 to do direct assignment as much as possible between all
4 the different activities at U.S. Ecology.
5 The second thing was, I told him that other
6 areas where the expenses were going to be common to a
7 number of activities, that he was going to have to
8 allocate, and if there was an allocation method for
9 expenses that would follow the direct assignments, to
10 use that, such as there might be with fringe benefits
11 that could follow labor which had been directly
12 assigned.
13 And I said for anything else, you're going to
14 have to use a general allocation methodology, and I
15 think we were talking about the president's salary, that
16 he was going to have to use a general allocation
17 methodology, and I recall talking about using something
18 like the Massachusetts formula, which is a technique
19 that is commonly used in these situations.
20 Now, obviously, he's more knowledgeable about
21 these accounts and about accounting than I am, and my
22 discussion with him was just for guidance purposes, and
23 in the final analysis, he had to make up his own mind.
24 But I would say we had at least three or four hours
25 worth of conversation on these expense related subjects.

001397

1 Q Did you give him any documents to follow, any written
2 instructions?
3 A No.
4 Q Did you give the same directions to Mr. Sauer?
5 A No, Mr. Sauer's more of a policy witness, and he wasn't,
6 as I recall, responsible for coming up with any specific
7 expense numbers.
8 Q Did you give any directions to Mr. Sauer?
9 A No, we just discussed things back and forth.
10 Q Was this the same three- or four-hour session?
11 A As I recall, we had three all-day sessions, and the
12 three to four hours I was talking about with Mr. Ash was
13 just an estimate of how much time that we spent talking
14 about expense items and accounting for expense items.
15 There was additional time discussing these issue with
16 Mr. Sauer.
17 And I might add that during most of the
18 conversations with Mr. Sauer and Mr. Ash, both were
19 present, along with other company personnel.
20 Q Back to your assignment to develop a rate making
21 methodology, what is a rate making methodology, as you
22 used that term in your testimony?
23 A What it is, is a method or an approach for coming up
24 with the revenue requirement, and the revenue
25 requirement is simply the total dollars that would have

001398

1 to be collected from the rates, that would permit the
2 recovery of expenses and a return adequate to maintain
3 financial integrity.
4 Q How does one determine in general the adequacy of a
5 revenue requirement?
6 A One determines that by assessing whether the rates
7 result in financial integrity for the regulated entity.
8 Q And how does one determine whether financial integrity
9 for an entity like U.S. Ecology has been achieved?
10 A You would determine that by finding out whether they
11 could borrow money on reasonable terms.
12 Q And what are the underlying economic principles that
13 you're trying to achieve with your rate making
14 methodology, Dr. Olson?
15 A The underlying economic thing you're trying to achieve
16 is to obtain the same result that you would get if there
17 were competition. Competition is presumed to produce
18 the best allocation of resources. If you take that as a
19 premise, what regulation is trying to accomplish is the
20 same thing.
21 Q The company is in competition now; is that correct?
22 A Yes.
23 Q And it's unable to attract debt at this time; is that
24 correct?
25 A That appears so, from the annual report of American

001399

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1 Ecology, yes.
2 Q So if regulation would allow -- regulation under the
3 revenue requirement you would prescribe, would allow it
4 to attract debt, it would put it in a better position
5 than it would have in competition; isn't that correct?
6 A Yes, it would.
7 Q Now, what discussions did you have with management of
8 the company about their ability to borrow money at
9 reasonable terms at the current time?
10 A Well, I remember asking about that, and I think the
11 response was that with this kind of operation, it just
12 wasn't possible to issue bonds or borrow on a long-term
13 basis. In fact, the business was considered to be too
14 risky.
15 Q Did you discuss with them bank loans, or anything else
16 like that?
17 A In a general way, yes. And I think the response on the
18 question of bank loans is that banks only want to
19 finance things like receivables or items of equipment
20 that can be repossessed, if necessary. And that there
21 really wasn't anything in the operation of this
22 particular company that was very suited to bank lending.
23 Oftentimes, for example, you'll find bank lending
24 associated with things like inventory, and there just
25 isn't inventory that you find with this kind of

001400

1 operation.

2 Q You mentioned that the availability of long-term

3 contracts might be something that would allow a company

4 like U.S. Ecology to achieve from debt financing; is

5 that correct?

6 A Yes, I did.

7 Q Explain to me how that would work.

8 A Well, if there are long-term contracts, then the lenders

9 know that the company they're loaning money to has an

10 assured revenue stream, and with that assured revenue

11 stream, they're willing to make a debt type of

12 investment, because they can expect that that revenue

13 stream will be used for the payment of interest and the

14 eventual repayment of principal.

15 Q Is there anything in your recommended rate making

16 methodology that will allow U.S. Ecology to attract debt

17 or be able to get debt financing?

18 A Hopefully, there's enough of a return. Whether it will

19 be enough or not, I don't know. I think it will be, but

20 time will only tell with that. What would be more

21 assuring would be long-term contracts, with take-or-pay

22 provisions.

23 Q Did you explore with management about its ability to

24 obtain long-term contracts?

25 A We talked about that, and my recollection was that they

001401

1 said that wasn't the pattern in the industry, and they
2 didn't know whether any of the generators would be
3 interested in such arrangements or not.
4 Q What did they tell you about the financing for the
5 Nebraska facility?
6 A Nothing that I recall.
7 Q Did they tell you that the Nebraska facility was being
8 financed in part by some of the contributors to the
9 waste stream?
10 A I don't recall that.
11 Q Now, Dr. Olson, there are different rate making
12 methodologies, are there not?
13 A Yes.
14 Q Give me, for example, what some other competing
15 methodologies might be, contrasted to yours.
16 A Well, one approach would be to use original cost rate
17 making, which I don't think I have to explain to you.
18 Another would be to use the operating ratio approach,
19 which would be to take expenses and add depreciation and
20 then use some ratio of expenses to revenues to generate
21 return dollars with.
22 Q Are there any others?
23 A None that come to mind.
24 Q And is there a shorthand that we can call your
25 methodology? Is there a phrase we can use to address

001402

1 it?

2 A The marginal cost approach.

3 Q Now, is one rate making methodology better than another?

4 A Of priority, no.

5 Q And to repeat, the goal to be achieved by any rate

6 making methodology is to produce financial integrity for

7 the regulated entity?

8 A Yes, and more generally, the same results that

9 competition would have produced.

10 Q And on what basis did you choose the marginal cost

11 approach for a methodology for U.S. Ecology, and reject

12 the operating ratio and the original cost approach?

13 A Generally, based on my past experience. In other words,

14 I've been involved in enough different rate cases

15 involving enough different circumstances, that this was

16 one that fit the marginal cost approach without having

17 to go through a formal search of the other

18 methodologies.

19 MR. DUDLEY: Would the reporter read that last

20 response back to me?

21 (Whereupon, the previous response

22 was read by the reporter)

23 Q (By Mr. Dudley) I don't really quite understand. What

24 did you mean by a formal search of the other

25 methodologies, Dr. Olson?

001403

1 A Well, I was trying to give you a pragmatic answer. You
2 said how did you do it, and essentially, my answer is I
3 just knew. Now, if I were new to this business, what I
4 might have done is said, what are the exiting
5 methodologies? I might have searched the literature for
6 them and looked at pros and cons, and said, based on
7 these pros and cons, I've decided on the marginal cost
8 approach.
9 But when you do this all the time, and you've
10 done it all the time for years and years and years, you
11 don't have to do that kind of formal selection process.
12 You just know.
13 Q What other companies are successfully regulated under
14 the marginal cost approach, that you can think of, Dr.
15 Olson?
16 A What do you mean by "successfully regulated"?
17 Q Well, I'll rephrase that. What other companies are
18 regulated under the marginal cost rate making
19 methodology, as you have applied it -- proposed applying
20 it here to U.S. Ecology?
21 A I think there are a number of electric utilities that
22 are regulated with the premise in mind that rates can't
23 exceed long-run marginal cost, and for that reason there
24 have been substantial disallowances made in their
25 revenue requirements, because their revenue requirements

001404

1 have gotten beyond the marginal cost level. This is
2 especially true of companies that got involved in very
3 large nuclear investments, but I can't think of any
4 cases that's specifically comparable to this one. As
5 far as I know, this is the first instance of rates being
6 determined for a company that runs a low-level
7 radioactive waste facility.
8 Q You have -- can you tell me what are the other cases of
9 disallowances for the electric utilities you just
10 referenced, do you have the utility or the commission
11 and a case number at your fingertips where this has
12 occurred?
13 A No, but I can tell you generally, that I think companies
14 like Long Island Lighting, Niagara Mohawk Power,
15 Commonwealth Edison, probably Detroit Edison, and there
16 are other companies whose costs have gotten so high that
17 regulators have had to take into account what they
18 believe the long-run marginal cost level to be, and to
19 limit rates to that level, so as to be able to allow the
20 proper price signals to be sent, and not overburden
21 their customers.
22 Q In none of those cases that you mentioned were rates set
23 based on a hypothetical, fictitious rate base,
24 calculated on marginal cost, were they?
25 A Well,I think those companies would call it a fictitious

001405

1 rate base, if you chop out a lot of the investment,
2 but -- well, that's my answer.
3 Q So --
4 A I think fictitious is in the mind of the labeler.
5 Q Is hypothetical a better word?
6 A The answer would be the same. I think if you are wed to
7 the original cost approach, that it is what it is, and
8 as soon as you start taking something out, if you add
9 something or subtract something under that approach,
10 it's all hypothetical. I don't think it's -- in other
11 words, what I'm saying is, I don't think it's any less
12 hypothetical because something has been subtracted than
13 it is if it's added.
14 Q Is there any case that you can think of where a
15 regulated company has been granted a long-run marginal
16 cost rate base that exceeded its original cost?
17 A I think that's the case for a number of oil pipe lines
18 under the Williams methodology that the FERC has
19 established.
20 Q And do you have at your fingertips cases and decision
21 numbers for those?
22 A Well, that would be Williams Pipe Line Company, and the
23 opinion number would be 154 and 154-B.
24 Q That's the Federal Energy Regulatory Commission?
25 A Yes.

001406

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1 Q Are there any others than the Williams pipe lines that
2 come to your memory?
3 A No.
4 Q In your discussion with Mr. Hatcher, you stated that the
5 return under your methodology would be about three
6 million dollars per year; do you recall that?
7 A I think I said closer to four, three-and-a-half or four
8 million dollars a year, and I said that would be the
9 return for the first year.
10 Q To be true to long-run marginal cost principles, what
11 would the company do with that return?
12 A They wouldn't have to do anything with it.
13 Q They wouldn't have to invest it in new facilities or
14 anything like that?
15 A No.
16 Q They could buy casinos in Las Vegas with it?
17 A Well, once the return dollars are earned, they're the
18 property of the investor, and the investor can do
19 anything with those dollars. They're not -- the rate
20 payer doesn't have a string on those dollars, in other
21 words. Under regulation, that's something that is not
22 supposed to happen.
23 Frankly, I can't tell you how the issue of
24 diversification interfaces with this fact situation, as
25 far as the low-level radioactive waste facility is

001407

1 concerned. I just don't know if there are any
2 provisions in the Commission's regulations to limit or
3 do anything else with diversification. There are many
4 commissions that can tell utilities they're simply not
5 allowed to diversify, but what the facts are in this
6 state, I simply am not aware of that.
7 Q But that would affect your recommendation?
8 A No, it wouldn't, but I will tell you that if dollars are
9 provided for financial integrity, it really shouldn't be
10 the option of the regulated company to blow those
11 dollars so that it doesn't have financial integrity. If
12 the Commission sets rates that produce financial
13 integrity, then the financial integrity should be there,
14 and if the company somehow conducts itself in such a
15 fashion that it's got the dollars, but it doesn't get
16 financial integrity because it's lost all the money
17 elsewhere or done something else that's unreasonable,
18 then the Commission should consider revoking the
19 franchise of that company. But how that concept fits
20 here, I simply don't know, because at this point, I'm
21 not even sure whether there's a franchise or a
22 certificate of convenience for a low-level radioactive
23 waste facility in this state.
24 Q But you don't know if a franchise is required for U.S.
25 Ecology for its work here in the State of Washington?

001408

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1 A No. But my basic answer is, as far as U.S. Ecology, if
2 they collect these rates, those dollars should be
3 available to the operation, and the operation should be
4 generally conducted in such a way that there is
5 financial integrity.
6 Q You've talked a bit about the risks faced by U.S.
7 Ecology in your previous discussion here?
8 A Yes.
9 Q Can you quantify what those risks are?
10 A No.
11 Q Can you describe in general categories what those risks
12 are?
13 A Well, I think we talked about that earlier. There's a
14 potential risk from competition, and there's risk from
15 technological changes.
16 Q Are there any others?
17 A I guess there's the risk that the generators' waste
18 producing activity will not continue in operation.
19 There have been referenda in various states, for
20 example, that potentially could have closed down the
21 operation of generators.
22 Q Any others?
23 A Not that come to mind.
24 Q Now, your last one, wouldn't that be accounted for in
25 the volume adjustment; to the extent that volumes were

001409

1 reduced from any particular facility, the statute
2 automatically adjusts the total revenue to allow for
3 that, does it not, Dr. Olson?
4 A Well, it does in the single case, but there are only a
5 few generators involved here, and if there were
6 referenda that shut down the Supply System's nuclear
7 plant and PGE's nuclear plant, presumably it would be
8 very possible that the volume adjustment could make the
9 rates so high for the other generators, that they would
10 cease to do business in this region, and either shut
11 down that kind of activity altogether, or move to a
12 facility in another part of the country.
13 Q So you're not questioning the efficacy of the legal
14 volume adjustment; you're questioning whether the rates
15 might get too high, so as to keep any amount of waste
16 being accepted by U.S. Ecology; is that what you're
17 saying?
18 A That's right. There have been instances under
19 regulation where an attempt has been made to say that a
20 particular project in its rate of return are guaranteed
21 because there were tariff provisions in place that would
22 take care of that. For a long time, for example, tariff
23 provisions were touted as a means of financing the
24 Alaskan gas pipe line, but eventually the bankers
25 figured out that it was going to be residential

001410

1 customers that were going to be buying that gas, and
2 that there was nothing to prevent those residential
3 customers, if the price got too high, from switching to
4 an alternative source of fuel.
5 So there's nothing that can really guarantee a
6 company like this that it's going to have business all
7 the time. Volume adjustment can help and it can smooth
8 things out, but if there's a referendum in Oregon that
9 shuts down Trojan, and then there's a later referendum
10 that shuts down the Supply System's nuclear plant, well,
11 there just may not be waste, and if there's not enough
12 waste, presumably then, the other generators have to
13 figure out whether it's worth while to continue to pay
14 the rate that's now much higher, or shut down their
15 operations and move elsewhere.
16 Q Do you have any estimate of what that rate level would
17 be, that would cause that effect?
18 A No.
19 Q Have you done any calculations to that effect?
20 A I think we had some discussions with the company
21 management involving other facilities, and we looked at
22 some projections for the future, and I think we talked
23 about the possibility that for some of those new
24 facilities, that there could be rates a lot higher than
25 have been proposed here, on the order perhaps of two to

001411

1 five times higher. But I don't think there's any actual
2 experience under rates that are that high.
3 Q What will the rates be in California, when that
4 facility's completed, do you know?
5 A Presumably, they'll be a lot higher than they are here,
6 because there is a much bigger investment cost involved,
7 and the return component under the formula that's been
8 decided by the State of California produces a far higher
9 return than is being proposed here, so my guess would be
10 those would be very high rates, but --
11 Q Do you know what those would be as a multiple of the
12 rates that are being proposed in this case?
13 A I think about twice.
14 Q What technological change would cause -- and we're
15 talking about the risk for technological change here,
16 that you addressed earlier -- what technological change
17 exposes U.S. Ecology to risk?
18 A The technological change that would be involved would be
19 anything that would result in less low-level radioactive
20 waste being produced, or any change that would develop
21 an alternative means of dealing with this waste.
22 Q Have you done any studies to determine if there exists
23 in the development stage, or study change, alternative
24 means of dealing with this waste?
25 A No, the only thing we've talked about at the company

001412

1 regarding that is compaction.

2 Q Have you -- are you aware of anything -- any

3 technological change that would allow a production of

4 less waste product?

5 A No.

6 Q So this risk, then, devolves to -- at least what's known

7 about the risk of technological change, is only the risk

8 of compaction; is that correct?

9 A Well, that's all I know about. But I'm not very

10 knowledgeable on the subject, so that shouldn't be taken

11 as a definitive answer. There's lots of things that the

12 Department of Energy is doing and lots of research, I'm

13 sure, that's going on in this area, and I just couldn't

14 tell you what the possibilities are there.

15 Q Now, the third element of risk that you've identified

16 for us is competition. How would -- how does a risk of

17 competition apply to U.S. Ecology, Dr. Olson?

18 A Well, U.S. Ecology could -- at its Richland facility,

19 could be operating under regulation for a period of

20 time, and making investments and conducting its

21 operations based on that, and the law could change

22 again, resulting in competition, making it difficult or

23 impossible to recoup its investment. Now, I recognize

24 that we're talking about prospective investments, but

25 still, that's a risk that the company faces under

001413

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1 regulation.

2 Q Are you talking about some law change that's different
3 than existing law that U.S. Ecology operates under now
4 in the State of Washington?

5 A No, I was talking about these regional compacts. It's
6 federal law with respect to these regional compacts.
7 That law could change and it could change after a period
8 of time during which the company had invested
9 substantial dollars, assuming that the regional compacts
10 were gong to continue.

11 Q I see. So this risk comes into play only to the extent
12 that the company expends substantial dollars under the
13 hope of a regulatory environment, but then the
14 environment becomes competitive, and it can't recoup
15 those dollars. Is that what you're telling me, Dr.
16 Olson?

17 A Generally, I wouldn't use the term "hope of". I would
18 use the term "premised on," but that's what I'm telling
19 you, yes.

20 Q Okay. So with that correction, the answer is yes?

21 A Yes.

22 Q And it's your -- it's a part of your recommendation for
23 return for this company that the companies under
24 regulation compensate this company for the risk that it
25 might not be regulated; is that what the effective

001414

1 result is?

2 A Well, now, my general premise would be that the rates

3 have to provide for a return that reflects all the risks

4 the company has to face.

5 Q And one of those risks is the company may no longer be

6 regulated, correct?

7 A Right.

8 Q And you're recommending this company collect through

9 rates, through regulated rates, a risk premium to give

10 the company in case that it might no longer be

11 regulated, is that what I hear you saying?

12 A That's generally true. In concept that's in there, but

13 as I discussed with Mr. Paine this morning, there's not

14 necessarily a link between that concept and dollars,

15 because we go from the general concept of how the

16 company should be regulated, to a rate base, to a rate

17 of return, to a DCF, to comparable companies, and an

18 estimate of the growth rate for those comparable

19 companies. And whether that rate of return, that 18

20 percent, actually compensates for this particular risk,

21 there's really no way of saying. Hopefully, it does,

22 but that isn't explicitly built in there. That only

23 arrives via the DCF approach, which is a very imperfect

24 mechanism for capturing all of these risks.

25 Q Now, in response to some of the questions of Mr. Paine,

001415

1 you made the statement that you rejected the original
2 cost of the facility in Richland because in its first
3 lease there was no need for regulation, it was operating
4 in a competitive market, and now, starting regulation
5 for the first time, is why the marginal cost methodology
6 should be applied. Is that a -- I'm just trying to get
7 you to the right place on the page. I don't mean to --
8 A That seems generally right. I don't remember if I
9 responded to him on that or not.
10 Q Well, let me be specific then. Why is it that you
11 rejected the use of original cost investment in the
12 Richland facility, for purposes of regulation?
13 A Well, original cost is the concept of the investment
14 cost being the cost to the first person devoting
15 property to public service. The original cost in this
16 case was not the cost to the first person devoting it to
17 public service. We have to start fresh.
18 Q And your recommendation for doing that is to take the
19 cost, the California cost, make an adjustment for
20 California-specific expenses, and then make a further
21 adjustment for the existing life of the lease at
22 Richland?
23 A That's correct.
24 Q And is there any precedent in the literature for making
25 that calculation of long-range marginal cost, Dr. Olson?

001416

1 A Well, I think the economic literature is pretty clear
2 that long-run marginal cost is the way to go. I think
3 that's quite explicitly pointed out in Kahn's, The
4 Economics of Regulation, and there's a publication that
5 Nera put out a number of years ago, entitled, "How to
6 Quantify Marginal Costs," and that was what was spelled
7 out as the way in which to get proper marginal cost
8 based rates.
9 Q And that -- I'm focusing here on your adjustment
10 methodology, and that is to take an original cost and
11 then make the adjustment based on the remaining life of
12 another facility? Is there any literature precedent for
13 doing that calculation, Dr. Olson? That's what I'm
14 getting at.
15 A Not that I know of.
16 Q And specifically, what I'm talking about is the
17 calculation that you took of the 46 million for the
18 California facility and the division by 12 -- or
19 multiplication of the fraction 12.5 over 30?
20 A I understand.
21 Q Is that correct?
22 A That's correct.
23 Q All right.
24 MR. DUDLEY: That's all the questions I have.
25 Thank you.

001417

1 Anne, do you --

2 MS. EGELER: No, I won't ask any questions

3 today.

4 MR. DUDLEY: Anybody else?

5 (Deposition concluded at 1:23

6 p.m.)

7 (Signature of the deposition

8 was waived.)

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001418

C E R T I F I C A T E

STATE OF WASHINGTON)
) ss.
County of Snohomish)

I, Victoria Wright, Notary Public, do hereby certify:

That the deposition of DR. CHARLES E. OLSON was taken before me at the time and place indicated in said transcript; that said deponent before examination was duly sworn by me to testify the truth, and that the testimony thereupon given was recorded verbatim by me and reduced to typewriting under my direction; and that the foregoing transcript contains a full, true and accurate record of all of the testimony given.

I further certify that I am in no way related to or employed by any party to the cause of action concerned, nor any of counsel, and that I am not financially interested in said action or the outcome thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal this 30th day of May, 1992.

Victoria L. Wright
Notary Public in and for the State
of Washington, residing at Lynnwood.
Commission Expires: 1/28/93

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001419