
Solid Waste



Public Hearing on Proposed Landfill Disposal Guidelines

May 15, 1979

Washington, D.C.

Transcript

T R A N S C R I P T

Public Hearing
on Proposed Landfill Disposal Guidelines
May 15, 1979, Washington, D.C.

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U.S. ENVIRONMENTAL PROTECTION AGENCY

1979

OFFICE OF SOLID WASTE

ENVIRONMENTAL PROTECTION AGENCY

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In the Matter of: :
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PUBLIC HEARING :
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Proposed Landfill Disposal :
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Guidelines :
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Environmental Protection Agency
Waterside Mall
401 M Street, S.W.
Room 3906
Washington, D.C.

Tuesday, May 15, 1979

The above-entitled matter came on for hearing
pursuant to notice at 9:10 o'clock a.m.

BEFORE: DR. JOHN SKINNER,
Chairman, Director Land Disposal Division
Office of Solid Waste
Environmental Protection Agency

PANEL MEMBERS:

Mr. Truett DeGeare

Mr. Bernard Stoll

Mr. James Lennon

Mr. John Humphries

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P R O C E E D I N G S

DR. SKINNER: My name is John Skinner. I would like to welcome you all to a public hearing on the Guidelines for the Landfill Disposal of Solid Waste, and I would like to introduce Stef Plehn who is the Deputy Assistant Administrator for Solid Waste Programs who would like to make a few opening remarks. Stef?

MR. PLEHN: Certainly appreciate your all coming this morning for this meeting. As you know the Congress enacted the Resource Conservation Recovery Act in 1976 and that Act greatly expanded the Federal role in solid waste management.

D
Subtitle ~~A~~ of that Act focuses on the role of state agencies in eliminating the practice of open dumping of solid waste. Under Section 4004 of Subtitle B, criteria for determining the acceptability of solid waste disposal facilities are under development.

These criteria were proposed on February 6, 1978 and they are scheduled for promulgation in July. Section 1008 of RCRA requires the development and dissemination of information on solid waste management practices. The first guidance document to be developed under Section 1008 is the subject of today's public hearing. These guidelines for landfill disposal of solid waste were proposed in the "Federal Register" on March 26, 1979. They present recommended

1 practices and considerations for disposal of solid waste by
2 the landfill technique.

3 This information should be of value to state
4 regulatory agencies as well as to those with responsibility
5 for design, construction, and operation of landfill disposal
6 facilities.

7 Today's hearing is the first of two public hearings
8 on the proposed guidelines intended to provide an opportunity
9 for you to express your comments and opinions on this
10 proposed regulation. Such an opportunity for public particip-
11 ation is strongly emphasized through RCRA and has been
12 strongly emphasized by EPA in its efforts to carry out this
13 Act.

14 The second and final hearing on these proposed
15 guidelines will be held on May 17th, that is this Thursday,
16 in Houston, Texas. I wish that I could stay with you today
17 to hear some of the comments but the House Committee is going
18 to be marking up our legislation this morning and I have to
19 go up there so I will, at this point, thank you again for
20 coming and turn it back to John Skinner who will be running
21 the meeting this morning. Thank you very much.

22 DR. SKINNER: Thanks, Stef. It sounds like it is
23 starting a little bit. Can you hear in the back? I guess
24 we are getting some sound. Is it any better? Okay.

25 Let me go over the way in which we will proceed today.

1 The meeting is scheduled to extend until about 4:00 o'clock
2 this afternoon. We will be breaking for lunch between 11:30
3 and 12:00 o'clock for an hour.

4 As Stef indicated these guidelines were published
5 as a proposed regulation in the "Federal Register" on March
6 26th. Copies of the proposed guidelines and also copies of
7 the Act are available at the registration desk. There is
8 a draft environmental impact statement that has also been
9 prepared and that is also available at the registration desk.

10 The closing date for all public comments on the
11 guidelines is May 25th and all comments received before that
12 date or postmarked on that date will be considered before
13 we finalize the guideline.

14 The purpose of this hearing is for the public
15 to comment on the proposed regulation and draft environmental
16 impact statement and to give us an opportunity to ask questions
17 based upon the comments and testimony provided.

18 Let me just briefly explain the relationship between
19 these guidelines and several other provisions and regulations
20 being developed under the Act. As Stef indicated, these
21 guidelines support to a certain extent the criteria for
22 classification of solid waste disposal facilities which were
23 proposed under Section 4004 of RCRA. These criteria being
24 the criteria for use for distinction between land disposal
25 facilities that are opened up or sanitary landfills.

1 These guidelines describe practices that should be
2 helpful in meeting those criteria. Also, some information
3 in these guidelines should provide some assistance in
4 designing landfills for the management of hazardous wastes,
5 but these guidelines are only relevant to hazardous waste
6 disposal facility to the extent that it provides a further
7 explanation of practices required under Section 3004 of the
8 Act.

9 Because the public comment period on both Section
10 4004 criteria and 3004 regulations have closed, your comments
11 today, even though they may address those two regulations, will
12 only be considered for finalization of the 1980 guidelines.
13 Comments that you make on Section 4004 and 3004 cannot be
14 considered because the public comment period is closed on
15 both of those regulations.

16 All comments made today will be part of the
17 official docket. This docket is referred to as docket 1008.1
18 and is available for review during normal business hours here
19 at EPA. The exact location of that docket and way of accessing
20 that docket is explained in the preamble of the guideline and
21 also if you would like further information on that you can
22 check at the registration desk.

23 All comments received today will be placed in that
24 docket. All testimony will be placed in that docket as
25 well.

1 This hearing is being recorded and there will be
2 a verbatim transcript. We would like every person that is
3 going to make a comment to identify themselves and their
4 organization. We would like you to limit your statements,
5 your formal statements to 10 minutes. Excuse me, limit your
6 oral statements to approximately 10 minutes. If you have
7 a longer written statement you may submit it to the recorder
8 and it will be published in its entirety in the transcript
9 and will be considered in its entirety.

10 The list of individuals who have requested to make
11 a statement is also available at the registration desk, so
12 if you are interested in seeing when you or someone else is
13 going to be making comments you can take a look at that list.
14 We estimate approximately 20 minutes to a half hour to deal
15 with each individual; a 10 minute presentation and then 10
16 to 15 minutes of questions by the panel. So, you can see
17 from the list approximately when we will be getting to you.

18 Anyone in attendance today can direct questions to
19 anyone making a statement. We would like you to do that by
20 writing your questions either on a card, which is available
21 at the registration desk, or on a small piece of paper and
22 submitting it to the panel and the panel will ask the question
23 for you. At the end of the hearing, if we do have time, we
24 will provide an opportunity for anyone who wants to ask
25 questions of the members of the panel. Again, they should be

1 in writing so that we can include them into the formal
2 record.

3 Let me introduce the panel members. On my immediate
4 left is John Humphries who is with our regional office in
5 Region III. Next to him is Barry Stoll who is a Program
6 Manager with the Land Disposal Division in the Office of
7 Solid Waste here at headquarters. Barry is the Project Officer
8 on these guidelines and one of the primary authors of the
9 guidelines.

10 Next to him is Truett DeGeare who is the Branch
11 Chief for the Land Protection Branch for the Office of
12 Solid Waste and at the end of the table is Jim Lennon who
13 is with our Hazardous Waste Management Division here at EPA.
14 My name is John Skinner, I am the Director of the Land
15 Disposal Division. Are there any questions on how we are
16 going to proceed? Fine. Let's begin with the first witness,
17 Mr. George KUSH from the National Solid Waste Management
18 Association.

19 MR. KUSH: Good morning. I am George KUSH with
20 the National Solid Waste Management Association. The members
21 of the National Solid Waste Management Association operate
22 hundreds of privately owned sanitary landfills throughout
23 the United States and as such they have looked forward to
24 publication of the guidelines on which we are commenting
25 today.

1 In contrast to the criteria for sanitary landfills
2 or sanitary landfilling, which necessarily must be performance
3 oriented, the guidelines provided EPA with an opportunity
4 to express itself on what it considers to be good practice
5 for locating, designing, upgrading, and operating land disposal
6 facilities.

7 For this reason facility operators should be able
8 to operate or relate their operations to guidelines much
9 more easily than to criteria.

10 The proposed guidelines have been critically reviewed
11 by the Sanitary Landfill Committee of the Association at a
12 meeting of that Committee. The reactions of our members seem
13 to indicate that there are very few strong adverse reactions
14 to the proposed guidelines. Indeed we have heard some very
15 favorable reactions. Therefore, you should understand that
16 our presentation today is not intended to be strongly critical
17 of the guidelines, but rather to indicate those areas where
18 our members felt EPA might make certain improvements. Interst-
19 ingly, most of our comments will relate to omissions from
20 the guidelines.

21 First, as a general statement, we assume that the
22 guidelines will be consistent with the criteria as they will
23 be finally promulgated. To that extent that paragraphs of the
24 criteris, as paragraphs of the criteria are altered, we assume
25 that consistent alterations would be made in the guidelines.

1 Any inconsistency between these two documents would be the
2 cause of needless confusion.

3 We continue to express our concern over provisions
4 of either the criteria or the guidelines relative to environ-
5 mentally sensitive areas. Our concerns are twofold. First,
6 we are concerned that there are areas of the country where
7 there is little choice but to locate a land disposal facility
8 in an area that is technically environmentally sensitive.
9 EPA recognizes this by conceding that point in paragraph
10 241.200-2(A)(1) that landfills might be located in environ-
11 mentally sensitive areas if alternative locations and disp-
12 osal facilities are infeasible. However, the guidelines do
13 not go far enough in providing direction to owners and
14 operators and state regulatory personnel as to the weighting
15 of the various factors in the alternative study. In particular
16 the last sentence of the paragraph, I quote, "Increased cost
17 alone should not be sufficient grounds for dismissing an
18 alternative in favor of disposal in an environmentally
19 sensitive area," end quote, is a statement that begs for
20 clarification and amplification and we would hope that EPA
21 would provide that in the final version of the guidelines.

22 Our second concern about environmentally sensitive
23 areas involves new versus existing facilities. It is not
24 likely that someone would attempt to establish a new facility
25 in such an area if there was any feasible alternative. But

1 where an existing facility is operating in an environmentally
2 sensitive area, does it make sense to arbitrarily close it
3 down even if there is no threat to health in the environment?

4 We contend that it makes more sense to operate such
5 a facility to completion rather than to close it down in a
6 partially finished condition. Of course, this is subject to
7 a condition that the facility is not threatening health in
8 the environment as defined in the criteria. We urge that
9 EPA address this issue in the final guidelines.

10 In another matter relative to environmentally
11 sensitive areas, we note that paragraph 241.200-2(A) (3)
12 refers to the matter of approvals. We suggest that this
13 section be made more specific as to the actual permits that
14 are required and reference the procedures by which those
15 permits may be obtained.

16 Several of our members commented that EPA might
17 have used the preparation of guidelines as an opportunity to
18 critically investigate some of the requirements for landfill
19 design and operation that are accepted without question. For
20 example, 241.202-2 (A) states that the bottom of a landfill
21 disposal facility should be one and a half meters or more
22 above the seasonal high ground water table. There are large
23 areas of the United States wherein the ground water table is
24 much closer to the surface than one and a half meters and
25 there are landfills operating in these sections of the

1 country that to the best of our knowledge do not pollute the
2 ground water.

3 The premise that leachate from landfills will
4 necessarily contaminate an aquifer if there is not the
5 traditional five feet of unsaturated soil below the fill has
6 not been substantiated and, in fact, we believe it to be
7 false.

8 Given a choice, one might prefer a site with
9 ample unstaturated zone but where the choice is not available
10 alternative design and operating practices are available to
11 the operator. We would suggest that EPA recognize the need
12 for exception such as is provided for in the system of notes
13 in the Hazardous Wastes Management Regulations proposed under
14 Subtitle C of RCRA.

15 Another item of landfill folklore that might have
16 been questioned in preparing the guidelines is the universal
17 requirement for six inches of daily soil cover called for
18 in Section 41.205-2 (B) (1). Why six inches? Why not four
19 inches or eight inches? It is true that six inches has become
20 a widely accepted number but, in fact, its original source
21 of rationale are obscure. Few people seriously debate the
22 desirability of daily cover, but at the same time practical-
23 ity indicates that there are occasions when it is not all
24 but impossible to provide.

25 For example, in extreme winter conditions or during

1 a period of heavy rain. Landfill operators complain bitterly
2 when inspectors measure the depth of daily cover with a
3 ruler and then cite the operator for a violation because the
4 cover depth is an inch or two short of the six inch objective.
5 The guidelines provide EPA with an opportunity to inject a
6 note of practicality into landfill regulation, but the
7 agency has not done so.

8 We suggest the guidelines be expanded to include
9 some discussion on the practicality of the daily cover
10 requirement.

11 Turning now to the draft environmental impact
12 statement on which comments were also requested, let us say
13 that this is a useful document which provides a good tutorial
14 background on the location, design, upgrading, and operation
15 of landfills. Our comments pertain mainly to the economic
16 analysis contained in section 5.

17 First, with regard to the baseline disposal cost
18 as indicated on Figure 5.1. The relation between disposal
19 costs and landfill operating capacity seems to agree generally
20 with present cost levels. However, the use of a single curve
21 is misleading. It may well be adequate for determination of
22 the overall environment impact of compliance with the guidelines.
23 A person unfamiliar with landfill costs generally may be
24 misled into thinking that this curve applies in each and
25 every specific situation. In fact, there is a large range of

1 costs and even though it was not necessary to indicate such a
2 range for EPA purposes, we feel that the value of the draft
3 EIS would be enhanced if it could be indicated that there is
4 a range of costs at each capacity level. This same comment
5 applies to the scenarios for upgrading land disposal facilities.
6 There too the presentation of upgrading costs as a single
7 number rather than a range does not tell the whole story.

8 One mis-impression that can be arrived at because
9 of failure to present the range of costs is that resource
10 recovery is not likely to be a feasible disposal alternative.
11 No resource recovery projects that we are aware of operate
12 for costs less than indicated for an upgraded landfill. This
13 is not, however, universally the case. There are areas of the
14 country where resource recovery is economically feasible
15 compared with alternative landfills. And while we do not
16 suggest that EPA enter into a discussion of resource recovery
17 economics in the draft EIS, we feel that the agency could
18 inadvertantly do a disservice to resource recovery
19 implementation by not indicating a realistic range for
20 landfill disposal costs.

21 We think that EPA might have presented some typical
22 costs for landfills larger than 300 tons per day. It is
23 true that the available surveys of landfills do indicate that
24 many facilities are operated at capacities of 1000 tons per
25 day or greater, but nevertheless as the number of landfills

1 shrink the size is becoming greater and we believe that a
2 scenario for a site operating in excess of 1000 tons per day
3 should have been included.

4 Our most serious concerns about the economic analysis,
5 however, is the failure of EPA to consider the economies of
6 an entirely new landfill. The entire analysis that is pres-
7 ented is based on upgrading of an existing facility. If, however,
8 the inventory of land disposal facilities and the prohibition
9 against open dumping results in the closure of a number of
10 existing facilities, new landfill sites will have to be
11 found. Even in the normal course of events there would be
12 the need for location of new facilities. It is our belief that
13 the opening up of an entirely new landfill might be signific-
14 antly different from the costs for upgrading an existing
15 facility.

16 In most areas a new facility will cost far more
17 than the one it replaced because of the greatly increased
18 difficulty in obtaining new facilities. We believe EPA should
19 have addressed this matter when preparing the draft EIS.

20 We thank you for the opportunity to comment today
21 and we will try to respond to any questions that you may have
22 of our industry.

23 DR. SKINNER: Thank you, Mr. ~~K~~ush. Is the sound
24 system working? Can you hear the speaker in the back? Fine,
25 thank you. Are there any questions from the panel? Are there

1 any questions from the audience that you would like us to
2 ask the speaker? Fine, thank you very much.

3 The next witness is Mr. Peter Skinner, Environmental
4 Engineer, New York State Attorney General's Office. After
5 that Mrs. Irma Levonious, Canterbury Connecticut. Mrs.
6 Levonius? Mr. James McElroy? Mr. Robert Arner? If these
7 other people arrive we will take them at the end of the
8 list of witnesses.

9 MR. ARNER: My name is Robert Arner. I am with the
10 Association called Sycamore Associated Volunteering Energy.
11 It is individually funded organization concerning source
12 separation techniques of recycling.

13 Ladies and gentlemen, greetings: I come here to
14 question solid waste disposal guidelines proposed under the
15 authority of section 1008 (A) (1), the Resource Conservation
16 Recovery Act of 1976, Public Law 94-580 of RCRA. I direct
17 my attention to 241.205-2, recommended practices, page 1814778,
18 "a landfill disposal facility should be maintained in an
19 aesthetic manner."

20 On the contrary I have reports from dumps on a
21 potential threat to our groundwater supplies, Bruce ^{Wesley} ~~Weider~~
22 and George Garland; damage incidents from improper land
23 disposal, Emory Lazar of the EPA, various EPA leachate damage
24 assessments and a field reconizance investigation of sanitory
25 landfills in Maryland with respect to impact of surface water

1 down by Herbert Sachs of the Natural Resources, Department
2 of Natural Resources.

3 All of these documents instead suggest the art
4 of cosmetics to beautify coverup. American's honeymoon at
5 Love Canal has divorced us with the ideaology of the polluter
6 pays. Unfortunately people, property and wildlife and this
7 country's future all heavily incurs these costs.

8 Landfill disposals of solid waste is no longer
9 an answer but profound problem. Sanitary is a euphemism used
10 to deceive the public into accepting techniques which bury,
11 spread and compact waste with a daily half -- six inches of
12 earth and finalized with two feet of soil to seal in the
13 leachate.

14 Motor oil is one typical product folks unconsciously
15 discharge in the landfills. Federal, State, and county law
16 vainly attempt to stop this ignorant disposal without incurring
17 massive publicity drives. This leadful substance threatens
18 our digestive tract evident by the two to three million barrels
19 discharged in the Washington area alone. In Montgomery County
20 15,000 gallns a day are discharged.

21 Yes, gas stations do recycle it, but the primitive
22 nature of the present re-refining process inhibits safe
23 disposal products. The case in point reflects a fallacy in
24 the conservation policy. We worry about dwindling foreign
25 supplies while we do little to promote the return of valuable

1 products back to our feed stock. Our psyche towards waste
2 requires recycling to battle or frivolous infringement on our
3 ecosystem. Reusing oil and leachate have to become household
4 concepts to motivate people to respond. The results are
5 crippling aquifers.

6 Of course landfill is a practice that is not
7 going to be discontinued and it is something that is going to
8 be continuing. It is naive to think that this whole process
9 is going to stop.

10 I wish to address another guideline, 241.200-2,
11 recommended practices, (A) (1), alternatives. Before concluding
12 the location of a landfill in an environmentally sensitive
13 area it is advisable that alternative locations and disposal
14 techniques should be evaluated in terms of hydrogeologic
15 technological environmental, economic and other pertinent
16 facts.

17 We are currently using a lower percentage of our
18 resources than ever before in history. Our post consumers
19 waste are being ignored by three-fourths of the total virgin
20 resources substituted instead. Only seven percent of our energy
21 and the materials available for municipal waste is being
22 recovered today.

23 Separate collection systems have a wide application
24 because they do require intensive capital investment -- do
25 not require capital investment. Waste reduction alternatives

1 and source separation must receive support from the public
2 and the engineering community. Separation at the source,
3 whether commercial or domestic, could greatly improve the
4 economics of recovering paper, organics, glass, metals in
5 the metropolitan area.

6 Ironically, our concern for energy discounts the
7 supplies we have, landfill which are more likely to represent
8 the more serious shortage.

9 With half of this country being served by ground-
10 water the best available technology to filtrate, purify and
11 abate water pollution is in great demand. The EPA realizes
12 the importance of consumer response. Leachate is a problem
13 that is produced by precipitation that passes through land
14 disposal sites gathering various contaminants. If this
15 tainted water migrates uncontrolled to surface and ground
16 water, the public health becomes endangered.

17 Not only are fish killed, but any nearby wells may
18 be contaminated. The chances of damage are related to the
19 proximity of the resource, to the landfill site in the direct-
20 ion of water. Due to the lack of assessing leachate damage,
21 hundreds of thousands of these disposal sites are not seriously
22 monitored as to the impact of this problem. The Environmental
23 Protection Agency indicates that at least one-fourth and
24 possibly as much as three-fourths of the municipal disposal
25 sites in the United States have leachate migration problems

1 and specific site studies represent the tip of the iceberg
2 as present information concerning their energy costs.

3 Emerging today is a philosophy of holding the glass.
4 We have spilled too much milk. Crying does not control the
5 problem, preventative planning does. A vital path of energy
6 service is accomplished by insuring separation at the source.
7 Surely we address the problems at the sink, landfills and
8 drinking water, but only focus our attention on the heart
9 of the issue; safe saligy number of supplies.

10 Awareness of these hazardous wastes can recruit
11 massive support and attention to stop these incidents such as
12 the valley of the barrels. We must define the problem and
13 not the answer. For encouraging the chances of the future
14 is this planets right.

15 I must add to this testimony that there is great
16 progress being made in this whole field of reconizance of
17 landfill and control of leachate groundwater, but in
18 Montgomery County I have seen a vast problem of a \$28
19 million dollar situation where recycling systems are being
20 inhibited merely because of the institutional barriers and
21 I think that has to be brought to the public's attention too.

22 Landfills are not bad, per se, it is just the
23 way we apply our resources to them. Thank you.

24 DR. SKINNER: Thank you, Mr. Arner. Are there any
25 questions from the panel? Mr. Arner, I would just like to

1 ask you, did you see specific problems in the guidelines?

2 MR. ARNER: No. It is not so much specific problems
3 in the guidelines as much as you speak of alternatives. The
4 chance of alternatives occurring are very inhibited. In sense
5 of trying a recycling center in Bethesda, it cannot be done.
6 I mean, I have tried for two years.

7 In trying to set up recycling activities there is
8 great constraints from the taxes and transportation costs.
9 much less zoning. So I am trying to bring forth the attention
10 to landfills as being a problem. And I think the publications
11 that over the years EPA has documented have shown that, yes,
12 there is concern and we should look at this issue.

13 Of course it would be frivolous to say that landfills
14 is a practice that is, you know, going to be ameliorated. It
15 is going to continue. I am just concerned as to the public's
16 knowledge of what they are disposing.

17 DR. SKINNER: Thank you. Are there any other questions
18 from the panel? Are there any questions from the audience
19 that you would like us to ask? Thank you. Mr. T.A. Moleski?
20 Mr. James Cowhey? Dr. Grover Emrich? Mr. Richard Wright?
21 James King? John Rein? Ralph Tabor? That concludes all of
22 the people who have registered to make a statement. Has
23 anybody come in since I have called the first ones; Mr.
24 Skinner, Mrs. Levonius, Mr. McElroy, Mr. Moleski, Mr. Cowhey.
25 Is there anyone who has not registered who would like to make

1 a statement. Okay. What we will do is we will leave the
2 transcript open for the remainder of the day and anyone --
3 we will probably stay here for another hour or so to see
4 if anyone shows up and if they don't we will leave and leave
5 the transcript open and take an statements until the end of
6 the day and include those statements in the transcript.

7 Questions? Yes sir.

8 MR. BRINKMAN: Has there been criteria established
9 as to what is an open dump and what is a sanitary landfill?
10 I notice in the Act this was established in '77 and I am
11 new to the area and I just don't know.

12 DR. SKINNER: Yes, we have proposed a set of
13 criteria of 1978. We have extensive public comment period
14 on those criteria and are now undergoing review of those
15 comments and expect to finalize those criteria by July, the
16 end of July of this year. So they are not final, but they
17 will be final in the next two months.

18 MR. BRINKMAN: I guess my point is, okay, say we
19 follow these guidelines and set up nice sanitary landfill
20 according to all of your guidelines and then you come out
21 with your criteria and it no longer fits the guidelines.

22 DR. SKINNER: Well, these will be put in final
23 form after the finalization of the criteria and so they
24 will reflect the criteria and support the criteria as they
25 can. These are scheduled for putting these in final form will

1 be close to the end of this year. Question?

2 MS. KESNER: How closely do the various states
3 have to stick to these guidelines? Is there going to be any
4 specific sort of guideline for holding to the guidelines or
5 to move open ended?

6 DR. SKINNER: The guidelines are totally advisory.
7 The section 1000 of the Act asks for advisory guidelines,
8 suggested guidelines and they are only -- there are other
9 sections of the Act which make these requirements for certain
10 Federal grantees, for certain Federal agencies and for certain
11 grantees receiving certain types of grants. But in general
12 they are advisory.

13 The states are, through their state solid waste
14 management programs which receive financial assistance under
15 the Act, are required to establish programs to eliminate
16 open dumps and to require that all new disposal be in
17 sanitary landfills according to the 4004 criteria. These
18 guidelines should describe techniques which they could
19 use in order to meet that requirement but the guidelines
20 themselves are not mandatory.

21 MS. KESNER: Thank you.

22 DR. SKINNER: I understand that Mr. King is on
23 his way, is that what they say?

24 SPEAKER: He will arrive at a quarter to 11.

25 DR. SKINNER: Okay we will stay here so he can

1 read his statement into the record if he chooses to do so.

2 Yes sir?

3 MR. CHILDS: If I can identify the section, I think
4 it is 241.2 -- it is in one of the books anyhow.

5 DR. SKINNER: Excuse me, could you identify yourself
6 please?

7 MR. CHILDS: Ken Childs and Brian Mckennon.

8 DR. SKINNER: And could the two last speakers
9 identify themselves so we can get their names on the record?

10 MS. KESNER: Okay. I am Joan Kesner from the town
11 of Oyster Bay Department of Public Works.

12 MR. BRINKMAN: Richard Brinkman from Montgomery
13 County and Dayton, Ohio.

14 DR. SKINNER: Thank you.

15 MR. CHILDS: It is the comment in here with respect
16 to the location of airports within two miles of land disposal
17 operations. I wonder what the impact of that statement is
18 in terms of what happens if there is a landfill in that
19 radius, or is there any means by which you can keep a landfill
20 outside of that radius. We have a guideline which says five
21 miles. We have no punch to that guideline. I am wondering if
22 this one has any clout with it or is it just window dressing?

23 MR. STOLL: This was included in the guidelines to
24 reflect a requirement which is contained in the proposed
25 criteria classification of solid waste disposal. So that

1 requirement in the criteria adopts the Federal Aviation
2 Administrations recommendations or their recommended guidelines
3 for the co-location of airports and disposal facilities.

4 That guideline requires a two mile distance for
5 propeller airplanes and five mile distances for jet airplanes
6 between the disposal -- minimum distance between the disposal
7 site and the runway.

8 MR. CHILDS: Are you telling me that you can prohibit
9 placement of a landfill within that distance?

10 MR. STOLL: No.

11 MR. CHILDS: Okay, you have the same problem as
12 us. It is just a guideline, it has no punch in it? You have
13 a hell of a good argument.

14 MR. STOLL: The only kind of enforcement as far
15 as the exact distance is that an airport can be denied
16 Federal Aviation Administration certification if this distance
17 is not maintained and if there is at least some evidence of
18 a problem.

19 MR. CHILDS: The airport can be apprised of this?

20 MR. STOLL: Right, the airport can be. Well, that
21 is the way it usually works out, but as far as the way the
22 guideline was developed it was as far as Federal Aviation
23 Administration certification.

24 Now, in the case of the landfill control it would
25 be through the criteria that if there is a problem or a

1 strong belief that there could be a problem by a location
2 of a disposal facility closer, either proposed or existing,
3 closer than the recommended distances, then that landfill
4 can be considered as, or identified as an open dump and the
5 state could take action to either close the fill or put it
6 on a compliance schedule for modification which would
7 alleviate this problem.

8 MR. CHILDS: I am saying the gulls and the other
9 birds seem to have a mind of their own and they don't seem
10 to respect the five mile limit.

11 MR. STOLL: That is true.

12 MR. DEGEARE: We have a question asking are guidelines
13 or regulations being written on the production or use of
14 natural gas from sanitary landfills? The answer is no, we
15 are not developing any such guidelines or regulations. We
16 are aware of the practice and we have supported it in terms
17 of supporting financially a demonstration project in this
18 area of gas recovery from the sanitary landfill.

19 Our regulations are more directed to addressing
20 the potential hazard that uncontrolled gas migration can
21 pose rather than only the recovery or use of the gas that
22 is produced. We do recognize that the recovery and use of
23 the gas is a side benefit which can be achieved while also
24 controlling and preventing against adverse effects from
25 gas migration. Yes?

1 MR. COOPER: I am Jack Cooper from the Food Processors
2 Association and if you are going to optimize your natural
3 gas production you may need to follow different criteria and
4 different guidelines than what is written here. Can you make
5 exceptions in the case of a city who wants to utilize their
6 organic waste primarily to produce natural gas? Can there
7 be variance from these criteria if needed in order to enhance
8 natural gas production?

9 MR. DEGEARE: Can you hear the questions? The
10 question gets to the fact that if one is concerned that a
11 facility with optimizing gas production in situ, in a land --
12 fill, they may want to try different methods of waste handling
13 or disposal in order to produce gas at a larger rate. That may
14 cause some differences in operation as compared to those that
15 we have discussed in the guidelines. For example, one may
16 want to increase the moisture in a landfill in order to
17 further enhance gas production which is somewhat contrary
18 to the discussion in the guidelines which talks about minim-
19 izing infiltration of water into the landfill.

20 We recognize this and to accommodate the possibility
21 for those different types of operations we have spoken in
22 terms of the need for making trade offs among the various
23 provisions of the guidelines. For example, in the area of
24 leachate control, one technique that is recognized is to
25 use a compacted tight soil cover material that naturally

1 will keep the moisture out or promote runoff as opposed to
2 infiltration. It will also seal in gas and it could enhance
3 lateral migration.

4 That has to be balanced, that concern for leachate
5 production has to be balanced against the concern for gas
6 migration and the design can accommodate collection of that
7 gas rather than simply allowing it to migrate.

8 So we do talk in terms of the need for trade offs
9 and for the consideration of such things and it is not pre-
10 cluded by the guidelines.

11 DR.SKINNER: Any other questions? Yes, sir?

12 MR. BRINKMAN: Richard Brinkman from Montgomery County.
13 Do you speak of the monitoring of the groundwater wells and
14 not to put one through the landfill base proper. What types
15 of distances do you propose? Should we be five feet away
16 from the landfill or 100 yards, or a mile, or what do you feel
17 on that?

18 MR. STOLL: The question was, since we in the
19 guidelines recommend that groundwater monitoring wells not
20 be placed through the landfill proper, what is the recommended
21 distance away from the landfill for locating groundwater
22 monitoring wells?

23 First a comment on the recommendation not to put
24 it through the landfill. We included that recommendation
25 because drilling through a landfill base for any reason,

1 especially if that landfill is supposed to provide any
2 degree of containment at the base of it, gives you the
3 possibility of leakage along the conduit in which you are
4 going to place your well.

5 So as far as on that issue a recommendation for
6 a distance outside of the landfill proper, we didn't make
7 one nor would I anticipate that we would make one other than,
8 you know, beyond the edge of it. As long as you are not
9 going through the bottom of the fill at least that danger
10 of the place where leachate could be collecting leaking down
11 the shaft would be avoided anywhere outside the property
12 boundary whether it be five -- not the property boundary,
13 perimeter of the actual filled area, whether it be five
14 feet or 100 yards or whatever, that would be potentially
15 a compliance issue to be specified by the state agency.

16 MR. BRINKMAN: Well, I guess what I am getting at
17 is landfills have a tendency to expand and if we got to
18 monitor groundwater this year and then what do we do --
19 block up the shaft, concrete it over as we expand into the
20 region where we were monitoring before?

21 MR. STOLL: Elaboration is the question, Since
22 landfills do tend to expand, if you place a well-- or how
23 do you avoid having a well through the landfill? One way, of
24 course is, if you place a well out side of the landfill
25 proper and then the landfill expands, then you would leave a

1 section of earth undisturbed, call it an island for the
2 monitoring well, whatever you wish, and you could move your
3 landfill around it and you could have those spaced throughout
4 a very large fill area. But there, again, you would not
5 be giving the opportunity for leachate to flow down the
6 shaft if it was designed such that the leachate stayed away
7 from it.

8 We could expand on that topic in the guidelines
9 but we don't include that much information on monitoring since
10 we reference our groundwater monitoring manual as a primary
11 reference source for landfills.

12 DR. SKINNER: I note that Mr. Emrich has arrived
13 and are you prepared to make a statement or would you like
14 to wait a few seconds?

15 MR. EMRICH: I would like to state that Allegheny is
16 not a reliable airline.

T-1 S-2 17 DR. SKINNER: Someone indicated that the problem,
18 probably one of the problems is the fact that National is
19 fogged in and a lot of people who are trying to make it
20 are not able to make it. What we will do is we will continue
21 with as many people who show up this morning and then we will
22 reconvene after lunch and see if anyone shows up after lunch
23 and if so we will take their testimony at that point in
24 time. And again, if anybody is unable to make it due to
25 travel difficulties, I am sure we can include their statement

1 in the transcript for today. Grover? Please identify
2 yourself and your organization.

3 DR. EMRICH: My name is Grover H. Emrich. I am
4 Executive Vice President of A.W. Martin Associates, consulting
5 engineers and scientists. I feel that this statement will
6 probably be about disjointed as the plane ride down here
7 and it is fogged in. I don't know why we stopped at Baltimore
8 except we were running out of gas.

9 I am also President of the Pennsylvania section of
10 the Association of Professional Geologist and I would like
11 this statement to reflect, that this statement does reflect
12 their thinking.

13 I have been a groundwater geologist for approximately
14 20 years and my training was in that area, and I have also
15 done research in pure groundwater geology. And in most cases
16 the water was pure.

17 In 1963 I left a research organization, moved to
18 Pennsylvania to set up their program in groundwater quality
19 management and one of the first problems to be identified
20 was the disposal of solid waste, and particularly the siting
21 of solid waste facilities.

22 We developed this program under the concept, the
23 initial concept that groundwater should be protected from
24 solid waste. We first had to define, was leachate a problem.
25 Well quickly, with a little water balance work, you find

1 out that at least in the humid east leachate is generated
2 from landfills and this now seems old hat. Fifteen to 20
3 years ago it wasn't. In fact a recent study funded by EPA
4 that our firm has conducted has shown that leachate is being
5 generated in an area 10 inches of precipitation or less
6 per year. It is a state of the art landfill. So we see that
7 leachate is not only a problem in the eastern part of the
8 United States, or the humid part, but it is also a problem
9 throughout the United States and we have to handle this
10 leachate.

11 We know that landfills can cause groundwater
12 pollution. There is no question about that. The magnitude
13 of it is something that disturbs many of us in the field,
14 in the landfill field and also working out on landfill
15 problems.

16 We recognize that landfills 20 years ago, or even
17 10 years ago, were located in wet areas; commonly fill in
18 the local swamp, we are going to turn it into a recreation
19 playground facility. And the regulatory agencies, including
20 the State of Pennsylvania, then started saying we have
21 groundwater discharges all over the area and we cannot
22 site a landfill in a wet area. Keep it out of the wetlands,
23 keep it out of the swamps, keep it out of the groundwater
24 discharge areas.

25 The concept then, 15 years ago, was let's keep it

1 high and dry and that moves us towards the groundwater
2 recharge areas. We moved in this direction, a series of
3 research projects were undertaken to prove that what the
4 attenuation capacity of the underlying earth materials
5 would be.

6 I was just looking quickly to see if there was
7 a soil scientist on this panel, this illustrious , because we
8 find that we became concerned not only with the refuse, but
9 the underlying earth material which included, quote, "soils."
10 Being a groundwater geologist I only give the soils people
11 a couple of upper feet. They like to extend it down quite
12 a distance further.

13 But it is the underlying earth materials. In most
14 cases when you put a landfill in the first thing you do
15 it seems is strip off the soils, stockpile them because
16 you are going to use them for cover material. Fortunately
17 that is a smart -- at least that is the right direction. At
18 least let's cover these dumps, maybe we should or shouldn't.

19 But we started moving with the idea of separating
20 refuse from solid waste. Our siting would have to be located
21 accordingly and we found that this is not a panacea. In some
22 cases we can effectively use the attenuating characteristics
23 of the underlying earth material.

24 Most of our concepts today in landfill siting go
25 back into two methods of handling leachate. The attenuation,

1 the natural attenuation of the leachate by the underlying
2 earth materials before it comes in contact with the ground-
3 water and the second is hydraulic isolation. This would be
4 along the lines of either natural or man made liners in order
5 to collect the leachate and handle that accordingly.

6 One of the things that we seem to move away from
7 is recognizing that the attenuation capabilities of the
8 sub surface are unlimited if we recognize what the conditions
9 of the subsurface are and this is one thing that disturbs
10 me in the proposed guidelines.

11 We find a definition of contamination meaning
12 degradation of naturally occurring water, air or soil quality.
13 I did not find a definition of degradation and I am concerned
14 as to how it is applied. Once waste material of any type is
15 applied to the earth, or on to the earth, we are generally
16 going to find some type of change in the underlying soils
17 and in the underlying waters. But I don't see where this is
18 necessarily an adverse effect if we manage and control this.
19 And, I feel very strongly that we must consider, and these
20 guidelines must consider, controlled degradation of the
21 environment.

22 We must manage the physical environment, the waste
23 that we are putting on to it as long as we understand what
24 we are doing and I think this is one of the most -- this is
25 the key element, is that we must know that physical system.

1 That physical system includes the soils, it includes the
2 geology, it includes the groundwater and immediately below
3 the fill it also includes it in the area of the fill.

4 You need to know that the flow system, the ground-
5 water flow system is into the groundwater, not just in the
6 upper five or 10 feet.

7 We have started to move away from the concept of
8 putting the refuse in high and dry groundwater recharge
9 areas. I haven't quite figured out where we are going to
10 put it after awhile because most of our good sites either
11 seem to be in quote, "good sites" that we are using are in
12 either high recharge areas or else they are next to streams
13 where there is a groundwater discharge. I feel very strongly
14 that we have to start developing a program recognizing that
15 the refuse can be put in the groundwater.

16 Many areas of this country you are dealing with a
17 very shallow water table. Especially in the midwest you are
18 dealing with soil deposits or geologic deposits that have
19 an extremely low permeability. By placing the refuse in this
20 material, knowing where your aquifers are, it is possible
21 to carefully control the amount of leachate that is generated
22 by the type of cover you are using. It is also possible
23 to control and manage the movement of the leachate from the
24 refuse, and from the landfill.

25 I think we have to develop a very careful monitoring

1 system which certainly should include monitoring more than
2 once a year. Now being on the other side of the fence after
3 setting up the State of Pennsylvania's groundwater monitoring
4 regulations, I have to convince some of our clients that they
5 should use them.

6 These should be a flexible set of regulations. They
7 have to be utilized. The parameters that are identified have
8 to be reviewed, and you have to know what the system is
9 so that you manage it. There is no reason you cannot put
10 refuse in groundwater. I think, in fact, a classic example
11 is one that has been utilized in eastern Pennsylvania and
12 where a water filled quarry was de-watered, a liner was put
13 in, the groundwater has been maintained below the bottom
14 of the fill, leachate has been recirculated for eight years
15 to the point where it has improved drastically in quality
16 and I would say we are now to a point where the leachate
17 pumps and the groundwater pumps should be shut off.

18 The amount of contamination in that landfill is at
19 a minimum. The hydrology of the area is very well known, and
20 we know exactly where it is going to move. There is no
21 groundwater use in the area and it will eventually discharge
22 into a nearby river. I feel very confident that the amount
23 of leachate that discharges into the river will never be
24 seen in the river. In fact, it has been said that we maybe
25 should put all of our landfills in groundwater discharge areas

1 next to a major river and just let the leachate bleed in over
2 a period of years.

3 We have to look at how we cover or do not cover,
4 depending on how we are going to manage this leachate. Recomm-
5 endations is that the surface water should be diverted away
6 from the landfill. I think that this, again, depends on the
7 conditions of the site. There may be cases where you may
8 want to get as much water in there to get a maximum amount
9 of contaminants out in a minimum period of time because you
10 are going to collect the leachate, recirculate, and you want
11 to be able to walk away from this landfill in a reasonable
12 period of time and say, it has and it is causing very little
13 degradation to the environment.

14 I strongly feel that flood plains are a viable
15 area for solid waste disposal, especially some of our mater-
16 ials that are being generated by industry and are meeting
17 other environmental regulations. I am thinking primarily of
18 the air quality regulations and the sludges that are being
19 produced. We have to look at the economics In many parts
20 of this country the power plants are located along streams.
21 The most logical place to dispose of the sludges that are
22 generated are nearby.

23 If you put them in the flood plain you have a
24 control because you are generally in a groundwater discharge
25 area. You know where any contaminants are going. They are

1 coming up at you. You can see them if they are going to be
2 generated.

3 You can put in a counter pumping system, as necess-
4 ary, and control the movement. I feel very strongly that we
5 have to address these areas in the regulation so that we
6 know that although it requires a more sophisticated manner
7 of disposal of solid waste, we have to look at where we
8 put it and we should definitely consider some type of
9 alteration in the subsurface groundwater quality. That this
10 alteration must be carefully monitored and a system has to
11 be installed to handle any changes in that subsurface system
12 that we are not satisfied with.

13 There is no reason that with the sophisticated
14 technology that we have available today we cannot place
15 landfills in many areas that previously were considered to
16 be unsuitable.

17 Fortunately, or unfortunately, many of these so-cal-
18 led unsuitable areas may be viable sites with the public
19 and this is today one of the most critical elements in
20 landfill location and design is what site can you find that
21 can be accepted politcally by the local area or by the
22 state.

23 I have some specific comments that I will submit
24 to you in my written about various areas of this. Thank you
25 for your time. I hope this is not as disjointed as the plane

1 ride was.

2 DR. SKINNER: Are there any questions from the
3 panel?

4 MR. STOLL: Dr. Emrich, just to get a better
5 understanding of your general comments, you discussed the
6 desirability of the guidelines addressing site specific
7 situations where, for example, solid waste in the groundwater
8 may be acceptable.

9 It is my feeling that the guidelines, as currently
10 written, do not say -- well, naturally they are not regul-
11 atory and therefore they cannot prohibit anything. Most of
12 the subjects that you addressed are considered in the guide-
13 lines and there are some words to say that based on site
14 specific situations this may be possible. Is your suggestion
15 or recommendation that we do this in considerably more
16 detail?

17 DR. EMRICH: Yes. I feel that reading these proposed
18 guidelines, and again you say they are guidelines and they
19 are not regulations, I have unfortunately been in this bind,
20 as I said , with the states in which you promulgate guidelines.
21 Unfortunately they are used by others as regulations.

22 Reading these guidelines I am left with the
23 impression, and quite a few other staff people that have
24 reviewed these, that there is a thrust to keep out of the
25 groundwater, a very strong thrust to keep out of the

1 groundwater and to even consider groundwater management as a
2 means of allowing waste disposal in various areas.

3 I feel very strongly and I think this goes back
4 to about 20 years of time trying to change my thinking about
5 how to dispose of solid waste. I feel very strongly that many
6 of these high and dry sites are in groundwater recharge
7 areas. They may not be a critical area but once anything
8 leaves that site, if you are not very carefully monitoring
9 it, it gets tremendous dispersal into the groundwater system.
10 I would like to see it in as tight a -- as close to the
11 groundwater in many cases as possible. I would also like to
12 see it stablized as quickly as possible which generally means
13 milling or putting as much water into them as possible.

14 DR. SKINNER: Any other questions? I would welcome
15 looking at your specific comments for revisions of particular
16 parts of the guidelines because I am sure you can realize,
17 given a situation which varies so much from site to site
18 and given the detailed considerations and evaluations that
19 are necessary on each site over the long periods of time that
20 you were talking about, it is very difficult to generalize
21 that into a national type of regulation without just throwing
22 your hands up and saying, everything is site specific, do
23 the best you can. So any suggestions that you could make
24 to improve the regulation along those lines I think we would
25 be glad to look at.

1 DR. EMRICH: I would be very glad to, Dr. Skinner.

2 DR. SKINNER: Any other questions from the panel?

3 Thank you.

4 (Prepared statement follows:)

1 DR. SKINNER: Has anyone shown up who wanted to
2 testify? Mr. Skinner, Mrs. Levonius, Mr. McElroy, Mr. Moleski
3 Mr. Cowhey, Mr. Wright, Mr. King, Mr. Rein, Mr. Tabor? Are
4 there any other questions? Please identify yourself.

5 MR. ZAGROBELNY: My name is Ted Zagroblney. For the
6 record it is Z-a-g-r-o-b-e-l-n-y. I am with the U.S. Navy,
7 Naval Facilities Engineering Command. And throughout the
8 morning the panel and other people keep on mentioning that
9 these are guidelines and only guidelines. Yet, for myself
10 and other Federal agencies, these are more than guidelines
11 because under RCRA section 6004.(A) (3), each executive
12 agency and each Federal facility must comply with the
13 guidelines. So, let's not fool ourselves. These are more
14 than just guidelines for some of us. Thank you.

15 MR. STOLL: Let me address that question or comment.
16 I wish our Office of General Counsel was here to address this.
17 It is our understanding that at least as far as section 6004
18 of that Federal requirement, as far as section 1008 guidelines,
19 which these landfill guidelines are, that there is a primary
20 control on the practice of landfill disposal and those are,
21 in the case of non-hazardous wastes, the facilities criteria
22 under section 4004 which we have talked about, which will
23 be promulgated in July as final regulations. Those are the
24 primary control or landfill disposal facilities.

25 And if it is hazardous waste facility, section 3004

1 regulations will be the primary control. Therefore, we still
2 interpret these proposed guidelines as advisory in nature
3 even for Federal facilities as long as the criteria are
4 being met.

5 There is a final point as far as Federal facilities
6 and that is the requirement of section 6001 of the Act, which
7 makes Federal facilities comply with all regulations, both
8 substantive and procedural, whether they be Federal, State
9 or local regulations. So it is not that these are specifically
10 not mandatory. It is just that since they are general
11 advisory documents, or is a general advisory document, it
12 will be interpreted as such for enforcement action at a
13 Federal facility. And the enforcement mechanism will be
14 4004 facilities criteria.

15 DR. SKINNER: Any other questions? Okay, we will
16 reconvene at 1:00 o'clock to pick up any of the statements
17 of people who have been not able to come because of the
18 weather problem and , again, the record will be -- the
19 transcript will remain open until the end of the day for
20 anyone doesn't make it.

21 (Whereupon, at 10:15 o'clock a.m., the hearing was
22 recessed, to reconvene at 1:00 o'clock p.m. this
23 same day, Tuesday, May 15, 1979.)
24
25

A F T E R N O O N S E S S I O N

1:05 p.m.

DR. SKINNER: We will reconvene the public hearing on the Guidelines for the Landfill Disposal of Solid Waste. I see that we have two of the people who are going to give testimony here. Let me just check to see if anyone else is here. Mr. Richard Wright, is he here? Do you intend to give a statement?

MR. WRIGHT: Yes.

DR. SKINNER: Fine, thank you. Mr. King is here, Mr. Cowhey is here somewhere. Ms. Levonius? Mr. McElroy? Mr. Peter Skinner? Mr. Moleski? Mr. Rein is here but is not going to give a statement, is that correct?

MR. REIN: Right.

DR. SKINNER: Fine. And Mr. Tabor has sent his comments. Okay, fine. Let's begin then. Mr. Cowhey? Introduce yourselves and also give the name of our association. You can come up to the podium if you would like to use it for your notes.

MR. COWHEY: My name is James Cowhey and I am the President of Land & Lakes Company which is a firm that is in land development work. We do lakes and we also run a number of landfills in the Chicago area. And, I am talking about a matter which, in my opinion, has not been defined so far by the EPA. It might be what we call a gray area.

1 It involves a listing of landfill sites and responsibility
2 in regards to them.

3 As it is right now we have penalties for operation
4 of hazardous sites and so forth, but they have not classified
5 the municipal solid waste sites and the classification is
6 not being liable over long term liability. By this I mean there
7 are certain sites that are handling a limited amount of
8 materials that may be under the classification of hazardous.

9 I am also thinking, in general, of materials such
10 as sludge and some limited amount of liquids.

11 My talk will be very short because it is just a
12 few comments, a few thoughts I have had in regards to this
13 matter. I wish to make a few comments relative to the inter-
14 pretation of section 3004 of the Act which contains the
15 standards for owners and operators of disposal sites.

16 It is especially our attention to address the
17 area involving the liability of sites after completion. It
18 seems at this time that the matter of site classification
19 does not fully determine, or at best a gray area, whereby
20 municipal solid waste disposal sites may be classified as
21 hazardous waste sites

22 As municipal sites have the capacity of absorbing
23 limited amounts of liquid waste and in many cases, these
24 sites are used for the disposal of nonhazardous or nontoxic
25 liquid waste with special permits, under the present

1 interpretation these sites may be classified as hazardous
2 waste sites. If so classified these sites may be -- would also
3 be liable for either perpetual care or extended periods of
4 liability under the law. Sludge disposal in municipal waste
5 sites may cause a site to be classified as hazardous.

6 From our experience, we have been involved with
7 many sites in the Chicago area which have been reclaimed
8 by means of land disposal and which are now being put to
9 attractive and useful purposes. Many of these sites if left
10 with the stigma or liability of being labeled sites
11 necessary for long-term perpetual care or owner responsibility
12 and liability would never have been developed and returned
13 as active revenue and tax generating properties.

14 Some areas that have been reclaimed by landfill
15 procedures in the Chicago area are: Maine South High School in
16 Park Ridge, Illinois, which has the seven and a half million
17 dollar facility on it, a site that had been an old pit and
18 had been reclaimed. It is very beautiful. It has a lake on
19 it; The Winston Tower Development which some of you people
20 might be an old Chicagoian, has over 1000 apartments and
21 condominiums. They all range in the over \$100,000 class. They
22 are also other landfill sites. The Lane Technical High School
23 in Chicago, which is a rather large high school, about 6000
24 or 7000 students and across the street has the WGN television
25 studio, which is also on a landfill site.

1 The Old Orchard Development, which we are connected
2 with, is approximately 400 condominiums in it and the over
3 \$125,000 range. And we also the municipal golf course and a
4 high rise apartment.

5 Also in the Chicago area, many of the race track
6 properities such as Sportsmans Park and Hawthorne Race Track
7 are on old disposal sites as are industrial areas in Rosemort,
8 and the areas along the north branch of the Chicago River
9 which have been extensively developed as industrial and
10 residential areas.

11 A recent development, which you have probably
12 read about, because the man that was involved in it was a
13 fellow named Harry Chaddick and his wife was kidnapped last
14 week, and had the Chicago Brickyard development, at the
15 disposal site which has approximately 100 stores and a
16 couple of the major stores like J.C. Penney and so forth. And,
17 that is also on a landfill site. It is a recent development.

18 Another area that we are developing at the present
19 time is in the Glenview area. We are helping construct a
20 condominium development along with an industrial park and
21 a recreational area. This, again, is on another old landfill
22 site.

23 Needless to say some of the finest property develop-
24 ments in the Chicago area are on former landfill sites. To
25 hold these sites in abeyance for observation, monitoring,

1 and liability would certainly have prevented the development
2 of many of these properties. I might add that if they are
3 a liability on the property such as to have it in the tax
4 rule or in its title, there would be very little development
5 of any old landfill sites. A developer would just shy away
6 from them.

7 On behalf of Land and Lakes Company, it is cordially
8 requested that the Agency and the legislatures be aware that
9 not all fill sites are Love Canals or Kin-Buc Landfill sites.
10 Such areas as Kin-Buc and Love Canal should be set aside
11 and perpetually maintained, and the owners and operators should
12 be liable for the safety of the public. However, in so doing,
13 the Agency should not take a "shot gun" approach and affect
14 all other sites which are not , or in all probability will
15 do no harm to environment.

16 A modified monitoring and care program should be
17 substituted for these sites so that the reclamation will
18 take its ordinary course. A lot of these sites will be devel-
19 oped for the benefit of the community and the public. Thank
20 you.

21 DR. SKINNER: Are there any questions or comments
22 from the panel?

23 MR. DEGEARE: I understand your concern as it relates
24 to some of the enforcement actions that the Agency is
25 undertaking and to regulations that we have been considering

1 under Section 3004. Do you have comments relating directly
2 to these guidelines and how this might impact on what your
3 concern is?

4 MR. COWHEY: My concern in general is, you have
5 classified landfill sites as the wetland and the flood
6 plains. You have that classified actually as whether they
7 are going to be solid waste, municipal solid waste site,
8 or again I say, if they do handle any hazardous materials,
9 even a limited amount, they may switch over and be classified
10 as a hazardous site which would put an awful liability on
11 them.

12 Many times, as you know, the refuse itself is a
13 good blotter. And limited amounts of nontoxic liquids are
14 really acceptable in a landfill and they should be if they
15 are in a tight, permeable type of fill. However, this may
16 switch and turn the whole site over to the Hazardous Waste
17 Program under -- we talked at one time of perpetual care,
18 we have talked 20 years, we talked about about \$5 million
19 dollars liability insurance which, incidentally, nobody can
20 get, and it is just the program when they do classify the
21 sites. When you get into that program and when you redefine
22 it, I would appreciate your considering maybe classification
23 down the line on this site, even though it has a limited
24 amount.

25 Say it is handling flood materials. Most sludges,

1 municipal sludge is not bad, although some of it does run
2 high and can be -- If it is in a landfill site and buried under
3 20 feet, we are not growing any crops on it and it is not
4 going anywhere. It is going to be contained on a good permea-
5 ble -- especially in the northern Illinois area, we have very
6 good clays.

7 If they were to be restricted, that they cannot
8 take it, you are going to have a shortage of sites, you are
9 going to have liability and the sites will not be developed.

10 MR. DEGEARE: I understand. Thank you.

11 MR. COWHEY: Thank you.

12 DR. SKINNER: Are there any comments from the
13 audience? Questions? Fine, thank you, Mr. Cowhey. Mr.
14 Wright?

15 MR. WRIGHT: Thank you for the opportunity to
16 be here today and to comment on this important issue.

17 DR. SKINNER: Could you indicate your association
18 please?

19 MR. WRIGHT: My name is Richard E. Wright. I am
20 President of R.E. Wright Associates Inc., a firm specializing
21 in environmental geology, groundwater geology engineering
22 geology and mining geology. My firm is located in Pennsylvania
23 and we have been involved in Pennsylvania's Sanitary Landfill
24 Program as consultants to the industry, by virtue of our
25 personnel, since 1968.

1 I am past President of the Pennsylvania section of
2 the Association of Professional Geological Scientists, which
3 is a statewide, non-profit, organization composed of profess-
4 ional geologists. In addition, I am Vice Chairman of the Board
5 of Supervisors of the Township of Derry in Dauphin County,
6 Pennsylvania, a second-class township governed by five
7 supervisors which also operates a sanitary landfill permitted
8 by the Commonwealth of Pennsylvania, Department of Environ-
9 mental Resources.

10 The comments presented by me today are presented
11 as a concerned professional, as a concerned municipal official
12 and as a concerned small businessman.

13 As stated in the Introductory Section of the "Federal
14 Register," volume 44, No. 59, Monday, March 26, 1979, "Pro-
15 posed Guidelines, Landfill Disposal of Solid Waste, Environ-
16 mental Protection Agency," the proposed guidelines have been
17 formulated by EPA for the purpose of assisting the states in
18 solid waste management planning.

19 The intent of the proposed guidelines is to, and
20 I quote, "suggest preferred methods for the design and operation
21 of those solid waste disposal facilities which employ landfill-
22 ing techniques. The decision as to what mix of these and
23 other practices will be required to meet regulatory standards
24 for land disposal will be a matter of state concern," unquote.

25 Although these statements are indicated as both

1 suggested and preferred guidelines on the part of EPA, it is
2 important to recognize the substantial influence that EPA
3 plays upon the formulation of state programs with respect to
4 environmental management regulation.

5 For this reason, any suggested guidelines and
6 preferred methods proposed by EPA as formal guidelines will
7 severely inhibit any flexibility on the part of the states.
8 Historically, Federal guidelines of this type have been
9 treated as minimum standards within states, which develop
10 more stringent standards to acquire state primacy for
11 regulatory enforcement.

12 As a result, any failure on the part of EPA to
13 recognize alternative methods and technologies with respect
14 to landfill disposal of solid waste may, as a result, preclude
15 certain sound, cost-effective, and efficient management
16 methods.

17 With respect to Section 241.202-2, Leachate Control--
18 Recommended Practices, it is clear that two policy tenants
19 prevail throughout the proposed guidelines with respect to
20 landfill disposal. These include: containment and non-degrad-
21 ation.

22 The guidelines state that the most protective means
23 for leachate control involves techniques which achieve comp-
24 lete containment of the solid waste and leachate by means of
25 placement of low permeability materials at the bottom and

1 sides of the landfill.

2 The exception to containment requirements is the
3 landfill site where natural attenuation and renovation of
4 leachate results within the unsaturated and saturated zones
5 which underlie the landfill facility.

6 The second policy tenant which is largely unmentioned
7 is the non-degradation policy with respect to groundwater.
8 Clearly, throughout the guidelines, the focus is directed
9 upon complete and total non-degradation of groundwater. Ex-
10 amples of this non-degradation policy includes statements
11 that preclude placement of refuse directly in groundwater
12 or within the zone of seasonal fluctuation of groundwater
13 levels and placement within environments where natural dis-
14 charge of landfill leachate to the underlying groundwater
15 aquifer would result in groundwater contamination.

16 These policy tenants constitute severe policy
17 problems with respect to state-of-the-art technology as
18 regards to leachate control and leachate management.
19 Specifically, they preclude the application of groundwater
20 management and manipulation procedures which have been
21 clearly documented to adequately control and collect all
22 leachate draining to and affecting underlying groundwater
23 flow systems. For example, Chapter 75 of the Pennsylvania
24 Department of Environmental Resources Rules and Regulations
25 concerning solid waste management, Section 75.24, paragraph 6

1 states that, quote, "Natural systems may be utilized to collect
2 leachate from landfills. The methods to utilize the natural
3 systems may be the manipulation of the groundwater flow
4 systems," unquote. Any such plan requires a detailed analysis
5 of the groundwater flow systems to include as a minimum,
6 "Groundwater Table maps, piezometric surface maps, hydraulic
7 gradients, hydrologic connections, flow directions, flow
8 regimes analysis, transmissivity, and permeability data."

9 This design concept allows the utilization of
10 perimeter interception, underdrains without liners, ground-
11 water interception and leachate recovery well systems
12 causing artificial gradients. This approach allows very
13 limited, but carefully controlled groundwater degradation
14 to the degree necessary to allow natural conveyance of
15 leachate to adequate interception and collection systems to
16 assure complete control and interception of all landfill
17 leachate.

18 Subsequent to leachate collection, the leachate
19 and groundwater combination is treated by conventional
20 means and disposed of by means of spray irrigation over the
21 landfill site or a nearby and related spray irrigation field.
22 Alternately, the treated leachate may be disposed of by
23 surface discharge in accord with standard NPDES procedures.

24 At no point in the proposed guidelines is the
25 option of controlled degradation of, and groundwater leachate

1 interception indicated a satisfactory methodology. The only
2 leachate control procedures cited as recommended include:
3 natural renovation, landfill liner with low permeability
4 natural soil, landfill liner with artificial material and
5 multiple liners with natural and/or artificial liners combined
6 with constant leachate drainage.

7 Even the practice of natural attenuation is disc-
8 ounted under Section 241.202 Leachate Control, where the
9 statement is made that, quote, "procedures for estimating
10 attenuative capabilities of underlying soils and groundwater
11 have not achieved wide acceptance and such estimates may be
12 possible only with the thorough knowledge of the solid waste
13 disposed in conjunction with site specific hydrogeological
14 and climatological conditions," unquote.

15 This guideline will ultimately preclude the
16 possibility of natural attenuation sites due to the probable
17 large degree of documentation that will be required to
18 support the attenuative capabilities of the underlying
19 soils and groundwater conditions, a veritable impossibility
20 without a permitted site on which to acquire site specific
21 documentation.

22 It therefore appears that EPA is promoting a
23 single landfill concept, that being a site with a naturally
24 or artificially impermeable liner designed to completely
25 contain and capture leachate. This policy is clearly exclusive

1 of proved, in-practice, and current state-or-the-art ground-
2 water mangement technology, and definitely precludes the use
3 of the same.

4 For this reason it is essential that these proposed
5 guidelines be revised to include the use of natural flow
6 systems to collect leachate from landfills. The fundamentally
7 important policy concept must be complete renovation or
8 collection of landfill leachate followed by appropriate
9 treatment and disposal.

10 Complete collection, as opposed to containment,
11 is an important, philosophical and policy matter that can
12 substantially affect the economics of landfill site develop-
13 ment and operation as well as long term site maintenance
14 beyond closure.

15 Therefore, it is imperative that the containment
16 policy be de-emphasized and that assured collection be
17 emphasized allowing both the use of natural and artificial
18 liners, as well as groundwater management procedures as
19 practiced within the Commonwealth of Pennnsylvania today.

20 It is my personal opinion that the guidelines
21 being discussed here today are a significant step toward
22 a bureaucratic forced march to the economically unfeasible
23 alternative of complete resource recovery. As a responsible
24 profession, I object; as a municipal official at the
25 local level, I object; as a tax-paying small businessman, I

1 object. I appreciate you hearing me. I thank you once again
2 for the opportunity to speak in a free country and I welcome
3 your questions.

4 DR. SKINNER: Thank you very much. Any comments
5 from the panel? Barry?

6 MR. STOLL: I understood the comments. The major
7 difference I see other than emphasis is inclusion of technol-
8 ogy for groundwater renovation after introduction of leachate.
9 Did I get that correct from you? That is a primary addition
10 that you would like to see?

11 MR. WRIGHT: I would like to see some mention made
12 of the fact that it is possible, without a liner, to collect
13 leachate by controlling the groundwater flow system and that
14 once collected it can be treated and in addition that the
15 placement of a landfill in close proximity to the groundwater
16 table makes that particular alternative the most easily
17 controlled and accomplished end product.

18 And the regulations, as they exist right now,
19 make that an impossibility as I perceive them to be.

20 MR. STOLL: Okay.

21 DR. SKINNER: Okay. I was just glancing through
22 the leachate control section as you were talking and I guess
23 I agree that they don't explicitly discuss diversion of
24 groundwater or collection of contaminated groundwater. I
25 think that some of the terminology, some of the words we

1 were talking about, leachate management techniques, include
2 control of escape of leachate from a landfill didn't only
3 mean a complete containment of that leachate, and when we
4 talk about the two extremes, one of the extremes that we
5 did talk about was rely upon the natural hydrogeologic system
6 which incorporates biological, chemical and physical treatments
7 within the soil itself to abate leachate contamination of
8 groundwater.

9 I think we were sort of getting at that through
10 that terminology. Also, in the options for leachate control
11 we did talk about everything from complete containment to a
12 much more , I guess you would say not lenient, but a control
13 which was based based upon natural hydrogeology of the
14 site. I don't think we necessarily disagree with everything
15 you said. Perhaps we weren't as explicit as we should have
16 been.

17 MR. WRIGHT: Well, as far as the attenuative capabil-
18 ities of the soil materials, and the subsurface flow system
19 are concerned, a natural renovation site, as I see here, is
20 going to be impossible to permit because one will never be
21 able to get enough hard site specific data to document the
22 feasibility of that concept if there is not some more latitude
23 provided in the regulations to enable one to get involved in
24 that type of an operation.

25 The Township that I represent has a site that is

1 kind of a hybrid site and it is being experimented with at
2 the present, but it does employ a natural renovation and we
3 are gaining some information and some knowledge about it. That
4 site is going to be illegal by virtue of these regulations.

s-1 5 MR. STOLL: I took your comment primarily to mean
6 not that we hadn't mentioned -- we have mentioned virtually
7 everything that you addressed, but if you read the guidelines
8 and interpret them as a whole, there is a preference indicated
9 toward containment and non-degradation.

10 MR. WRIGHT: Very strong, very strong, preference
11 yes.

12 DR. SKINNER: Are there any other comments from
13 the panel? Questions? Any comments from the audience or
14 questions? Please identify yourself.

15 MR. CYWIN: I am Allan Cywin, EPA. Did I understand
16 you to say that you are suggesting that leachate actually
17 be allowed to contaminate an aquifer and that you then capture
18 the waters from the aquifer and treat those waters?

19 MR. WRIGHT: Yes. That is being done effective and
20 efficiently and without environmental degradation except in
21 that certain confined area beneath the site.

22 This is, a matter of fact, is the way that hydro-
23 carbon spills are contained from spreading. One confines
24 and manipulates the flow system so that the contaminant cannot
25 move off the finitely controlled area.

1 MR. CYWIN: Could you tell us exactly where an
2 aquifer is being contaminated and then being decontaminated,
3 and to what standards?

4 MR. WRIGHT: The decontamination will result when
5 renovation in the site takes place naturally, by flushing the
6 contaminants out of the landfill.

7 MR. CYWIN: But you said you permit the contaminants
8 to contaminate groundwater in aquifers.

9 MR. WRIGHT: Beneath the landfill site, that is
10 correct.

11 MR. CYWIN: That aquifer then could be used someplace
12 else and your other suggestion was than you can decontaminate
13 that water, there are technologies?

14 MR. WRIGHT: No sir. I did not mean to state that
15 that aquifer was being contaminated and that, that contamin-
16 ation was being used as pottable water anyplace else. All that
17 I said is that halo of contamination is confined to a very
18 specific area. It is captured by groundwater manipulation
19 and that captured leachate is treated.

20 DR. SKINNER: Is there a question in the back?
21 Yes, sir?

22 MR. KOLMER: My name is Joe Kolmer and I really don't
23 have a question, just by way of comment with respect to
24 what you are saying. In the state of Pennsylvania, I don't
25 know what your water right laws are there, but when you get

1 west of the Mississippi River you deal a lot in water rights
2 and a lot of water rights legislation would prohibit what
3 you are proposing because you will be artificially changing
4 the groundwater system and interfering with it in somebody
5 else's water rights. So that is a big consideration.

6 MR. WRIGHT: I can understand that in a water rights
7 situation such as that it could present a policy problem.

8 MR. KOLMER: It does.

9 MR. WRIGHT: Yes.

10 DR. SKINNER: Could you say your name again, please?

11 MR. KOLMER: Joe Kolmer.

12 DR. SKINNER: Spell it for the reporter.

13 MR. KOLMER: K-o-l-m-e-r.

14 DR. SKINNER: Thank you.

15 MR. DEGEARE: I would like to ask for a little
16 more elaboration, if possible. We have given consideration
17 to this possible approach and I think, to an extent, we did
18 address that in the guidelines. But one concern we have had
19 in our discussions in the Agency is, the usual case where
20 a disposal facility operator does not really have control over
21 groundwater diversion in the area of concern. He has no
22 control over the use of groundwater on the adjacent property.
23 For example, a water supply company, or small industry, or
24 even a homeowner could sink a well and change the groundwater
25 flow pattern such that controls at the landfill itself are

1 no longer effective. In fact, if a well field were developed
2 near the disposal facility, it could divert the groundwater
3 system entirely such that no control at the disposal facility
4 could be effected.

5 MR. WRIGHT: Well, I think that you get into the
6 compatibility and comprehensiveness of long term municipal
7 land use planning and anyone that would develop a municipal,
8 a private or public well field in close proximity to any
9 kind of a landfill, whether it was lined or unlined, you know,
10 I think there is cause to question that, but not the basic
11 policy concept of controlling contamination of the landfill
12 by groundwater manipulation.

13 And the burden of proving that, that is an effective
14 system rests with the applicant. His data ought to be
15 convincing enough to demonstrate that he can, based upon
16 various properties of the flow system and any effect that
17 offsite water users might cause to that system.

18 MR. DEGEARE: Do you see any way that we could
19 try to accommodate future changes in land use or groundwater
20 use? All we are able to talk about in this regulation is
21 control of the disposal facility and practices at the
22 facility and suggested methodology.

23 MR. WRIGHT: Well, I don't think that the land use
24 planning area is necessarily your responsibility. It is
25 your responsibility, I think, to look at the various types of

1 landfill disposal leachate control practices and see if they
2 do not represent sound technical, proven, viable, alternatives
3 and once that is put into the picture, then the planning
4 community has to reckon with what exists.

5 MR. HUMPHRIES: How do you anticipate to maintain
6 that the landfill operator will, say after the facility
7 closes up, maintain operations to treat the leachate once
8 he is removing it from the groundwater?

9 MR. WRIGHT: Well this is a question that I think
10 the previous speaker touched on and that is, I believe, that
11 one needs to define how long the operator is going to be
12 responsible for leachate collection and treatment after the
13 fill has been completed.

14 But the monitoring of the groundwater flow system
15 and the monitoring of the leachate collection system will
16 indicate whether or not that site has been renovated and
17 whether, you know, continued pumping and management may
18 be required.

19 MR. HUMPHRIES: Yes, but somehow a liability is going
20 to have to be assured because if the operator decides to
21 disband and go bankrupt or leave the state, how are you going
22 to get the funds or the resources to manage that collection
23 of the leachate from the groundwater?

24 MR. WRIGHT: By reclamation bonding. That is the
25 way it is done now and that is a part of getting a permit.

1 DR. SKINNER: Any other questions or comments? The
2 gentleman in the back?

3 MR. KOLMER: Yes. Joe Kolmer again. Don't get me
4 wrong, I think some doors to alternatives should be opened,
5 Mr. Wright. But, I am just kind of concerned over the altern-
6 ative, you know, that you are proposing and I wonder do you
7 have any cost data on something like this? If you think about
8 it, the term of leachate production from the landfill site
9 can be quite long depending upon the character of the wastes
10 that you have got in there.

11 And when you say like reclamation bonding, you are
12 going to have to make a guess at how long that term is going
13 to be so that you can guess how long that pumping system and
14 that fueling system is going to have to maintain operation.
15 And looking at the costs associated with pump systems, as well
16 as being somewhat familiar with that as well as the other
17 problems that are there, as well as the treatment plant
18 problems and the maintenance costs, not saying anything about
19 your capital costs and then looking at the wastes that are
20 going to be produced by that treatment plant, because unless
21 you go to something like carbon, activated carbon where
22 you may be able to go to a regeneration process and thermally
23 degrade your waste products, you are going to have sludges
24 develop there that are going to require ultimate disposal.

25 But looking at all of this I think maybe the one

1 time capital cost of the liner might still be more cost
2 effective instead of looking at the proposal that they are
3 working out.

4 I think alternatives should be there, but I think
5 all of the pitfalls that are associated with some of the
6 other alternatives should also be brought out.

7 MR. WRIGHT: I think that what you are talking
8 about now is a business judgement that should be made by the
9 operator and not necessarily a judgement that should be made
10 by the regulatory people if, in fact, they believe that the
11 alternative represents a prudent and environmentally respon-
12 sible way to handle the problem.

13 MR. KOLMER: Well, I agree with you there.

14 MR. WRIGHT: Okay.

15 MR. KOLMER: That is it. I agree with that.

16 MR. WRIGHT: There is an additional problem in these
17 regulations which I didn't touch on that goes along with
18 the groundwater management alternative and that is that to
19 some degree we want to collect the leachate, we want to recycle
20 it back through the landfill and have that thing renovated
21 as quickly as possible, as opposed to containing it and keeping
22 the atmospheric agents away from it.

23 We have uncovered landfills that are old landfills,
24 in excess of 20 years and you can still read newspapers.

25 MR. KOLMER: That is it. I agree with what you

1 saying, I agree with the alternatives, I agree with your
2 thinking, but I disagree with your judgement. But by the same
3 token I think the pitfalls associated with some of the
4 alternatives should be brought out too.

5 Now, we can do what you are saying with respect to
6 leachate collection and recirculation within land sites only.
7 It doesn't necessarily mean that you have to use the ground-
8 water system as part of your recycling. I was just wondering
9 though, my basic question is, do you have any cost data?

10 MR. WRIGHT: I do not have any cost data. I can
11 refer you to the Pennsylvania Department of Environmental
12 Resources who permits sites that we have alluded to here
13 today. I would prefer not to give the names of these
14 operations because they are operations that are being run
15 by private operators.

16 But, there are sites like that in Pennsylvania
17 that are functioning properly and they have not been in busi-
18 ness long enough to have closed and to know how long they
19 have to treat the leachate, but they are bonded and they are
20 responsible to it. And it was a business judgement that the
21 operator had to make at the outset.

22 DR. SKINNER: Any other questions? Over here?

23 MR. CHILDS: Ken Childs, Environment Canada. Mr.
24 Wright, you added a dimension in that you refer to the
25 editorial comment that I didn't quite understand and I am

1 speaking now from the secure objectivity of being on the
2 other side of the water. There was a point about forced march
3 to resource recovery. I have been listening to the comments
4 here and I read that document. I saw some strong things in
5 there, but I really didn't see real levers of that nature, I
6 wonder why you comment.

7 MR. WRIGHT: Well, the capital costs associated with
8 liners and would you consider this in view of 257 which
9 is site criteria that will be coming out in its final form
10 I think around the first of the year. It is going to be so
11 difficult and so costly to practice sanitary landfilling that
12 the cost difference between that and resource recovery will
13 become less and make resource recovery more feasible econom-
14 ically.

15 MR. CHILDS: So this is where I have the problem
16 really. I have been listening to the dialogue between you and
17 the gentleman in the back and it seems to me that what you
18 are advocating could be just as expensive as lining and this
19 is where I am having the problem.

20 If there is a forced march in there, then there
21 is an equally forced march as to what you are suggesting.
22 Have I not gotten --

23 MR. WRIGHT: I am sorry but can't follow that.

24 MR. CHILDS: You are suggesting that you are in to
25 a collection within a certain area, and recycle. That could

1 be a long term proposition, an extremely long term proposition.
2 I am suggesting that, that might be equally expensive to the
3 initial capital cost of lining the site and evidently goes
4 with it.

5 I see a forced march with what you suggested and
6 what is in here, if it is in here. I don't see where yours
7 is a lessening of requirement.

8 MR. WRIGHT: Well, I think it is giving an additional
9 alternative that has been proven to be environmentally
10 acceptable.

11 MR. CHILDS: But it doesn't stop a march.

12 MR. WRIGHT: I don't agree with that, sir. We don't
13 believe that the recycling leachate and treating leachate
14 through the landfill is going to be as costly. And what we
15 expect is that perhaps five to 10 years after the closure of
16 the site we may have the site renovated if we are able to
17 flush the contaminants out of the site.

18 DR. SKINNER: Fine. Thank you very much, Mr. Wright,
19 for a very interesting and useful statement.

20 MR. WRIGHT: Thank you.

21 DR. SKINNER: Mr. King?

22 MR. KING: My name is James J. King. I am employed
23 as an Environmental Coordinated for the Florida Power and Light
24 Company. I am appearing today on behalf of my company, the
25 Utility Solid Waste Activities Group and the Edison Electric

1 Institute. We expect to file written comments on the proposed
2 Landfill Disposal Guidelines that are the subject of this
3 hearing. Therefore I will confine my statements today to a
4 brief description of our three major concerns: first, our
5 belief that high volume electric utility wastes should not
6 be subject to any RCRA regulations or guidelines until compl-
7 etion of the upcoming special rule making on utility wastes;
8 second, our belief that the guidelines should emphasize more
9 strongly that they are non-binding in nature; and third, our
10 belief that the siting restrictions recommended in the guide-
11 lines would be impractical, burdensome, and unnecessary for
12 electric utility disposal facilities.

13 Before I discuss these points in greater detail,
14 let me provide some brief background on USWAG, EEI, and the
15 basis for our concerns. USWAG is an informal consortium of
16 electric utilities and the Edison Electric Institute. Currently,
17 approximately 65 utility operating companies are members. These
18 companies own and operate a substantial percentage of the
19 nation's electric generating capacity. EEI is the principal
20 national association of investor-owned electric light and
21 power companies.

22 Coal is the principal fuel used for electric
23 generation in the United States today. The current upsurge
24 in orders for new coal-fired capacity and the emphasis on
25 coal in our national energy policy indicate that it will

1 hold that position for at least the remainder of this century.
2 The wastes from the combustion of coal for electric power
3 generation will, of course, be regulated under RCRA. They
4 include very large volumes of fly ash and bottom ash and
5 increasing amounts of flue gas emission control sludges.

6 We recognize that RCRA regulations and guidelines
7 may seriously affect the operations and economics of the
8 electric utility industry. Those potential effects have led
9 USWAG and EEI to comment and testify on substantially all of
10 EPA's proposed RCRA regulations and guidelines.

11 With respect to the current proposal, we would like
12 to commend and thank EPA for their flexibility in their
13 approach to the complex problem of landfill siting, design,
14 and operation. We believe that EPA should incorporate
15 similar flexibility into all of its solid waste regulations,
16 guidelines and criteria. We believe the flexible siting
17 provisions of the current proposals reflect more faithfully
18 than earlier EPA proposals the restricted role Congress
19 intended for the Federal Government in solid waste management.
20 Similarly the guideline proposals on leachate control demon-
21 strate flexibility and realism in recognizing that elaborate
22 leachate control systems are often unnecessary.

23 Nevertheless, as I indicated a moment ago, we
24 have several concerns with these proposals. The first is
25 identical to the position we stated in our recent comments on

1 the proposed hazardous waste regulations. As we stated in those
2 comments, we believe EPA possesses insufficient information
3 on the characteristics of utility wastes and the nature and
4 effects of current utility disposal practices to rationally
5 regulate those practices. We believe that such information
6 should be collected in the context of a special utility waste
7 rule making. Importantly however, and I stress this, that
8 rule making should not prejudice, prejudge, the appropriate
9 strategy context for utility waste regulation. That is, the
10 rule making should be conducted under neither Subtitle C nor
11 D of RCRA, but under the general rule making authority of
12 Section 2002. Pending completion of that special rule making,
13 utility wastes should not be subject to any requirements
14 inconsistent with current practices.

15 Obviously these positions also apply to the current
16 proposal. Any regulatory action at this time that applies to
17 utility wastes, even if only advisory, is premature and
18 improper. Until completion of the special utility waste
19 rule making, the guidelines should explicitly exempt utility
20 wastes from their recommended practices. Flexible guidelines
21 for utility waste disposal should be proposed as part of the
22 special rule making. They should describe practices and
23 technologies appropriate to the unique nature of utility
24 wastes.

25 My second point concerns the advisory nature of the

1 proposed guidelines. They state that the recommended practices
2 are not meant to be exclusive or discourage the development
3 and use of equally effective technologies. We support that
4 position but believe that it must receive much greater
5 emphasis.

6 EPA's primary function in nonhazardous waste manage-
7 ment is to provide information and guidance to the states
8 and industry. Thus Section 1008 (a) of the statute calls for
9 suggested guidelines. They are not meant to be prescriptive
10 or to describe the only means to achieve sanitary landfill
11 status under Section 4004 (a). For this reason, sanitary
12 landfill status must be available to those who use technologi-
13 es and practices not listed among the suggested guidelines, or
14 who use the guidelines recommended practices at a lower level
15 of performance than the guidelines recommend.

16 All too often, however, EPA's guidelines and
17 recommendations become rules and requirements in the hands
18 of the state agencies and EPA regional offices. That result
19 is especially troubling where, as here, many of the guidelines
20 are inapplicable to various types of wastes, including utility
21 wastes.

22 For example, decomposition gas control and daily
23 cover for vector control are quite irrelevant to inorganic
24 ash and scrubber sludge.

25 We recommend two actions to assure that the guidelines

1 do not become mandatory in the hands of state regulators.
2 First, they should state explicitly that they are not to be
3 incorporated into the state solid waste regulations as a
4 checklist for sanitary landfill status.

5 Second, each Recommended Practices section
6 should point out that any equivalent practice which is suitable
7 for a particular waste and landfill site is a fully
8 acceptable substitute.

9 In addition, these guidelines should indicate
10 clearly that some of the recommended technologies are applic-
11 able only to landfills containing certain types of waste.
12 This would avoid the possibility that state regulators might
13 misinterpret the guidelines as recommending incorporation
14 of all of the practices described, even though some may be
15 totally unsuitable to a particular landfill.

16 My final point concerns siting restrictions. As I
17 mentioned earlier, we believe the siting provisions of this
18 proposal incorporate a needed flexibility-- flexibility
19 sorely lacking in EPA's previously proposed sanitary landfill
20 classification criteria. Nevertheless, these guidelines still
21 seek to eliminate vast areas from solid waste landfill siting.
22 Two of the proposed siting restrictions are of particular
23 concern to utilities: the 100 year floodplain and wetlands,
24 as EPA defines those terms.

25 The recommended restriction on solid waste facilities

1 in floodplains is inappropriate for two reasons. First, it
2 will substantially, but unnecessarily, increase transportation
3 of utility wastes. Steam power plants must have ready access
4 to a water supply. For this reason, they are almost always
5 located next to bodies of water. If a power plant disposal
6 facility must be sited beyond the floodplain, transportation
7 of utility wastes away from the immediate plant site will
8 increase substantially. This is costly and wastes energy.

9 Second, many utility disposal facilities consist
10 of ponds or impoundments created by the damming of small
11 streams. The recommended floodplain siting restriction would
12 eliminate this disposal option, since such impoundments
13 are necessarily in the floodplains of the streams from which
14 they were constructed.

15 Allow me to add here that we realize that the prop-
16 osed guidelines apply only to landfills, not surface impound-
17 ments. But these guidelines substantially duplicate the
18 siting restrictions in the Section 4004 (a) Classification
19 Criteria. Future surface impoundment guidelines are also
20 likely to conform to the classification criteria and these
21 landfill guidelines. For that reason we feel compelled to
22 comment here on the impact of these siting restrictions
23 on the utility surface impoundments.

24 We also have substantial objections to EPA's
25 definition of wetlands and the application of this concept as

1 a restriction on the siting of utility disposal facilities.
2 Without question, EPA has given little consideration to the
3 severity of this restriction in many areas of the country.
4 For example, very large portions of Florida and Louisiana are
5 likely to qualify as wetlands. The development of necessary
6 solid waste disposal facilities in those states would be
7 seriously inhibited by the recommended restrictions. In
8 addition, the proposed definition fails to restrict wetlands
9 to naturally occurring areas. Many utility waste disposal
10 sites, such as surface impoundments, support a prevalence of
11 vegetation typically adapted for life in saturated soil
12 conditions, and thus, under this proposed definition would
13 themselves qualify as wetlands. We urge EPA to limit its
14 definition of wetlands to those that are naturally occurring.

15 Finally, we urge EPA to explicitly exempt existing
16 landfills from all of the recommended siting restrictions.
17 That exemption should be stated in the guidelines themselves,
18 not just in the preamble.

19 I appreciate the opportunity to present these
20 comments and would be happy to respond to any questions you
21 may have. And our attorney for USWAG happens to be here to,
22 so if you have any questions direct them to him also.

23 DR. SKINNER: Fine, thank you. Any questions from
24 the panel? I have a question, whether there is anything in
25 the Act itself or in the legislative history that indicates

1 that utility wastes should be separated out from all other
2 wastes for special rule making and should not be dealt with
3 under either Subtitle C or Subtitle D of RCRA, or if there
4 isn't something in the Act, is there something special about
5 utility wastes that would make them not subject to Subtitle
6 C or Subtitle D as compared to any other waste material?

7 MR. KING: Well, our general philosophy has been
8 that we are not hazardous, right off the top, and the volumes
9 of fly ash that we are talking about are enormous. Having
10 to move a site that has been in operation for 15 years and
11 locate it in a non-sensitive area, for instance, could be
12 almost prohibitive. Closing a site like that could be
13 restrictive and transporting two or three miles worth of
14 box cars on a rail line with fly ash, it becomes so burdensome
15 to the rate payers that this is one of the reasons why we
16 feel very strong about this one subject.

17 DR. SKINNER: I can understand that with respect to
18 your concern about the wetlands and floodplains provisions
19 themselves as perhaps being inappropriate for certain types
20 of wastes. But that doesn't suggest to me, I would like to
21 know why it suggests to you, those wastes should not be
22 subject to the regulatory scheme of Subtitle B or Subtitle
23 C, if in fact they meet the --. Well, let's talk about
24 Subtitle B today, because that is the subject.

25 MR. KING: That would be the state program. Okay, we

1 would rather see the states regulate, at this point, a non-
2 hazardous substance as it is spelled out in the Act. Subtitle
3 C, that is a different ball game with the hazardous waste.
4 Mike, do you have anything you might want to add to that?

5 MR. LOWE: My name is Mike Lowe, L-o-w-e. I am one
6 of the attorneys for the Utility Solid Waste Activities Group.
7 And concerning the discussion here about special rule making
8 for utility wastes or justifications for them, first I would
9 like to refer you, in detail, to our hazardous wastes comments
10 which were filed on March 16th. But, I can summarize briefly
11 here saying that there are a couple of areas that we believe
12 justify this.

13 First, in the litigation last winter concerning the
14 timing of regulations for hazardous waste regulations, EPA
15 admitted its lack of data, sufficient data, in a number
16 of areas including utility waste regulation. That was repeated
17 effectively in the preamble to the proposals of the hazardous
18 waste as to all of the special waste categories and that is
19 a major justification and we think a correct one and a
20 proper one under the Act for deferring full consideration
21 of these special waste categories.

22 And all we are saying here is basically what we
23 said there, that we agree with that deferral until appropriate
24 studies that EPA is currently initiating are completed with
25 respect to utility wastes. But that further we think that

1 until the completion of that special waste rule making, there
2 should not be any prejudging of exactly what regulatory
3 scheme utility wastes should fall under and therefore it would
4 seem appropriate to utilize the general rule making authority
5 given the administrator under Section 2002 (a) (1), rather
6 than starting the rule making under either Subtitle C or
7 Subtitle D.

8 The conclusion of the rule making, obviously, would
9 have to fall into one of those two regulatory schemes or some
10 mix of them, depending on the characteristics finally
11 determined for the wastes.

12 DR. SKINNER: Any other questions on that, comments,
13 on any of the points?

14 MR. STOLL: As far as recommended changes in the
15 guidelines themselves, you identify a couple of points
16 primarily the siting issue, and the -- the siting issue is
17 the main thing that you emphasize as far as the guideline.
18 And while your supposition is that the utility industry should
19 not be considered at all in these guidelines, does the lack
20 of suggested changes indicate that you are generally satisfied
21 with the technology, other than those such as daily cover
22 which you don't feel is necessary for a utility waste?

23 MR. KING: We are pleased with the flexibility of
24 these rules at this point. Again, what we are looking for
25 down the road is that special rule making. But in these

1 regulations, just the three major concerns that I have and,
2 again, the flexibility issue, I think that it speaks for
3 itself.

4 MR. STOLL: Will you be able to provide, recognizing
5 that they are flexible, would you be able to provide any
6 additional comments in a specific critique of technology
7 that you would like to see included if utility wastes are going
8 to be -- until something of the special rule making occurs,
9 that they will be included as waste if landfilled, that would
10 have to look to these guidelines?

11 MR. LOWE: We will be filing more detailed comments
12 by the 25th of this month, which will address some more
13 specific problems in the guidelines themselves.

14 MR. STOLL: Will it include technology recommendations?

15 MR. LOWE: No it does not this time because, again,
16 we feel, and this is following on EPA's own proposal in the
17 hazardous waste regulations, that full regulation of utility
18 waste sites is appropriately deferred until completion of
19 ongoing studies that the Agency is initiating.

20 MR. STOLL: If it were possible to include recommend-
21 ations as far as technology for large volume generators, we
22 would appreciate receiving that for consideration in developing
23 the final guidelines.

24 MR. LOWE: I think there will probably be such
25 information provided in the context of the major study of 16

1 sites I believe that is being initiated by the Hazardous
2 Waste Division. And the utility industry has promised full
3 cooperation in technological and environmental effect
4 data that has been collected, or any that might be available
5 in that context. So I think that very well might be available
6 to feed into this particular guideline.

7 DR. SKINNER: Let me explain this a slightly different
8 way. The issue at hand today is not whether a particular type
9 of waste should be dealt with under Subtitle C, or whether it
10 should be dealt with under Subtitle D, or whether some
11 special type of rule making, regulatory program for dealing
12 with particular wastes should be established or not. The
13 issue is, how these guidelines, which are not written under
14 Subtitle D, are not written under Subtitle C, they are written
15 under Section 1008, which describe landfilling practices,
16 should be modified or changed in a technical way to better
17 describe those practices.

18 One or two things were pointed out with respect
19 to how these guidelines really are inappropriate when they
20 discuss utility waste. Gas control would be unnecessary when
21 the waste is not organic, vector control would be unnecessary
22 when the waste is not putrescible. In any of the other
23 sections of this guideline there is inappropriate technology
24 as it refers to utility wastes and you could bring that to
25 our attention. I think that would be very, very, helpful.

1 MR. LOWE: More examples of that sort will be
2 included in our detailed comments.

3 DR. SKINNER: Any more questions? A questions from
4 the audience? A comment from the audience? Thank you, Mr.
5 King. Is there anyone else who would like to make a
6 statement? Are there any questions?

7 MR. NORTON: My name is John Norton. I am here to
8 represent Montgomery County Ohio, that is the county surround-
9 ing and including the city of Dayton Ohio. Montgomery County,
10 over the years, has assumed the responsibility for final
11 disposition of solid waste for the entire metropolitan commu-
12 nity of about 700,000 people.

13 We are currently involved in nearly every aspect of
14 municipal solid waste disposal. We currently incinerate in
15 two plants about 1000 tons a day. Due to air pollution
16 problems we are opening two transfer stations capable of
17 diverting all 1000 tons a day to distant landfills. We
18 are pursuing, and have pursued for about five years, resource
19 recovery. We have spent something on the order of \$700,000
20 worth of county money pursuing that one and we are well into
21 siting a 300 or 400 acre landfill to serve the community.
22 And we see that as a necessary adjunct to any solid waste
23 program.

24 One of our biggest concerns is that resource
25 recovery keeps holding out there is the promise that we will

1 eliminate landfills and I think nothing can be farther than
2 that from the truth.

3 We think the proposed guidelines are an excellent
4 job on a very difficult subject. We think it was delightful
5 and very prudent that the EPA sought fit to establish the
6 right way to do it as opposed to just saying what not to
7 do, such as seemed to be the case when I used to be in
8 Waste Water and Air Pollution.

9 I would like to address two areas of concern that
10 we do have. The first is that the requirement not become so
11 extreme and burdensome that the expense becomes out of line
12 with regard to the possible environmental returns on the
13 investment, which did seem to be the case in waste water for
14 many years. And I guess they are starting to back off a little
15 on that.

16 Along this line I believe that it is important to
17 recognize the regional differences across the nation and you
18 do seem to have hit those pretty well, which allow the
19 different methods to be employed from place to place, and not
20 just to try and describe one standard landfill, Type B, that
21 everybody is supposed to put in every place in the country.

22 We do believe that landfill is one responsible way
23 to deal with the solid waste problem and that it should not
24 be priced out of the market for purely arbitrary reasons.

25 My second point deals perhaps more with the criteria

1 than to the guidelines, but I do find it very difficult to
2 divorce the two elements and I am going to pursue it anyway.

3 I would like to recommend that some clarification
4 be requested of Congress on the matter of their intent with
5 regard to the, quote, "Open Dump Inventory," end quotes and
6 the prohibition of dumping. It is my understanding that the
7 law, RCRA, was a compromise of two bills, typically enough,
8 one which envisioned an inventory of open dumps as a planning
9 tool and another bill in the other house which sought to
10 outlaw indiscriminate "open dumping," quotes.

11 It is further my understanding that RCRA was the
12 result of a last minute compromise of those two bills which
13 never did address that basic question of philosophy and
14 further it is my understanding that to this day the EPA
15 has not been able to resolve the issue.

16 I was in Kansas City two weeks ago and I heard the
17 question asked, is hauler who dumps in a listed open dump
18 guilty under the law of open dumping? I kind of thought that
19 the answer to that would be open and shut, but much to
20 my amazing, much to my amazement the question was answered,
21 I believe by Mr. Skinner, and the answer was that the EPA
22 had not yet been able to determine the answer to that question.

23 Now, I just -- with that position at this point in
24 time, I don't believe that any listing or enforcement should
25 be attempted until we can get a clear mandate of just what

1 Congress wants done. Otherwise, many small landfill operators
2 who cannot afford costly legal defenses will close up simply
3 because they cannot afford to stay open and fight the case.
4 And a number of larger firms, financially more able firms,
5 will continue to fight the thing from court to court and
6 eventually get the baby thrown out with the bath water.

7 And our biggest concern is that during any such
8 legal battles our county, trying to site a new landfill, will
9 be in great doubt as to just what is required because the
10 proposed guidelines are bound to be called into question
11 throughout any such court proceedings.

12 I recognize, or course, also that you have been
13 under the gun for sometime now about the delays that exist
14 already and I know that you are probably addressing these
15 very questions yourself. The suggestion I might have to offer
16 is that at the same time that you publish these guidelines
17 it might be appropriate to publish a short list of the worst
18 examples of open dumps that do exist at this point in time,
19 from place to place, along with the disclaimer that the list
20 is being published as a purely informational tool and that
21 enforcement will not be forthcoming until a Congressional
22 mandate or something of the sort could be obtained.

23 This would help local officials to stop some of
24 the most offensive operations while minimizing the risk to
25 the enforcement program itself. It would also encourage the

1 responsible siting of new landfills which are sorely needed
2 and which would undoubtedly be built with the new guidelines
3 in mind.

4 That is basically all we have got to say except
5 that I really don't envy the position in which you guys find
6 yourselves in the least. I have got my own problems. I wish
7 you great luck in resolving yours.

8 DR. SKINNER: Thank you. In response to your question
9 on open dump versus open dumping. We have made a little bit
10 of progress in the last two weeks, and I would refer you to
11 either today or tomorrow's version of the "Federal Register"
12 which in response to a petition from an industrial organiz-
13 ation we have published for public comment our tentative
14 conclusion on the issue of open dump versus open dumping.
15 This was signed by the Assistant Administrator last week
16 and should be in today's "Federal Register." And there
17 will be a 30 day public comment period on that. If anyone
18 would like to comment on that please do so. And we hope to
19 finalize that position very shortly after that.

20 MR. NORTON: Could you possibly summarize really --

21 DR. SKINNER: I think you should look at the
22 actual "Federal Register" version.

23 MR. NORTON: Okay, okay. Thank you very much.

24 DR. SKINNER: Any comments from the panel for
25 Mr. Norton? Thank you for your comments. Yes?

1 MS. KESNER: I have a question and a possible comment
2 on 241.200-2, regarding the siting. You have a number two,
3 the siting and sensitive, environmentally sensitive areas.
4 You suggest that a comprehensive analysis of location of
5 landfills in environmentally sensitive areas should be per-
6 formed and provided to responsible agencies.

7 Now my question, is this not redundant in those
8 states that have NEPA like legislation which require
9 impact statements? This is essentially what you are asking for
10 here, I believe, an environmental impact statement.

11 DR. SKINNER: If that was the case, there is no
12 reason why that the analysis done for the environmental
13 impact statement wouldn't be suitable for these purposes
14 as well.

15 MS. KESNER: I just get concerned about the fact
16 of redundancy, you know. There is also fresh water and tidal
17 wetlands legislation which would require much of the same
18 thing.

19 DR. SKINNER: Any other questions? Yes, sir?

20 MR. BAUGHMAN: My name is Art Buaghman. I represent
21 Phelps Dodge Refining Corporation and my question is asked
22 as a private citizen about municipal landfill. This has
23 bothered me a little bit. My question is directed to these
24 comments. Is an impervious liner a safe process in an area
25 particularing water ridge? I can see it in a dry area where

1 there is a net evaporation in the course of the year.

2 It seems to me when you feel up this ridge bath
3 tub it would eventually flow full of water, accumulate a
4 great quantity of effluent or leachate and since a liner is
5 not infinite, it has definite impermanent, even at 20"ml
6 one may not know precisely when that moment comes but somewhere
7 in time there will be a rupture, a break. What happens when
8 a potentially large volume is suddenly released, what happens?

9 MR. STOLL: If you are referring to the discussion
10 of liners and leachate collection in the guidelines, I think
11 you will note if you refer to that section, that the oppor-
12 tunity to build a bath tub, as it were, is never encouraged
13 in any of the four schemes presented. In the two more
14 stringent or secure landfills, continual removal of leachate
15 is recommended, and in all of the techniques minimization
16 of infiltration is recommended.

17 The only one where there would be no control is
18 a pervious site where the flow at the bottom would be
19 essentially the same as the flow into the top.

20 MR. BAUGHMAN: Thank you.

21 DR. SKINNER: Any other questions or comments? Fine,
22 thank you very much for coming. I received a testimony from
23 a Mr. Wallace Koster who could not attend and would like to
24 include that in the record as well.

25 (Prepared statement follows.)

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(Prepared statement of Mr. Ralph Tabor follows.)

(Whereupon, at 2:15 o'clock p.m., the hearing was
concluded.)

REPORTER'S CERTIFICATE

DOCKET NUMBER:

CASE TITLE: Proposed Landfill Disposal Guidelines

HEARING DATE: May 15, 1979

LOCATION: Washington, D.C.

I hereby certify that the proceedings and evidence herein
are contained fully and accurately in the notes taken by me
at the hearing in the above case before the
Environmental Protection Agency
and that this is a true and correct transcript of the same.

Date: May 22, 1979

Maria Skomazucha

Official Reporter

Acme Reporting Company
1411 K Street, N.W.
Washington, D.C.



EUGENE J. WINGERTER
EXECUTIVE DIRECTOR

National Solid Wastes Management Association

1120 CONNECTICUT AVENUE N.W. • SUITE 930 • WASHINGTON D.C. 20036
TELEPHONE (202) 659-4613

T E S T I M O N Y

ON

LANDFILL DISPOSAL OF SOLID WASTES

PROPOSED GUIDELINES UNDER SECTION 1008(a)(1) OF THE SOLID WASTES DISPOSAL ACT

AS AMENDED BY THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976

COMMENTS BY

THE NATIONAL SOLID WASTES MANAGEMENT ASSOCIATION

MAY 15, 1979

- INSTITUTE OF WASTE TECHNOLOGY
 - CHEMICAL WASTE COMMITTEE
 - NATIONAL SANITARY LANDFILL COMMITTEE
 - RESOURCE RECOVERY COMMITTEE
- WASTE EQUIPMENT MANUFACTURERS INSTITUTE

THE MEMBERS OF THE NATIONAL SOLID WASTES MANAGEMENT ASSOCIATION OPERATE HUNDREDS OF PRIVATELY OWNED SANITARY LANDFILLS THROUGHOUT THE UNITED STATES AND AS SUCH THEY HAVE LOOKED FORWARD TO PUBLICATION OF THE GUIDELINES ON WHICH WE ARE COMMENTING TODAY. IN CONTRAST TO THE CRITERIA FOR SANITARY LANDFILLS OR SANITARY LANDFILLING WHICH NECESSARILY MUST BE PERFORMANCE-ORIENTED, THE GUIDELINES PROVIDES EPA WITH AN OPPORTUNITY TO EXPRESS ITSELF ON WHAT IT CONSIDERS TO BE GOOD PRACTICE FOR LOCATING, DESIGNING, UPGRADING, AND OPERATING LAND DISPOSAL FACILITIES. FOR THIS REASON, FACILITY OPERATORS SHOULD BE ABLE TO RELATE THEIR OPERATIONS TO THE GUIDELINES MUCH MORE EASILY THAN TO THE CRITERIA.

THE PROPOSED GUIDELINES HAVE BEEN CIRCULATED TO THE SANITARY LANDFILL COMMITTEE OF THE ASSOCIATION AND HAVE BEEN REVIEWED AT A MEETING OF THAT COMMITTEE. THE REACTIONS OF OUR MEMBERS SEEM TO INDICATE THAT THERE ARE VERY FEW STRONG ADVERSE REACTIONS TO THE PROPOSED GUIDELINES. INDEED, WE HAVE HEARD SOME VERY FAVORABLE REACTIONS. THEREFORE, YOU SHOULD UNDERSTAND THAT OUR PRESENTATION TODAY IS NOT INTENDED TO BE STRONGLY CRITICAL OF THE GUIDELINES BUT RATHER TO INDICATE THOSE AREAS WHERE OUR MEMBERS FELT EPA MIGHT MAKE CERTAIN IMPROVEMENTS. INTERESTINGLY, MOST OF OUR COMMENTS WILL RELATE TO OMISSIONS FROM THE GUIDELINES.

FIRST, AS A GENERAL STATEMENT, WE ASSUME THAT THE GUIDELINES WILL BE CONSISTENT WITH THE CRITERIA AS THEY WILL BE FINALLY PROMULGATED. TO THE EXTENT THAT PARAGRAPHS OF THE CRITERIA ARE ALTERED, WE ASSUME THAT CONSISTENT ALTERATIONS WOULD BE MADE IN THE GUIDELINES. ANY INCONSISTENCY BETWEEN THESE TWO DOCUMENTS WOULD BE THE CAUSE OF NEEDLESS CONFUSION.

2.

WE CONTINUE TO EXPRESS OUR CONCERN OVER PROVISIONS OF EITHER THE CRITERIA OR THE GUIDELINES RELATIVE TO ENVIRONMENTALLY SENSITIVE AREAS. OUR CONCERNS ARE TWO-FOLD. FIRST, WE ARE CONCERNED THAT THERE ARE AREAS OF THE COUNTRY WHERE THERE IS LITTLE CHOICE BUT TO LOCATE A LAND DISPOSAL FACILITY IN AN AREA THAT IS TECHNICALLY ENVIRONMENTALLY SENSITIVE. EPA RECOGNIZES THIS BY CONCEDED THE POINT IN PARAGRAPH 241.200-2(A)(1) THAT LANDFILLS MIGHT BE LOCATED IN ENVIRONMENTALLY SENSITIVE AREAS IF ALTERNATIVE LOCATIONS AND DISPOSAL FACILITIES ARE INFEASIBLE. HOWEVER, THE GUIDELINES DO NOT GO FAR ENOUGH IN PROVIDING DIRECTION TO OWNERS AND OPERATORS AND STATE REGULATORY PERSONNEL AS TO THE WEIGHTING OF THE VARIOUS FACTORS IN AN ALTERNATIVE STUDY. IN PARTICULAR, THE LAST SENTENCE OF THAT PARAGRAPH, "INCREASED COST, ALONE, SHOULD NOT BE SUFFICIENT GROUNDS FOR DISMISSING AN ALTERNATIVE IN FAVOR OF DISPOSAL IN AN ENVIRONMENTALLY SENSITIVE AREA," IS A STATEMENT THAT BEGS FOR CLARIFICATION AND AMPLIFICATION AND WE WOULD HOPE THAT EPA WOULD PROVIDE THAT IN THE FINAL VERSION OF THE GUIDELINES.

OUR SECOND CONCERN ABOUT ENVIRONMENTALLY SENSITIVE AREAS INVOLVES NEW VERSUS EXISTING FACILITIES. IT IS NOT LIKELY THAT SOMEONE WOULD ATTEMPT TO ESTABLISH A NEW FACILITY IN SUCH AN AREA IF THERE WAS ANY FEASIBLE ALTERNATIVE. BUT WHERE AN EXISTING FACILITY IS OPERATING IN AN ESA, DOES IT MAKE SENSE TO ARBITRARILY CLOSE IT DOWN EVEN IF THERE IS NO THREAT TO HEALTH AND THE ENVIRONMENT? WE CONTEND THAT IT MAKES MORE SENSE TO OPERATE SUCH A FACILITY TO COMPLETION RATHER THAN CLOSE IT DOWN IN A PARTIALLY FINISHED CONDITION. OF COURSE THIS IS SUBJECT TO A CONDITION THAT THE FACILITY IS NOT THREATENING HEALTH AND THE ENVIRONMENT AS DEFINED IN THE CRITERIA. WE URGE THAT EPA ADDRESS THIS ISSUE IN THE FINAL GUIDELINES.

3.

IN ANOTHER MATTER RELATIVE TO ESA'S, WE NOTE THAT PARAGRAPH 241.200-2(A)(3) REFERS TO THE MATTER OF APPROVALS. WE SUGGEST THAT THIS SECTION BE MADE MORE SPECIFIC AS TO THE ACTUAL PERMITS THAT ARE REQUIRED AND REFERENCE THE PROCEDURES BY WHICH THOSE PERMITS MAY BE OBTAINED.

SEVERAL OF OUR MEMBERS COMMENTED THAT EPA MIGHT HAVE USED THE PREPARATION OF GUIDELINES AS AN OPPORTUNITY TO CRITICALLY INVESTIGATE SOME OF THE REQUIREMENTS FOR LANDFILL DESIGN AND OPERATION THAT ARE ACCEPTED WITHOUT QUESTION. FOR EXAMPLE, PARAGRAPH 241.202-2(A) STATES THAT THE BOTTOM OF A LANDFILL DISPOSAL FACILITY SHOULD BE 1.5 METERS OR MORE ABOVE THE SEASONAL HIGH GROUNDWATER TABLE. THERE ARE LARGE AREAS OF THE UNITED STATES WHEREIN THE GROUNDWATER TABLE IS MUCH CLOSER TO THE SURFACE THAN 1.5 METERS AND THERE ARE LANDFILLS OPERATING IN THOSE SECTIONS OF THE COUNTRY THAT, TO THE BEST OF OUR KNOWLEDGE, DO NOT POLLUTE THE GROUNDWATER. THE PREMISE THAT LEACHATE FROM LANDFILLS WILL NECESSARILY CONTAMINATE AN AQUIFER IF THERE IS NOT THE TRADITIONAL FIVE FEET OF UNSATURATED SOIL BELOW THE FILL HAS NOT BEEN SUBSTANTIATED AND IN FACT WE BELIEVE IT TO BE FALSE. GIVEN A CHOICE, ONE MIGHT PREFER A SITE WITH AMPLE UNSATURATED ZONE BUT WHERE THE CHOICE IS NOT AVAILABLE, ALTERNATIVE DESIGN AND OPERATING PRACTICES ARE AVAILABLE TO THE OPERATOR. WE WOULD SUGGEST THAT EPA RECOGNIZE THE NEED FOR EXCEPTIONS SUCH AS IS PROVIDED FOR IN THE SYSTEM OF NOTES IN THE HAZARDOUS WASTES MANAGEMENT REGULATIONS PROPOSED UNDER SUBTITLE C OF RCRA.

ANOTHER ITEM OF LANDFILL FOLKLORE THAT MIGHT HAVE BEEN QUESTIONED IN PREPARING THE GUIDELINES IS THE UNIVERSAL REQUIREMENT FOR SIX INCHES OF DAILY SOIL COVER CALLED FOR IN SECTION 41.205-2(B)(1). WHY SIX

INCHES? WHY NOT FOUR INCHES OR EIGHT INCHES? IT IS TRUE THAT SIX INCHES HAS BECOME A WIDELY ACCEPTED NUMBER BUT IN FACT ITS ORIGINAL SOURCE OR RATIONALE ARE OBSCURE. FEW PEOPLE SERIOUSLY DEBATE THE DESIRABILITY OF DAILY COVER BUT AT THE SAME PRACTICALITY INDICATES THAT THERE ARE OCCASIONS WHEN IT IS ALL BUT IMPOSSIBLE TO PROVIDE, FOR EXAMPLE, IN EXTREME WINTER CONDITIONS OR DURING A PERIOD OF HEAVY RAIN. LANDFILL OPERATORS COMPLAIN BITTERLY WHEN INSPECTORS MEASURE THE DEPTH OF DAILY COVER WITH A RULER AND THEN CITE THE OPERATOR FOR A VIOLATION BECAUSE THE COVER DEPTH IS AN INCH OR TWO SHORT OF THE SIX INCH OBJECTIVE. THE GUIDELINES PROVIDED EPA WITH AN OPPORTUNITY TO INJECT A NOTE OF PRACTICALITY INTO LANDFILL REGULATION BUT THE AGENCY HAS NOT DONE SO. WE SUGGEST THAT THE GUIDELINES BE EXPANDED TO INCLUDE SOME DISCUSSION OF THE PRACTICALITIES OF THE DAILY COVER REQUIREMENT.

TURNING NOW TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT ON WHICH COMMENTS WERE REQUESTED ALSO, LET US SAY THAT THIS IS A USEFUL DOCUMENT WHICH PROVIDES A GOOD TUTORIAL BACKGROUND ON THE LOCATION, DESIGN, UPGRADING AND OPERATION OF LANDFILLS. OUR COMMENTS PERTAIN MAINLY TO THE ECONOMIC ANALYSIS CONTAINED IN SECTION 5.

FIRST, WITH REGARD TO THE BASELINE DISPOSAL COST AS INDICATED ON FIGURE 5-1, THE RELATION BETWEEN DISPOSAL COST AND LANDFILL OPERATING CAPACITY SEEMS TO AGREE GENERALLY WITH PRESENT COST LEVELS. HOWEVER, THE USE OF A SINGLE CURVE IS MISLEADING. IT MAY WELL BE ADEQUATE FOR DETERMINATION OF THE OVERALL ENVIRONMENTAL IMPACT OF COMPLIANCE WITH THE GUIDELINES. A PERSON UNFAMILIAR WITH LANDFILL COSTS GENERALLY MAY BE MISLEAD INTO THINKING THAT THIS CURVE APPLIES TO EACH AND EVERY SPECIFIC SITUATION. IN FACT, THERE IS A LARGE RANGE

OF COSTS AND EVEN THOUGH IT WAS NOT NECESSARY TO INDICATE SUCH A RANGE FOR EPA'S PURPOSES, WE FEEL THAT THE VALUE OF THE DRAFT EIS WOULD ENHANCED IF IT COULD BE INDICATED THAT THERE IS A RANGE OF COSTS AT EACH CAPACITY LEVEL. THIS SAME COMMENT APPLIES TO THE SCENARIOS FOR UPGRADING LAND DISPOSAL FACILITIES. THERE TOO THE PRESENTATION OF UPGRADING COSTS AS A SINGLE NUMBER RATHER THAN A RANGE DOES NOT TELL THE WHOLE STORY.

ONE MIS-IMPRESSION THAT CAN BE ARRIVED AT BECAUSE OF FAILURE TO PRESENT A RANGE OF COSTS IS THAT RESOURCE RECOVERY IS NOT LIKELY TO BE A FEASIBLE DISPOSAL ALTERNATIVE. NO RESOURCE RECOVERY PROJECTS THAT WE ARE AWARE OF OPERATE FOR COSTS LESS THAN INDICATED FOR AN UPGRADED LANDFILL. THIS IS NOT HOWEVER UNIVERSALLY THE CASE. THERE ARE AREAS OF THE COUNTRY WHERE RESOURCE RECOVERY IS ECONOMICALLY FEASIBLE COMPARED WITH ALTERNATIVE LANDFILLS AND WHILE WE DO NOT SUGGEST THAT EPA ENTER INTO A DISCUSSION OF RESOURCE RECOVERY ECONOMICS IN THE DRAFT EIS FOR THE LANDFILL DISPOSAL GUIDELINES, WE FEEL THAT THE AGENCY COULD INADVERTENTLY DO A DISSERVICE TO RESOURCE RECOVERY IMPLEMENTATION BY NOT INDICATING A REALISTIC RANGE FOR LANDFILL DISPOSAL COSTS.

WE THINK THAT EPA MIGHT HAVE PRESENTED SOME TYPICAL COSTS FOR LANDFILLS LARGER THAN 300 TONS PER DAY. IT IS TRUE THAT THE AVAILABLE SURVEYS OF LANDFILLS DO NOT INDICATE THAT MANY FACILITIES ARE OPERATED AT CAPACITIES OF 1,000 TONS PER DAY OR GREATER, BUT NEVERTHELESS AS THE NUMBER OF LANDFILLS SHRINKS, THE SIZE IS BECOMING GREATER AND WE BELIEVE THAT A SCENARIO FOR A SITE OPERATING IN EXCESS OF 1,000 TONS PER DAY SHOULD HAVE BEEN INCLUDED.

OUR MOST SERIOUS CONCERNS ABOUT THE ECONOMIC ANALYSIS HOWEVER, IS THE FAILURE OF EPA TO CONSIDER THE ECONOMICS OF AN ENTIRELY NEW LANDFILL. THE ENTIRE ANALYSIS AS PRESENTED IS BASED ON UPGRADING OF AN EXISTING FACILITY. IF HOWEVER, THE INVENTORY OF LAND DISPOSAL FACILITIES AND THE PROHIBITION AGAINST OPEN DUMPING RESULTS IN CLOSURE OF A NUMBER OF EXISTING FACILITIES, NEW LANDFILL SITES WILL HAVE TO BE FOUND. EVEN IN THE NORMAL COURSE OF EVENTS, THERE WOULD BE THE NEED FOR LOCATION OF NEW FACILITIES. IT IS OUR BELIEF THAT THE TOTAL COST OF OPENING UP AN ENTIRELY NEW LANDFILL MIGHT BE SIGNIFICANTLY DIFFERENT FROM THE COST FOR UPGRADING AN EXISTING FACILITY. IN MOST AREAS, A NEW FACILITY WILL COST FAR MORE THAN THE ONE IT REPLACES BECAUSE OF THE GREATLY INCREASED DIFFICULTY IN OBTAINING NEW FACILITIES. WE BELIEVE EPA SHOULD HAVE ADDRESSED THIS MATTER WHEN PREPARING THE DRAFT EIS.

WE THANK YOU FOR THE OPPORTUNITY TO COMMENT TODAY AND WE WILL TRY TO RESPOND TO ANY QUESTIONS YOU MIGHT HAVE OF OUR INDUSTRY.

May 10, 1979

I wish to make a few comments relative to the interpretation of Section 3004 of the Act which contains the standards for owners and operators of disposal sites. It is especially our intention to address the area involving the liability of sites after completion.

It seems at this time that the matter of site classification is not fully determined, or at best a gray area whereby municipal solid waste disposal sites may be classified as hazardous waste sites. As municipal sites have the capacity of absorbing limited amounts of liquid waste and in many cases, these sites are used for the disposal of nonhazardous or nontoxic liquid waste with special permits, under the present interpretation these sites may be classified as hazardous waste sites. If so classified, these sites also would be liable for either perpetual care or extended periods of liability under the law. *SLUDGE DISPOSAL IN MUNICIPAL WASTE SITES MAY CAUSE A SITE TO BE CLASSIFIED AS HAZARDOUS.*

Page Two

From our experience, we have been involved with many sites in the Chicago area which have been reclaimed by means of land disposal and which are not^w being put to attractive and useful purposes. Many of these sites if left with the stigma or liability of being labeled sites necessary for long-term perpetual care or owner responsibility and liability would never have been developed and returned as active revenue and tax generating properties.

Some areas that have been reclaimed by landfill procedures in the Chicago area are:

Maine South High School in Park Ridge, Illinois, where a seven million dollar facility exists.

Winston Tower Development which consists of sixteen story buildings housing at least one thousand apartments and condominiums built on a landfill site.

Lane Technical High School in Chicago,
also a landfill site.

The Old Orchard Development consisting of
approximately four hundred condominiums in
the one hundred thousand dollar price range,
a high-rise home for the aged, and a municipal
golf course.

Also in the Chicago area, many of the race
track properties such as Sportsmans Park
and Hawthorne Race Track are on old disposal
sites as are industrial areas in Rosemont,
and the ~~industrial~~ areas along the north
branch of the Chicago River from Howard Avenue
north to Diversey Avenue south, many of which are
industrial plants and housing projects.

A recent development is the Chicago Brickyard,
a shopping development consisting of approx-
imately one hundred stores.

An area in Glenview is being developed as a combination industrial, residential and recreational area.

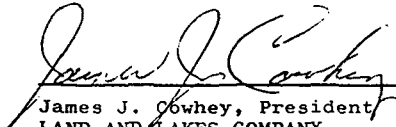
Needless to say, some of the finest property developments in the Chicago area are on former landfill sites. To hold these sites in abeyance for observation, monitoring, and liability would certainly have prevented the development of many of these properties.

On behalf of Land and Lakes Company, it is cordially requested that the Agency and the legislatures be aware that not all fill sites are Love Canals or Kin-Buc Landfill sites. Such areas as Kin-Buc and Love Canal should be set aside and perpetually maintained, and the owners and operators should be liable for the safety of the public. However, in so doing, the Agency should not take a "shot gun" approach and affect all other sites which are not, or in all probability will not do harm to the environment. A modified monitoring

Page Five

and care program should be substituted for these sites so that the reclamation can take its course, and the areas can be developed to the benefit of the communities and the public.

Submitted By:

A handwritten signature in dark ink, appearing to read "James J. Cowhey", is written over a horizontal line.

James J. Cowhey, President
LAND AND LAKES COMPANY
123 N. Northwest Highway
Park Ridge, Illinois 60068

312-825-5000

eml

COMMENTS OF RICHARD E. WRIGHT
CERTIFIED PROFESSIONAL GEOLOGIST
TO THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ON SECTION 241.202-2--LEACHATE CONTROL--RECOMMENDED PRACTICES
EPA PROPOSED GUIDELINES FOR LANDFILL DISPOSAL OF SOLID WASTE
FEDERAL REGISTER, VOLUME 44, No. 59
MONDAY, MARCH 26, 1979

MY NAME IS RICHARD E. WRIGHT. I AM PRESIDENT OF R. E. WRIGHT ASSOCIATES, INC., A FIRM SPECIALIZING IN ENVIRONMENTAL GEOLOGY, GROUNDWATER GEOLOGY, ENGINEERING GEOLOGY, AND MINING GEOLOGY. MY FIRM IS LOCATED IN PENNSYLVANIA, AND WE HAVE BEEN INVOLVED IN PENNSYLVANIA'S SANITARY LANDFILL PROGRAM AS CONSULTANTS TO THE INDUSTRY BY VIRTUE OF OUR PERSONNEL SINCE 1968.

I AM PAST PRESIDENT OF THE PENNSYLVANIA SECTION OF THE ASSOCIATION OF PROFESSIONAL GEOLOGICAL SCIENTISTS, WHICH IS A STATEWIDE NONPROFIT ORGANIZATION COMPOSED OF PROFESSIONAL GEOLOGISTS, WHOSE PURPOSE IS:

1. TO STRENGTHEN THE GEOLOGICAL SCIENCES AS A PROFESSION.
2. TO ESTABLISH PROFESSIONAL QUALIFICATIONS FOR, AND TO EVALUATE CONTINUOUSLY THE CONDUCT OF, GEOLOGICAL SCIENTISTS.

3. TO ENHANCE AND TO PRESERVE THE STANDING OF THE GEOLOGICAL SCIENCES AS A PROFESSION.
 4. TO ESTABLISH ETHICAL STANDARDS THAT INSURE THE PROTECTION OF THE PUBLIC HEALTH, SAFETY, AND WELFARE AND THE PROFESSION FROM NON-PROFESSIONAL PRACTICES WITHIN THE PROFESSION OF THE GEOLOGICAL SCIENCES.
 5. TO MONITOR, AT ALL LEVELS, GOVERNMENTAL AND OTHER ACTIVITY AFFECTING THE GEOLOGICAL SCIENCES, AND TO COMMUNICATE WITH THE PUBLIC AND OTHERS CONCERNING THE PROFESSION OF GEOLOGICAL SCIENCES.
 6. TO TAKE ALL REASONABLE ACTIONS NECESSARY TO STRENGTHEN THE GEOLOGICAL SCIENCES AS A PROFESSION AND TO FURTHER THE STATED PURPOSES OF THE ASSOCIATION.
-

IN ADDITION, I AM VICE-CHAIRMAN OF THE BOARD OF SUPERVISORS OF THE TOWNSHIP OF DERRY IN DAUPHIN COUNTY, PENNSYLVANIA, A SECOND-CLASS TOWNSHIP GOVERNED BY FIVE SUPERVISORS, WHICH ALSO OPERATES A SANITARY LANDFILL PERMITTED BY THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL RESOURCES.

THE COMMENTS PRESENTED BY ME TODAY ARE PRESENTED AS A CONCERNED PROFESSIONAL, AS A CONCERNED MUNICIPAL OFFICIAL, AND AS A CONCERNED SMALL BUSINESSMAN.

AS STATED IN THE INTRODUCTORY SECTION OF THE FEDERAL REGISTER, VOLUME 44, NO. 59, MONDAY, MARCH 26, 1979, "PROPOSED GUIDELINES, LANDFILL DISPOSAL OF SOLID WASTE, ENVIRONMENTAL PROTECTION AGENCY," THE PROPOSED GUIDELINES HAVE BEEN FORMULATED BY EPA FOR THE PURPOSE OF ASSISTING THE STATES IN SOLID WASTE MANAGEMENT PLANNING. THE INTENT OF THE PROPOSED GUIDELINES IS "TO SUGGEST PREFERRED METHODS FOR THE DESIGN AND OPERATION OF THOSE SOLID WASTE DISPOSAL FACILITIES WHICH EMPLOY LANDFILLING TECHNIQUES. THE DECISION AS TO WHAT MIX OF THESE AND OTHER PRACTICES WILL BE REQUIRED TO MEET REGULATORY STANDARDS FOR LAND DISPOSAL WILL BE A MATTER OF STATE CONCERN." ALTHOUGH THESE STATEMENTS ARE INDICATED AS BOTH SUGGESTED AND PREFERRED GUIDELINES ON THE PART OF EPA, IT IS IMPORTANT TO RECOGNIZE THE SUBSTANTIAL INFLUENCE THAT EPA PLAYS UPON THE FORMULATION OF STATE PROGRAMS WITH RESPECT TO ENVIRONMENTAL MANAGEMENT AND REGULATION. FOR THIS REASON, ANY SUGGESTED GUIDELINES AND PREFERRED METHODS PROPOSED BY EPA AS FORMAL GUIDELINES WILL SEVERELY INHIBIT ANY FLEXIBILITY ON THE PART OF THE STATES. HISTORICALLY, FEDERAL GUIDELINES OF THIS TYPE HAVE BEEN TREATED AS MINIMUM STANDARDS WITHIN STATES, WHICH DEVELOP MORE STRINGENT STANDARDS TO ACQUIRE STATE PRIMACY FOR REGULATORY ENFORCEMENT. AS A RESULT, ANY FAILURE ON THE PART OF EPA TO RECOGNIZE ALTERNATIVE METHODS AND TECHNOLOGIES WITH RESPECT TO LANDFILL DISPOSAL OF SOLID WASTE MAY, AS A RESULT, PRECLUDE CERTAIN SOUND, COST-EFFECTIVE, AND EFFICIENT MANAGEMENT METHODS.

WITH RESPECT TO SECTION 241.202-2, LEACHATE CONTROL--RECOMMENDED PRACTICES, IT IS CLEAR THAT TWO POLICY TENANTS PREVAIL THROUGHOUT THE PROPOSED GUIDELINES WITH RESPECT TO LANDFILL DISPOSAL. THESE INCLUDE:

1. CONTAINMENT, AND
2. NON-DEGRADATION.

THE GUIDELINES STATE THAT THE MOST PROTECTIVE MEANS FOR LEACHATE CONTROL INVOLVES TECHNIQUES WHICH ACHIEVE COMPLETE CONTAINMENT OF THE SOLID WASTE AND LEACHATE BY MEANS OF PLACEMENT OF LOW PERMEABILITY (IMPERMEABLE) MATERIALS AT THE BOTTOM AND SIDES OF A LANDFILL. THE EXCEPTION TO CONTAINMENT REQUIREMENTS IS THE LANDFILL SITE WHERE NATURAL ATTENUATION AND RENOVATION OF LEACHATE RESULTS WITHIN THE UNSATURATED AND SATURATED ZONES WHICH UNDERLIE THE LANDFILL FACILITY.

THE SECOND POLICY TENANT WHICH IS LARGELY UNMENTIONED IS THE NON-DEGRADATION POLICY WITH RESPECT TO GROUNDWATER. CLEARLY, THROUGHOUT THE GUIDELINES, THE FOCUS IS DIRECTED UPON COMPLETE AND TOTAL NON-DEGRADATION OF GROUNDWATER. EXAMPLES OF THIS NON-DEGRADATION POLICY INCLUDE STATEMENTS THAT PRECLUDE PLACEMENT OF REFUSE DIRECTLY IN GROUNDWATER OR WITHIN THE ZONE OF SEASONAL FLUCTUATION OF GROUNDWATER LEVELS AND PLACEMENT WITHIN ENVIRONMENTS WHERE A NATURAL DISCHARGE OF LANDFILL LEACHATE TO THE UNDERLYING GROUNDWATER AQUIFER WOULD RESULT IN GROUNDWATER CONTAMINATION.

THESE POLICY TENANTS CONSTITUTE SEVERE POLICY PROBLEMS WITH RESPECT TO STATE-OF-THE-ART TECHNOLOGY AS REGARDS LEACHATE CONTROL AND LEACHATE MANAGEMENT. SPECIFICALLY, THEY PRECLUDE THE APPLICATION OF GROUNDWATER MANAGEMENT AND MANIPULATION PROCEDURES WHICH HAVE BEEN CLEARLY DOCUMENTED TO ADEQUATELY CONTROL AND COLLECT ALL LEACHATE DRAINING TO AND AFFECTING UNDERLYING GROUNDWATER FLOW SYSTEMS. FOR EXAMPLE, CHAPTER 75 OF THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES RULES AND REGULATIONS CONCERNING SOLID WASTE MANAGEMENT, SECTION 75.24, PARAGRAPH 6 STATES THAT "NATURAL SYSTEMS MAY BE UTILIZED TO COLLECT LEACHATE FROM LANDFILLS. THE METHODS TO UTILIZE THE NATURAL SYSTEMS MAY BE THE MANIPULATION OF THE GROUNDWATER FLOW SYSTEMS." ANY SUCH PLAN REQUIRES A DETAILED ANALYSIS OF THE GROUNDWATER FLOW SYSTEMS TO INCLUDE AS A MINIMUM "GROUNDWATER TABLE MAPS, PIEZOMETRIC SURFACE MAPS, HYDRAULIC GRADIENTS, HYDROLOGIC CONNECTIONS, FLOW DIRECTIONS, FLOW REGIMES ANALYSIS, TRANSMISSIVITY, AND PERMEABILITY DATA." THIS DESIGN CONCEPT ALLOWS THE UTILIZATION OF PERIMETER INTERCEPTION, UNDERDRAINS WITHOUT LINERS, GROUNDWATER INTERCEPTION, AND LEACHATE RECOVERY WELL SYSTEMS CAUSING ARTIFICIAL GRADIENTS. THIS APPROACH ALLOWS VERY LIMITED BUT CAREFULLY CONTROLLED GROUNDWATER DEGRADATION TO THE DEGREE NECESSARY TO ALLOW NATURAL CONVEYANCE OF LEACHATE TO ADEQUATE INTERCEPTION AND COLLECTION SYSTEMS TO ASSURE COMPLETE CONTROL AND INTERCEPTION OF ALL LANDFILL LEACHATE. SUBSEQUENT TO LEACHATE COLLECTION, THE LEACHATE AND GROUNDWATER COMBINATION IS TREATED BY CONVENTIONAL MEANS AND DISPOSED OF

BY MEANS OF SPRAY IRRIGATION OVER THE LANDFILL SITE OR A NEARBY UNRELATED SPRAY IRRIGATION FIELD. ALTERNATELY, THE TREATED LEACHATE MAY BE DISPOSED BY SURFACE DISCHARGE IN ACCORD WITH STANDARD NPDES PROCEDURES.

AT NO POINT IN THE PROPOSED GUIDELINES IS THE OPTION OF CONTROLLED DEGRADATION OF, AND GROUNDWATER-LEACHATE INTERCEPTION INDICATED AS SATISFACTORY METHODOLOGY. THE ONLY LEACHATE CONTROL PROCEDURES CITED AS RECOMMENDED INCLUDE: NATURAL RENOVATION, LANDFILL LINER WITH LOW PERMEABILITY NATURAL SOIL, LANDFILL LINER WITH ARTIFICIAL MATERIAL, AND MULTIPLE LINERS WITH NATURAL AND/OR ARTIFICIAL LINERS COMBINED WITH CONSTANT LEACHATE DRAINAGE. EVEN THE PRACTICE OF NATURAL ATTENUATION IS DISCOUNTED UNDER SECTION 241.202--LEACHATE CONTROL, WHERE THE STATEMENT IS MADE THAT "PROCEDURES FOR ESTIMATING THE ATTENUATIVE CAPABILITIES OF UNDERLYING SOILS AND GROUNDWATER HAVE NOT ACHIEVED WIDE ACCEPTANCE, AND SUCH ESTIMATES MAY BE POSSIBLE ONLY WITH A THOROUGH KNOWLEDGE OF THE SOLID WASTE DISPOSED IN CONJUNCTION WITH SITE SPECIFIC HYDROGEOLOGICAL AND CLIMATOLOGICAL CONDITIONS." THIS GUIDELINE WILL ULTIMATELY PRECLUDE THE POSSIBILITY OF NATURAL ATTENUATION SITES, DUE TO THE PROBABLE LARGE DEGREE OF DOCUMENTATION THAT WOULD BE REQUIRED TO SUPPORT THE ATTENUATIVE CAPABILITIES OF THE UNDERLYING SOILS AND GROUNDWATER CONDITIONS, A VERITABLE IMPOSSIBILITY WITHOUT A PERMITTED SITE ON WHICH TO ACQUIRE SITE SPECIFIC DOCUMENTATION.

IT THEREFORE APPEARS THAT EPA IS PROMOTING A SINGLE LANDFILL CONCEPT, THAT BEING A SITE WITH A NATURALLY OR ARTIFICIALLY IMPERMEABLE LINER DESIGNED TO COMPLETELY CONTAIN AND CAPTURE LEACHATE, ~~CONTAINMENT~~. THIS POLICY IS CLEARLY EXCLUSIVE OF PROVED, IN-PRACTICE, AND CURRENT STATE-OF-THE-ART GROUNDWATER MANAGEMENT TECHNOLOGY AND DEFINITELY PRECLUDES THE USE OF THE SAME. FOR THIS REASON, IT IS IMPERATIVE THAT THESE PROPOSED GUIDELINES BE REVISED TO INCLUDE THE USE OF NATURAL FLOW SYSTEMS TO COLLECT LEACHATE FROM LANDFILLS. THE FUNDAMENTALLY IMPORTANT POLICY CONCEPT MUST BE COMPLETE RENOVATION OR COLLECTION OF LANDFILL LEACHATE FOLLOWED BY APPROPRIATE TREATMENT AND DISPOSAL. COMPLETE COLLECTION AS OPPOSED TO CONTAINMENT IS AN IMPORTANT PHILOSOPHICAL AND POLICY MATTER THAT CAN SUBSTANTIALLY AFFECT THE ECONOMICS OF LANDFILL SITE DEVELOPMENT AND OPERATION, AS WELL AS LONG TERM SITE MAINTENANCE BEYOND CLOSURE. THEREFORE, IT IS IMPERATIVE THAT THE CONTAINMENT POLICY BE DE-EMPHASIZED AND THAT ASSURED COLLECTION BE EMPHASIZED, ALLOWING BOTH THE USE OF NATURAL AND ARTIFICIAL LINERS AS WELL AS GROUNDWATER MANAGEMENT PROCEDURES AS PRACTICED WITHIN THE COMMONWEALTH OF PENNSYLVANIA TODAY.

IT IS MY PERSONAL OPINION THAT THE GUIDELINES BEING DISCUSSED HERE TODAY ARE A SIGNIFICANT STEP TOWARD A BUREAUCRATIC FORCED MARCH TO THE ECONOMICALLY UNFEASIBLE ALTERNATIVE OF COMPLETE RESOURCE RECOVERY.

AS A RESPONSIBLE PROFESSIONAL, I OBJECT; AS A MUNICIPAL OFFICIAL
AT THE LOCAL LEVEL, I OBJECT; AS A TAX-PAYING SMALL BUSINESSMAN,
I OBJECT.

John C. Carter

Statement of James J. King
on behalf of
The Florida Power & Light Company
The Utility Solid Waste Activities Group
and
The Edison Electric Institute

Public Hearing on Proposed Guidelines for
the Landfill Disposal of Solid Waste
under Section 1008(a)(1) of
The Resource Conservation and Recovery Act of 1976,
U.S. Environmental Protection Agency

May 15, 1979
Washington, D. C.

My name is James J. King. I am employed as Environmental Coordinator for the Florida Power and Light Company. I am appearing today on behalf of my company, the Utility Solid Waste Activities Group ("USWAG"), and the Edison Electric Institute.

We expect to file written comments on the proposed Landfill Disposal Guidelines that are the subject of this hearing. Therefore I will confine my statement today to a brief description of our three major concerns: first, our belief that high volume electric utility wastes should not be subject to any RCRA regulations or guidelines until completion of the upcoming special rulemaking on utility wastes; second, our belief that the guidelines should emphasize more strongly that they are non-binding in nature; and third, our belief that the siting restrictions recommended in the guidelines would be impractical, burdensome and unnecessary for electric utility disposal facilities.

Before I discuss these points in greater detail, let me provide some brief background on USWAG, EEI, and the basis for our concerns. USWAG is an informal consortium of electric utilities and the Edison Electric Institute. Currently, approximately 65 utility operating companies are members. These companies own and operate a substantial percentage of the Nation's electric generating capacity. EEI is the principal national association of investor-owned electric light and power companies.

Coal is the principal fuel used for electric generation in the United States today. The current upsurge in orders for new coal-fired capacity and the emphasis on coal in our national energy policy indicate that it will hold that position at least for the remainder of the century.

The wastes from the combustion of coal for electric power generation will, of course, be regulated under RCRA. They include very large volumes of fly ash and bottom ash and increasing amounts of flue gas emission control sludges. We recognize that RCRA regulations and guidelines may seriously affect the operations and economics of the electric utility industry. Those potential effects have led USWAG and EEI to comment and testify on substantially all of EPA's proposed RCRA regulations and guidelines.

With respect to the current proposal, we would like to commend and thank EPA for the flexibility of their approach to the complex problems of landfill siting, design, and operation.

We believe that EPA should incorporate similar flexibility into all of its solid waste regulations, guidelines, and criteria. We believe the flexible siting provisions of the current proposals reflect more faithfully than earlier EPA proposals the restricted role Congress intended for the Federal Government in solid waste management. Similarly, the guideline proposals on leachate control demonstrate flexibility and realism in recognizing that elaborate leachate control systems are often unnecessary.

Nevertheless, as I indicated a moment ago, we have several concerns with these proposals. The first is identical to the position we stated in our recent comments on the proposed Hazardous Waste Regulations.^{2/} As we stated in those comments, we believe EPA possesses insufficient information on the characteristics of utility wastes and the nature and effects of current utility disposal practices to rationally regulate those practices.

1/ In particular, as we have commented before, the proposed "sanitary landfill" Classification Criteria under Section 4004(a) (43 Fed. Reg. 4942, February 6, 1978) should be much less rigid, especially in their siting provisions. See EEI Comments on Proposed Criteria for Classification of Solid Waste Disposal Facilities, June 12, 1978, pages 2-10; USWAG Comments on Proposed Guidelines for Development and Implementation of State Solid Waste Management Plans, Docket 4002(b), November 27, 1978, pages 4-7; USWAG and Utility Water Act Group ("UWAG") Comments on Proposed Statement of Procedures Regarding Floodplain Management and Wetlands Protection, April 5, 1979, pages 2-11.

2/ 43 Fed. Reg. 58946 (December 18, 1978). See USWAG's Comments on proposed Hazardous Waste Guidelines and Regulations, March 16, 1979, pages 127-75.

We believe that such information should be collected in the context of a special utility waste rulemaking. Importantly, however -- and I stress this -- that rulemaking should not prejudge the appropriate statutory context for utility waste regulation. That is, the rulemaking should be conducted under neither Subtitle C nor D of RCRA, but under the general rulemaking authority of Section 2002. Pending completion of that special rulemaking, utility wastes should not be subject to any requirements inconsistent with current practices.

Obviously, these positions also apply to the current proposal. Any regulatory action at this time that applies to utility wastes, even if only advisory, is premature and improper. Until completion of the special utility waste rulemaking, the guidelines should explicitly exempt utility wastes from their "recommended practices." Flexible guidelines for utility waste disposal should be proposed as part of the special rulemaking. They should describe practices and technologies appropriate to the unique nature of utility wastes.

My second point concerns the advisory nature of the proposed guidelines. They state that their recommended practices "are not meant to be exclusive or to discourage the development and use of equally effective technologies."^{3/} We support that position, but believe that it must receive much greater emphasis.

^{3/} Proposed § 241.100(b).

EPA's primary function in nonhazardous waste management is to provide information and guidance to the States and industry. Thus Section 1008(a) of the statute calls for "suggested guidelines." They are not meant to be prescriptive, or to describe the only means to achieve "sanitary landfill" status under Section 4004(a). For this reason, "sanitary landfill" status must be available to those who use technologies and practices not listed among the "suggested guidelines," or who use the guidelines' "recommended practices" at a lower level of performance than the guidelines recommend.^{4/}

All too often, however, EPA's "guidelines" and "recommendations" become rules and requirements in the hands of State agencies and EPA Regional Offices. That result is especially troubling where, as here, many of the guidelines are inapplicable to various types of wastes, including utility wastes. For example, decomposition gas control and daily cover for vector control are quite irrelevant to inorganic ash and scrubber sludge.

We recommend two actions to assure that the guidelines do not become mandatory in the hands of State regulators. First, they should state explicitly that they are not to be incorporated into State solid waste regulations as a checklist for "sanitary

^{4/} The language of the two pertinent statutory provisions demonstrates this point. The substantive standard in Section 4004(a) is "no reasonable probability of adverse effects on health or the environment." That standard is less stringent than the Section 1008(a)(1) standard of "protection of public health and the environment."

landfill status. Second, each "Recommended Practices" section should point out that any equivalent practice which is suitable for a particular waste and landfill site is a fully acceptable substitute.

In addition, the guidelines should indicate clearly that some of the recommended technologies are applicable only to landfills containing certain types of waste. This would avoid the possibility that State regulators might misinterpret the guidelines as recommending incorporation of all of the practices described, even though some may be totally unsuitable to a particular landfill.

My final point concerns siting restrictions. As I mentioned earlier, we believe the siting provisions of this proposal incorporate a needed flexibility -- flexibility sorely lacking in EPA's previously proposed "sanitary landfill" Classification Criteria. Nevertheless, these guidelines still seek to eliminate vast areas from solid waste landfill siting. Two of the proposed siting restrictions are of particular concern to utilities: the 100-year floodplain and "wetlands", as EPA defines those terms.

The recommended restriction on solid waste facilities in floodplains is inappropriate for two reasons. First, it will substantially, but unnecessarily, increase transportation of utility wastes. Steam power plants must have ready access to a water supply. For this reason, they are almost always located next to bodies of water. If power plant disposal facilities

must be sited beyond the floodplain, transportation of utility wastes away from the immediate plant site will increase substantially. This is costly and wastes energy.^{5/}

Second, many utility disposal facilities consist of ponds or impoundments created by the damming of small streams. The recommended floodplain siting restriction would eliminate this disposal option, since such impoundments are necessarily in the floodplains of the streams from which they are constructed.

Allow me to add here that we realize that the proposed guidelines apply only to landfills, not surface impoundments. But these guidelines substantially duplicate the siting restrictions in the Section 4004(a) Classification Criteria. Future surface impoundment guidelines are also likely to conform to the Classification Criteria and these landfill guidelines. For that reason we feel compelled to comment here on the impact of these siting restrictions on utility surface impoundments.

We also have substantial objections to EPA's definition of "wetlands" and the application of this concept as a restriction on the siting of utility disposal facilities. Without question, EPA has given little consideration to the severity of

^{5/} A four mile long conveyor system can be expected to have a capital cost of \$2.5 million plus an annual operating cost of \$250,000. A rail system for transporting utility wastes would have a capital cost of \$300,000 per mile plus operating expenses of approximately \$0.60 per ton per mile. See USWAG comments on Proposed Hazardous Waste Guidelines and Regulations, March 16, 1979, pages 204-08 and Appendix 3.

of this restriction in many areas of the country. For example, very large portions of Florida and Louisiana are likely to qualify as wetlands. The development of necessary solid waste disposal facilities in those states would be seriously inhibited by the recommended restriction. In addition, the proposed definition fails to restrict "wetlands" to naturally occurring areas. Many utility waste disposal sites, such as surface impoundments, support "a prevalence of vegetation typically adapted for life in saturated soil conditions," and thus, under this proposed definition would themselves qualify as "wetlands." We urge EPA to limit its definition of "wetlands" to those that are "naturally occurring."

Finally, we urge EPA to explicitly exempt existing landfills from all of the recommended siting restrictions. That exemption should be stated in the guidelines themselves, not just the preamble.

I appreciate the opportunity to present these comments, and would be happy to respond to any questions you may have.

Thank you.

MONTGOMERY COUNTY

SANITARY ENGINEERING DEPARTMENT

P.O. Box 972

451 West Third Street
Dayton, Ohio 45422

COUNTY COMMISSIONERS

(Mrs.) E. George Ferguson
Charles M. Lewis
Paula J. Macchiarina

COUNTY ADMINISTRATOR

Claude O. Malore, Jr.



SOLID WASTE MANAGEMENT DIV.
(513) 225-6145

May 24, 1979

Mrs. Gerri Wyer
WH 562
Public Participation Officer
Office of Solid Waste
USEPA
Washington, D.C. 20460

Dear Mrs. Wyer:

Attached are our comments on the Proposed Landfill Guidelines as we would like them entered on the record.

Thank you,

John W. Norton, P.E.
Superintendent, Solid Waste Management

JWN:ps

COMMENTS ON THE PROPOSED
GUIDELINES FOR LANDFILL DISPOSAL
OF SOLID WASTE
MAY 15, 1979

I represent Montgomery County, Ohio (the County surrounding and including the City of Dayton, Ohio.)

Over the years, Montgomery County has assumed the responsibility for final disposition of Solid Waste for our entire metropolitan community of about 700,000 people.

We are currently involved in every aspect of municipal solid waste disposal -- we currently incinerate over 1000 tons per day, we are opening two (2) transfer stations capable of diverting all our waste to distant landfills, we are pursuing Resource Recovery (having already spent approximately \$700,000 on the elusive dream), and we are well into siting a landfill (which we see as a necessary adjunct to any Solid Waste program.)

We think that the proposed Guidelines are an excellent job on a difficult subject. We think that it was very prudent to establish the right way to do it as apposed to just saying what not to do, such as was the case in water and air pollution.

We do have two areas of concern that I'd like to address. The first is that the requirements not become so extreme, that expense becomes out of line with regard to the environmental return on investment.

Along this line, I believe that it is important to recognize the regional differences across this nation which would allow different methods to be employed from place to place. The proposed Guidelines seem to have done that rather well.

We believe that landfill is one responsible way to deal with the solid waste problem, and that it should not be priced out of the market for purely arbitrary reasons. My second point deals perhaps more with the "Criteria" than to the Guidelines, but, I find it very difficult to divorce the two elements of Solid Waste Management. I'd like to recommend that some clarification be requested of Congress on the matter of their intent with regard to the "open dump inventory" and the prohibition of "open dumping." It is my understanding that the law (RCRA) was a compromise of two bills - one which envisioned an inventory of "open dumps" as a planning tool: and one bill, in the other house, which sought to outlaw indiscriminate "open dumping."

It is further my understanding that RCRA was the result of a last minute compromise of the two bills which never addressed that basic question of philosophy. And further that the EPA to this day has not been able to resolve the issue.

In Kansas City, two weeks ago, I heard the question asked, "Is a hauler who dumps in a listed "open dump" guilty under the law of "open dumping"?" Much to my amazement, the answer to this apparent open-and-shut question (by John Skinner, I believe) was that the EPA did not yet know what position to take.

I don't believe that any listing or enforcement should be attempted until

the EPA has a clear mandate from the lawmakers (Congress) on this matter. Otherwise, many small operators who cannot afford costly legal defenses will be closed, while other large and more financially able firms will eventually overturn enforcement actions in the courts, while successfully expanding their operations into areas lost by small operators who couldn't afford to defend themselves.

Our concern is that during such legal battles, our County will be in some doubt about just what is required in our planning and siting efforts. Your proposed "Guidelines" will also be in question during any such court proceedings.

Our further concern is that such premature enforcement may eventually result in the baby being thrown out with the bathwater. Now, we also recognize that there has been too much delay already. At the same time that the Guidelines are published, it would be appropriate to publish a list of the worst examples of "open dumps" along with disclaimers that the list is meant to be informational only, and that enforcement would not be forthcoming until a congressional mandate could be obtained. This would help the local officials to stop some of the most offensive operations while minimizing risk to the enforcement program itself. It would also encourage the responsible siting of new landfills which are sorely needed.

REFUSE DISPOSAL ASSOCIATION OF PENNSYLVANIA
COMMENTS ON PARAGRAPH 241.200 2 A(1)
OF THE EPA PROPOSED GUIDELINES FOR
LANDFILL DISPOSAL OF SOLID WASTE
AS PRESENTED IN THE MONDAY, MARCH 26, 1979
FEDERAL REGISTER

The R.D.A.P. is a state-wide, non-profit organization of small to medium-sized solid waste refuse contractors and landfill operators. Our comments on the guidelines reflect the feelings and concerns of our membership.

At present, the private refuse industry in Pennsylvania disposes of at least 60% of all waste generated in the State. These businessmen provide a health service and produce revenue for local, State, and the Federal Government through the taxes they pay. Today, some eleven years after the establishment of the State Department of Environmental Resources, the private landfill operator has become very discouraged from delays by the State in reviewing permit applications, arbitrary inspection reports and unequal enforcement of the State Regulations. The landfill operator has never received any appreciation for his services in disposing of his neighbors refuse and the association does not feel that the EPA Criteria, as proposed, will improve prevailing conditions. The Criteria will increase the cost of the development of new sites and increase the risk of ventures into or remaining in the solid waste business. Our members feel that once their landfills are finished, replacement facilities will be too difficult, time consuming, expensive, and risky for them to search for.

The effect of the diminishing role of the small independent refuse operator in the Solid Waste industry is left to your imagination. We feel that there appears to be little reason to be optimistic about the future. The environment will not be improved, tax revenue from this source will be lost, to be made up painfully elsewhere, and public funds will be drained at inflated prices to replace private investment.

We wish to specifically address the statement made by the EPA in the guidelines that "increased costs, alone should not be sufficient grounds for dismissing an alternative in favor of disposal in an environmentally sensitive area". Our membership is confused as to what grounds the Administrator of the Criteria will use to approve or disapprove proposed sites when compared to other alternatives if not on a cost comparison basis. The guidelines are open-ended and will set-up a situation where permit applications will remain in limbo or be subject to arbitrary action. The technical consultant's role in the solid waste field will be intensified by the Criteria. As the guidelines for the Administration of these Criteria are now written, the consultant will not be able to provide the leadership the Criteria require of him.

The refuse industry is an energy intensive industry and a large part of the cost of the transport of refuse is the cost of fuel. Our Association feels that in the interest of the industry, the environment and the welfare of the public that the favored site location be decided on the basis of cost with transportation cost included as a pertinent factor in the economic and environmental impact analysis of the site location on the locality.

We feel that this approach would help provide a common basis of understanding between the regulatory agencies and the solid waste industry in site selection. An inventory of the energy required to provide for the transportation and disposal of refuse generated in any locality would be a rather straight forward task for any technical consultant to perform. His data and conclusions could be evaluated objectively by anyone knowledgeable in the industry and a fair decision reached quickly. EPA would be remiss in their duty if the conservation of energy was not included in the guidelines for the implementation of RCRA and cost was not the deciding factor in site selection.

Wallace C. Koster
Refuse Disposal Assoc. of Pa.
56 North Second Street
Chambersburg, PA 17201

WCK:ld



EARL GOODWIN
Administrative Officer

RALPH TABOR
Washington Representative

Washington Office
316 Pennsylvania Avenue, S. E.
Washington, D.C. 20003
(202) 547-9333

May 15, 1979

BOARD OF SUPERVISORS

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Mrs. Geraldine Wyer
Public Participation Office
Office of Solid Waste
U.S. Environmental Protection Agency
Washington, D.C. 20460

RE: Public Hearings on Proposed
Guidelines for Landfill Disposal
of Solid Waste (Docket 1008.1)

Dear Mrs. Wyer:

We appreciate the opportunity to testify on the Proposed Guidelines for Landfill Disposal of Solid Waste which were published in the Federal Register of March 26, 1979.

San Bernardino County is the largest county in the continental United States, with about 20,000 square miles of area which could encompass the states of New Jersey, Delaware, Massachusetts and Rhode Island. Approximately 80 percent of the county lands are under the jurisdiction of the Federal government (Bureau of Land Management and Forest Service). The county has a population of approximately 800,000 people generating about one million tons of solid waste annually. San Bernardino County operates twenty three (23) sanitary landfills within the county to dispose of Class II waste being generated within thirteen (13) sites located on government lands which service about 150,000 people in the desert area of the county.

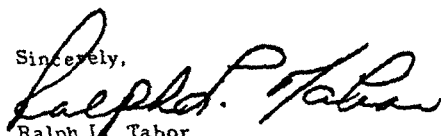
The proposed guidelines can be reasonably met on the county's solid waste management operations for the sites located in the valley and mountain areas, which will dispose of about 85 percent of the waste being generated. However, with the sixteen (16) landfills now being operated in the desert area, it will be difficult to meet the proposed guidelines in total because of the vast open areas that makes close control and surveillance of the landfills impossible. Further, the landfills are located in areas where climatological, environmental, and quantities of waste being generated (5 to 50 tons per day) are not of too much concern.

The County will be facing a financial hardship if it has to implement the proposed guidelines in the desert area. The provisions of concern are those dealing with daily cover, communications equipment, restricting site access, recordkeeping, source of water, monitoring, and others.

The Board of Supervisors adopted on May 14, 1979, a resolution expressing concern with the guidelines potential impact on landfilling activities at remote sanitary landfill sites in the desert area (copy attached). The Board of Supervisors is requesting EPA to consider an exemption clause that can be exercised using administrative discretion.

Also attached is a breakdown of the additional estimated capital costs (\$1.3 million) and operating costs (\$300,000) required to meet the proposed guidelines. A map is attached showing the sites of the 23 sanitary landfills in San Bernardino County.

Sincerely,


Ralph L. Tabor
Washington representative

SAN BERNARDINO COUNTY
PUBLIC WORKS AGENCY - SOLID WASTE MANAGEMENT

May 9, 1979

ESTIMATED COST TO MEET PROPOSED EPA GUIDELINES

<u>CAPITAL COSTS</u>	<u>Estimated Cost</u>
1. Fencing of 13 sites (65,000 ft @ \$4.00/ft)	\$ 250,000
2. Communications equipment	150,000
3. Dozers (Four (4) @ \$80,000 each)	320,000
4. Semi-tractor trailers (Four (4) @ \$10,000 each)	400,000
5. Select cover material	200,000
	<hr/>
TOTAL CAPITAL COSTS	\$1,320,000

OPERATING COSTS

Ongoing maintenance increase including five (5) additional men	\$ 300,000
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EARL GOODWIN
Administrative Officer



BOARD OF SUPERVISORS

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Robert D. Townsend, Chairman	Fourth District
Bob Hammock	Fifth District

RESOLUTION

U.S. ENVIRONMENTAL PROTECTION AGENCY
PROPOSED GUIDELINES FOR LANDFILL DISPOSAL OF SOLID WASTE

WHEREAS, the County of San Bernardino operates 23 sanitary landfills of which 13 are located on U.S. Government lands;

WHEREAS, these 13 solid waste disposal sites are currently operated under existing state minimum standards and federal Solid Waste Disposal Act guidelines of August 14, 1974;

WHEREAS, the U.S. Environmental Protection Agency is proposing revised guidelines for the operation of solid waste disposal sites which may substantially affect those being operated on U.S. Government lands;

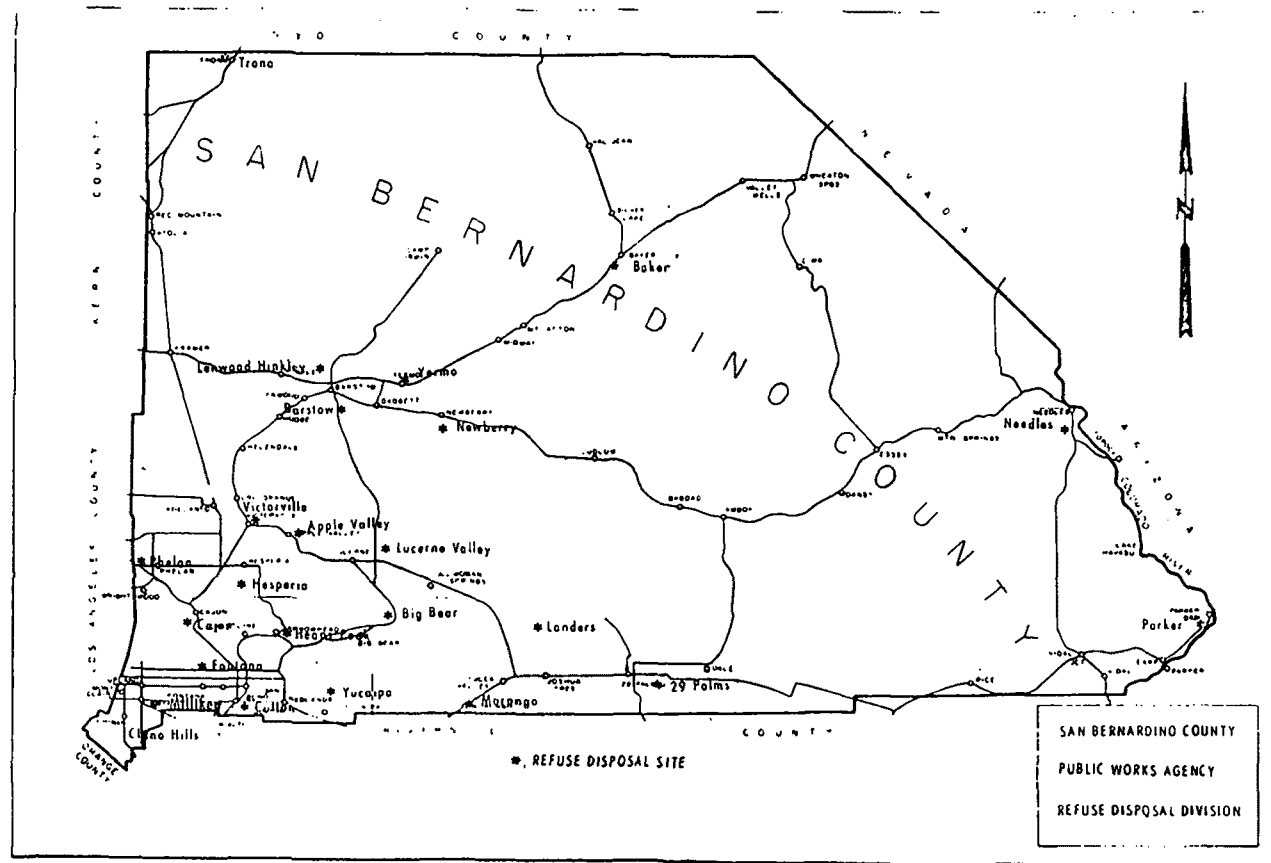
WHEREAS, the proposed guidelines establish good practice of solid waste disposal in certain areas but do not completely apply to other facilities where climatological, environmental, or quantities of waste being landfilled do not justify the added expense;

WHEREAS, the proposed revised guidelines may fiscally impact the operation of the county's disposal sites on Government lands by a potential capital expenditure of \$1.3 million and an increased yearly operations cost by an additional \$300,000 which is an increase of about 50 percent to present landfilling costs;

WHEREAS, input of interested parties is requested in the finalization of the guidelines;

BE IT THEREFORE RESOLVED by the Board of Supervisors of the County of San Bernardino, State of California, that the county does not object to the proposed guidelines in principle; and that the county expresses concern with the guidelines' potential impacts on the landfilling at remote sanitary landfills in the desert area. Therefore, it is proposed that the Environmental Protection Agency consider an exemption clause that can be exercised using administrative discretion.

(Adopted by the Board of Supervisors on May 14, 1979)





BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC.

Upton, New York 11973

(516) 345- 4210

Safety & Environmental Protection Division

May 18, 1979

Mrs. Gerri Wyer (WH-562)
Public Participation Officer
Office of Solid Waste
U. S. Environmental Protection Agency
Washington, D. C. 20460

Dear Mrs. Wyer:

Enclosed is a statement reflecting our news on the Proposed Guidelines for the Landfill Disposal of Solid Waste. This may please be included in the official record of the hearing.

Thank you for the opportunity to review and comment on the proposed guidelines.

Yours truly,

Janakiram, R. Naidu, Ph.D.
Ecologist

JRN/slg

Enclosure

cc: L. C. Emma

A. P. Hull

C. B. Meinhold

Statement made by: Janakiram R. Naidu, Ph.D.,
Ecologist
Safety & Environmental Protection Division
Brookhaven National Laboratory
Upton, New York 11973

Public Hearing on Proposed Guidelines
for the Landfill Disposal of Solid Waste
Washington, D. C.
May 15, 1979

Brookhaven National Laboratory has reviewed the guidelines and the following are our comments:

Guidelines - General

- a. The public interpretation of the guidelines is that it is a regulatory statute and landfill owners and/or operators will treat the guidelines as such. A clarification of the intent of the guidelines would be useful.
- b. Federal facilities interpret the guidelines as EPA assessing Federal facilities in terms of the guidelines as a measure of compliance for regulatory action. This seems in conflict as guidelines suggest preferred methods.
- c. Is the intent of the guidelines to push Resource Recovery as the Ultimate method of handling solid waste?
- d. It is essential that one knows what we are doing in the landfill such as, type of wastes, the operations, the geo-hydrology of the site and the interaction of the groundwater with the contents of the landfill which in essence asks the question what will flow into the groundwater system.
- e. Though not directly related, we are concerned that EPA regulations set limits that make the states (agreement states) promulgate limits that are further restrictive. Guidelines may be another area where we can expect to see similar actions by the states.

Soil

Whenever something artificial is done to the soil, such as preparing an area for a landfill site, degradation of the soil under the landfill takes place. We feel that this question has not been addressed and should do so as a prerequisite before landfill operation.

Contents of Solid Waste

An integral part of the landfill program must be public education. Solid waste generation in industries can be regulated through the management but public understanding of what a landfill is will aid in the exclusion of a large number of undesirable items, the chief of them being used motor oil with its high lead content.

Leachate

- a. It must be recognized that leachate will always be there, whether the location is in a dry or humid area.
- b. We feel that the guidelines, at least as it is presently worded, excludes the concept of groundwater management. Numerous examples can be given where landfill operations have been located in 'sensitive areas' and by proper management of groundwater, such as natural collection of groundwater (with leachate) combined with appropriate treatment have returned the waters to the environment within drinking water standards. This practical approach should not be excluded.
- c. In closing the site and designating it for environmental vigilance, the question of leachate generation must be addressed as the time frame of leachate generation will determine the duration of active monitoring.

Management

The concept of rendering the landfill site after closing to conditions that are aesthetic can be regarded only as cosmetic. This is based on observations of other landfill sites.

Costs

- a. The question of liability of sites has not been addressed. Reclamation bonding may be one such measure to assure corrections if necessary.
- b. Costs in terms of surveillance into the future has not been addressed.
- c. Since developers usually shy away from past landfill sites (even though all sites are not like 'Love Canal'), it is felt that landfill sites will therefore not be capable of generating revenue. Such situations could be avoided by addressing these questions in the EIS report on prospective landfill sites.

We appreciate the opportunity to participate in this hearing of national importance.

Attendees--Public Hearing
on Proposed Landfill Disposal Guidelines
Washington, D.C.

May 15, 1979

Kitty Adams
Government Relations Consultant
904 North Overlook Dr.
Alexandria, VA 22305

Anthony Anderson
Assistant Director
Government Relations
Sun Company
Suite 320, 1800 K St., NW
Washington, DC 20006

Robert Arner
Sycamore Assoc. Vol. Energy
4705 Maple Avenue
Bethesda, MD 20014

Frank Arzt
Director, Marketing Services
IU Conversion Systems, Inc.
115 Gibraltar Rd.
Horsham, PA 19044

Barbara Bechtold
Social Research Application Corp.
Project Director
800 18th St., NW
Washington, DC 20006

Donald R. Baker, Ph.D., Esq.
Environmental Consulting Services
2239 Kemmerer Street
Bethlehem, PA 18017

Samuel Balamoun
Senior Engineer
Pennwalt Corporation
900 First Avenue
King of Prussia, PA 19406

Bruce Barrett
Sanitary Engineer
Office of Environmental Affairs
US Dept. of Commerce
Washington, DC 20230

Robert Baughman
Environmental Coordinator
Phelps Dodge Refining Corp.
300 Park Avenue
New York, NY 10705

Charles Bent
Environmental Engineer
Reynolds Metals Co.
6601 W. Broad St.
Richmond, VA 23261

Dr. Harry Brennan
Director, Air & Water Conservation
AMOCO Chemicals Corp.
200 East Randolph Dr.
Chicago, IL 60601

R.F. Brinkman & John Norton
Research & Control
Montgomery County Ohio
451 W. Third St.
Dayton, OH 45403

K.A. Childs
Chief, Technology Transfer Division
Environment Canada
351 St. Joseph Blvd.
Quebec, K1A1C8

George Clark
Aspen Systems Corporation
Subject Research Associate
20010 Century Blvd.
Germantown, MD 20767

Howard Cohen
Aspen System Corporation
Senior Attorney
20010 Century Blvd.
Germantown, MD 20767

Dennis E. Connelly
American Electric Power Serv. Corp.
Associate Engineer
2 Broadway
New York, NY 10004

Jack Cooper
Director, Environmental Affairs
National Food Processors Assoc.
1133 20th St., NW
Washington, DC 20036

James Cowhey, President
Land & Lakes Co.
123 N. Northwest Highway
Park Ridge, IL 60068

Bob Cottam, P.E.
First Piedmont Corp.
P.O. Box 1169
Chatham, VA

Elliott Curzon, Paralegal
Jones, Day
1100 Connecticut Ave.
Suite 1200
Washington, DC

Jean Doherty, Project Director
Social Research App. Corp.
800 18th St., NW
Washington, DC 20006

R. V. Edwards
Mgr., Environmental Studies
Engineering Science
7903 West Park
McLean, VA 22102

W.R. Elliott, Project Engineer
Bechtel
15740 Shady Grove Rd.
Gaithersburg, MD 20760

William Ellison, PE
Senior Executive Consultant
NUS Corporation
4 Research Place
Rockville, MD 20850

Grover H. Emrich, Ph.D., Exec. VP
SME Martin
900 W. Valley Forge Road
P.O. Box 190
King of Prussia, PA 19406

Joseph Ferrante
Director, Project Development
Wheelabrator-Frye
Liberty Lane
Hampton, NH 03842

Scott Foster, Analyst
Energy & Env. Analysis, Inc.
1111 N. 19th Street
Arlington, VA 22209

Robert Genereau, Vice President
Stanley Plating Co.
60 Wooster Ct.
Forestville, CT 06010

Richard Giberti
Section Head
Environmental Technology
Kennecott Copper Corporation
128 Spring Street
Lexington, MS 02173

William Gilley, P.E., Director
Division of Solid & Hazardous Waste
Commonwealth of Virginia
Department of Health
Madison Bldg, 109 Governor St.
Richmond, VA 23219

J.R. Gilligan
Manager of Regulatory Affairs
Borg-Warner Chemicals
Parkersburg, W. VA 26101

Dr. T.L. Go
ICI Americas
Environmental Coordinator
Concord Pike & Murphy Rd.
Wilmington, DE 19897

Barbara Goff, Administrative Asst.
Cast Metals Fed.
918 16th St., NW
Washington, DC 20006

Robert Gressang
Director of Env. Activities
Westvaco Corporation
PO Box 4795
Charleston Heights, SC 29405

Bruce D. Guilbeault, Staff Eng.
NUS Corporation
4 Research Place
Rockville, MD 20850

Deborah Guinan
Manager, Env. Services
Assoc. of American R.R.
1920 L St., NW
Washington, DC 20036

W. Gulevich
Public Health Engineering
VA State Dept. of Health
109 Governor Street
Richmond, VA 23219

Edwin Hafner, President
Hafner Industries, Inc.
P.O. Box 3923, Amity Station
New Haven, CT 06525

Charles Hall, P.E.
Camp Dresser & McKee Inc.
Penn Silver Office Bldg.
5408 Silver Hill Rd., Suite 507
Suitland, MD 20028

Henry Heidt
Manager, Chemical Processing
Babcock & Wilcox
PO Box 785
Lynchburg, VA 24505

H. Lanier Hickman, Jr., PE
Executive Director, Government Refuse
Collection & Disposal Assoc.
1629 K St., NW
Washington, DC 20006

Emmett Holdren
Wiley & Wilson, Inc.
2310 Langhorne Rd.
Lynchburg, VA 24501

Joe Hudson, Chairman
COG
P.O. Box 481
Monroe, NC

Hank Hughes, Environmental Eng.
Alexandria Health Dept.
517 N. St. Asaph St.
Alexandria, VA 22309

Mary Jimmink
Manager of Regulatory Affairs
Association of Nonwoven Fabrics
Industry
1500 Mass. Ave., NW
Washington, DC 20005

Karl Johnson
Vice President
The Fertilizer Institute
1015 18th Street
Washington, DC 20036

Charles Kay
Director, Occup. & Env. Prot.
Eastern Operations
Atlantic Richfield Company
1500 Market Street
Phila, PA 19101

B.A. Kerns
Manager, Environmental Control
Westinghouse Electric Corp.
1601 Westinghouse Bldg.
Pittsburgh, PA 15222

Nick Kesslering
Environmental Products Div.
American Colloid Company
5100 Suffield Ct.
Skokie, IL 60076

Joan Kesner
Research Aide
Town of Oyster Bay
150 Miller Place
Syosset, NY 11791

Wallace Koster
Refuse Disposal Assoc. of P
56 N. Second St.
Chambersburg, PA 17201

Gary Kruger, Attorney
The Goodyear Tire & Rubber Co.
1144 East Market St.
Akron, OH 44316

Joseph Kolmer USAEWES-EL
Sanitary Engineer
Rt. 1, Box 255m
Vicksburg, MS 39180

Louis Kramer
U.S. Naval Air Development Center
General Engineer
Warminster, PA 18974

George Kush, Director of
Chemical Programs
NSWMA
1120 Connecticut Ave., NW
Washington, DC 20036

B. Lafferty, Process Chemist
W.R. Grace & Company
55 Hayden Avenue
Lexington, MS 02173

Clark Layton
Intermountain Power Project
PO Box BB
Sandy, Utah 84070

Mary Leffler, Asst. Proj. Mgr.
ICMA
1144 Connecticut Ave., NW
Washington, DC 20036

Michael Lowe, Attorney
Wald, Harkroder & Ross
1300 19th St., NW
Washington, DC 20036

Elaine Lustig
Senior Environmental Specialist
N.J. Dept. of Env. Protection
32 E. Hanover St.
Trenton, NJ 08620

Janakiram Naidu
Ecologist, Brookhaven National
Laboratories
Upton, NY 11973

James E. McCarthy
Fred C. Hart Associates, Inc.
527 Madison Avenue
New York, NY 10022

Charles W. Martin
Environmental Affairs
Westvaco Corp.
P.O. Box 278
Wickliffe, KY 42087

Michael Matthews
Environmental Engineer
Tennessee Valley Authority
248 - 401 Bldg.
Chattanooga, TN 37401

Terry Matthews
National Governors Association
444 North Capitol St.
Washington, DC 20001

William Mc Comb, P.E.
W.F. McComb Engineering, P.C.
P.O. Box 8973
St. Thomas, US Virgin Islands 00801

Todd McCreight
Energy & Env. Analysis, Inc.
1111 N. 19th St.
Arlington, VA 22209

Linda Meskunas
Environmental Reporter
Bureau of National Affairs, Inc.
1231 25th St., NW
Washington, DC 20037

Robert Miller & William Hill
Engineers, Howard County Gov.
Bureau of Environmental Svcs.
3430 Court House Drive
Ellicott City, MD 21043

Steve Miller
Attorney, US DOE
6A 521
Washington, DC 20584

Gary Molchan
Combustion Equipment Assoc.
555 Madison Avenue
New York, NY 10022

George Monaghan, Executive Director
Centralina
Council of Governments
1 Charlottetown Center
PO Box 4008
Charlotte, NC 28204

Mark Murray, Staff Consultant
APHA
1015-18th Street, NW
Washington, DC 20036

J. Robert Nicholson, VP
Zimpro Inc.
Rothschild, WI 54474

Andrew A. O'Brochta
Chemist, US Army Armament
Aberdeen Proving Ground, MD 21010

James O'Donnell
Automation Industries, Inc.
14000 Georgia Avenue
Silver Spring, MD 20910

Emil Onuschar, Jr.
Environmental Affairs
Columbia Gas System Service Corp.
20 Montchanin Road
Wilmington, DE 19807

Harrison T. Pannella
Technical Services Director
American Coke & Coal Chemicals Inst.
300 North Lee St., Suite 306
Alexandria, VA 22314

Ms. Joan Partyka
Assistant to President
Holyoke Sanitary Landfill
142 Casino Avenue
Chicopee, MS 01013

J. Payne, Director
B. Archer, Deputy Director
G. Peachner, Landfill Supt.
Dept. of Public Works
Prince William County
9258 Lee Avenue
Manassas, VA 22110

Dr. Louis Peltier
Environmental Planner
Montgomery County Gov.
Office of Env. Planning
100 Maryland Avenue
Rockville, MD 20850

Ronald Penny, Attorney
E.I. DuPont
Legal Dept.
Wilmington, DE 17808

Edward Powell & Wayne Warren
Environmental Care Spec.
Veterans Administration
810 Vermont NW
Washington, DC 20420

Helen Prestipino
Treasury Department
15th & G St., NW
Washington, DC 20220

Andrew Quigley
Fairfax County Government
4100 Chain Bridge Rd.
Fairfax VA 22030

Thomas Raubacher, Staff Engineer
Radian Corporation
McLean, VA

Robert Rhodes, Jr., Attorney
Holland and Knight
PO Drawer BW
Lakeland, FL 33802

John Rein
Illinois EPA
2200 Churchill Rd.
Springfield, IL 62706

Dr. Rip G. Rice & David Burch
Jacobs Engineering Group
Suite 608, 1725 K St., NW
Washington, DC 20006

Kermit W. Ryman
Chevron USA
1700 K Street, Suite 1204
Washington, DC 20006

J. D. Samuels
Sr. Project Engineer
GM Plant Environment, EA Staff
GM Technical Center
Warren, MI 48090

Stephen H. Schroeder, Attorney
NRDC, Inc.
917 15th St., NW
Washington, DC 20005

Raymond Schroll
Firestone
PO Box 699
Pottstown, PA 19464

Elaine Schwelm, Adm. Asst.
Nuclear Engineering
1100 17th St., NW
Washington, DC 20036

Harvey Segal
General Physical Scientist
HQ, USAF, Env. Plan. Div
HQ USAF/LEEVP
Washington, DC 20330

Marc Shapiro, Director
Solid Waste Project
National League of Cities
1620 Eye Street, NW
Washington, DC 20006

Dr. Donald Shilesky, VP
SCS Engineers
11800 Sunrise Valley Dr.
Reston, VA 22091

Sharon Steen, Associate
DeBevoise & Liberman
1200 17th St., NW
Washington, DC 20036

Fred Steinbrenner, Branch Manager
Law Engineering Testing Co.
2749 Delk Rd., SE
Marietta, GA 33067

E. R. Streiter
Environmental Advisor
Marisol, Inc.
125 Factory Lane
Middlesex, NJ 08846

Bill Summerlin
Union County, Public Works Dept.
Box 215
Monroe, NC

Fred Swartz
Washington Representative
Hooker Chemical Company
1747 Penn. Ave., NW
Washington, DC 20006

Jeffrey Teilel, Director
Regulatory Affairs
Conrail
6 Penn Center Plaza, Rm. 830
Phila., PA 19104

Anne Toothaker
General Electric Company
Building 36, Rm. 120
Schenectady, NY 12345

W. Corey Trench
Associate Environmental Scientist
WAPORA, Inc.
6900 Wisconsin Ave., NW
Chevy Chase, MD 20015

Floyd Trillis
Senior Operations Engineer
Consolidated Natural Gas Svc. Co.
Four Gateway Center
Pittsburg, PA 15222

Arlie Ullrich, Consultant
Eli Lilly & Co.
Indianapolis, IN 46206

Jorge Valladares, PE
Chief, Env. Plan. Division
Maryland-National Capitol Park &
Planning Commission
8787 Georgia Avenue
Silver Spring, MD 20907

Emma Verkieck
Solid Waste Specialist
CT Sierra Club
1974 Hebron Avenue
Glastonbury, Ct 06003

Thomas Voges, Asst. Director
Air & Water Control
Inland Steel Company
3210 Watling Street
East Chicago, IL 46312

Richard Volonino, Program Mgr.
Combustion Equipment Associates
555 Madison Avenue
New York, NY 10022

Arthur Wammel, Pres. Inter. Executive
ODASD (EES)
Rm 3D823, Pentagon
Washington, DC 20301

Janet Weller
Cleary, Gotlieb, Steen, Hamilton
1250 Connecticut Ave., NW
Washington, DC 20036

Charles Wilkinson
Sea Plantations, Inc.
29 Congress St., Bldg. 4
Salem, MA 01970

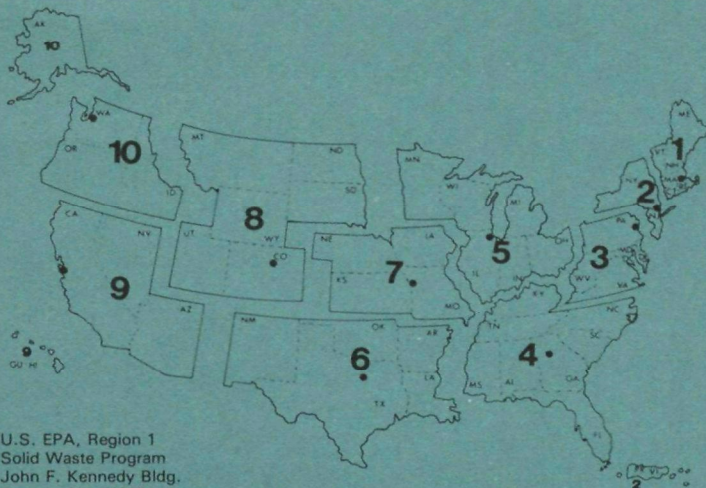
James Woodford
Chief, Division of Env. Health
City of Baltimore
111 N. Calvert Street
Baltimore, MD 21202

Richard Wright, President
R.E. Wright Assoc., Inc.
3805 Paxton Street
Harrisburg, PA 17033

Ted Zagrobelny, Env. Engineer
Naval Facilities Engineering Command
200 Stcvall Street
Alexandria, VA 22332

us 1832
Order No. 766

EPA REGIONS



U.S. EPA, Region 1
Solid Waste Program
John F. Kennedy Bldg.
Boston, MA 02203
617-223-5775

U.S. EPA, Region 2
Solid Waste Section
26 Federal Plaza
New York, NY 10007
212-264-0503

U.S. EPA, Region 3
Solid Waste Program
6th and Walnut Sts.
Philadelphia, PA 19106
215-597-9377

U.S. EPA, Region 4
Solid Waste Program
345 Courtland St., N.E.
Atlanta, GA 30308
404-881-3016

U.S. EPA, Region 5
Solid Waste Program
230 South Dearborn St.
Chicago, IL 60604
312-353-2197

U.S. EPA, Region 6
Solid Waste Section
1201 Elm St.
Dallas, TX 75270
214-767-2734

U.S. EPA, Region 7
Solid Waste Section
1735 Baltimore Ave.
Kansas City, MO 64108
816-374-3307

U.S. EPA, Region 8
Solid Waste Section
1860 Lincoln St.
Denver, CO 80295
303-837-2221

U.S. EPA, Region 9
Solid Waste Program
215 Fremont St.
San Francisco, CA 94105
415-556-4606

U.S. EPA, Region 10
Solid Waste Program
1200 6th Ave.
Seattle, WA 98101
206-442-1260